

2017 Annual CAHSPR Conference



TOWARDS AN ACCORD FOR CHANGE

Book of Abstracts

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ID: 330

Author: Dr. Reham Abdelhalim

Title: Operationalizing Patient-Centered Integrated Care: The Gap Between Discourse and Action in Ontario's Health Links

Type of Abstract: Oral

Objectives: Health Links (HL) was launched as a patient-centered initiative to better coordinate care for complex patients in Ontario. HL business plans demonstrated a clear vision to putting patients front and center in every step of the intervention. This study explored if the vision of patient-centeredness was operationalized as planned.

Approach: We conducted evaluative case studies of three HLs within one regional health authority (Local Health Integration Network) in the spring/summer of 2016. Data was collected through semi-structured interviews with leaders and providers working within each case and an in-depth document analysis of business plans, pre-implementation documents, meeting minutes and all publicly available electronic materials. We compared documentation to interview data, conceptualizing documents as the source of the planned view and draw the operationalizing view from the interviews with leaders and providers.

Results: Our preliminary results show that leaders and providers agree with planned view that patient-centeredness and engagement is the key philosophy behind HL as a program. However, participants identified ambiguity about the mechanisms of execution especially when working with such complex patients. Although the documents emphasized the importance of patients in managing their own care, leaders and providers found many barriers to this, for example low buy-in from some patients and lack of patient access to medical records. While having patients on HL committees was emphasized in all HL documents, leaders and providers highlighted that most of the time patients do not have a voice and that a single patient will never represent all patients.

Conclusion: Patient-centeredness is a primary goal for HLs. However, results point to a key difference between discourse and action even when intentions are strong?. The study highlights a need for policy and decision-makers to better support patient-centeredness in these initiatives and to find better ways to meaningfully engage complex patients.

All Authors: Reham Abdelhalim, Agnes Grudniewicz, Jennifer Gutberg, Sobia Khan, Jenna Evans, Walter Wodchis

ID: 68

Author: Dr. Mohamad Alameddine

Title: The Integration of Gender Sensitivity in Health Human Resources Planning, Development and Management: A Systematic Review

Type of Abstract: Oral

Objectives: The objective of this study is to systematically review approaches to integrate gender sensitivity into health human resources (HHR) planning, development and management in healthcare settings and to identify major barriers for its implementation.

Approach: Eligible studies addressed any type of information on promoting gender equity between male and female health human resources working in healthcare settings. The search strategy covered several databases including: PubMed, MEDLINE, EMBASE, CINAHL, Sociological Abstracts, Scopus and the Cochrane Library databases. Two reviewers completed in duplicate and independently the processes of study selection, data abstraction, and assessment of methodological features.

Results: The review included 11,029 citations, after which rigorous screening identified 72 eligible papers. The most common types of study design included quantitative studies (50%) and reviews (18.09%). Least common were intervention and evaluation studies (5.56%). Majority of studies originated from the USA (61.11%), Japan (8.33%) and England (6.94%). The most studied health professional groups were physicians (34.72%). Investigated themes included family-work balance (55.56%), mentorship (45.83%) and work schedule/working hours (44.44%). Only a quarter of the studies suggested actionable recommendations at the institutional and individual levels, including: ensuring pay equity, enhancing female recruitment, providing equal opportunities for promotion and advancement and building leadership efficacy among female HHR. Proactive approaches were the least identified including ensuring gender equity through workforce planning (8.33%) and creating gender sensitive organizational cultures (5.56%).

Conclusion: Evidence-based integration of gender sensitivity into HHR planning and management requires learning from experiences. Expanding the geographic and professional scope (to nurses and other health professions) of studies is necessary. Enhancing the methodological rigor and focusing on proactive approaches must also be supported.

All Authors: Mohamad Alameddine, Nour El Arnaout, Rana Chehab

ID: 108

Author: Dr. Joan Almost

Title: Positive and negative behaviours in workplace relationships: A scoping review

Type of Abstract: Oral

Objectives:

- 1) To provide results from a synthesis of the vast amount of literature from many disciplines examining behaviours in workplace relationships.
- 2) To provide practical information to inform policies, education program development, and interventions in the workplace for dealing with issues and challenges regarding workplace behaviours.

Approach: A scoping review was conducted using the methodological framework developed by Arksey and O'Malley. In collaboration with knowledge users, an overall research question was used 'What is known about the positive and negative behaviours of workplace relationships?' A literature search was conducted using selected electronic databases from 2000 to 2015. Inclusion criteria were primary studies, all settings, all research designs, coworker-to-coworker behaviours and English language. Data was analyzed using a descriptive and thematic analysis. The descriptive numerical analysis described characteristics of included studies. The thematic analysis provided an overview of the breadth of the literature.

Results: A total of 19,601 citations were screened. Of the 1,933 studies reviewed for full-text screening, 372 were included in the review. One hundred and fifty-three studies had taken place in healthcare settings and 219 studies in non-healthcare settings. Quantitative designs were used most frequently in the included studies. Forty behaviours specific to co-worker workplace relationships were identified with 20 positive and 20 negative behaviours. The most frequently studied positive behaviours were social support, organizational citizenship behaviour, mentoring, and helping. The most frequently studied negative behaviours were conflict, bullying, incivility and horizontal violence. Hundreds of antecedents and outcomes emerged with conceptual inconsistencies and conflicting results. A number of potentially useful instruments were found, and only 30 studies had evaluated an intervention.

Conclusion: Engaging in teamwork requires a clear understanding of the behaviours that act as facilitators and barriers to effective workplace relationships. This synthesis is a critical step for policymakers and leaders to effectively use what is known thus far, enabling them to more effectively manage and reduce corrosive behaviour and increase collaborative behaviour.

All Authors: Joan Almost, Angela Wolff, Sheri Price, Barbara Mildon, Christina Godfrey, Amanda Ross-White, Sheile Mercado-Mallari

ID: 388

Author: Ms. Abigail Amartey

Title: Mental health status and service utilization among ethnic groups in Ontario, Canada

Type of Abstract: Oral

Objectives: The purpose of this study was to compare the prevalence of mental health service utilization and other self-reported mental health factors across the four largest ethnic groups in Ontario: white, South Asian, Chinese, and black groups.

Approach: The study population was derived from the Canadian Community Health Survey, using a cross-sectional sample of 254,951 white, South Asian, Chinese, and black residents living in Ontario between 2001 and 2014. Age- and sex-standardized prevalence estimates for mental health service use and other related factors were calculated for each of the four ethnic groups overall as well as within age, sex and immigrant strata.

Results: Prevalence of physician-diagnosed mood and anxiety disorders and mental health service utilization was lower among South Asian, Chinese, and black respondents compared to white respondents. Among those reporting past-year suicidal ideation, less than half sought help from a mental health professional, and this was particularly low among ethnic minorities ranging from only 13.9% in the Chinese group to 25.6% in the black group. Family doctors were the most common point of contact for mental health issues for most ethnic groups, with the exception of Chinese individuals who were just as likely to see a family doctor, psychiatrist, or allied health professional. We also found that Chinese individuals reported the weakest sense of belonging and the poorest self-rated mental health compared to all other ethnic groups.

Conclusion: The lower rates of mental health service use among ethnic minorities may not solely reflect lower mental health burden, but may also reflect a reluctance to seek help. Efforts are needed to understand why mental health service use is low among ethnic minority groups, even among those reporting severe distress.

All Authors: Abigail Amartey, Maria Chiu, Paul Kurdyak, Xuesong Wang

ID: 210

Author: Dr. Ruolz Ariste

Title: Medicare Services Bought with the 2004 Health Accord in Canada: What Is the Evidence?

Type of Abstract: Oral

Objectives: With the 2004 First Minister's Health Accord showcasing a 10-Year Plan to strengthen health care in Canada, significant investments have been made to improve access to health services. This study aims to assess to what extent these increases have translated into more Medicare services (hospital and physician) for the population

Approach: An increase in health expenditure may arise from a price change, which can be caused by higher compensation rates. On the other hand, it can also be caused by increased utilisation of health care services due to demographic or technological changes. The distinction between these two components can be the key information needed to find policy solutions for sustainable health care spending. An accounting approach is used to address the issue of Medicare cost drivers. Growth in total costs is broken down into several components: inflation (general and sector-specific), demographic (population growth and aging) and others, including utilization.

Results: Average annual growth rate (AAGR) between 2004 and 2014 was 5.1% for hospitals and 6.7% for physicians. Results suggest that in the case of hospitals, wage per hour for staff (excluding physicians) accounted for 2.5% of the total AAGR while demographic factors were responsible for 2.2% (1.1% for population growth and 1.1% for aging), with 0.4% for other factors. As for physicians, the average unit fee was responsible for 3.1% of the total AAGR; demographic factors accounted for 1.8%, leaving a similar proportion for other factors. This suggests that unit cost was a moderate cost driver in hospital and physician spending growth. However, considering that general inflation was on average 1.8% per year, growth in the inflation-adjusted unit cost for physicians represented almost twice that for hospital staff.

Conclusion: Unit price was responsible for slightly less than 50% of the total cost increase for hospital and physician services. Yet, this unit price increased more substantially for physicians than for hospital staff. In the case of physicians, there was also a substantial increase in other factors such as volume of services due to technological improvement, mix of services, morbidity, etc.

All Authors: Ruolz Ariste, Geoff Ballinger

ID: 17

Author: Dr. Diane Aubin

Title: What a shame: The psychological impact of mistakes on health professionals

Type of Abstract: Oral

Objectives: I will present my grounded theory on the psychosocial process health professionals go through when they make a mistake. Through an exploration of the emotion of shame, I explain why mistakes have great psychological impact on health professionals, and provide recommendations on how to help them cope with the trauma.

Approach: This study was conducted using constructivist grounded theory. Central to this approach is the notion that participants play a key role in helping the researcher develop the grounded theory. The participants were health professionals working in two Canadian academic paediatric hospitals in nursing, medicine and pharmacy. The sample size was increased until saturation (21 participants including seven nurses, five pharmacists/pharmacy assistants, five residents and four physicians). The method for data collection was semi-structured one-on-one interviews using open-ended questions. Methods included initial purposive sampling, data collection, memo writing, constant comparison, coding, data analysis, theoretical sampling, diagramming and theory development.

Results: Five phases of the psychosocial process were identified: weighing the risk and making decisions; causing harm or potential harm; unmasking the self as a fallible professional; reinforcing the self against external exposure and internal erosion; and rebuilding the self as a professional after an error. The psychosocial process that health professionals undergo when they make a mistake is overwhelming and complex. It can have a significantly negative effect on their wellbeing and on their ability to care effectively for their patients. The process is mired in shame, confounded by social interactions with other team members and patients, and cluttered with the internal struggles with their identity as health professionals.

Conclusion: This study provides a conceptual rendering of the process that challenges current ideas about how to manage errors in healthcare. Our theory suggests we should focus on the individual's emotional journey throughout the process, rather than solely on external/ system processes. It emphasizes the importance of developing a compassionate culture.

All Authors: Diane Aubin, Sharla King

ID: 500

Author: Dr. Kris Aubrey-Bassler

Title: Effect of geographic accessibility and delivery volume on maternal and neonatal obstetrical outcomes: a population-based study.

Type of Abstract: Oral

Objectives: When determining the appropriate level of obstetrical services to offer at a given hospital, it is unclear how to trade off higher delivery volumes with geographic accessibility. We completed a population-based study in Canada to determine the relative effect of these parameters on obstetrical outcomes while adjusting for important covariates.

Approach: 2006-09 maternal and neonatal obstetrical data for all provinces except Quebec were accessed from the Canadian Institute for Health Information and linked to census and road network data. Road distance from maternal home to delivery hospital and obstetrical volume were categorized, and hierarchical regression models were used to determine the effect of these variables on perinatal mortality and a composite of maternal morbidity and mortality. Catchment-area based analyses (averaging predictor variables at the home hospital catchment area) were used to minimize the effect of unobserved confounding.

Results: In 820,761 mothers delivering 827,504 infants, travel distance had essentially no effect on perinatal mortality, but the effect on maternal outcomes was non-linear. Compared to mothers who travelled 0-9 km, the risk of the maternal outcome decreased for women who travelled 20-49 km (odds ratio (OR) 0.80, 95% confidence interval (CI) 0.75-0.86) and increased for women who travelled the longest distances (>400km, OR 2.22, 95%CI 1.06-4.63).

Relative to the highest volume hospitals (>2500/year), the odds of the maternal outcome were roughly equivalent for hospitals ranging from 1-49 (OR 1.20, 95%CI 1.00-1.43) to 500-999 deliveries per year (OR 1.27, 95% CI 1.17-1.39). There was more variability in the perinatal outcome, ranging from an OR of 1.08 (95%CI 0.76-1.54, 100-199 deliveries/year) to 1.55 (95%CI 1.07-2.23, 50-99 deliveries/year).

Conclusion: These results suggest that hospitals greater than approximately 200 km from other services should attempt to offer maternity care, even if local delivery volumes are quite low. Obstetrical outcomes do not improve until delivery volumes exceed about 1000/year.

All Authors: Kris Aubrey-Bassler, Richard Cullen, Joan Crane, Marshall Godwin, Alvin Simms, Shabnam Asghari

ID: 83

Author: Dr. Robbie Babins-Wagner

Title: From Outcomes to Impact in Psychotherapy

Type of Abstract: Oral

Objectives: The fundamental goal of psychotherapy is the improvement of patient mental health status. This study explored the impact of incorporating routine collection of patient reported alliance and outcome measures into mental health services delivery over a seven-year period.

Approach: Clients who reported mental health distress at intake were eligible for inclusion if they received at least three psychotherapy sessions with the same clinician. The resulting sample included 5,128 clients seen by 153 clinicians. Outcomes were measured using the Outcome Questionnaire (OQ-45.2), a 45-item self-report measure designed specifically to capture change that occurs during the course of psychotherapy. Calgary Counselling Centre systematically collects OQ 45 data prior to each service contact upon arrival at the Centre. A multilevel modelling approach was applied to the data to explore outcomes stratified by the centre as a whole, year and individual provider.

Results: Over the course of treatment, mental health symptoms decreased on average by OQ 19.64 points, which is a significant pre-post change, corresponding to a Cohen's d of 1.17. Further analysis demonstrated that client outcomes improved across time. A significant effect was noted indicating that outcomes (patient-level pre-post d s) were becoming 0.035 standardized units larger each year. Changes were found in client outcomes across therapist experience indicating that therapists' outcomes improved 0.034 standardized units per year.

Conclusion: The agency has been working to create an outcome informed culture for clinical practice since 2008. The discussion will focus on both the methods and process being used that may be contributing to these changes over time. Lessons learned and implications for practice will also be discussed.

All Authors: Robbie Babins-Wagner, Simon Goldberg, Sandy Berzins

ID: 302

Author: Dr. Ross Baker

Title: Organizational and System Challenges to the Spread and Scale of Integrated Community Based Primary Health Care

Type of Abstract: Oral

Objectives: Community based primary health care (CBPHC) organizations are critical providers of integrated care for complex patients. Exemplar cases exist. But efforts to scale up and spread successful practices face major challenges. We identify challenges and approaches derived from literature and 9 cross-jurisdiction comparative case studies.

Approach: We report on barriers to scale up and spread of integrated CBPHC from the iCOACH project (Integrated Care for Older Adults with Complex Health Needs). The research project draws on key literature and detailed analysis of interviews from 9 in-depth case studies of organizations in Ontario, Quebec and New Zealand. Using a realist theory approach, we outline the challenges of identifying and replicating key mechanisms for integrated care and their adaptation to specific local contexts.

Results: Key factors for spread and scale up include the resources and support needed for coordinating care, coaching patients on self-management and facilitating the interaction of providers who form the network serving complex patients. Many successful pioneer CBPHC organizations were mission-driven and, at times had to work hard to challenge the dominant power bases. They relied on visionary leadership and institutional entrepreneurship; however, these assets are difficult to recreate in new settings. These organizations have long histories of inter-personal and inter-organizational relationships contributing to institutionalized knowledge and patterns of practice. They have also maintained a strong ideological commitment to serving the critical needs of their communities. Successful scale up and spread will involve careful attention to local contexts, co-production with clients and engaged local leadership.

Conclusion: Integrated CBPHC organizations play an important role for complex patients. Scale up and spread of currently successful organizations requires identifying the key mechanisms that make them successful, understanding how local contexts shape and activate these mechanisms, and providing the resources necessary to launch and sustain these efforts in new settings.

All Authors: Ross Baker, Jean-Louis Denis, Jay Shaw, Carolyn Steele Gray, Jennifer Gutberg, Mylaine Breton, Peter Carswell, Annette Dunham, Walter Wodchis, Tim Kenealy

ID: 250

Author: Dr. Lucy Barker

Title: Guideline-adherent diabetes care for individuals with comorbid schizophrenia: A sex-based analysis

Type of Abstract: Oral

Objectives: Over 10% of individuals with schizophrenia have diabetes, and they are less likely to receive guideline-adherent diabetes care compared to individuals without schizophrenia. Sex and gender contributions to this disparity remain incompletely understood. We aimed to determine whether guideline-adherent diabetes care differs between women and men with schizophrenia.

Approach: We conducted a population-based cohort study using Ontario health administrative data to compare guideline-adherent diabetes care between women (n=13,972) and men (n=12,287) with schizophrenia (2011-2013). The primary outcome was guideline-adherent diabetes care, defined as > 1 retinal exam, > 4 HbA1c tests, and >1 dyslipidemia test during the 2-year observation period. Secondary outcomes were meeting criteria for each of the different types of tests individually. Logistic regression models generated crude and adjusted odds ratios (aOR) and 95% confidence intervals (95%CI) comparing women to men (referent). Models were adjusted for all baseline characteristics with standardized differences >0.10.

Results: Women were more likely to receive guideline-adherent diabetes care than men during the two-year study period (25.2% vs. 23.0%; aOR 1.20, 95%CI 1.10-1.30, adjusted for age, duration of diabetes, and Aggregated Diagnosis Groups measuring medical comorbidity and stable psychosocial stressors). Women were more likely than men to have had at least one eye exam (aOR 1.13, 95%CI 1.08-1.19) and at least four HbA1C tests (aOR 1.06, 95%CI 1.01-1.12), but were not significantly more likely to have had at least one dyslipidemia test (aOR 1.04, 95%CI 0.99-1.11). A greater proportion of women met criteria for at least one of the recommended tests (86.3 vs. 82.9%, aOR 1.16, 95% CI 1.08-1.24).

Conclusion: Diabetes care is similarly poor in women and men with schizophrenia, with women receiving slightly more frequent guideline-adherent diabetes care. Sex differences in diabetes care among those with schizophrenia are smaller than in other populations, and less significant than the poor quality of diabetes care observed in schizophrenia generally.

All Authors: Lucy Barker, Paul Kurdyak, Binu Jacob, Simone Vigod

ID: 503

Author: Dr. Mary Bartram

Title: Two-tier access to psychotherapy: Canada, the UK and Australia

Type of Abstract: Oral

Objectives: The objectives of this two-part study are two-fold. First, to measure to what extent income determines access to psychotherapy in Canada, and second, to identify lessons learned from the Australia and the UK about how to break down these inequities.

Approach: This mixed-methods study first quantifies need-standardized concentration indices of both mental health service utilization and unmet need for mental health services, using data from the Canadian Community Health Survey. The qualitative part of the study uses data from semi-structured interviews with policy-makers and experts in Australia and the UK, regarding the relationship between state governance, service system design, and equity in access to psychotherapy.

Results: The results show that two-tier access to mental health services does indeed exist in Canada. Income-based inequities in unmet need for care can be measured using Concentration Indices, for mental health vs physical health problems and for access to service providers who are and are not covered by Medicare. Lessons learned from the IAPT and Better Access initiatives in the UK and Australia indicate that careful planning is needed to ensure that wealth-based inequities are reduced while improving access to psychotherapy across the population as a whole, and that service system design needs to be tailored to the policy levers which are available to different levels of government.

Conclusion: Two-tier access to mental health services in Canada is real, particularly for psychotherapy. Even if access can be improved overall, new federal funding may have little effect on income-based inequities. Specific targets and accountability measures are needed, but these may prove challenging in the Canadian constitutional context.

All Authors: Mary Bartram

ID: 234

Author: Dr. Brandi Bell

Title: Youth Journeys in Mental Health

Type of Abstract: Oral

Objectives: In this presentation, we will share early learnings from a longitudinal study on youth mental health in Atlantic Canada, specifically addressing how qualitative and arts-based research methods are being employed to engage young people and families in conversations to inform youth mental health research, policy, and action.

Approach: Atlantic Canada Children's Effective Service Strategies in Mental Health (ACCESS-MH) is a 5-year research study, funded by the Canadian Institutes of Health Research. It aims to deepen understanding of child/youth mental health in Atlantic Canada. Grounded in critical ethnography and Complex Cultural Nesting theory, we incorporate visual mapping and photo-elicitation into in-depth interviews with children/youth (identifying with depression, anxiety, eating disorders, conduct disorders, or autism spectrum disorders), parents (of children/youth identifying with a mental health challenge), and service providers (medical and community) engaged with the youth mental health and associated systems.

Results: Our findings suggest that family, peer, and community members play key roles in youth journeys and create communities of support for youth as they access and navigate care. However, even with these supports in place many youth continue to struggle. Journeys often become fractured and many youth fall through the cracks. Navigation of this system is complex, and a detailed literacy of both overt and covert pathways to care are often necessary. Our arts-based patient journeys approach provides a way to engage participants and give emphasis to these often long and complex stories of struggle; helping to understand issues such as service coordination, wait times, stigma, and spaces for families, schools, and mental health professionals to support youth's journeys of recovery.

Conclusion: Patient journeys and arts-based research methods are important tools for improving understanding of youth mental health from the perspectives of those most affected. Learning from those with lived experience will better address mental health system issues.

All Authors: Brandi Bell, Kate Tilleczek, Sarah Gallant, Matthew Munro

ID: 182

Author: Dr. Onil Bhattacharyya

Title: A Digital Health Advisor for High-Need, High-Cost Patients

Type of Abstract: Oral

Objectives: A Digital Health Advisor (DHA) that can access personal health information, health services, and medical evidence could provide answers, connect with providers, and empower patients to achieve their health goals. This study explored the use of design methods to understand how high-need, high-cost (HNHC) individuals could benefit from a DHA.

Approach: Our team used human-centred design to understand the latent needs of HNHC patients. This technique is widely used in service and software development but only more recently in healthcare. We interviewed 8 patients who had multiple chronic conditions or were frail elderly, and their caregivers. Then we conducted interactive sessions testing prototype DHA functions with on-going feedback from participants. We carried out market scans, workflow mapping with care coordinators, and interviews with experts in healthcare, informatics, and venture capital. We used qualitative analysis, brainstorming sessions, and interactive stakeholder workshops to generate personas of potential users and key use cases.

Results: We identified a broad set of needs and goals of HNHC patients. These fell along 2 dimensions, ranging from functional needs and emotional needs, and medical and personal needs. This included the themes “live my life” (manage day to day tasks), “love my life” (preserve dignity and connections), “manage my health” (empower to make smart decisions), “feel understood” (communicate how conditions affect physical and emotional state). These needs informed the creation of 8 personas of potential DHA users, and scenarios describing use cases for the different personas. We then developed a DHA prototype with the following key functions: providing advice on health-related questions, tracking health indicators, creating a holistic picture to share with practitioners, and providing coordination and communication assistance with their care team.

Conclusion: Human-centred design provides a useful method to understanding complex patients and scenarios often encountered in healthcare. This approach can inform design of relevant health services and technologies to meet patients' needs, and help health system leaders consider the potential of patient-facing digital tools to assist their highest cost patients.

All Authors: Onil Bhattacharyya, Eric Schneider, Arnav Shah, Kathryn Mossman

ID: 249

Author: Dr. Yvonne Bombard

Title: Patient Preferences and Perceived Utility of Incidental Genomic Sequencing Results

Type of Abstract: Oral

Objectives: Guidelines recommend clinicians inform individuals of their incidental results (IR) when having genomic sequencing (GS) to diagnose their diseases or target their treatments. Policy-makers are grappling with how to value the array of IR. We describe patient preferences and perceived utility of learning their IR to inform health technology assessment.

Approach: Semi-structured interviews were conducted with 15 breast and colon cancer patients (53% female; 73% >age 50) who took part in usability testing of a decision aid (DA) designed to assist with the selection of IR. 6/15 participants had previously undergone genetic testing. Patients selected from 5 categories of incidental results that were defined as either medically actionable or not. Content analysis was used to analyse the data. Transcripts were coded for categories and themes within and across interviews. Initial codes were derived from topics explored in the interview guide; constant comparison allowed novel codes to emerge from the data.

Results: After using the DA, participants were enthusiastic towards GS testing and IR. Indeed, all participants chose to receive some IR; 13 participants selected at least three of the five categories of IR. They expressed an inherent value in learning IR, primarily to inform their disease prevention or treatment. Even when considering IR about diseases without known preventions or treatments, participants believed this information would encourage them take actions to slow or delay onset of disease. Participants also valued learning IR to benefit their relatives' health and to inform their families' future financial or reproductive planning. Although, all participants were in favour of GS, several participants expressed concerns regarding the potential risks associated with learning of their IR, specifically, insurance issues and/or psychosocial concerns.

Conclusion: Despite this small sample size, results reveal patients' enthusiasm for receiving IR. Patients applied broader definitions of medical actionability than medical experts, reflecting a key divergence in valuing this incidental information. These findings have implications for clinicians and policy-makers about the expected return and anticipated use of IR from GS.

All Authors: Yvonne Bombard , Marc Clausen , Chloe Mighton , Lindsay Carlsson , Selina Casalino , Emily Glogowski, Kasmintan Schrader, Adena Scheer , Michael Evans , Jada Hamilton , Kenneth Offit , Mark Robson, Nancy Baxter, Kevin Thorpe , Jordan Lerner-E

ID: 208

Auteur: Mrs. Roxane Borgès Da Silva

Titre: Nurse prescribing in Quebec: a tool to improve health services efficiency

Type d'abstrait: Oral

Objectifs: La prescription infirmière (PI) a été promulguée au Québec le 11 janvier 2016. Depuis, les infirmières peuvent prescrire dans certaines situations cliniques.

Objectifs :

- 1) décrire la prescription infirmière et dresser un portrait de son implantation
- 2) identifier les facteurs limitant et facilitant l'utilisation du droit de prescrire.

Approche: Un devis quasi-expérimental a été utilisé pour comparer 1) les infirmières ayant leur attestation de prescription et celles ne l'ayant pas demandé et ensuite, 2) les infirmières ayant prescrit au moins une fois et celles n'ayant pas prescrit. Deux enquêtes ont été menées conjointement. Le premier questionnaire, en ligne, s'adressait à toutes les infirmières travaillant dans les services ambulatoires du Québec. Le second s'adressait aux Directions de soins infirmiers (DSI) chargées du déploiement de la prescription infirmière sur leur territoire. Des analyses bivariées et des régressions logistiques ont permis de répondre à nos objectifs.

Résultats: Un an après la promulgation de la PI, 3047 attestations ont été accordées aux infirmières, ce qui est inférieur aux cibles prévues (n?10000). L'absence de rémunération et la surcharge de travail sont des raisons évoquées par les infirmières pour ne pas demander l'attestation. Dans les territoires où les DSI ont mis en place des interventions pour améliorer le déploiement, on observe une plus grande proportion d'infirmières titulaires de l'attestation. Parmi les 3047 infirmières ayant l'attestation, moins de 20% se seraient prévaluées de leur droit de prescrire. Les mêmes facteurs évoqués ci-dessus sont associés au fait qu'une infirmière n'ait pas encore fait de prescription. La crainte de générer des conflits avec les collègues s'ajoute aux facteurs limitant l'utilisation du droit de prescrire.

Conclusion: Le règlement de la prescription infirmière s'inscrit dans une logique de transferts des tâches entre les professionnels pour améliorer l'accessibilité aux services ambulatoires. Plusieurs recommandations sortent de notre étude dont, entre autres, un plan de déploiement plus uniforme des DSI et une sensibilisation des professionnels au travail d'équipe.

Auteurs: Roxane Borgès Da Silva, Isabelle Brault, Aude Motulsky, Alexandre Prud'homme, Carl-Ardy Dubois

ID: 94

Author: Mrs. Nevzeta Bosnic

Title: A review of public coverage of CDR reviewed drugs

Type of Abstract: Oral

Objectives: This PMPRB study analyzes the coverage of drugs reviewed by the CDR across Canadian public drug plans, and examines both the number of drugs and the extent of reimbursement.

Approach: The drugs reviewed by the CDR from December 2003 through June 2015, along with their listings as of December 2015, were obtained from IMS Brogan's iMAM and public formularies. The sales data for 2015 was retrieved from the IMS Brogan Private Drug Plan and IMS AG MIDAS™ databases. The coverage rates for 10 provincial drug plans and the NIHB were calculated as simple and weighted percentages of all select drugs. The analysis also includes an inter-jurisdictional comparison using simple agreement descriptive statistics.

Results: The CDR issued positive recommendations for 55% of the analyzed drugs, with provinces following the CDR recommendation in 78% of the cases. With sales weighting, most provinces listed all major drugs.

An inter-jurisdictional comparison of all CDR drugs indicates medium to high rates of coverage agreement, ranging from 50% to 86% across all pairs of the public drug plans. When weighted by sales, the percentage of coverage agreements notably increases.

Conclusion: The study results suggest a relatively high coverage and inter-jurisdictional agreement of the CDR drugs, and highlights differences across public drug plans. These findings are expected to inform policy discussions around a national formulary.

All Authors: Nevzeta Bosnic, Karine Landry

ID: 178

Author: Dr. Mylaine Breton

Title: Sharing a solution to a common problem: comparing centralized waiting lists for unattached patients in primary healthcare in six Canadian provinces

Type of Abstract: Oral

Objectives: Many jurisdictions are working to reduce the number of unattached patients (i.e. without a primary care provider). Centralized waiting lists are one solution to help unattached patients connect with a primary care provider. Our objective is to compare the different models of centralized waiting lists for unattached patients implemented in 6 provinces.

Approach: We compared the centralized waiting lists' logic of intervention. To build each logic model, the grey literature was reviewed and 3 to 9 semi-structured interviews with key stakeholders of the centralized waiting lists were conducted, for a total of 28 interviews. Documents and interview transcriptions were coded using NVivo software with a codebook made up of the logic model components. Then, logic models were created for each province and validated by key stakeholders of the centralized waiting lists. Finally, cross-case (inter-provincial) analysis was performed by comparing the different logic models.

Results: The models of centralized waiting lists varied considerably among the provinces analyzed. All provinces, except British Columbia, had a provincially centralized registration. Also, all provinces, except Manitoba, had put in place financial incentives to encourage family physicians' participation. In New Brunswick, new family physicians must take 600 patients from the centralized waiting list in their first year of practice. The prioritization process varied among provinces: in Quebec, Ontario and Manitoba, it was based on a health assessment whereas prioritization was based on chronological in New Brunswick and Prince Edward Island. In all provinces except Quebec, patients could be attached to nurse practitioners. In February, a symposium is organized to bring together researchers and key stakeholders to share the logic models and discuss lessons from each province.

Conclusion: Because unattached patients are more likely to have unmet needs and to use services inappropriately, solutions implemented to promote attachment have the potential to improve health systems. Centralized waiting lists are therefore important mechanisms and by comparing different models, our findings may help provinces learn from each other and identify improvement

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ID: 400

Author: Dr. Amy Bronstone

Title: Does Real-Time Continuous Glucose Monitoring Reduce Short-term Medical Costs for Patients with Type 1 Diabetes and Hypoglycemia Unawareness in Ontario, Canada?

Type of Abstract: Oral

Objectives: Assess the impact on short-term direct medical costs of replacing self-monitoring of blood glucose (SMBG) with real-time continuous glucose monitoring (RT-CGM) in patients with type 1 diabetes (T1DM) and hypoglycemia unawareness (HUA) from the public payer perspective in Ontario over 1 year and 5 years.

Approach: All model inputs, including incidence rates and costs related to SMBG, ER visits, and hospitalizations, were derived from published literature or publicly available sources. The prevalence of diabetes is 10.5% in Ontario; 7.5% of patients with diabetes have T1DM (112,860), of whom ~20% have HUA (n=22,572) and a 4.5-fold increased risk of severe hypoglycemia (SH). Data from randomized controlled trials indicate that RT-CGM reduces the incidence of SH by 59% and HbA1c by 0.6% compared with SMBG. Device costs were provided by the manufacturer (Dexcom G5™ Mobile; Dexcom, Inc., San Diego, CA, USA). Costs were adjusted to 2016 Canadian dollars.

Results: Annual direct medical costs for emergency treatment of SH in patients receiving SMBG and RT-CGM are, respectively, \$228,314,534 and \$83,069,877. The reduction in HbA1c conferred by RT-CGM results in an annual savings of \$109,023 (-\$805 per 1% HbA1c reduction). The annual cost of SMBG and RT-CGM is \$31,274,535 and \$148,723,782, respectively. The annual and 5-year net impact of replacing SMBG with adjunctive RT-CGM was estimated to be -\$27.9 million (-11%) and -\$140.3 million (-10%), respectively. One-way sensitivity analyses showed that results were most sensitive to the cost of RT-CGM and hospitalization, incidence of hospitalization, and reduction in SH conferred by RT-CGM.

Conclusion: By reducing the risk of costly acute complications among high-risk patients with T1DM, RT-CGM may save short-term direct medical cost compared with SMBG.

All Authors: Amy Bronstone, Shraddha Chaugule, Claudia Graham, Lindy Forte

ID: 218

Author: Mrs. Astrid Brousselle

Title: Healthcare system performance: what if it were about power?

Type of Abstract: Oral

Objectives: To analyze preferences regarding potential solutions to improve the healthcare system among four groups of key actors of the healthcare system such as managers, physicians, nurses and pharmacists.

Approach: This project is based on an exploratory sequential design. First, we explored the views of various stakeholders by conducting 31 in-depth interviews with key stakeholders that have an influence on Quebec's health policy. The interviews focused on the healthcare system's strengths, problems, solutions and on identifying the most influential groups regarding healthcare policies. Interviews were analyzed using a social network analysis strategy. Second, we conducted a survey among 2503 respondents (pharmacists, physicians, senior level managers and nurses) on a set of solutions aiming at improving the performance of the healthcare system. Analysis compared the positions of professional groups.

Results: The participants agree that Quebec's healthcare system needs improvement. There is a large consensus on solutions identified to improve the healthcare system. In the survey, resistance is observed in two major areas: information systems and changes directly affecting physicians' practice. Our results show the central role of medical federations in influencing public policies related to healthcare. They also show that our inability to implement solutions to improve the healthcare system's performance can't be explained by a polarization among professional groups' positions nor by a disagreement among key stakeholders. It then raises new questions on the actual sources of resistance and on the influential role of medical federations in the healthcare system.

Conclusion: Our results show the central influence of medical federations on health policies. This disrupts our representations of the influence on health policies and invites both researchers and decision-makers to consider their actions differently, if they are to have an impact on health policies.

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ID: 139

Author: Dr. Hilary Brown

Title: A population-based study of contraception methods among women with intellectual and developmental disabilities

Type of Abstract: Oral

Objectives: Delivery of appropriate reproductive healthcare to women with intellectual and developmental disabilities (IDD) is challenging. The postpartum period represents an opportune time to initiate contraception to prevent negative outcomes (e.g., rapid repeat pregnancy). We compared contraception methods among women with and without IDD in the year following a live birth.

Approach: We undertook a population-based study using Ontario health and social services administrative data. We identified women with (n=1,182) and without IDD (n=36,261) who had a live birth in 2002-2014 and were Ontario Drug Benefit recipients. The primary outcome was any contraception use in the year following the live birth. We examined non-surgical (oral contraception, injectable birth control, intrauterine device) and surgical contraception (tubal ligation, hysterectomy) as well as the specific approaches within these categories. Multivariable modified Poisson regression was used to assess risk, adjusting for age, parity, neighbourhood income quintile, rurality, physical and mental health, and continuity of primary care.

Results: Women with IDD were more likely than those without IDD to use any contraception in the year following a live birth (52.7% vs. 39.8%; aRR 1.29, 95% CI 1.17-1.42), including non-surgical (47.0% vs. 36.8%; aRR 1.23, 95% CI 1.13-1.34) and surgical contraception (9.8% vs. 6.7%; aRR 1.50, 95% CI 1.24-1.80). Higher rates of non-surgical contraception were driven by injectable birth control (19.0% vs. 9.5%; aRR 1.93, 95% CI 1.68-2.21). Oral contraception (23.7% vs. 21.8%) and intrauterine devices (9.4% vs. 9.1%) were no more common among women with IDD than those without. We could not examine specific approaches to surgical contraception due to small numbers of hysterectomies. Results were similar when analyses were restricted to women who were primiparous at the index delivery.

Conclusion: Because women with IDD have difficulty advocating for condom use, it is reassuring that their contraception rate is higher than that of women without IDD in the postpartum period. Women with IDD not using contraception may benefit from accessible reproductive health education to avoid rapid repeat pregnancy.

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ID: 313

Author: Ms. Natasha Burke

Title: Canadian costs and quality of life associated with different measures of rheumatoid arthritis severity

Type of Abstract: Oral

Objectives: To fill a gap in the literature, the objectives of this study were to determine health-related quality of life (HRQoL) and costs associated with different levels of rheumatoid arthritis (RA) severity in Canada.

Approach: Data on HRQoL, healthcare resource utilization and productivity losses were collected as part of 2-year double-blind randomized trial conducted at 6 rheumatologist's practices at McMaster University. Severity of RA was evaluated using the Disease Activity Score (DAS-28-4-ESR) and the Health Assessment Questionnaire (HAQ). HRQoL was measured using the Health Utility Index Mark 3 (HUI) and the EQ-5D. Direct and indirect costs were valued in 2016 dollars. Multiple imputations were used for missing data.

Results: Between September 2009 and March 2011, 158 patients (mean age: 57 years; 68% female; mean duration of RA: 5.3 years) contributed to the study for a total of 790 observations over time. The baseline mean DAS-28-4-ESR and HAQ scores were 4.3 and 1.1, respectively, indicating moderate disease severity. HRQoL decreased with disease severity while total costs increased with RA severity. For example, the mean HUI score was 0.829 for patients in remission compared to 0.437 for patients with severe RA as evaluated with DAS-28-4-ESR. The mean 6-month direct and indirect costs were \$3,410 for patients with remission and \$4,105 for patients with severe RA. Similar trends were observed when using the HAQ.

Conclusion: The results of this study provides, for the first time, costs and HRQOL per RA disease severity.

All Authors: Natasha Burke, Jean-Eric Tarride, James M. Bowen, Robert B. Hopkins, Daria O'Reilly, Jonathan D. Adachi

ID: 327

Author: Ms. Natasha Burke

Title: The costs associated with idiopathic pulmonary fibrosis in Quebec

Type of Abstract: Oral

Objectives: The objective was to estimate the economic burden of illness of idiopathic pulmonary fibrosis (IPF) using mandatory administrative databases for the province of Quebec.

Approach: We used multiple provincial databases from fiscal years 2006-2011 to capture acute institutional care, physician billings, prescription drugs, emergency visits, home care, and long-term care. Cases were identified from acute care with an ICD-10-CA diagnosis code of J84.1 and from physician billings with an ICD-9-CM code of 516.3. We used a broad definition that excluded cases with subsequent diagnosis of other interstitial lung diseases and a narrow definition that required further diagnostic testing prior to IPF diagnosis. Using a time series approach, an average cost per patient for each year pre- and post-diagnosis was estimated in 2016 Canadian dollars.

Results: Over the five year period, the 5 year incidence of IPF using a broad definition was 4,485 cases (22.5/100,000 per year) for women and 6,094 cases (31.1/100,000per year) for men. Overall, 10,579 and 8,683 satisfied the broad and narrow definitions, respectively. The average annual cost per patient 2 years prior to diagnosis was \$6,180 and costs rose 68% in the first year post-diagnosis. Average annual costs remained elevated in the years following diagnosis. The cumulative incremental costs relative to baseline was \$50,295 for a broad definition and \$52,973 for a narrow definition.

Conclusion: Incorporating multiyear annual cost prior to and after diagnosis results in higher estimate of burden of IPF compared to previous studies.

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ID: 472

Author: Dr. Lisa Calder

Title: Developing quality improvement indicators for a patient safety program in obstetrics

Type of Abstract: Oral

Objectives: We developed a set of quality improvement indicators, using internationally recognized healthcare frameworks, to support measurable improvements in obstetrical practice. We focused these indicators on areas of practice associated with increased risk of medico-legal risk.

Approach: We analysed medico-legal data from a national database to identify areas of greatest medico-legal risk in obstetrical practice. We conducted a literature search for pre-existing quality indicator frameworks. We selected relevant quality indicators that mapped to the identified high risk medico-legal areas and developed new potential measures as necessary. To ensure face validity of these measures, we conducted consultations with internal experts, and relevant external obstetrical quality organizations.

Results: We identified 5 areas of increased medico-legal risk in obstetrical practice among 686 closed cases (2010-2014). We found 5 published quality indicator frameworks; these focused on clinical and process of care (PoC) outcomes, but lacked balancing measures. We selected and developed 23 PoC, 14 clinical care and 3 balancing measures. For each high risk area, we identified the following measures: 15 for labour induction and augmentation of labour (e.g. proportion of protocol use as indicated); 13 for shoulder dystocia (e.g. frequency of shoulder dystocia risk assessment); 16 for assisted vaginal delivery (e.g. delay to delivery time); 10 for delayed decision to C-section (e.g. proportion of cases where both forceps and vacuum used for single delivery); and 8 for collaborative care (e.g. number of inter-professional huddles).

Conclusion: We developed a comprehensive but pragmatic list of quality indicators for 5 areas of medico-legal risk in Canadian obstetrical practice. These indicators can be used to facilitate future quality improvement work in obstetrics, with the complementary aim of reducing medico-legal risk.

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ID: 10

Author: Dr. David Campbell

Title: The association between financial barriers and adverse clinical outcomes among patients with cardiovascular-related chronic diseases

Type of Abstract: Oral

Objectives: We sought to confirm findings of previous self-report studies, by using linked survey and administrative data to determine, among patients with cardiovascular-related chronic diseases, if there is an association between perceived financial barriers and the outcomes of: (1) disease-related hospitalizations, (2) all-cause mortality, and (3) inpatient healthcare costs.

Approach: We used 10 cycles of the Canadian Community Health Survey to identify a cohort of adults with hypertension, diabetes, heart disease or stroke. Perceived financial barriers to various aspects of chronic disease care and self-management were identified from the survey questions. The cohort was linked to administrative data sources for outcome ascertainment (Discharge Abstract Database, Canadian Mortality Database, Patient Cost Estimator). We utilized Poisson regression techniques, adjusting for potential confounding variables (age, sex, education, multimorbidity, smoking status), to assess for associations between financial barriers and outcomes. In a subcohort we used gross costing methodology to estimate excess inpatient costs.

Results: We identified a cohort of 120,752 individuals over the age of 45 years with one or more of hypertension, diabetes, heart disease or stroke. One in ten experienced financial barriers to at least one aspect of their care, with the two most common being financial barriers to accessing medications and healthy food. Even after adjustment, those with at least one financial barrier had an increased rate of disease-related hospitalization and mortality compared to those without financial barriers with adjusted incidence rate ratios of 1.36 (95% CI: 1.29-1.44) and 1.24 (1.16-1.32), respectively. Furthermore, having a financial barrier to care was associated with 30% higher inpatient costs, compared to those without financial barriers.

Conclusion: After adjusting for relevant covariates, perceiving a financial barrier was associated with increased rates of hospitalization and mortality, and higher hospital costs, compared to those without financial barriers.

All Authors: David Campbell

ID: 119

Author: Dr. Christine Cassidy

Title: Fostering an Academic-Clinical Partnership to Design a High-Dependency Care Policy on a Pediatric Inpatient Unit

Type of Abstract: Oral

Objectives: Develop a partnership between clinicians, administrators, and researchers to conduct a series of knowledge translation (KT) activities to develop a high-dependency care (HDC) policy on a pediatric inpatient unit, including;

- Mapping current literature on pediatric acuity tools for allocation of HDC resources;
- Identifying the barriers and facilitators to implementing HDC.

Approach: A nursing team from the Medical/Surgical /Neurosciences Unit (MSNU) at the IWK Health Centre participated in a workshop series designed to strengthen clinicians' KT research skills. The team was assigned a KT research mentor to work with them to design a systematic KT process to address their policy change. The partnership endured beyond the workshop series and has led to a scoping literature review and barriers assessment. Five focus groups and eight interviews were conducted with key stakeholders. Focus groups and interviews were guided by the Theoretical Domains Frameworks, audio-recorded, transcribed verbatim, and analyzed using content analysis.

Results: An academic-clinical team used the Knowledge-to-Action Cycle as a framework to design a policy related to HDC on the MSNU. The integrated partnership faced many challenges, including differences in priorities, especially with regards to timelines. However, many benefits stemmed from the partnership, including the development of relevant practice change questions and research findings for the practice setting. From the scoping review, ten standardized pediatric acuity tools were identified. No tools were identified for use in allocating HDC in a pediatric setting. The stakeholder consultation participants (n=42) identified enhanced patient safety as a perceived facilitator of HDC, while the lack of guidelines for allocating HDC resources was seen as a potential barrier.

Conclusion: This project highlights the first steps in fostering an academic-clinical partnership to redesign nursing care in a pediatric setting. We will use these findings to develop an implementation strategy to overcome the barriers and enhance potential facilitators and implement and evaluate HDC on the MSNU at the IWK Health Centre.

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ID: 416

Author: Dr. Kathleen Charlebois

Title: Co-designing an optimal discharge process for internal medicine: understanding the challenges faced by clinicians and staff

Type of Abstract: Oral

Objectives: The objective for this study was to obtain clinical and staff perspectives about improving discharge processes on two internal medical wards in a large teaching hospital. The findings will contribute to an experience-based co-design initiative in partnership with patients, caregivers, and staff to identify priorities for change.

Approach: Experience-based co-design (EBCD) consists of two phases: discovery and co-design. In this presentation we focus on the overall methods for this study, and results of the discovery phase, which included interviews with the healthcare team. Semi-structured interviews were conducted with staff and clinicians to include a diverse sample of those involved in the discharge process. A conceptual framework comprising core aspects of the discharge process (planning, coordination, teaching and outcomes) guided data collection and analysis. Thematic analysis was then used to analyse the data. Major themes were developed by contrasting empirical data and the conceptual framework.

Results: Seventeen interviews were completed. Three overarching themes emerged from our analysis. First, discharge planning is an iterative, multidisciplinary process. However, breakdowns in communication occur as changes are not always communicated to staff and clinicians in a timely manner. Second, a reduced sense of control was expressed by staff at the point of discharge regarding placement. One contributing factor was thought to reside in some of the organizational change within their institution as well as across community-based institutions. Third, the need to address the lack of informal social support among certain patients, particularly those living alone and/or with cognitive difficulties, to help them cope following their discharge from hospital was highlighted as a major impediment to discharge. Readmissions tended to be attributed to such situations.

Conclusion: Iterative planning along with strategies to facilitate the coordination of patients' discharge from the internal medicine unit constitute efforts to ensure a flexible process that responds to patients' specific needs and preferences. Challenges persist for staff regarding autonomy and resources attributed to measures aimed at centralizing services.

All Authors: Kathleen Charlebois, Susan Law, Sylvie Lambert, Laurence Green, Sarah Elsayed, Robyn Tamblyn

ID: 431

Author: Dr. Dan Chateau

Title: Planning Geographic Based Primary Care Networks for Patients That Travel for Care

Type of Abstract: Oral

Objectives: My Health Teams is a primary care reform initiative of Manitoba Health in which providers and other professionals enter into formal agreements to work together. How many patients would be part of a network is not easy to define. Where patients live and where they receive primary care are not the same.

Approach: Using the Manitoba Population Research Data Repository, patients were allocated to physicians based on an accepted algorithm. The location of the physician clinic was compared to the geographic area where the patient resided, creating two cohorts (provider based vs residence based). The total populations for each cohort were calculated for each My Health Team in Manitoba, as well as their demographic characteristics, health care use and complexity, and measures of the social determinants of health (i.e., receipt of income assistance, involvement with child and family services, involvement with the justice system, newcomers to Manitoba).

Results: By requiring at least 3 visits in a three year period, the provider based cohort is smaller than the residence based cohort, with markedly fewer youth and younger males. Urban areas and their associated rural fringe see much more movement between areas when comparing the residence based cohort to the provider based cohort. Rural areas in close proximity to a large city, and where commuting is common, have patient populations that are reduced by as much as half, with patients allocated in large numbers to physicians in the adjacent urban areas. Urban core areas with large primary care clinics have a much different patient population in terms of age, SES, and other measures comparing the residence based cohort to the provider based cohort.

Conclusion: When planning for primary care, the patient population being considered may be very different depending on how it is defined. A population based on location of residence may provide a very different picture of care needs than one that is defined on where patients currently go to receive care.

All Authors: Dan Chateau, Alan Katz, Chelsey McDougall, Carole Taylor, Scott McCulloch

ID: 46

Author: Ms. Emily Clark

Title: Knowledge broker mentoring program builds capacity for evidence-informed decision making in public health

Type of Abstract: Oral

Objectives: The National Collaborating Centre for Methods and Tools (NCCMT) has successfully piloted a 16-month mentorship program to provide public health professionals with the knowledge, skills and tools needed to act as knowledge brokers within their Health Department and advance the uptake and use of research evidence in public health practice.

Approach: Senior management at each of five participating health units participated in a focus group that assessed the organizational culture in their health unit for evidence-informed decision making (EIDM) and identified targets for change to support EIDM.

Five or six front-line staff from each health unit completed a 16-month curriculum. This included two in-person workshops at McMaster University at program initiation and at 6 months. Staff also participated in monthly webinars and monthly phone and email support with a senior knowledge translation expert. Finally, a practice-based issue was identified by each health unit and a rapid review conducted by the participants.

Results: Strategies to improve the support and use of EIDM at the organizational level were identified and implemented. Knowledge broker trainees completed an EIDM Skills Assessment prior to and upon completion of the curriculum. Changes in performance were analyzed using a paired t-test (non-parametric test, Wilcoxon Signed Ranks Test). A statistically significant increase in EIDM knowledge and skill was observed following the program ($p < 0.017$); specifically, statistically significant improvements were observed regarding interpretation of quantitative findings from single studies ($p < 0.001$) and meta-analyses ($p < 0.001$).

Conclusion: Mentoring of knowledge brokers provides a statistically significant increase in skills for evidence-informed decision making in public health. This pilot program shows promise as an effective strategy to support and develop knowledge and skills in EIDM among public health professionals. Ongoing evaluation of this strategy is recommended.

All Authors: Emily Clark, Maureen Dobbins, Donna Ciliska

ID: 163

Author: Dr. Deborah Cohen

Title: Can High-Cost Spending in the Community Signal Admission to Hospital? A Dynamic Modelling Study for Urgent and Elective Cardiovascular Patients

Type of Abstract: Oral

Objectives: Studying care trajectories for high-cost patients with cardiovascular disease can shed light on the dynamic interplay between community-based and acute care along the care continuum, and provide information about spending signals in the community that can be used to predict difficult-to-anticipate future hospitalizations.

Approach: Using linked health administrative data in Ontario, Canada, 74683 incident cases with cardiovascular disease between 2009 and 2011 were included in the study. Patients were followed from 36 months (total study duration 2009-2014) until the first elective or urgent admission to hospital for a heart-related condition. We used an extended Cox model with time varying covariates and competing risks to study the way that high-cost spending in the community (e.g. monthly spending for general practitioners (GP) & specialists visits, home care, laboratory services and emergency department (ED) services) could be used to predict two mutually exclusive outcomes: time to urgent or elective hospitalization.

Results: Elective hospitalizations were most clearly signaled by high-cost spending in community-based specialist visits in the month prior to hospital admission (Hazard Ratio 9.0, $p < 0.0001$), while urgent care hospitalizations were signaled by high-cost spending across all community-based sectors (from GP and specialists visits, to home care visits, laboratory services and emergency department (ED) visits). Urgent hospitalizations were most clearly signalled by high-cost spending in ED services in the month prior to hospitalization (Hazard Ratio 2.6, $p < 0.0001$)

Conclusion: By studying the dynamic nature of patient care trajectories, community-based spending patterns can serve as signals in the system for urgent CVD patients for whom hospitalizations are otherwise difficult to anticipate. These signals may also point to optimal opportunities for intervention along the care trajectory in order to reduce the likelihood of future hospital admissions.

All Authors: Deborah Cohen, Walter Wodchis, Andrew Calzavara

ID: 113

Author: Dr. Shannon Collinson

Title: Identifying Causes of Funding Volatility in Ontario Hospital Funding Model

Type of Abstract: Oral

Objectives: Stability and predictability are vital to hospital funding. We investigate whether the HBAM funding formula or factors therein are possible causes of volatility and oscillation in funding allocation, year-over-year.

Approach: The HBAM funding formula was investigated in two ways. A one-factor-at-a-time sensitivity analysis was conducted on the explicit funding formula using FY2014/15 funding data of 69 HBAM hospitals. The second approach was a Monte Carlo simulation for a simulated hospital system, for a simplified version of the formula, to look at funding stability over time. Again, a one-factor-at-a-time approach was taken to determine the impact of the variables on the funding share. In both cases, the standard deviation of the HBAM share percent change was calculated for each factor analysed; the magnitude of the standard deviation determined how the factor.

Results: Both the one-factor-at-a-time sensitivity analysis of the model using the data and the one-factor-at-a-time analysis for the simulated hospital system in a Monte Carlo framework concluded that the percent Based Funded Expenses (%BFE) was the component of the model that caused the most variability.

Conclusion: There is no specific component of the HBAM funding formula that obviously drives oscillating behaviour in funding share. The largest effect is seen from changes in %BFE. From the Monte Carlo simulation, we can see that the effect is amplified over time.

All Authors: Shannon Collinson, Sping Wang

ID: 561

Author: Dr. Andrew Costa

Title: The DIVERT- CARE Catalyst Trial: Targeted Multi-disciplinary Chronic-Disease Management for Frail Home Care Clients

Type of Abstract: Oral

Objectives: Home care patients are a large population of vulnerable older adults who access care across settings, have very high rates emergency department use, and have relatively poor access to effective chronic disease management. We tested a multi-disciplinary intervention deployed with a case-finding tool to determine its 'real-world' effectiveness.

Approach: A cardio-respiratory disease management intervention was developed based on existing guidelines and deployed using the validated Detection of Indicators and Vulnerabilities of Emergency Room Trips (DIVERT) Scale. Intervention components were refined and delivered by a multi-disciplinary group of geriatricians, cardiologists, primary care providers, home care coordinators, nurses, and pharmacists. Components included: sustained self-care training, patient self-care resources, medication review, advanced care planning, clinician communication tools, and staff education. We conducted a non-randomized pragmatic cluster trial. The control group included patients who met the same eligibility in the six surrounding geographic areas. A city-wide control group was also included ad hoc.

Results: Data were analyzed based on intent-to-treat. One hundred home care patients from three geographic areas were enrolled for the intervention over 6 months. The hazard ratio (time to first emergency department visit) was reduced by 79% over the 7-month follow-up period. The absolute risk of an emergency department visit was reduced by 20%. Nursing costs increased by approximately \$4 per day, or approximately \$500 over the entire follow-up period. Interviews revealed most intervention components were well received. Results were similar with the ad hoc control group.

Conclusion: Targeted, multi-component cardio-respiratory disease management interventions are feasible and effective for home care clients. A large pragmatic cluster-randomized trial is now underway.

All Authors: Andrew Costa

ID: 215

Author: Ms. Élisabeth Côté-Boileau

Title: Toward a better dialogue between the policy and managerial levels of Quebec's healthcare system in times of reform: what about the in-between capacity?

Type of Abstract: Oral

Objectives: We described the alignment of views and capacities of the managerial level with policy intention and aspiration, through the implementation of Quebec community based primary health care (CBPHC) integrated care initiative for elders. The study was conducted in the context of a massive restructuration (2015) in the Quebec's healthcare system.

Approach: We conducted multiple case studies exploring the challenges face by organizations in the implementation of the CBPHC model for senior care, in three different regional Integrated Health and Social Services Centers in Quebec. We focus our analysis on four institutional work performed within organizations: conceptual, structural, operational and relational work. Data was collected through thirty-nine semi-structured interviews with key informants at the policy and managerial levels, and we also relied on secondary data (documents, evaluation reports, etc.). Data were analyzed using a conceptual Model of Forms of Institutional Work in the Enactment of Policy Reform (Cloutier et al., 2015).

Results: Results show that there seems to be a gap between a vision of service integration promoted by policy actors based on structural integration, compared to a vision based on collaboration among partners promoted by managers. Unshared vision creates a tension between prescribed modes of organizing by the central government, and desire to develop local arrangements to better adapt to regional and local contexts and contingencies. Indeed, models of organizing promoted by the Ministry of Health is divergent with the needs for operational adaptation to regional and local contexts, which reduces managers autonomy, while increasing their workload and performance expectations. The relative absence of relational capacities between these two levels of governance is a critical barrier to build a convergent vision and leadership to support CBPHC.

Conclusion: In a reform that includes, both the integration of governance structures and care services, our findings suggest that mediating mechanisms between central and local governance should be developed to consider the need for adaptive capacities in different territorial contexts. Management team-based networks and feedback mechanisms emerge from our empirical study.

All Authors: Élisabeth Côté-Boileau, Maxime Guillette, Jean-Louis Denis, Yves Couturier, Mylaine Breton, Louise Belzile

ID: 237

Author: Dr. Sonya Cressman

Title: How Canadian oncology drug prices measure up: A cross-country comparison

Type of Abstract: Oral

Objectives: Recent cross-country comparisons indicate that prices for oncology drugs can fluctuate dramatically. In this study, we assessed whether Canadian oncology drugs are over or underpriced relative to comparison countries, and if there are any identifiable market or drug-based characteristics that could explain instances of overpricing.

Approach: We used ex-factory prices to determine the percent price difference for 31 oncology drugs in Canada from the median prices in comparison countries from the Organization for Economic Cooperative Development (OECD). A parallel analysis was undertaken using prices from the US RedBook. We used an ordinary least squares regression analysis to test for dependence of percent difference on independent market variables (generic or orphan drug status, number and class of indications, time from market authorization), pharmaceutical variables (oral vs. intravenous delivery, tyrosine kinase inhibition and other mechanisms of action) and clinical benefit scores according to ASCO and ESMO evaluative frameworks.

Results: We found excessive pricing for 29% of the drugs under study with difference in prices that were up to 146% higher than the OECD median. Prices in the USA were unanimously excessive for all drugs under study. Using an ordinary least squares regression analysis, we found that Canadians pay less for generic and oral cancer drugs while Americans pay more for drugs that are approved for a greater number of oncology indications and less for drugs that also have non-oncology indications. We did not find a relationship between clinical benefit scores with either evaluative framework or for any variables related to the mechanism of action of the drugs, in either country.

Conclusion: Market effects such as generic availability and the existence of other indications appear to influence North American drug prices, rather than effects related to mechanism or clinical benefit. Generic cancer drug policy has protected against excessive prices in Canada.

All Authors: Sonya Cressman, Kelvin Chan , Nicole Mittmann, Stuart Peacock

ID: 308

Author: Ms. Lois Crowe

Title: A Cohort Study Examining Emergency Department Visits Among People Who Use Drugs in Ottawa, Canada

Type of Abstract: Oral

Objectives: The health of people who use drugs (PWUD) is characterized by multimorbidity and chronicity of health conditions, necessitating an understanding of their health care utilization. The objective of this study was to evaluate emergency department (ED) visits among a cohort of PWUD.

Approach: We used a retrospective observational study design between 2012 and 2013 in Ottawa, Ontario. The population was a marginalized cohort of PWUD (the PROUD study) for whom survey data was linked (n=663) to provincial health administrative data housed at the Institute for Clinical Evaluative Sciences. We constructed a 5:1 comparison group matched by age, sex, income quintile, and region. The main outcome was defined as having two or more ED visits in the year prior to survey completion. We used multivariable logistic regression analyses to identify factors associated with ED care.

Results: Compared to the matched cohort, PWUD had higher rates of ED visits (rate ratio 7.0; 95% confidence interval [95%CI] 6.5 to 7.6). After adjustment, factors predicting two or more ED visits were receiving disability (odds ratio [OR] 3.0; 95%CI 1.7 to 5.5) or income assistance (OR 2.7; 95%CI 1.5 to 5.0), injection drug use (OR 2.1; 95%CI 1.3 to 3.4), incarceration within 12 months (OR 1.6; 95%CI 1.1 to 2.4), mental health comorbidity (OR 2.1; 95%CI 1.4 to 3.1), and a suicide attempt within 12 months (OR 2.1; 95%CI 1.1 to 3.4). Receiving methadone (OR 0.5; 95%CI 0.3 to 0.9) and having a regular family physician (OR 0.5; 95%CI 0.2 to 0.9) were associated with lower odds of having more ED visits.

Conclusion: Improved post-incarceration support, housing services, and access to integrated primary care services including opioid replacement therapy may be effective interventions to decrease acute care use among PWUD, including targeted approaches for people receiving social assistance or with mental health concerns.

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ID: 217

Author: Dr. Ceara Cunningham

Title: IMPACTS OF ALTERNATIVE PAYMENT PLAN BILLING CLAIMS ON HYPERTENSION PREVALENCE, MORTALITY AND CARDIOVASCULAR DISEASE HOSPITALIZATION ESTIMATES IN ALBERTA, CANADA

Type of Abstract: Oral

Objectives: In Canada, there are concerns nationally that APPs are associated with decreased billing claims submission resulting in suboptimal data quality. We examined the impact of APPs on hypertension prevalence, mortality and cardiovascular (CVD) disease estimates in Alberta.

Approach: The following administrative databases were used for this study: Alberta Health Care Insurance Plan registry; discharge abstract data; physician claims and; vital statistics. Patients with hypertension (>20 years) between April 1, 2004 and March 31, 2009 were defined based on a validated algorithm. Hypertension cases were stratified into FFS and APP billings. Descriptive statistics, all-cause mortality and CVD-related hospitalizations were reported for both the FFS and APP groups.

Results: In total, 613,844 adult hypertensive cases were identified using the validated case definition. The majority of hypertension cases (99.4%) were identified using FFS billings. Among FFS, overall hypertension prevalence was 22.2% and the effect of APP billing estimates (0.13%) on hypertension prevalence was small. All-cause mortality (33.8/per 1000 person years, 95% CI 33.6-34) was higher for FFS than APP billings (19.0/per 1000 person years, 95% CI 16.6-21.8). A similar pattern was seen for CVD admissions.

Conclusion: The impact of non-submission of APP claims (i.e. shadow billings) on disease estimates and outcomes appear to be minor during the study periods examined, however variations in mortality and cardiovascular hospitalization rates warrant further investigation with updated data.

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ID: 384

Author: Dr. Liz Darling

Title: PERINATAL MENTAL HEALTH SERVICE DELIVERY MODELS: A SCOPING REVIEW

Type of Abstract: Oral

Objectives: Our objectives were to identify the state of the research evidence regarding the effectiveness and cost-effectiveness of, and patient satisfaction with, service models for perinatal mental health services, and to describe the characteristics of models that achieve favourable outcomes. Our focus was comprehensive service delivery models rather than singular interventions.

Approach: We conducted a scoping review using the methods described by Arksey & O'Malley. Two team members conducted literature searches using pre-determined search terms in three databases. Search results yielded: 707 publications in Medline, 3,485 in SCOPUS, and 3,645 in CINAHL. Abstracts for these publications were assessed based on pre-determined inclusion criteria establishing the population, intervention, comparison, and outcomes of interest. Both English and French publications were included. To verify their relevance, full publications were read for all abstracts that appeared to potentially meet the inclusion criteria. Descriptive data about each publication that was read was extracted and charted.

Results: 126 publications were fully read and charted. Only five publications reported outcomes related to effectiveness, cost-effectiveness, or patient satisfaction associated with perinatal mental health service models, thereby meeting our inclusion criteria. Two additional publications described innovative service delivery models without reporting outcome measures. Features of successful service delivery models identified in the five included studies were: community based clinics, multi-disciplinary teams, service providers in advocacy/advisory roles, education and outreach to primary care providers to build capacity in the primary care sector, multi-pronged approaches to maximize accessibility (e.g., easy referral processes, "no wrong door" approach, outreach to women's homes, activation of women to seek care, good connections to other services, established care pathways, etc.), and collaboration and partnership between existing service providers.

Conclusion: There is limited high quality research evidence to guide the organization and structure of perinatal mental health services to optimize clinical effectiveness, cost effectiveness, and patient satisfaction. Innovative service models should take into account known barriers and facilitators of timely access to appropriate care, and evaluation is warranted.

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Author: Dr. Aileen Davis

Title: Implementation of Good Life with Osteoarthritis in Denmark (GLA:DTM): group education and exercise for hip and knee osteoarthritis is feasible in Canada

Type of Abstract: Oral

Objectives: Current clinical practice does not reflect the use of evidence-based non-surgical management of hip and knee osteoarthritis (OA). We evaluated feasibility to implement a Danish group education and exercise program (GLA:DTM) in Canada, and outcomes for people with mild to severe hip/knee OA who were not surgical candidates.

Approach: Patients triaged to non-surgical management participated in two 1.5 hour education sessions and supervised, neuromuscular exercise twice a week for six weeks. Patients completed surveys pre-program and at 3 months follow-up. The primary patient outcome was the numeric pain rating scale (0-10); secondary outcomes included physical function and quality of life measured by the Knee/Hip Osteoarthritis Outcome Score, self-efficacy and number of days per week of > 30 minutes of moderate physical activity. We evaluated program fidelity through observation and conducted semi-structured interviews with therapists post-program. Participant perceived benefit, frequency of information use, satisfaction and willingness to pay were collected.

Results: 58/58 patients provided follow-up data. Mean age was 67 years; 78% were female. 86% had >high school education and 52% had BMI >25. There was a 40% improvement in pain (average decrease from 5 to 3 points) and 60% achieved a clinically important improvement. Statistically significant improvement also occurred in function, quality of life, and self-efficacy (12, 19 and 10% respectively). 24% reported increased physical activity. Program fidelity was confirmed. Therapists emphasized that rolling recruitment allowed appropriate supervision of 6-8 people per class and resulted in participants encouraging each other. Patients asked for future refresher sessions. 99% of participants indicated they benefited from and were satisfied with the program and 89% reported using the knowledge daily. 53% were willing to pay >\$200 for the program.

Conclusion: GLA:DTM was successfully implemented in the Canadian context. The results for participants in this pilot mirror those reported from >5,000 participants in the Danish GLA:DTM registry for 2015. Implementation of GLA:DTM Canada is now occurring in Ontario and Alberta with expansion to British Columbia and the Maritimes in 2017.

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ID: 18

Author: Dr. Claire de Oliveira

Title: The long arm of childhood mental health on adult outcomes

Type of Abstract: Oral

Objectives: Little research has examined how poor child health, in particular poor mental health, affects outcomes in adulthood, and the mechanisms through which this occurs. The objectives of this study are to examine and compare the impact of childhood mental health and other major childhood health conditions on early adult outcomes.

Approach: We obtained administrative health records for all children born between 1991 and 1996 (roughly 467,000) in Ontario, Canada's largest province, and observed their outcomes as young adults in 2014. Our child health measures were mental health (conduct disorder and ADHD), injuries (including poisoning), asthma, and other serious health problems (other major chronic and acute illnesses). Our early adult outcomes included poor physical and mental health, suicide attempts, and deaths. We made use of several econometric models to undertake our analysis, controlling for child characteristics and maternal physical and mental health.

Results: We found that all childhood conditions were predictive of the likelihood of poor adult physical health, although injuries had the largest impact. We found similar findings for adult mental health; however, mental health had the largest impact for this outcome. Injuries and in particular mental health were predictive of the likelihood of suicide attempts in young adulthood. Mental health, injuries and other serious health problems at older ages (only) predicted the likelihood of death in adulthood. Poor maternal physical health at all child ages and poor maternal mental health at older child ages were also significant predictors of the likelihood of poor physical health, poor mental health and suicide attempts in adulthood.

Conclusion: Childhood mental health is a significant determinant of poor physical and mental health, suicide attempts and death in young adulthood. Prevention and better care for children with mental health problems can help improve later life prospects. In addition, addressing maternal health problems can improve children's health outcomes in early adulthood.

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ID: 529

Author: Ms. Maaïke de Vries

Title: Reducing antipsychotic medication use among long-term care home residents: working together to bring about meaningful improvement

Type of Abstract: Oral

Objectives: The objective of this work was to support the long-term care sector (LTC) in reducing potentially inappropriate use of antipsychotic medication among LTC home residents through a cycle of measuring and reporting, developing evidence, setting quality standards, connecting and building capacity for improvement, and supporting implementation.

Approach: A public report was released in May 2015 describing variations in antipsychotic prescribing among LTC homes, and home level results were reported publicly the following year. LTC homes were encouraged to include reducing antipsychotic use as a priority in their 2016/16 Quality Improvement Plans (QIPs). To support quality improvement and build capacity, an audit and feedback tool was launched in September 2015 to provide practice level data to physicians and a community of practice was established to connect homes and partner organizations. A quality standard and implementation plan for behavioural symptoms of dementia was released in October 2016.

Results: A decrease in potentially inappropriate antipsychotic use among LTC residents continues to be observed in Ontario. 85% of all homes selected appropriate prescribing of antipsychotics as a priority in their QIP, and a benchmark was set to support the setting of targets for this indicator. Physicians expressed that the audit and feedback tool, combined with change ideas, has provided a valuable component to deprescribing and reducing medications. Over 80% of homes found the community of practice to be likely or very likely to influence their approach to quality improvement. The implemented standard supports residents and families to know what care to ask for, help providers to know what should be offered, and organizations to know what to measure and improve in caring for these patients.

Conclusion: In an effort to support the LTC sector to improve the quality of care for LTC residents, we continue to work together to bring about meaningful improvement through continued measurement and reporting, implementation of the quality standard, and strengthening the tools that enable quality improvement.

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ID: 169

Author: Dr. Avram Denburg

Title: The moral foundations of child health and social policy: A critical interpretive synthesis

Type of Abstract: Oral

Objectives: Most societies seem to attach special importance to children and childhood. However, little clarity exists on the values that guide child health and social policymaking. Our research maps the normative dimensions of child health and social policy to inform future analyses of policy for children on a range of issues.

Approach: We conducted a structured review of the academic and grey literature of the ethical and social values that inform health and social policies for children. Our search strategy followed a critical interpretive synthesis approach: in addition to tightly specified searches based on systematic review methodology, we undertook purposive and theoretical sampling of the wide-ranging literatures relevant to this question. Data analysis proceeded through four stages: coding of major concepts and values, development of synthetic constructs, interrogation of points of tension or discordance among constructs, and development of a theoretical framework from our main findings.

Results: Our review of the literature exposes a paucity of explicit analyses of the normative foundations of child health and social policy. Few formal attempts to name, interrogate, or prioritize select values are evident. Nevertheless, three central themes, each encompassing a few key values, emerge from the literature: potential, rights, and risk. A core set of foundational concepts also cuts across disciplines: well-being, participation, and best interests of the child inform debates on the moral and legal dimensions of a gamut of child social policies. Finally, a meta-theme around embedding emerges from the academic discourse, which gives form to the pervasive issue of a child's place, in the family and in society, at the heart of much social theory and applied analysis on children and childhood.

Conclusion: Foundational understanding of the dominant policy frames applied to children can enrich future analyses of social policies for children on a range of issues. Our proposed schema of values will help gauge social policy prescriptions not only by measures of outcome but also by evidence of their alignment with societal values.

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ID: 543

Author: Ms. Anna Dion

Title: Leveraging Diverse Knowledge Networks to Improve Perinatal Health Inequities in Canada

Type of Abstract: Oral

Objectives: To introduce a method that grounds published evidence with lived experience to address perinatal health inequities in Canada. Combining stakeholder perspectives with evidence from published literature will provide a more comprehensive understanding of how to improve outcomes. This pilot focuses on unmet postpartum care needs among immigrant and refugee women.

Approach: Three family physicians with obstetrics practices that include immigrant and refugee women in Montreal were asked to map the causes of unmet postpartum care needs. The physicians were asked to merge their ideas with a literature-based map and subsequently quantify causal relationships. Using a mathematical algorithm, we identified priority areas and the most effective pathways through the map to address unmet needs. Published evidence was updated with physician knowledge using Bayesian statistics, resulting in an aggregate knowledge network. We again identified priority areas and the most effective pathways through the combined knowledge network.

Results: The literature-based and physician knowledge networks independently identified being a migrant, not having enough information, low social support and postpartum depression as having important influence on women experiencing unmet postpartum care needs. Health care provider attitudes and behaviours and the lack of multi-disciplinary teams were additional priority factors identified by physicians. The pathway between being a migrant, having low social support and not having enough information was identified within the physician map as the most important pathway contributing to unmet postpartum care needs. Bayesian updating highlighted synergies between published literature and physician perspectives, as well as where they diverge, shifting some priority areas and indicating where greater emphasis on practice-based evidence may be beneficial.

Conclusion: This method offers a rigorous and transparent approach to building stakeholder voices into the evaluation and improvement of service delivery. Expanding this work by genuinely engaging stakeholders with diverse roles and experiences within the health system, including marginalized women, will better inform the development of recommendations to improve perinatal care.

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ID: 79

Autheur: M Mamadou Diop

Titre: Développement d'un algorithme pour la surveillance de l'incidence du cancer colorectal à Montréal avec les banques de données médico-administratives de la RAMQ

Type d'abstrait: Oral

Objectifs: Nous développons un algorithme pour identifier les cas incidents de cancer colorectal (CCR) en utilisant les banques de données médico-administratives et le fichier des tumeurs du Québec (FiTQ). Nous évaluons sa performance relative aux méthodes actuelles en termes de nombre total de cas identifiés et parmi différents groupes des patients.

Approche: L'étude porte sur 2 013 430 usagers montréalais des services de santé, de 2000 à 2010. Les codes de diagnostics du fichier de facturation des actes médicaux (SERVMED), du fichier des hospitalisations (MED-ÉCHO) et du FiTQ sont utilisés. Nous avons choisi, parmi trois algorithmes, le plus performant en termes de nombre de cas identifiés et de concordance des cas avec ceux du FiTQ. Il définit un cas lorsqu'une personne a un code CCR dans MED-ÉCHO ou deux codes dans SERVMED, séparés au minimum de 30 jours sur deux ans. Les cas additionnels sont évalués avec les codes d'actes de traitement dans SERVMED.

Résultats: Les résultats préliminaires indiquent que l'algorithme identifie 13 076 des 13 077 cas incidents de CCR du FiTQ. Il permet aussi d'identifier 4 040 cas additionnels dont 99,8 % ont reçu un traitement de CCR. Les pourcentages de femmes, des moins de 50 ans, et des plus favorisés socio-économiquement sont plus élevés dans les cas additionnels comparativement à ceux identifiés par le FiTQ. L'algorithme est probablement plus sensible aux cas diagnostiqués précocement que le FiTQ ne capte pas. Il y a également plus de chance que ces cas soient identifiés par dépistage que par la présence de symptômes. Le FiTQ sous-estime le fardeau du CCR, surtout dans certains groupes socio-économiques où un dépistage efficace pourrait avoir un impact important.

Conclusion: Notre algorithme détecte plus de cas de CCR que le FiTQ. Il donne un portrait plus exhaustif et les cas additionnels semblent avérés. Il pourrait servir de base de planification et favoriser une priorisation objective du futur programme québécois de dépistage du cancer colorectal (PQDCCR).

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ID: 549

Author: Ms. Chelsea Doktorchik

Title: Identifying Patient-Centred Quality Indicators: An Environmental Scan of Patient-Centred Care Measurement in Canada

Type of Abstract: Oral

Objectives: Patient-centred quality indicators (PC-QIs) allow healthcare systems to monitor and evaluate Patient-Centred Care (PCC) practices and identify needed improvements to healthcare quality. Despite this, standardized PC-QIs are not being implemented across Canada. Our objective was to understand whether Canadian provinces and territories measure PCC, and identify existing PC-QIs being used.

Approach: An online survey was developed to collect data on demographic characteristics for regional healthcare authorities and quality improvement organizations, PCC practices, PC-QIs used (if any), and methods of collecting, storing and reporting data. Survey respondents included provincial/regional quality improvement leads, identified through existing networks of key PCC stakeholders, an internet search, and use of snowball sampling. The survey was conducted from July-December 2016 using Survey Monkey. Data was analyzed and reported, based on frequency of responses and content analysis methods. PC-QIs identified were categorized according to the Donabedian framework for implementation and evaluation of health services and quality of care.

Results: We obtained completed surveys from 87% (26/30) of representative organizations/ agencies across Canada. The majority of healthcare authorities and quality improvement organizations served both adults and children, rural, sub-urban, and urban populations, and provided acute and community services, among others (e.g. long-term care facilities)). No data was available from Nunavut. 91% of the organizations practiced PCC, and of those participants, 74% reported use of PC-QIs/related measures. Most provinces (10/12) used PC-QIs/measures, with the exception the Northwest Territories and Yukon. Data collected to measure PCC was collected from patients, clinicians, families, and health administrators. Most PC-QIs/measures being used across Canada assessed aspects related to Donabedian components of “Process” and “Outcome,” including: communication; engaging patients and caregivers; continuity of care; access to care; and Patient-Reported Outcomes.

Conclusion: This environmental scan gave us greater insight into PCC measurement across Canada and helped us to identify PC-QIs currently being used. These results will help us to develop a standard set of PC-QIs that can be used by healthcare organizations to guide PCC measurement, and improve healthcare for Canadians.

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ID: 380

Author: Dr. Lisa Dolovich

Title: Synthesizing and translating primary healthcare research findings into policy options

Type of Abstract: Oral

Objectives: Ontario has gone through significant primary care reform, which has been studied by the Innovations Strengthening Primary Healthcare through Research (INSPIRE-PHC) Ontario-based program and network. This project describes a synthesis of INSPIRE-PHC findings, combining observational studies and trials of new practice and system level approaches along with policy implications.

Approach: A descriptive narrative synthesis of project findings was conducted. Summary findings from each project were generated according to 11 pre-specified themes: ehealth, equity, patient perspective, patient engagement, team based care, access, vulnerable populations, gender, health policy, improvement in health status, and health economics. Research leads worked iteratively in small or large groups and individually to identify, discuss and synthesize findings from across studies. Attention was given to similarities and differences between findings of different studies, patterns in the data, changes in findings over time and the meaning of the data within the context and history of the Ontario health system.

Results: Thirty-one projects were synthesized. Projects were anchored in primary care but connected to other sectors including community/home care, in-home care, speciality care, and hospitals. A variety of research methods were used with emphasis on use of health administrative data, randomized controlled trials, program evaluation, surveys, systematic reviews and qualitative analyses. Preliminary synthesis demonstrates that primary healthcare practice and policy innovations are making progress in improving access and system integration, encouraging team based care, engaging community, and improving quality of care. Data platforms are emerging to support population based planning and care delivery. Several promising approaches are being scaled regionally, but special consideration of urban/rural context is required. Many quality domains were targeted; improvements in one domain were often balanced by potential risks for other areas.

Conclusion: Research findings support health care reform that promotes the principles of primary healthcare and accompanying policies and practices. Comprehensive outcomes measurement in primary care is needed. Ongoing evaluation of new policy implemented structures or innovations emerging from decision maker priorities is essential to understanding progress towards health system reform goals.

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ID: 328

Author: Ms. Laura Dowling

Title: The Nova Scotia Health Atlas: A collaborative approach to evidence-informed decision making through health geography

Type of Abstract: Oral

Objectives: The Nova Scotia Health Atlas is a patient-centred, web-based interactive mapping tool that illustrates health care utilization and outcomes in the province of Nova Scotia. The objective of this application is to provide a comprehensive, cohesive visual representation of patterns of health care utilization and patterns to inform health decision-making.

Approach: In order to engage in prospective health systems planning and evidence informed decision-making, in Nova Scotia, meaningful geographic areas were developed for consistent use in research and evidence-informed decision-making. Community Clusters were created through a collaboration between the Nova Scotia Department of Health and Wellness, the Nova Scotia Health Authority, and the MSSU. A distinct advantage of Community Clusters are that they are composed of census dissemination areas (to the greatest extent possible) and nest within NS health planning geographies: Community Networks and Health Management Zones. This represents a common language for research and health system planners and policy-makers moving forward.

Results: The Atlas builds on existing reports generated by the MSSU, for example Small Area Rate Variation (SARV), which displays regional variation in the rate high cost users in small geographic areas throughout the province, measured by cost of physician and hospital inpatient services. Additional possible features of this application include geographic representation of the following topics:

- Rates and incidence of multi-morbidity;
- Spatial access to health services (primary to tertiary care);
- Provincial programs, such as Cancer Care and Diabetes Care; and
- Socioeconomic determinants of health.

Census dissemination areas, Community Clusters, Community Networks and Health Management Zones are the units of analysis and geographic display. We are presently at the stage of acquiring additional data sets. Collectively, this research will form the evidentiary basis for provincial evidence-informed decision-making around health service planning, management, and evaluation.

Conclusion: This tool will display indicators of population health and will assist policy-makers and health system decision-makers in planning and designing targeted health services, and facilitate the linking of health service cost information and health outcomes to social determinants of health. The Nova Scotia Health Atlas can be viewed at www.healthatlas.ca

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ID: 149

Author: Dr. Olivier Drouin

Title: Parents' willingness to pay for pediatric weight management programs

Type of Abstract: Oral

Objectives: Understanding parents' willingness to pay (WTP) for pediatric weight management programs could help inform implementation and funding for such programs. We aim to determine the extent to which parents are willing to pay for pediatric weight management programs and explore factors influencing their decision.

Approach: Participants were parents of 2-12 year-olds with BMI >85th percentile who participated in the Connect 4 Health randomized trial that included two intervention arms: enhanced primary care (EPC) vs enhanced primary care + individualized health coaching (EPC+C). At 1-year follow-up, we assessed parental WTP out-of-pocket for a similar program by self-report. We used multivariable log binomial regression to examine differences by intervention arm and explore individual and family-level factors associated with WTP. Among parents willing to pay, we used multivariable linear regression to evaluate the effect of those same factors on the amount they were willing to pay per month.

Results: Of the 721 participants enrolled in the trial, 636 (88%) parents responded, and 38% were willing to pay for the program (31% for EPC vs. 45% for EPC+C). In multivariable models, EPC+C parents were more likely to endorse WTP than EPC parents (Odds Ratio [OR] 1.38; 95% CI: 1.13, 1.69). Parents "very/somewhat satisfied" with either program (v. "very/somewhat dissatisfied"; OR: 6.68; 95% CI: 2.56, 17.42) were also more likely to endorse WTP. Children's baseline BMI z-score ($p=0.74$), amount of 1-year BMI z-score change ($p=0.49$), or other socio-demographic factors were not associated with WTP. Among the 240 parents willing to pay, the median (interquartile range) amount they would pay was \$25/month (\$20-50) and there were no significant differences between the intervention arms or other covariates.

Conclusion: Parents were more likely to endorse WTP for a pediatric weight management program that included individualized health coaching. Parental satisfaction with the program and Hispanic race/ethnicity were strong predictors of WTP, whereas baseline BMI, household income, and amount of BMI change were not.

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ID: 4

Author: Dr. Anna Durbin

Title: Health profiles and associated service use among adults with HIV and intellectual and developmental disabilities

Type of Abstract: Oral

Objectives: Due to the commonly held notion that individuals with intellectual and developmental disabilities (IDD) have low risk of HIV acquisition, we compared the prevalence of HIV infection among people with and without IDD. We also examined health status and health service use among the HIV-infected group.

Approach: We compared HIV prevalence between Ontario adults with IDD (n=64,008) and a 20% random sample of Ontario adults without IDD. Among the HIV-infected group, we compared adults with and without IDD in terms of comorbid chronic physical conditions and mental health (MH) disorders, as well as use of overall health services, MH services, and HIV-specific services.

Results: HIV prevalence per 100,000 population was similar for adults with IDD [163.38 (95% CI: 132.27,199.6)] and without IDD [172.45 (95 CI: 167.48,177.53)]. Among the HIV-infected group, those with IDD had more comorbid chronic physical conditions and MH disorders. They also had greater use of overall health services and MH services. However, use of HIV-specific services was similar for those with and without IDD.

Conclusion: A similar prevalence of HIV among adults with and without IDD accentuates a need for individuals with IDD to be included in HIV prevention efforts. High comorbidity and health service use among people with HIV and IDD highlights a need for comprehensive and coordinated care for this complex patient group.

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ID: 557

Author: Dr. Cathy Eastwood

Title: Identification and Reliability of Hospital Chart Quality Indicators

Type of Abstract: Oral

Objectives: There is no standardized measure to assess quality of documentation in hospital charts, yet hospital data is reported and compared locally, nationally, and internationally. Documentation quality affects the quality of data used for research or administrative data coding. The objective was to test indicators for scoring hospital chart quality.

Approach: A literature review revealed research-based indicators that addressed both specific and general aspects of hospital chart data. We identified six quality indicators: chart completeness, organization, legibility, clearly recorded chief complaint, thoroughness of discharge summary, and overall chart quality. Two descriptive indicators (percent of variables found in electronic data, and the time to review the chart) were included. As part of an ethically approved study involving 3000 randomly selected Calgary hospital admissions in 2015, six nurses scored chart quality on a scale from 1-100 for 8 indicators, with poor and high quality defined.

Results: 1780 charts were reviewed; 49 were scored by three reviewers for inter-rater reliability. Of the chart quality indicators, legibility was scored lowest (80%, IQR=16), and the indicator for clearly recorded complaints scored the highest (94%, IQR=10). Comparison of overall chart quality between hospitals revealed a slightly lower overall score for one hospital (85%, IQR=13), while two other hospitals had similar scores (89%, IQR=10 and 89%, IQR=13). Using the proportion of agreement to assess reliability, we found that 14.3-26.5% of the charts were assigned to the same quality category by all three reviewers, and 40.4-51.1% were assigned to the same quality category by two reviewers.

Conclusion: A comprehensive method for measuring hospital chart data quality is needed. The instrument tested in this study produced low reliability scores indicating variation between reviewers and requires further refinement. Future research will include concrete criteria for scoring each indicator to improve reliability.

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ID: 67

Author: Ms. Gillian Elliott

Title: Active change interventions to reduce low-value healthcare practices: a scoping review

Type of Abstract: Oral

Objectives: There is recognition that overuse of procedures, testing and medications strains the healthcare system financially and can cause unnecessary stress and harm for patients. The purpose of this scoping review was to identify and characterize studies that used an active change intervention to reduce or eliminate a low-value healthcare practice.

Approach: Research suggests that passive interventions, such as the publication of guidelines, are often not sufficient to change behaviour and that active change interventions are required to implement significant, sustained practice change. We conducted a review of English articles using MEDLINE, EMBASE, CINAHL and Scopus databases using key search terms, including but not limited to de-adoption, de-implementation, low-value and Choosing Wisely. The database searches identified 977 articles (after duplicates were removed) for which the titles and abstracts were screened for inclusion; 39 items were selected for full text review. Twenty articles were excluded upon further review.

Results: Nineteen studies met the inclusion criteria. Sixty-three percent of the studies (n=12) reported a reduction in the target low-value practice. The majority of studies cited Choosing Wisely recommendations as the rationale for pursuing a practice change (n=16). Half of the studies reported on efforts to reduce low-value practices listed on the Choosing Wisely International Top 10 List. Two-thirds of the studies targeted diagnostic imaging or screening, and a third targeted therapeutic practices. The active change interventions used 14 different strategies to reduce low-value practices, with education the most commonly used, which were implemented at the individual and/or organizational level. Eleven studies employed single interventions and 8 studies employed multifaceted interventions. In eighty percent of the studies (n=15) interventions were targeted to change healthcare providers' behaviour.

Conclusion: Our findings indicate that single, organizational level interventions and multifaceted interventions implemented at both the individual and organizational levels are most effective. Single interventions implemented at the individual level were least effective at reducing the target low-value practice. These results can provide insights for future primary research in de-implementation.

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ID: 87

Author: Dr. Gayathri Embuldeniya

Title: Spreading integrated funding models: Lessons from six Ontario pilot programs

Type of Abstract: Oral

Objectives: Faced with rising costs and healthcare system inefficiencies, the Ministry of Health and Long-Term Care (MOHLTC) invited proposals for integrated funding models (IFMs) across Ontario. Six programs were selected, and a low-rules environment established to enable implementation diversity and explore what worked best to inform future IFM spread.

Approach: We present results from the qualitative component of a mixed-methods provincial evaluation. We sought to identify factors key to program success. IFM programs were established based on the premise that hospital and community organizations working together to provide seamless care would result in better patient outcomes and cost savings. As such, multiple organizations were typically involved in each program, with programs featuring heterogeneous patient populations. Forty-eight stakeholder interviews were conducted to capture this diversity, including practitioners, organization leaders, and policy informants. Thematic analysis was performed on anonymized transcripts coded with NVivo. A realist framework informed analysis.

Results: Six key factors that impacted program function were identified: 1) program structure (decision-making about clinical condition, program scale and organization size), 2) the quality of and ability to leverage existing partnerships, 3) trust-building, 4) thoughtful model development, 5) clinician engagement, and 6) information-sharing. The scale and spread of these models will also be contingent on stakeholders' ability to work through challenges related to differences in motivation and discrepancies with existing funding models, while negotiating the larger cultural shift of working across the traditionally siloed acute and home care sectors.

Conclusion: These six factors manifested in unique local contexts, where they interacted with already existing organizational cultures so that each model had a unique configuration of integration-generating mechanisms. While there may be uncertainty about their generalizability, they had observable impacts, and therefore provide a productive starting point for discussing IFM spread.

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ID: 394

Author: Mr. Farhat Farrokhi

Title: A Comparison of Administrative Data versus Surveillance Data for Hospital-Associated Methicillin-Resistant *Staphylococcus aureus* Infections in Canadian Hospitals

Type of Abstract: Oral

Objectives: Administrative data may complement surveillance programs by providing a standardized approach to reporting/monitoring antimicrobial resistant infections across Canadian hospitals and allowing for inter-facility comparability of risk-adjusted rates. This study assessed the accuracy of administrative data in capturing in-hospital infections due to methicillin-resistant *Staphylococcus aureus* (MRSA) in comparison to surveillance data.

Approach: A retrospective study of all in-hospital MRSA infections was conducted for a 12-month period, for 217 acute Canadian hospitals (124 in Ontario, 93 in Alberta), using administrative data and compared against surveillance data. Hospital-associated cases for MRSA bloodstream infections in Ontario, and for all body site infections in Alberta were identified. Pearson correlation coefficients were used to compare the number of hospital-level MRSA cases between administrative versus surveillance datasets. The correlation of all body site infections versus MRSA bloodstream infections was also assessed within the Ontario administrative data.

Results: There was a strong correlation ($r=0.79$, $p < 0.0001$, 95% CI [0.72, 0.85]) between the administrative and surveillance databases for hospital-level MRSA bloodstream infections in Ontario. A stronger correlation ($r = 0.92$, $p < 0.0001$, 95% CI [0.88, 0.94]) was observed for Alberta, between all body site MRSA infections in the administrative and surveillance data. Within the Ontario administrative data, a strong correlation ($r=0.95$, $p < 0.0001$, 95% CI [0.93, 0.96]) was observed between in-hospital MRSA bloodstream and all body site infections for the 124 Ontario hospitals. A total of 334 all body site MRSA infections were identified from the Ontario administrative data, representing an additional 166 infections when compared to MRSA bloodstream infections only.

Conclusion: Administrative and surveillance datasets identify comparable hospital-level counts of MRSA infections. The "In-hospital Infections due to MRSA" indicator (developed using administrative data), will be publicly available in 2017 and will complement surveillance programs by creating a standardized definition for measuring these infections and monitoring/comparing standardized rates across Canadian hospitals.

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ID: 226

Author: Mrs. Julie Fiset-Laniel

Title: Hospitalization for Ambulatory Care Sensitive Conditions Across Neighborhoods in Montreal and New York: A Comparative Analysis

Type of Abstract: Oral

Objectives: High hospitalization rates for ambulatory care sensitive conditions (ACSC) often reflect barriers to ambulatory care. We compare ACSC hospitalization rates between the islands of Montreal and New York (NY), two cities with comparable populations. We then document the association between neighborhood poverty levels and ACSC hospitalization rates in both cities.

Approach: We calculate age-standardized ACSC hospitalization rates using discharge data from 2011-2013 for NY and admissions data (2007/8-2009/10) for Montreal. Neighborhood poverty (percent below median income) is from national surveys in each country. We use multivariate logistic regression to estimate, separately for each city, the correlation between neighborhood poverty and the odds of hospitalization for ACSC. The first set of regressions controls only for independent variables that are comparable across cities (age, sex, number of diagnoses, etc.). The second set of regressions includes larger sets of potential confounders differentially available in each city (e.g., race in NY and morbidity in Montreal).

Results: Crude ACSC hospitalization rates were more than twice as high in NY as Montreal (12.6 vs. 4.8 per 1000 population). Crude rates varied substantially by neighborhood poverty in NY, but were fairly constant in Montreal. The adjusted odds of ACSC hospitalization were much higher in the poorest quartile of neighborhoods in NY, and the gap declined with the addition of NY-specific confounders (ORs 1.76; 1.33). In Montreal, higher odds in the poorest quartile neighborhoods emerged after controlling for confounders (ORs 1.18, 1.22). In both cities, men, older, and sicker adults had higher odds of ACSC hospitalizations. In NY, those without private insurance and who are non-white had higher odds. In Montreal, those with heart failure and low-to-moderate predicted health care use had higher odds.

Conclusion: Our findings are consistent with the hypothesis that universal insurance coverage contributes to lower ACSC rates in Montreal. However, other important factors may include fewer acute hospital beds per capita and more redistributive social and tax policies in Canada compared to the United-States.

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ID: 421

Author: Dr. Kathryn A. Fisher

Title: Comorbidity and healthcare service use in stroke survivors stratified by age and sex

Type of Abstract: Oral

Objectives: Among stroke survivors, comorbidity burden is high and is linked to higher healthcare service use. However, little is known about age and sex differences in comorbidity in this population. This study reports on age and sex differences in comorbidity among stroke survivors and how these relate to healthcare service use.

Approach: This retrospective cohort study identified community-dwelling individuals aged >65 years on April 1, 2008 who had experienced a stroke at least 6 months prior using administrative data from Ontario, Canada. The cohort was stratified by age and sex and the existence of 14 comorbid conditions was determined using algorithms validated for use with administrative data. The prevalence of comorbid conditions was determined for each age/sex stratum and level of comorbidity (measured by number of conditions), and was explored in relation to use of specific healthcare services (general practitioner and specialist visits, emergency department visits, and hospital admissions) over one year.

Results: The cohort consisted of 26,673 stroke survivors, with 50% being male. The age distribution was 32% under 75, 46% between 75 and 84 years old, and 22% above 85 years old. The sex distribution changed with age. The under 75 age group was 42% female, rising to 62% in the over 85 age group. The comorbidity burden was high, with 65% having 2-4 comorbidities and 30% having 5 or more. For both sexes, the number of comorbid conditions increased with age. Utilization of all services increased with number of comorbid conditions for both sexes. No significant differences in utilization were observed across the range of health care services when the sample was stratified by age and sex.

Conclusion: While healthcare utilization is thought to increase with age, this relationship was reduced substantially when comorbidity burden was held constant. This pattern was similar across sexes. These results suggest that comorbidity burden is an important predictor of health service use, while age and sex play a lesser role.

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ID: 183

Author: Ms. Stacey Fisher

Title: Dementia Population Risk Tool (DemPoRT): Predictive Algorithm for Assessing Dementia Risk in the Community Setting

Type of Abstract: Oral

Objectives: Existing population projections of dementia prevalence are simple and have poor predictive accuracy. The Dementia Population Risk Tool (DemPoRT) seeks to predict the incidence of dementia in the population setting using multivariable modeling techniques.

Approach: Projection of disease in the population typically does not consider potential confounding and interaction, and assumes that risk factors will remain stable over time. DemPoRT overcomes these limitations and includes a more comprehensive list of predictors than existing algorithms. Incident dementia among elderly Ontario respondents of the 2001-2007 Canadian Community Health Surveys (CCHS) was identified through individual linkage of survey respondents to population-based databases. Using time of first dementia capture as the primary outcome and death as a competing risk, sex-specific proportional hazards regression models were estimated.

Results: The derivation cohort consists of 47,776 survey respondents, of which 4,867 (10%) were identified as having incident dementia. The pre-specified model includes 32 predictors (63 degrees of freedom) capturing variables on sociodemographics, general and chronic health conditions, health behaviors and physical function. Preliminary results suggest that the model is well-calibrated and has good discrimination. Diabetes, stroke and diet were strong predictors of dementia for males and females. Body mass index and needing help managing finances were also predictive in females, while self-rated health was predictive in males. After model reduction, the contribution of health behaviors to dementia incidence will be assessed and future prevalence of dementia in Ontario will be projected. DemPoRT will be validated using the 2008/09 CCHS in Ontario.

Conclusion: Health system planning in anticipation of growing dementia prevalence requires reliable projection estimates. DemPoRT will be the first and most comprehensive population-based algorithm for predicting dementia incidence, with the potential to improve the ability to answer key policy questions with respect to the future burden of dementia in Canada.

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ID: 468

Author: Dr. Randy Fransoo

Title: Aggressive chronic disease management program reduces mortality, morbidity and service use in Peripheral Artery Disease patients

Type of Abstract: Oral

Objectives: Peripheral artery disease (PAD) is increasing in prevalence, and carries significant risks for amputation, heart disease and stroke. The objective of this study was to evaluate the effectiveness of an aggressive health maintenance program for reducing health service use, amputations, and mortality.

Approach: This study used a combination of data sources: a detailed clinical database of patients involved in the program was linked into the individual-level, de-identified Data Repository housed at the Manitoba Centre for Health Policy. “Intention to treat” and “as treated” groups were compared to matched controls to assess program effectiveness. Changes in intermediate outcomes were assessed using the program database; other outcomes were identified in administrative data. Rates of physician visits, hospitalizations, days used, and prescription drug use were compared using Poisson models. Major lower limb amputations and mortality were analyzed by Cox proportional hazards regression.

Results: Program participants had significantly better intermediate and long-term outcomes. Blood pressure levels, statin usage, antiplatelet therapy and ankle-brachial indices were all significantly improved ($p < 0.05$). Program participants were less likely to start Dialysis (0.6% vs 2.2%; $p < 0.0002$), hospitalized less frequently (378 vs 416 per 1000 person-years; $p < 0.0001$), and for shorter stays when hospitalized (3.7 vs 5.4 days, $p=0.0014$). Their adjusted mortality rate was significantly lower than the control group (aHR = 0.79; $p < 0.0001$). Amputation rates also appeared to be lower, but this difference did not reach statistical significance (aHR = 0.85; $p = 0.31$).

Conclusion: The program’s aggressive management of risk factors resulted in significantly better intermediate and long-term patient outcomes. It was also associated with lower rates of health service use. Savings from reduced hospital usage alone would cover the cost of program operations, but have not provided sufficient motivation to continue the program.

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ID: 77

Author: Ms. Sarah Gallant

Title: Mothers' Care-Seeking Journeys for Daughters with Depression

Type of Abstract: Oral

Objectives: The objectives were to explore Atlantic Canadian mothers' experiences seeking mental health care and support for their adolescent daughters' depression, to illustrate the power dynamics that mothers face in the system while seeking care, and to understand how support for mothers of youth with depression can be improved.

Approach: The depression care-seeking journeys were depicted through the narratives of seven mothers whose eight daughters accessed the provincial mental health system and obtained a diagnosis of depression. Qualitative semi-structured interviews and visual patient journey mapping methods guided data collection and analysis to assist in understanding mothers' experiences in the mental health system, education system, and family life. The interview transcripts and journey maps were analyzed using narrative and thematic analysis, where narrative summaries and theme webs were created and analyzed in combination with the participants' journey maps.

Results: The three overarching themes in the care-seeking journeys were marginalization and loss of control, becoming empowered, and hope for the future. Participants' narratives and visual maps displayed fragmented journeys and exemplified power struggles in their interactions with people in the mental health system, education system, and family life. Examples of marginalization and loss of control included receiving blame, being ignored, and lacking support and guidance. Examples of becoming empowered included questioning professional treatment, educating and advocating for daughters, and understanding daughters' mental health needs through experience. The final theme of hope for the future consisted of mothers' main recommendations for improving and facilitating depression care-seeking journeys through the system.

Conclusion: The depression care-seeking journeys of mothers and daughters in Atlantic Canada could be improved by enhancing the continuity of mental health care, increasing collaborative team-based supports within and between systems, and strategizing quality mental health education and accessible service navigation resources for parents, educators, and health providers.

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ID: 420

Author: Dr. Rebecca Ganann

Title: Early patient and public engagement strategies in the Community Assets Supporting Transitions study: Building a foundation for collective impact

Type of Abstract: Oral

Objectives: Engagement of older adult patients, caregivers, and communities is a critical foundation for successful tailoring and implementation of the Community Assets Supporting Transitions (CAST) intervention study. This presentation will frame CAST's early engagement strategies within the context of the study's broader collective impact model (collaborative partnerships in research).

Approach: The CAST study will examine implementation and impact of a hospital-to-home support program for older adults with depressive symptoms and multimorbidity. Early engagement activities involved hosting community forums and meetings with key informants in three diverse Ontario communities. Across sites, these activities engaged over 70 community members including patients, caregivers, service providers, administrators, community agencies, and advocacy groups. These early engagement activities helped identify local hospital-to-home transitional care issues. A Patient and Public Engagement training workshop was also held to inform engagement efforts and develop shared understanding of effective patient and public engagement strategies amongst CAST's academic and patient/caregiver co-researchers.

Results: CAST's early engagement activities have established a foundation for the next steps in our collaborative patient-oriented partnership model, which will involve adapting, implementing, and testing a community-based transitional care intervention in three communities. The community forums and key informant meetings provided valuable insights into existing gaps, burden, opportunities, and local issues related to hospital-to-home transitional care for older adults. Engagement of patients/caregivers helped to adapt the intervention and ensure a patient-centred lens to meet the needs of CAST's target population. Many of the community forum participants have committed to ongoing engagement in subsequent study phases. Strategies to engage and support patients/caregivers in the research process will be tailored to individual needs. A comprehensive patient engagement strategy will support implementation, evaluation, and scale-up of the intervention.

Conclusion: Early patient and public engagement in CAST has provided valuable insight into existing community assets, gaps, and local contexts, which are necessary for subsequent study implementation. Early partnership building is critical to engage study communities in CAST's collective impact model and understand factors influencing successful implementation of the CAST program.

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ID: 225

Author: Ms. ISABEL GARCES DAVILA

Title: Access to Mental Health Services among Youth: An Analysis of Individual and Ecological Determinants

Type of Abstract: Oral

Objectives: The objective of this study was to identify determinants of youth access to professional mental health services (i.e., types of professionals consulted and hours of consultation). This study followed an ecological approach, examining the contribution of individual and neighborhood-level variables to explain access to mental health services.

Approach: Data from the Canadian Community Mental Health Survey (CCHS-MH; (2011-2012) and the Postal Code Conversion File Plus (PCCF+) were linked and analyzed to examine individual (e.g., education, perceived need for care) and neighborhood (e.g., community size)-level determinants of access to mental health services among youth with mental disorders (i.e., depressive disorders, substance use disorders, and comorbid disorders). Specifically, the data were weighted based on the Canadian population of individuals aged 15 to 24, and a series of sequential binary and multinomial logistic regression analyses were conducted.

Results: Results indicated that individual determinants, such as living in households with high income, perceiving a need for care, and having a social support system were associated with greater access to services among youth. Among neighborhood-level determinants, living in urban areas enabled access to services for youth. In addition, findings indicated that having a family doctor increased the likelihood of consulting mental health services by 71%. Females were 3 times more likely to consult services from 2 to 5 types of professionals (e.g., family doctors and psychiatrists) than males. Consistent with the study's hypothesis, findings demonstrated that 25% of youth with comorbid disorders received 11 or more hours of consultation, compared to 9% of youth with substance use disorders.

Conclusion: Using a nationally representative sample of adolescents and young adults to examine access to mental health services, our results provide information on estimates of access to mental health care following individual and ecological variables. Implications and future directions will be discussed.

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ID: 364

Author: Ms. Stephanie Garies

Title: Validated Case Definitions using Linked Electronic Medical Record (EMR) and Administrative Databases: a systematic review

Type of Abstract: Oral

Objectives: As large, linked health data become more widely used for research and health system improvement, it is important to classify disease cases accurately and efficiently. The purpose of this systematic review is to identify validated case definitions available for use in health databases linked with electronic medical record data.

Approach: A systematic review was conducted through searches in MEDLINE Ovid, PubMed and EMBASE for studies published between 1970 and 2015. The search included studies that reported on a computerized case definition for a specific disease/illness for use in linked administrative data sources and primary care electronic medical records (EMRs), and reported validity metrics (i.e. sensitivity, specificity, positive predictive value). Abstracts and full-text articles were screened by two independent reviewers. The quality of each study was evaluated using a modified version of the QUADAS tool (used for assessing quality in primary studies of diagnostic accuracy).

Results: Our search strategy identified 2669 citations, of which 16 studies were include in the final systematic review. The majority were published between 2012-2014 (56%) and all were located in the United States in various settings (i.e. managed health organizations, federal health service). A total of 14 acute and chronic conditions had case definitions identified, with multiple definitions for diabetes (n=3) and hepatitis B (n=2). All studies used International Classification of Disease version 9 (ICD-9) codes as criteria for the case definition; many also included laboratory values and medications. The majority of studies used positive predictive value (PPV) to assess validity (94%). Studies were found to be of good or very good quality (69%), though case definitions could have been reported in more detail to facilitate replication.

Conclusion: This review provides a reference source for case definitions together with their performance metrics and can identify gaps where new or improved case definitions are needed. However, generalizability is limited due to variable quality of constituent studies and the fact that they derived from American health system databases.

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ID: 471

Author: Dr. François-Pierre Gauvin

Title: What do we need to know about medical aid in dying? Preliminary findings from deliberative forums in Quebec

Type of Abstract: Oral

Objectives: In 2014, Quebec adopted Bill 52 allowing for and outlining under which conditions terminally-ill patients can request medical aid in dying. In the spring of 2016, two deliberative forums brought together members of the public (including patients and caregivers) and healthcare professionals to explore their information needs on this issue.

Approach: A one-day face-to-face forum and a three-week online forum were hosted. Participants were recruited via calls for applications sent to citizen, patient and professional organizations, mass mailing listservs and social media. A purposeful sampling strategy ensured that participants reflected diversity in terms of age, gender, socioeconomic status, expertises, and perceptions about medical aid in dying. Overall, 43 participants took part in the face-to-face forum and 42 in the online forum (60% being members of the public). A series of videos and scenarios were used to prompt deliberations. A thematic analysis was conducted to identify patterns in the data.

Results: Participants commonly agreed that there were very limited and fragmented initiatives to inform the public and professionals about medical aid in dying. This resulted in an asymmetry of information between the public and professionals, as well as among professionals. Yet, members of the public and professionals identified 21 common information needs, which go beyond the legal and medical dimensions of medical aid in dying (e.g., how to interpret eligibility criteria; what support patients, caregivers and professionals will receive throughout the process; what are the potential risks; how to maintain privacy of requests; how to humanize the process). Participants identified key information needs at specific stages of medical aid in dying (from formulating a request to documenting and evaluating practices).

Conclusion: The forums provided key insights to strengthen the capacity of citizens, patients, caregivers and healthcare professionals to engage in conversations about medical aid in dying. They also revealed how critical it is to have a common information base to support meaningful partnership at the end of life.

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ID: 290

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Titre: Conditions d'adoption du dossier de santé électronique personnel pour la gestion des maladies chroniques en première ligne au Québec : Perspectives professionnelle et organisationnelle

Type d'abstrait: Oral

Objectifs: Cette étude visait à décrire et analyser, selon les perspectives des professionnels et des gestionnaires, les facteurs influençant l'adoption du dossier de santé électronique personnel (DSE-P) par les professionnels pour le suivi et la gestion des maladies chroniques en première ligne de soins au Québec.

Approche: Nous avons mené une étude qualitative dans le cadre d'un projet d'expérimentation du DSE-P au Québec. Les entrevues individuelles semidirigées réalisés auprès de professionnels et gestionnaires directement impliqués dans l'implantation du DSE-P dans une organisation de première ligne. Les entrevues sont enregistrées et transcrites verbatim avant l'analyse de contenu, type thématique. Nous avons préconisé une analyse inductive-déductive, itérative et très flexible. Notre recherche s'inscrivant dans un contexte d'implantation, nous avons étendu notre analyse aux concepts du cadre proposé par Holahan et al. (2004), liant l'efficacité de l'implantation et l'adoption aux antécédents organisationnels dans le contexte précis d'implantation de système d'information.

Résultats: Nous notons l'ouverture des professionnels et organisations de première ligne aux approches innovantes d'optimisation de la gestion des maladies chroniques. Six thèmes principaux regroupant des facilitateurs ou des barrières à l'adoption et l'intégration du DSE-P dans la pratique ont été identifiés : un contenu pertinent complémentaire, une communication bidirectionnelle soutenant le développement du partenariat patient-professionnels, le support et le leadership des cliniciens, la maturité et l'intégration avec les systèmes disponibles et l'adaptation au contexte de la pratique clinique. Les précurseurs organisationnels identifiés réfèrent à l'ouverture de l'organisation envers l'innovation, aux valeurs des participants, mais surtout aux pratiques mises en place pour supporter l'adoption du DSE-P aussi bien par les professionnels que leurs patients. Aussi, le coût est un enjeu important à l'implantation du DSE-P.

Conclusion: Le DSE-P est un outil prometteur pour soutenir un rôle plus actif des patients atteints de maladies chroniques dans leurs soins en collaboration avec l'équipe clinique. Cependant, plusieurs facteurs individuels, organisationnels, liées aux patients utilisateurs et à la technologie offerte déterminent l'adoption et l'intégration de l'outil dans la pratique clinique.

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ID: 550

Author: Dr. Laurie Goldsmith

Title: Understanding cost-related non-adherence to prescription medicines over time from the patient's perspective

Type of Abstract: Oral

Objectives: While prior work has indicated that cost-related non-adherence (CRNA) to prescription drugs exists for many Canadians, we know little about the experience of patients who report CRNA. We conducted the first (to our knowledge) qualitative examination of CRNA to provide an in-depth understanding of this phenomenon from the patient's perspective.

Approach: Twenty-eight adults with experience with CRNA were recruited from Vancouver and Toronto. We conducted two semi-structured, in-depth interviews with each participant, with Interview 2 occurring approximately six months after Interview 1. Participants were purposefully recruited through posters in community and health care settings, and online and newspaper advertisements. Our initial sampling criteria used key characteristics previously found to influence CRNA; we refined our purposeful sampling criteria as we learned more about CRNA from the patient's perspective. We used our CRNA typology developed through framework analysis from earlier work on this project to characterize each individual's experience over time.

Results: Most changes in patients' CRNA experiences between interviews resulted from one or more changes in a patient's drug insurance coverage, financial flexibility, the drug cost burden on an individual's budget, and the importance of the drug from the patient's perspective. Some reasons for changes in patients' calculus around their CRNA experiences included qualifying for increased insurance coverage, additions to insurance plan formularies, increased income, dependents gaining financial independence, more affordable medication substitutions or receiving medication samples, and health improvements. Other changes in CRNA experiences resulted from patients finding ways of obtaining medicines outside of the patient-provider relationship, such as using pills from another person's prescription. Most individuals who continued to report CRNA in Interview 2 reported CRNA for the same drug(s) as in Interview 1.

Conclusion: Using our CRNA typology across time broadens and deepens our understanding of CRNA from the patient's perspective. Changes in CRNA experiences over a six-month window of time happen for multiple reasons and reflect patients' complicated calculus involving decisions that extend far beyond health.

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ID: 386

Author: Mrs. Vanita Gorzkiewicz

Title: Streamlining the process of indicator development, maintenance and evaluation through the indicator lifecycle

Type of Abstract: Oral

Objectives: With rapid growth in health information, many organizations face challenges in keeping up and balancing the demands of regular reporting of health indicators and the development of new indicators. We have developed a standardized repeatable process for indicator development, maintenance and evaluation that can help streamline processes and decision-making.

Approach: Building on long-standing structured approaches for indicator development, reporting and evaluation in health system performance, as well as an organizational consultation, we defined a lifecycle for an indicator, consisting of multiple iterative phases. Included in the overview of each lifecycle phase is the identification of key stakeholders, milestones, and decision points to guide the flow to different phases of the lifecycle. To ensure continuous reporting of “fit” indicators we also leveraged evidence-based criteria in our organization’s information quality framework to identify relevant criteria applicable to each phase.

Results: Multiple iterative phases for the indicator lifecycle were identified including: methodology development and validation, result validation, calculation and maintenance, pre-release and client support, release and client support, and a key phase of evaluation to guide decision-making to develop new indicators and to maintain, redevelop or retire existing indicators. An additional resource aid with practical questions grounded in evidence-based criteria applicable to each indicator lifecycle phase was developed to help guide decision-making along the process.

Conclusion: Reporting of indicators that potentially no longer (optimally) support improvements in health care, health system performance or population health can lead to indicator chaos. To help mitigate this issue, we will share the process for the lifecycle of an indicator that can be adapted for use by other organizations.

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ID: 355

Author: Dr. Kelly Grindrod

Title: Playing Telephone: Understanding the state of medication decision making in growing healthcare teams in the time of electronic health records

Type of Abstract: Oral

Objectives: To study how electronic health information is shared across patients, family physicians and pharmacies, including the types of information typically exchanged, tools that support interprofessional shared medication decision-making and best practices related to the use of Electronic Health Records (EHRs) for decision making.

Approach: We visited community pharmacies, primary care clinics, throughout Ontario, Nova Scotia, Alberta, and Quebec. Research assistants collected data using an ethnographic approach including workflow observations, recordings of clinicians talking aloud while prescribing or dispensing medications, and (where possible) recordings of patient interactions clinicians related to medication therapy. We also completed semi-structured interviews with clinicians to inquire about healthcare provider experiences with medication decision making and EHRs. We transcribed audio recordings and translated all transcripts into English. The team met for two days to develop a multidisciplinary analytic framework, which was used to code the data.

Results: We collected data at 25 pharmacies and 11 medical clinics and identified five main themes. First, the Current State of Computer Systems can support or constrain the ability of clinicians to collaborate. Second, Different Communication Expectations mean healthcare providers (primary care, pharmacy) have a limited understanding of the others' contexts around managing medication, leading to frustration in general. Third, when collaborating, clinicians focus on Task Oriented Communication (e.g., errors, fax renewals) rather than decision oriented communication (e.g., choosing the best medication). Fourth, clinicians express that they value Shared Decision Making but in practice focus on informing patients and describing options with minimal patient input, with limited awareness of the contradiction. Fifth, there is a Desire and Need for EHRs which are complete and accurate for making informed decisions.

Conclusion: Collaboration between community pharmacists and primary care providers is generally task-based with little opportunity for interdisciplinary shared decision making. EHRs are a potential tool to help clinicians share information. However, to improve the quality of collaboration, more attention will need to be paid to the environmental contexts within which community pharmacists and primary care providers manage medications.

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ID: 284

Author: Ms. Qi Guan

Title: Patterns of methadone use and perinatal outcomes among pregnant women in Ontario

Type of Abstract: Oral

Objectives: Methadone is the standard treatment for opioid use disorder during pregnancy as it minimizes opioid cravings and withdrawal symptoms without causing sedation or euphoria. In a population-based sample, we aimed to determine when women initiate methadone in relation to their pregnancies, and how timing of initiation may impact pregnancy outcomes.

Approach: We conducted a population-based cohort study among Ontario female public drug beneficiaries who delivered a baby between 2005 and 2015 and filled >1 methadone prescription between conception and delivery. We compared women stabilized on methadone within 60 days before conception, newly initiated within 60 days before conception, and initiated post-conception on baseline characteristics including age and parity using descriptive statistics and key pregnancy outcomes such as small for gestational age, preterm birth and congenital anomalies using a logistic regression. Key pregnancy outcome rates for the overall cohort were also compared to that of the general population provided by Health Canada.

Results: Among 1,842 pregnant women, the median age was 26 (IQR 23-30), 71.2% (N=1,311) were multiparous, and 87.2% (N=1,606) lived in urban areas. Over two-thirds (68.5%; N=1,261) were stabilized on methadone before conception, 19.2% (N=353) were newly initiated before conception, and 12.4% (N=228) initiated after conception. About 22.2% (95% CI 20.3%-24.1%) of infants were small for gestational age, 17.5% were born preterm (95% CI 15.8%-19.4%) and 5.9% (95% CI 4.8%-7.0%) had a congenital anomaly. There was little variability by timing of initiation. These rates were substantially higher than those reported in the general Canadian population, i.e 8.5% for small for gestational age, 6.1% for preterm birth and 3.9% for congenital anomalies.

Conclusion: Most Ontario women requiring methadone during pregnancy initiate prior to conception or shortly after conception. Rates of negative pregnancy outcomes do not vary based on timing of methadone initiation, but are higher than the general population. This affects the lives of this already-vulnerable population and should be carefully monitored.

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ID: 432

Author: Dr. Sara Guilcher

Title: The Financial Burden of Prescription Drugs for Neurological Conditions in Canada: Results from the National Population Health Study of Neurological Conditions.

Type of Abstract: Oral

Objectives: The specific objective for this study was to explore the perspectives of key stakeholders on the availability of and access to prescription drugs for neurological conditions in Canada.

Approach: We conducted semi-structured qualitative interviews (n=180) with health care professionals (39%, n=70); community-based non-health care professionals (47%, n=85), policy-makers at the federal, provincial and regional levels (14%, n=25) across Canada to understand the existing health and community service needs for individuals with neurological conditions and their family members/caregivers; and the perceived health system level facilitators and barriers in the management of these conditions in Canada. Data analysis involved an iterative constant comparative process with descriptive analyses.

Results: The analysis revealed three primary themes related to the availability of and access to prescription drugs to treat neurological conditions. First, we learned that across Canada there is significant vulnerability and a need for advocacy on behalf of people living with these conditions. Second, we learned that the heightened level of vulnerability and need for advocacy stems in part from the significant differences in the drug coverage available in the different provinces and territories. As a result, there are significant inequities across Canada. Third, we determined that the existing situation is also due to the current approach to health governance (i.e., accountability, transparency).

Conclusion: Our study highlights that there are substantial inequities in the availability of and access to prescription drugs for people with neurological conditions across Canada. The inequities identified placed significant burden on persons with neurological conditions, caregivers, health care professionals and community organizations to advocate for increased access.

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ID: 452

Author: Ms. Elaine Guo

Title: Socioeconomic gradients in supplementary health insurance coverage: Evidence from two repeated cross-sectional datasets

Type of Abstract: Oral

Objectives: Our first objective is to describe comprehensively the extent to which Canadians have access to supplementary health insurance coverage. The second objective is to identify characteristics that are associated with having coverage. In particular, we investigate the role of socioeconomic status in accessing coverage.

Approach: We use repeated cross-sectional data from six waves of Commonwealth Fund's International Health Policy (IHP) Survey and six waves of Canadian Community Health Survey (CCHS). IHP and CCHS complement each other's insurance data. CCHS focuses on Ontario while IHP provides national data. IHP only concerns private insurance while CCHS covers public insurance, employer-sponsored insurance and self-purchased insurance. IHP does not specify the type of coverage while CCHS examines prescription drug coverage, dental coverage and vision coverage separately. Using these two datasets, we construct cross-tabulations and logit models to examine the level of coverage and the presence of socioeconomic gradients.

Results: IHP data suggest that around two-thirds of Canadians in the below 65 age group have private health insurance and this proportion does not vary significantly over time or across regions. As expected, this proportion is lower for the above 65 age group given the existence of provincial drug plans for seniors. The level of private coverage is also lower for the fair or poor self-reported health group likely due to risk selection of private plans. CCHS reveals that around one-fifth of Ontarians lack coverage from any source. Its estimate regarding private coverage conforms to that of IHP. Positive gradients by income and education are evident in private coverage in both IHP and CCHS and negative gradients are discovered in public coverage in CCHS.

Conclusion: IHP and CCHS collectively suggest that positive income and education gradients in coverage persist and the current patchwork system does not suffice. This finding supports the national pharmacare advocacy and informs other innovative solutions like Ontario's Low-Income Health Benefit proposal aiming to fill gaps in coverage for Ontario's working poor.

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Author: Mr. Wissam Haj-Ali

Title: Improving the timeliness of information generated from administrative databases to enable quality improvement in primary care

Type of Abstract: Oral

Objectives: Administrative databases used to generate audit and feedback reports are not timely enough to support quality improvement. The objective of this work was to improve the timeliness of data that is currently presented to primary care physicians and administrators across Ontario, to better inform quality improvement efforts and ultimately improve patient care.

Approach: Using a two-staged approach, we assessed the feasibility of using quarterly instead of annually refreshed data from the Discharge Abstract Database (DAD) and National Ambulatory Care Reporting System (NACRS) databases, in an attempt to produce timelier primary care performance data. First, we verified data source completeness by comparing data in annual versus quarterly refreshed records, from both the DAD and NACRS databases, for the time period of April-September 2014. Next, we computed physician-specific rates for hospitalisation and emergency department indicators using both the annual and quarterly data. Finally, we calculated the percent difference between the quarterly and annual results.

Results: When comparing quarterly to annual DAD records, the results showed 98.8% and 99.5% completeness for the second and third quarter data feeds respectively. For NACRS records, we observed 99.6% and 99.9% completeness for the second and third quarter data feeds respectively.

For hospitalization using DAD records, when compared with rates computed using the annual data, 96.8% of physicians had the same rate when using the second quarter data feed and 99.1% had the same rate when using the third quarter data feed.

For non-urgent ED visits, using NACRS records, when compared with rates computed using the annual data, 89.8% of physicians had the same rate when using the second quarter data feed and 95.5% had the same rate when using the third quarter data feed.

Conclusion: This work reduced administrative data lag from one year to six months, allowing timelier audit and feedback information provided back to primary care physicians/ administrators. This advancement is considered a step forward towards using administrative databases to produce timely information that can drive primary care improvement and better patient care.

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Author: Dr. Julie Hallet

Title: Reducing repeat imaging in hepatico-pancreatico-biliary cancer care through shared diagnostic imaging repository.

Type of Abstract: Oral

Objectives: With regionalization of cancer services, patients often undergo treatment in institutions other than where initial investigation is conducted. The hospital diagnostic imaging repository services (HDIRS) facilitates electronic sharing of imaging among institutions. We assessed the impact of HDIRS on processes of care and outcomes of hepato-pancreatico-biliary (HPB) cancer surgery.

Approach: We conducted a retrospective cohort study linking administrative datasets at the Institute for Clinical Evaluative Sciences. We included HPB cancer patients operated at a tertiary cancer centre (2003-2014). HDIRS and non-HDIRS groups were based on where initial imaging (CT or MRI within 6 months of surgical consultation) was conducted. Outcomes were repeat imaging before surgery, divided into same (e.g. repeat CT after initial CT) and different modality (e.g. repeat CT after initial MRI), wait time for surgery from initial imaging and surgical consultation, 90-day post-operative morbidity, and overall survival. Univariate and multivariate analyses examined the association between HDIRS and outcomes.

Results: Of 839 patients, 474 (56.5%) were from HDIRS institutions. HDIRS patients had lower use of repeat imaging overall (57.6% Vs. 76.2%; $p < 0.01$). Median wait time to surgery from initial imaging (64 Vs. 79 days; $p < 0.01$) and surgical consultation (39 Vs. 45 days; $p=0.046$) was shorter for HDIRS patients. Post-operative morbidity and survival did not differ. After adjusting for demographic, social, and clinical factors, HDIRS patients had 22% lower odds of repeat imaging (odds ratio – OR 0.22 [0.15-0.33]), whether same (OR 0.43 [0.30-0.60]) or different modality (OR 0.65 [0.46-0.93]). Repeat imaging using the same modality and the same protocol was less likely for HDIRS patients (OR 0.45 [0.32-0.64]). 03-1.84]).

Conclusion: Imaging sharing with HDIRS significantly reduced repeat cross-sectional imaging for HPB cancer surgery, including repeat imaging with same protocol that is less likely to add information. It shortened wait time to surgical care. HDIRS could improve quality and efficiency of care. Future studies should focus on patient and provider experience.

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ID: 121

Author: Ms. Jihee Han

Title: Potentially Unnecessary Diagnostic Imaging for Minor Head Trauma

Type of Abstract: Oral

Objectives: Choosing Wisely Canada (CWC) recommends against head imaging for minor head trauma patients unless they exhibit signs that warrant a scan. In close collaboration with CWC, we estimated the extent of head scanning performed to these patients in emergency departments in Alberta and Ontario.

Approach: We looked at adults 18 to 64 years of age who visited emergency departments in Alberta and Ontario in the fiscal year of 2015 with documented head trauma and excluded patients with signs for severe head trauma identified by CWC and experts. Then we estimated brain or cranial X-ray, CT, or MRI scanning rates and ran logistic regression to find factors associated with high scan rates.

Results: Overall, 31% of minor head trauma patients 18 to 64 years of age without signs warranting imaging received X-ray, CT, or MRI head scans at emergency departments from Alberta and Ontario which translates to roughly 15,000 potentially unnecessary scans. CT accounted for the majority of scans (98%). While the provincial rates were similar (29% in AB vs. 31% in ON), the regional results showed variations even after adjusting for age and sex. Wider variation was observed in Ontario compared to Alberta (14% to 46% vs. 19% to 41%) and the variation among EDs was even wider (0 to 68%). Minor head trauma patients without indications for head imaging who were older, male, or living in lower income neighbourhoods were more likely to receive imaging.

Conclusion: Despite the clinical guidelines that recommend against imaging for minor head trauma without indications, close to one third of patients with minor head trauma received head scans. The wide variations among health regions and emergency departments indicate room for improvement and peer learning to reduce the potentially unnecessary scans.

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ID: 37

Author: Dr. Stephanie Hastings

Title: Utilization of Licensed Practical Nurses in Alberta Health Services

Type of Abstract: Oral

Objectives: The goal of the current study was to examine the roles and opportunities for Licensed Practical Nurses (LPNs) in different practice settings within Alberta Health Services (AHS). Specifically, we examined LPNs' utilization in emergency departments (EDs), mental health (MH) units, and labour and delivery (L&D) units.

Approach: Phase 1 of the study, reported here, used staff and patient data from various data systems within AHS. We did descriptive analyses of the data to examine how LPNs are mixed with other staff and distributed across unit types, facilities, and AHS zones. We also examined the distribution of LPNs in relation to patient volume and workload and classified units with and without LPNs. For EDs, we also examined staffing in relation to Canadian Triage and Acuity Scale scores. Finally, we examined whether LPN staffing was correlated with staffing of other nursing and non-nursing providers.

Results: Slightly more than half (58%) of EDs had LPNs in their staff mix; LPNs represented 6.5% of all nursing full time equivalents (FTEs) and 5.1% of all provider FTEs. LPNs were almost evenly distributed between EDs with higher acuity (54%) and lower acuity (46%) patients. The majority (74%) of MH units had LPNs in their staff mix but LPNs accounted for only 9.7% of nursing FTEs and 7.6% of all provider FTEs. There was wide variation across zones in how LPNs were included in MH units and units with Health Care Aides tended to have fewer LPNs. LPNs were staffed on 58% of L&D units but made up only 2.5% of nursing provider FTEs. We could find no patient volume or acuity patterns to explain

Conclusion: We found LPN staffing was inconsistent across zones and service types and patient intensity and acuity did not seem to factor heavily into staffing decisions. Our results suggest that other factors might have influenced decisions about whether to include LPNs in these units and further study is necessary.

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Author: Dr. Lindsay Hedden

Title: Are Primary Care Physicians who Provide Obstetrical Care in BC a Dying Breed?

Type of Abstract: Oral

Objectives: Concerns have been raised that fewer primary care (PC) physicians may be including obstetrics in their practices, despite significant financial incentives for the delivery of these services. Our objective was to examine trends in and determinates of the provision of obstetrical care within the PC context among physicians in BC.

Approach: This is a population based, longitudinal cohort study covering all primary care physicians practicing in BC between 2005/6 and 2011/12. We used fee-for-service (FFS) billings to identify the provision of prenatal and postnatal care and deliveries. We modeled the proportion of physicians who participated in one or more deliveries, and the proportion who included any obstetrical care provision in their practice over time using longitudinal mixed effects log linear modeling. We also modeled the proportion of all care related to obstetrics using a logit-transformed outcome and a normal linear mixed effects model. Model covariates included physician and patient-population demographic characteristics.

Results: The proportion of physicians attending deliveries or providing any obstetrical care declined significantly over the study period (OR deliveries 0.90, 95%CI 0.88-0.92; OR obstetrics 0.92, 95%CI 0.90-0.93). Further, by the end of the study period obstetrical care provision accounted for a significantly smaller proportion of overall practice activity (OR 0.93, 95%CI 0.92-0.95). Female physicians were significantly more likely to attend deliveries (OR 1.21, 95%CI 1.04-1.37) and to include any pre- and post-natal care provision in their practices (OR 1.46, 95%CI 1.27-1.68). Obstetrical care more generally also made up a significantly larger proportion of the practices of female PCPs (OR 1.26, 95%CI 1.09-1.44). Older physicians and those located in metropolitan centres were less likely to provide obstetrical care or attend deliveries.

Conclusion: The provision of maternity care in the PC context is declining significantly over time, suggesting the possibility of a growing access issue in this area. This issue presents a particularly salient problem in rural/remote communities where family physicians are often the sole provider of maternity services.

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Author: Ms. Marcela Hidalgo

Title: Engaging patients and staff to introduce a quiet time on a maternity ward: post-implementation results

Type of Abstract: Oral

Objectives: In a hospital with a 'baby-friendly' designation, the healthcare team introduced a quiet time on the maternity unit in the context of an evaluation to understand the barriers and benefits. The objective in this phase of the study was to assess perceptions and experiences of new mothers, clinicians, and staff.

Approach: The overall evaluation used a mixed methods pre-post evaluation design, involving concurrent qualitative and quantitative data collection and analysis pre and post intervention. We adopted a participatory approach where the research team worked in partnership with staff and patients on the ward to initiate and conduct the study. In the post-implementation phase, we collected data on patient experience using the Canadian Patient Experience Survey, conducted qualitative interviews with staff and patients, measured noise levels and disruptions on the unit, and met regularly with clinical team members regarding lessons related to obstacles and enablers for this change.

Results: Patients and staff reported overwhelming support for the intervention with mention of specific benefits. Data collection has been completed for all aspects and results are being analyzed for presentation. From a preliminary review, we anticipate that there will be low congruence between quantitative and qualitative measures of overall experience and benefits. Noise pre-implementation was above WHO standards; we anticipate improvement post-implementation. Barriers to change related to logistics of communicating the daily quiet time routine and compliance of staff in terms of changing established behaviours and norms. Enablers included motivation and leadership amongst senior staff and flexibility of services to adapt schedules. This initiative has generated interest from other hospital units for adoption. These results contribute to the scant literature in support of quiet time interventions.

Conclusion: The implementation of a quiet time on a maternity ward was an important intervention in delivering patient-centered care. This evaluation provided unique insight and understanding of the barriers and enablers to institutional change, and regarding the benefits of a quiet time from the perspective of postpartum mothers and staff.

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Author: Dr. Anne Holbrook

Title: A Systematic Review of Cost-Related Medication Nonadherence in Canada

Type of Abstract: Oral

Objectives: Our objective in this review was to summarize the literature evaluating cost-related nonadherence (CRN) in Canada – its prevalence, predictors, and effect on clinical outcomes. Canada's patchwork coverage of increasingly expensive outpatient drug therapies may lead to CRN, which has been associated with adverse clinical outcomes.

Approach: This systematic review was designed to adhere to PRISMA guidelines. We searched Embase, Medline, Google Scholar, and the Cochrane Library databases from 1992 to Feb 2016 for original data related to at least one of the three objectives. Where multiple countries were involved in a study, inclusion required ability to separately identify data from Canadian patients or citizens. Articles were screened and full text reviewed in duplicate. Data were extracted on study design, population, sample size, CRN-related definitions, outcome measures, results and statistical analysis. Quality ratings used GRADE criteria of within-study risk of bias, directness of evidence, heterogeneity, and precision of effect.

Results: Of 119 articles identified by the literature search, ten studies (n = 229,907 unique individuals) were eligible for inclusion. Overall GRADE quality was low due to observational designs, risk of bias in all studies, and indirectness of evidence in several. Data from six studies reported on the overall prevalence of self-reported CRN, which ranged from 5.1 % to 15%. Predictors of CRN, self-reported in four studies and inferred by before and after cost-sharing policy change analyses in four studies, included out of pocket spending, low income, young age, chronic illness, financial burden, and insurance type. One study on the impact of cost sharing in Quebec suggested that CRN was associated with a small increase in serious adverse events in both elderly patients and welfare recipients.

Conclusion: Our systematic review suggests that CRN affects a significant number of Canadians, predictors tend to be financial and the specifics of public drug plan insurance rules impact CRN. However, the association with clinical outcomes is uncertain and high quality evaluations of interventions to alleviate CRN are needed.

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ID: 359

Author: Dr. Amy Hsu

Title: RESPECT, find out what it means to me: Algorithm for predicting death among older adults in the home care setting

Type of Abstract: Oral

Objectives: Older adults living in the community often have multiple, chronic conditions and functional impairments. A challenge for healthcare providers working in the community is the lack of a predictive tool that can be applied to the broad spectrum of mortality risks observed and may be used to inform care.

Approach: RESPECT (Risk Evaluation for Support: Predictions for Elder-life in the Community Tool) is based on a predictive algorithm that estimates survival time for older adults in the home care setting. The algorithm was developed using data at the Institute for Clinical Evaluative Sciences, consisting of information obtained from 436 908 home care recipients between 2007-2012. A proportional hazards regression model was estimated; it contains 35 predictors, including sociodemographic factors, social support, health, functional status, cognition, symptoms of decline and prior healthcare use. The final mortality risk algorithm is implemented as a web-based calculator that can be used by older adults and caregivers.

Results: The majority of home care recipients in Ontario were over the age of 70 (83.0%) and female (64.9%). Approximately half of this population was widowed (46.5%) and lives alone or with their adult child (47.3%). 6- and 12-month mortality risk models were estimated. In the 6-month model, the receipt of chemotherapy among cancer patients (HR: 3.25, CI: 3.14-3.36), having a diagnosis of a terminal illness (HR: 3.12, CI: 3.05-3.19), and total dependence on others to perform the activities of daily living (e.g., eating, grooming, toileting, locomotion; HR: 3.52, CI: 3.41-3.65) were the strongest predictors of mortality. Preliminary results suggest that the model has good discrimination (C-statistic: 0.764) and is well-calibrated across quintiles of mortality risk.

Conclusion: RESPECT is a well-performing algorithm that provides health care providers, patients, and caregivers with prognostic data that can be used to inform care, including when palliative and end-of-life care should be initiated. The online implementation of RESPECT presents a valued opportunities for research knowledge translation and patient engagement.

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ID: 496

Author: Mr. Luciano Ieraci

Title: MRI wait times in Ontario – an evidence-based tool to assist allocating regional funding hours to improve decision making and patient wait times

Type of Abstract: Oral

Objectives: Access to Care and Strategic Analytics at CCO developed analyses to help Local Health Integration Network (LHIN) stakeholders examine MRI wait times in Ontario. The results were packaged in a final tool that predicts the optimal allocation of funding (in scan hours) within each LHIN incorporating hospital-level performance indicators.

Approach: Analyses were developed using the Wait Time Information System (WTIS) with statistical methods embedded in an operations research design. MRI demand was predicted for the next three years for different priority queues using time series analysis at both the LHIN and hospital level. A mathematical model produced optimal allocation of funding to improve two MRI wait time performance indicators predicted through regression analysis: percent of scans completed within access target; and 90th percentile wait time. Policy-relevant parameters allowed users to customize growth in MRI demand; scan efficiency and throughput; P3 waitlist reduction; and equity by balancing indicator values across hospitals.

Results: LHIN stakeholders are able to use the tool to examine predicted MRI demand and the corresponding effect on 90th percentile wait times and percent completed within access target metrics. Different scenarios were analyzed showing the effect of specific policy changes: LHIN-level 90th percentile wait times for lower priority MRI scans decreased according to the recommended and optimized funding allocations. In addition, 90th percentile wait times also decreased based on improved MRI efficiency and throughput; and decreased by minimizing the discrepancy in performance indicator values across hospitals within the LHIN of interest. Certain scenarios demonstrated that existing allocation processes are already optimized with the ideal hospital allocations.

Conclusion: LHINs requested a tool to assist in allocating funding for MRI scans in Ontario to improve access within their region. Feedback from the LHINs was integrated in the tool's development from the onset. The tool has shown stakeholders the value of modifying policy levers to reduce MRI wait times.

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ID: 197

Author: Ms. Jennifer Innis

Title: Hospital characteristics and use of evidence-based discharge practices in Ontario, Canada

Type of Abstract: Oral

Objectives: The objective of this study was to examine the relationship of hospital size, teaching status and location with the use of evidence-based discharge practices based on Project RED (Re-Engineered Discharge). These practices are associated with improved patient and health system outcomes.

Approach: Larger organizational size, teaching status and urban location have been associated with the increased use of evidence-based practices in health care organizations. A survey measuring the use of evidence-based discharge practices was administered to all 143 acute care hospitals in Ontario that have an inpatient medicine unit, and 79 hospitals responded (55% participation rate). Multiple regression analysis was used to examine the relationship between survey score and the hospitals' size (number of acute care beds), teaching status and location (region and rurality).

Results: Smaller hospital size was significantly associated with greater use of evidence-based discharge practices, and survey scores were found to be highest in the north region of the province, a largely rural area. A significant interaction was found between size and rurality. No relationship was found between teaching status and use of evidence-based discharge practices.

There may be improved information continuity and sharing of resources between smaller hospitals in rural settings. In addition, it is possible that there are different relationships between hospitals and other health care settings, such as primary and long-term care organizations, in urban and rural regions. These are factors that may be associated with an increased use of evidence-based discharge practices.

Conclusion: The use of evidence-based discharge practices was higher in small, rural hospitals and in the north region of the province. Future research into the reasons for these differences could offer insight into those factors that may influence use of evidence-based practices in hospitals.

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ID: 434

Author: Mr. Michael Ip

Title: Impact of proximity as a factor in rates of transfers from long-term care homes to hospitals in Ontario

Type of Abstract: Oral

Objectives: Transfers from long-term care (LTC) to acute care facilities can be costly to the healthcare system and a cause for emotional distress among elderly residents. This study aimed to investigate the proximity of acute care facilities to LTC homes as a potential predictor (among others factors) influencing patient transfer rates.

Approach: Information on LTC homes was obtained from the Ontario Ministry of Health and Long-Term Care's directory of LTC homes, and hospitalization data was obtained from the Institute for Clinical Evaluative Sciences. The 6-month hospitalization rate following an incident LTC admission was derived from a prospective cohort of LTC residents (2010-2012). LTC homes and acute care facilities were subsequently tagged with geographic information systems (GIS) software (ArcGIS), where travel time and road distance between facilities were calculated. Multivariable regression models were used to determine the relationships between transfer rates and facility proximity, as well as other home and population characteristics.

Results: Small LTC homes (less than 100 beds) have a transfer rate that is approximately 10% higher than that of larger homes, despite having less access to acute care facilities (i.e., have a higher average distance to the nearest facility and averaging fewer facilities within 30 km by road). Small population centres have the highest transfer rates compared to both rural areas and larger population centres. LTC homes in more rural areas have more acute care facilities within 30 km than small or medium population centres, despite having a greater distance to the nearest facility. Non-profit LTC homes were found to have approximately 15% fewer transfers compared to the average in Ontario, despite having superior accessibility to acute care facilities as for-profit homes.

Conclusion: We demonstrate variations in patient transfer rates based on LTC homes' proximity to acute care facilities, showing that shorter distances and travel times suggest lower transfer rates. These results provide insight into areas that may be underserved, as well as how to maximize the accessibility of new facilities.

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ID: 278

Author: Dr. Liisa Jaakkimainen

Title: Does prompt receipt of a discharge note by a patients' family physician reduce the rate of readmissions and emergency room visits?

Type of Abstract: Oral

Objectives: The objectives of this study were to determine whether the receipt of a discharge note by a patients' family physician (FP) within 3 days, within 30 days and over 30 days after being discharged from hospital are associated with readmissions/emergency room (ER) visits.

Approach: A retrospective record linkage study in Ontario of FP electronic medical record (EMR) data called the Electronic Medical Record Administrative data Linked Database (EMRALD). All medical and surgical inpatient visits for EMRALD patients over 18 years of age were included. Pregnancy-related admissions were excluded. The EMR discharge notes were extracted from their FPs EMR. Readmissions/ER visits were identified in health administrative data. For EMRALD patients hospitalized in 2012/13, the proportion having a discharge note received by their FP within 3 days, within 30 days and over 30 days was calculated. Bivariate analyses examined these proportions by patient and physician factors.

Results: For the 10,397 hospital discharges, there were 489 (4.7%) discharge notes received by the patient's FP within 3 days of discharge and 1558 (15.0%) notes within 30 days of discharge. Of the 489 admissions with a note received within 3 days there were 112 (22.9%) hospital readmissions/ER visits. The odds ratios when adjusted for patient (age, sex, socioeconomic status, comorbidities and location) and provider (age, sex and primary care group) factors for the receipt of a discharge note was 1.1 [0.88, 1.38] for less than 3 days, 1.38 [1.18, 1.53] for within 30 days and 1.21 [1.06, 1.36] for greater than 30 days.

Conclusion: A well-coordinated primary care system is associated with high patient and provider satisfaction, good health outcomes and potentially lower health care costs. While prompt receipt of a note was not associated with readmissions/ER visits, delayed or no receipt of a note is associated with readmission/ER visits.

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ID: 39

Author: Dr. Siavash Jafari

Title: A Policy framework for Marijuana Legalization (A Systematic review)

Type of Abstract: Oral

Objectives: Currently, marijuana is considered an illegal substance in Canada and is only available for medical purposes. The main objective of this study is to review the available national and international policies and create a framework that assists policy makers with their decision making for legalization of marijuana in Canada.

Approach: We conducted a systematic review of the published and gray literature that has investigated the marijuana policies. We used MeSH terms to search for peer reviewed articles, conference abstracts, organizational policies, and federal and provincial guidelines and policy papers that discuss marijuana legalization. Two independent researchers (SJ and PG) reviewed the titles of the available publications. Abstracts of the relevant publications were selected for in-depth review followed by the full text. Data was gathered to spread sheets. Narrative analysis was used to compare the available policies and their benefits and risks.

Results: Fifty two peer reviewed articles and government guidelines were included in the systematic review. Similar to any substances, illegality is causing more harm than substance. A range of approaches, from non-legalization to medicalization and full-legalization were identified. Potential benefits of marijuana such as reduction of anxiety, improvement of sleep, prevention of seizure and reducing pain levels and muscles spasms were reviewed. Adverse effects such as driving under influence, promotion of marijuana use, promotion of smoking, increased blood pressure, increased risks related to smoking during pregnancy and risk of psychosis have been discussed in the included literature.

Policy approaches are grouped under five main categories: 1) licensing, 2) education, 3) legal requirements, 4) monitoring, and 5) product supply and approval.

Conclusion: This framework helps policy makers/politicians to consider all aspects of the legalization of marijuana. When applied properly, such a framework reduces the burden on the societies and creates job opportunities and most importantly revenue for the government.

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Author: Ms. Tamika Jarvis

Title: Defining Public Health Systems: A critical interpretive synthesis of how public health systems are defined and classified.

Type of Abstract: Oral

Objectives: With recent emphasis on creating a stronger, more patient-centred, health system in Ontario, there remains no clear definition of a “public health” system, hindering the ability to integrate preventive public health and healthcare practices. This study aims to describe public health systems and initiate a research agenda for this field.

Approach: A critical interpretive synthesis of the literature was conducted using six electronic databases. In addition, data extraction, coding and analysis followed a best-fit framework analysis method. Initial codes were based on two current leading health systems and policy classification schemes: health systems arrangements (based on governance, financial and delivery arrangements) and the 3I+E framework for health policy formulation (institutions, interests, ideas and external factors). New codes were developed as guided by the data. A constant comparative method was used to develop concepts and to further link these into themes. Additional documents were identified to fill conceptual gaps.

Results: 5,957 unique documents were found through the electronic database searches. 5,600 were excluded through title and abstract reviews. From the remaining 357 documents, 87 documents were purposively sampled for full-text review, and 61 of these were included in this study. Six documents were used to fill conceptual gaps. For the most part, public health systems can be defined using traditional health systems and policy frameworks. However, there was a stronger emphasis on identifying and standardizing the roles and functions of public health. In addition, public health systems relied on partnerships (both community and multi-sectoral) and communication, which were markedly different than for healthcare systems. Acknowledging the need to develop and/or strengthen public health systems is prevalent, particularly in regards to emergency planning.

Conclusion: Understanding public health systems can help strengthen these systems and further integrate preventive public health and primary care services. Systems are influenced by organizational and contextual factors that need to be explored to improve population health. A research agenda is proposed to move this field forward.

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ID: 179

Author: Mr. Aaron Jones

Title: The Association Between Home Care Services and Same Day Emergency Department Utilization

Type of Abstract: Oral

Objectives: Home care patients are a large and expanding subpopulation of older adults characterized by high rates of emergency department (ED) utilization. The relationship between ED visits and home care services is poorly understood. This study examines the impact that home care services have on same day ED utilization.

Approach: A population-based longitudinal retrospective cohort was created of all adult home care patients in a large health region of Ontario. The cohort included all days that a patient was available for home care service from January 1st 2015 to December 31st 2015, minus holidays and weekends. Conditional logistic regression was utilized to explore the effect that different types of home care visits during the day had on ED visits after 5pm of the same day, controlling for temporally dependent risk factors. Analysis was stratified by whether a patient was receiving on-going ("Long Stay") or episodic ("Short Stay") care.

Results: Home care patients were considerably more likely to visit the ED after 5pm on days that they had any type of nursing service [Long Stay OR 1.51 (1.39-1.63), Short Stay OR 1.48 (1.33 – 1.64)]. The effect size was similar when restricted to ED visits that did not result in a hospital admission but greater for non-urgent ED visits [Long Stay OR 1.91 (1.53-2.39), Short Stay OR 1.62 (1.31 – 2.00)]. Clinic nursing tended to be more strongly associated with ED visits than home nursing. No effect was seen for personal support, therapies, or care coordination.

Conclusion: Home care nursing services were positively associated with same day after-hours ED visits. The effect was persistent across patient groups and nursing service types, but absent for other home care service types. The task-based nursing model employed by home care agencies could be leading to higher ED utilization rates.

All Authors: Aaron Jones, Andrew Costa

ID: 343

Author: Dr. Monika Kastner

Title: Optimizing the health of older adults with multiple chronic conditions: The development of the KeepWell Tool

Type of Abstract: Oral

Objectives: To develop a patient-centered, web-based knowledge transation (KT) tool called “KeepWell” with the potential to optimize the self-management of older adults (age ≥ 65 years) with multimorbidity. KeepWell integrates risk assessment, and evidence-based, self-management recommendations from among 11 high-burden chronic diseases affecting older adults (e.g., diabetes, arthritis, dementia).

Approach: We used an integrated KT strategy (involving older adults, e-health and KT experts and health care providers) and the Knowledge-to-Action framework to create KeepWell. The tool (including its name) was co-designed by a working group of 10 older adults with one or more chronic conditions. The features and design of the conceptual prototype was informed through seven “discovery” focus groups with our older adult working group. The prototype was iteratively created using input from: 1) older adults; 2) evidence-based clinical practice guidelines across 11 chronic conditions; 2) family physicians, geriatricians, KT researchers; 3) and literature on KT and behaviour change.

Results: KeepWell is a web-based application that can be used on any computer, tablet, or smartphone. An avatar navigates the user through the application, acting as their personal health coach. It begins by prompting older adults to identify their “wellness vision” (health goal) followed by a disease/lifestyle risk assessment questionnaire. This generates a summary of their risks, what they mean and their importance. Tool users are then led through a priority setting process to narrow their self-management recommendations. This generates an Action plan, which includes customized, evidence-based recommendations on what to do about their priority risks and how. This is supplemented by an innovative picture-based tracking system to monitor lifestyle habits (e.g., nutrition, exercise, smoking) designed to maximize sustained engagement with KeepWell, and to facilitate self-management.

Conclusion: The KeepWell tool integrates the care of any combination of 11 high-burden chronic conditions affecting older adults, and responds to the complexities of disease concordance/discordance. Next steps involve usability testing KeepWell with older adults, and conducting an RCT to determine its impact for increasing healthy lifestyle behaviours and self-efficacy.

All Authors: Monika Kastner, Leigh Hayden, Julie Makarski, Yonda Lai, Nate Gerber, Anu Jhajj, Joyce Chan, Victoria Treister, Sharon Straus

ID: 361

Author: Mrs. America Keddy

Title: A Patient-Centred Framework of Everyday Self-Management Strategies

Type of Abstract: Oral

Objectives: Existing self-management definitions and frameworks do not explain the challenges faced by people living with neurological conditions in sufficient depth to guide care, integrate systems or measure outcomes. Our goal was to develop a comprehensive and unified framework for understanding how people self-manage everyday life.

Approach: A preliminary framework was derived through an extensive concept mapping study of the qualitative and quantitative neurological literature (n=77 articles). Structural features (definition, characteristics, boundaries, preconditions and outcomes) of three overlapping concepts, coping, adaptation and self-management were examined; 68 strategies in eight categories were identified. Deductive content analysis of original data from open ended questions in a cohort study (n=117 adults aged 18-65 interviewed over 11 months) confirmed and refined strategy categories to form the Taxonomy of Everyday Self-Management Strategies (TEDSS) Framework. Finally, frequency and commonality of strategy use were assessed by calculating the proportion of participants using each category.

Results: Twenty-nine strategies were identified in the data. For the final TEDDS framework, these were grouped into 7 strategy categories, five of which were goal-oriented and two of which were support-oriented. High proportions of participants reported using strategies in all seven categories, attesting to patient relevance. Goal-oriented categories (Internal Strategies, Social Interaction Strategies, Activities Strategies, Health Behavior Strategies and Disease Controlling Strategies) strongly represent important life priorities for patients. Support-oriented categories (Process Strategies and Resource Strategies) are crosscutting in that they can facilitate all goal oriented strategies. For example, information seeking and problem solving support (Process Strategies) underpin many goal-oriented strategies. Interestingly, literature in self-management measurement, interventions and outcomes are diverse in which of the TEDDS categories they emphasize.

Conclusion: TEDSS provides a patient-centred framework that can help guide health services research and policy on self-management. It delineates patient self-management strategies to achieve life goals (Goal-oriented categories), and crosscutting, fundamental strategies for meeting them (Support-oriented categories). These categories identify targets for outcomes measurement based on patient experiences and needs.

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ID: 61

Author: Mr. Kyle Kemp

Title: The Experience of Patients Undergoing Coronary Artery Bypass in Alberta Hospitals

Type of Abstract: Oral

Objectives: Despite being a life-saving procedure, coronary artery bypass grafting (CABG) can have sub-optimal outcomes. Research has shown that better overall patient experience is associated with better outcomes among cardiac patients. The objective was to examine patient experience survey data to identify targeted areas for improvement among CABG patients in Alberta.

Approach: This cohort study included randomly-selected patients who underwent CABG at two cardiovascular centres and completed a telephone survey within six weeks of hospital discharge. A modified, Canadian version of the Hospital-Consumer Assessment of Healthcare Providers and Systems (H-CAHPS) instrument was used. The survey contained 56 questions which examined aspects of care such as communication with providers, medications, discharge instructions, and general care. Responses to each question were classified as “top box” versus other, where “top box” represented the best possible result (e.g. nurses “always” explaining things in a way patients could understand, patients “always” being involved in care decisions).

Results: From April 2014 to March 2016, 308 patients completed the survey. Patients were predominantly male (n=257, 83.4%), had a mean age of 66.3 ± 9.5 years, and a mean length of stay of 10.7 ± 6.6 days. The top three performing questions were nurses treating patients with courtesy and respect (90.3% reporting “always”), doctors treating patients with courtesy and respect (83.8% reporting “always”), and hospital staff doing everything they could to help with pain (80.7% reporting “always”). The five poorest performing questions were room quietness at night (35.5% reporting “always”), staff describing possible side effects of new medication (42.1% reporting “always”), room/bathroom being kept clean (60.8% reporting “always”), receiving timely help after pushing the call button (66.0% reporting “always”), and receiving support for anxieties, fears or worries (66.7% reporting “always”).

Conclusion: Our results provided patient-reported data that identify areas where care for CABG patients is performed well. Patients also identified targeted areas for quality improvement, which, if improved upon, may improve outcomes for CABG patients. Further research to compare patient-reported data and outcomes from a quality improvement perspective is necessary.

All Authors: Kyle Kemp, Hude Quan, María José Santana

ID: 339

Author: Dr. George Kephart

Title: The Internal Consistency and Comparability of Three Commonly Used Measures of Self-Management Ability in Persons with Neurological conditions

Type of Abstract: Oral

Objectives: Self-management (SM) ability is commonly assessed in chronic disease care and research. Qualitative literature shows SM to be a multidimensional concept, but many measures treat it as unidimensional. We assessed if three commonly used self-management outcome measures: (1) each measure a single construct, and (2) all measure the same construct.

Approach: As part of the National Population Study on Neurological Conditions, a national survey of persons 17 years of age and over with one or more neurological conditions included data (N=742) on three commonly used self-management tools: the Partners in Health Scale (PIH), the Patient Activation Measure (PAM) and the Self-Efficacy for Managing a Chronic Disease Scale (SEMCD). Using confirmatory factor analysis, the fit of the three tools was assessed, and areas of poor fit identified. As well, confirmatory factor analysis was used to test whether indicators for the three tools measure the same, or three different latent constructs.

Results: Confirmatory factor analysis models showed poor fit statistics for each of the measures when treated as single (unidimensional) constructs; especially for the PIH and PAM for which fit statistics were far short of criteria for good fit. The SEMCD provided a better fit to the data, but still did not meet the fit criteria. Modification indices showed high correlations between error terms, suggesting the presence of other domains. Only a 4-factor version of the PIH, proposed in a recent study, but with an insufficient number of items for sub-scales, provided an acceptable fit to the data. Confirmatory factor analysis showed the three tools do not measure the same construct. Rather, the measure correlated, but separate latent constructs. Correlations between latent constructs ranged from .74 to .84.

Conclusion: The PAM, PIH and SEMCD scales are not interchangeable measures of the same construct. None, when treated as single, unidimensional constructs, provides an acceptable fit to our data. While these measures may provide reliable summative measures, multi-dimensional scales are needed for clinical use and more detailed research on self-management.

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ID: 78

Author: Mr. Nick Kerman

Title: The Effect of Housing Stability on Service Use among Homeless People with Mental Illness: Results of a Multi-site Randomized Trial of Housing First

Type of Abstract: Oral

Objectives: This presentation will explore how service use of homeless people with mental illness changes as they become stably housed. The objective is to achieve a greater understanding of service use patterns that are associated with successful community living and ones that may be risk factors for recurrent homelessness.

Approach: This study used longitudinal data from the At Home/Chez Soi demonstration project, a randomized controlled trial of housing first that was conducted in five cities across Canada. All participants were [a] homeless, and [b] had a recent diagnosis or met criteria for a mental disorder at study entry. A total of 2,039 participants were included in this study, 1,131 of whom received housing first and 908 who received standard care. Linear mixed models were used to examine what effects the intervention and housing stability had on nine types of self-reported health, community, and justice service use over 24 months.

Results: Changes in housing stability affected use of several institutional services. In particular, use of inpatient psychiatric hospitals decreased across the two intervention groups as individuals' housing stability increased. Within the housing first group, participants experiencing continued or recurrent housing instability also spent more time in prison over the study period. Emergency department visits decreased across all groups. No changes in use of outpatient hospital services, medical hospitalizations, or specialized crisis services were found. As for community services, use of food banks increased among participants who became stably housed. Use of homeless shelters declined in the first year across groups and continued to decrease in the second year for all participants except for those that experienced recurrent housing instability. Visits to drop-in centers declined across groups.

Conclusion: Overall, the findings show that, as homeless people with mental illness become stably housed, their use of costly institutional services either decreases or remains low. Service use patterns, in particular with regard to psychiatric hospitalizations and time in prison, may signify persons at-risk of recurrent homelessness.

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ID: 153

Author: Dr. Karim Keshavjee

Title: The Land of Perpetual Pilot Projects: A Failure of Innovation or A Failure of Policy?

Type of Abstract: Oral

Objectives: Canada is still the country of perpetual pilot projects in health care. We developed a framework to assess health innovation programs and agendas to identify why innovations become stranded in the healthcare system. We analyzed recent health innovation strategies at the Federal and the Ontario and Alberta Provincial governments.

Approach: We conducted a literature review on innovation assessment frameworks and synthesized the perspectives of multiple stakeholders to develop a framework which assesses Canada's health innovation strategies. The framework utilizes 22 evaluation criteria in 5 categories (Governance, Health System Partnerships, Innovation Policies, Implementation/Dissemination Strategies and Evaluations) to provide an analysis of program performance.

Results: Provincial and Federal health innovation strategies perform well on Governance and Health System Partnerships criteria. However, Provincial programs underperform in promoting policies which encourage the development, refinement and dissemination of innovations by private industry. All health innovation strategies performed poorly in encouraging wider dissemination and uptake of innovations by providers, patients, and health care organizations. All innovation strategies perform poorly in encouraging the types of evaluations which are most likely to lead to wider dissemination including economic evaluations from the perspectives of multiple stakeholders, i.e. patients, providers, and health systems. Qualitative evaluations or worse, self-congratulatory evaluations, do not lead to breakthroughs in dissemination and thus do not represent an adequate method of evaluation to promote innovation in healthcare.

Conclusion: We encourage all levels of government that wish to transform the health care system to embrace additional policy elements that will encourage informed risk taking among all healthcare stakeholders and that will remove the bottle-necks that are preventing pilot projects from gaining wider traction.

All Authors: Karim Keshavjee, Zaki Hakim, Rory Lattimer, David Bach

ID: 559

Author: Ms. Isra Khalil

Title: Developing a user-centered design to improve public reporting of health system performance data

Type of Abstract: Oral

Objectives: Increasing the availability of information to enable better decision making is a strategic priority at Health Quality Ontario (HQO). To realize this priority, HQO developed a user-centered design for its webpages to make publicly available information on the performance of Ontario's health system accessible, relevant and actionable for its users.

Approach: To create a user-centred design, both user groups: patients, caregivers and members of the public as well as health system stakeholder organizations were engaged. Recognizing that each of the two user groups consumes health system performance data differently, appropriate engagement tactics were developed for each user type. Users were involved in selecting the measures of health system performance, in prioritizing existing measures on the basis of their perceived importance and in selecting how the measures would be communicated through text and visuals. Users also provided input on the design, layout and overall navigation through the webpages.

Results: Engaging the two audience types through different tactics was crucial to receiving usable results. The consultations provided HQO with valuable insights into what motivates each user type to seek health system performance data and how they search for it. Multiple points of engagement throughout the build of the webpages ensured that user perspective was included from the beginning to the end. The engagements influenced decisions about which measures were reported online and the way in which they were communicated. The writing of the content as well as the organization and ordering of the content on the webpages was informed by the consultations.

Conclusion: The consultations not only provided Health Quality Ontario with the information needed to ensure a user-centered design for its two audience types but also facilitated system-wide conversations about the use of different tactics to engage and consult with differing audiences.

All Authors: Isra Khalil, Amira Salama, Susan Brien

ID: 520

Author: Ms. Jisoo Kim

Title: Quality of antenatal care and its relationship with women's intended use of the same facility for delivery: a national cross-sectional study in Kenya

Type of Abstract: Oral

Objectives: Having a skilled birth attendant (SBA) can prevent the majority of maternal deaths in developing countries. Most SBA-assisted deliveries take place at an institution. The objective of this study is to determine if quality of antenatal care (ANC) is associated with Kenyan women's intention to deliver at the same facility.

Approach: The 2010 Service Provision Assessment survey of Kenya was used. This national cross-sectional survey sampled health facilities and patients to examine quality of care and patient experience. A total of 1,178 women, sampled during their antenatal care (ANC) visit, were included in this study. Structural and process aspects of quality were assessed by a third-person at individual facilities and women were interviewed after their ANC. Multilevel mixed-effects logistic regression was used to estimate the effect of quality of ANC, and maternal, facility, and provider characteristics on mothers' intentions to deliver at the facility where they received their ANC.

Results: Controlling for other variables, quality of care variables of interest were not significantly associated with women's intentions to deliver at the facility where they received ANC. However, mothers who had their ANC at hospitals were more likely to intend to come back for delivery (OR=0.03 with hospital as reference, 95% CI [0.00, 0.35]). Distance was also positively associated with intention to deliver at the same facility (OR=7.23, 95% CI [1.58, 32.9]). Nevertheless, some established determinants of SBA usage, such as cost of normal deliveries and education, were found to have no association with women's intentions to deliver at the same facility.

Conclusion: Among Kenyan women who receive ANC, the quality of care provided was not significantly associated with their intentions to deliver at the same facility. However, those women who received ANC at a hospital closest to her home were most likely to express her intention to return for delivery.

All Authors: Jisoo Kim, Bridget Ryan, Neil Klar, Amardeep Thind

ID: 539

Author: Dr. Tara Kiran

Title: Did introduction of medical homes with mandatory after-hours provision reduce emergency department use?

Type of Abstract: Oral

Objectives: Compared to other high-income countries Canada has one of the highest rates of emergency department visits and lowest availability of alternative after hours care . We sought to understand whether the introduction of primary care medical homes in Ontario with mandatory after-hours provision reduced emergency department use.

Approach: We examined emergency department and primary care visit trends for Ontario residents 19 years and older who transitioned to a medical home between April 1, 2003 to March 31, 2014 and lived outside rural areas (n= 8,946,398). For residents who had a minimum of three years of data available before and after the year of transition (n=4,409,593), we used segmented negative binomial regression to assess the impact of transition on emergency department use. Resident age, neighbourhood income quintile, co-morbidity, and morbidity were included as time-varying co-variables and resident sex as a stable variable in the models.

Results: In 2014, there were approximately 4.1 million emergency department visits and 8.2 million after hours visits to primary care. Between 2003 and 2014, the crude rate of emergency department visits rose from 333 to 370 per 1000 persons. During the same period, the proportion of primary care visits that occurred on the weekend rose from 2.2% to 3.7%, but there was a secular decrease in both the primary care visit rate and continuity with the primary care physician. In the years before transition to a medical home, the emergency department visit rate was decreasing by 2.8% (95% CI, 2.7% to 2.9%) per year. After transition, the emergency department visit rate was increasing by 1.4% (95% CI 1.4% to 1.4%).

Conclusion: Transition to a medical home with mandated after-hours services was associated with an increase in emergency department use despite an increasing trend in the proportion of primary care visits that occurred on the weekend. |

All Authors: Tara Kiran

ID: 196

Author: Dr. John Knight

Title: Relationship between Family Physician Retention and Avoidable Hospitalization in the Province of Newfoundland and Labrador: a population-based cross-sectional study

Type of Abstract: Oral

Objectives: Physician turnover, involving a physician leaving clinical practice in a specific area, may disrupt continuity of care leading to poorer health outcomes and greater healthcare utilization. The aim of the current study was to investigate the relationship between family physician retention and avoidable hospitalization.

Approach: A population-based cross-sectional study was conducted involving linkage and analysis of provincial health administrative data for residents of the province of Newfoundland and Labrador (NL) holding a provincial health card between 2001 and 2009. Individuals migrating outside or within the province were excluded from analysis. Five-year family physician retention was calculated by regional economic zone (EZ) and aggregate retention scores were assigned to individuals based on postal code of residence. Individuals were divided into tertiles based on retention level. Multi-variate negative binomial regression was used to compare hospitalization rates for ambulatory-care-sensitive conditions (ACSCs) among retention tertiles while adjusting for covariates.

Results: There was an inverse relationship between family physician retention and ACSC hospitalization where individuals with lower retention had higher hospitalization rates. Individuals residing in areas with moderate physician retention had a 28.0% higher hospitalization rate for ACSCs compared to areas with high retention [rate ratio (95% confidence interval)]: 1.280 (1.243-1.332), while those residing in areas with low retention had a 35.2% higher hospitalization rate for ACSCs [rate ratio (95% confidence interval)]: 1.352 (1.303-1.403). The relationship was attenuated but still significant when analysis was limited to seniors and when controlling for number of family physicians per capita.

Conclusion: Higher family physician retention is associated with reduced hospitalization for ACSCs when controlling for other factors affecting hospitalization. This is consistent with physician turnover acting to disrupt continuity of care, resulting in higher hospitalization rates. Findings are of interest to clinicians and decision-makers seeking to design cost-effective primary healthcare interventions.

All Authors: John Knight, Maria Mathews, Kris Aubrey-Bassler

ID: 548

Author: Dr. Catherine Kreatsoulas

Title: A novel mixed methodological approach to capture the evolving self-assessment of risk among patients

Type of Abstract: Oral

Objectives: How patients perceive personal cardiovascular risk as they navigate through the healthcare system is unknown; however, this knowledge can help inform decision-making across multiple stakeholders. The objective of this study is to develop a comprehensive framework that captures the healthcare experiences of patients as it influences their perception of risk.

Approach: Thirty-one interviews of patients prior to coronary angiography were analyzed using coding conventions consistent with gender-centered modified grounded theory approach. Five raters used constant comparison to establish analytic categories and open coding continued until theoretical saturation was reached. Interviews were multi-coded to ensure trustworthiness and credibility, which was further supported by additional patient information and triangulation was reached. To help visualize theoretical codes, an Ishikawa framework was adapted to illustrate the relationship between axial and focused codes. A qualitative assessment of the visual theory inspired layering a phase analysis adapted from methods from statistical process control (SPC).

Results: Three distinct methodologies were combined in a novel way to capture non-overlapping aspects of how patients assess their cardiovascular risk. Using modified grounded theory approach, a theory emerged from four main themes and their accompanying sub-themes. An Ishikawa diagram was introduced to help visualize the emergent theory, challenging the interrelationships between the theoretical codes. Theoretical codes were refined into more focused codes, revealing the inherent chronology of patients' evolving risk perception. Patients' self-assessment of risk evolves as they proceed through the healthcare system in four distinct and sequential phases. A qualitative adaptation of SPC was overlaid to the Ishikawa to visually capture the phases of risk perception.

Conclusion: A new theory integrating three interdisciplinary methodological approaches captures a patient's evolving perception of cardiovascular risk as they progress through the healthcare system. Future studies should apply this novel theory to other populations and illnesses to test transferability, which may have applications for multiple stakeholders in healthcare.

All Authors: Catherine Kreatsoulas, Niveditha Pattathil, Tanya Kakkar, Cameron Taheri, Puru Panchal

ID: 170

Author: Dr. Grace Kyoon-Achan

Title: Integrating Indigenous Traditional Health Knowledge in the Health System: Issues, Opportunities and Recommendations of Manitoba First Nations.

Type of Abstract: Oral

Objectives: First Nations are calling for holistic and traditional healthcare approaches to be recognized and connected to the biomedical health system. We discuss ways to integrate traditional knowledge into primary healthcare, elaborate on areas of opportunity for collaboration and highlight possible implementation challenges.

Approach: The study involved eight (8) Manitoba First Nations collaborating with University based researchers and the Manitoba First Nations Health and Social Secretariat to understand community-based experiences of primary healthcare. Our goal was to identify innovations and facilitate transformation. 299 in-depth interviews were conducted with participants from all participating communities. The 8 FNs were involved in developing the questions, conducting interviews and the analysis of data. Grounded theory informed data analysis using Nvivo software.

Results: First Nations are clear that increased access to traditional health knowledge should be a part of the existing health care system. Elders and healers should be meaningfully involved in the delivery of primary healthcare in First Nations communities. Funding for traditional medicines and approaches to wellbeing, are necessary components of primary healthcare. An overall respect for indigenous health knowledge will aid transformation in community-based primary healthcare and overall health outcomes. Traditional knowledge is currently being used as a parallel system of health care and prevention but is not yet commonly recognized by the mainstream health system.

Conclusion: Change on a transformative scale would involve formal recognition, active support, and protection of Traditional Healers and Medicines as part of addressing the Legacy and intergenerational impact of assimilative policies, as the Truth and Reconciliation Commission of Canada has stated in its Calls to Action in its final report (2015).

All Authors: Grace Kyoon-Achan, Kathi Avery-Kinew, Wanda Phillips-Beck, Josée Gabrielle Lavoie, NASER IBRAHIM, Stephanie Sinclair , Alan Katz

ID: 532

Author: Dr. Natasha Lane

Title: Low Disability at Admission Predicts Faster Disablement in Long-Term Care Residents

Type of Abstract: Oral

Objectives: Disablement is when people lose their ability to perform activities of daily living (ADLs) over time; it is associated with lower quality of life and higher healthcare costs. This study examines whether disability and specific geriatric syndromes present at long-term care admission predict residents' rate of disablement over two years.

Approach: Longitudinal study of 12,334 residents admitted to 633 Ontario long-term care homes between April 1st 2011 and March 31st 2012. Eligible residents received an admission assessment of disability using the RAI-MDS 2.0 ADL long-form score (range 0 – 28) and two subsequent disability measures in the home they were admitted to. Regression models estimated the adjusted association between low versus high disability, pain, balance impairment and cognitive impairment at admission with residents' rate of disablement over two years.

Results: Residents had a median disability score of 13 at admission. Residents with disability scores below or equal to the sample median experienced disablement at a rate of 0.43 (95% CI: 0.42, 0.45) points per month, whereas those with above-median disability at admission became disabled at a rate of 0.17 (95% CI: 0.15, 0.18) points per month. Pain, balance impairment and cognitive impairment at admission had negligible effects on resident disablement over two years.

Conclusion: Residents who are more disabled at admission experience slower disablement over two years than residents who are less disabled at admission. This rate difference may reflect an untapped opportunity for slowing disablement among residents who are admitted to long-term care with lower disability.

All Authors: Natasha Lane, Therese Stukel, Cynthia Boyd, Walter Wodchis

ID: 522

Author: Ms. Kathryn LaRoche

Title: “And if I ever did have a daughter, I wouldn’t raise her in New Brunswick”: Exploring the impact of Regulation 84-20 on access to abortion services

Type of Abstract: Oral

Objectives: We set out to document women’s experiences obtaining abortion care in New Brunswick before and after Regulation 84-20 was amended, identify the economic and personal costs associated with obtaining abortion care, and examine the ways in which geography, age, and language-minority status condition access to care.

Approach: We conducted 37 semi-structured telephone interviews with NB residents who had abortions between 2009 and 2014 (n=27) and after January 1, 2015 (n=10) in both English and French. We audio-recorded and transcribed all interviews verbatim and conducted content and thematic analyses using ATLAS.ti software to manage our data.

Results: We found that the cost and burden of travel is significant for NB residents trying to access abortion services. Women reported significant wait times which impacted not only the disclosure of their pregnancy but also the gestational age at the time of termination. Further, many women reported that physicians refused to provide information about, or referrals for, abortion care. Even after the amendment to 84-20, almost all participants reported that they were still required to have two physicians approve their procedure in order to access funded care.

Conclusion: The funding restrictions for abortion care in New Brunswick represent a profound inequity. Amending Regulation 84-20 is an important step but fails to address the fundamental issue that clinic based abortion care is not funded and significant barriers to access persist.

All Authors: Kathryn LaRoche, Angel Foster

ID: 517

Author: Dr. Eric A Latimer

Title: Cost-effectiveness of Housing First for high-need homeless people with serious mental illness : Results from the At Home/Chez Soi Randomized Trial

Type of Abstract: Oral

Objectives: Scattered-site Housing First (HF) is an evidence-based intervention to help homeless people with mental illness quickly find an apartment and then meet other goals. It is considered a key intervention in programs to address homelessness. We report the results of the first cost-effectiveness analysis of this intervention.

Approach: The At Home/Chez Soi study recruited 950 high-need homeless individuals with serious mental illness between October 2009 and June 2011 in Vancouver, Winnipeg, Toronto, Montreal and Moncton. Participants were randomly assigned to receive scattered-site HF with Assertive Community Treatment (ACT) or treatment as usual (TAU). Residential stays, service use and income sources were ascertained from participant self-reports at 3- or 6-month intervals for up to two years. Days in stable residence were used as the outcome measure. Analyses were carried out from a societal perspective. Cost-effectiveness was assessed using the net benefit framework, with multiple imputation to address missing data.

Results: Unadjusted for baseline differences between HF and TAU groups, the average annualized difference in costs including intervention costs between HF and TAU groups varied by site, from \$21,814 (95% CI: \$14,642, \$30,900) to -\$2,084 in Toronto (-\$18,174, \$14,623). On average across sites, each additional day stably housed using HF cost an additional \$74.93 (95% C.I.: \$36.58, \$115.97). The cost-effectiveness acceptability curve indicates that a decision-maker needs to be willing to pay up to about \$87 per day stably housed for the intervention to have an 80% chance of being cost-effective. Although higher functioning and absence of hospitalization or incarceration history were associated with higher net benefit, no baseline characteristic that we tested predicted greater cost-effectiveness, regardless of willingness-to-pay.

Conclusion: Averaging across all cities, scattered-site HF was cost-effective when the decision-maker was willing to pay about as much more per additional day stably housed as a day in transitional housing. In this sense, it can be viewed as cost-effective. Individual characteristics were not associated with higher or lower cost-effectiveness.

All Authors: Eric A Latimer, Zhirong Cao, Angela Ly, Guido Powell, Daniel Rabouin

ID: 482

Author: Dr. Ruth Lavergne

Title: Changing practice patterns of recent entrants to family medicine in BC

Type of Abstract: Oral

Objectives: Doctors who have recently completed residency training, and have newly entered practice, may be practicing differently than previous cohorts. They may be choosing to specialize within family medicine, practicing as hospitalists, or opting for walk-in clinic style practice. We examine practice patterns using administrative health data in BC.

Approach: We present descriptive, cross-sectional analysis at two points in time. We use province-wide administrative health data capturing fee-for-service physician payments, hospitalizations, and prescriptions filled, linked to physician characteristics from the College of Physicians and Surgeons of BC (CPSBC). We focus on family physicians/general practitioners identified based on specialty recorded with the BC College of Physicians and Surgeons. We compare new entrants (10 years since graduation) at two points in time (2003/4 and 2013/14) with respect to physician demographic characteristics, service volume, responsibility for longitudinal patient care, and other practice characteristics.

Results: The total number of primary care physicians registered with CPSBC increased by almost 20% between 2003/4 and 2013/14, but the proportion of new entrants has remained constant at 19%. A higher proportion of new entrants in 2013/14 trained outside of Canada, and is practicing in Health Authorities within the densely-populated lower mainland. Total (constant dollar) billings were lower among new entrants in both years, but this gap has not increased. The number of total patient contacts, and unique patients seen fell among all physicians, but even more rapidly among new entrants than established physicians. Changes in measures of responsibility and other practice characteristics were observed among both new and established physicians.

Conclusion: Observed changes in service volume and practice patterns have enormous implications for the supply of physicians available to provide comprehensive primary care, but are not unique to new entrants. Findings may help explain why, despite having more primary care physicians than ever before, patients still report difficulty finding family doctors.

All Authors: Ruth Lavergne, Sandra Peterson, Kimberlyn McGrail

ID: 466

Author: Dr. Susan Law

Title: Co-designing care processes on a geriatric assessment unit

Type of Abstract: Oral

Objectives: To engage patients and professionals through an experience-based co-design (EBCD) initiative to identify and implement improvements on an acute care geriatric assessment unit (GAU) in a community general hospital. Additionally, our team aimed to encourage the spread of this approach through enhanced capacity and support within the institution.

Approach: The EBCD approach includes the following blend of qualitative research methods and quality improvement (processes of 'discovery' and 'design'): a series of ethnographic observations using field-notes to understand the processes and culture on the unit; qualitative interviews using audio/video recording with patients and caregivers; the preparation of a short 'trigger film' using clips from these interviews; qualitative interviews with professionals and staff involved in their care; feedback sessions to validate results and identify priorities for change; and, change management to implement priorities. An advisory panel provides oversight and includes caregivers, professionals, researchers and clinical leaders.

Results: Data collection for the 'discovery' phase is complete. Results from the patient and professional interviews revealed emerging themes which included: inconsistent communication between staff and patients/families; challenges with insufficient patient mobility and activity; limited information sharing about care processes including discharge planning; discrepancies between staff and patients/families regarding the role for caregivers in a hospitalization context; and specific ideas for improvement (e.g. greater engagement of patients in daily social activities). A short film was produced that highlights positive and negative experiences of patients - to trigger discussion with professionals in the design phase. Priorities for improvement will be determined in a co-design event to be held in March 2017 and strategies for implementation will be determined (results to be reported).

Conclusion: The co-design approach, although time-intensive, facilitates substantial engagement and a deeper understanding of patient-centered priorities for improvement. As an intervention it offers pragmatic, evidence-based and experience-based solutions, as well as an effective process for change. Requests from three additional hospital units to adopt this approach are under consideration.

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ID: 336

Author: Dr. Justin Lee

Title: Contribution of Prescribed Medications to High Cost Healthcare User Status in Ontario

Type of Abstract: Oral

Objectives: To determine the contribution of prescription drug expenditures to high cost healthcare user (HCU) status amongst older adults in Ontario.

Approach: We conducted a retrospective population-based matched cohort analysis of incident senior HCUs defined as Ontarians age ≥ 66 years in the top 5% of total healthcare cost users in fiscal year 2013 (FY2013). Person-level healthcare and prescription drug utilization data for the index year and year prior to HCU status was obtained from Ontario's linked health administrative databases. Total health system and prescription drug costs were determined by using validated costing macros developed at the Institute for Clinical Evaluative Sciences (ICES). The primary study outcomes were the drug-to-total healthcare expenditure ratio and the annual total prescription drug expenditures per patient.

Results: In FY2013, senior HCUs ($n=176,604$) accounted for \$4.9 billion in total healthcare expenditures and \$433 million in medication costs. Compared to non-HCUs ($n=529,812$) on a per patient basis, HCUs incurred higher mean annual medication costs (\$2453 vs. \$842, $p < 0.0001$). Although drug expenditures increased 1.7-fold among HCUs relative to the preceding year, the ratio of drug-to-total health expenditures decreased from 40.2% to 8.9% during their HCU year primarily due to a relative increase in hospitalizations. HCU claims for higher-cost medications increased dramatically. For example, compared to the year preceding HCU status, the number of prescription claims for ranibizumab, biologic response modifying agents and monoclonal antibodies increased 9-fold, 60-fold and 120-fold, respectively (all $p < 0.0001$).

Conclusion: Medications are important contributors to HCU expenditures, but their magnitude of contribution is underestimated due to incomplete cost capture associated with outpatient chemotherapy and drugs dispensed in hospital. In a HCU subgroup, use of higher-cost drugs themselves may trigger HCU status. Careful investigation of medication appropriateness and cost-effectiveness is warranted.

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ID: 395

Author: Dr. Audrey L'Espérance

Title: Patient and Public Engagement Evaluation Toolkit

Type of Abstract: Oral

Objectives: This project has 3 main objectives: 1) to review existing evaluation instruments to assess public and patient engagement (PPE) in health research and health-system transformation; 2) to produce a PPE evaluation toolkit; and 3) to identify gaps that can lead to develop a common research and evaluation agenda.

Approach: Using the critical interpretive synthesis method, we searched the published and grey patient and public engagement literature with a focus on original, review articles of empirical studies of evaluations (and evaluation tools) and background papers offering critical discussions of key evaluation tools that pertain to the field of PPE in health research and health-system transformation. Covering all available years from 1980 to June 2016, we conducted an electronic literature search of all major databases without any language restriction. Inclusion and exclusion criteria were defined by a steering committee and used for data extraction and analysis. A consensus building exercise helped identify needs and gaps.

Results: More than 10 569 hits were classified, 554 articles/webpages were analyzed, 51 tools were found, 29 were included as responding to all inclusion/exclusion criteria and 12 were excluded but indexed on a second list. Data extraction made possible three main observations that fostered much discussion among the 30 participants the consensus building exercise (among them 14 patients). First, the majority of tools are not founded on a clear evaluation approach or PPE conceptual framework. Second, very few instruments show the patient/public and professional perspectives in relation to one another, and/or were developed by/with patient(s)/public members. Finally, from the list of excluded tools, most were not specifically oriented towards the evaluation of PPE participation (e.i. stakeholders), or specifically developed for the health domain, while proving to be useful to a broader conversation about the science and practice of PPE.

Conclusion: This Toolkit provides not only an exhaustive list of evaluation tools, but also recommendations about strengths, weaknesses and most appropriate use of each evaluation instruments to facilitate the decision-making process of SUPPORT Units guiding PPE initiatives across Canada. We also documented the gaps and the needs that can lead to develop a common research/evaluation agenda.

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Author: Mr. Cord Lethebe

Title: Using machine learning methods to create chronic disease case definitions in a primary care electronic medical record

Type of Abstract: Oral

Objectives: The emergence of electronic medical records (EMRs) in primary care in Canada provides a unique opportunity for chronic disease surveillance. However, the utility of the chronic disease surveillance information is dependent on the quality of the EMR data, and the quality of the case identification algorithms.

Approach: Data were obtained from the Canadian Primary Care Sentinel Surveillance Network, an organization that houses primary care EMR information from across Canada. A chart review was conducted for the presence of 8 chronic conditions in a sample of 1920 primary care patients. The results of this validation study will be used as training data for developing machine learning and regression-based classification models capable of creating interpretable case definitions. Features will be selected from billing codes, medication prescriptions, laboratory values, encounter diagnoses and health-problem lists. A comparison of the accuracy (sensitivity, specificity, PPV, NPV) will be performed across algorithms.

Results: Classification and Regression Tree (CaRT) methods, C5.0 decision tree methods, logistic regression using a lasso (or L1) penalty, and forward stepwise logistic regression will be used for variable selection and case definition development. Complexity parameter values will be determined using k-fold cross validation methods to minimize error. New case definitions will be developed and estimates of sensitivity, specificity, PPV, NPV will be estimated using bootstrap methods. Preliminary results show that decision tree methods (C5.0 and CaRT) are capable of creating case definitions that outperform committee-created case definitions in terms of classification accuracy and simplicity. These definitions can also be created much quicker than committee-created case definitions. More results to follow.

Conclusion: By developing a methodology to create case definitions in an automated fashion, we can quickly develop and validate case definitions and improve surveillance. Improving overall surveillance quality will also allow for a more accurate assessment of chronic disease burden in populations and improve efficiency in terms of resource allocation.

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ID: 498

Author: Ms. Emily Levitt

Title: Caregiver strain in families of youth experiencing mental health and/or addiction issues

Type of Abstract: Oral

Objectives: This study will explore caregiver, youth, and service factors that impact caregiver and youth strain in Ontario families of youth with mental health and/or addiction (MHA) issues.

Approach: This exploratory cross-sectional survey examined the factors that contribute to caregiver and youth strain in families of youth suffering from MHA issues. Ontario adults responsible for one or more youth up to age 30 were asked to participate in an online survey designed to identify MHA issues, families' service needs, and MHA system navigation needs. A total of 840 subjects participated in the study, with 259 identifying as caring for a youth with MHA issues under 30 years of age.

Results: Caregivers' mean age was 45.9 (SD 8.4), with 70.7% female. Youths' mean age was 16.4 (SD 5.7) with 36.7% female. Caregiver Strain was evaluated using 9 items and Youth Strain was evaluated using 5 items. Each scale demonstrated good internal consistency (Caregiver Strain $\alpha = .91$, Youth Strain $\alpha = .79$). Two multiple regression models were used to determine the contribution of the individual items to overall variance in strain. The significant items ($p < .0001$) for Caregiver Strain were barriers to services, number of symptoms, currently waitlisted, and level of education, and the total r^2 for the model was .49. The significant items ($p < .0001$) for Youth Strain were barriers to services, number of symptoms, currently waitlisted, and caregiver gender, and the total r^2 for the model was .39.

Conclusion: Both families and youth experienced strain related to waitlists and service access barriers. These findings can be used to develop system service solutions and policies that will help reduce burden of MHA in youth and families across Ontario.

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ID: 465

Author: Dr. Allanah Li

Title: Establishing the representativeness of physician and patient respondents in the Ontario QUALICOPC study using administrative data

Type of Abstract: Oral

Objectives: QUALICOPC is an international survey of primary care performance. QUALICOPC data have been used in several primary care studies, yet the representativeness of the Canadian QUALICOPC survey is unclear. This study examined the representativeness of QUALICOPC physician and patient respondents in Ontario using administrative data.

Approach: This representativeness study linked QUALICOPC physician and patient respondents in Ontario to administrative databases at the Institute for Clinical Evaluative Sciences. Physician respondents were compared to other physicians in their practice group and all Ontario primary care physicians on demographic variables and practice characteristics. Patient respondents were compared to other patients rostered to their primary care physicians, patients rostered to their physicians' practice groups, and a random sample of Ontario residents on sociodemographic characteristics, morbidity, and health care utilization. Standardized differences were calculated to compare the distribution of characteristics across cohorts.

Results: The QUALICOPC physician respondents had a higher proportion of younger, female physicians and Canadian medical graduates compared to the other physicians in their practice groups and the rest of Ontario. The survey included an overrepresentation of physicians in Family Health Team practice models, compared to the provincial proportion for primary care physicians. QUALICOPC patient respondents were more likely to be older and female, with higher levels of morbidity and health care utilization, compared with the other patients in their physicians' and physicians' practice groups' rosters and the population of Ontario. However, when looking at the QUALICOPC physicians' whole rosters, rather than just patient survey respondents, the patient characteristics were similar to the rosters of the other physicians in their practice groups and Ontario patients in general.

Conclusion: Despite differences in demographic and practice characteristics, Ontario QUALICOPC physician respondents had similar rosters overall compared to their practice groups and primary care colleagues. Visit-based sampling led to a biased patient respondent sample. These results have implications for studies using QUALICOPC data and other physician surveys concerned with nonresponse bias.

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ID: 311

Author: Dr. Morgan Lim

Title: Using patient narratives in the development of a priority setting instrument for cataract surgery

Type of Abstract: Oral

Objectives: Patient and clinician perspectives differ when considering impact on patient quality of life. To ensure a cataract surgery priority setting instrument was relevant to patients' concerns, we filmed a series of patient narratives. The objective was to understand how the narratives affected the clinician perspective when developing the instrument.

Approach: To develop the instrument, a modified Delphi process was used with an expert panel of 13 clinicians specializing in eye care. The process consisted of 3 rounds of electronic surveys and 1 face-to-face meeting. Patient narratives, in video format, were presented to the expert panel before the first round of surveys. The panel was asked to provide feedback on what they believed to be key messages and the narratives relevance to instrument development. For the narratives, patients were selected to represent differing experiences through a pre-screening process. Once selected, an experienced interviewer and videographer conducted the interview in the patient's

Results: Three patient narratives were presented to the expert panel in a 6 minute video. The following topics were reported back as being key messages from the narratives: challenges accessing and waiting for cataract surgery, multiple factors contribute to disability from cataracts, impact of vision loss on quality of life, patient's level of visual disability and how overall health affects prioritization, and the importance of patient self-advocacy. The majority of panelists reported that the narratives were relevant to this process because: they provided insights into impact of vision loss on quality of life, that multiple factors should inform appropriateness determinations, there are consequences to long wait times, and that prioritization should be based on patient needs and disability level.

Conclusion: Presenting patient narratives to the expert panel provided deeper insights into the patient experience that may not necessarily be assessed during surgical consultation where surgery priority is set. It is necessary to engage the patient perspective to ensure priority instruments assess the full potential impact on quality of life.

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ID: 148

Author: Dr. Lisa Lix

Title: Tuberculosis and Healthcare Use: A Population-Based Investigation

Type of Abstract: Oral

Objectives: Active tuberculosis (TB) requires a lengthy and intensive treatment process, but contacts with the healthcare system may vary over time and across patient groups. Our objectives were to characterize the associations of population origin and disease characteristics with healthcare use (HCU), and changes in HCU before and after TB diagnosis.

Approach: Manitoba's population-based TB Registry was linked with multiple administrative health databases. Individuals with a TB diagnosis between 1999 and 2013 comprised the TB cohort. A matched, disease-and-treatment-free cohort was also constructed. Generalized linear models with generalized estimating equations tested for differences in relative rates (RR) of inpatient hospitalizations, length of stay (LOS), specialist visits, family physician visits, emergency department visits, and non-TB prescription drugs one year before and two years after diagnosis. Population origin was tested for its association with HCU in both the TB and matched cohorts after adjusting for socio-demographic and comorbidity characteristics.

Results: The TB cohort included 1419 cases; 62% were First Nations (FN) and 24% were foreign-born. The matched cohort comprised 7078 individuals. Off-reserve FN TB cases had higher HCU than non-First Nations Canadian-born cases for hospitalizations, LOS, non-TB prescriptions and family physician visits; the same was true for on-reserve FN TB cases except for family physician visits. Foreign-born cases had the lowest HCU. HCU differences between First Nations and non-First Nations were similar for the TB and matched cohorts, except for LOS (TB RR = 1.7; 95% CI: 1.2, 2.3; matched RR = 1.2; 95% CI: 0.8, 1.9) and non-TB prescription drugs (TB RR = 2.3; 95% CI: 1.9, 2.4; matched RR = 1.6; 95% CI: 1.5, 1.8). HCU was typically higher after diagnosis than before.

Conclusion: This study integrated information from multiple sources to provide an in-depth examination of HCU associated with active TB disease. We demonstrated significant differences in HCU pre- and post-diagnosis and by population origin. These data will be useful for developing performance measures to compare with other provincial and international jurisdictions.

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ID: 174

Author: Dr. Aisha Lofters

Title: CERVICAL CANCER SCREENING AMONG WOMEN FROM MUSLIM-MAJORITY COUNTRIES IN ONTARIO, CANADA

Type of Abstract: Oral

Objectives: Immigrant women are less likely to be screened for cervical cancer in Ontario. Religion may play a role for some women. We used country of birth as a proxy for religious affiliation and examined screening uptake among foreign-born women from Muslim-majority versus other countries, stratified by region of origin.

Approach: In this population-based retrospective cohort study, we linked several provincial databases housed at the Institute for Clinical Evaluative Sciences. We identified all women eligible for cervical cancer screening between April 1, 2012 and March 31, 2015. Women were classified into region of origin based on country of birth. For women who were born in South Asia, the Middle East & North Africa, Eastern Europe & Central Asia, Sub-Saharan Africa, and East Asia & the Pacific, countries were classified as Muslim-majority (50% or more of the country's estimated 2010 population identifying as Muslim) or not.

Results: We found that being born in a Muslim-majority country was significantly associated with lower likelihood of being up-to-date on Pap testing, after adjustment for region of origin, neighbourhood income, and primary care-related factors (adjusted relative risk 0.93 [95% CI 0.92-0.93]). Sub-Saharan African women from Muslim-majority countries had the highest prevalence of being overdue for screening (59.6%), and the lowest adjusted relative risk for screening when compared to their peers from non-Muslim-majority Sub-Saharan African countries (ARR 0.77 [95% CI 0.76-0.79]). Other factors independently associated with screening for women in our study population included neighbourhood income, immigrant class, having a family physician, sex and region of training of the family physician, and primary care model.

Conclusion: We have shown that being born in a country where the majority of citizens identify as Muslim is associated with a decreased likelihood of being up-to-date on cervical cancer screening in Ontario. Future research should explore this relationship in a culturally safe manner and using more individual-level data sources.

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ID: 90

Author: Mrs. Elena Lungu

Title: The Canadian market for biologic response modifiers, 2015

Type of Abstract: Oral

Objectives: The market for biologic drugs used in the treatment of chronic inflammatory conditions has rapidly evolved over the last two decades. This study provides insight into the uptake in utilization, market shares, pricing, annual treatment costs and the broader drug portfolio of manufacturers operating in this space.

Approach: This project was initiated in response to a request from the NPDUIIS Advisory Committee in support of the pan-Canadian Pharmaceutical Alliance (pCPA). The drugs considered are Enbrel, Remicade, Kineret, Humira, Rituxan, Orencia, Simponi, Cimzia and Actemra. International comparisons focus on the seven countries the PMPRB considers in reviewing the prices of patented drugs (PMPRB7): France, Germany, Italy, Sweden, Switzerland, the UK and the US, as well as select countries in the Organisation for Economic Co-operation and Development (OECD). The report focuses on 2015 calendar year and provides a retrospective look at trends since 2010.

Results: The study shows that the sales and use of these biologic drugs are higher in Canada than in most comparable international markets. Despite the availability of lower-cost treatments, the majority of Canadian patients continue to use the drugs with the highest treatment costs: Remicade, Humira, and Enbrel. Aligning Canadian drug prices with international levels, especially for Remicade, and using less expensive alternative therapies, such as biosimilars, would result in lower drug costs for Canadians.

Conclusion: This report is designed to inform policy discussions on the price and reimbursement of this drug class at public and private payer level, including the pricing and uptake of emerging biosimilars.

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ID: 259

Author: Ms. Karen MacDonald

Title: PATIENTS' PREFERENCES AND TRADE-OFFS IN CHOOSING A SURGEON TO DECREASE WAITING TIMES

Type of Abstract: Oral

Objectives: Patients face significant waiting times for hip and knee total joint replacement (TJR) in Canada. One waiting time management strategy is the single-entry model (characterized by pooled referrals, central intake and triage for referral to specialist). Central intake can improve access by offering the choice of next available surgeon.

Approach: We aimed to assess patients' preferences and trade-offs for reducing waiting times for TJR including surgeon choice. We administered a questionnaire, including a discrete choice experiment (DCE) with 12 choice tasks, to Canadian patients (>18 years) referred as candidates for TJR. Five attributes were included based on our previous research, pre-testing and pilot testing: surgeon reputation, surgeon selection process, waiting time to surgeon visit, waiting time to surgery and travel time to hospital. Preferences were assessed using hierarchical Bayes analysis and evaluated for goodness-of-fit. We conducted simulation analyses for alternative scenarios representing various combinations of attributes.

Results: Of 422 participants, 59% were female and 68% were referred for knee TJR. Overall, mean baseline EQ-5D was 0.4 and mean Oxford score was 19.8. The most important attribute was surgeon reputation followed by waiting time to surgery, waiting time to surgeon visit, surgeon selection process and travel time. Patients appear willing to wait 10 months for consultation with an excellent reputation surgeon before switching to a good reputation surgeon. Simulations indicate that patients in the lowest pain category have stronger preferences for choosing their surgeon than those in the highest category. Patients in the highest pain category were willing to wait 7.3 months, after which they would accept the next available surgeon. Those experiencing the least pain were willing to wait 12 months.

Conclusion: Next available surgeon increases choice and may result in shorter waiting times. However, surgeon reputation is a dominant consideration, albeit poorly assessed by patients.

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ID: 378

Author: Mr. Adrian MacKenzie

Title: Changes in Determinants of the Supply of and Requirements for Family Physicians in Nova Scotia, 2006-2016

Type of Abstract: Oral

Objectives: The objectives of this study are to a) estimate changes in population need for primary care and family physician supply and productivity in Nova Scotia between 2006 and 2016, and b) identify gaps and limitations of existing sources of data pertaining to family physician supply and requirements in Nova Scotia.

Approach: This study was conducted by the Maritime SPOR SUPPORT Unit. It is a quantitative, descriptive study with a mix of repeated cross-sectional and longitudinal elements. Existing data on seven immediate determinants of family physician supply and requirements between July 1st 2006 and June 30th 2016 were compiled according to the elements of an established analytical framework for needs-based health workforce planning. Data sources included administrative health care databases, population health surveys, physician surveys, and previously published documents. Perspectives from patients, family physicians, and decision-makers were elicited to inform the analysis and interpretation of data.

Results: Changes in each determinant of the analytical framework – including 1) population size and demographics, 2) population health status, 3) levels of service, 4) family physician productivity, 5) the number of licensed family physicians, 6) family physician participation levels, and 7) family physician activity levels – between 2006 and 2016 are described. There are gaps in data pertaining to levels of primary care service provision and family physician activity and productivity in Nova Scotia. Existing data sources pertaining to the health status of Nova Scotia's population are subject to multiple limitations, including i) under-representation of disadvantaged populations, ii) infrequent collection, iii) sample sizes too small for many sub-provincial analyses, iv) delays in availability, or v) lack of information on severity and impacts of health issues.

Conclusion: The identified changes have direct implications for health human resources (HHR) planning in Nova Scotia, and underscore the need to broaden this planning beyond single professions such as physicians. Improving HHR planning in Nova Scotia will require investments in addressing the identified data gaps and limitations.

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Author: Dr. Martha MacLeod

Title: Managing the Tensions of Whole System Change Through a Partnership of Health Authority, Physicians, and Communities

Type of Abstract: Oral

Objectives: British Columbia's Northern Health Authority (NH) is leading a process of whole system change in partnership with physicians and communities. The objective is to examine how the partners work together, through the challenges and inherent tensions, in creating and scaling-up NH-wide integrated, patient centred, primary healthcare (PHC).

Approach: A longitudinal, multiple case study approach was used to examine how NH and its physician and community partners are attempting to undertake whole system change. Data consisted of 250 semi-structured interviews regionally and within communities over three years along with NH documents such as meeting minutes and evaluations of implementation initiatives. Thematic analysis was undertaken to understand, in depth, the process of developing integrative PHC approaches and to identify strategies in working through the challenges encountered in changing multi-dimensional systems. Research findings, discussed with physicians, community leaders, and NH leaders, contributed to ongoing PHC transformation and partnership development within communities.

Results: We have found that fundamental, transformative change that address the needs of people in communities while meeting regional and provincial directions, takes longer than anticipated; that partnerships have allowed NH and the physicians to work together in managing the dynamic tensions of reformulating services and scaling-up service changes. Finding ways to work through these tensions has been instrumental in transforming the system rather than just fixing aspects or adding on new PHC service structures. Through cooperative efforts, change processes have occurred locally with linkages to the regional direction; new common understandings and expectations are allowing the health system culture to change. Interim indicators of change are reflected in improvements in provider and patient experience, enhanced population health, and no increase in NH costs.

Conclusion: An in-depth examination of processes of change illuminates the relationships, challenges, and approaches that are needed for services and structures to be re-formed to better serve the needs of patients and families. Partnerships allow for working through the inevitable tensions and barriers to fundamental, far-reaching change in integrated PHC services.

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ID: 456

Author: Ms. Mona Magalhaes

Title: Looking Forward: Co-designing and evaluating a cancer survivorship program

Type of Abstract: Oral

Objectives: To develop an intervention that helps prepare patients for transition from acute treatment toward recovery by: exploring informational and psycho-social needs of adult cancer patients; engaging patients and clinicians to co-design a supportive program; evaluating the program's acceptability and impact on patient's perceived preparedness for re-entry and patient health education.

Approach: This study adopted a participatory approach using experience-based co-design. Five focus groups were held to obtain perspectives on care experiences and support needs from 15 patients and 11 clinical and community-based professionals. At a co-design session, patients and professionals agreed priorities for intervention content and format. Evaluation employed mixed methods pre-post to assess perceived preparedness (adapted from the Perceived Preparedness Re-entry Scale), health education (heiQ), and user feedback. 47 adult patients ending adjuvant chemotherapy or radiotherapy within the previous three months (English or French, without severe cognitive impairment or recurrent/metastatic cancer) participated in the pilot study and completed follow up.

Results: The final intervention design included: a group orientation session facilitated by a healthcare professional; an introductory animated video; and seven information booklets (English and French): Mindfulness of the 'new normal', Side effects and Symptoms, Emotions and fears, Regaining function and health, Back to work, Caregiver support, Finding reliable information. Results of the pilot and evaluation show significant improvement in perceived preparedness for re-entry from baseline to 1 month follow-up with an effect size of 0.75. Also noted were improvements in three health education domains (health behaviour, active engagement, self-monitoring) with a standardized effect size of 0.42, 0.55, 0.40 respectively. User feedback regarding overall usefulness (six questions) was relatively high with an average of 5.4 (95% CI: 5.2-5.6) on a six point Likert scale.

Conclusion: A patient-centered co-design approach enabled patients and professionals to share perspectives, and develop a re-entry program for cancer survivors. Patients demonstrated a high willingness to participate as collaborators. Patients identified needs for detailed health information which at times contrasted with professional's views. Pilot results suggest acceptability of the program.

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ID: 48

Author: Ms. Olivia Marquez

Title: Interactive Twitter infographics as a knowledge translation method for disseminating research evidence to public health decision makers

Type of Abstract: Oral

Objectives:

- to disseminate actionable messages from high-quality systematic reviews via a 10-week infographic Twitter campaign
- to increase public health engagement with review level evidence on Twitter and increase access to review evidence via healthevidence.org

Approach: Health Evidence™ hosts an online repository of 4,800+ quality-rated reviews evaluating effectiveness of public health interventions. A 10-week Twitter campaign posted two interactive infographics each week, disseminating actionable messages from methodologically-strong systematic reviews. Each infographic highlights the Canadian relevance of the health topic/issue and presents an actionable message with supporting review results. Tweets include a link to the review abstract on healthevidence.org and campaign hashtag “HE_Infographic”. Twitter and Google Analytics will compare engagement of sharing actionable messages with infographics versus Tweets without infographics using statistics.

Results: The @HealthEvidence Twitter account has 6,400+ global followers and tweets are viewed from followers from 119+ countries including: Canada, United States, United Kingdom, and Australia. Preliminary campaign data from Google Analytics reveal an average 265% increase in access to the systematic review on the day-of Tweeting compared to average daily views the month prior. Twitter Analytics show a single infographic Tweet will be viewed by up to 2,200+ followers, and can engage up to 60 people through an average 8 retweets, 6 likes, and 13 link clicks. Compared with text only Tweets, Tweets with infographics attract an average 732 more views and reveal a 26% improvement in engagement and 48% increase in link clicks.

Conclusion: Disseminating actionable findings from systematic reviews via engaging infographics that integrate statistical, graphical, and text descriptions of data increase public health decision makers' engagement evidence, compared to text only social media posts. This campaign demonstrates that social media can transform how evidence is disseminated to Canadian and global public health audiences.

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Author: Dr. Emily Marshall

Title: The more the better: a comparison of access, availability, and comprehensiveness of services between different models of primary health care (PHC) in Nova Scotia. Results from the MAAP-NS study

Type of Abstract: Oral

Objectives: To determine the benefits (e.g., access, availability and comprehensiveness of services) of various models of primary health care (PHC) currently in place as Nova Scotia (NS) develops and implements a collaborative care framework.

Approach: The MAAP-NS study surveyed all primary care practices (85% response rate) and providers (family physicians and nurse practitioner; 60% response rate) in the province by telephone and fax respectively, collecting information on each provider and practice including: accepting new patients, urgent and non-urgent wait times, walk-in options, and comprehensiveness of services. The independent variables are composites of information gathered related to models of care (e.g., number and type of provider, elements of collaboration, remuneration models and governance structures).

Results: Among family physicians and nurse practitioners, 70% are co-located and collaborating (C&C); 73% are provider-owned private practices; 76% are fee-for-service. Each of these variables relate to availability of care: C&C providers work more hours ($p=0.006$) and more often allow walk-ins than solo and not-collaborating providers; non-C&Cs are more likely to accept patients ($p=0.03$); private practices have fewer hours/week, are less likely to accept patients (both $p < 0.001$), and less likely to allow walk-ins ($p=0.03$). Fee-for-service providers work fewer hours/week, are less likely to accept patients or allow walk-ins (all $p < 0.01$) than providers on other funding. Comprehensiveness of services did not differ. Regressions indicate collaborating is most predictive of shorter urgent wait times and private governance predicts fewer hours/week and fewer walk-ins allowed (all $p < 0.05$).

Conclusion: Collaborative PHC teams currently provide better access and availability than solo providers or multi-provider/non-collaborating practices in Nova Scotia, Canada. Nova Scotia may thus benefit from investment in the new Collaborative Care Framework towards co-located and collaborative PHC practices.

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Author: Ms. Ping Mason-Lai

Title: The research interests of those with lived experience of depression

Type of Abstract: Oral

Objectives: The Alberta Depression Research Priority Setting Project was a collaborative process to engage patients/persons with lived experience, carers, and clinicians/researchers as partners to create a Top-10 list of depression research questions most relevant and important to those dealing with depression.

Approach: Meaningful engagement and partnership were critical to the project: The Steering Committee was comprised of patients/persons with lived experience, carers, and clinicians/researchers. They designed and implemented a survey that sought the input of Albertans with experience of depression; the survey collected questions that Albertans believe need to be focused on by mental health research. After the survey closed, the Committee then themed and sorted all the responses. A literature review was conducted to highlight under-researched areas. The questions that warrant further investigation went through a two-step prioritization process modelled after the James Lind Alliance methodology.

Results: Over 900 questions were submitted by Albertans. The majority were well-conceived, thoughtful, and intentional, demonstrating that persons with lived experience can be engaged in the research process as more than subjects of research. Some themes that emerged were: treatment (methods, options, access); biology/physiology (heritability, recovery); and age- specific (child/youth behaviour, education). 920 questions were reduced through several prioritization stages. The first stage involved reduction by the Steering Committee to a Top-30 list. Additional stakeholder perspectives were solicited in an all-day workshop to reach a Top-10 prioritization of depression research questions. The Top 10 will be utilized by several organizations: the Addictions and Mental Health Strategic Clinical Network, Alberta Health Services and the Canadian Depression Research Intervention Network.

Conclusion: Patients/persons with lived experience bring thoughtful and important insights to the research team. This project provided evidence that engaging patients/persons with lived experience as collaborators or partners is beneficial for patient-oriented research. Priority setting is an effective method of patient engagement.

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ID: 291

Autheur: Madame Julie Massé

Titre: L'adaptation des services à l'évolution du contexte migratoire : opportunités d'innovation dans la région de Québec

Type d'abstrait: Oral

Objectifs: L'évolution du portrait démographique amène à adapter les modèles d'organisation des services de santé à l'immigration. L'objectif de cette recherche était de documenter l'expérience des professionnels et intervenants œuvrant en périnatalité auprès d'une clientèle présentant des barrières linguistiques et culturelles à l'accès aux services dans la région de Québec.

Approche: Reposant sur un devis qualitatif de type exploratoire et descriptif, la collecte de données s'est appuyée sur 13 entrevues individuelles semi-dirigées réalisées à l'hiver 2016 auprès de professionnels du CIUSSS de la Capitale-Nationale et d'intervenants d'organismes communautaires du territoire travaillant en périnatalité auprès de familles immigrantes. L'analyse thématique, réalisée avec le logiciel QDA Miner, a mis en lumière les difficultés rencontrées ainsi que les pistes de solutions envisagées par les répondants, et ce, dans le but d'éclairer les décideurs régionaux dans le développement d'un modèle organisationnel novateur visant à répondre aux besoins induits par l'évolution du contexte migratoire local.

Résultats: Deux types de défis se répercutant sur l'accès des familles immigrantes aux services sont identifiés : (1) les particularités de la clientèle (ex. : spécificités linguistiques et culturelles, précarité financière et statuts migratoires); (2) les défis organisationnels et structurels (ex. : rigidité des programmes, complexité des trajectoires de services, difficultés d'accès géographique, ressources humaines et budgétaires limitées, formation interculturelle et coordination de la prise en charge). Face à ces défis, les participants formulent des pistes de solution touchant le développement d'un portrait plus fin de la réalité immigrante, le déploiement de mesures renforçant l'accès aux services, un accompagnement durable et intégré offert aux familles, l'adaptation des outils d'intervention et programmes et la création d'une structure de prise en charge périnatale de proximité spécialisée en interculturel.

Conclusion: Nos conclusions suggèrent la nécessité de développer un modèle intégrateur d'organisation des services favorisant un accès de proximité, équitable et adapté aux besoins des familles ayant des barrières linguistiques et culturelles dans une approche sensible aux spécificités du contexte migratoire local.

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ID: 301

Author: Dr. Cristina Mattison

Title: Understanding the role of midwifery in Ontario's health system

Type of Abstract: Oral

Objectives: Despite the significant variability in midwifery across provincial/territorial health systems, there has been limited scholarly inquiry into whether, how and under what conditions midwifery has been assigned roles into Canada's health systems. Our study examines Ontario's response to maternity care needs in the context of broader efforts to transfer the province's system.

Approach: We use Yin's (2014) explanatory single-case (embedded) study design, to qualitatively assess how, since the regulation of midwives in 1994, the Ontario health system has assigned roles to midwives as a service delivery option. The study focuses on two recent key policy directions (2014 creation of two midwifery-led birth centres and the 2015 primary care reform discussion paper by the Ministry of Health and Long-Term Care) that present opportunities for the integration of midwives into the health system. Key informants (n=18) were sampled purposively based on whether they have been involved in or affected by the policy directions.

Results: Our emerging findings suggest that while midwives, at the time of regulation, were created to be an autonomous profession, health-system transformation initiatives have restricted the scope of practice and integration of midwives into Ontario's health system. Birth centres have surprisingly introduced constraints to midwifery practice, including the capping the number of births attended by midwives at hospitals, as well as number of midwives able to hold hospital privileges. Primary care reform has failed to incorporate midwives as members of the primary care team. Ongoing analyses are examining the factors that explain these emergent findings.

Conclusion: This will be the first study to explain why midwives have not been fully integrated into the Ontario health system as well as the limitations placed on their role and scope of practice. It builds a theoretical understanding of the integration process of healthcare professions within health systems.

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ID: 353

Author: Ms. Mary McBride

Title: Costs of adolescent cancer by phase of care: a population-based study in British Columbia and Ontario, Canada

Type of Abstract: Oral

Objectives: Adolescent cancer care presents unique issues relating to diagnosis, treatment, late effects, and survivorship, but little is known about costs, which are useful for economic evaluation and healthcare planning. This study estimates and compares cancer-attributable costs for cancer in adolescents in two Canadian provinces in four phases of care.

Approach: Patients diagnosed with cancer 1995-2010 aged 15 to 19 years were identified from British Columbia (BC) and Ontario (ON) cancer registries. Resource-specific costs (Canadian \$, 2012) were estimated for all patients in pre-diagnosis, initial year of treatment, continuing phase, and final year of life (for those who died) using linked clinical and administrative healthcare databases. Net costs were calculated by subtracting healthcare costs for propensity-score-matched province specific samples of adolescents without cancer from cancer patient costs. Costs in each phase were standardized to per 60 days for pre-diagnosis, and 360 days for initial, continuing, and final phases.

Results: In both cohorts (NBC = 775;NON = 2,443), approximately (26BC, 29ON)% had lymphoma, (17BC, 13 ON)% germ cell tumours, and (19BC, 24 ON)% other malignant epithelial neoplasms and malignant melanomas; 94% survived ≥ 1 year. Both provinces reported highest costs in the final phase. Mean overall net costs in BC were \$3,486, \$61,130, \$8,254, and \$233,849 in pre-diagnosis, initial, continuing, and final phases respectively. ON mean overall net costs were \$1,018, \$62,919, \$7,071, and \$242,008 by phase. Inpatient hospitalizations represented 40%, 60%, 54%, and 72%BC and 40%, 67%, 55%, and 77%ON of net costs by phase. CNS tumours had the highest pre-diagnosis costs and leukemia the highest initial and final costs in both provinces. For continuing costs, leukemia was highest in ON and bone and soft tissue highest in BC.

Conclusion: Hospitalization was the single largest cost driver in both provinces in all phases. Higher overall costs in Ontario are likely due to higher cost per weighted case values in Ontario hospitals. Overall adolescent cancer costs are lower than costs for cancer among children, and higher than for cancer among adults.

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ID: 93

Author: Mr. Greg McComb

Title: Cost Drivers in Public Drug Plans in Canada, 2015/16 – CompassRx

Type of Abstract: Oral

Objectives: After several years of low or negative growth, drug expenditures in public drug plans increased sharply by 12.2% in 2015/16. The 3rd edition of the CompassRx provides insight into the factors that contributed to this remarkable growth in cost.

Approach: The analysis uses claims-level public drug plan data from the Canadian Institute for Health Information's NPDUIIS Database for the 2011/12 to 2015/16 fiscal years. A sophisticated cost-driver model isolates the key factors contributing to changes in drug and dispensing costs: the mix of drugs, drug prices, dispensing fees, the volume of drugs, and changes in the demographic profile of the beneficiaries.

Results: The striking growth in drug costs in 2015/16 was due to the combined effect of limited generic savings and an increased use of high-cost drugs. The hepatitis C drugs Harvoni, Sovaldi and Hologic alone contributed 7.3% toward this increase in growth, while other high-cost drugs continued to put pressure on costs. The generic drug use and lower prices, which markedly pulled down drug costs in recent years, had a diminished cost saving impact from -9.2% in 2012/13 to -4.1% in 2015/16 and was no longer able to offset the effect of higher-cost drugs.

Conclusion: A greater understanding of the forces driving expenditures in Canadian public drug plans will inform policy and stakeholder discussions and aid in anticipating, managing and responding to evolving cost pressures.

All Authors: Greg McComb

ID: 235

Author: Ms. Meghan McMahon

Title: The Effects of Regulation on Quality: Evidence from the Nursing Home Industry

Type of Abstract: Oral

Objectives: Improving nursing home (NH) quality of care (QoC) is consistently identified as a top but challenging priority. Insufficient evidence exists about the effects of the most commonly used tool to ensure quality: government regulation. This study systematically reviews the empirical literature about the effects of government regulation on NH QoC.

Approach: The review protocol was informed by a group of academics and decision makers with expertise in the areas of NH regulation, quality monitoring and reporting, and economics, and a search strategy was then developed with the help of a library scientist. Peer-reviewed papers on the effects of government regulation on NH QoC published between 1985-2016 were identified through searches of seven databases using MeSH and keyword terms related to nursing homes AND quality of care/quality of life AND government regulation. Articles deemed relevant for inclusion underwent systematic data extraction and were assessed for their methodological quality.

Results: Results are forthcoming and will be first presented at CAHSPR. Initial results indicate that: 1) the majority of evidence is from the US; 2) study designs and model specifications vary in their ability to identify causal relationships and minimize bias; 3) regulations more frequently target nurse staffing levels (e.g., minimum direct care staffing requirements) and process of care inputs (e.g., use of restraints, catheters, feeding tubes) rather than QoC outcomes (e.g., pressure ulcers, falls); 4) where outcomes are targeted they tend to focus on clinical outcomes more than quality of life or resident experience outcomes; 5) the effects of regulation are inconsistent across studies and quality measures; and 6) evidence of offsetting behaviour (e.g., diversion of efforts to measured quality, input substitution) is apparent.

Conclusion: The design of effective regulation is acknowledged to occur in an iterative cycle of testing and refinement. Given the importance of providing high quality NH care and the widespread use of regulation as a tool to ensure quality is achieved, it is essential to have rigorous evidence about its effects.

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ID: 31

Author: Ms. Dale McMurchy

Title: Healthy Child Development: The Impact of Indigenous Outreach and Home Visiting Programs On-Reserve

Type of Abstract: Oral

Objectives: Aboriginal Head Start on Reserve (AHSOR), Maternal Child Health (MCH), and Children's Oral Health Initiative (COHI) are part of FNIHB's Healthy Child Development outreach and home visiting programming. This study assesses how these activities are delivered in communities, integrated, and contributing to the health and well-being of children and families.

Approach: Study methods included a literature review; program and staff surveys administered in Canadian Indigenous communities selected randomly using a stratified, factorial design; in-person program participant and staff interviews in four communities; and analyses of national level administrative data. The study was supported by a National Working Group and Community Advisory Group which provided input into study design, implementation and final reports. Standard qualitative and quantitative analyses methods were used to analyze program surveys from 17 communities (89% response rate); 55 staff surveys (92% response rate); 26 focus group participant surveys; and interview data from 24 staff and 21 program participants.

Results: Increasing awareness and trust is a critical first step to improving program participation and outcomes. Important impacts of the three programs include improved: self-esteem and self-confidence among parents; access to services; knowledge about health and well-being; screening; parenting skills and bonding; family relationships; and school readiness. These programs work together to varying degrees and also have linkages with other on-reserve programs. Communities with two or more programs had higher reported impact in terms of cultural activities, promoting healthy families, effective parenting and healthy child development.

Factors critical to program success and impact included: community and client input; effective communication; positive and trusting staff-participant relationships; program approach, including the curriculum, group programs and innovative tools; scheduling; teamwork; staff roles, responsibilities and turnover; staff training; and partnerships.

Conclusion: Health Canada's AHSOR, MCH and COHI outreach and home visiting programs provide critical prenatal care, early childhood development and oral health support and services to children and families on-reserve. While the programs would benefit from more resources, they have highly-rated participant-reported experiences and provide important benefits to participants and communities.

All Authors: Dale McMurchy, Robert Palmer

ID: 114

Author: Ms. Nickoo Merati

Title: Cree youth engagement in community-based health planning - perspectives on process and priorities: review of evidence and methodology

Type of Abstract: Oral

Objectives: While many health problems in James Bay Cree communities primarily affect youth, engagement of young voices in health planning to date has been limited. Objectives: to (1) review the evidence and best practices regarding Indigenous youth engagement in health planning and evaluation, and (2) co-design a strategy for engaging Cree youth.

Approach: This project is nested within an ongoing community-based participatory research evaluation (CIHR-PHSI grant) of a Cree community-based health planning initiative. The Cree conceptualization of health is known as 'Miyupimaatisiun', best interpreted as 'being alive well'. Our research question is: What does Miyupimaatisiun mean for Cree youth? This qualitative descriptive study will involve a review of the evidence, a partnership with local youth leaders and councils, and co-designing a strategy for youth engagement in their own Miyupimaatisiun planning and evaluation. We will recruit approximately 8-10 Cree youth leaders and youth community members (aged 14-25) and conduct 2-3 focus groups, with selected in-depth follow-up interviews.

Results: We will present the overall methods and preliminary findings of the literature review: including evidence about Indigenous youth priorities for health and healthcare, and best practices of how to gather youth voices (particularly through the use of social media). Overall, we anticipate this project will contribute to: i) a better understanding of youth perspectives on planning processes and priorities for their health and healthcare; ii) the co-creation of new knowledge about methods for engaging young Indigenous people in health planning and research processes; iii) strengthened partnerships between the McGill academic team, the Cree Health Board, and the James Bay Cree youth and communities; and iv) knowledge translation products (including a final report and plain language briefings for Cree youth).

Conclusion: This study will help fill the knowledge gap for James Bay regarding what Cree youth perceive to be effective strategies for gathering young voices about health and healthcare, and preliminary insights on priorities. We anticipate that the youth perspectives will differ from that of local and regional leadership.

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ID: 530

Author: Ms. Ashleigh Miatello

Title: The service journey of transitioning from child to adult mental health services: An analysis of underlying values from the perspectives of youth, family members and service providers

Type of Abstract: Oral

Objectives: ‘Touch points’ – crucial positive or negative moments that shape a service user’s experience in care are based on values. This analysis sought to identify the underlying values associated with the service journey when transitioning from youth to adult mental health services from the perspectives of youth, families and providers.

Approach: Using secondary interpretive phenomenological analysis of interview transcripts involving youth, family members and service providers across Ontario, we identified touch points that shaped experiences of youth transitioning from child to adult mental health services. Focus groups were then held with youth, family members and service providers from Hamilton to obtain their feedback on the touch points and to develop experience maps of prioritized touch points illustrating where they occurred along the journey from each perspective. Using qualitative thematic analysis, we identified the underlying values (deeply held beliefs) associated with touch points and compared these with Giacomini et al.’s values framework.

Results: Youth, family member and service provider descriptions of their experiences in the journey through mental health services were value-laden. Common values that emerged for youth and families included: feeling that crisis level need should not be a necessary precursor to gain access to care, that they had the right to be taken seriously and be treated with respect and dignity, to expect an orderly transition plan where a provider is held accountable, to have timely communication while transitioning between services, and for parents to be informed of aspects of their youth’s care that influence safety. Service providers felt that youth should have access to continuity in care, but issues of turf and silos, geographic service boundaries, and adult service shortages were obstacles.

Conclusion: This research identifies the underlying values that youth, family members and service providers hold that create emotive touch points along the journey from child to adult mental health services. Findings support the patient-centered approach to policymaking and facilitate prioritizing negative touch points as areas for quality improvement.

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ID: 392

Author: Dr. Sandra Milicic

Title: The associations between e-cigarettes and binge drinking, marijuana use, and energy drinks mixed with alcohol

Type of Abstract: Oral

Objectives: Use of e-cigarettes by youth is proliferating world-wide but little is known about the behavioural profile of youth e-cigarette users and the association of e-cigarette use with other health-risky behaviours. We examine the associations between e-cigarette use and tobacco, marijuana, and alcohol use among a large sample of Canadian youth.

Approach: Using Canadian data from 39,837 grade 9 to 12 students who participated in Year 3 (2014-15) of the COMPASS study, logistic regression models were used to examine how current use of e-cigarettes were associated with tobacco, marijuana, binge drinking, and energy drinks mixed with alcohol. Pearson's chi-square tests were used to examine subgroup differences by sex.

Results: Overall, 9.75% of respondents were current e-cigarette users. Current cigarette smokers (OR 3.009), current marijuana users (OR=5.549), and non-current marijuana users (OR=3.653) were more likely to report using e-cigarettes than non-cigarette smokers and non-marijuana users. Gender differences among males and females showed higher risk of e-cigarette use among female current marijuana users (OR=7.029) relative to males (OR=4.931), and female current smokers (OR=3.284) compared to males (OR=2.862). Compared to non-binge drinkers, weekly (OR=3.253), monthly (OR=3.113), and occasional (OR=2.333) binge drinkers were more likely to use e-cigarettes. Similarly, students who consume energy drinks mixed with alcohol (OR=1.650) were more likely to use e-cigarettes compared to students who do not consume them.

Conclusion: We identify that youth who binge drink or use marijuana have a greater increased risk for using e-cigarettes compared to cigarette smokers. These data suggest that efforts to prevent e-cigarette use should not only be discussed in the domain of tobacco control.

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ID: 269

Author: Dr. Kyle Millar

Title: Children born to mothers with diabetes in pregnancy in Manitoba: Long term educational outcomes.

Type of Abstract: Oral

Objectives: It is becoming clear that diabetes in pregnancy (DIP) leaves a legacy on the fetus. There are higher rates of neonatal and childhood morbidity, including worsened developmental and cognitive outcomes in children exposed to DIP. Our hypothesis is that exposure to DIP will negatively affect education attainment in the offspring.

Approach: Using population-based, de-identified, linked administrative databases, 2 cohorts of children were categorized into those exposed to pre-pregnancy diabetes (PGD) or gestational diabetes (GDM). Multiple databases were used to construct outcomes including grade 12 graduation (G12G) rates and acceptable grade 9 achievement (G9A), as well as to correct for social and medical confounders. Cases were matched 1:3 by birth year, gender and gestational age with controls. Children were excluded if they died, emigrated, or attended school on a First Nations reserve. Multivariate logistic regression was used to determine the association between in utero diabetes exposure and G12G rates and G9A.

Results: The exposure rates to PGD and GDM were 475 and 982 per 100 000, respectively. The model size varied slightly by outcome and diabetes type but contained 5197-13796 students. Over 80% of PGD exposure was to type 2 diabetes. An association between G12G rates and exposure to GDM (OR, 0.70 [95% CI, 0.62-0.79]), and PGD (OR, 0.57 [95% CI, 0.47-0.69]) was seen. An association between G9A and exposure to GDM (OR, 0.75 [95% CI, 0.68-0.83]), and PGD (OR, 0.78 [95% CI, 0.66-0.92]) was also seen. The predicted probability of G12G was 86% for PGD and 87% for GDM compared to control rates of 91% and 90% respectively. The predicted probability of G9A was 73% for PGD and 66% for GDM compared to 77% and 72% in controls.

Conclusion: There was an association between exposure to either PGD or GDM and lower grade 12 graduation rates and lower grade 9 achievement. It is critical to optimize the educational outcomes of these children to promote upward social progress and to break the cycle of poverty, social isolation and detrimental health outcomes.

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ID: 275

Author: Mr. David Miller

Title: Examination of Repeat Hospital Admissions for Mental Health Conditions Among Children and Adolescents in New Brunswick

Type of Abstract: Oral

Objectives: Access to psychiatric services is insufficient for children and adolescents in Atlantic Canada. Unfortunately, the limited available services are exacerbated by youth who are readmitted, with readmission rates ranging from 35 to 50 percent. This study examined predictors of readmission to acute psychiatric care services in New Brunswick.

Approach: Consistent with the prevailing literature on psychiatric hospitalisations, we examined key demographic, support, and illness/treatment factors. The New Brunswick Discharge Abstract Database (NB DAD) was used to compile a retrospective readmission cohort, consisting of all children and adolescents ages 3 to 19 years who were admitted to psychiatric care in a New Brunswick hospital between April 1, 2003 and March 31, 2014 (N = 3,825). Primary analyses consisted of: (1) Kaplan-Meier survival methods with Log-Rank tests to assess variability in time to readmission and (2) Cox regression to identify significant predictors of readmissions.

Results: A total of 27.8 percent of the admitted child and adolescent population experienced at least one readmission in the 10-year period. Of those readmitted, over half (57.3 percent) readmitted within 90 days post-discharge. Bivariate results indicated that male, upper-middle-class adolescents aged 11 to 15 years from non-rural communities were more likely to be readmitted. Factors generally associated with a significantly increased likelihood of readmission were older age, being male, higher SES, referral by medical practitioner/clinician, discharge to another health facility, mood/affective disorder diagnoses, previous psychiatric admission, comorbidity, and ambulance use. In contrast, those factors associated with significantly reduced readmission likelihood were smaller community size and referral to medical practitioner/therapist. Of the associated variables, age, SES, and referral source had the strongest positive relationship with readmission.

Conclusion: The impact of demographic and support structures on readmission are pronounced, indicating that those children and youth with certain demographic characteristics and specific types of support structures (that instigate referral) explain a significant portion of the variance in readmission likelihood. Implications and future directions of these findings are discussed.

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ID: 206

Author: Ms. Nassim Mojaverian

Title: Validation of incident long-term care admissions in Ontario using administrative data

Type of Abstract: Oral

Objectives: This validation study evaluated algorithms based a combination of prescription drug claims and physician billings for determining admissions into publicly-funded long-term care (LTC) homes in Ontario prior to 2010, where there was an absence of longitudinal LTC data at the individual level.

Approach: The analysis utilized health administrative data at the Institute for Clinical Evaluative Sciences (ICES). Prescription drug claims, physician billing, and LTC entry were obtained from the Ontario Drug Benefit (ODB) database, the Ontario Health Insurance Plan (OHIP) data, and the Continuing Care Report System (CCRS), respectively. The CCRS – the reference standard – contains records of LTC admissions/discharges, as well as comprehensive health assessments of residents in LTC homes from 2010 onwards. Various combinations of OHIP and ODB records (2012-2013) were validated against the CCRS. Performance measures included sensitivity, specificity, predictive values and proximity to the CCRS admission date.

Results: In 2012, 25 162 Ontarians over the age of 50 were admitted into LTC for the first time. The average age of the residents at admission was 83 years. The results from our preliminary analysis indicate the best performing algorithm uses 2 OHIP, 2 ODB, or 1 OHIP and 1 ODB claims that were no more than 365 days apart between any 2 codes (sensitivity: 99.3%, specificity: 98.8%). The validated algorithm identified fills an existing data gap by expanding our capacity to determine the incidence of LTC entry and examine the health care needs of new LTC residents prior to the introduction of the CCRS. Further analysis will use the validated algorithm to determine the health profiles of new LTC residents over 15 years (2000-2015).

Conclusion: The validated algorithm will enable future researchers to examine LTC use and trends prior to the systematic collection of CCRS data. Our findings will also provide policymakers in Ontario with a better understanding of the trends in LTC utilization and the health care needs of new residents.

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ID: 70

Author: Dr. Steven Morgan

Title: The estimated effects of adding universal public coverage of an essential medicines list to the existing complement of public drug plans in Canada

Type of Abstract: Oral

Objectives: Canada's universal health care system does not include universal coverage of prescription drugs. We sought to estimate the effects of a step toward such coverage: adding universal public coverage of an essential medicines list to existing public drug plans in Canada.

Approach: We used administrative and market research data to estimate the 2015 shares of the volume and cost of prescriptions filled in the community setting that were for 117 drugs on a model list of essential medicines for Canada. We compared prices of the essential medicines in Canada with prices in the USA, Sweden, and New Zealand. We estimated the cost of adding universal public drug coverage of the essential medicines based on anticipated effects on drug utilization and pricing.

Results: The 117 essential medicines accounted for 44% of all prescriptions and 30% of total prescription drug expenditures in 2015. Average prices of generic essential medicines were 47% lower in the USA, 60% lower in Sweden, and 84% lower in New Zealand; brands were priced 43% lower in the USA. Universal public coverage of the essential medicines could save patients and private drug plan sponsors \$4.272 billion per year (28%; range \$2.721 to \$5.831 billion) at an incremental government cost of \$1.229 billion per year (11%; range \$373 million to \$1.979 billion).

Conclusion: Adding universal public coverage of essential medicines to the existing public drug plans in Canada could address most of Canadians' pharmaceutical needs and save billions of dollars while more comprehensive pharmacare reforms are planned.

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ID: 286

Author: Dr. Aude Motulsky

Title: Adoption and level of use of a population-based health information exchange in Québec

Type of Abstract: Oral

Objectives: Health information exchanges (HIE) are seen as an essential technology for improving healthcare quality and efficiency by allowing patient-centered data exchange over time and across organizations. The objective of this study is to describe the adoption of an HIE in the province of Quebec two years after its full implementation.

Approach: An analysis of usage data between January 1st 2016 and July 31st 2016 was performed to describe the usage of three types of clinical data (medication dispensations, laboratory results, and diagnostic imaging) available through this HIE. The number of authorized users, active users, and number of accesses per user according to their role (physician, nurse, pharmacist, other [technicians, archivists, midwives, etc.]), medical specialty, and clinical setting (acute care, long term care, primary care, pharmacy) were described. Data were obtained from the Health Ministry of Québec.

Results: During the study period, a total of 26 939 (56% of 48 065 authorized users) active users accessed the HIE: 29% physicians, 28% nurses, 25% pharmacists, 4% medical residents, and 14% other. Among physicians, 75% were GPs, 25% were specialists. 80% (6 669/8 319) of the total number of potentially authorized pharmacists in the province accessed the HIE, 66% (5 980/8 906) of GPs, while only 20% (1 949/9 748) of specialists and 10% (7 443/74 579) of nurses accessed it. Of the three types of clinical data available, medication data was the most likely to be accessed by any user. GPs had the greatest number of mean accesses during the study period (565), followed by pharmacists (441), nurses (269) and medical residents (177).

Conclusion: This HIE was used by a diverse group of healthcare professionals. Most pharmacists and the majority of GPs in the province have adopted the tool. Medication data was the domain that was used the most, indicating that it has broad value across clinical settings.

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ID: 478

Author: Ms. Kelly J. Mrklas

Title: Intervention Mapping as a Planning and Improvement Tool for Provincial Knowledge Translation Consultation Services

Type of Abstract: Oral

Objectives: Evidence-informed knowledge translation (KT) consultation within the healthcare system requires the consistent availability of consult-applicable knowledge; however, such evidence is scarce. This study used evidence from a previous barrier-facilitator-context assessment to build an evolving program-level adaptome (Chambers & Norton, 2016) for planning, quality improvement and KT strategy development.

Approach: A previous barrier-facilitator-context assessment (n=100 KT consultations) was used to map theory-based domains and intervention functions (Theoretical Domains Framework; Michie and Consolidated Framework for Implementation Research; Damschroder). A dictionary of potentially relevant, evidence-based intervention strategies was developed to address barriers, facilitators and consider context. Consultations were examined and strategies mapped by case, on individual and group levels, as appropriate. A modified APRAISE (Michie) assessment was used to identify strategies of potential fit, and the dictionary was synthesized thematically, to inform program development. A comprehensive supports assessment was not undertaken.

Results: Consultations comprised service and research activity (n=100) and barrier-facilitator codes spanned the theoretical domains (n=290 barriers, n=550 facilitators). A full 75% and 97% of consults were associated with more than one barrier and facilitator, respectively. A third of coded barriers focused on context/resources and knowledge issues, generating an intervention map focused on training, environmental restructuring and enablement strategies (e.g. knowledge brokering, changes in scope/nature of benefits and services, formal integration of service, leadership and financial parameters), and population-specific education interventions. There was high overlap between the top 5 barrier-facilitator categories, revealing opportunities for tactical strategy mapping (e.g., in environmental restructuring, enablement, education, modeling, and persuasion). Among facilitators, social roles and influences were prominent, and intervention strategies to lever peer and professional influences were identified.

Conclusion: Findings demonstrate use of a theory-driven, evidence-based approach to case- and program-level KT consultation assessment in a provincial healthcare system. Findings will be integrated into research, training and consult service tactics and will guide program improvement. Future research should include systematic assessment of interventions and their adaptations to elaborate the adaptome.

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ID: 467

Author: Dr. carol mulder

Title: Demonstration of Starfield's observations about relationship between primary care quality and health system cost at the level of primary care teams in Ontario

Type of Abstract: Oral

Objectives: Starfield observed that high quality primary care was related to lower per-capita healthcare costs. The regional/national nature of these observations make them less actionable for providers. This study examines the quality-cost relationship at primary care team level in Ontario to facilitate healthcare sustainability via high quality primary care.

Approach: All 184 members of the Association of Family Health Teams of Ontario (AFHTO) were invited to contribute quality and cost data to Data to Decisions (D2D), a performance measurement report, now in its 4th iteration. Consistent data extraction and compilation were enabled by team-level Quality Improvement Decision Support (QIDS) specialists. A composite measure of quality was calculated from patient experience, administrative and EMR data. Each component of the composite was weighted by its importance to patients in their relationship with their provider. It was compared to per-capita healthcare costs for primary care, hospitalization, diagnostic and consulting services and institutional care.

Results: Data were available for 120 teams (65%). The average quality score was 52.9 (S.D. =11.57, 25.2 – 85.3, compared to an approximated Ontario average of 30.6 based on publicly-reported aggregate data. The average per-capita cost (without institutional costs) was \$2456.16 (S.D. = 504.65, 1234.68-4030.03). Linear regression analyses (controlling for patient panel size, Standardized Adjusted Clinical Group Morbidity Index (SAMI), rurality, teaching status and a surrogate measure of EMR maturity) showed that quality was negatively related to cost ($R^2 = 0.427$). The relationship was stronger for urban than rural teams, suggesting other factors might be contributing to costs in different settings.

Conclusion: Starfield's observation that high primary care quality is related to lower healthcare system costs applies to this setting. Factors affecting costs in rural/urban settings need further examination. Active participation of AFHTO members (and QIDS specialists in particular) in consistent, ongoing measurement via D2D was a crucial enabler of this study.

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ID: 195

Author: Dr. Gillian Mulvale

Title: Teasing apart 'the Tangled Web' of Influence of Policy Dialogues: Lessons from A Case Study of Dialogues About Health Care Reform Options for Canada

Type of Abstract: Oral

Objectives: Our objective was to understand whether the intended capacity development effects of policy dialogues described in the literature were borne out in practice, based on a series of policy dialogues on health care reform in Canada, and if so, how enhanced capacities influenced participants' subsequent activities in the policy realm.

Approach: We conducted a qualitative case study of four policy dialogues that were convened in 2011 among national, provincial and regional stakeholders on topics pertaining to health care financing and funding. Data sources included videos of participant perspectives recorded during or immediately following each dialogue and follow up key informant interviews among dialogue participants during 2015. Initial coding was based on a conceptual framework that relates dialogue features to the development of participant capacities in the short term, and organizational and health systems capacities over the medium and long terms for evidence-informed policy-making. The framework was extended based on emergent themes.

Results: The findings suggest a 'tangled web' of mechanisms by which capacities developed by policy dialogue participants may influence subsequent policy development as well as possible barriers and facilitators. In the short term, discussion of ideas, including policy problems and their framing as well as potential solutions may influence the problem definition and agenda-setting stages of policy making. In the medium term, better engagement of senior leaders, positioning of the options that are up for discussion and creating excitement around a policy problem can help to draw attention to the issue. Over the longer term, dialogue attendance can create a more cohesive policy community, encourage policy-relevant research, and the development of new knowledge exchange approaches can support policy implementation and evaluation.

Conclusion: Policy dialogue planning should consider the stage of the policy cycle, the characteristics of the organization (skilled managers, change champions, staff stability) and political context (will for reform, leadership) to assess the potential for knowledge exchanged at the dialogue to influence policy development, particularly in the decentralized Canadian context.

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Author: Mr. Matthew Munro

Title: Narratives of Barriers and Facilitators in the Treatment of Youth Anxiety

Type of Abstract: Oral

Objectives: This presentation discusses the implications of youth mental health journeys research. The primary objective of this work is to explore how youth with anxiety disorders have experienced treatment in the mental health system in Atlantic Canada, and how youth perspectives can inform mental health research.

Approach: Data was collected as part of the Atlantic Canada Children's Effective Service Strategies in Mental Health (ACCESS-MH) study. Semi-structured qualitative journey interviews were conducted with youth aged 13-18 who have been diagnosed with anxiety disorders and have sought treatment. The research explored how participants experienced barriers/facilitators accessing services and being treated in the system. The interview analysis was grounded in critical ethnography to study how social, political, and economic systems impacted youth journeys. The design of the study promoted youth voice with the infusion of patient perspectives in qualitative health systems research.

Results: Participants identified barriers/facilitators at personal and systematic levels that acted as a barrier or facilitator in different circumstances. Key themes were therapeutic relationships, medicalization, wait times, and being treated in schools. Journeys were complex and participants highlighted bureaucratic barriers that impacted their treatment. Participants often did not feel the system responded appropriately to the critical and sensitive nature of their needs. There were communication barriers with mental health providers where youth voices felt marginalized, issues around trust, and confusion regarding the appropriateness of some treatment options. Many participants felt stuck in the margins and did not know if they were sick enough to access services. These themes represented the paradoxical struggles youth faced when being treatment in the mental health system.

Conclusion: Youth negotiate treatments through complex networks and require more support when navigating the system. Providers, researchers, and policy makers should consider youth perspectives when making informed decisions for mental health interventions and service design. This work raises concerns regarding equity and accessibility when treating youth anxiety disorders.

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Author: Mr. Sergei Muratov

Title: Incremental Healthcare Utilization and Costs Among Senior High Cost Users in Ontario

Type of Abstract: Oral

Objectives: To determine the magnitude of incremental healthcare use and costs among incident senior high cost users (HCUs) compared to matched non-HCUs across various care components in the province of Ontario.

Approach: We conducted a retrospective, population-based cohort study using administrative healthcare records. Incident senior HCUs were defined as Ontarians age ≥66 years who were in the top 5% of healthcare cost users during fiscal year 2013 (FY2013) but not during fiscal year 2012 (FY2012). Each HCU was matched to 3 non-HCUs by age, sex and health planning region. Where possible, incremental healthcare use and costs were determined estimating the difference between the change in outcomes before versus after the index date in HCU compared to non-HCU groups ('difference in differences' approach).

Results: Incident HCUs (n=176,604) accounted for 46% of all HCUs in FY2013 (n=387,759). 78.6% of HCUs had at least one hospitalization in the incident year compared to 2.6% in the preceding year. The proportion of hospitalized non-HCUs was 1.6% and 1.8%, respectively. Compared to the year before becoming HCU, the annual incremental resource utilization per senior HCU was a mean of 1.31 emergency department visits, 29.7 physician visits (73% attributable to specialist visits), and 24.9 home care visits (63% due to personal support).

Compared to non-HCUs (n=529,812), HCUs incurred an additional \$23,765 per patient in total healthcare costs. Inpatient care had the highest incremental costs (\$12,143) representing 51% of the total incremental spending, followed by physician services (\$3,015), home care (\$1,387), and rehabilitation (\$1,345).

Conclusion: Healthcare resource use is substantial among senior HCUs, with the greatest incremental costs originating from inpatient care. Additional research is needed to determine an optimal mix of cost-effective interventions and services for these individuals.

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ID: 483

Author: Ms. Serina Nghiem

Title: Your Health System: Helping Sunnybrook Health Science Centre Focus on Key Quality of Care Initiatives

Type of Abstract: Oral

Objectives: The objective of this presentation is to demonstrate how an Ontario hospital used the Your Health System: In Depth tool to identify opportunities for improvement related to clinical and process outcomes.

The aim was to decrease Surgical Catheter Associated Urinary Tract Infections from 2.5% to 1.7% by April 2016.

Approach: After further analysis through chart reviews, it was discovered that the two greatest contributors to this hospital's in-hospital sepsis cases were ventilator associated pneumonia (VAP) and Urinary Tract Infections (UTI); with the greater opportunity for improvement being with UTI rates. The component pieces of the action plan were then focused on reducing UTI with a measureable goal.

The interventions planned include reducing unnecessary catheter use; improving sterile technique upon insertion; earlier removal of Foley catheters; training and re-training all medical staff on proper catheter insertion techniques; and introducing a medical directive (for catheter removal by nurses) to surgical wards.

Results: Through the implementation of the urinary catheter insertion criteria in the operating room in May 2015 and the nurse-initiated urinary catheter removal medical directive in July 2015, the hospital had notably lowered their catheter days per patient days on surgical units.

Prior to the implementation of these interventions, the quarterly average Surgical UTI Rate from October 2013 to June 2015 was 2.51% with a range of 1.2% to 3.3%.

After the implementation, the quarterly average Surgical UTI Rate (from July 2015 - Sept 2016) was 1.48% with a range of 0.96% to 1.94%.

This allowed successful achievement of this hospital's target Surgical UTI Rate of 1.7%.

The Surgical UTI Rates are consistently monitored and results have shown continued and significant improvement as a result of successful UTI intervention implementation.

Conclusion: By using data provided from Canadian hospitals and other sources, Your Health System: In Depth provides performance measures on a broad range of quality metrics and health indicators, which allows health care providers such as this hospital to respond, action, and improve the quality of care for their patients.

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ID: 111

Author: Dr. Kathryn Nicholson

Title: Multimorbidity in Canada: Understanding the Patterns and Progression of Multiple Chronic Diseases Using a Pan-Canadian Electronic Medical Record Database

Type of Abstract: Oral

Objectives: Multimorbidity, that is the coexistence of multiple chronic diseases within an individual, is an increasing burden for patients, primary health care (PHC) providers and policy-makers alike. Enhanced understanding of multimorbidity in Canada is needed. The objectives of this research were to determine the patterns and progression of multimorbidity over time.

Approach: Data were derived from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) electronic medical record (EMR) database of longitudinal, de-identified information from PHC practices across Canada. Patients who had > 1 in-office encounter recorded in their EMR and who were > 18 years at first encounter date were included (N=367,743). The ICD-9 classification system identified chronic disease diagnoses and a list of 20 chronic disease categories identified patients with multimorbidity. The most commonly occurring unique combinations (unordered clusters) and unique permutations (ordered clusters) were computed using JAVA programming, while descriptive and multilevel survival analyses were conducted using Stata 14.1 software.

Results: Among all adult PHC patients, 53.3% were living with at least 2 chronic diseases and 33.1% were living with at least 3 chronic diseases. A high proportion of these patients with multimorbidity were female and under the age of 65 years. A total of 6,095 combinations and 14,911 permutations were detected among female patients with multimorbidity. A total of 4,316 combinations and 9,736 permutations were detected among male patients with multimorbidity. The most frequent patterns (combinations and permutations) of multiple chronic diseases will be presented, stratified by patient sex and age category. Specific longitudinal patient profiles will also be presented. A multilevel survival analysis indicated decreased time elapsing until subsequent chronic disease (33.0% increase in rate until next chronic disease), as well as relevant predictors.

Conclusion: This research explores the complex clinical profiles of adult PHC patients with multimorbidity in Canada. These findings will contribute the Canadian context to the international multimorbidity literature, and can be used strategically to inform more effective health care delivery and health policy decisions for adults living with multimorbidity in Canada.

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ID: 314

Author: Dr. Mayu Nishimura

Title: Evaluation of a school-based visual screening program for kindergarten children

Type of Abstract: Oral

Objectives: About 10% of kindergarten children have undetected refractive errors and 3-5% need treatment to prevent amblyopia - the number one cause of blindness. In many jurisdictions, there is no universal screening to detect these problems. We evaluated a school-based program for kindergarten children in 28 schools in Ontario.

Approach: Using the five best evidence-based tools that are appropriate for children age 3-6 years, in Study 1 we measured visual acuity, stereovision, binocular alignment, and refractive error. Screening took 10-15 minutes per child. Any child who did not pass all 5 screening tests were referred for an optometry exam by a licensed optometrist at school, with a parent/guardian present. If glasses were needed, they were dispensed at no cost. 2529 kindergarten children were screened. In Study 2, we compared the number of glasses prescribed through our program to the status quo. Data were analyzed using descriptive measures.

Results: 45% of the children passed screening and 55% were referred for optometry exams. For the referred children, 83% of parents consented to the in-school optometry exam. Most (80%) parents who opted out indicated that the child had already seen an eye doctor. 9% of the screened children were discovered to have amblyopia risk factors (of which 5% were newly discovered) and 6% to have significant refractive errors (of which 4.6% were newly discovered). Results from Study 2 revealed that more children were wearing glasses at the end of the school year in schools where we offered our screening program (56 students, a 300% increase from September counts) compared to control schools that did not receive our program (20 students, a 33% increase)

Conclusion: Both studies suggest that a school-based vision screening program can be effective in detecting eye problems that might otherwise be missed in children before Grade 1, when reading becomes increasingly important for academic success. Challenges to, and strategies for, scaling the program to universal coverage will be discussed.

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ID: 417

Author: Ms. Hyejee Ohm

Title: Primary care accessibility for adolescents in the medical home: a population-based retrospective cohort study in Québec

Type of Abstract: Oral

Objectives: To assess the extent to which Family Medicine Groups (FMGs) are associated with increased access to care and decreased health inequalities for adolescents. FMGs are a new model of multidisciplinary primary care (PC) based on principles of the medical home and implemented in Québec over a decade ago.

Approach: Population-based retrospective cohort study linking province-wide health administrative data in Québec for adolescents 12-18 years of age between 2010-2013 (n=574,964). Multivariate regression analyses were performed to test associations between 4 PC models (FMGs, family physicians not part of FMGs, pediatricians, or no PC) and two outcomes: emergency department (ED) visits (main outcome; proxy for PC accessibility) and PC visits (secondary outcome). Models were adjusted for confounders: age, sex, co-morbidities, rurality, socioeconomic status (SES). Reasons for ED visits was examined through the ICD-9CA diagnostic codes on physician claims. Secondary analysis assessed for effect modification, testing the interaction between SES and PC model.

Results: The distribution of adolescents across PC models was the following: 19.7% in FMGs, 13.7% in pediatric care, 10.1% in non-FMGs, and 56.5% in no PC. Compared to adolescents receiving care from FMGs, fewer ED visits were made when receiving care from pediatricians (incidence rate ratio [IRR] 0.90, 95% CI 0.87-0.93) or with no PC (IRR 0.89, 95% CI 0.87-0.91). No significant differences in rates of ED use were found between FMGs and non-FMGs (IRR 0.98, 95% CI 0.95-1.02). Adolescents in pediatric (RR 1.29, 95% CI 1.28-1.31) and non-FMG models (RR 1.12, 95% CI 1.11-1.13) were more likely to receive a PC visit than those in FMGs. FMGs reduced inequality in PC visits between the lowest and highest SES groups compared to non-FMGs.

Conclusion: The majority of adolescents did not utilize PC. FMGs were not associated with improved access for adolescents, but were associated with reduced inequalities in PC visits compared to non-FMGs. The current study identifies gaps in adolescent PC – future studies should ascertain and address the barriers and facilitators of PC accessibility.

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Author: Ms. Irina Oltean

Title: Boundary Work and Retention: Experiences of Midwifery Students' in Clinical Placement

Type of Abstract: Oral

Objectives:

- To understand the challenges faced by midwifery students during the course of professional socialization in identifying the boundaries of their professional responsibility.
- To demonstrate the relationship between boundary work and workplace retention in order to assist researchers and policy makers in facilitating best policy and practice.

Approach: This paper is based on the qualitative analysis of 19 interviews conducted with students attending the Midwifery Education Programs across Canada. The interviews were conducted over the phone with students who underwent at least one clinical placement. The semi-structured interview guide focused on students' experiences in the classroom and in clinical placements, challenges experienced in the program and the relationship between these challenges and students' intention to stay. The interviews were recorded and transcribed verbatim. Data were analyzed using line-by-line coding followed by a more focused coding and thematic analysis. The theme of professional boundaries was derived inductively during the analysis.

Results: Findings indicate that midwifery students experience challenges identifying the boundaries of their professional responsibilities in three different areas: (1) interprofessional boundaries, which reflect the tension between midwifery professionals and other healthcare professionals (nurses) with respect to the scope of practice and its affect on the interprofessional relationship; (2) intraprofessional boundaries, which reflect the power relationships between midwifery students and their preceptors as well as unclear work expectations regarding student roles; and (3) Learning, work and life boundaries, which include emotional struggles resulting from challenging work experiences and balance between personal life and work/study.

Conclusion: In order to facilitate best policy and practice, programs should be better designed to increase retention of healthcare professionals by focusing on the relationship between boundary work and work place satisfaction. It is necessary to tailor support to the needs of healthcare professionals by defining their roles and responsibilities.

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ID: 223

Autheur: Mrs. Lysane Paquette

Titre: Développement et évaluation psychométrique d'un questionnaire mesurant les perceptions d'efficacité des équipes de soins selon la perspective des patients et de leurs proches.

Type d'abstrait: Oral

Objectifs: Cette étude a pour but d'évaluer les qualités psychométriques d'un questionnaire adressé aux patients et à leurs proches afin de mesurer leurs perceptions d'efficacité des équipes de soins. La présentation décrira la perspective des répondants et discutera des principaux enseignements tirés au cours du projet.

Approche: Une enquête transversale a été réalisée de mai à octobre 2016 auprès d'un échantillon de convenance de patients et leurs proches. Le questionnaire est constitué de 41 items portant sur les équipes de soins avec ou sans infirmières praticiennes, les processus d'équipes, les résultats sur les soins et les données sociodémographiques des répondants. L'estimation du coefficient alpha de Cronbach a permis d'évaluer la fidélité du questionnaire. La validité de contenu a été évaluée par des experts (par ex., patients, chercheurs) tandis que la validité de construit a été examinée au moyen de la technique des groupes connus.

Résultats: Les répondants (n=320), âgés en moyenne de 50,7 ans \pm 15.9 et majoritairement des femmes (67%) sont suivis principalement par des équipes de soins de première ligne, pédiatrie, santé maternelle et périnatale et d'oncologie. Plusieurs (85%; n=204/250) estiment que toutes les questions pertinentes sont incluses dans le questionnaire. L'alpha de Cronbach est de 0,836 pour l'échelle des processus et 0,724 pour l'échelle des résultats. Le score moyen des processus est de $5,37 \pm 0,9/7$ et le score des résultats est de $5,43 \pm 1,06/7$. La confiance envers l'équipe est la dimension au score le plus élevé ($5,64 \pm 1,49$); suivi par la perception d'efficacité ($5,43 \pm 0,94$). Des différences existent selon la spécialité pour la confiance, les perceptions d'efficacité, la clarté des rôles, les processus et les résultats.

Conclusion: L'outil validé évalue la perception d'efficacité des équipes de soins des patients et des proches dans les unités de soins aigus, de première ligne, avec ou sans infirmière praticienne. Il permettra d'identifier les processus d'équipe à améliorer et comment impliquer les patients et ses proches dans l'équipe.

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ID: 348

Author: Dr. Allie Peckham

Title: Reform but No Change: The Case of Aging at Home Policy in Ontario, Canada

Type of Abstract: Oral

Objectives: This study considers Ontario policy responses to an aging population and identifies challenges of sustaining reform in unstable sub-sectors. Namely, the home and community care sector (H&CC). We analyze community based long-term care policy in Ontario, specifically the legacy of what has been referred to as 'aging at home' strategy.

Approach: This research is a case study of aging at home policy in Ontario. Two qualitative methods were employed to understand the trajectory of the Aging at Home strategy: 1) document review and 2) semi-structured interviews. The document review looked to identify the missions, visions, and goals of the aging at home strategy to document the course of the policies implementation. A total of 22 interviews lasting 60 to 90 minutes were completed between October 2015 and November 2016. An iterative inductive thematic analysis was conducted to identify constructs related to the implications of policy shifts in the H&CC sector.

Results: After an analysis of key documents and interviews with policy experts two primary themes emerge. Firstly, Health systems are not monolithic; and secondly, health policy change can be contingent on competing policy agendas in other health system sectors. Drawing from critical theories of policy dynamics and change – we are better able to understand the dynamics at play between the hospital and the H&CC sectors, where we are likely to continue to see certain sectors dominate the reforms embedded within the H&CC sector. In the case of Aging at Home, findings suggest it was largely appropriated by the interests of more critical subsectors.

Conclusion: The sectors within healthcare systems have divergent political dynamics, institutional arrangements, and policy histories. We suggest that existing theoretical frameworks do not fully capture the processes of policy change in unstable and contested policy fields like long-term H&CC.

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ID: 439

Author: Dr. Melanie Penner

Title: Accuracy of community general pediatrician diagnosis of autism spectrum disorder (ASD) compared to multi-disciplinary team (MDT) assessment

Type of Abstract: Oral

Objectives: Encouraging general pediatricians to make ASD diagnoses may increase diagnostic capacity and decrease wait times; however, there are currently no studies evaluating the accuracy of their ASD diagnoses. This study's objective is to determine agreement in ASD diagnosis between general pediatricians and a subspecialist MDT assessment.

Approach: This study follows a prospective, cross-sectional design. There are two target populations for recruitment: 1) general pediatricians (projected $n = 6$), and 2) their patients under 5.5 years referred for developmental concerns ($n = 60$ total; 10/pediatrician). MDT and general pediatrician assessments are conducted blinded to each other's impressions. The MDT consists of a developmental paediatrician and a psychologist. Both the pediatrician and the MDT independently record a forced decision on whether the child has ASD and a Likert scale score assessing their certainty regarding their diagnostic impression. Agreement between the two assessments is measured with a simple kappa statistic.

Results: To date, 12 assessments have been completed (7 males, 5 females; mean age 37 months, range 25-55). Ten of the children in the preliminary sample had an ASD diagnosis as determined by the MDT. General pediatricians agreed with the MDT team on 75% of cases ($\kappa = 0.7$, substantial agreement). There was one false negative from the pediatrician in which the pediatrician reported they would have taken a watch and wait approach, and there were two false positives in which pediatricians would have referred to a subspecialist. Of the 9 cases with agreement, pediatricians reported that they would provide the ASD diagnosis for 4 of the cases, watch and wait for 1 of the cases, refer to a subspecialist for 4 of the cases.

Conclusion: This ongoing project will evaluate the diagnostic agreement between general pediatricians and an expert MDT. Further analysis of cases with and without agreement will allow for development of triaging procedures to delineate which cases are appropriate for the community and which are sufficiently complex to warrant a tertiary assessment.

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ID: 429

Author: Dr. Christopher Perlman

Title: Patient safety practices in the care of individuals with self-harm behaviour admitted to inpatient psychiatry in Ontario, Canada.

Type of Abstract: Oral

Objectives: This study examined patterns of patient safety among individuals at risk of self-harm and suicide receiving inpatient mental health services in Ontario, Canada. It examines individual and service factors associated with the receipt recommended care practices, such as close or constant observation.

Approach: We examined all non-forensic, adult admissions to inpatient psychiatry in Ontario between January 1, 2012 and December 31, 2015 (N= 59,922). Using Resident Assessment Instrument for Mental Health (RAI-MH) data from the Canadian Institute for Health Information we identified all cases that had engaged in self-harm behaviour in the 7 days prior to admission (excluding personality disorders). Patient safety included indicators of confinement to room or unit, close/constant observation at various intervals, and a proxy indicator of potential documentation errors. Individual factors included demographics, diagnoses, symptoms, and functioning. Service factors included admission types, involuntary admission status, and hospital

Results: About a third of the sample (29%) had engaged in self-harm behaviour in the 7 days prior to admission. Of those with self-harm, 59% had a suicide plan and 77% had family/caregiver concerned for the person's safety. In terms of safety, 63% experienced any form of confinement (room or unit), 37% were checked at 5 or 15 min. intervals, and 7% received any constant observation over any of the first 3 days of admission. We also identified documentation issues in 16% of cases where a discordance in reports of self-harm behaviour existed between admission and discharge assessments. The presentation will highlight a number of patterns of patient safety among individuals with self-harm behaviour by individual and service-related characteristics.

Conclusion: This study highlights variability in the types of patient safety procedures that are practiced in inpatient psychiatry among adults admitted with self-harm behaviour. It also highlights new approaches for using standard clinical assessment data for monitoring the quality of care related to self-harm and suicide risk.

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Author: Ms. Jessica Peter

Title: Integrating Volunteers into Community-Based Primary Healthcare Service Delivery: Development of a Volunteer Program Supporting Vulnerable Populations in Two Complex Interventions

Type of Abstract: Oral

Objectives: In primary healthcare, volunteerism is a largely untapped potential resource. The Health TAPESTRY (Health Teams Advancing Patient Experience: Strengthening Quality) program in Hamilton integrates community volunteers, novel technologies, and community resource linkages into primary healthcare teams. This presentation will describe processes, barriers, and facilitators in integrating volunteers into the program.

Approach: In Health TAPESTRY-Older Adults (TAP-OA), trained volunteer pairs visited adults aged 70+ in their homes, gathering health information and goals via a tablet, which was summarized into reports and sent electronically to patients' interprofessional primary healthcare teams.

Health TAPESTRY with Health Connectors for Diabetes Management (TAP-HC-DM) had trained volunteers communicating weekly (by phone, electronic message, or home visit) with patients with diabetes and hypertension, providing motivation, education, community linkages, and, again, connections to primary healthcare team via reports.

Quantitative and qualitative data was collected, including number of visits, patient self-reported health outcomes, volunteer activity logs/narratives, interviews/focus groups to explore experiences.

Results: Volunteers were trained using multiple methods (in-person, online, manual) and coordinated by a community partner.

In TAP-OA, 393 home visits were conducted by 78 trained volunteers to 312 clients. This first iteration of the volunteer program recruited an engaged set of volunteers and established that volunteers can be trained to collect health data which can be relayed to clinic teams for follow-up. Challenges such as scheduling/continuity of volunteers at home visits, volunteer support of patient self-management, goal-setting dialogue/outcomes were identified.

These learnings helped develop the TAP-HC-DM volunteer role. In 220 client communications conducted by 20 volunteers to 28 clients, the program demonstrated volunteers' capacity for carrying out an even more demanding and time-consuming role within primary care, focused on patient self-management, goal setting, and motivation.

Conclusion: Generally, volunteers participating in Health TAPESTRY felt their role was a personal growth experience. New and valuable information was relayed to the interprofessional team, to the benefit of patient care. With appropriate training and coordination, meaningful volunteer roles can be created and integrated into community-based primary healthcare service delivery.

All Authors: Jessica Peter, Doug Oliver, Ruta Valaitis, Laura Cleghorn, Gina Agarwal, Larkin Lamarche, Fiona Parascandalo, Lisa Dolovich

ID: 371

Author: Dr. Yelena Petrosyan

Title: Evaluating quality of care among older adults with diabetes with comorbid chronic conditions: a retrospective cohort study

Type of Abstract: Oral

Objectives: 1) to examine the difference in the quality of care between patients with selected concordant vs. discordant comorbid conditions, and 2) to examine associations between quality of care measures and all-cause hospitalizations among older adults with diabetes with selected comorbid conditions.

Approach: This population-based cohort identified all people aged 65 and over with diabetes in Ontario having at least one selected condition, using clinical administrative databases, in the period from 2010 to 2014. The cohort was stratified into four disease combinations, including concordant: diabetes 1) with hypertension, 2) with hypertension and ischemic heart disease, and discordant: diabetes 3) with osteoarthritis, and 4) with osteoarthritis and depression. A specific set of measures identified using a Delphi approach was used for the purpose of this study. A generalized estimating equations approach was used to examine associations between the quality of care and all-cause hospitalizations.

Results: The study findings suggest that patients with 2 vs.1 selected comorbid conditions are at risk of suboptimal care, especially those with discordant conditions. The incidence of all-cause hospitalizations markedly increased in diabetes patients with 2 vs. 1 selected comorbid condition, especially in those with discordant conditions. The median score of continuity of care declined in patients with 2 vs. 1 selected condition, especially in those with discordant conditions. The greater continuity of care was associated with lower hospital utilization for diabetes patients with comorbidities, including concordant: 1) with hypertension, 2) with hypertension and ischemic heart disease, and discordant: 3) with osteoarthritis, 4) with osteoarthritis and depression (OR=0.70, 95% CI 0.69-0.72; OR=0.74, 95% CI 0.72-0.77; OR=0.73, 95% CI 0.72-0.74, and OR=0.72, 95% CI 0.67-0.80, respectively).

Conclusion: There is a need for a holistic approach in education and clinical care of older adults with diabetes taking into account concomitant conditions that affect patient's health status. Chronic disease management programs among older diabetes patients must incorporate levers to promote continuity, especially for those with discordant conditions.

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ID: 408

Author: Ms. Erin Pichora

Title: Advancing the measurement of equity in health care with common stratifier definitions

Type of Abstract: Oral

Objectives: There are documented inequalities in access, quality and outcomes of health care in Canada; however, diverse approaches are used to measure inequalities. This work aims to facilitate consistent pan-Canadian measurement by developing common definitions for selected equity stratifiers (socio-demographic variables) and applying them to health indicators using linked data.

Approach: A literature review was conducted to describe and evaluate definitions for 5 equity stratifiers identified as high priority through an in-person facilitated stakeholder dialogue: Age, Sex, Geographic location, Income, and Education. Pan-Canadian web-based focus groups were held to generate discussion and seek agreement on the recommended stratifier definitions.

Using linked health and social data (e.g., hospital-census), we are collaborating with Statistics Canada to apply these working stratifier definitions to analyze hospital-based indicators of health system performance, including sensitivity testing of stratifier definitions.

Results: Results of the web-based focus groups yielded working definitions of the 5 equity stratifiers, along with considerations for their application and future research. For example, it was recommended to use multiple ordinal categories of educational attainment to stratify by education; a dichotomous variable was deemed insufficient. For the geographic location stratifier, recommendations include defining urban versus rural and remote using Statistical Area Classification type, prioritizing developing a methodology to better distinguish rural and remote areas, and defining a travel burden measure.

The findings from the stratified analysis of hospital-based indicators using the linked data will be presented. We will also discuss the challenges and opportunities of examining equity in health care across multiple stratifiers at the national and provincial level using linked health and social data.

Conclusion: Developing and promoting the adoption of common stratifier definitions will facilitate comparisons across jurisdictions and inform data collection initiatives, with the goal of informing action toward equity in health care. Future work will include developing definitions and conducting analysis of other stratifiers of importance such as race/ethnicity and language.

All Authors: Erin Pichora, Sara Allin, Geoff Hynes, Jean Harvey, Christina Catley, Dana Riley, Harshani Dabere, Stephanie Ko

ID: 546

Author: Ms. Kristen Pitzul

Title: Post-acute rehabilitation and medical oversight of hip fracture patients

Type of Abstract: Oral

Objectives: To compare the intensity of post-acute rehabilitation and medical oversight (i.e., physician visits) received by matched hip fracture patients discharged to either inpatient rehabilitation or the community within 30 days of acute care discharge in Ontario, Canada. This study also describes re-hospitalizations associated with rehabilitation intensity and physician visits.

Approach: Propensity-score matched retrospective cohort of older hip fracture patients who were discharged from acute care to either inpatient rehabilitation ((IPR) patients) or the community (community patients), within two health region groupings: HighIPR region (regions with relatively high number of IPR beds) and LowIPR region (regions with relatively low number of IPR beds). Outcomes are rehabilitation receipt and intensity (number of visits); physician visit or intensity; and re-hospitalization within 30 days of acute care discharge.

Results: Approximately 60% of community patients received post-acute rehabilitation. The intensity of rehabilitation and physician visits were substantially lower in community patients (median N=4 rehabilitation visits and N=7 physician visits) compared to matched IPR patients (median N=23 rehabilitation visits and median N=27-31 physician visits, depending on health region). Community patients also had substantially higher re-hospitalization rates (22%-36%, depending on health region) compared to matched IPR patients (8.9%-10%, depending on health region). Of those IPR and community patients with similar rehabilitation intensities (approximately 10 hours), this difference in proportion of patients who re-hospitalize is attenuated (i.e., between 15%-18% for IPR patients and 24%-27% for community patients, depending on health region). IPR patients have a substantially higher proportion with general practitioner visits and physiatrist visits.

Conclusion: Rehabilitation intensity for these community patients should be increased to reduce re-hospitalization rates. However, medical oversight also appears to play a role. Future research should focus on the system resources required to provide these community patients increased rehabilitation intensity, and further investigate the role of medical oversight.

All Authors: Kristen Pitzul, Hans Kreder, Walter Wodchis, Michael Carter, Susan Jaglal

ID: 124

Author: Mr. Michael Poydenko

Title: Concurrent Physical Pain and Opiate Use in Inpatient Psychiatry.

Type of Abstract: Oral

Objectives: Understanding and managing physical pain is complex among individuals with mental health and addiction conditions. This study investigates contextual, clinical, and demographic factors that are related to concurrent physical daily pain and opiate use among Ontario inpatient psychiatry clients.

Approach: We used a cross-sectional design to examine the prevalence of concurrent physical pain and opiate use among individuals admitted to inpatient psychiatry in Ontario between 2006 and 2015. Data from the Ontario Mental Health Reporting System at CIHI were used to identify individuals reporting daily physical pain, use of opiates, and abuse of medications within 90 days of admission. Bivariate and multivariate regression analyses were used to identify contextual, demographic and clinical factors associated with pain and opiate use.

Results: Among the 295,267 assessments during the study period, 37,391 (13%) reported daily physical pain. The prevalence of daily pain remained consistent between 2006 and 2015. Among those reporting daily physical pain the prevalence of opiate use was 31%. Just over half were admitted due to threat or danger to self and/or a problem related to addiction. About 52% had psychiatric admissions in the prior 2 years. The most common diagnosis was mood disorders (61%) followed by substance related disorders (54%). Individuals with concurrent pain and opiate use tended to reside in areas of greater deprivation, although this pattern was not different from those experiencing pain but not reporting opiate use.

Conclusion: Understanding the demographic patterns of physical pain and opiate use in inpatient psychiatry may lead to improved interventions for targeting safe approaches to pain management. The identification of contextual factors in relation to pain and opiate use exemplifies potential inequity in pain management and addiction.

All Authors: Michael Poydenko, Christopher Perlman

ID: 347

Author: Mr. Saad Rais

Title: Measuring Equality in Ontario Healthcare Spending

Type of Abstract: Oral

Objectives: The Gini Coefficient (GC) is typically used as a measure of income inequality in a population. We explored the GC as a viable measure of equality in healthcare spending across LHINs in Ontario.

Approach: The Gini Coefficient (GC) for healthcare expenditures and funding per capita was calculated and plotted (via a Lorenz curve), using fiscal year 2014 data. Expenditures were obtained through an internal data file that unifies patient costs from every provincially-funded healthcare sector. Funding information was extracted from the Ministry of Finance's public accounts data. For expenditures, the GC was primarily calculated at the LHIN of residence level, and secondarily at the sub-region and patient level. For funding, the GC was calculated at the LHIN of service level. The GC for sector-specific expenditures was also explored.

Results: The GC for expenditures at the LHIN level was 0.09, demonstrating strong equality of expenditures per capita across LHINs. At the patient level, the GC was 0.87, showing a highly dispersed expenditure distribution, a result consistent with studies on high cost users. The GC for funding was 0.21, indicating a modest equality of funding across LHINs. The GC was also calculated to measure equality across LHINs in terms of other characteristics, such as immigrant status, and diabetes prevalence. The GC for the immigrant and diabetes populations was 0.11 and 0.09 respectively, both exhibiting strong equality. For sector-specific expenditures, the GC was highest in mental health (0.29) and complex care (0.28), and lowest in primary care (0.04).

Conclusion: The GC illustrates high level of equality in health care expenditures across LHINs. High level of inequality in healthcare expenditures at patient level reflects varied healthcare needs across individuals. Some inequality in distribution of sector-specific expenditures by LHIN may reflect concentration of specialized services in the province.

All Authors: Saad Rais, Kamil Malikov

ID: 167

Author: Dr. Selena Randall

Title: Using social media and infographics to extend the reach of population health research

Type of Abstract: Oral

Objectives: Our study aimed to identify ways to a) promote the uptake of infographics summarizing research in a public friendly way, using social media; and b) promote traffic to published material on our website. We plan to use this new knowledge to develop future communications campaigns for population health research.

Approach: Our communications campaign used social media platforms to promote a published research report from Manitoba Centre for Health Policy (MCHP). A public and media-friendly infographic shared key facts and promoted access to our research report.

We scheduled 'tweets' and 'posts' over 30 days, using 12 different message styles. We compared messages with and without images or website links; messages targeted to special interest groups and untargeted. We sent messages at different times of day.

We used social media analytical tools to measure reach and follow-up actions. We used web analytics to measure hits to our website from these media.

Results: 302 new users visited the MCHP website during our study, 62% of whom were directed there from a link shared through our social media campaign. We gained 41 new followers to our social media platforms during the campaign and lost none.

Periods of increased traffic to the MCHP website, coincided with posts made to our social media platforms.

The first posts of the campaign garnered the greatest engagement from social media users. Analysis showed infographics with website links supported the greatest engagement, and posts targeted at particular interest groups had the most 'likes'. Posts made during the mid-morning and mid-afternoon received more attention than at other times during the day.

Conclusion: Social media increases public access to research and stimulates traffic to websites. Images result in greater engagement than text. Tagging influential followers with a potentially far reach (many followers) increases engagement.

Social media extends the reach of research, but the capacity of tools to analyze just how far are limited.

All Authors: Selena Randall, Shannon Turczak, Carly Leggett

ID: 502

Author: Mr. Liam Rémillard

Title: Application of cluster analysis to inform geographically-targeted STI interventions

Type of Abstract: Oral

Objectives: The objective of the present study was to identify if STIs exert spatio-temporal patterning in order to inform future STI interventions.

Approach: Using the 2006 Census boundaries, a unique geography combining both census tracts (CT) and census subdivisions (CSD) was developed. Ontario STI cases of chlamydia, gonorrhea, and syphilis diagnosed between 2005-2010 were geocoded from identified case data, and age- and sex-standardized rates were calculated for each Ontario CSD and CT. To assess global autocorrelation trends, Moran's I statistic and local indicators of spatial autocorrelation (LISA) were calculated for each STI annually. In addition, Kulldorff's cylindrical scan statistic was applied to identify the most likely spatio-temporal cluster location for each STI.

Results: This research suggests that STIs are not spatially random with each exerting differing degrees of spatial autocorrelation in Ontario. Although syphilis cases are becoming increasingly clustered between 2005-2010, both chlamydia and gonorrhea are becoming more diffuse. Results also identify the presence of regions with excess risk.

Conclusion: In contrast to chlamydia and gonorrhea, findings suggest that the increasingly clustered nature of syphilis may benefit from future geographically-targeted interventions. Therefore, maintaining spatially invariant interventions may be the best approach for chlamydia and gonorrhea; however, syphilis interventions should be geographically-targeted.

All Authors: Liam Rémillard, Paul Belanger, William Pickett, Kieran Moore, Anna Majury

ID: 523

Author: Dr. Rebecca Rich

Title: Selecting performance indicators for maternity care in a circumpolar context: A modified Delphi approach

Type of Abstract: Oral

Objectives: Performance measurement is popular tactic in the pursuit of improved health care quality, accountability, and value for money. For circumpolar states, the selection of contextually relevant indicators presents a challenge. Indicators aligned with national strategies may ignore or even conflict with the priorities of northern, remote, or Indigenous populations.

Approach: The aim of this project was to identify contextually appropriate performance indicators for the evaluation of maternity care in circumpolar regions. A scoping review generated a working list of indicators. Fourteen circumpolar maternity care experts then participated in a two-round modified Delphi consensus process. Participants rated 62 proposed indicators on a 7-point Likert scale according to importance, circumpolar relevance, validity, and reliability and suggested additional indicators for consideration. Agreement was measured using Cronbach's alpha.

Results: Consensus was achieved after two rounds as measured by a Cronbach's alpha of 0.87. Eleven indicators were rated highly on all four criteria. Twenty-nine additional indicators, largely focused on social determinants of health, responsiveness and accessibility, were identified as being important and relevant but did not reach the threshold for validity and reliability.

This approach was effective in identifying contextually appropriate indicators for maternity care in circumpolar regions. A small number of indicators were considered to be both scientifically robust and relevant to the circumpolar context.

Conclusion: This study demonstrated that while most circumpolar health systems engage in performance reporting for maternity care, current indicators do not always reflect local priorities. Future work should ensure that circumpolar performance indicators appropriately capture issues related to social determinants of health, travel for care, and cultural competency.

All Authors: Rebecca Rich, Thomsen D'Hont, Jeremy Veillard, Kellie Murphy, Susan Chatwood

ID: 88

Author: Mr. Sebastian Rios

Title: Geographic marginalization among psychiatric inpatients in Ontario

Type of Abstract: Oral

Objectives: To link a geographically based index to mental health services data in order to understand the areas where persons receiving inpatient mental health treatment reside in Ontario, Canada.

Approach: Socio-environmental markers such as discrimination and other forms of social disadvantage have been associated with increased risk of mental illness. In this presentation, clinical characteristics associated with living in areas with high marginalization will be explored and assessed using the Ontario Marginalization Index (ONMarg), a census and geographically based index that measures four domains: material deprivation, ethnic concentration, residential instability, and dependency. Clinical characteristics from the Ontario Mental Health Reporting System, which uses the interRAI-MH as its primary assessment system will be used to evaluate the relationships between these characteristics and the four dimensions of the ONMarg index.

Results: The majority of inpatient mental health services recipients live in neighbourhoods with high levels of social deprivation, ethnic concentration, residential instability and dependency scores. There is a clear positive relationship between the type of mental health diagnosis and the degree of neighbourhood marginalization among recipients of inpatient mental health services. This relationship is also true for social and service use characteristic, as well as mental health symptoms. These results confirm that socio-environmental factors play an important role in mental illness and highlight a new way to study these factors using publicly available data.

Conclusion: Identifying and understanding the context of where a person lives can influence policy and help ensure that services and programs are available to those who need it, and reduce inequities through appropriate targeted care.

All Authors: Sebastian Rios, Christopher Perlman

ID: 14

Author: Ms. Laura Rivera

Title: The impact of homelessness on the frequency of accessing primary health care

Type of Abstract: Oral

Objectives: While it has been well documented that homeless individuals have difficulty accessing primary care, there is a lack of knowledge about their experience once homeless individuals are able to access primary care health services. The objective of work is to elucidate the impact of homelessness on frequency of visits to primary care providers.

Approach: This work takes place in Calgary, a medium-sized Canadian city which has a large homeless population. The study data originated from an inner-city clinic's electronic medical record, HealthQuest. The study investigated the relationship between current homelessness status and the rate of visits to primary care, defined as the count of visits associated with a patient accounting for the length of time the length of that patient's relationship with their primary care physician. We used negative binomial regression to elucidate this relationship, multivariate adjusting for patient age, sex, and Charlson comorbidity score.

Results: The study analyzed 336 patients, of which 49 were homeless (14.6%). The mean number of visits for homeless patients was 11.4 for the study period, compared to 3.8 visits for non-homeless patients ($p < 0.0001$). Overall, the multivariate adjusted model indicated that the rate of homeless individuals accessing primary care physicians was 2.65 times greater than the rate for non-homeless individuals (rate ratio [RR] 2.65, 95% confidence interval [95% CI] 2.11-3.33; $p < 0.0001$) when adjusted for age, sex, and comorbidity score. When stratified by sex, the magnitude of the risk ratio was stronger for males (females, RR 2.01, 95% CI 1.33-3.05, $p < 0.0001$; males, RR 2.85, 95% CI 2.16-3.77, $p < 0.0001$).

Conclusion: Homelessness status is associated with an increased rate of visits to family physicians. These results bear implications for primary care physicians whose practices include homeless individuals, and for decision-makers involved in developing physician remuneration schemes that may be able to incentivize physicians to roster complex patients such as the homeless.

All Authors: Laura Rivera, Matthew Henschke, Edwin Khoo

ID: 81

Author: Dr. Celia Rodd

Title: Determinants of Dysglycemia in Youth: CHMS Survey Results

Type of Abstract: Oral

Objectives: Population-based rates of prediabetes or dysglycaemia (i.e. elevated A1C) among low-risk youth are not well described. Moreover, the biological and socioeconomic determinants of an elevated A1C in youth remain poorly understood. Our primary objective was to determine the prevalence of dysglycemia in Canadian youth.

Approach: Youth aged 6-19 years who participated in the first (2007-2009) or second (2009-2011) cycles of the Canadian Health Measures Survey (CHMS) were included in our analyses. The primary outcome was defined using A1C guidelines established by the American Diabetes Association (ADA: 5.7%-6.4%) and Canadian Diabetes Association (CDA: 6.0%-6.4%). Various biological and socioeconomic determinants were compared between healthy and dysglycaemic youth using two sample t-tests and χ^2 tests. Multivariable logistic regression was used to calculate adjusted odds ratios for dysglycaemia. Age stratified regression was performed to adjust for physical activity. All analyses were unweighted.

Results: Of the 3449 youth studied, 785 (22.8%) and 179 (5.2%) displayed dysglycaemia according to ADA and CDA definitions, respectively. Youth with dysglycaemia (ADA definition) were more likely to be male (55.4 vs. 50.6%, $p=0.02$), non-white (24.8 vs. 14.6%, $p < 0.001$) and obese (16.2 vs. 10.8%, $p < 0.001$). Dysglycaemia in youth was more common in those living in households with middle income adequacy (32.6 vs. 26.8%, $p=0.006$) and lower levels of parental education (high school or less, 15 vs. 11.4%, $p=0.007$). Similar associations were found using the CDA definition. In the adjusted logistic regression model (age ≥ 12 y), significant predictors were age, race, income adequacy, geographic region, obesity (OR=1.60, 95% CI: 1.08-2.35) and physical activity (monthly frequency of activity longer than 15 minutes, OR=0.97, 95% CI: 0.95-0.99).

Conclusion: Up to nearly 1 of every 5 youth in Canada are at risk for type 2 diabetes, based on early elevated A1C. Elevated A1C in youth is associated with social determinants of health and some lifestyle factors and both should be addressed in prevention efforts.

All Authors: Celia Rodd, Allison Feely, Atul Sharma, Jonathan McGavock, Allison Dart

ID: 382

Author: Mr. Kyle Rogers

Title: Mental Health Inpatient Use Over Time: Identifying Characteristics Associated with Increased Use Following Index Admission

Type of Abstract: Oral

Objectives: The purpose of this study was to describe patterns and predictors of inpatient mental health service over 5 years following index admission. Specifically, we examined individual and socio-environmental factors associated with high use following index admission.

Approach: Data from the Ontario Mental Health Reporting System (OMHRS) and the Ontario Marginalization Index were merged using geographic indicators. OMHRS includes individual-level demographic, clinical, and health service data for everyone admitted to inpatient psychiatry in Ontario (N=21,070).

We used a retrospective cohort design. Individuals with index admissions between 2006 – 2009 were followed for 5 years to identify additional admissions. Days in hospital and episodes following index admission were examined, with high-intensity use defined as use in the 90th percentile for either variable. Logistic regression using generalized estimating equations (GEE) were used to determine factors associated with high intensity use.

Results: Following index admission, 70% had no additional use the following 5 years. Schizophrenia and psychotic symptoms increased the odds of being high intensity users, while individuals with dementia, substance use, and adjustment disorders had decreased odds. Two interactions predicted high intensity daily use: Individuals who were never married and had high levels of positive symptoms scores or individuals who were male and had high levels of impaired cognitive performance. At the geographic level, living in an area with higher dependency scores predicted high intensity episodic use.

Conclusion: Schizophrenia and psychotic symptoms drive high intensity inpatient use following index admission, though observed interactions suggest that social support issues could lead to increased time in hospital following index admission. Socio-environmental factors play a smaller role—after adjusting for individual factors—in high intensity inpatient use following index admission.

All Authors: Kyle Rogers, Christopher Perlman, Samantha Meyer, Ashok Chaurasia

ID: 158

Author: Dr. Tolulope Sajobi

Title: The Prognostic Utility of Patient-Reported Outcomes for Risk Prediction Modelling in Coronary Artery Disease

Type of Abstract: Oral

Objectives: Risk prediction models are useful for predicting health outcomes and healthcare utilization in chronic disease populations. However, most of the existing models don't adjust for patient-reported outcomes (PROs). This study investigates the value of including PROs in predicting mortality and length of stay (LOS) among coronary artery disease (CAD) patients

Approach: Data were obtained by linking the Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease, a population-based registry of CAD patients, to Discharge Abstract Database. PROs in this study included self-reported health-related quality of life which was assessed using the Seattle Angina Questionnaire (SAQ), as well as self-reported depression and anxiety measured by the Hospital Anxiety and Depression Scale (HADS). Generalized linear regression with logistic and negative binomial distributions were used to develop prediction models for all-cause mortality and LOS, respectively. The prognostic contributions of these PROs were assessed using area under the curve (AUC) and mean square error

Results: Of the 5159 patients included in this analysis, 535 deaths were reported within five years of first catheterization, while the average hospital LOS was 3 days. Self-reported PROs such as SAQ physical limitation domain and HADS depression and anxiety were significant predictors of both all-cause mortality and hospital LOS, accounting for about 2.8% and 45.2% improvement in predictive accuracy of mortality and LOS risk prediction models, respectively

Conclusion: This study demonstrates the prognostic utility of PROs in accurately estimating patient-specific risk of mortality and prolonged LOS in CAD patients. We recommend that PRO should be evaluated as candidate predictors when developing risk prediction models for clinical outcomes and patterns of health services utilization in individuals with CAD

All Authors: Tolulope Sajobi, María José Santana, Meng Wang, Danielle Southern, Matthew James, Oluwagbohunmi Awosoga, Mingshan Lu, Hude Quan

ID: 107

Author: Dr. Natasha Saunders

Title: Delivery of pediatric primary care in the context of primary care reform in Ontario, Canada: a population-based study.

Type of Abstract: Oral

Objectives: Primary care has undergone major reforms in Ontario. Pediatricians were not included in reforms yet provide a proportion of primary care to children. We sought to describe patient characteristics of children receiving primary care by pediatricians versus family practitioners in various reform enrollment models over time.

Approach: Population-based repeat cross-sectional study using linked health administrative and demographic databases of all children living in Ontario (0-17 years) with insurance under the universal provincial health plan (2.8 million/year) from 2005 to 2014. Patients were assigned annually to primary care providers based on their enrollment in a care delivery model. Unenrolled patients, including those served by pediatricians, were assigned their usual primary care provider using all fee-for-service primary care billings to identify the majority provider. Socio-demographics and case-mix were ascertained through census data and inpatient and outpatient health records. Changes over time in patient characteristics by care model were analyzed.

Results: Pediatricians provide primary care for 10.0% of children (vs. 12.5% in 2005) and 7.2% have no regular care provider. Over time, children cared for by pediatricians declined (23.7% in 2005 vs. 18.9% in 2014 for 0-2-year-olds; 14.4% in 2005 vs. 10.8% in 2014 for 3-10-year-olds). Overall (2014), among children followed by pediatricians, 25.7% live in high-income neighbourhoods whereas the largest proportion in fee-for-service models (23.5%) or without care providers (26.6%) are in the lowest income neighbourhoods. In major urban centres, pediatricians care for 12.2% of children (vs. 15.3% in 2005). Case-mix for those with mental health problems was similar across care-models and over time. Pediatricians cared for a higher proportion (8.0%) of patients with complex chronic conditions compared with all pediatric care providers (6.0%).

Conclusion: With reforms to primary care delivery, fewer children are receiving primary care from pediatricians and differences exist by income and geography. The impact of reform on workforce, and accessibility and quality of pediatric primary care services remains to be studied.

All Authors: Natasha Saunders, Astrid Guttmann, Richard Glazier, Christina Diong

ID: 459

Author: Dr. Annette Schultz

Title: 'Index Angiogram' recipient trends among Status First Nations people and all other Manitobans

Type of Abstract: Oral

Objectives: Amidst reported disparities of coronary artery disease incidence among Indigenous People, this study explored cardiac health services use of Manitoba 'Status FN people' (FN) and all other Manitobans. Specifically, demographic and comorbid trends were investigated for Manitoban adults (18+) in each group who received an 'index angiogram' during 2000 –

Approach: De-identified, individual-level health services use data held by the Manitoba Centre for Health Policy were analyzed. An angiogram was identified as an "index" investigation when it was the patient's first angiogram in at least 365 days. In addition, among those receiving an index angiogram, rates of hospitalization with an AMI during the 7 days prior to their index angiogram were calculated for each group and each year from 2000-2009. Descriptive analysis of demographic, urban vs rural residency, socio-economic status and Charlson comorbidity index are presented by group for Manitobans who received an index angiogram during the combined years 2000-2009.

Results: During 2000–2009, the rate of FN people who received an index angiogram was 0.27% versus 0.33% ($p < 0.001$) of non-FN Manitobans. Yearly rates ranged between 0.23% and 0.31% for FN people, and 0.31% - 0.34% for all others. Of the index angiogram recipients, the overall rate of those hospitalized with a diagnosis of AMI during the 7 days prior was FN=28.75% and all others=24.95% ($p=0.0061$); yearly rate ranges were: FN = 18.71% to 33.17% and all others = 16.93% and 34.08%. The descriptive analysis revealed that FN people were significantly younger; 56.25 vs 63.76 years ($p<.0001$), and were significantly sicker at time of receiving an index angiogram as indicated by their Charlson index scores; mean score 1.32 vs 0.78 ($p<.0001$).

Conclusion: FN were younger and sicker at time of index angiogram; yet, higher rates of non-FN received this service. Also, FN were more likely to receive an index angiogram as part of urgent versus planned cardiac services. Findings extend our understanding of the nature and scope of FN cardiac service utilization.

All Authors: Annette Schultz, Elizabeth McGibbon, Jarvis Brownlie, Catherine Cook, Alan Katz, Thang Nguyen, Jo Ann Sawatzky, Moneca Sinclair, Lindsey Dahl, Karen Thronson, Randy Fransoo

ID: 316

Author: Ms. Anika Sehgal

Title: Case distribution and complications of mid-urethral sling surgery in a Canadian city before and after Health Canada advisory on pelvic floor mesh

Type of Abstract: Oral

Objectives: Mid-urethral mesh slings are used for treating female stress urinary incontinence. Incidences of complications resulted in the Food and Drug Administration and Health Canada issuing advisories. The purpose of this study was to assess the effect these advisories had on the number of surgeons performing MUS surgery and post-surgical complications.

Approach: This study conducted a retrospective analysis of administrative data between 2006 and 2011 in maintained by Alberta Health Services. Post-surgical complications were identified using ICD-10 codes. All rates were adjusted for the increase in female population in Calgary during the study period. An interrupted time series model was used to evaluate any changes in the number of surgeons performing MUS surgery and any post-surgical changes from the period of time before and after the advisories.

Results: A total of 3,321 initial MUS surgeries were conducted in Calgary during our study period. On average, there were 49.1 surgeries conducted per month in the pre-warning period, 49.6 surgeries per month during the warning period, and 39.5 surgeries per month during the post-warning period. The number of surgeons performing MUS surgery and the number of surgeries performed decreased over the study period, although neither of these were significantly related to the advisories. In terms of complications, we did not observe a significant change in the rate of repeat MUS surgeries, inpatient admissions, emergency department visits, and ambulatory care visits within two years of initial surgery.

Conclusion: The Food and Drug Administration and Health Canada advisories had no effect on the use of MUS in Calgary. This suggests either that they bear little influence on local surgeons' practices, or that safety was already at such a high level that improvements were not possible.

All Authors: Anika Sehgal, Kevin Carlson, Richard Baverstock, R. Trafford Crump, Camille Charbonneau

ID: 151

Author: Dr. Hsien Seow

Title: How palliative care utilization differs by disease trajectory

Type of Abstract: Oral

Objectives: Prior research showed that half of decedents in Ontario received at least palliative care service in the last year of life, mostly from hospitals and close to death. We investigate the variation in utilization and timing of palliative care services in the last year of life by major disease trajectory.

Approach: Using linked administrative databases, we examined all decedents in Ontario between FY 2010/11 to 2012/13. We categorized disease trajectories into terminal illness (e.g cancer), organ failure, frailty, other, and sudden death using ICD-10 codes. From billing records, we examined which palliative care services, if any, were used across multiple settings and providers, the mean number of days of utilization, and timing of initiation of services. We also used a multi-variable model to determine how disease trajectory was associated with any use of palliative care and number of palliative care days.

Results: We identified 235,159 decedents, of which 31% died of organ failure, 32% terminal illness, 29% frailty, 5% other, and 3% sudden death. Overall 80% were 65+ years old, and 75% had 3+ chronic conditions. 88% of terminal illness patients ever used palliative care, using a median of 49 days of services total and initiated 107 days before death among users. 44% of organ failure patients used palliative care for a median of 23 days and initiated 22 days before death; 32% of frailty patients used palliative care for a median of 21 days and initiated 24 days before death. Regression analysis showed that terminal illness trajectory had 14x higher odds to use any palliative care and 6.5x more days than frailty trajectory.

Conclusion: Palliative care is predominantly delivered to cancer patients. To improve palliative care access for the other disease trajectory groups, this analysis highlights which settings and provider groups that palliative care services can be increased and delivered earlier.

All Authors: Hsien Seow, Peter Tanuseputro

ID: 374

Author: Ms. Laura Sevick

Title: Rapid Endovascular Therapy – Policy Responsive Evidence Synthesis

Type of Abstract: Oral

Objectives: Objectives: The objectives of this research were to (1) summarize the body of evidence on the clinical effectiveness, costs, cost effectiveness and the patient experience with rapid endovascular therapy (EVT) and stroke, and (2) to estimate the number of patients who would be eligible for treatment in British Columbia.

Approach: Approach: To assess clinical effectiveness, a recent systematic review was identified and critically appraised by two reviewers. A sub-analysis and comparison of only the recent 2015 literature was completed. Two de-novo systematic reviews were completed; one assessing the cost and cost effectiveness of EVT and one assessing stroke patients' experience with travelling for care. Systematic review best practices were followed. The number of patients eligible for treatment with EVT in British Columbia was estimated by Health Service Delivery Areas. A map was generated to highlight policy considerations including time constraints and transport coordination.

Results: Results: The clinical effectiveness systematic review found that the odds of being functionally independent at 90-days were 1.71 times greater for the EVT group than the control (Confidence Interval: 1.18-2.48). Seven cost-analyses and ten cost-utility studies were then identified. All cost-utility studies reported a cost per quality adjusted life year of less than \$50,000 (2016 CND); the results of the studies varied by perspective and time horizon adopted. Two qualitative studies examining the stroke patient experience with being treated away from home or travelling for care were identified. Both studies reported a strong preference to be home as opposed to in hospital. Finally, a coordinated transportation plan would enable BC patients from across the province to be eligible for EVT treatment.

Conclusion: Conclusions: EVT appears to be clinically effective and good value for money. Stroke patient preferences regarding repatriation should be considered. Healthcare systems will need to consider the broad evidence base, technological expertise, transportation available and the coordination of the health system resources to optimize patient outcomes with this new technology.

All Authors: Laura Sevick, Sarah Ghali, Michael Hill, Vishva Danthurebandara, Diane Lorenzetti, Tom Noseworthy, Eldon Spackman, fiona clement

ID: 200

Author: Ms. Nida Shahid

Title: The impact of Telehomecare on blood pressure control among patients with chronic obstructive pulmonary disease and heart failure in Ontario

Type of Abstract: Oral

Objectives: High blood pressure (BP) continues to be a major modifiable risk factor for cardiovascular mortality and morbidity. The objective of this abstract is to evaluate the impact of Telehomecare program on blood pressure control in patients with chronic obstructive pulmonary disease (COPD) and heart failure (HF) in Ontario.

Approach: The study utilized a longitudinal cohort design. The cohort included COPD and HF patients enrolled in Telehomecare program from July 2012 to Jul 2015. The outcome of interest was change in biweekly average of systolic and diastolic blood pressure (BP) levels over a six month program duration. Data was extracted from the Ontario Telemedicine Network database and analyzed using general linear mixed model procedures in SAS. Based on patient BP values at baseline, two subgroup analyses were conducted to evaluate changes in BP over time: in patients with controlled BP ($< 140/90$ mm Hg) and uncontrolled BP levels ($\geq 140/90$ mm Hg).

Results: Overall, data for 3513 patients were analyzed. Average age was 74.1 ± 11.4 , 62% had HF, 55% had COPD. At baseline, the systolic and diastolic BP were 130.5 ± 19.2 mm Hg and 72.2 ± 12.6 mm Hg. Over 6 month program period, there were 4.0 mm Hg (95% CI: -4.5 to -3.5) and 2.7 mm Hg (95% CI: -3.1 to -2.4) reduction in systolic and diastolic BP respectively, adjusted for confounders. About 35% ($n = 1220$) of the cohort had uncontrolled BP levels at baseline ($150.7 \pm 10.4 / 80.2 \pm 13.5$ mm Hg). In subgroup analyses of patients with uncontrolled BP levels, the reduction in systolic BP was 12.5 mm Hg (95% CI: -13.4 to -11.6) and in diastolic BP was 7.1 mm Hg (95% CI: 7.8 to 6.5) over 6 month period.

Conclusion: The systolic and diastolic blood pressure levels significantly decreased in patients with COPD and HF enrolled in the Telehomecare program. The changes seen in patient BP over time, leads us to interpret that patients with elevated levels of BP may benefit the most from participating in Telehomecare program.

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ID: 51

Author: Mrs. Sara Shearkhani

Title: Caregivers Voice through a Quantitative Lens

Type of Abstract: Oral

Objectives: Informal caregivers are under-represented in evaluations of health care interventions and health system performance. The purpose of this research was to identify measures of informal caregivers' experience with the healthcare system, costs and health outcomes. Measurement of caregiver experience and outcomes can inform the design and evaluation of future interventions.

Approach: Using the "Triple Aim" measurement framework, a grey literature search was conducted focusing on reports published in English by government and non-for-profit agencies on caregiving since 2000. To supplement this review, a scoping review was conducted to identify common measurement tools used to capture Alzheimer/Dementia caregiving experiences. A search of three databases (Ovid MEDLINE, EMBASE, and Scopus) was completed for the period of 2011 to 2016. Additionally, we engaged key stakeholders including patients and caregivers to further explore the results of our review in a 5-hour workshop held in Toronto.

Results: Twenty-seven reports were identified as eligible for inclusion in the grey literature along with 20 peer-reviewed articles. Common caregiver-self-reported outcome measures were depression, stress, distress, anxiety, burden, and overall mental and physical health. These outcomes were measured using either generic health status instruments such as Health Related Quality of Life, Anxiety and Depression, or caregiver specific tools assessing caregiver burden and strain. Common caregiving costs were out-of-pocket costs, and caregiver productivity loss. Out of 47 articles reviewed, only 6 included experience measures beyond satisfaction in their analysis exploring caregivers' experience with the healthcare system. Consultation with stakeholders revealed the importance of taking into account the dyadic patterns of care between patient and caregiver highlighting that caregivers' wellbeing is closely linked to patients' wellbeing.

Conclusion: This study provides evidence that contributes to the design of future healthcare evaluations, interventions, and policies aimed to improve the healthcare system for caregivers. It identifies three main areas that require further investigation, including caregiver's experience with the healthcare system, caregiver's healthcare utilization cost, and the dyadic pattern of care.

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ID: 352

Author: Dr. Shengli Shi

Title: A Needs-based Approach for Funding, Using Quality-Based Procedure of Hip and Knee Replacement in Ontario as An Example

Type of Abstract: Oral

Objectives: Current Ontario hospital funding is a utilization-based approach with funding allocation based on actual volume. This study explored a needs-based approach to estimate volume across LHINs adjusting for geographic variation in clinical conditions and socioeconomic disparities that are related to needs for hip and knee replacement.

Approach: A direct stratification approach is taken to adjust for variations in risks for hip and knee replacement, including age, sex, clinical conditions of arthritis, obesity and diabetes, and geographic characteristic of income quintile, rurality and single households. Ontario adult population in FY2015 were first stratified by risk factors and rate of hip and knee surgeries was calculated for each stratified group. The provincial rates were then applied to the LHIN population of the funding year assuming they shared the same population composition as FY2015. Then apply market share of hip/knee replacement to convert residence LHIN volume to service LHIN volume.

Results: Among Ontario adult population, hip/knee replacement rates were significantly much higher in cohorts with clinical condition of arthritis, obesity, and diabetes. Female and older population also shows much higher hip/knee replacement rates. The surgical rates were lower in areas that are rural or populated with single households.

The distributions of risk factors vary across LHINs of residences. The variation in prevalence rates for arthritis ranged from 11.8% to 18.7%, and from 3.6% to 6.3% for obesity/overweight. Age, gender, income compositions and single households also differ across the LHINs.

Adjustment of the risk factors results in changes in expected hip/knee volumes in both residence and service LHINs, and LHINs with population with higher chances of needs for hip and knee surgery also have higher expected volumes.

Conclusion: Hip/Knee replacement surgery rates differ across various levels of the risk factors. Distributions of these risk factors vary across LHINs. Adjustment upon these factors could lead to better estimates of procedure volumes that reflect the needs and provide better evidence for funding.

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ID: 424

Author: Dr. Esther Shoemaker

Title: FACTORS INFLUENCING MATERNITY CARE PROVIDERS' PRACTICES REGARDING MODE OF BIRTH AFTER PREVIOUS CAESAREAN SECTION

Type of Abstract: Oral

Objectives: An increasing proportion of Canadian women are having a repeat Caesarean section (CS). This study explores the factors that influence the practices of maternity care providers (obstetricians, family physicians, midwives, and nurses) regarding mode of birth after a previous CS.

Approach: A sequential mixed methods approach was used. Twenty-eight providers from different disciplinary backgrounds filled out an adapted form of the Maternity Care Providers' Attitudes Survey. The surveys were analyzed descriptively to explore the providers' practice patterns and perspectives regarding mode of birth after a previous CS. Interviews were conducted with eleven survey respondents, which were analyzed using an iterative deductive and inductive coding approach.

Results: Maternity care providers expressed positive attitudes towards vaginal birth and would recommend a vaginal birth after CS (VBAC) for healthy pregnant women with a history of CS. They had different perceptions of the safety of birth to the health of women and infants and different approaches to engage in decision making during consultation. Providers believed women make their decision about mode of birth outside of the clinical consultation and often prior to their subsequent pregnancy.

Conclusion: The study illustrates that providers from different maternity care disciplines share a preference for VBAC among healthy pregnant women but they have different perspectives on the levels of risks associated with birth. These differences have an impact on the shared decision making processes that take place during consultation.

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ID: 277

Author: Dr. Shannon Sibbald

Title: The New Triple Threat: Scalable, Spreadable and Sustainable

Type of Abstract: Oral

Objectives: Chronic Obstructive Pulmonary Disease(COPD) is a primary cause of hospitalizations. The INSPIRED COPD Outreach ProgramTM is spreading across Canada, showing patient care and system outcomes. This mixed-methods study analyzes the implementation efficacy of INSPIRED across Canada, building on the limited research on spread and scaling up programs and sustainability impact.

Approach: Nineteen teams participated in a one-year (2014-2015) pan-Canadian spread collaborative launched via a public-private partnership. The collaborative aimed to support teams' adaption and adoption of an INSPIRED approach to care. Committed teams required interdisciplinary composition, connections across acute and community care, local leadership support, participation in the curriculum (covering evidence-based medicine and quality improvement), plus sharing of measurements and progress. The mixed-methods summative evaluation relied on post-collaborative team final reports, key informant interviews, focus groups and self-ratings of progress.

Results: At least one team/province participated (19 sites); and >1000 patients. Nineteen teams submitted final reports. Thirteen teams (n=38) participated in either a team interview (n=8 teams, n=31) or focus group (n= 5 teams; n=7). Teams reported quality of care gains: Greater self-confidence in symptom management; substantially fewer ED visits and hospitalizations for enrolled patients. 18/19 teams successfully adapted INSPIRED to local context. Context, leadership and existing collaboration were major factors in determining sustainability of local INSPIRED programs. Sustainability was maintained on different levels not limited to the program itself, but also through integration with existing programs, and by sustained (and improved) data collection. Teams contemplating scaling up indicated collaboration and coordination with existing programs as a means to achieving.

Conclusion: The collaborative demonstrated that spread of innovation is achievable, even within short timeframes. Lessons learned through dissemination of the INSPIRED COPD program should be of value to senior policy and decision makers where better care, better outcomes and better value are priorities.

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Author: Dr. Meaghan Sim

Title: Exploring early professional socialization across five health professions

Type of Abstract: Oral

Objectives: We will present emerging findings of a longitudinal, qualitative study examining early professional socialization among students from five health professional programs. This research, grounded in narrative methodology, seeks to understand how interprofessional collaboration can be enhanced at an earlier stage in the professional socialization process.

Approach: Health professional students (n=49) entering health professional programs at Dalhousie University, Canada in fall 2015 participated in repeat, 1:1, audiotaped interviews starting before formal orientation. Pre-entry interviews focused on factors influencing students' career choice and expectations of their own profession and of early interprofessional learning and practice. Subsequent interviews – completed after the participants' first term of study (n=44) and first year of study (n=39), respectively – focused on professional identity formation and interprofessional collaboration experiences throughout the first year of health professional training.

Results: Emerging findings suggest that participants chose the health professions out of a desire for career fulfillment and satisfaction. Myriad roles and experiences influenced their exact career choice and framed the social positioning of their future career (e.g., leadership, social prestige, autonomy). Pre-entry conceptualization of the health professions continued to play a role in participants' experiences as first year students. In some cases, participants' prior assumptions about their health profession led to dissatisfaction with their experience as a first year student. Participants' universally described that the opportunity for tangible learning within a practice setting was the critical turning point in the development of not only their own professional identity, but also provided meaningful exposure to other health professions and setting a foundation for future interprofessional collaboration.

Conclusion: To our knowledge, this is the first study to explore early professional socialization and professional identity over time among several health professional student groups. Findings provide valuable direction for pre-entry career choice messaging and refining or enhancing initiatives that promote positive professional identity formation within the context of interprofessional collaboration.

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ID: 71

Author: Ms. Stephanie Simpson

Title: The Development and Implementation of the Off-Premise Outlet Density Expansion Initiative within Ontario's New Beer Framework: A Case Study

Type of Abstract: Oral

Objectives: This study examined the role of health information (e.g., research evidence), and the contexts and factors which shaped its use, in the development and implementation of the policy to expand beer sales in up to 450 grocery outlets as part of the Ontario government's New Beer Framework, implemented in 2016.

Approach: This qualitative case study employed Kingdon's Streams Model (2011) (problem, policy, and politics) to guide a directed content analysis of transcripts of semi-structured interviews conducted with a range of policy actors, including government policymakers, alcohol researchers, and knowledge translation and media personnel (n=11). This data set was triangulated through additional analysis of policy-related documents, including Hansard transcripts, press releases, position papers, formal letters disseminated by public health organizations, as well as news articles (n=69). As such, the framing of the policy issue, as well as stakeholder perspectives regarding the extent to which health information informed the expansion initiative, were identified.

Results: The policy to expand beer sales to 450 Ontario grocery outlets was framed as an economic and consumer convenience initiative within policy-related documents. Moreover, many interview participants perceived that the decision to implement the policy preceded health stakeholder consultations. This perception was consistent with official policy documents released by the Premier's Advisory Council on Government Assets. Thus, despite efforts to highlight concern regarding the potentially negative population health impact following increases to outlet density, knowledge translation strategies by public health actors remained reactive and unpersuasive. Accordingly, the expansion policy appears largely incongruent with pre-existing public health frameworks at both government and organizational levels, as well as a Health in All Policies (HiAP) approach, more broadly.

Conclusion: Health information pertaining to the relationship between increased alcohol outlet density and population health impact appears to have had a minimal role in informing the development and implementation of Ontario's beer retail expansion initiative. Future public policy development should prioritize health considerations through transparent consultation processes with relevant health-related stakeholders.

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ID: 194

Author: Dr. Amanda Slaunwhite

Title: To everything there is a season: Child, Adolescent and Adult Psychiatric Admissions to Hospital in New Brunswick (2004-2014)

Type of Abstract: Oral

Objectives: The primary objective of this study was to identify seasonal variations in mental health-related hospitalizations by children and adolescents from 2004-2014 using administrative health data from New Brunswick, Canada.

Approach: Hospital admission records from January 2004 to March 2014 were sourced from the New Brunswick version of the Discharge Abstract Database (DAD). Seasonality was measured using a cosinor model to estimate the peak, amplitude and phase of seasonal variations in psychiatric admissions over the 12-month period from January-December for children and adolescents (3 to 19 years of age), and adults (20 years and older). We adjusted for the average number of days per month and provincial population counts using offsets in the general linear model. Data were modelled using the season package in R.

Results: Between 2004 and 2014, there were 57,730 mental health-related hospital admissions by 41,690 patients. Psychiatric admissions by children and adolescents (aged 3-19) increased from 44 admissions per 100,000 in 2004 to 51 admissions per 100,000 in 2014. . The opposite trend was observed for adults 20 years and older that decreased from 465 admissions per 100,00 in 2004 to 325 in 2014. The results of the cosinor model indicated that child, adolescent and adult psychiatric admissions per 100,000 exhibited significant seasonality ($p < .025$). The highest rates of child and adolescent admissions were in February (phase=2, amplitude=4.4) whereas adult admissions to hospital peaked in early May (phase=5.3) with an amplitude of 9.7.

Conclusion: The results of this study indicate that hospital admissions by children, adolescents and adults are highly variable by season. We found that psychiatric admissions to hospital peaked in the winter months for children and adolescents, whereas admissions by adults were the greatest in the spring (May and June).

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ID: 229

Author: Ms. Glenys Smith

Title: Impact of different models of physician-based palliative care on costs in the last year of life

Type of Abstract: Oral

Objectives: To describe the healthcare costs across all sectors incurred in the last year of life by individuals receiving different models of physician-based palliative care. This includes outpatient palliative care by different specialties (i.e., family physician vs. palliative care specialist), and physician home visits by family physician or palliative care specialists.

Approach: All decedents in Ontario were captured between April 1, 2011 and March 31, 2015. Physician billing data captured in the Ontario Health Insurance Plan (OHIP) dataset was used to categorize decedents by the type(s) of physician-based palliative care they had received. Health care costs across all sectors (e.g., home care, hospitals, long-term care) were estimated for each decedent and then averaged across the care type to provide an estimate of the costs incurred for each care type and compared to those who did not receive such care.

Results: Approximately 50% of all decedents will have at least one palliative care visit in the last year of life. Of those who received palliative care, 64% received palliative care in an outpatient setting and only 18% received home visits. Conversely, 85% of individuals who received palliative care received inpatient care, incurring large healthcare costs. We determine if those who receive physician-based palliative care at home or in the community result in lower overall cost – in the last year of life and across all healthcare sectors – than those not receiving palliative care. Furthermore, we seek to determine physician type (e.g., family physicians or palliative care specialist) or setting of care further impacts overall healthcare cost.

Conclusion: Little is known about the cost associated with different models of palliative care and the fiscal impact on the healthcare system overall. This project provides insight into the cost of delivering physician-based palliative care, which can inform policy decisions around the allocation of finite resources across competing end-of-life care needs.

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ID: 362

Author: Ms. Mélanie Ann Smithman

Title: Deciding who gets care first - A realist review of prioritization in centralized waiting lists for healthcare services

Type of Abstract: Oral

Objectives: Healthcare systems have limited resources. Centralized waiting lists (CWLs) appear to be one way to manage patient's demands according to available resources. Our objective was to identify how CWLs determine which patients are prioritized in receiving healthcare services in different contexts and to analyse factors influencing their implementation.

Approach: This analysis was conducted as part of a larger realist review on centralized waiting lists. Searches were conducted in Medline, CINAHL, PsychInfo and SocIndex (n=1623 articles). Scientific articles had to feature a prioritization process in a healthcare setting which was could be generalized to other healthcare settings. Articles on simulations, emergency services and transplants were excluded. Articles were selected by two independent team members who discussed selection to reach consensus. Data was extracted from 16 articles using an extraction grid. Grey literature was used to find additional details on the initiatives described in the selected articles. We identified context-mechanism-outcomes configurations.

Results: CWLs were implemented to manage the demand for elective surgeries (n=14), referrals to specialists and diagnostic tests (n=1) and attachment to primary care providers (n=1). We identified two different ways CWLs decide which patients get care first: 1) prioritization based on patients' needs (scores (n=11) or categories (n = 5)) and 2) first-come-first-serve (n = 1). To prioritize patients, CWLs used clinical information (patient reported or medical file) or a combination of clinical and social information. Differences in the design, management and context of CWLs led to variations in implementation (barriers and facilitators) and reported outcomes (wait times, equity, access to services). For instance, the use of maximum wait times were sometimes reported to lead to system gaming whereas non-mandatory guidelines seemed to lead to variations in prioritization practices.

Conclusion: The results describe different designs of CWLs. By linking this information with context as well as factors influencing implementation and outcomes, our results provide policy-makers with a menu of options in designing a CWL that best meets their objectives and their context of implementation.

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ID: 105

Author: Ms. Joanne Smith-Young

Title: 'Chasing Time': A Theory of Parents' Experiences in Accessing Autism Spectrum Disorder Diagnostic and Treatment Services for their Children

Type of Abstract: Oral

Objectives: Our study objectives were to: 1) determine the process parents of children and adolescents diagnosed with Autism Spectrum Disorder (ASD) go through to access diagnostic and treatment services for their children throughout the life course of their disease; and 2) explore whether parents' socioeconomic status (SES) affected this process.

Approach: Semi-structured interviews were conducted with 17 parents of children and adolescents diagnosed with ASD living in an urban community in Newfoundland and Labrador, Canada. We used a grounded theory approach to data analysis. Interview data were analyzed by identifying, categorizing, and describing common processes through the means of constant comparison. Processes were then integrated and refined to form the resulting theoretical model that involved choosing a core category that unified the strategies used by parents to access care. This study received approval from the Memorial University Health Research Ethics Board.

Results: The process included three main phases and various sub-phases within each phase: (1) Watchful waiting (noticing behaviors and searching for assessment and diagnosis); (2) Informed waiting (receiving the diagnosis, facing challenges in accessing services, and realizing the impact of an ASD diagnosis); (3) Contemplative waiting (pondering the future, reflecting on the past and making recommendations). 'Chasing Time' was the core category that parents used to resolve their main concern of having to perpetually wait to access ASD diagnostic and treatment services for their children. Factors that influenced the process included: SES, parents' perceived self-efficacy in caring for a child with ASD, and severity of ASD symptoms.

Conclusion: Canadian parents of children and adolescents with mental health disorders such as ASD, expect timely access to healthcare services. However, our results illustrate the many struggles parents face including factors related to SES, that create disparities and financial hardships for parents attempting to pay privately for needed services.

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ID: 185

Author: Ms. Nadia Sourial

Title: Indicator Framework for Measurement of Primary Care Performance in Persons with Dementia using Health Administrative Data

Type of Abstract: Oral

Objectives: Health administrative data provide a unique opportunity to study the impact of health policy at a population level, particularly in dementia where comparative data are scarce. This project adapted an existing health performance framework and operationalized feasible indicators to the context of primary care for individuals with dementia in Ontario.

Approach: We undertook a scoping review and identified 12 frameworks in Canada and elsewhere for the evaluation of primary care performance. We selected the Health Quality Ontario (HQO) framework due to its inclusive list of quality domains, overlap with other published frameworks, extensive number of indicators and relevance to the Canadian healthcare setting. A panel of family physicians, geriatricians, health services researchers and methodologists selected and operationalized HQO indicators relevant to dementia care and feasible with administrative data. Additional indicators of quality of dementia care were included based on the Canadian Consensus Conferences on Diagnosis and Treatment of Dementia (CCCDTD) guidelines.

Results: Eight of the nine HQO domains were measurable using health administrative data: Accessibility, Integration, Effectiveness, Efficiency, Equity, Safety, Population Health and Patient-Centeredness. The domain "Appropriate resources" included only practice-level indicators not measurable through administrative data. A subset of 10 HQO and 12 CCCDTD indicators across the eight domains were identified as relevant and feasible by the expert panel. Examples include the proportion with a regular primary healthcare provider (PHP) (accessibility), average number of readmissions within 30 days of hospital discharge (integration), proportion of dementia patients with dementia medication prescribed by a PHP (effectiveness), average cost of health services (efficiency), sex (equity), proportion prescribed anticholinergic medication (safety), proportion immunized for influenza (population health) and proportion who died at home (patient-centeredness).

Conclusion: This adapted framework combines operational indicators of primary and dementia care performance measurable through health administrative data. It provides a foundation for the evaluation of primary care performance in the context of dementia, leveraging the rich information contained within health administrative data and based on a validated Canadian conceptual framework.

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ID: 228

Author: Mrs. Leona Star

Title: Manitoba First Nations Indicators of Well-being for Early Childhood Development

Type of Abstract: Oral

Objectives: First Nations well-being has been measured against Western Canadian standards, such measures of progress counted First Nations as “deficit white people”. Manitoba First Nations (MFNs) developed their own community-based indicators of change through workshops guided by the MFNs advisors, leadership and Elders in discussions about "We are Who We are".

Approach: Based on these early discussions MFNs developed their own Indicators of Wellbeing moving away from a silo program and policy approach to seeking overall wellness of communities, families and individuals. The regional component of the Regional Early Childhood Development, Education and Employment Survey (REEES) was used to test the MFN wellbeing measures. Questions were developed to measure the following indicators of wellbeing: Independence and Inter-dependence, Governance, Economic Development, Lands, Waters, Environment and Identity, Identity and Language, Housing, Lifelong Learning and Quality of Life.

Results: The MFN indicators of wellbeing were based on Positive, Goal Orientated, Community Based; and Culturally Rooted and Relevant to create change based on the strengths of who we are as the original peoples of these lands and territories within Turtle Island. Data collection was by 95 First Nations data collectors who were hired and trained to conduct interviews in 35 MFNs. Collectively they interviewed 3837 MFNs who live on reserve, achieving 82.2% of our targeted sample within 35 MFNs. The presentation will focus on responses provided by the 1396 parents who were interviewed on behalf of their child under the age of 12 years old.

Conclusion: The indicators of wellbeing that include the many SDoH and the insistence by MFN that indicators are culturally rooted and include strength based measurements. Such measurements would empower our MFNs working from the strength of First Nations identity, toward closing the gap between between First Nations SDoH and the rest of Canada.

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ID: 273

Author: Dr. Carolyn Steele Gray

Title: Getting to Goals: Using the electronic Patient Reported Outcome (ePRO) mobile app to support complex patients in primary care settings.

Type of Abstract: Oral

Objectives: Goal-oriented care approaches are viewed as an effective way of prioritizing and managing the health care needs of individuals with complex chronic disease and disability (CCDD) in primary care settings. Our objective is to support adoption of goal-oriented care in primary care settings through implementation of an innovative mobile application.

Approach: A multi-phased user-centred design method was used to build an app to meet both CCDD patient and provider needs around goal-setting. After development and usability testing a 4-month exploratory trial was conducted with two Family Health Teams in Toronto as a preliminary exploration of the app's impact on patient outcomes and implementation. Patients were randomized into control and intervention groups and compared at baseline and post study on outcomes measures (quality of life and activation) and system usability. Semi-structured interviews were also conducted with providers and patients in the intervention group to better understand implementation and impact.

Results: Eight providers and 16 patients (7- control, 9 - intervention) participated in the study (2 patients withdrew due to health issues and conflict with another study). Outcome measures were captured using the AQoL-4D and PAM surveys which were analyzed using descriptive statistics. Interviews were conducted with 7 providers, and 9 intervention patients; transcripts were analyzed using inductive thematic analysis. Most notable are qualitative findings regarding the goal-oriented care process which can be broken down into three key stages: 1) goal-setting; 2) goal-monitoring; and 3) follow-up. While, the ePRO tool was found to be most useful in stages 2 and 3, it was the activities in stage 1 that were of greatest importance to ensure goals were meaningful and relevant to both patients and providers.

Conclusion: The ePRO tool can play an important role in the adoption of goal-oriented care in primary care settings. However, technology, like ePRO is not a stand-in for collaborative decision-making between patients and providers in development of meaningful goals. Implementation of technology should occur at the right stages to be useful.

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ID: 280

Author: Dr. Erin Strumpf

Title: The Effects of Early Pregnancy Loss on Health Care Utilization and Costs

Type of Abstract: Oral

Objectives: Early pregnancy loss occurs in 15-20% of pregnancies and has significant effects on the family, but implications for the health care system are poorly understood. We study the predictors and the effects of these prevalent losses on health care use and costs to better understand how bereavement affects Canadian women.

Approach: We developed an algorithm to identify miscarriages and ectopic pregnancies in linked administrative health databases from Manitoba using diagnosis and billing codes. To minimize bias in our effect estimates, we created a propensity score model to match women who experienced their first loss from 2003-2010 to women with a live birth within 6 months. Predictors of loss included social, clinical, and health care use factors. To estimate the effect of loss on health care use and costs, we used multivariate regressions and our matched sample. Outcomes included GP and specialist visits, use of psychotropic medications, and their costs.

Results: Before matching, women experiencing their first early pregnancy loss differ in important ways from women who have a live birth. Prior to the loss, exposed women have lower parity, higher morbidity, higher rates of psychological distress, more ambulatory care visits, and live in areas with lower socioeconomic status. Our propensity score matching procedure achieved balance on all predictors of loss in a final sample of approximately 18,000 women. Preliminary results indicated that a miscarriage or ectopic pregnancy increases costs for specialist visits by approximately 50%, and GP visits by 4%, in the two years after the loss. We observe increases in new prescriptions for psychotropic medications in both groups – women with a live birth and women who experience a loss – after the event.

Conclusion: Beyond the direct effects on family members, early pregnancy loss leads to increases in certain types of health care utilization among affected women. This could mean higher health care costs and likely reflects increased physical and mental health needs.

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ID: 270

Author: Dr. Enkelejda Sula Raxhimi

Title: Implications of Medical Power in Quebec's Health System and Policy

Type of Abstract: Oral

Objectives: A recent study conducted among key health stakeholders in Quebec indicates the central influence of the medical federations over public policies, which hinders parts of the implementation of the reform. This paper analyzes, through an anthropological and sociological perspective, the medical power and its roots in the Quebec's health system.

Approach: One question stems from the interviews: where and how does the medical body find its power within the system and what are the implications for the reform implementation at large? This presentation questions the current state of affairs, and seeks to discern and shed light on multiple facets that medical power might take. We draw on Foucauldian perspective, and on anthropological and sociological analyses to conceptualize the medical power in Quebec's healthcare system, using qualitative data from several sources: interviews with 31 stakeholders, academic as non-academic journals and literature from several disciplines such as anthropology, sociology, philosophy, history.

Results: Our analysis offers a conceptualization of medical power in Quebec, which allows us to better understand its influence on health policy implementation, to anticipate resistance zones and to identify the potential *marge de manoeuvre* for necessary changes to take place and improve the health system. It shows that these power relations are based on a system of differentiation that allows some to influence or act upon the actions of others. They materialize as traditional differences of status or privilege, of economic nature, of know-how possession and competence, but they can also be linguistic and cultural differences. Power relations mobilize such differences, which are both "its conditions and its effects".

Conclusion: Considering power as a diffused notion based in power relations, it should be possible to challenge the current status quo of the power relations between the medical body and other professionals and institutions. Public opinion should play a role in decision-making concerning the system, choices and quality of services.

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ID: 256

Author: Dr. Frank Sullivan

Title: DIABETES ACTION CANADA: Patient, Practice and Population Diabetes Risk Management System

Type of Abstract: Oral

Objectives: Diabetes Action Canada is a CIHR Strategic Patient Oriented Research Network which aims to transform the health outcomes of people with diabetes and its related complications. It will facilitate important and meaningful connections between patients and professionals to improve health care and significant cost savings within the health system.

Approach: Develop a platform for a national data management system to evaluate access to and implementation of effective methods for diagnosing and preventing diabetes complications for all Canadians.

Design a mobile and web-based app that will assess risk for diabetes complications for individuals with T1D and T2D – the “Risk Calculator”.

Design a novel framework for collecting reported data through mobile or web-based apps that connect with clinical data and analytics to capture population level health data previously limited to small research studies and trials.

Design a user-friendly Clinician Dashboard for researchers to manage their engagement in research.
Develop a platform

Results: In the first year of the program a information architecture has been developed based on a national network of Electronic Medical Record(EMR) data known as the Canadian Primary Care Sentinel Surveillance Network. Administrative data record linkage and patient reported outcome measures are being added. Currently, three provinces from the CPCSSN network are participating in DAC (Ontario, Quebec and Alberta). 46 219 people with diabetes are contributing data to the Risk Management System. Baseline data comparing practices across the provinces are being used for a range of observational, quality improvement, system redesign and interventional studies.

Early examples of baseline quality of care data across the provinces are that in the past 2 years 58% (34-66%) of patients have a HbA1c of < 7 % and 60%(30-68%) have had a BMI measured.

Conclusion: Although Canada has been slow to adopt EMRs compared to other industrialised countries, recent improvements enable the data they contain linkable & available for a range of health services research- and other purposes. As has happened in other countries diabetes mellitus provides a suitable means of demonstrating proof of concept.

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ID: 184

Author: Mrs. Chantal Sylvain

Title: Implementing a work rehabilitation program in primary healthcare for workers on sick leave for a common mental disorder

Type of Abstract: Oral

Objectives: Common mental disorders (CMDs) represent one of the main causes of absenteeism and a major occupational health issue. Yet mental health services rarely offer work rehabilitation. Our study sought to support and analyze the implementation and effects of a primary healthcare program designed to promote post-CMD return to work (RTW).

Approach: A developmental evaluation approach (Patton, 2011) was retained. The evaluated program included group interventions, one-on-one interventions, and concerted actions with partners (attending physician, insurer, other). The implementation analysis involved four data collection strategies: dashboards of activities conducted with participants (n=41); questionnaires completed by attending physicians (n=18); interviews with program clinicians and managers (n=7); and participant observations. Effects analysis was based on telephone interviews with participants (n=26). Quantitative data underwent descriptive statistical analyses, while qualitative data underwent thematic analysis. Results were presented and discussed periodically with the clinical team to ensure their credibility.

Results: Implementation: Participants began the program after 28 weeks of sick leave on average, and participated for 10 ± 2 weeks. Half began the gradual RTW before program completion. 80% of cases included concerted actions, usually with the insurer or the supervisor and rarely the attending physician. Virtually all the physicians saw the program as meeting needs and promoting RTW. Three categories of factors influenced the program: institutional constraints/resources, clinicians' values, and work rehabilitation scientific evidence.

Effects: 69% of the participants returned to work. Upon program completion, 22 of 26 participants interviewed rated their work self-efficacy at 7/10 or more. The program's main benefit was participants' assimilation of concrete tools for increasing their margin of manoeuvre at work and in life in general (e.g. mindfulness meditation techniques).

Conclusion: Better access to work rehabilitation is needed to prevent long-term disability and support health recovery after a CMD. By documenting the implementation and effects of a program adapted to the primary healthcare context, our results constitute a first step toward developing this essential offer of services.

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Title: Improving the performance reporting of primary care patient experience

Type of Abstract: Oral

Objectives: Performance reporting in primary care (PC) in Canada is recent. In part, there is a need for improvement in the science of performance measurement. The goal of this work was to specify the patient experience information needed to provide a high level snapshot of PC performance on several key dimensions.

Approach: Cross sectional patient experience data were collected as part of a larger practice-based survey across three geographic areas in British Columbia, Ontario, and Nova Scotia. We mapped items and scales from the patient survey to core constructs of PC. Next, we conducted exploratory and confirmatory factor analyses of intended constructs, using the core PC constructs as a framework (second order CFA models). We then created indices from the items and scales that measure the same construct (e.g. equity orientation, coordination). Each index is made up of both positive and negative indicators.

Results: Data from 1,207 patient experience surveys were used; Patients were clustered into 56 clinics (n=12, BC; n=15, ON; n=26, NS). Our factor analyses suggests patient experience data can be grouped into the following seven dimensions: accessibility orientation, relationship-based care, promoting health, self-management support, coordination orientation, safe care and equity orientation. Patient demographics and health status across geographic areas were similar but their experiences varied. Clinic means for each geographic area are reported since actionability on improving performance is likely to happen at the organizational level. ON clinics consistently had the highest performance in all dimensions, followed by those in NS and then BC. Within each area, there are practices who scored lower than their peers and those who scored substantially higher than the geographic mean.

Conclusion: These seven dimensions of patient experiences in PC can provide actionable and sensitive information to enhance or improve performance. Policy interventions (e.g., interprofessional teams) aimed at the clinic level could lead to more impact on improving PC performance and strengthening the PC system.

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Title: Dialysis patients in hospitals: risk of hospitalization and associated costs

Type of Abstract: Oral

Objectives: Dialysis-dependent patients have a higher risk of hospitalization than other patients, leading to increased patient burden and healthcare system costs. Using pan-Canadian data, this study highlights the factors affecting risk of hospitalization among dialysis-dependent patients and the associated costs of these hospitalizations.

Approach: This study identified a cohort of 38,369 new dialysis patients using data between 2005 and 2014 from the Canadian Organ Replacement Register (CORR). This patient data was linked to hospitalization data from the Discharge Abstract Database (DAD) and the Ontario Mental Health Reporting System (OMHRS). We calculated hazard ratios for all-cause and infection-related hospitalizations (IRHs; those related to dialysis care). Covariates included age, sex, race, income, comorbidity, primary diagnosis, year of dialysis start, care type and dialysis modality. Comparable costing data for hospitalizations were estimated using CIHI's Cost of a Standard Hospital Stay (CSHS) indicator.

Results: All-cause hospitalization rates across age groups ranged from 1.1 to 2.5 hospitalizations per patient-year on dialysis. Pediatric (0–17 years) dialysis patients had higher risks for all-cause hospitalizations (HR = 2.73; p-value < 0.001) and IRHs (HR = 1.30, p-value = 0.164) than patients age 45–64. Indigenous dialysis patients also demonstrated higher risks for both all-cause hospitalizations (HR = 1.20; p-value < 0.001) and IRHs (HR = 1.30, p-value = 0.001) than Caucasian patients. For all-cause hospitalizations, patients on either hemodialysis or peritoneal dialysis modalities had similarly decreasing risks of hospitalization over time 7 days after starting dialysis. The average estimated hospitalization cost per patient-year was higher for younger patients (\$27,344 for pediatric patients) than older patients (\$8,149 for patients age 75 and older).

Conclusion: Dialysis patients are at a high risk of hospitalization, which are costlier than other patients. IRHs for these patients can be prevented by adhering to dialysis catheter guidelines and promoting greater arteriovenous fistula use. Special attention should be given to higher risk populations such as pediatric and Indigenous dialysis patients.

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Title: Integrated Funding Models in Ontario: Validating a Patient Experience Survey

Type of Abstract: Oral

Objectives: The objective is to assess the reliability and validity of a patient experience survey that includes measurement of acute and community care settings and the transition between the two. The survey was implemented as part of an evaluation of an integrated funding model (IFM) pilot program implemented in Ontario.

Approach: A survey with 28 substantive items was administered in six pilot IFM projects across six different regions in Ontario. Survey questions were related to: patients' experience during their index hospitalization, transition from hospital, and care in the community. Questions were selected from existing validated surveys found in the literature. Each IFM project provided a list of consenting patients from which a random sample of participants was selected. Participants had paper, electronic, and telephone options to complete the survey. Exploratory factor analysis was used for survey validation and Cronbach's alphas were used to assess reliability of the resulting scales.

Results: The total response rate across all the sites in the first four months of the survey was 48.5% (229/472). 40% of the sample was 75 years and older and 51% were male. Exploratory factor analysis revealed a 5-factor solution for which scales were calculated and termed: hospital care, transition from hospital to community, continuity of community care, access to community services, and promotion of self-management. All Cronbach's alphas were above the recommended cut off of 0.7. Variability in outcomes between programs provides an indication of discrimination. For most programs, transition of care scored the lowest. Results are based on data collected before December 2016, updated results will be provided at the conference.

Conclusion: Exploratory factor analysis showed 5-factors associated with the integrated care pathway, each of which had high internal consistency. Relevant domains aligned closely with patient care trajectory and previously validated factors. The instrument is also used in monthly reporting to sites to identify areas to focus improvement.

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Author: Ms. Sukirtha Tharmalingam

Title: Bridging the information gaps during patient encounters across care settings

Type of Abstract: Oral

Objectives: Primary care (PC) and Long-term care (LTC) are vital to the health care of many Canadians. But do clinicians in these settings have the patient information they need when providing care. What are the information needs, gaps, and impact of digital assets such as the interoperable electronic health record.

Approach: A cross-sectional study of PC physicians and LTC clinicians was conducted in 2016 to understand the impact of access to clinical information that make up the iEHR, focusing on information that are mainly from outside of a provider's own practice. PC physicians (N=100) were grouped as connected (n=50) and unconnected (n=50) based on level of iEHR access. A total of 5000 patient encounters (Connected, n=2500) (unconnected, n=2500) in PC were studied. In the LTC, nurses and physicians (N=21) in an unconnected practice setting documented information gaps patient encounters (N=1050). Descriptive analysis was conducted to understand the extent of information gaps.

Results: Missing information impacted over 22% of all patient encounters in PC. Connected patient encounters were 20-33% less likely to be missing necessary clinical information (i.e. hospital visit/discharge, specialist notes, diagnostic imaging, lab tests) relative to unconnected encounters. Specific consequences information gaps in PC (i.e. seeking information from a secondary source, providing care with incomplete information, physician and patient time wasted) will be discussed. In LTC, 34% of patient encounters were missing at least one item of information that was needed (i.e. hospital discharge, specialist/outpatient report, diagnostic imaging, immunization, lab test results, care plans). Information gaps in LTC had an adverse consequence for nearly 3 out of every 10 encounters. Majority of the missing information was ordered or documented by someone external to the organization.

Conclusion: Not having relevant clinical information during patient encounters impacts clinicians' ability to provide care, patient safety, patient experience and costs the health system. Reduced information gaps and negative impacts due to availability of iEHR information in connected PC settings shows the need for continued effort towards increasing information availability.

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Title: GETTING FAMILY PHYSICIANS ON BOARD: FACTORS INFLUENCING PARTICIPATION IN CENTRALIZED WAITING LISTS FOR UNATTACHED PATIENTS

Type of Abstract: Oral

Objectives: In various Canadian provinces, centralized waiting lists (CWLs) were implemented to help unattached patients find a family physician (FP). However, FPs' participation in CWLs (i.e. attaching patients from CWLs) is voluntary and varies significantly. Our objective was to identify barriers and facilitators influencing FPs' participation in CWLs.

Approach: We conducted qualitative multiple case studies of CWLs implemented in four Health and Social Services Centres in Quebec. Each case was purposefully selected by an advisory committee made up of decision-makers, clinicians and researchers. A total of 23 semi-structured interviews were conducted with a range of 5 to 8 key stakeholders involved in each CWL's implementation (FPs, nurses, clerks, medical coordinators and managers). Data were coded with NVivo Software. Intra and inter-case content analysis were performed using the Consolidated Framework for Implementation Research (Damschroder and al., 2009).

Results: Five constructs influencing FPs' participation were identified: 1) The complexity of CWLs (e.g., administrative tasks) was an overarching barrier; 2) The tension for change and interest of FP in participating was low as several FPs did not perceive CWLs as needed and helpful to their practice; 3) External policy (i.e., Bill 20 threatened to cut FPs' income) influenced participation in two ways: a number of FPs retired or left for private practice, increasing the number of patients on CWLs, while other FPs attached more patients from CWLs to increase their panel size; 4) Having a committed champion FP in the CWL's implementation facilitated the promotion of the CWLs and enhanced FP participation; 5) Financial incentives provided to FPs were also a facilitating factor.

Conclusion: The barriers and facilitating factors identified could guide the development and use of strategies intended to encourage the FPs participation in CWLs and ultimately attach CWL patients. Attachment to FP is a key components of Patient's Medical Home. Learnings could be interesting for different provinces trying to improve attachment.

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Author: Dr. Simone Vigod

Title: A population-based cohort study of rapid repeat pregnancy among women with schizophrenia

Type of Abstract: Oral

Objectives: Rapid repeat pregnancy, a second pregnancy within 12 months of a live birth, is associated with perinatal morbidity and mortality. Women with schizophrenia are at risk, related to inconsistent contraception use and high sexual assault rates. We evaluated their risk for rapid repeat pregnancy in a large representative sample.

Approach: Using linked Ontario health administrative data, we conducted a population-based cohort study, comparing women with (n=1,686) and without schizophrenia (n=983,516) who had a live birth between 2002 and 2014. The primary outcome was rapid repeat pregnancy following this live birth; we also examined type of subsequent pregnancy (i.e., live birth, fetal death/stillbirth, or induced abortion). Modified Poisson regression was used to generate crude and adjusted relative risks (aRR). The model was adjusted for maternal age, parity, neighbourhood income quintile, rurality, chronic medical conditions, and continuity of primary care physician contact.

Results: Women with schizophrenia were younger, poorer, and more likely to have chronic medical conditions than women without schizophrenia, but they had higher continuity of primary care. About 2.9% of women with schizophrenia had a rapid repeat pregnancy, compared to 1.5% of women without, higher both before and after covariate adjustment (RR 1.91, 95% CI 1.44-2.54; aRR 1.62, 95% CI 1.21-2.15). Rates of rapid repeat live birth (1.3% vs. 0.6%, RR 2.09, 95% CI 1.38-3.18), fetal death/stillbirth (1.1% vs. 0.7%, RR 1.65, 95% CI 1.04-2.62) and induced abortions (0.6% vs. 0.2%, RR 2.33, 95% CI 1.21-4.49) were all higher for women with vs. without schizophrenia in crude models. Only risk for rapid repeat live birth remained statistically significant after adjustment (aRR 1.75, 95% CI 1.15-2.66).

Conclusion: These data provide new insight about the need for effective family planning among women with schizophrenia. Postpartum contacts with the health care system present key opportunities to provide women with schizophrenia additional support to initiate and maintain appropriate contraception, and avoid negative outcomes associated with a rapid repeat pregnancy.

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Author: Ms. Regina Visca

Title: Implementation Evaluation of an Integrated Healthcare Delivery Initiative for Low Back Pain

Type of Abstract: Oral

Objectives: An integrated interdisciplinary primary care based approach to the management of LBP was implemented in four primary local health and social services centres (HSSC) in Quebec. This study seeks to identify the contextual factors that influence implementation, and the ability of each HSSC to integrate and sustain the program.

Approach: This was a comparative in-depth longitudinal multiple case study with embedded units of analysis (policy, organization and clinical practice) to evaluate the contextual factors that impacted the level of service integration. Data collection included interviews with family physicians, nurses, physiotherapists, psychologists, managers and policymakers at various points. These data were complemented by onsite observations of numerous committee meetings, and analysis of project documentation. Thematic analysis was conducted to identify themes of contextual determinants that influenced integration of the model across five dimensions: integration of care, integration of clinical teams, functional integration, normative integration, and systemic integration (Champagne's model).

Results: The integration of care in all sites focused on coordinating comprehensive care provided by the various healthcare professionals to meet the specific needs of each patient. In terms of clinical team integration, support for interdisciplinary practice was provided to clinicians. Ongoing quality improvement of the delivery of care was observed. Functional integration, including the degree to which strategic management, leadership and organizational structure, varied among the sites and impacted the cooperation among stakeholders and ultimately the efficiency and effectiveness of the program. Professionals and managers were able to recognize the organizational dynamics (ex. cooperation and coordination) that played a critical role in service integration, suggesting normative integration took place. At the level of systemic integration, the ministry exerted an influence on implementation through the allocation of funding.

Conclusion: The integration of the program in a traditional organizational context required recurrent changes in stakeholder actions and relationships to facilitate integration across all dimensions. The sites fulfilling the conditions for a strong leadership, time and resources were more successful in the integration of the LBP program.

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Title: The Implementation of An External Audit and Feedback Program in Team-Based Primary Care Practices in Ontario – Lessons for Design and Execution

Type of Abstract: Oral

Objectives: In 2014, the Association of Family Health Teams of Ontario launched Data to Decisions (D2D) as a change management strategy to advance manageable meaningful measurement in primary care. One goal was to enable local quality improvement. This study evaluated how teams implemented D2D as an Audit and Feedback program.

Approach: To recruit family health teams for interviews, criterion sampling was implemented to ensure variation in setting, teaching status, roster size and patient complexity. Qualitative data were collected using semi-structured in-depth interviews, informed by the Consolidated Framework for Implementation Research (CFIR). Questions explored rationale for participation in D2D. In addition, questions elicited details regarding the barriers and facilitators to using the initiative to support quality improvement efforts. Interview transcripts were analyzed deductively to specific CFIR constructs, which were subsequently used to unearth key themes associated with participation and implementation.

Results: Of the 184 eligible teams in Ontario, 120 were participating in D2D by February 22nd, 2016. Interviews were completed with 25 key informants, including executive directors, from 18 family health teams across Ontario. Participation was facilitated by existing relationships between AFHTO and the participants and was primarily associated with the perception that D2D would evolve into the gold-standard for A&F in primary care. Teams successfully implemented the audit processes and reviewed and discussed the feedback, however this did not lead to commensurate quality improvement efforts. Thus, D2D could be characterized as an incomplete feedback loop. Key reasons for this result included: i) a resource intensive audit process and ii) the strength of the relationship between the physicians and organizational administrators among other factors.

Conclusion: Consistent with A&F literature, the successful implementation of the audit process and results discussions yielded no impact on quality improvement efforts. CFIR provides one approach to understand how well and why initiatives are reaching their goals. Addressing identified barriers and completing the feedback loop will enhance the program's value proposition.

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Title: Postpartum mental health of biological mothers involved with child protection services at birth: A retrospective cohort study using linkable administrative data

Type of Abstract: Oral

Objectives: Mental disorders are a common sequela of childbirth. This study examines the mental health outcomes of mothers whose children were taken into care at birth, mothers who received other protection or support services, and mothers not involved with child protection services.

Approach: The population-based cohort consisted of all women whose first child was born in Manitoba, Canada between April 1, 1995 and March 31, 2015. The cohort consisted of 464 mothers whose first-born was taken into care at birth, 1,514 mothers receiving services from child protection services within the first week of their first-born's life, and 1,978 mothers who were not involved with child protection services.

Results: Mothers involved with child protection services had higher rates of mental disorder diagnoses and treatment use in the year postpartum. Among those involved with child protection services, mothers whose children were taken into care had higher rates of depression (Adjusted Rate Ratio (ARR) = 1.29), anxiety (ARR = 1.34), substance abuse (ARR = 1.55), physician visits for mental illness (ARR = 1.41), and psychotropic medication use (ARR = 1.34) than mothers who received services.

Conclusion: Having a child taken into care at birth is related to worse mental health than the stresses of new motherhood.

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ID: 231

Author: Dr. Sping Wang

Title: Using Administrative Databases to Estimate Medical Procedure Cost

Type of Abstract: Oral

Objectives: Policymakers have a keen interest in comprehending medical cost of particular procedures for funding, improving efficiencies and lowering health care costs. The information, however, is not always transparent as reporting can vary from one facility to another. We demonstrated methods of estimating procedure cost using Ontario administrative databases.

Approach: We first identify functional centres under which cost of procedure is reported in Ontario Case Costing Initiative (OCCI) database. Cost accrued in the functional centre over a patient's hospital stay is used for statistical modeling of incremental cost of procedure. Two modeling approaches explored were propensity score matching and generalized linear modeling. Estimates between two methods were compared. Content validity is established by comparing estimates with product costs from select hospitals and subject matter experts. Socio-demographic and clinical factors related to cost were controlled or matched. We applied the methodologies to quality-based procedures recommended for stroke and COPD patients.

Results: Procedure cost was estimated for CT or MRI scan of brain, Ultrasound, CT or MRI carotid arteries, and thrombolytic therapy of stroke patients, and for non-invasive and invasive positive pressure ventilations of COPD patients. Overall incremental cost estimates from the two modeling approaches were similar. Stability and accuracy of procedure cost estimates hinges on quality of financial and clinical data. If cost data is not consistently recorded in well-defined functional centres across facilities participating in OCCI, estimates are often biased and unstable when a different method or a different year of data is used. Likewise if reporting of a procedure is not mandatory in clinical databases, the inconsistent assignment of patients in case and control groups resulted in questionable cost estimates.

Conclusion: Administrative database is a valuable source for estimating procedure costs, which can be used for understanding medical cost or for funding. While the methodology or statistical modeling is sound, reliability of results greatly depends on the quality of data. Results are sensitive to data quality in administrative databases.

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Title: Using an implementation science framework to evaluate an online portal to assess and manage frailty in primary health care

Type of Abstract: Oral

Objectives: This study examined the implementation of a web-based tool called the Frailty Portal; developed to aid in the screening, identification, and care planning of frail patients in primary health care (PHC). An implementation science framework, the Consolidated Framework for Implementation Research (CFIR), guided the evaluation design for the study.

Approach: Semi-structured key informant interviews were conducted with a purposive sample of stakeholders that included PHC providers, administrators and decision makers. CFIR constructs were reviewed then used to develop open-ended questions to probe different perspectives on the development and implementation of the Portal. Transcripts were coded in Nvivo software. Deductive content analysis was used to make sense of the meanings in the data. Analysis was an ongoing iterative process consisting of multiple reviews of the data that involved both reflexive and interactive processes among team members. Codes aligned with CFIR constructs, then themes emerged using an inductive process

Results: A total of 17 semi-structured interviews were conducted with stakeholders that included decision makers (n=2), health authority administrators (n=4), family physicians (n=6), nurse practitioners (n=3) and other (n=2). Themes reflected participants' experiences with the Portal, the complexity of the intervention and implementation processes, and were informed by CFIR constructs. Our three themes were: 1) PHC Practice Context (e.g. difficulty fitting the Portal into their practice routine, opportunity costs to using the Portal) 2) Intervention attributes affecting implementation (e.g. need for follow-up training, not linked to electronic medical record, challenges implementing associated care plans), and 3) Targeting providers with older patients (e.g. frailty was identified as being important by administrators, providers did not take time to use the Portal unless their patient population was primarily elderly).

Conclusion: The CFIR-inspired interview questions helped uncover critical aspects of implementation at the organizational and health authority levels that may otherwise not have been identified. The study identified key intervention characteristics that need to be modified to help providers integrate the Portal into their practice routines.

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Title: Medications Prescribed, Stopped and Modified at Hospital Discharge and Filled Medications in the Community: Impact of Failure to Follow in-Hospital Medication Changes on Adverse Health Outcomes 30-days Post Hospital Discharge

Type of Abstract: Oral

Objectives: To determine the impact of failure to follow changes made to patient drug regimens during hospitalization on 30-day hospital re-admissions and emergency department visits for patients admitted at two urban, tertiary care academic hospitals in Montreal, Quebec between October 2014 and May 2016 with at least two chronic conditions

Approach: This study was restricted to solid, oral medications covered under the provincial drug plan. Failure to follow medication changes was measured by comparing patient discharge prescriptions (patient chart) to medications filled in community 30-days post-discharge (dispensing data). Failure to follow changes made in-hospital included i) community medications that were stopped in-hospital and filled post-discharge, ii) community medications that were modified in-hospital but not filled at the modified daily-dose, and iii) new medications not filled post-discharge. Logistic regression was used to determine the impact of failure to follow changes made to community medications in-hospital on 30-day hospital re-admissions and ED visits.

Results: Among the 872 included patients, mean age was 72 (SD 13) and 37% were female. Patients had a median of 9 (IQR: 7-11) in-hospital medication changes; 489 (56%) patients had at least one medication change during hospitalization not followed post discharge. 27% of patients without a failure post-discharge had an ED visit or hospitalization in 30-days, 30% with 1-2 failures experienced an event, and 57% of patients with 3+ failures had an event. After adjusting for patient demographics, healthcare service utilization one year prior to hospitalization, hospital length-of- stay and comorbidity level, as well as the total number of in-hospital medication changes, each additional failure post-discharge was associated with a 25% increased odds of hospital re-admission or ED visit (OR: 1.25, 95% CI: 1.10-1.41).

Conclusion: Not only did the majority of patients not follow all medication changes that were made during hospitalization, the extent to which this occurred significantly impacted the risk of hospital re-admissions and ED visits. Policy and patient level interventions should be developed specifically targeting barriers for adherence to medication changes.

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Author: Ms. Deirdre Weymann

Title: Patient preferences for massively parallel sequencing genetic testing of colorectal cancer risk: a discrete choice experiment

Type of Abstract: Oral

Objectives: Massively parallel sequencing (MPS) of genes may replace traditional diagnostic testing for inherited colorectal cancer and polyposis syndrome (CRCP) given its improved ability to find causal pathogenic variants. Our study aims to enumerate preference-based personal utility and willingness-to-pay for MPS genetic testing of colorectal cancer (CRC) risk.

Approach: Our setting is the New Exome Technology in (NEXT) Medicine Study, a randomized control trial of usual care genetic testing versus exome sequencing in Seattle, Washington. Using discrete choice techniques, we elicited patient preferences for information on genetic causes of CRC. We estimated personal utility for the following attributes: proportion of individuals with a genetic cause of CRC who receive a definitive diagnosis, number of tests used to search for genetic cause, wait time for results, and cost. We analyzed preference data by estimating an error-component mixed logit model.

Results: Of the 139 patients enrolled in the NEXT Medicine study, 95 completed this DCE (68% response rate). Preferences for information on Mendelian causes of CRC were somewhat heterogeneous. On average, participants preferred to undergo genetic tests identifying more individuals with a definitive genetic etiology and involving a shorter wait time for results. Assuming that MPS identifies more individuals with a Mendelian form of CRC risk, involves fewer genetic tests, and results in a shorter wait time than traditional diagnostic testing, average willingness-to-pay for MPS ranged from US\$1,850 (95% CI: \$1,438, \$2,252) to US\$2,150 (95% CI: \$1,595, \$2,698). Approximately 83% to 87% of participants were predicted to choose to receive MPS over traditional testing.

Conclusion: Patients value information on genetic causes of CRC and replacing usual care genetic testing with MPS testing of CRC risk will increase patients' utility. Future research exploring costs and benefits of MPS for inherited CRCP is warranted.

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Title: Preventable and Repeat Adverse Drug Events in Canadian Emergency Department Patients

Type of Abstract: Oral

Objectives: Adverse drug events (ADEs), unintended, harmful medication-related events, commonly cause emergency department (ED) presentations. Understanding their preventability and contributing factors may aid in developing strategies for prevention. Our objective was to determine the proportion of preventable and repeat events, and to identify contributing factors for ADEs causing ED presentations.

Approach: We conducted a retrospective chart review of systematically-selected ED patients diagnosed with an ADE at the point-of-care in one of three prospective cohorts. A pharmacist and physician independently reviewed all charts and applied preventability algorithms, searched for repeat events, and recorded contributing factors. The main outcome was a probably or definitely preventable ADE (avoidable by adhering to best practice, appropriate monitoring, taking a history of prior ADEs, compliance with recommended therapy, and error avoidance). Secondary outcomes included repeat ADEs (same drug or drug-class re-exposure or repeat inappropriate drug withdrawal causing a similar presentation). We investigated contributing factors using logistic regression.

Results: 670 patients were diagnosed with 725 ADEs. We deemed 61% (95%CI:57-65%) preventable, the largest proportion of which were due to non-adherence (30%,95%CI: 25-34%). Overall, 20% (95%CI:17-23%) of ADEs were repeat events, most of which were moderate (61%) or severe (32%). 33% of repeat ADEs required hospital admission, 59% clinical monitoring, 50% additional medications to treat the ADE and 35% follow-up testing. The most commonly implicated drug classes were antithrombotics (17%), psycholeptics (12%) and analgesics (9%), and common contributing factors were inadequate patient counselling (15%), insufficient laboratory monitoring (12%), and provider non-adherence with treatment guidelines (7%). On multivariable regression, mental health diagnoses were associated with preventability of ADEs (OR 2.1, 95%CI:1.3-3.3, $p=0.002$). Diabetes was marginally significant in association with repeat ADEs (OR 1.6, 95%CI: 1.0-2.5, $p=0.06$).

Conclusion: The majority of ADEs presenting to the EDs of five hospitals were deemed preventable, incurring substantial hospital resources. Fully 20% were repeat ADEs. Interventions that improve adherence behaviour, target high-risk medications, and improve management for patients with mental health diagnoses or diabetes may reduce ED visits for ADEs.

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Author: Dr. Tyler Williamson

Title: Defining and describing high system use in primary care

Type of Abstract: Oral

Objectives: With 5% of patients consuming over 60% of health care resources, a tailored approach to managing high system users may improve patient care and outcomes, while reducing health spending. We aim to better understand the clinical, social, and demographic characteristics of high primary care users.

Approach: We performed an observational study to identify patients with a health care encounter between 2010-2015 from electronic medical record data housed by the Canadian Primary Care Sentinel Surveillance Network (CPCSSN). CPCSSN is a nationally representative sample of primary care practices from 8 provinces/territories including more than 1,500,000 patients. We defined high primary care system users as those in the top 10% of in-person encounters over a one-year period. Characteristics of interest include: 1) health care utilization, 2) patient demographic factors, and 3) medical complexity, defined as the presence of three or more chronic conditions in three or more body systems.

Results: On average, the top 10% of primary care users had 10 or more encounters per year. In the fiscal year 2014-2015, most provinces had a high-use definition close to the national average of 10 encounters per year. Of the total primary care encounters during the study period, 33.6% were attributable to high users in 2010 and 35.4% were attributable to high users by 2015. Characteristics of high primary care users will be described, and compared to those without high primary care use. We will also determine the prevalence of and examine the characteristics associated with persistent high primary care use across multiple years.

Conclusion: High primary care use can be defined as ≥10 encounters in a year. This analysis will provide details about the sociodemographic and clinical characteristics of patients with use of primary care. It will also guide interventions to improve health system efficiency and identify strategies for better management of complex patients.

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ID: 419

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Title: Development and evaluation of a citizen panel program for engaging citizens in setting direction for broad system change

Type of Abstract: Oral

Objectives: Our objective was to: 1) describe the phases of building a citizen panels program that gives citizens the opportunity to make informed judgements about pressing health-system issues; 2) evaluate the panels; and 3) to identify a set of values that citizens prioritize for addressing a range of health-system issues.

Approach: Our approach consisted of three components. First, we documented the evolutionary phases of our approach to citizen engagement to provide insight into a model that could be used by others interested in engaging citizens as part of system-level change. Second, we surveyed all panel participants about their views of the citizen brief sent to them prior to the panel, and about their experience with the panel. Lastly, we analyzed the values articulated across each of the 33 citizen panels convened by the McMaster Health Forum to identify those that were consistently prioritized by citizens to address health-system issues.

Results: While some features of our citizen panels have remained in place over the evolution of the program (namely engaging diverse groups of citizens and supporting informed judgements), we have made key changes to enhance the program (e.g., streamlining the citizen briefs and sequencing panels to precede a stakeholder dialogue with health-system leaders to inform their deliberations). Our survey findings indicate that our approach resonates well, with participants providing a 6.1 (n=399; SD=1.1) and 6.7 (n=402; SD=0.6) mean overall assessment of the citizen brief and citizen panels, respectively. In addition, across 33 panels, participants have consistently identified a core set of values (most notably supporting excellent patient experience, ensuring fairness and fostering collaboration across the system) despite panels addressing a broad range of issues.

Conclusion: Citizen panels provide a mechanism for evidence-informed deliberation among citizens about pressing health-system issues that emphasizes citizens' views and experiences about an issue, and values and preferences for addressing it. Findings also indicate that our approach has resonated well with participants as a mechanism for supporting people-centred health systems.

All Authors: Michael Wilson, François-Pierre Gauvin, Julia Abelson, John Lavis

ID: 285

Author: Ms. Jenna Wong

Title: What factors predict when antidepressants are prescribed for indications besides depression?

Type of Abstract: Oral

Objectives: Physicians commonly prescribe antidepressants for indications that are not evidence-based and need evaluation. Given that treatment indications for drugs are rarely documented, statistical models that can accurately predict when antidepressants are not prescribed for depression are important to monitor and assess non-evidence-based prescribing and identify factors associated with this practice.

Approach: This study included antidepressant prescriptions between Jan 2003 and Dec 2012 from an e-prescribing system in Quebec that required primary care physicians to document indications at the time of prescribing. Prescriptions were linked to administrative data from the provincial health insurance agency to obtain information on over 350 potential predictors. Binomial logistic regression and a forward stepwise selection procedure were used to identify important predictors of antidepressant prescriptions for indications besides depression. The final prediction model was derived on 75% of the study dataset and its performance was evaluated on the remaining 25%.

Results: During the study period, 73,576 antidepressant prescriptions were written by 141 physicians for 16,262 patients. 44.0% of antidepressant prescriptions were for indications besides depression. Among 40 predictors in the final model, the most important predictor of whether an antidepressant was prescribed for an indication besides depression was the name of the specific antidepressant prescribed. Other important predictors included diagnostic codes for certain conditions and certain drugs prescribed in the past year, the patient's age and education level, the physician's workload, and the prescribed dose. In the test set, the final model had good discrimination (c-statistic: 0.8148, 95% CI 0.7874 to 0.8469) and good calibration (ratio of observed to expected events: 0.986, 95% CI 0.842 to 1.136).

Conclusion: This study identified a set of variables from health services data that could accurately predict when antidepressants were prescribed for indications besides depression. In the absence of documented treatment indications for antidepressants, these findings are promising for researchers hoping to conduct database studies on antidepressant use by indication.

All Authors: Jenna Wong, Robyn Tamblyn

ID: 136

Author: Ms. Lindsay Wong

Title: Ontario Pharmacy Smoking Cessation Program: More Pharmacies Need to Participate

Type of Abstract: Oral

Objectives: The Ontario Pharmacy Smoking Cessation Program introduced in September 2011 reimburses pharmacies for smoking cessation counselling services for Ontario Drug Benefit eligible individuals. Prescription smoking cessation medications were reimbursed since August 2011. We described use of pharmacy smoking cessation services over time, and measured compliance with prescription smoking cessation medication.

Approach: We analyzed medical and pharmacy claims data to identify the number of patients and pharmacies participating; compare patient characteristics over time (2011/09-2013/08 vs. 2013/09-2015/03); and estimate prescription smoking cessation medication compliance (proportion of days covered over 90 days \geq 80%). Analyses were stratified by drug plan group (seniors \geq 65 years; or social assistance < 65 years), sex and region.

Results: Forty percent (n=1,710) of Ontario pharmacies participated, with 26% being new providers from 2013/09-2015/12. We identified 12,819 patients; patient characteristics remained similar over the two time periods, with 29% seniors (mean age=70, SD=4.7; 53% male) and 71% social assistance (mean age=46, SD=11.7; 49% male). In the year prior to smoking cessation service, almost half received another professional pharmacy service such as MedsCheck (18% at enrolment), and 89% had a physician smoking cessation service. Regional differences in use were identified. Among patients with one-year follow-up data, 58% received follow-up smoking cessation services and 74% received prescription smoking cessation medication. More patients starting prescription smoking cessation medication at enrolment were compliant (37%), compared to patients starting before (25%), or after (12%) enrolment.

Conclusion: More pharmacies offering smoking cessation services may improve patient access to smoking cessation services, particularly in areas with limited access to physicians.

All Authors: Lindsay Wong, Suzanne Cadarette, Sara Guilcher, Zahava Rosenberg-Yunger, Michael Chaiton, Beth Sproule, Giulia Consiglio, Lisa Dolovich

ID: 162

Author: Ms. Heather Worthington

Title: The Impact of an Income-based Deductible on Drug Use and Health Care Utilization in Older Adults

Type of Abstract: Oral

Objectives: Income-based deductibles are present in several Canadian public drug plans, and have been the subject of extensive debate. However, we have limited rigorous information on their impact. Therefore, we studied the impact of the deductibles used in British Columbia's Fair PharmaCare program on drug utilization and health resource utilization.

Approach: We used a quasi-experimental regression discontinuity design to study the impact of BC rules that impose no deductible on older community-dwelling adults born before 1939, compared to a 2% of household income deductible to those born after. We used 1.2 million person-years of data between 2003 and 2015 to study public drug plan expenditures, overall drug use, and physician and hospital utilization above and below this threshold.

Results: Income-based deductibles led to 28.6% fewer adults receiving public drug plan benefits (95%CI: -29.7 to -27.5), and reduced the per capita extent of annual benefits by \$206 (95%CI: -\$247 to -\$163). Despite this difference in public subsidy, we found no difference in total drug spending and number of drugs received once privately paid amounts were included ($p=0.82$ and $p=0.44$, respectively). Further, we found only small or non-existent changes in hospital or physician use at the threshold.

Conclusion: Modest, income-based deductibles considerably impacted the extent of public subsidy for prescription drugs. However, we found that it had only a trivial impact on overall access to medicines and use of other health services. Unlike co-payments, modest income-based deductibles may safely reduce public spending on drugs for some population groups.

All Authors: Heather Worthington, Michael Law, Lucy Cheng, Muhammad Mamdani, Kimberlyn McGrail, Fiona Chan, Sumit Majumdar

ID: 440

Author: Mr. Wei Wu

Title: Increasing Research Value with Sex-Specific Reporting of Data: the Cholinesterase Inhibitor Example

Type of Abstract: Oral

Objectives: To improve the value of research for older women and men, we examine the case of sex-specific reporting of data from drug trials for the management of dementia where these data may influence considerations ranging from the health of populations to shared decision-making by individual patient and caregiver.

Approach: Randomized controlled trials of cholinesterase inhibitors (ie donepezil, rivastigmine or galantamine) with clinical outcomes were identified from searches of MEDLINE, EMBASE and the Cochrane Library. Sex-specific data were extracted from eight sections of each trial (title, abstract, introduction, methods, outcomes, results, limitations and conclusion). Among the donepezil trials, the mostly widely used cholinesterase inhibitor therapy, more detailed harms data were obtained.

Results: 33 randomized controlled trials were identified evaluating 15,971 participants, of which 9,103 (57%) were women. Trials were highly cited (median citations 158, interquartile range 62-441) and published in high impact journals (median impact factor 7.4, interquartile range 3.4-8.2).

Sex was not mentioned in the title, introduction, limitations and conclusion section of any trial. Only three trials (9%) mentioned sex in the abstract (all as a demographic characteristic), and six (18%) in the methods. Almost all (32 [97%]) trials mentioned sex in the results, all in a table. One reported a sex difference as a secondary outcome. Among the 16 trials studying donepezil, adverse events were frequently reported and often dose-related. No trial provided sex-specific reporting of adverse events.

Conclusion: There is an almost complete lack of sex-specific reporting of data in clinical trials for dementia therapies, and no sex-specific reporting of adverse events. Sex-specific reporting of data should be required in all trials, or these data made readily available, to increase research value.

All Authors: Wei Wu, Nishila Mehta, Susan Bronskill, Paula Rochon, Craig Rodrigues

ID: 295

Author: Ms. Qian Yang

Title: Increasing Trend of Canadian Medico-legal cases Outside Hospitals

Type of Abstract: Oral

Objectives: Increasingly, Canadian healthcare services are transitioning from hospital to community and ambulatory care settings. We reviewed the Canadian Medical Protective Association (CMPA) data to compare the medico-legal experiences of physicians practicing in hospitals with those in non-hospital settings. We also assessed the severity of patient outcomes associated with practice setting.

Approach: We divided the CMPA civil legal actions and threat cases into 4 categories based on care setting: emergency department (ED), non-emergency in-hospital, physician office, and other out-of-hospital settings. We examined 10-year (2006-2015) trends of cases opened at CMPA to determine whether the transition of healthcare services out of hospital was reflected in the medico-legal cases. To test the association between severe outcomes (catastrophic, permanent major disabilities and death) and care setting, we built a logistic regression model using cases closed between 2011 and 2015. Other than care setting, independent variables also included patient age, Charlson comorbidity index, and contributing factors.

Results: Of the 8950 legal and threat cases opened in the CMPA (2006-2015), 50% were from non-emergency in-hospital settings, and 25% were from physician offices. The proportion of non-emergency in-hospital cases decreased from 53% in 2006 to 41% in 2015. Meanwhile, both ED (12% to 18%) and other out-of-hospital settings (9% to 14%) saw increases in medical-legal cases. Adjusting for patient age and comorbidity, we found no significant differences in patient outcomes from physician office and non-emergency in-hospital settings. However, patients treated in ED had an odds ratio of 2.3 for a severe outcome, with confidence interval of (1.9, 2.8). Contributing factors significantly associated with severe patient outcomes included: inadequate clinical decision making ($p < 0.0001$), poor provider situational awareness ($p < 0.0001$), and communication issues among providers ($p=0.0132$).

Conclusion: The CMPA data reflected the transition of healthcare services to out-of-hospital settings. The likelihood of severe patient outcomes was same in physician offices and non-emergency in-hospital, higher in EDs. With increasing number and complexity of patients treated outside hospitals, understanding patient safety in these settings is of even greater urgency.

All Authors: Qian Yang, Cathy Zhang, Lisa Calder

ID: 116

Author: Mrs. Alison Ytsma

Title: Wait Times and Cost Barriers to Care in Canada: Results from The Commonwealth Fund's 2016 Survey of Adults in 11 Countries

Type of Abstract: Oral

Objectives:

- Provide perspective on how Canada compares internationally for timely access to care and cost barriers to care
- Identify how results are changing over time and where improvements can be made
- Highlight how health care experiences and perceptions vary across Canadian provinces and between socio-demographic groups

Approach: The Commonwealth Fund's 2016 International Health Policy Survey of Adults in 11 Countries

reflects self-reported experiences from a random sample of those age 18 and older in 11 countries: Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. A total of 4,547 respondents were interviewed in Canada by phone (landline and cell phone) from March to June 2016. The data were weighted by age and gender. Data were also weighted by province to reflect Canada's population distribution. Significance tests compared Canadian and provincial results against the average of all 11 countries.

Results: Canadians continue to report longer wait times for doctors, specialists, elective surgery, and emergency department visits than all other countries. While primary care physicians have reported improvement to timely access, the general population results are unchanged. Longer waits may be related to Canadians reporting more consultations with physicians than people in other countries, while Canada reports fewer doctors per capita.

Canadians appeared to be facing cost barriers to care not covered under the Canada health act (Dental Visits and Pharmaceuticals). Both younger Canadians and low income Canadians are facing greater cost barriers to care overall. More Canadians reported that they worry about having enough money for meals, and mortgage or rent.

Conclusion: The 2016 results suggest that timely access to care continues to be a problem for Canadians with little improvement over the past 6 years. Cost is also a barrier to care with younger and lower income Canadians report facing more cost barriers to care.

All Authors: Alison Ytsma, Geoff Paltser

ID: 204

Author: Dr. Yan Yuan

Title: Quality Assurance Process Significantly Affects Breast Cancer Screening Performance

Type of Abstract: Oral

Objectives: Biennial breast cancer screening using mammogram is a strategy for secondary cancer prevention in developed countries. However, mammography can also cause harm, so quality is critical. Measures of screening programs such as recall rate and post-screen cancer rate vary between EU, USA and Canada. We investigated performance indicators in Alberta.

Approach: Breast cancer screening and diagnostic data from 2006 to 2010 in Alberta were obtained from two complementary data sources: 1) physician claims data, which covers radiologists in private clinics working under a fee-for-service model, similar to the USA model; 2) data from provincial Screen Test (ST) program that employs sessional radiologists and has a quality assurance process, similar to European models. Information on diagnosed breast cancers was obtained from the provincial cancer registry. Performance indicators were calculated for eligible women at their index screens. Logistic regression and Poisson regression were used to estimate odds ratios and rate ratios, respectively.

Results: Index screening mammograms were analyzed on 183,704 and 206,084 Alberta women in July 2006 – June 2008 and July 2008 – June 2010, respectively. 12.7% of screening mammograms were performed and interpreted by the Screen Test program. In 2006-2008 period, the ST program has a lower i) abnormal recall rate (3.8% vs. 9.8%, OR: 0.41, 95%CI:0.39-0.43), ii) false positive rate (3.4% vs. 9.4%, OR: 0.37, 95%CI:0.35-0.39), and iii) post-screen cancer rate (7.5 vs. 18.6 per 10,000 person-year 12-24 months after a normal screening mammography, RR: 0.40, 95%CI:0.24-0.64), but a higher iv) cancer detection rate (4.5 vs. 3.5 per 1,000 screens, RR: 1.3, 95%CI: 1.1-1.6), when compared to screening mammograms interpreted outside the ST. These performance indicators were largely similar in the 2008-2010 period.

Conclusion: The Screen Test program, which has a rigorous quality assurance process in place, performed significantly better during 2006 – 2010. This provides empirical evidence of the effectiveness of a quality assurance process, and may explain some of the variation in the reported performance indicators of breast cancer screening across countries.

All Authors: Yan Yuan, Ye Shen, James Dickinson, Marcy Winget

ID: 216

Author: Dr. Isik Zeytinoglu

Title: Associations between organizational practices, work stress and health: Evidence from the survey of Ontario community personal support workers

Type of Abstract: Oral

Objectives: A healthy workforce is crucial for providing good quality continued care in the community. Objectives of this study are to present evidence on the emotional and physical health of personal support workers (PSWs) in the community, and examine the associations between organizational practices, work stress, and PSWs' health.

Approach: This study is based on our 2015 Ontario survey of PSWs employed in the community care (n = 1,746). Measures of dependent variables are self-reported health, emotional health (life stress), and physical health (musculoskeletal disorders (MSDs)). Organizational practices (full-time hours, guaranteed hours, and support at work), workers' preferences (for more, same, or less hours) and satisfaction (with work hours, schedule/shifts, amount paid, benefits) and work stress are independent variables. A number of demographic characteristics and work factors are included as control variables. Descriptive statistics, correlations and multivariate regression analyses are conducted.

Results: PSWs report excellent/very good or good health (94%); 22% consider their lives as stressful; and between 9-20% report pain or discomfort due to MSDs most or all of the time (with pain or discomfort in the neck or shoulder as the highest (20%)). Reporting on significant associations and controlling for demographic characteristics and work factors, results show that full-time hours is negatively associated with life stress and MSDs but not with self-reported health. Guaranteed hours is not associated with health. Support at work is negatively associated with life stress and MSDs. Work stress is negatively associated with self-reported health, and positively associated with life stress and MSDs. Preference for work hours, and satisfaction with schedule/shifts and amount paid are also associated with health.

Conclusion: PSWs report good health but also life stress and MSDs. Organizational practices and work stress are significant contributors to these outcomes. Managers are recommended to pay attention to these factors to better facilitate PSWs health, and retain a healthy workforce for good quality continued care for the recipients.

All Authors: Isik Zeytinoglu, Margaret Denton, Catherine Brookman, Sharon Davies, Firat Sayin

ID: 558

Author: Dr. Cheryl Camillo

Title: Exchanging Ideas for Tackling Pharmaceutical Costs

Type of Abstract: Panel of Related Speakers

Relevance:

Pharmaceutical costs are a growing concern for the Canadian and United States health systems. Prescription drugs account for the second largest share (16%) of health spending in Canada and 10% of all health spending in the United States. In the U.S., prescription drug spending grew faster than any other service in 2015. In Canada, CIHI projects that drug spending will grow faster than hospital and physician spending in 7 provinces and territories this year. Due to high costs, many Canadians and Americans, particularly those with low income, go without needed drugs. Recent estimates of non-adherence amongst low-income Canadians range from 10-22%.

This problem persists despite efforts to address it in both countries over the last decade, which include the implementation of a National Pharmaceutical Strategy in Canada and the adoption of a Medicare prescription drug benefit in the United States.

Constraining costs is a current priority in both countries, at the federal and subnational levels. Amidst calls for universal pharmacare, Prime Minister Justin Trudeau asked Health Minister Jane Philpott in her mandate letter "to improve access to necessary prescription medications... reducing the cost Canadian governments pay for these drugs, making them more affordable for Canadians...." Incoming President Donald Trump American has pledged to reduce "runaway" drug costs. The National Academy for State Health Policy recently formed a Pharmacy Cost Work Group. American Medicaid Directors have made addressing prescription drug pricing a 2017 legislative priority.

Objective: This panel will bring together senior Canadian and American health system officials with national and state oversight to exchange new ideas about how to solve the problem, including how they might partner in doing so. Topics will include reimportation of prescription drugs and joint price negotiation.

Panelists:

- Kevin Wilson, Executive Director, Drug Plan and Extended Benefits Branch, Saskatchewan Ministry of Health
- Trish Riley, Executive Director, National Academy for State Health Policy
- Anchalee Srisombun, Senior Negotiator, pan-Canadian Pharmaceutical Alliance
- Rebecca Pasternak-Ikard, Chief Operating Officer, Oklahoma Health Care Authority

Moderator: Cheryl Camillo, Assistant Professor, Johnson Shoyama Graduate School of Public Policy

All Authors: Cheryl Camillo, Burl Beasley, Trish Riley, Sang Mi Lee, Vivian Leong

ID: 85

Author: Dr. Raisa Deber

Title: Approaches to Patient Engagement in the age of the Internet: What roles do people wish to play

Type of Abstract: Panel of Related Speakers

Patient engagement comprises multiple activities at many levels of

health care. This panel will focus on patient preferences for involvement in individual treatment decisions, and how this may have been affected by the growth of information on the Internet.

Previous work divided treatment decisions into two sets of tasks – PS (problem solving, which are preference-independent), and DM (decision making, which reflect what outcomes are important to people, and their weighting of risks and benefits). Three potential roles emerged – passive (who wish to hand off both PS and DM to their physician), shared (who wish to be informed about PS and involved in DM), and autonomous (who wish to be involved in both PS and DM). Although previous work had found almost no one preferred an autonomous role unless they did not trust their physician, current patient engagement models often assume that most people should adopt an autonomous role. We are studying whether the increased availability of information on the Internet has really changed preferences, or whether these models are drawing a false dichotomy and do not reflect what role people wish to take.

The panel will accordingly discuss pros and cons of different approaches that are reflected in current policy debates. It will also draw on a series of empirical studies (combining surveys, key informant interviews, and website analysis) looking at preferred roles and the existing state of using information technology to enhance patient-physician communication. Scheduled speakers include Raisa Deber (whose work on preferred roles catalyzed this research) and 3 PhD candidates at the University of Toronto: Vidhi Thakkar (who is studying preferred roles among glaucoma patients), Daniel Saliba (who is studying preferred roles among people involved in patient engagement activities), and Claudia Lai (who has studied the contents of patient health-related social media platforms on the Internet), although we hope that other members of our research team, which includes patient representatives, will also attend and share their insights.

All Authors: Raisa Deber, Vidhi Thakkar, Daniel Saliba, Claudia Lai

ID: 422

Author: Mr. Erik Hellsten

Title: Quality Standards: Driving Evidence-Based Quality Improvement in Ontario Mental Health Care

Type of Abstract: Panel of Related Speakers

It is a well-accepted truth in health care that evidence is a necessary but insufficient condition for achieving consistent adoption of evidence-based practice. The body of evidence to guide high quality care grows exponentially each year, yet wide gaps continue to persist between current practice and evidence-based care in many areas of health care. Traditional evidence translation vehicles such as clinical practice guidelines attempt to close these gaps, but often face challenges in gaining wide uptake due to their broad scope, lack of consideration of measurement or implementation mechanisms as well as resistance of health professionals to change.

An increasingly popular guidance vehicle pioneered by England's National Institute for Health and Care Excellence and now adopted in Australia and a growing range of other OECD health systems is the 'quality standard'. Quality standards are concise sets of evidence-based statements that focus on high priority areas for improvement, with an emphasis on measurability, actionability and implementation.

In 2016, Health Quality Ontario (HQP) partnered with interdisciplinary expert committees of clinicians, consumers and caregivers from across Ontario to develop Canada's first three quality standards, focusing on mental and cognitive health conditions: major depression, schizophrenia and behavioural symptoms of dementia.

This panel session brings together clinicians, administrators, methodologists and consumers that were involved in the making of these quality standards to discuss their initiation, development, dissemination and implementation from their own unique perspectives.

The panelists will walk the audience through the methods employed to systematically identify, appraise and synthesize evidence from a variety of guidance sources and then work with interdisciplinary expert panels—including consumer and caregiver representatives—to draw on this evidence to formulate sets of guidance statements directed toward the Ontario clinical context. The session will describe the methods and processes used to develop definitions for structure, process and outcome indicators developed to measure the adoption of these statements and evaluate their impact. Panelists will discuss the processes used to solicit and incorporate feedback from stakeholders, the public and consumer advisory groups on the content of the three draft standards, as well as the approaches used to disseminate the quality standards to a broad range of audiences, including the development of plain language summary versions of the standards designed to be accessible for patients, caregivers and the public. Finally, the panelists will discuss the strategies now underway to support clinical adoption of the quality standards across Ontario, including the use of measurement and reporting vehicles, the development of clinical decision support tools and hospital order sets, and the use of implementation science methods to customize messages and mechanisms to optimize uptake in key audiences.

The audience will be invited to join the panelists in a discussion on the barriers, challenges and opportunities for adoption of evidence-based practice in Canadian health systems, with a special focus on the challenge of driving quality improvement in mental and cognitive health.

All Authors: Erik Hellsten, Philip Klassen, George Mihalakakos, Ryan Monte, Arielle Baltman-Cord, Terri Irwin

ID: 248

Author: Dr. Noah Ivers

Title: Seeing the forests and the trees-- using systematic reviews of complex interventions to enhance health system decision-making to improve diabetes care

Type of Abstract: Panel of Related Speakers

Background: An increasing number of systematic reviews document the effects of quality improvement (QI) strategies to assist decision-makers in developing new initiatives. For example, we published a systematic review of 142 trials of QI strategies to improve care for patients with diabetes (Lancet 2012). We found that QI strategies work in general but were unable to offer detailed advice to decision-makers about which strategies to use in specific contexts. Poor reporting of primary studies and limitations in standard methods of meta-analysis reduce the utility of such syntheses for health system decision-makers. This panel will discuss innovative approaches to the conduct and analysis of our updated systematic reviews of diabetes QI to enhance their informativeness for health system decision makers.

Methods: We updated our systematic review of diabetes quality improvement strategies, assessed a range of 13 outcomes, and enriched the dataset by surveying authors of all included trials to ensure a fulsome understanding of contextual factors. We used novel approaches for exploring heterogeneity (hierarchical, multivariate meta-regression analyses) to better understand how effective different QI strategies are across different contexts. We also tested the utility of different approaches to characterizing QI strategies, by applying the Behaviour Change Techniques Taxonomy for interventions targeting health professionals and/or patients. Finally, we explored the use of diabetes quality improvement strategies amongst vulnerable populations. Decision-makers were involved throughout to help identify and prioritize variables to be explored and to aid in the interpretation and dissemination of results.

Results: We identified 278 randomized trials of diabetes quality improvement strategies, including 69,531 patients 200 patient randomized trials and 165,128 patients from 78 cluster randomized trials. Our panel discussion will present the results: Comparing standard to innovative analytical approaches; Concerning the implications of contacting authors for additional information; Exploring the implications of different approaches to characterise QI strategies; and Exploring the extent that equity considerations have been considered in diabetes QI trials. Finally we will discuss the challenges of maintaining a very large systematic review with rapidly evolving literature and the opportunities to convert our review into a living systematic review to ensure timely information for decision makers.

Discussion: Our team of scientists and knowledge users have collaboratively developed and tested new methods to produce outcomes beyond just the 'mean effect' to inform new health system initiatives as they aim to improve outcomes for people with diabetes. We illustrate the value of novel approaches for exploring heterogeneity in meta-analysis of complex interventions, including different ways to describe the effective components of quality improvement strategies. We will also discuss the future of this synthesis as a Cochrane 'living systematic review' and how we are working with decision-makers to optimize evidence-use for new initiatives.

All Authors: Noah Ivers, Jeremy Grimshaw, Kristin Danko, Justin Presseau, Carolyn Gall Casey

ID: 131

Author: Dr. Alan Katz

Title: Big Data Meets Health Services Research Panel

Type of Abstract: Panel of Related Speakers

Objective: To discuss the challenges and potential solutions to the use of analysis of free text for health services research; to share the participants' experience with Natural Language Programming as a tool for Health Services Research in Canada

Background: Canadian provincial administrative health and social data holdings have supported cutting edge health services research that has had a significant impact on the provision of healthcare in Canada and as a result on the health of Canadians. Through the addition of data like Electronic Medical Records (EMR) to administrative data repositories the breadth of these structured data holdings can be supplemented by the depth of information available in unstructured free text. Free text Analysis (FTA) transforms unstructured data into a structured form that facilitates further analysis. Analysis of free text or natural language was developed by computer scientists and has been used for some time in other fields. The translation of these techniques to health data has proven to be a particularly complex task in medicine when even specialists in the same field may use different terminology or grammatical constructions to describe the same disease, patient, or treatment status. The analysis of the transformed data could be traditional statistical analysis or a number of analytic techniques not yet commonly used in health services research.

The presenters on the panel will share their experience with developing NLP at leading Canadian health services research centres: The Manitoba Centre for Health Policy – Alan Katz and Lisa Lix, the Institute for Clinical Evaluative Sciences (ICES) – Karen Tu, and PopData BC – Kim McGrail. They will share the challenges they have faced and the solutions they have developed including de-identification of free text, development of risk prediction models using free text, and disease identification. They will provide examples of the free text data sources currently being analyzed, the research questions being addressed by these analyses, share early results from these analyses and discuss the potential of future analyses.

Relevance: The dramatic growth of EMR data available through networks like the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) and the Electronic Medical Record Administrative data Linked Database (EMRALD®) has highlighted the potential of FTA as a tool to enhance traditional statistical techniques for health services research. The clinical details available through the inclusion and analysis of EMR data have the potential to dramatically enhance the power of health services research in Canada. This session will also provide the opportunity for members of the audience to share their experience with FTA.

All Authors: Alan Katz, Lisa Lix, Kimberlyn McGrail, Karen Tu

ID: 569

Author: Dr. Kimberlyn McGrail

Title: “We can help with this”: Bringing the public's views into decisions about the use of data for research

Type of Abstract: Panel of Related Speakers

Canada has a long history of innovative and privacy-sensitive use of administrative data for research. The research paradigm is changing, for example there is interest in hypothesis-generating questions, and researchers wish to link new types of data with administrative data, such as information derived from biospecimens or electronic medical records. High profile initiatives and reports highlight the potential benefits that could be realised through these expanded linkages.

“Data access governance” can be described simply as policies about who can have access to what data, for what research purpose, and under what conditions. Legislation and norms around use of person-specific information, with and without consent, underpin current data governance practices. Legislation alone, however, does not provide adequate clarity when different types of data are linked, and social norms and expectations may not be compatible with what is “legally allowed”. The public has been woefully underrepresented in policy decisions about data access governance, the result being practices that may either underuse and/or misuse data from the public perspective. In the current context of change, data access governance must use public engagement to ensure the alignment of policies with social values.

This panel will help move the conversation forward. It will identify different approaches to public engagement and help set an agenda for research that brings the public’s voice to decisions around data use. The panel will include an introduction, a series of presentations, and discussion.

Introduction: We will start with a brief overview of legislative authority for use of administrative data, and the uncertainty created when broadening the array of data used for research. This will include aspects of technology, “big data”, and a summary of existing literature on public attitudes and expectations.

Presentations on approaches to public engagement: We will review approaches to public engagement undertaken in Ontario and British Columbia. In Ontario, from 2015-2017, the Institute for Clinical Evaluative Sciences (ICES) conducted nine ~ two-hour focus groups, including sessions in downtown Toronto and northern Ontario. These sessions included a very brief overview of the process used by ICES to remove or code identifying personal information prior to making linked health datasets available for research, and discussion of potential benefits and risks in the context of specific case studies.

In 2017 in British Columbia we will be conducting a four-day deliberative engagement event, using a method developed over approximately 20 previous engagements. The intent is to inform a “mini public” of approximately 25 people, and then facilitate discussions about what is acceptable and not, with the intent of finding areas of persistent disagreement, representing the more challenging areas for policy development.

Evelyn Sparks will provide thoughts about how members of the public can contribute to data access governance policies and her views on the potential benefits and drawbacks of different approaches to public engagement.

Discussion: We will facilitate dialogue with audience members about their recommendations for a research agenda focused on public engagement in data access governance

.All Authors: Kimberlyn McGrail, P. Alison Paprica

ID: 103

Author: Dr. Walter Wodchis

Title: A Collaborative Multi-Method Evaluation of Health Links : Results and Lessons Learned for System-level Program Evaluation

Type of Abstract: Panel of Related Speakers

Overview: In 2012, the Ontario Ministry of Health and Long Term Care (MOHLTC) launched Health Links, a system-wide transformation to improve the coordination of care for the highest cost users in the health care system. By 2017, Health Links has matured to include more than 20,000 patients with coordinated care plans in nearly 90 individual Health Links across the province. The MOHLTC sought to evaluate the Health Links program by collaborating with Health Links and selected research groups. This panel presentation describes the collaborative evaluation program and results to date with highly relevant lessons for evaluations of broad health system programs.

Approach: In 2016, the MOHLTC approached five research groups to collaborate on this evaluation. A multi-method approach was undertaken including: 1. A quantitative evaluation using a quasi-experimental design based on a secondary analysis of provincial health administrative data; 2. Case studies of the implementation across six Health Links in three regions in the province; 3. Patient surveys to evaluate the impact of Health Links on patient experience in primary care across nine Health Links in three regions; 4. Caregiver surveys and interviews to assess the impact of Health Links on caregivers in the same nine Health Links ; and 5. A citizen panel to help direct the future orientation and further spread of the Health Links' approach to care.

Results and Implications: The panel speakers will provide insights from each of these perspectives as well as share their experiences with the broad collaborative approach to the evaluation. The anticipated value of this effort is a robust and time-sensitive evaluation outcome. Each perspective in the evaluation is represented. Dr. Walter Wodchis is scientific lead for the evaluation consortium and will provide context for the evaluation. Dr. Rick Glazier will outline both the opportunities and challenges of implementing a rigorous quasi-experimental design in the absence of a robust patient roster. Dr. Agnes Grudniewicz will highlight the approach and insights obtained from in-depth case studies of the implementation of Health Links, with an emphasis on insights about the organizational context and capabilities for successful implementation of integrated care. Dr. Mike Green will discuss the implementation of a patient survey and use of newly enrolled and existing clients to develop an assessment of the effects of Health Links. Dr. Ruta Valaitis will present a novel approach and insights gained from incorporating caregivers in the evaluation of this program. Dr. Michael Wilson will discuss the approach and outcomes of a citizen's panel on the topic of Health Links. Phil Graham, the director of primary care for MOHLTC will discuss the importance of this project, how the ministry decided to undertake this approach to the evaluation, and also to share his perspectives on policy implications arising from the evaluation.

All Authors: Walter Wodchis, Agnes Grudniewicz, Richard Glazier, Ruta Valaitis, Michael Green, Michael Wilson, Phil Graham

ID: 9

Author: Ms. Muna Abdhulla

Title: MOMMY MONITOR: The development of a mobile app to reduce the adverse maternal health experiences of racialized women in Canada

Type of Abstract: Poster

Objectives:

- 1) explore the experiences of immigrant women with prenatal care
- 2) determine the perceived relevance of the topics taught in generic prenatal classes to immigrant women
- 3) discuss the interplay between culture, perceived relevance, and use of prenatal care by these racialized women.

Approach: A qualitative ethnographic study with eight in-depth one on one interviews with immigrant women from Africa, the Caribbean, and Latin America. Convenience sample from a church and a prenatal program from Unison Community Health Centre in Toronto, Ontario. The women had more than one child, but no more than four children, and were between the ages of 30-50 years old, and lived in Canada between 2 to 37 years. Interviews recorded, notes taken, and lasted from 45 minutes to 1 hour. This is Phase 1 of the study. Phase 2 is a mixed methods study which includes a survey, focus groups, & interviews.

Results: The participants acknowledged the presence of prenatal care and services being provided by the healthcare system, though the majority did not attend prenatal classes. The immigrant women discussed a need for larger social support networks during and after pregnancy, and healthcare professionals that took the initiative to understand their cultural values and needs on an individualistic level. The participants highly preferred midwifery as a form of prenatal care, and were not concerned with receiving competent care from providers, but rather relied on their personal cultural networks for that cultural sensitivity.

Conclusion: Four final recommendations were made to provide for the enhancement of maternal care and services to reflect the needs of racialized women. The Mommy Monitor app is currently being developed in phase two of the study, to enhance surveillance, increase monitoring, increase social support and provide culturally sensitive health care.

All Authors: Muna Abdhulla, Aisha Lofters

ID: 320

Author: Mrs. Sabina Abou Malham

Title: WHAT ARE THE PERCEIVED EFFECTS OF THE IMPLEMENTATION OF ADVANCED ACCESS IN FAMILY MEDICINE UNITS IN QUEBEC?

Type of Abstract: Poster

Objectives: Examining impacts of advanced access has been the subject of most studies; very few have addressed the perceived effects of this innovation on the different categories of providers and patients. This study aimed to gain insights into users' own experiences by exploring which types of effects are perceived by them.

Approach: We used a qualitative approach and purposively selected 10 key informants (Family physicians, residents, nurse clinicians, advanced nurse practitioners, and clerical staff) from four early adopters of advanced access family medicine units in Quebec. A total of forty individual semi-structured interviews were conducted. Interviews were audio-recorded and transcribed verbatim. Data were coded with QDA Miner software and analyzed using qualitative content analysis. We used a mixed coding scheme based mainly on empirical data derived from fieldwork and on the literature on the potential effects of advanced access.

Results: Many key benefits were commonly reported by participants: increased satisfaction for physicians, nurses, and clerical staff. This result was mainly attributed to improvements in timely access to care, flexibility of appointments, enhancement of working conditions, reduction in patients complaints, work stress and frustration with the traditional booking system. Nurses recognized specific benefits such as role enhancement and valorization.

Greater patients' satisfaction (e.g., improved timeliness of patient care) was a significant benefit. Positive effects on residents' education included improved clinical training experiences and learning novel practice management skills. Some participants reported lower emergency department utilization.

However, some negative effects were highlighted: disruption in relational continuity of care compromising resident training and educational goals. Perceptions regarding improved responses to the complex needs of vulnerable patients were equivocal.

Conclusion: Our findings suggest that advanced access appears to provide significant benefits to the: patients, health care providers, administrative staff, and the health care system. They can support the decision makers in promoting the model across Quebec, and pursuing their efforts to improving timely access and health care quality delivery.

All Authors: Sabina Abou Malham, Mylaine Breton, Nassera Touati, Lara Maillet

ID: 460

Author: Mrs. Sabina Abou Malham

Title: THE CHALLENGES OF IMPLEMENTING ADVANCED ACCESS IN FAMILY MEDICINE TEACHING UNITS IN QUEBEC. DO PROMISING STRATEGIES TO OVERCOME SUCH CHALLENGES EXIST?

Type of Abstract: Poster

Objectives: Advanced access offers benefits for providers, patients and the healthcare system. However, implementing this model in teaching units has its own challenges. Our objective is to outline the perceived challenges encountered while implementing this model in family medicine units with a teaching mission and the potential strategies to address them.

Approach: This article builds on: 1) a multiple case study research, and 2) academic workshop discussions during annual family medicine departmental assembly. Data were collected from two sources: 1) semi-structured interviews (N=40) held with healthcare professionals and clerical staff involved in the implementation of advanced access in 4 family medicine units in Quebec; 2) workshop discussion groups, reflection and insights from current practice of a various number of residents and experienced family physicians who have encountered and overcame challenges while implementing this innovation in their academic teaching units. A thematic approach was used for the analysis.

Results: Four categories of challenges were reported: 1) managing the residents' patient population (assignment, patient roster size and distribution of complex cases according to their pedagogical needs); 2) managing and balancing the office appointment schedule; 3) resident availability and continuity of care; 4) availability of nursing staff

Despite challenges, promising strategies were suggested: introducing this model in family medicine programs and clinical training; proactive and extensive patient and providers' education; definition of the residents practice population, adoption of a team-based care (creating joint practice models with nurses, a small team configuration), establishing formal contingency plans for residents' absence (pairing with residents to cover for each other, with nurses), promoting a culture that values responding to patient's needs, engaging residents in the implementation process.

Conclusion: Our findings have significant implications for decision makers, managers and healthcare providers. They may help to identify what challenges to consider while implementing advanced access in academic teaching units; and to offer more proactive solutions for other teaching units planning to implement the advanced access model for residents.

All Authors: Sabina Abou Malham, Mylaine Breton, Nassera Touati, Lara Maillet

ID: 40

Author: Ms. Stephanie Aboueid

Title: What are the nutrition promotion practices of family physicians and nurse practitioners in regards to obesity in multidisciplinary primary care settings in Ontario?

Type of Abstract: Poster

Objectives: 1) To examine when family physicians and nurse practitioners approach the topic of nutrition with patients with excess weight in multidisciplinary primary care settings and 2) to elucidate the facilitators and barriers of approaching the topic of nutrition in regards to obesity management.

Approach: We used a qualitative research design to provide an in-depth understanding of current nutrition promotion practices. Fifteen one-on-one semi-structured interviews were conducted with family physicians (n=5) and nurse practitioners (n=10) working in various multidisciplinary primary care settings (family health teams, community health centres, nurse practitioner-led clinics) in Ontario. The interviews were 30 to 60 minutes in length. All interviews were audiotaped, transcribed and analyzed using NVivo software. Inductive and deductive codes were used for data analysis. Two researchers coded the transcripts independently and assessed intercoder reliability. Discrepancies were resolved by consulting the research team.

Results: Nutrition seemed to be discussed with patients when they: 1) bring it up, 2) come for physicals, 2) are diagnosed with a chronic disease, 4) are at-risk of developing a chronic disease, and 5) are obese. The facilitators were: 1) trusting relationship with the patient, 2) having a dietitian on site as it provides the practitioner with a cost-free referral after the discussion, 3) flagging system and template prompting to talk about nutrition, 4) comfort level of practitioner, 5) family support, 6) financial incentives, and 7) having a patient roster. The barriers were: 1) competing demands and lack of time, 2) lack of patient buy-in and readiness, 3) fear of offending patients, and 4) patients unable to afford healthier foods.

Conclusion: Therefore, there are many barriers and facilitators that came into play in practitioners' decision of approaching the topic of nutrition in regards to obesity management. The multidisciplinary nature of these clinics seemed to allow nutrition intervention to occur prophylactically but identified barriers should be addressed to facilitate the conversation.

All Authors: Stephanie Aboueid, Ivy Bourgeault, Isabelle Giroux

ID: 43

Author: Ms. Stephanie Aboueid

Title: Primary care providers' approach to dietetic referrals for patients with obesity and factors affecting patient initiation of Medical Nutrition Therapy - A qualitative study

Type of Abstract: Poster

Objectives: 1) To understand Family Physicians' (FPs) and Nurse Practitioners' (NPs) perceived influence on their patients' dietary behaviours, 2) To understand how FPs and NPs approach a dietetic referral, and 3) To elucidate enabling factors for patients initiating Medical Nutrition Therapy (MNT) for obesity management and nutrition-related chronic diseases.

Approach: We interviewed 15 FPs and NPs working in various multidisciplinary clinics in Ontario. Semi-structured interviews were audiotaped, transcribed and coded using NVivo software. A thematic analysis was utilized to identify major themes. Deductive codes were used for the initial analysis while inductive codes emerged iteratively. The research team met to provide feedback on the analysis and ensure coding reliability. Additionally, member checks were available for participants who were interested in reviewing the data analysis. The member checks showed that the analysis accurately reflected what participants conveyed during the interviews.

Results: Ways of positively influencing patients with obesity to make lifestyle changes included having a rapport with the patient, leading by example, reinforcing the message, and using an evidence-based and non-threatening approach. Before suggesting a dietetic referral, participants: explained the importance of lifestyle changes (5/15), did nothing (4/15), updated laboratory and anthropometric data (3/15), or explained what to expect at the visit with the dietitian (3/15). Some reported that using a more direct approach by saying 'I want you to see the dietitian' increased initiation of MNT and that patient motivation level also affected initiation of MNT. Factors increasing motivation included patient or family member being diagnosed with a chronic medical condition, fear of taking medications (e.g.: insulin), absence of mental health issues, and younger age.

Conclusion: Although FPs and NPs believed that their influence on their patients' dietary behaviours was moderate, explaining the importance of lifestyle changes could increase initiation of MNT. Examining patient-specific factors that might affect level of motivation was also important to consider when suggesting MNT for obesity management with a dietitian.

All Authors: Stephanie Aboueid, Danielle Edmonds, Ivy Bourgeault, Isabelle Giroux

ID: 294

Author: Dr. Lusine Abrahamyan

Title: Diagnostic Accuracy of Level IV Portable Sleep monitors Versus Polysomnography for Obstructive Sleep Apnea: A Systematic Review and Meta-Analysis

Type of Abstract: Poster

Objectives: Obstructive sleep apnea (OSA) is a chronic, prevalent condition. In-laboratory, overnight Type I polysomnography (PSG) is the current 'gold standard' for diagnosing OSA. Diagnostic sleep studies can be also conducted at home with Type IV portable monitors (PM). We systematically reviewed evidence on diagnostic ability of Type IV PMs against PSG.

Approach: Methods: Participants: patients ≥ 16 years old with symptoms suggestive of OSA. Intervention: type IV PM for diagnosing OSA. Comparator: in-laboratory PSG. Outcomes: diagnostic accuracy measures. Studies: cross-sectional, prospective observational/experimental/quasi-experimental studies. Information sources: MEDLINE and Cochrane library from January 1, 2010 to May 10, 2016. All review stages were conducted independently by two investigators.

Results: We screened 6,054 abstracts and 115 full-text articles to select 24 full-text articles for final review. These 24 studies enrolled a total of 2,068 patients with suspected OSA, and evaluated 11 different PMs with 1-6 channels. Only 7(29%) studies tested PMs in home setting. The mean difference (bias) between PSG-measured and PM-measured apnea-hypopnea index (AHI) ranged from -6.5 to 13.5 events/hour. At AHI ≥ 5 events/hour, the sensitivity of Type IV PMs varied from 67.5-100% and specificity from 25%-100%.

Conclusion: Level IV PMs offer the potential to widen access to treatment for this underdiagnosed condition. Policy recommendations regarding PM use should consider the health and societal implications of false positive and false negative diagnoses and its cost-effectiveness.

All Authors: Lusine Abrahamyan, Yeva Sahakyan, Suzanne Chung, Joanna Bielecki, Petros Pechlivanoglou, Steven Carcone, Valeria Rac, Murray Krahn

ID: 13

Author: Mrs. Ursulla Aho-Glele

Title: Strategies used in the institutionalization of patient engagement in risk management.

Type of Abstract: Poster

Objectives: The aim is to generate and share knowledge about factors, mechanisms and strategies put in place by organizational leaders that would allow patient engagement to be fully institutionalized in the health care system for the enhancement of patient safety.

Approach: The project has two research designs. The first one, is a descriptive research design. A questionnaire will be sent to all health care organization's Directors (N = 22) and answered via telephone in order to index all implemented patient engagement strategies. The second research design, to address the specific objectives on why and how these best practices (strategies) emerged and are put in place, will be a longitudinal case study with interwoven levels of analysis (strategic, organization and clinical). The study will involve one case study, which have implemented strategies to engage patients in risk management.

Results: Research outcomes can be achieved within a two-year timeframe and its end-point will be marked by the issuance of tangible research outputs, including: 1- A patient engagement (PE) indicator framework for patient safety in risk management. The PE indicator framework will include indicators of PE implementation and planning, as well as PE-sensitive performance indicators and measures for PE evaluation. The PE indicator framework could be used by decision-makers to plan, implement, evaluate and improve PE in risk management in health care institutions. 2- A guide informing on mechanisms and strategies used by managers to implement and institutionalized PE will be shared.

Conclusion: With the growth of chronic diseases incidence, and estimated costs related to incidents and accidents, risk management is still dealt with in silos. To cater to this problem, patient engagement is recognised as a key component for developing the highest quality of healthcare. In 2015, Accreditation Canada mentions PE as its core principle.

All Authors: Ursulla Aho-Glele, Marie-Pascale Pomey

ID: 293

Author: Ms. Kaitlynn Almeida

Title: Leveraging Regional Feedback to Support Provincial Improvement Efforts in the Ontario Cancer System

Type of Abstract: Poster

Objectives: This study identifies contextual factors and prioritizes key themes influencing the ability of Regional Cancer Programs (RCPs) to achieve high performance on priority cancer system indicators. The results can enhance CCO's provision of support to the RCPs in order to improve performance.

Approach: As part of a quarterly review of performance, CCO requires RCPs to explain the reasons for poor performance on a variety of indicators spanning the cancer journey. For this study, comments from the RCPs for the 2015-2016 fiscal year were compiled in Excel for analysis, with both qualitative thematic analysis and quantitative content analysis being conducted to identify and quantify common themes. Codes were developed inductively during the analysis and applied to the data set. High-level codes included "Capacity", "Operational Processes", "Data Reporting", "Patient Factors", and "Health Care Provider Buy-In", among others, with the frequency of each theme subsequently calculated.

Results: The results demonstrate that "Capacity" is the most common challenge encountered by the RCPs (47.5%). Health human resource (HHR), supply versus demand, and equipment or technology issues were the main contributors to these capacity challenges, with HHR difficulties contributing to nearly half (49.2%) of the capacity issues. "Operational Processes" were the second most prevalent theme, contributing to 20.7% of the issues noted by the RCPs. This includes comments on transitions between different operational processes as well as recognition of sub-optimally functioning processes. Finally, "Data Reporting" comprised 17.1% of the identified challenges, including data entry backlog, data input errors, and data quality concerns.

Conclusion: The results of this retrospective analysis have identified key areas for CCO to focus on in order to help address common challenges across the province. This includes identifying regions with effective mitigation strategies and engaging them in a knowledge sharing forum to strengthen the quality of provincial cancer care.

All Authors: Kaitlynn Almeida, Victoria Hagens, Jenna Evans, Vicky Simanovski

ID: 23

Author: Ms. Natasha Altin

Title: Evidence-based public health policy-making in Latin America: Is it possible?

Type of Abstract: Poster

Objectives: Public health policy-making is a complex process, thus many professionals refrain from incorporating health research in health policy-making. This study explores cases of successful collaboration among policy makers, researchers and knowledge brokers within Latin America to identify factors that facilitate incorporation of evidence and result in evidence-based public health policies.

Approach: A total of eighteen in-depth, semi-structured telephone or Skype interviews were conducted with a purposive sample of 10 decision makers, 7 researchers and 1 knowledge broker who all had effectively incorporated evidence in public health decision-making. The interviewees were purposely drawn from a sample informed by research advisors at the Pan American Health Organization. Data were analyzed thematically.

Results: The interviewees reported three distinct themes in the successful implementation of evidence-based policy:

- Changing the culture of the institution to make evidence part of the “gold standard” for decision-making process
- Establishing ongoing relationships and communication between researchers and policy makers
- Developing applied technical units, where qualified specialists answer policy makers’ questions efficiently

Results from this study indicate public health policy makers may be able to better incorporate evidence in decision-making by promoting a shift at the systematic level towards evidence-based policy. This shift can be further enhanced by proper training, local capacity building and inter-institutional/inter-disciplinary collaborations.

Conclusion: Our findings provide a first insight within Latin America into the process of successfully incorporating evidence by policy makers. We conclude that, in Latin America, it is feasible to develop the environment to support evidence-based policy-making to serve the best interests of the public.

All Authors: Natasha Altin, Eleana Villanueva, Jimmy Le

ID: 493

Author: Ms. Hailey Arsenault

Title: "Treating COPD patients in a clinical setting: Examining the potential link between a specialized COPD treatment clinic and psychological measures"

Type of Abstract: Poster

Objectives: The purpose of this study is to examine the effectiveness of a 12-week COPD rehabilitation program on the mental health of patients with COPD in Prince Edward Island. Specifically, this research will examine the impact of this program on participants' self-actualization, anxiety, and depression.

Approach: A mixed methods study will be conducted. First, recent participants of the COPD rehabilitation program will be asked to participate in a focus group to help create a questionnaire tailored to their psychological experience with COPD and treatment. Next, a new cohort of COPD program participants will complete the questionnaire one week prior to beginning the program and again after completion (12 weeks later).

Results: It is hypothesized that:

- 1) In the focus group phase, three variables will be highlighted as important: anxiety, depression and self-actualization, and
- 2) Participation in the COPD treatment program will result in increased self-actualization, leading to decreased anxiety and depression after 12 weeks of treatment.

Conclusion: This research will incorporate elements of patient-oriented research in order to assess the efficacy of COPD clinics on the psychological well-being of COPD patients. Further, this project has the potential to provide evidence to support specialized health services for chronic diseases in rural geographical areas.

All Authors: Hailey Arsenault, William Montelpare, Emily Read

ID: 511

Author: Ms. Afua Asare

Title: Access to Vision Health Services Amongst Vulnerable Populations in Canada: A Scoping Review.

Type of Abstract: Poster

Objectives: A scoping review was conducted to determine the nature of research activity and existing gaps in knowledge with regards to access to vision health services amongst vulnerable populations in Canada. 'Vulnerable populations' are groups at risk of poor health due to underlying differences in social status.

Approach: A scoping review was conducted using the Arksey and O'Malley (2005) methodological framework. Key words were used to search five electronic databases: MEDLINE, EMBASE, SCOPUS, PAIS index, CINAHL and the grey literature. Reference lists of key articles were also searched. The search strategy yielded a total of 886 abstracts. All abstracts were reviewed by two authors for relevance. Abstracts were excluded if they were case studies, reviews, not written in English, and if full articles were inaccessible or irrelevant to the review topic. From the 35 articles that remained, data was analyzed using descriptive summary and thematic analyses.

Results: General themes identified were: epidemiology of ophthalmic conditions (19), vision care workforce and supply (2), factors associated with (and barriers to) accessing vision care (7), the efficacy of intervention programs (6) and cost effectiveness analysis of interventions for vision care (1). Based on the Behavioural Model of Health Services Use, most studies focused on individual and not contextual characteristics of populations. In terms of realized access to care, studies focused mostly on vision health outcomes (22) and less on health behaviours of vulnerable populations and care professionals (12). Ontario was the most represented province (44%). Gaps identified in the literature include a limited number of studies evaluating contextual factors and health behaviours, an absence of large, population-based studies and limited data from Eastern provinces.

Conclusion: The access to vision care literature looks at important topics in vulnerable Canadian populations. However, more research is needed to develop a fuller understanding of vision care access to aid decision making. Future studies should address contextual attributes of access, incorporate larger population samples, and data from less populated provinces.

All Authors: Afua Asare, Mayu Nishimura

ID: 512

Author: Ms. Afua Asare

Title: Factors Influencing Vision Care Access Amongst Aboriginal Children in Canada: A Conceptual Framework

Type of Abstract: Poster

Objectives: Fifty-five percent of First Nations children with a health condition have vision problems. Service support for childhood vision problems is one of the most important concerns for Aboriginal communities. A conceptual framework was developed to aid the understanding of inherent issues on vision care access for researchers and policy makers.

Approach: Relevant articles on the topic were generated from a literature search of five electronic databases: MEDLINE, SCOPUS, PAIS index, CINAHL, and the grey literature. Reference lists of key articles were also searched. A total of 21 articles and two reports were deemed relevant by the author and concepts were extracted and used to develop an explanatory and interactive conceptual framework.

Results: The conceptual framework was developed using specific concepts informed by the literature, including four conceptual frameworks. These frameworks were: The Theory of Planned Behaviour, the Behavioural Model of Health Services Use, the First Nations Wholistic Policy and Planning Model and the Integrated Life Course and Social Determinants Model of Aboriginal Health. The Framework developed on Vision Care Access focuses on vision care issues influencing both potential and realized access in vulnerable children living on Aboriginal reserves. It embraces community, the important holistic perspective of health (physical, spiritual, emotional and mental) and health over the life course (child, youth, adult, and elders) in Aboriginal populations. Self-determination, the most important determinant of health among Aboriginal people (as cited in the literature) was also incorporated.

Conclusion: The Framework on Vision Care Access provides an explanatory and interactive framework to enhance understanding and aid the development of policy and research in Canada. Importance of relationship in community, holistic perspectives of health, the effects of colonialization and health over a life course were incorporated into the model.

All Authors: Afua Asare

ID: 430

Author: Dr. Rachelle Ashcroft

Title: A Grounded Theory Study to develop an Incentive Model for Quality Care of Depression and Anxiety in Ontario Family Health Teams – Initial Findings from Phase One

Type of Abstract: Poster

Objectives: The main objective of the study is to develop a comprehensive theoretical model that describes and links the incentives that can be leveraged by stakeholders to improve the quality of care for common mental disorders (CMDs) in interprofessional primary care teams.

Approach: Led by an interdisciplinary team, this three-year qualitative study uses a constructivist grounded theory approach. The two phases of sampling are i) initial sampling and ii) theoretical sampling. Each sampling phase will include 50 individual interviews. Family Health Teams (FHTs) in Ontario, Canada, closely resemble other team-based care and “medical home” models of care. Using purposive sampling, we have completed phase one of sampling with diverse healthcare professionals within FHTs (e.g. physicians, executive directors, nurses, social workers, counsellors), community mental health providers, and policy and decisions-makers. Initial and focused coding has been conducted for 50 interviews conducted in phase one.

Results: The poster will present initial findings from the first 50 interviews obtained during the initial sampling phase. The N=50 participants included: 42 healthcare professionals from Family Health Teams, 5 community informants, and 3 policy informants. Participants represented 15 Family Health Teams and spanned across 9 Local Health Integration Networks (LHINs). Quality care dimensions being explored in this study are: technical care, access, equity, structural, person-centeredness, and efficiency. There is a range of non-financial and financial incentives and disincentives identified in the first sampling phase. Examples of incentives and disincentives that may be influencing the quality of care for CMDs include: remuneration, education, organizational culture, and referral processes.

Conclusion: The incentive model will help guide how interprofessional primary care teams can be structured for the optimal prevention and management of CMDs. This is especially important in Ontario, where a regional strategy for primary health care resources, including the availability and role of mental health workers is being planned.

All Authors: Rachelle Ashcroft, Matthew Menear, Kwame McKenzie, Simone Dahrouge, José Silveira, Jocelyn Booton

ID: 99

Author: Ms. Li-Anne Audet

Title: Association between nursing staff policies regarding levels of education and experience and the risk of nursing sensitive outcomes for patient in acute care hospitals

Type of Abstract: Poster

Objectives: Recent studies have suggested an association between several nurse staffing policies and the occurrence of adverse patient outcomes in acute care hospitals. This study aims to summarize existing evidence for one hotly debated staffing policy: the levels of education and experience held by Registered Nurses (RNs) in acute care hospitals.

Approach: A systematic review of the literature was conducted in Pubmed. Relevant studies, published between January 2008 and December 2016, were retrieved by combining selected keywords (e.g., nurse, education, experience, patient outcomes). The bibliographic list of any identified article was also revised to identify any other relevant studies. Published systematic reviews were searched to identify any additional studies. To be included in the review, the retrieved articles needed to: a) describe a study examining the association between RNs' levels of education or experience and at least one patient outcome; b) have been carried out in acute care hospitals.

Results: A total of 6 studies were identified, including 3 primary studies (2 cross-sectionals, 1 longitudinal), 1 secondary analysis and 2 systematic reviews which summarized studies conducted prior to 2008. All retrieved studies revealed a positive association between higher proportions of baccalaureate-prepared RNs in the nursing staff and a lower risk of mortality and morbidity. Only one study identified significant associations between higher levels of RNs' experience and a decrease in both falls and pressure ulcer rates. None of the retrieved studies examined the potential interaction between RNs' levels of education and experience, and the potential effect of such an interaction on patient outcomes.

Conclusion: Given the current shortage of baccalaureate-prepared RNs in acute care hospitals, there is a pressing need for policies supporting their recruitment and retention. Further studies are required to better document the impact of RNs' levels of experience on adverse patient outcomes and its potential interactions with RNs' levels of education.

All Authors: Li-Anne Audet, Patricia Bourgault, Christian Rochefort

ID: 341

Author: Dr. Kathi Avery-Kinew

Title: First Nations Ethical Review essential in Age Truth & Reconciliation : HIRGC celebrating 20+years as FNs Regional Research Ethics Committee

Type of Abstract: Poster

Objectives: In order to guide the new Regional Health Survey (RHS, the first First Nations survey by and for First Nations in the world), the Assembly of Manitoba Chiefs established the Manitoba First Nations Health Information Research Committee by resolution in 1996; HIRGC has grown to promote FNs ethical Research standards & Data

Approach: Since 1996, HIRC was mandated by Chiefs to expand from guiding RHS (eg developing First Nations OCAP principles) to responsibility as the Health Information Research Governance Committee (Health Directors, and FNs Elder, Youth reps and 2 FNs academics), to review proposals and advise researchers, promote First Nations partnerships in Research, according to Chiefs mandate for research to abide by: Free Prior Informed Consent on a collective and individual basis; First Nations OCAP Principles that FNs have Ownership, Control, Access and Possession of their own data; First Nations ethical standards; benefits to First Nations throughout the research process from design to knowledge to action (KTEA).

Results: In HIRGC's 20 years of review of research proposals, they have approved, approved with required changes, or refused to support scores of research proposals. HIRGC is served by the AMC-established entity, Nanaandawewigamig (First Nations Health and Social Secretariat of Manitoba), working together to assist First Nations or Tribal Councils seeking advice on meeting the Chiefs standards for research, and finding partners for research initiatives First Nations identify. Increasingly, First Nations are identifying strength based research as the way to health and healing, especially strengthening languages and cultures, and connections to the lands and waters, as supporting a grounded cultural identity of individuals, families, and Nations. FNs now lead research and educate the universities and research institutes, to ensure our people, Knowledge Keepers & Traditional Healers are respected and trust is being built.

Conclusion: Canada, Manitoba and several Provinces have stated they will implement the Truth and Reconciliation Commission of Canada's 94 Calls to Action, which includes the United Nations Declaration of the Rights of Indigenous People. Both documents emphasize First Nations right to self-determination and to health, defined in our own languages as life in balance.

All Authors: Kathi Avery-Kinew, Doris Young, Stephanie Sinclair

ID: 209

Author: Dr. Renata Axler

Title: Producing Value and Innovation in Healthcare Procurement: Learning from Four Pilot Projects of Innovation Procurement in Ontario

Type of Abstract: Poster

Objectives: Many have criticized current procurement practices in healthcare in Ontario for not adequately producing value for procuring organizations, and for excluding important supplier inputs. This presentation examines the introduction of models of 'innovation procurement' in Ontario to increase accountable supplier – health system interactions, and to maximize value for healthcare

Approach: To examine processes of innovation procurement in healthcare organizations, four in-depth case studies were undertaken at organizations pursuing innovation procurement projects. Data were drawn from observation at procurement events, document reviews, and in-depth qualitative interviews and focus groups with procurement teams and health industry suppliers, in order to capture their experiences. Results from these case studies will be presented in aggregate form so as to not identify individual participants or teams engaged in these processes, but instead to highlight the general challenges and successes of these initiatives, as well as their potential to be scaled across healthcare organizations.

Results: Innovation procurement processes aim to enable healthcare organizations to harness the capacity of the health industry supplier market, and to create value for health organizations beyond purely cost-based metrics. However, as these processes are relatively new in Ontario, procurement teams undertaking them often struggle with structuring these procurement initiatives. Despite these challenges, organizations see great promise in these initiatives for enhancing patient and organizational value, and creating health innovations to meet their needs. Innovation procurement processes also tend to be more resource-intensive for health industry suppliers than traditional procurement processes, but suppliers are nonetheless enthusiastic about these models, which allow them to fairly and transparently interact with healthcare organizations, and tailor health products and services to meet health system needs.

Conclusion: Despite the upfront costs and resources required for innovation procurement, there is great promise in spreading these models across health organizations in Ontario. As innovation procurement skills, resources and culture are developed, innovation procurement has the capacity to greatly increase value for patients and health system outcomes and decrease costs.

All Authors: Renata Axler, Anne Snowdon, Ryan DeForge, Phillip Olla

ID: 414

Author: Ms. Namrata Bains

Title: A GIS Approach to Determine Hospital Service Areas For Ontario's Acute Hospitals

Type of Abstract: Poster

Objectives: A service area is a geographical region drawn around an institution that describes the population that utilizes its services. There is no single, widely accepted method for creating geographic service areas. The objective of this work is to develop a method for creating simple, contiguous empirical service areas.

Approach: Integrating a Geographic Information System (GIS) and SAS, we created a unique, simple method for determining service areas for 166 acute care hospital sites in Ontario using 2014/15 inpatient separation data. Service areas were defined using weighted percentiles of distance from each hospital site, based on the postal code location of all inpatient separations for the year. Various weighted percentiles of distance (50, 75 and 90%) were calculated for each hospital in SAS, and the results were smoothed and mapped using ESRI ArcGIS.

Results: This approach results in a set of contiguous, easily visualized service areas that correspond to the geographic patient population served by Ontario hospitals. When displayed on maps, the depicted service areas allow us to visualize the geographic flow of patients, as well as overlaps and gaps. With the service areas delineated we were able to calculate the geographic size and total population of each area. For 33 of the 166 hospital sites (20%), 9 out of 10 separations come from within 20km of the hospital; for an additional 89 sites (54% of sites), 9 out of 10 separations come from within 50km of the hospital. Hospitals with very large geographic service areas tended to be teaching and specialty hospitals.

Conclusion: We developed a simplified method to create service areas for 166 hospital sites. Examination of service area overlaps may be useful in identifying opportunities for delivery and integration of services.

All Authors: Namrata Bains, Mike Pacey, Kristin Bennett

ID: 473

Author: Dr. Neil Barr

Title: Physician Communication via Internet-Enabled Technology: A Systematic Review

Type of Abstract: Poster

Objectives: The purpose of this systematic review was to gain a greater understanding of the role that Internet-enabled technology (IET; information and communication technology such as smartphone apps and e-mail) plays in enhancing communication among physicians—which may inform current practices and future research—by examining evidence in the scholarly literature.

Approach: Studies were identified through a search in three electronic platforms: the ACM Digital Library, ProQuest, and Web of Science (which included 12 databases/indexes). To be eligible for inclusion in the study, articles needed to: 1) be published in a peer-reviewed journal; 2) be accessible in English; 3) be published between 2005 and 2015; and 4) have IET for health care communication among physicians as the primary objective of the investigation. Studies were assessed for quality, and findings were summarized and analyzed through a process of narrative synthesis.

Results: The search identified 5,140 articles; 21 of these met all inclusion criteria (16 studies used quantitative methods, three used qualitative methods, and two used mixed methods). Physicians participating in the included studies were from a variety of medical specialties (e.g., cardiology, radiology). Various forms of IET were described, including electronic health records, mobile devices, e-mail, image transmission and storage/picture archiving and communication systems, and web portals. In general, physicians were more satisfied with IET than conventional communication methods, but a lack of consensus emerged regarding whether health information exchange was more efficient, and if communication via IET makes a difference to clinical decision-making/diagnoses.

Conclusion: IET can play an important role in enhancing communication among physicians, but the extent of that benefit is influenced by: 1) the impact of IET on existing work practices; 2) the availability of resources for IET implementation and use; and 3) the nature of institutional elements, such as privacy legislation.

All Authors: Neil Barr, Glen Randall, Norman Archer, David Musson

ID: 504

Author: Dr. Neil Barr

Title: Guidance for the Use of Internet-Enabled Technology: Health Information Protection and the Physician Regulatory Colleges in Canada

Type of Abstract: Poster

Objectives: The purpose of this study was to examine guidance provided by the provincial physician regulatory colleges to their members regarding the protection of health information when using Internet-enabled technology (IET; information technology such as e-mail), and to assess the associated policy and service delivery implications for health system performance.

Approach: Websites of the provincial physician regulatory colleges were searched for documents that provided guidance to their members regarding the use of IET. To be eligible for inclusion in the study, documents needed to: 1) provide specific direction regarding maintaining—one or more of—confidentiality, privacy, and security of health data; and 2) mention a type of IET used for (or electronic/digital means of) data storage, transmission/use, or destruction. For each of the included documents, the precise wording related to the inclusion criteria was examined to determine the extent of guidance given.

Results: The search identified 522 documents; 12 of these (from eight colleges/provinces) met eligibility criteria for the study. Among the included documents, there was considerable variation in terms of the quantity of guidance and degree of detail provided. In addition, 5 out of 8 colleges discussed procedures related to storage of digital/electronic health data, 6 out of 8 discussed transmission/use, and 3 out of 8 discussed destruction. Colleges that provided more informative guidelines appeared to be from provinces in which the associated governments had a longer history of proactive policy platforms aimed at modernizing legislation/regulations and enhancing IET infrastructure.

Conclusion: The federal-provincial division of powers has likely resulted in a lack of collaboration among the health regulatory colleges, leading to inequalities and inefficiencies in health information protection. Thus, improvements in health system performance are unlikely to be realized in the absence of efforts to foster cooperation at the provincial level.

All Authors: Neil Barr, Glen Randall

ID: 516

Author: Dr. Mary Bartram

Title: Targeted federal transfers for mental health: Past, present, future

Type of Abstract: Poster

Objectives: This presentation first situates mental health transfers in the context of fiscal federalism. Second, the 150-year history of federal mental health transfers are traced, along with implications for gaps and inequities in mental health funding. Third, current Health Accord negotiations are analysed.

Approach: A mix of process tracing methodology and historical institutionalist theory are used to identify key factors which have contributed to gaps in Canada's mental health system, namely: de-centralized government, the early history of asylums, stigma, the prevalence of mental illnesses, the timing of effective treatments, and inter-professional turf. These factors are followed through the decades of health insurance and health reform debates. Data is drawn from primarily from the transcripts of federal parliamentary debates, supplemented by other sources such as royal commissions, federal/provincial/territorial conferences, political memoirs and mental health statistics.

Results: Canada's decentralized governance structure has been the at the root of the gaps and inequities in Canada's mental health system. Unmet needs for mental health care have just been too vast and expensive to take on, too jurisdictional thorny to take on, too politically expedient to evade, and too stigmatized to justify the use of federal spending power. With the 1957 decision to not take on the high cost of insuring services for the 40 per cent of hospital patients in mental hospitals, the federal government entrenched a gap between mental health and physical health care that has yet to be closed. While new federal funds promise to help narrow gaps in funding and services, jurisdictional issues will continue to pose serious challenges.

Conclusion: Without significant federal support tied to clear conditions, history tell us that provincial and territorial governments will continue to be challenged in their efforts to address this fundamental disparity affecting the lives of millions of Canadians.

All Authors: Mary Bartram

ID: 89

Author: Ms. Tricia Beath

Title: Accelerating Surgical Quality Improvement in Ontario

Type of Abstract: Poster

Objectives: Health Quality Ontario launched the Ontario Surgical Quality Improvement Network (Surgical Network) to support Ontario's surgical teams participating in the National Surgical Quality Improvement Program (NSQIP) as they learn to use their benchmarking data, build their capacity for quality improvement (QI), and implement improvement activities.

Approach: Capacity for QI: The first 18 hospitals of the Surgical Network completed an Initial and Follow-Up QI Capacity Assessment. Baseline results were compared to progress results to measure for change in QI capacity following 18-months participation in Surgical Network activities.

Planning and Tracking Surgical QI: Using NSQIP data, surgical teams identified improvement opportunities and leveraged Surgical Network supports to accelerate changes in surgical outcomes. Teams captured and shared their work using a Surgical Quality Improvement Plan (SQIP). Teams created their SQIP in September 2015, provided a progress report in March 2016, and completed a year-end report in September 2016.

Results: Results to date:

There was a 0.30 point increase in self-reported QI capacity

- From 12 to 17 teams with training in QI methods and/or access to QI resources
- From 8 to 13 teams that collaborate in QI
- From 13 to 17 teams engaged in evidence-based care
- From 14 to 17 teams engaged in their hospital's QI plans

13 teams chose surgical site infection reduction in their SQIP; by year-end, 7 reported an average decrease of 10%; 4 met/exceeded their target

- Change ideas included implementation of ERAS; participation in CPSI audit; normothermia

4 teams chose urinary tract infection reduction in their SQIP; by year-end, 3 reported an average decrease of 51%; 1 exceeded their target

- Change ideas included implementation of ERAS; reducing use/duration of use of catheters; prevention protocol

Conclusion: Members of the Surgical Network have demonstrated an increase in their capacity for QI. This improvement has supported members in the implementation and acceleration of change in their hospitals as is captured in their SQIPs, and has aligned surgical QI efforts across Ontario.

All Authors: Tricia Beath, Mina Viscardi-Johnson, Timothy Jackson, Pierrette Price-Arsenault, Lee Fairclough

ID: 233

Author: Dr. Brandi Bell

Title: Intersections of Mental Health & Digital Media in Young Lives

Type of Abstract: Poster

Objectives: Emerging technologies have the potential to support mental health promotion and treatment for youth; however, they also introduce new challenges for youth mental health. This presentation addresses how digital media (e.g., the internet, smart phones, social media) may impact the lives of young people, particularly with respect to mental health.

Approach: Semi-structured qualitative interviews were conducted with youth 10-21 years of age as part of two projects: (1) Atlantic Canada Children's Effective Service Strategies in Mental Health (ACCESS-MH), funded by CIHR, and (2) Digital Media and Young Lives Over Time, funded by SSHRC. Youth interviewed for the ACCESS-MH project identified with diagnosed mental illnesses (including depression, anxiety, eating disorders) and discussed how digital media figured in their mental health journey. Youth interviewed for the Digital Media project were not asked explicitly about mental health; however, several spoke about the intersections of their media use and mental health.

Results: Thematic analysis was conducted to identify data specifically relevant to mental health and digital media use. Speaking with young people about their experiences with digital media or their mental health reveals both anticipated and unexpected interconnections between the two. Young people are struggling to find relevant and appropriate mental health information and supports, balance their 'real' and 'virtual' selves/lives, manage the pressures of constant connectedness, and master new forms of interpersonal communication. As young lives continue to be marked by increased use of technologies and youth-focused e-mental health initiatives are developed, it is imperative that the intersections of technology and mental health in young lives are better understood.

Conclusion: Increased clarity about how youth experience the intersections of their digital media use and mental health will enhance program and policy development in media and mental health literacies, as well as interventions addressing mental health promotion, mental illness prevention/treatment, and stigma.

All Authors: Brandi Bell, Kate Tilleczek, Matthew Munro

ID: 118

Author: Ms. Lindsay Bevan

Title: The Impact of Academic Detailing in Long-Term Care

Type of Abstract: Poster

Objectives: Long-term care (LTC) providers face challenges staying current with evidence and best practices. Our project aimed to:

- Provide evidence to support appropriate prescribing and clinical decision-making
- Build from and complement current initiatives supporting prescribers and care teams
- Enhance the prescriber, care team, resident, and family experience
- Improve resident health outcomes

Approach: We evaluated the use of Academic Detailing (AD) in 41 LTC homes across Ontario. Our AD service offered one-on-one and small group visits to LTC providers to discuss objective, evidence-informed best practices. Homes received AD on 2 topics: Antipsychotics for Behavioural and Psychological Symptoms of Dementia (BPSD) and Falls Prevention. The service also provided discussion guides to support clinical decision-making, and material to share with residents, families and caregivers. We evaluated the service on two main criteria: uptake (number of visits and materials disseminated) and impact (provider satisfaction, confidence, and intention to change practice).

Results: From October 2015 to December 2016, we visited 41 LTC homes. We conducted 546 AD visits, provided 175 educational presentations, and disseminated 7,220 discussion guides.

Satisfaction was high: 94-99% of providers (N= 250-255 for antipsychotics, N=309-310 for falls):

- were interested in receiving another visit,
- found the information useful, and
- felt it added to their knowledge.

After the visits, providers felt more confident in:

- identifying behaviours that may respond to antipsychotics (219/247; 89%),
- deprescribing antipsychotics (208/236; 88%),
- identifying falls risk factors (271/299; 91%),
- reducing anticholinergic drug load (231/261; 89%), and
- communicating with the care team (220/249; 88% for antipsychotics, 272/300; 91% for falls).

Providers expressed intentions to change their behaviour by:

- changing BPSD prescribing practices (151/187; 81%), and
- reviewing medications contributing to fall risk (234/261; 90%).

Conclusion: LTC providers reported a high level of satisfaction with the AD service. The service encouraged providers to appropriately prescribe antipsychotics in BPSD and review medication to prevent falls, increased provider confidence to incorporate best practices, and increased team communication. AD has the potential to enhance care and outcomes in LTC.

All Authors: Lindsay Bevan, Patricia Rawn, Sid Feldman, Andrea Moser, Loren Regier, Margaret Jin, Hannah Loshak

ID: 211

Author: Dr. Onil Bhattacharyya

Title: Organizational Designs for Innovation in Healthcare

Type of Abstract: Poster

Objectives: Value-based financing and digital technologies create opportunities to transform healthcare delivery. In response, some organizations have created innovation centres that incorporate methods from industrial design and the software industry to develop new models of care. We explored different organizational structures for these centres to understand their strengths and weaknesses.

Approach: We reviewed the data on 33 healthcare innovation centres from the Commonwealth Fund Innovation Centre Survey, identifying 14 operating for over three years with at least one innovation that had spread. Eleven organizations agreed to a screening process, with four different designs emerging. One example of each design was selected for a case study involving a site visit, key informant interviews, and document review to describe the structure, activities, and projects from their innovation centres. Using the theoretical lens of organizational ambidexterity from the management literature, qualitative data analysis was carried out with NVivo11 to identify key themes and patterns.

Results: We identified four organizational designs for innovation: 1) Skunkworks: The innovation centre has a dedicated team, with limited oversight by senior leaders. It has few constraints, but more difficulty spreading new models. 2) Ambidextrous: The innovation centre has a dedicated team and close links to senior leadership. It requires strong leadership buy-in and is aligned with (but also constrained by) organizational strategy. 3) Hybrid: The innovation centre has a dedicated team supporting innovations from frontline staff, and reports to senior leadership. It can spread new models widely, but depends on frontline staff for ideas. 4) Cross-functional: Frontline staff engage in improvement and innovation activities, with a dedicated manager who trains them. This requires few dedicated staff, but a massive investment in training and culture change.

Conclusion: Healthcare organizations are experimenting with new organizational designs to increase their capacity to innovate. In deciding which design to pursue, it is important to consider the desired levels of leadership and frontline staff engagement, which will be determined by both the strategic importance of innovation and the underlying organizational culture.

All Authors: Onil Bhattacharyya, Eric Schneider, Kathryn Mossman

ID: 112

Author: Ms. Lady Bolongaita

Title: The impact of changes in education requirements on nurses' wage structure

Type of Abstract: Poster

Objectives: We investigate the impact of the change in entry-level Registered Nurses' (RN) education requirement from a diploma to a baccalaureate degree in nursing on their wage structure.

Approach: Our data is from a nationally-representative survey data that captures nurses working in different care sectors across Canada from 1993 to 2011. We model a two-stage least squares estimator using logged hourly wages as the dependent variable. We show the impact of the policy shift on the shifting supply of diploma and baccalaureate-prepared RNs, which are then used as explanatory variables in the wage equations. Diploma and baccalaureate-prepared RNs are modelled separately. Individual and job characteristics are used as control variables.

Results: Our preliminary findings will be presented.

Conclusion: Insights from our study are important in understanding how nurses' wage structure have been influenced by the policy change. Taking into consideration contextual and cultural differences, our findings may be used by other jurisdictions that are deciding to change their RN education requirements.

All Authors: Lady Bolongaita, Audrey Laporte, Raisa Deber, Andrea Baumann, Jasmin Kantarevic

ID: 64

Author: Mrs. Roxane Borgès Da Silva

Title: Inter-organizational collaboration in Primary Health Care (PHC) Organizations: potential and challenge in new PHC models

Type of Abstract: Poster

Objectives:

1. To describe the extent of inter-organizational collaboration among primary health care (PHC) organizations and with hospitals, and its evolution over time;
2. To identify which models of PHC organization are associated with more inter-organizational collaboration;
3. To determine the impact of inter-organizational collaboration on accessibility and continuity of care.

Approach: Study design was a before-and-after natural experiment in which new models of PHC constituted the treatment group, and the other clinics formed the comparison group. We carried out population and organization surveys in 2005 and 2010 in the two most populous regions of Quebec. Surveys were conducted on independent adults' samples (9,206 in 2005 and 9,180 in 2010). Surveys of all PHC organizations were also carried out in 2005 (N=659) and in 2010 (N=606). Individuals were linked with PHC organization identified in the survey as their usual source of care.

Results: Overall, our results show that 60% of PHC organizations had a collaboration agreement with another PHC organization or a hospital in 2005 but this percentage decreased to 53% in 2010. However, the percentage increased for new models of PHC between 2005 and 2010 (71% to 89%) while it decreased for other PHC organizations from 56% to 43%. Respondents attached to PHC organizations with no collaboration reported a lower accessibility of services than those attached to PHC organizations with collaboration who conversely reported lower continuity of care. Since inter-organizational collaboration was greater in new models of PHC organizations, we observed similar results for patients attached to the new models compared to those attached to other PHC organizations.

Conclusion: Inter-organizational collaboration is greater in new PHC models; it also increases accessibility but not continuity. Increasing accessibility was a prime objective in implementing new models but without decreasing continuity. Integrating all aspects of patient care experience represents a challenge to face for the new PHC models in coming years.

All Authors: Roxane Borgès Da Silva, Jean-Frederic Levesque, Raynald Pineault, Sylvie Provost, Michel Fournier, Alexandre Prud'homme

ID: 513

Author: Ms. Erica Bridge

Title: Implementing Clinical Practice Guidelines in Healthcare: A Conceptual Framework

Type of Abstract: Poster

Objectives: Clinical practice guidelines (CPG) are evidence-informed recommendations intended to optimize patient care by assisting provider clinical decision-making. Although CPGs can improve the quality of care and patient outcomes, uptake of CPGs in practice is limited. The study objective is to describe a conceptual framework for the implementation of CPGs.

Approach: The CPG implementation conceptual framework consisted of two steps. First, a scoping review, using the MEDLINE database, was conducted to identify key concepts known to influence CPG implementation in healthcare. Key concepts in CPG implementation include: 1) CPG characteristics; 2) implementation context (i.e., internal and external); 3) healthcare provider and patient characteristics; and 4) healthcare provider behaviors. Using the findings from the scoping review, implementation science frameworks were explored to conceptualize CPG implementation in healthcare. Components of the Consolidated Framework for Implementation Research (CFIR) and the Theory of Planned Behavior (TPB) can be used to explain CPG implementation in healthcare.

Results: The CPG implementation conceptual framework consists of five components. CFIR components include: 1) guideline characteristics (i.e., evidence strength and quality, relative advantage, adaptability); and 2) context (i.e., culture, leadership communication, teamwork, resources and incentives, social norms, organizational policies, structural characteristics). TPB components include: 1) healthcare provider beliefs and attitudes (i.e., awareness, level of agreement, knowledge, self-efficacy); 2) perceived control; and 3) behavioral intention. The CPG conceptual framework proposes that: 1) guideline characteristics influence healthcare provider beliefs and attitudes; 2) context influences healthcare provider beliefs and attitudes; 3) healthcare provider beliefs and attitudes influence behavioral intention; 4) perceived control influences behavioral intention; and 5) behavioral intention influences behavior.

Conclusion: This study describes a conceptual framework for the implementation of CPGs. This conceptual framework combines various components from the CFIR and the TPB, in order to understand and explain CPG implementation in healthcare. Future research is required to evaluate the effectiveness of this framework in CPG implementation.

All Authors: Erica Bridge

ID: 145

Author: Dr. Hilary Brown

Title: Teenage pregnancy and long-term mental health outcomes among Canadian Aboriginal women

Type of Abstract: Poster

Objectives: Teenage pregnancy has negative social and health consequences, but long-term mental health outcomes are poorly understood. Our objectives were to: (1) compare the risks for poor long-term mental health outcomes among Aboriginal women with and without a teenage pregnancy and (2) determine if community and cultural factors modify this risk.

Approach: We conducted a secondary analysis of the 2012 Aboriginal Peoples Survey. Our sample comprised women aged 25 to 49 years who had given birth to at least one child. Teenage mothers (age at first birth: < 20 years; n=1,330) were compared to adult mothers (age at first birth: ≥20 years; n=2,630). We used logistic regression to examine the association between teenage pregnancy and psychological distress, mental health status, suicide ideation/attempt, and alcohol consumption, before and after controlling for social and health covariates. We then tested the statistical significance of interaction terms between teenage pregnancy status and community and cultural factors.

Results: In unadjusted analyses, teenage pregnancy was associated with increased risk for poor/fair mental health (20.3% vs. 12.5%; uOR 1.77, 95% CI 1.24-2.53) and suicide ideation/attempt (8.1% vs. 4.3%; uOR 1.95, 95% CI 1.07-3.54). Associations were non-significant after controlling for social and health covariates; statistically significant covariates for both of these associations were food insecurity, poor/fair general health, and having a learning disability. Teenage pregnancy was not associated with increased risk for high psychological distress (9.7% vs. 6.0%) or heavy alcohol consumption (4.8% vs. 4.0%) before or after controlling for social and health covariates. Community (i.e., strength of family ties, community support) and cultural factors (i.e., ability to speak an Aboriginal language, involvement in traditional activities, residential school attendance) did not modify the main associations reported.

Conclusion: Improvement of long-term mental health outcomes among Aboriginal teenage mothers requires programs and policies that address their social and health circumstances. Interventions targeting these risk factors should consider multiple strategies including culturally grounded and strength-based approaches.

All Authors: Hilary Brown, Anita Benoit, Chloe Xavier

ID: 469

Author: Dr. Suman Budhwani

Title: Partners Advancing Transitions in Healthcare (PATH) Project Evaluation

Type of Abstract: Poster

Objectives: The PATH project was implemented in May 2014 in Northumberland County to improve health system transitions for older adults with chronic conditions and their caregivers. The objectives of this study were to evaluate participant experience and changes in health utilization for project participants using the My Health Experience technology platform.

Approach: Real-time survey data were collected via participant and provider self-report from the technology platform. Data collected included baseline and demographic information, self-reported needs, participant experiences with health care encounters, standardized measures such as the CollaboRATE scale, PAM and PACIC measures, and the overall utility of the tool. Additionally, for the summative evaluation, a propensity-matched cohort was constructed selecting controls meeting the PATH enrolment criteria. Outcome measures of interest included acute hospitalizations, ED visits, days in acute care, primary care and specialist visits. Comparative effectiveness evaluation was performed on each indicator using a Difference-in-Differences (DID) approach with generalized estimating equations (GEE).

Results: A total of 319 participant experience surveys were completed by 73 of the 121 PATH enrollees. A net positive trend was noted for questions assessing participant needs and experiences, and provider communication. CollaboRATE scores remained consistent, while some increases were noted in PAM and PACIC scales. Provider participation in the survey was limited. Those who did participate reported low utilization of the tool and few derived benefits. For the utilization analysis (n=106 PATH enrollees, matching rate=94%), the number of hospital days increased significantly over time for controls ($p=0.017$ [sig=0.10]), but did not change significantly for PATH participants. No significant changes over time were observed for PATH enrollees or controls, and DID estimates were also not statistically significant, on any of the other outcome measures.

Conclusion: PATH had limited effects on health system utilization and relatively low response rates to self-reported experience measures. Although the tool may have demonstrated utility, certain systematic barriers exist such as patient and provider motivation which may prevent the tool from contributing to significant changes in participants' health service utilization.

All Authors: Suman Budhwani, Kevin Walker, Luke Mondor, Yu Qing (Chris) Bai, Walter Wodchis

ID: 370

Author: Ms. Natasha Burke

Title: An Economic Evaluation of Low-Intensity Pulsed Ultrasound for Treatment of Tibial Fractures

Type of Abstract: Poster

Objectives: Tibial fractures are common and costly injuries that disproportionately affect young men in the prime of their working lives. We conducted an economic evaluation as part of randomized controlled trial to establish the effect of low-intensity pulsed ultrasound (LIPUS) on tibial shaft fractures managed with intramedullary nailing versus sham.

Approach: Our group recently completed a 501 patient, multi-centre, randomized controlled trial. For each patient in the trial, we prospectively collected over 1-year resource use and time to return to work as well as the Health Utilities Index version III (HUI-III). The incremental cost per Quality Adjusted Life years (QALY) gained of LIPUS versus sham was calculated from both a payer and societal perspectives. Multiple imputation was used for missing data and bootstrap techniques to account for sampling uncertainty. Cost-effectiveness acceptability curves were used to represent uncertainty.

Results: With a cost per device of \$3,995, the average cost per patient was higher for patients who were treated with LIPUS than sham (difference of \$3,647; 95% CI: \$3,244, \$4,070, $p < 0.001$). While LIPUS did not provide a significant benefit in QALYs of 0.023 QALYs (95% CI: -0.035, 0.069, $p=0.474$), the incremental cost effectiveness ratio was \$155,433/QALY for the payer perspective and \$146,006/QALY from a societal perspective.

Conclusion: LIPUS is more costly and not more effective than sham, and the ICER per QALY exceeds the range acceptable to payers and decision-makers for adoption (e.g., less than \$50,000 or \$100,000 per QALY gained).

All Authors: Natasha Burke, Jean-Eric Tarride, Robert B. Hopkins, Gord Blackhouse, Mohit Bhandari, Herman Johal, Gordan Guyatt, Paul Tornetta III, Emil Schemitsch, Thomas Einhorn, James D. Heckman, Kwok-Sui Leung, Jason W. Busse

ID: 326

Author: Dr. Erica Burry

Title: Interventions Using Pediatric Diabetes Registry Data for Quality Improvement: A Systematic Review

Type of Abstract: Poster

Objectives: Quality improvement (QI) interventions using diabetes registry data are associated with improved glycemic control, reduced hospitalizations, and other quality indicator improvements, but pediatric-specific data are limited. This systematic review characterizes QI interventions using pediatric diabetes registry data to determine the effect on care processes, care organization, and patient outcomes.

Approach: We searched Medline, Embase, Web of Science, and Cochrane Central Register of Controlled Trials (from inception to October 13, 2016), and conducted a grey literature search using Google, Google Scholar, Directory of Open Access Journals, and known diabetes registry websites. Studies that evaluated the impact of a QI intervention for diabetes management on care processes, organization of care, or patient outcomes and used pediatric (< 21 years) diabetes registry data in the intervention or to evaluate outcomes were included. We included all study designs. Two reviewers independently assessed study eligibility, extracted data, and assessed risk of bias.

Results: Of 1213 studies identified, 11 met inclusion criteria. One study from the grey literature was included. After removing duplicates, we excluded 985 studies that either did not evaluate a QI intervention or use registry data. We excluded four studies that did not include pediatric data and two that did not evaluate the impact of an intervention on diabetes management. The type of QI intervention varied; most targeted health systems and health-care providers. Most studies evaluated the effect of the intervention on patient outcomes, such as glycemic control; fewer evaluated the effect on processes or organization of care. The risk of bias was high for most studies. Data analysis is ongoing and the effects according to the type of intervention will be available by May 2017.

Conclusion: More rigorous evaluation using control groups is needed to determine the effectiveness of QI interventions using pediatric diabetes registry data. We anticipate that our final results will inform the use of existing registries and the development of new registries for QI purposes.

All Authors: Erica Burry, Noah Ivers, Farid Mahmud, Rayzel Shulman

ID: 354

Author: Dr. David Campbell

Title: Use of Mixed Methods in Research on Coronary Artery Disease, Diabetes, and Hypertension: A Scoping Review

Type of Abstract: Poster

Objectives: Among patients with CAD, diabetes and hypertension we sought to: (1) determine the extent of use of MMR; (2) describe what types of researchers are using mixed methods designs; (3) describe the MMR designs commonly used; and (4) describe the commonly used data study designs and data collection techniques in

Approach: We searched the following electronic databases: Pubmed, Medline, EMBASE, and CINAHL strategy using key words and title/abstract words for both the content area of interest and for the methodology of interest (mixed methods, multi-methods or multiple methods). Two reviewers independently assessed each abstract that was identified by the initial search. In the second stage, both reviewers read each full-text article and, based on a set of pre-defined criteria, determined which articles would be included. Both reviewers independently extracted data from each study advanced to full-text review and consensus was reached through discussion.

Results: We identified 811 abstracts of which 254 articles underwent full-text review and 97 reports of 81 studies met criteria for inclusion. The majority of studies in this area were conducted in the past 10 years by nurse researchers from the US and UK. Diabetes was the most common content area for mixed methods investigation (compared to CAD and hypertension). Most authors described their rationale for using mixed methods as complementarity, and did not describe study priority or how they reconciled paradigmatic differences in methodologies. Some mixed methods study designs were more commonly used, including concurrent timing and integration at the interpretation stage. Qualitative strands were most commonly descriptive studies using interviews for data collection. Quantitative strands were most commonly cross-sectional observational studies, which relied heavily on self-report data.

Conclusion: Although mixed methods research is becoming increasingly popular in the area of coronary artery disease and its risk factors, many of the more advanced mixed methods, qualitative, and quantitative techniques have not been commonly used in these areas.

All Authors: David Campbell

ID: 41

Author: Dr. Roger Chafe

Title: Improving the transition of youth with type 1 diabetes into adult care

Type of Abstract: Poster

Objectives: To determine the processes used to transition pediatric type 1 diabetes patients into adult care in Newfoundland, with a focus on the differences in transition experience between rural and urban areas, and exploring how primary care physicians could play a larger role in providing care to young adults with T1D.

Approach: The project is using a qualitative description methodology. Patients with T1D who have recently transitioned into adult care have been asked to participate in focus groups. Pediatric and adult providers, including diabetes nurses and primary care physicians, are being interviewed to explore their experience with transition and to identify ways to improve the transition into adult care. Participants represent both urban and rural settings.

Results: Six of the expected 25 interviews for the project have been completed so far, with the remaining interviews and focus groups to be completed by the end of April 2017. Initial results suggest that there is a good deal of variation in how and to which providers youth with type 1 diabetes transition at the end of pediatric care. Rural parts of the province do not have access to specialist endocrinologists, but appear to face fewer issues related to transition as the same providers often see them as both pediatric and adult patients. Primary care providers are sympathetic to see diabetes patients, but often do not see enough patients with type 1 diabetes to feel comfortable wholly taking over their care.

Conclusion: This project offers a unique perspective on both the transition of patients into adult care in rural vs. urban areas, and around better engaging primary care providers in the process; identifying some of the specific challenges there are to improving transition care on a province-wide basis.

All Authors: Roger Chafe

ID: 168

Author: Ms. Fiona Chan

Title: Changes in Employer-Sponsored Health Insurance for Canadian Retirees from 2005 to 2014

Type of Abstract: Poster

Objectives: To observe changes in employer-sponsored health insurance (EHI) for retired Canadians over time. EHI is important for many Canadians by increasing accessibility to non-publically-covered treatments. Retirees are particularly vulnerable to EHI changes due to declining health. American data consistently show decreasing EHI generosity in recent decades; no Canadian data available.

Approach: The 2005 (Cycle 3.1) and 2013-2014 cycles of the Canadian Community Health Survey were analyzed using multivariate logistic regression to investigate the association between EHI availability over time amongst Ontarians. Individuals over the age of 65 who have not worked in the past 12 months were included. Potential confounders in the relationship include age, sex, urban/rural dwelling, marital status, household income, education, number of chronic illnesses, and self-reported health status. Unadjusted and adjusted odds ratios (OR) as well as predicted probabilities of receiving EHI were calculated to describe the relationship between survey year and EHI availability.

Results: Approximately one-third of respondents reported having EHI, with a slightly higher proportion reporting receipt of EHI in the 2005 cycle compared to the 2013-2014 cycle. In the unadjusted analysis, there was no association between EHI availability and survey year. Bivariable results suggest that males, younger individuals, those in higher income deciles, those who had at least graduated from high school, and married individuals had higher odds of receiving EHI. Results adjusting for confounders suggest that individuals in 2013-2014 compared to individuals in 2005 had lower odds of having EHI, compared to not having EHI (OR 0.83, 95% CI 0.73-0.94). The change in estimate is mainly attributable to the effect of household income. This represents an absolute decrease of approximately 2% in receiving EHI over this time period.

Conclusion: This study provides the first Canadian individual-level data of EHI change. These results provide evidence that employers have been less generous in providing EHI in the past decade. Data limited to Ontario, but results likely generalizable nationally. The impact of decreased coverage availability may produce adverse health outcomes in this vulnerable, elderly population.

All Authors: Fiona Chan, Michael Law

ID: 272

Author: Dr. Yi-Sheng Chao

Title: Index or illusions: the case of frailty indices in the Health and Retirement Study

Type of Abstract: Poster

Objectives: Frailty is a geriatric syndrome that has been described with different measurement tools and theories. However, we are concerned about implicit assumptions regarding frailty, unclear criteria to select candidate domains of frailty and data processing prone to bias. We aim to review the interpretability and predictive power of FIs.

Approach: Three frailty indices (FIs), Functional Domains Model, Burden Model and Biologic Syndrome Model, are directly compared with the data from the Health and Retirement Study, a longitudinal study interviewing Americans aged 50 years and over. FIs were reproduced according to Cigolle et al. (2009) and interpreted with input variables through forward-stepwise regression. Bias was the residuals of FIs that could not be explained by input variables. Any four of the input variables were used to create alternative indices. Discrete-time survival analysis was conducted to compare the predictive power of FIs, input variables and alternative indices regarding mortality.

Results: There was insufficient information to fully reproduce three FIs. The sample sizes and prevalence rates were similar though. There were at least four, one and five sources of bias for respective FIs. The prevalence rates among those younger than age criteria could be as high as 23.9%, compared to 44.7% among the elderly in Burden Model. The proportions of FI variances unrelated to input variables were 14.7%, 0.014% and 21.7%. More than 90% of Burden Model variance could be explained by a less number of input variables. Frailty status defined by Biological Syndrome Model was better interpreted with bias. Input variables better predicted mortality than FIs. Continuous FIs better predicted mortality than dichotomous ones. At least 6865 alternative indices better predicted mortality than FIs.

Conclusion: Frailty is a syndrome not unique to the elderly. FIs are produced with different degrees of bias, information unrelated to input variables. Complicated FI, Burden Model, can be simplified. FIs cannot better predict mortality than input variables or many alternative indices. Caution is required when using FIs.

All Authors: Yi-Sheng Chao

ID: 246

Author: Ms. Camille Charbonneau

Title: A patient-centred discharge approach for overactive bladder

Type of Abstract: Poster

Objectives: Overactive bladder (OAB) is a chronic condition affecting approximately 14% of Canadians. This risks overwhelming specialty care capacity, which is usually the setting in which patients with OAB get treated. This study's objective is to identify factors related to discharge for OAB from urology that are relevant to patients.

Approach: First, a scoping review was undertaken to establish the methods and policies currently used to discharge patients from specialty back to their primary care physician. Based on this review, we designed a conceptual framework with respect to high quality discharge from specialty to primary care. We sought to validate and operationally define this conceptual framework through focus groups with patients diagnosed with OAB. Nvivo was used to analyze the qualitative data collected during the patient focus group.

Results: Based on the review, 8 factors were included in our conceptual framework of high-quality discharge: 1) treatment continuity, 2) re-referral, 3) symptom management, 4) clinical evidence, 5) best practices, 6) patient self-management, 7) patient education, and 8) information on when to seek care. A 60-minute focus group was conducted with 4 patients from a urology clinic in Calgary, AB. The patients represented a diversity of ages, sexes, ethnicities, and backgrounds. X themes emerged from this focus group: 1) long wait times, 2) dissatisfaction with solutions proposed at their appointment, 3) no permanent solutions, 4) lack of information shared between specialist and general practitioner.

Conclusion: As the prevalence of OAB care in specialty settings rises, the need for an effective discharge tool is increasingly important. Engaging patients in the development of such a tool is an effective method of ensuring that the health goals of patients with OAB are a central focus.

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ID: 240

Author: Ms. Paola Charland

Title: An Early Feasibility Study of Midwifery Services in a Socially Disadvantaged Population

Type of Abstract: Poster

Objectives: We explored the feasibility of implementing midwifery services to improve social and health outcomes for socially disadvantaged women. We partnered with a social agency that serves socially disadvantaged women to understand whether midwifery services could holistically address maternal and social needs of this population in place of traditional maternity care.

Approach: We used a mixed methods approach. Using administrative data, we developed a profile of socially disadvantaged women, including socioeconomic characteristics, health service utilization and maternal health problems faced by this population. This profile served to identify gaps that midwifery services could address. We asked women clients of our partner agency to complete a survey and participate in interviews to understand their current maternity health utilization, satisfaction with services, and barriers/facilitators to accessing midwifery services. Focus groups with partner agency staff and interviews with practicing midwives will be conducted to further inform how the holistic approach of midwifery may benefit this population.

Results: Preliminary findings from administrative data suggest that socially disadvantaged women do not access prenatal care services adequately and may be at risk for poor maternal and birth outcomes. Furthermore, preliminary qualitative findings suggest that midwifery services would be well accepted and utilized by socially disadvantaged women. The main barriers to currently accessing midwifery services include lack of awareness that midwives are available, not understanding what services midwives provide and, how to access a midwife. There was also confusion on the cost associated with midwifery services with most participants assuming that they would have to pay out-of-pocket for the expense. Midwifery services in Alberta have been government funded since 2009.

Conclusion: We conclude that socially disadvantaged women would likely accept and utilize midwifery services if given the opportunity. By addressing identified barriers to accessing midwifery services a midwifery model of care can be built that holistically and simultaneously addresses the health/social needs of socially disadvantaged women and their children.

All Authors: Paola Charland, Esther Suter, Mahnoush Rostami, Ameera Memon

ID: 57

Author: Ms. Leena Chau

Title: Examining the Delivery of Mental Health Services, in Primary Care and Public Health Collaborations, using a Population Health Framework

Type of Abstract: Poster

Objectives: Addressing mental illnesses requires a population health approach to focus on the determinants of health. The aim of this research is to understand how a population health approach, aimed at addressing the determinants of health, is used in primary care (PC) and public health (PH) collaborations to address mental illnesses.

Approach: A secondary analysis drawing on data collected through a multi-province (BC, ON, NS) study examined factors related to strengthening primary health care through PC and PH collaboration. Focus group data from four cases that addressed mental health were used to examine whether mental health activities incorporated a population health approach, as well as to identify the enablers and barriers to carrying out the activities. A coding framework and themes were developed deductively, based on the Public Health Agency of Canada's (PHAC) population health framework, and through inductive analysis.

Results: Results on how PC and PH collaborations addressed mental health problems, including the extent to which a population health approach was employed to address the determinants of health and ways mental health service delivery can be improved, will be presented. Twenty-nine themes and eighteen sub-themes were identified that correspond to the PHAC's population health framework. Participants described activities being carried out across the collaborations corresponding with many key elements of the population health framework. Key enablers included working in a multidisciplinary team, addressing the determinants of health, and engaging the community. Key barriers included poor data systems, a lack of service integration, a lack of action on demonstrating accountability for outcomes, and limited funding for upstream investments.

Conclusion: This research provides insight at the program and policy level for PC and PH as well as other sectors related to collaborative strategies that can strengthen the delivery of mental health services by incorporating a population health approach. It also provides suggestions for improving PHAC's population health framework

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ID: 251

Author: Mrs. Maud-Christine Chouinard

Title: Case management for frequent users of healthcare and social services: a participative research project with organizations and patients

Type of Abstract: Poster

Objectives: 1) To describe and compare case management (CM) program models used in services offered to frequent users of healthcare and social services, identify practice issues and best strategies and disseminate research results; 2) To reach consensus on best practices and develop recommendations for decision-makers.

Approach: A participative research project was conducted with various stakeholders engaged in the organization of case management services for frequent users. Within this project, two regional meetings, one year apart, brought together key stakeholders of six healthcare and social services centers of the Saguenay-Lac-Saint-Jean region (Québec, Canada). The participants: decision-makers, managers, healthcare professionals, representatives of community organizations, researchers and partner patients (43 persons at the first and 38 persons at the second meeting) participated in focus groups and transcripts of the discussions were analyzed using thematic analysis.

Results: The first meeting identified: 1) main practice issues related to resistance to change, working in silos, and limits of clinical information tools; and 2) facilitating factors for the implementation and functioning of programs such as support from management, the acknowledgement of the case manager's role and the importance of developing individual services plans (ISP). Findings from the second meeting highlighted the importance of: 1) a centralized regional case finding process using existing information systems; 2) the clarification of roles and responsibilities according to patient needs; 3) the improvement of communication with family physicians; and 4) navigation among services and partners facilitated by the transmission of the ISP and its follow-up. Patients mentioned the complexity of the healthcare system and the importance of communication between stakeholders.

Conclusion: These meetings enabled the sharing of evidence and concrete experiences of the patients and stakeholders involved in the CM programs for frequent users of healthcare and social services. The involvement of decision-makers contributed to reorient CM programs for this clientele in order to harmonize practices based on a regional consensus.

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ID: 106

Author: Ms. Erin Coates

Title: Innovative Coalition Empowering Change, Improving Outcomes: A Case Study on Using Integrated Knowledge Translation to Address Malnutrition in Older Adults on Vancouver Island

Type of Abstract: Poster

Objectives: The presentation of the initial findings in November 2015 led to the formation of the Coalition and IKT activities in November 2016. The purpose of this presentation is to share practical ideas about an Innovative Malnutrition Coalition of Leaders from Hospital, Community, Practice, and Academia that was formed to address the issue of Malnutrition.

Approach: According to CIHR, IKT is a "process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians?". To address the issue of Malnutrition and Older Adults within Island Health, an IKT Malnutrition Coalition was formed that is: (1) encouraging the use of local research findings; (2) promoting the spread of successes; and (3) facilitating Health Care-Community partnerships. The initial step of this process was achieved by organizing and facilitating a half-day IKT event to address this pressing issue and determining Next Steps through a collaborative discussion between Clinicians, Island Health, Community Leaders, and Academics.

Results: Over 50 participants partook in this event. Leaders from Community Organizations, Island Health, and the Nanaimo Municipality discussed Canadian Malnutrition Task Force data related to Malnutrition and Older Adults in the Nanaimo area. Participants engaged in break-out sessions to discuss key questions about this issue, and reconvened as a large group to share their strategies for Next Steps. These IKT activities have resulted in (1) sharing evidence to inform health system and practice; (2) discussing barriers and resources available to support practice change; and (3) increased involvement of community, clinicians, and decision-makers in research partnerships.

Conclusion: These IKT activities highlight the opportunity for researchers and clinicians to work with community partners to fill resource gaps in communities and within the health care system. It also demonstrates an opportunity to engage both practicing physicians and medical students in the IKT process.

All Authors: Erin Coates, Paul Hasselback

ID: 515

Author: Ms. Shawna Cronin

Title: Understanding healthcare providers' perspectives of health behaviour change in a childhood obesity program: A qualitative study

Type of Abstract: Poster

Objectives: As childhood obesity rates have increased, numerous programs have developed that aim to improve health through lifestyle and behavioral modifications. Unfortunately, many of these programs have had limited success and high rates of attrition. This study examined the perspectives of healthcare providers on behaviour change in a childhood obesity program.

Approach: A qualitative descriptive approach was used to describe the perspectives of healthcare providers (n=18) from three hospitals in an urban hospital system. Providers included paediatricians, registered nurses, dietitians, and administrators who work with and refer families to a 2-year childhood obesity program that offers a range of services, which aim to combat childhood obesity. We conducted and analyzed semi-structured, in person interviews (range: 30 – 45 minutes), which were audio recorded and transcribed verbatim. We applied an inductive approach to coding and the subsequent thematic analysis.

Results: Providers reflected on the diversity of participants in terms of the range of ethno-cultural backgrounds and family structures represented in the sample. Providers consistently noted concerns about parental self-efficacy regarding limit setting with children and poor perceived value of the program as barriers. In addition to family dynamics, relations between family income and cultural influence were sometimes perceived as barriers to positive changes in health behaviours and other times these determinants were described as factors that lead to favourable behaviour change. Positive role modeling by parents and providers and setting realistic goals were also factors that providers perceived as critical to the childhood obesity program.

Conclusion: Childhood obesity programs taking an inclusive family approach should emphasize parental self-efficacy and consider the importance of role modeling to facilitate sustained child health behaviour changes. Findings may have relevance for programs in other ethno-culturally diverse communities.

All Authors: Shawna Cronin, Michelle Silver

ID: 58

Author: Ms. Sandra Crowell

Title: Translating Research into Care: Supporting researcher-administrator collaborations to improve health service delivery and patient care

Type of Abstract: Poster

Objectives: Translating Research into Care (TRIC) healthcare improvement research program funds implementation science research in two Nova Scotia health care facilities and provides the evidence necessary for improving health service delivery and patient care. This presentation will illustrate the unique features of this funding program and share early program evaluation data.

Approach: The TRIC program has several unique features: researchers and health administrators must co-lead projects; administrators must commit to sustain the successful health system change post-project and to cover operational costs associated with the change; and the patient voice must be included in the research. Teams apply for up to \$3,000, \$30,000 or \$60,000 for one or two year projects. Applications are peer reviewed by a committee of researchers, administrators, patients and funding partners who assess projects for scientific and administrative merit. Funded projects will do one or more of the following: Improve: patient outcomes, access and/or safety; Reduce: costs, wait

Results: Since the TRIC program was initiated in 2013 with financial support from the QEII and IWK Health Centre Foundations, 107 projects have been considered with 48 projects funded worth over \$1.3 Million. The program has facilitated relationships between interdisciplinary teams of health care administrators, clinical researchers and trainees; has promoted patient engagement in health care research; and is positively impacting health care and service delivery at the IWK Health Centre and QEII Health Sciences Centre. Quantitative and qualitative program evaluation data and examples of specific projects and their impacts will be shared, along with plans for further expansion of the program.

Conclusion: Although many funded projects are still ongoing, early evidence indicates that the TRIC healthcare improvement funding program addresses a critical funding gap by providing support for research that will improve service delivery and patient care by addressing contextualized research questions in a local setting.

All Authors: Sandra Crowell, Patrick McGrath

ID: 125

Author: Dr. Greta Cummings

Title: Exploring quality indicators for older persons' transitions in care: A systematic review and Delphi process.

Type of Abstract: Poster

Objectives:

1. Using systematic literature review methods, examine the evidence for quality indicators for care transitions among older persons;
2. Examine the psychometric properties of quality indicators for older persons' care transitions.
3. Evaluate the perspectives of experts on the feasibility of implementing quality indicators across care transitions

Approach: This systematic review and Delphi process aims to catalogue and explore established quality indicators to evaluate the quality of care provided to older persons during transitions. Our search included articles examining development and testing of quality of care measures for older persons' transitions across the following settings: residential seniors' facilities, homes, emergency transport services, emergency departments (EDs), and, hospitals. Two reviewers independently screened abstracts and full text articles for indicators using predefined inclusion and exclusion criteria. In preparation for Delphi rounds, extracted indicators were coded by setting, Donabedian's structure, process and outcome, and Institute of Medicine (IOM) Domains of Quality.

Results: From 10,487 unique records screened, 41 met inclusion criteria. We digitally searched the grey literature for organization websites that generated reports of quality indicators, yielding an additional 12 organizational reports. 326 quality indicators (n= 266 established and n= 60 developing) were identified and coded according to setting, Donabedian framework domain, and the Institute of Medicine (IOM) domains of health care quality. We identified 35 structure, 212 process, and 79 outcome indicators, which included indicators prioritized as Timely (n=81), Safe (n=68), Effective (n=79), Patient-centred (n=63), Efficient (n=33) and Equitable (n=2). These indicators will be evaluated in two rounds of electronic surveys for relevance, feasibility and scientific soundness using a Delphi process. This will allow expert panellists to categorize indicators into "maintain", "consider" or "discard" groups.

Conclusion: Quality indicators provide benchmarks for decision-making on quality improvement in healthcare systems. By identifying established indicators and knowledge gaps that exist in quality measurement, policy makers, knowledge-users and researchers can collaborate to improve care for vulnerable older persons across settings.

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ID: 53

Author: Dr. Ceara Cunningham

Title: Exploring processes that link patients to primary care providers: The Alberta context

Type of Abstract: Poster

Objectives: Alberta Health Services (AHS) Primary Health Care (PHC) Portfolio formed three working groups for the Informing the Attachment Process project, focused on informing the processes to link patients to a regular primary care provider in Alberta. These three groups had provincial representation from groups within PHC and across five zones.

Approach: 1) Used administrative data to identify and determine characteristics of patients with or without chronic disease who present to PHC provider 2) conducted an environmental scan of AHS initiatives that support linking patients to a PHC provider; and 3) assessed the literature and processes that lead patients to securing a regular PHC provider.

Results: The majority of patients without a regular provider were men (62.6%), did not have a chronic disease (94.9%), and belonged to the healthy or health care non-user status based on administrative data. The environmental scan revealed many processes both active (n=19) and passive (n=15) that facilitate linking patients to PHC. Barriers related to these processes include primary care access issues (i.e. complex patients), patient preferences (i.e. young males) and cultural norms (i.e. immigrant populations). The literature review identified five key themes related to linkage processes; patient perspectives, provider factors, characteristics of the unattached, and structural and organizational factors.

Conclusion: Our findings dispel commonly held beliefs that those who are not linked to a PHC provider are complex patients with multiple chronic conditions. Given these results, better understanding the PHC patient population and evaluating which processes are effective for linking patients to PHC services is critical to meet the health.

All Authors: Ceara Cunningham, Scott Oddie, Tanmay Patil, Shawna McGhan, Alka Patel, Mary Modayil

ID: 563

Author: Mr. Zaheed Damani

Title: Improving quality of care for scheduled clinical services: results from a post-policy implementation review of the Winnipeg Central Intake Service, a single-entry model of referral for total joint replacement

Type of Abstract: Poster

Objectives: Single-entry models (SEMs) are one strategy for managing waiting times. In healthcare, they can improve accessibility to scheduled clinical services but impact on overall quality of care is poorly understood. We evaluated the Winnipeg Central Intake Service (WCIS), a SEM for patients referred for total hip (THR)/knee replacement (TKR).

Approach: A pre/post-intervention cross-sectional design was used to measure changes in six quality of care dimensions. Two different, non-longitudinal cohorts were identified using the regional THR and TKR waitlist. Pre-WCIS (n=2,282) and post-WCIS cohorts (n=2,397) were compared before and after WCIS implementation[DM1] . Primary outcomes were waiting time (WT) variation across surgeons, waiting times (WT1 primary care to specialist referral; WT2 decision to treat until surgery; and, TW total waiting time), and proportion of surgeries within benchmark. Analysis included descriptive statistics; Student's t-test, chi-square tests; and, clustered regression analyses (by surgeon). [DM1]Probably need to reflect that these were not the same people..

Results: Most orthopaedic surgeons experienced reduced variation for all waiting time categories following WCIS implementation. Simple comparison tests revealed variability in TW was reduced among surgeons by 3.7 (hip) and 4.3 (knee) weeks. Mean WT reductions for THR (WT1) and TKR (WT1/WT2/TW) and the increased proportion of patients who underwent TKR within benchmark (5.9%) waiting times were statistically significant. Among quality of care dimensions evaluated, accessibility and safety were the only dimensions that changed significantly (post-WCIS, THR and TKR). Regression analysis revealed statistically significant association between shorter WT2 and post-WCIS (knee), worse Oxford score (hip and knee) and having medical comorbidities (hip). Statistically significant associations were also found between meeting benchmark waiting times and post-WCIS (knee), lower BMI (hip) and worse Oxford score (hip and knee).

Conclusion: The implementation of WCIS reduced variability in waiting times across surgeons, and facilitated modest reductions in overall patient waiting times for surgery. Further longitudinal studies with robust comparison groups are needed to better elucidate the impact of SEMs on quality.

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ID: 29

Author: Ms. Karen De Blonde

Title: Implementation of Manitoba's Mental Health Strategic Plan: A Case Study Application of the Advocacy Coalition Framework

Type of Abstract: Poster

Objectives: This study examines mental health policy implementation. Its objective is to describe the factors, processes, challenges, and successes that effect the implementation of Manitoba's mental health strategic plan, "Rising to the Challenge: A strategic plan for the mental health and well-being of Manitobans".

Approach: A case study application of the Advocacy Coalition Framework is used to describe this policy response in terms of its policy subsystem, relevant contextual factors, the extent of policy oriented learning, the policy actors involved in its implementation along with the resources, strategies, and beliefs that they bring with them. Ten interviews were completed with policy makers, mental health organization administrators, and front line workers to obtain their descriptions and interpretations of the implementation of this policy response. The interviews were analyzed using a narrative thematic analysis to uncover the common and contrasting themes amongst the different policy actors.

Results: The analysis of the interviews resulted in the identification of patterns and themes in the experiences among the various policy actors involved. Preliminary findings have emerged from the ten interviews. The factors contributing to the challenges and success in implementing this policy include the availability of financial resources, clarity of the policy's purpose, utilizing evaluation standards, policy design, social mobilization, the implementation approach utilized, mental health system complexity, applicability to front line practice, time constraints, organizational supports, and leadership. The generated themes have helped define the factors that are most relevant for implementing policy in the mental health field along with the strengths and weaknesses of the approach that is being utilized for Manitoba's mental health strategic plan.

Conclusion: This research highlights current issues facing public mental health policy. By describing the relevant implementation factors evident in this policy, mental health policy makers can be better informed to plan more effectively. More meaningful policies can be created to ensure positive impacts for those suffering from mental health issues.

All Authors: Karen De Blonde

ID: 20

Author: Dr. Claire de Oliveira

Title: Analysis of health care costs among high-cost patients using finite mixture models

Type of Abstract: Poster

Objectives: A small group of health care patients accounts for a disproportionately large share of health care costs. However, little is known about the composition of this population. The main objective of this analysis was to determine the number of patient subgroups within the high-cost population using finite mixture models.

Approach: Using administrative health care data from Ontario, Canada, we selected all patients in the ninetieth percentile of the cost distribution in 2012 ($n = 987,887$). We accounted for over 90% of all health care costs incurred by the third-party public payer (i.e. the Ontario Ministry of Health and Long-term Care). We examined socio-demographic and clinical characteristics for all patients. We modelled patient-level costs using various regression techniques, such as ordinary least squares (OLS), generalised linear models (GLMs) and finite mixture models (FMMs) with differing number of components, and compared these among themselves.

Results: We found that the FMM provides a better fit of costs compared to standard parametric models. Our preliminary results suggest there are several patient sub-groups within the high-cost population. All patients had some mental health and addiction-related costs as well as physical health-related costs. The smallest patient group (4%) had the highest average cost (\$73,157) and was mostly made up of patients with psychosis. This group had the highest average number of comorbidities and the highest percentage of low-income patients among all patient groups. The largest patient group (26%) had a lower average cost (\$11,174) and included a variety of patients with mostly physical health conditions. This group had a slightly lower number of comorbidities and percentage of low-income patients compared to the previous one.

Conclusion: The high-cost population includes a multitude of diverse patient groups with different patient characteristics, chronic conditions and health care utilization. These findings will be useful to policy makers looking to design interventions/policies which address rising health care costs among patients with multimorbidity.

All Authors: Claire de Oliveira, Joyce Cheng, Paul Kurdyak

ID: 62

Author: Dr. Laura Desveaux

Title: Understanding the Impact of Accreditation on Quality in Healthcare

Type of Abstract: Poster

Objectives: To explore how organizations respond to and interact with the accreditation process and the actual and potential mechanisms through which accreditation may influence quality.

Approach: Qualitative grounded-theory study of organizations who had participated in Accreditation Canada's Qmentum program during January 2014-June 2016.

Results: The accreditation process is largely viewed as a quality assurance process, which often feeds in to quality improvement activities if the feedback aligns with organizational priorities. Three key stages are required for accreditation to impact quality: coherence, organizational buy-in, and organizational action. These stages map to constructs outlined in Normalization Process Theory. Coherence is established when an organization and its staff perceive that accreditation aligns with the organization's beliefs, context, and model of service delivery. Organizational buy-in is established when there is both a conceptual champion and an operational champion, and is influenced by both internal and external contextual factors. Quality improvement action occurs when organizations take purposeful action in response to observations, feedback, or self-reflection resulting from the accreditation process.

Conclusion: The accreditation process has the potential to influence quality through a series of three mechanisms: coherence, organizational buy-in, and collective quality improvement action. Internal and external contextual factors, including individual characteristics, influence an organization's experience of accreditation.

All Authors: Laura Desveaux, Noah Ivers, Jonathan Mitchell, Jay Shaw

ID: 69

Author: Mrs. Shanna DiMillo

Title: Physician Services in Canada: How do physicians contribute to the care of Canada's elderly population?

Type of Abstract: Poster

Objectives: In Canada, the elderly (aged 65+) exceed those aged 0-14 years, comprising 15% of the population in 2013 and projected to be 25% by 2030. These trends underscore the need for informed medical workforce planning. This study aims to characterize the provision of physician services to Canada's elderly population.

Approach: The Canadian Institute for Health Information's National Physician Database was used to analyze all fee-for-service care provided to Canada's elderly population (age 65+) from 2002/2003-2013/2014. Population estimates by age group and year were extracted from Statistics Canada (CANSIM). Analysis was stratified by physician specialty (e.g., Orthopedic Surgery), patient age group (e.g., 65-69 years), and service type (i.e., broad and detailed National Grouping System categories). Physician service provision was described using several metrics, including participation rates, overall volume, service intensity, and per capita service delivery. Changes in volume, types of services, intensity, and participation rates over time were also analyzed.

Results: In 2013/2014, over 80 million services were provided to patients aged 65+. The number of services delivered to seniors has increased by 26% since 2002. Diagnostic/therapeutic services comprised a sizeable portion of elder care (22%) during the most recent year. Overall, 90% of all physicians delivered care to the elderly in 2013/2014. However, there was an inverse trend between participation rates and patient age (89.7% for 65-69 years vs. 59.7% for 95+ years). In 2013/2014, Family Physicians and Internists provided the highest volume of care with 42.0 million and 19.2 million services respectively. Geriatricians and Ophthalmologists devote the largest proportion of their services to the elderly, accounting for 92% and 61% of their services respectively (2013/2014).

Conclusion: Virtually all physicians care for the elderly, but there are distinct cross-specialty variations in service volumes, intensity of elder care and types of services provided. This valuable new information can be used to inform and enhance medical workforce planning in response to the needs of our aging population.

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ID: 551

Author: Ms. Chelsea Doktorchik

Title: Validation of a Case Definition for Depression in Administrative Data Using a Chart Review Reference Standard

Type of Abstract: Poster

Objectives: The use of administrative health data is growing, as the cost of alternative data collection methods is expensive and time-consuming. This study determined the validity of International Classification of Disease (ICD)-9 and ICD-10 administrative health data case definitions for depression using family physician (FP) charts as the reference standard.

Approach: Trained chart reviewers reviewed 3362 randomly selected charts from years 2001 and 2004 at 64 FP clinics in Alberta and British Columbia, Canada. Depression was defined as presence of either: 1) documentation of major depressive episode, or 2) documentation of specific antidepressant medication prescription plus recorded depressed mood. Bipolar depression and alternate indications for antidepressants were excluded. The charts were linked to administrative data (hospital discharge abstracts and physician claims data) using personal health numbers. Validity indices were estimated for six administrative data definitions of depression using three years of administrative data.

Results: Depression prevalence by chart review was 15.9%-19.2% depending on year, region, and province. An ICD administrative data definition of '2 depression claims with depression ICD codes within a one-year window OR 1 discharge abstract data (DAD) depression diagnosis' had the highest overall validity, with estimates being 61.4% for sensitivity, 94.3% for specificity, 69.7% for positive predictive value, and 92.0% for negative predictive value. Stratification of the validity parameters for this case definition showed that sensitivity was fairly consistent across groups, however the positive predictive value was significantly higher in 2004 data compared to 2001 data (78.8% and 59.6%, respectively), and in Alberta data compared to British Columbia data (79.8% and 61.7%, respectively).

Conclusion: Sensitivity of the proposed case definition is moderate, and specificity is high, possibly due to undercoding of depression. This finding is supported in the literature. These results suggest that administrative data can be used as a source of information for both research and surveillance purposes.

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ID: 104

Author: Ms. Émilie Dufour

Title: Measurement and validation of nursing performance indicators in primary care

Type of Abstract: Poster

Objectives: The objectives are to 1) measure and 2) validate nursing sensitive indicators in primary care from a tracer case in wound care using electronic administrative data.

Approach: The study takes place in an ambulatory care clinic. The research adopts a correlational longitudinal design over a year where the episode of care is the unit of analysis (n = 482). The indicators were selected from a review of the literature and classified according to Donabedian's framework including structure-process-outcome components. The indicators are 1) nursing follow-up; 2) relational continuity; 3) education activities; 4) initial assessment; 5) consultation with a nurse specialist; (6) frequency of consultations; 7) length of the episode and 8) intensity. The I-CLSC electronic database was used as a data source for measurement and validation.

Results: Descriptive analyzes were performed to measure the indicators. Logistic regression models were adjusted to examine associations between process and outcome indicators. The results presented will focus on (1) the measurement of the eight indicators and on (2) the association between process and outcome indicators by presenting confidence intervals and correlation coefficients.

Conclusion: The aim of this study is to measure and validate primary care performance indicators from administrative data, in order to develop measurement tools that take into account the specific work of nurses and ultimately improve the quality of care .

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ID: 455

Author: Ms. Émilie Dufour

Title: Reliability study of electronic administrative data in primary care nursing

Type of Abstract: Poster

Objectives: The objective of this study is to assess the reliability of electronic administrative data contained in the I-CLSC software by measuring its concordance with the data contained in clinical records.

Approach: Administrative data and data from clinical records include performance indicators for primary care nursing services measured in an ambulatory care clinic. The research adopts a longitudinal design over a year and the episode of care is the unit of analysis ($n = 107$). Because the clinical records in the study were paper files, the extraction of the data was done manually using an extraction grid.

Results: Correlation analyzes were conducted to assess the concordance of the data contained in the I-CLSC electronic database and the information contained in the paper files. The results present the measurement of the interrater agreement to assess the level of concordance for indicators under study between the two data sources. A kappa coefficient was measured for each of the indicators studied.

Conclusion: The aim of this study is to assess the reliability of current administrative data on primary care nursing, to optimize their use by managers for service organization purposes and ultimately to improve quality care.

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ID: 296

Author: Ms. Gillian Elliott

Title: Women's experiences with hospital and community breastfeeding support: an exploratory study

Type of Abstract: Poster

Objectives: In recent years hospitals and Public Health Departments in Canada have implemented programs designed to promote and support breastfeeding. This exploratory study examined the impact of medical, institutional, health policy and professional forces on women's experiences with breastfeeding support.

Approach: The data were drawn from 10 semi-structured interviews and 41 in-depth surveys completed by women who initiated breastfeeding. Study inclusion criteria included hospital birth of a healthy, full-term, singleton baby, born past 37 weeks gestation with no known medical conditions that would prevent or contra-indicate breastfeeding. This study was conducted in a region in Ontario, Canada. A combination of purposeful and convenience sampling was used to recruit study participants.

Thematic analysis was used for data analysis. The analysis identified five themes that impacted breastfeeding support provision: birth interventions, Baby Friendly Initiative practices, lactation consultants and healthcare provider initiated formula supplementation.

Results: The majority of women in the study experienced birth interventions, Baby-Friendly Initiative practices, breastfeeding difficulties, used numerous breastfeeding support services, received support from lactation consultants and gave their baby formula as directed by a healthcare provider. The results provide insight into how birth practices, infant care protocols and professionalized practices influence breastfeeding support and, in turn, impact women's breastfeeding experiences. The findings demonstrate that the women relied heavily on breastfeeding support both in hospital and in the community and experienced a disparity between their expectations and the reality of breastfeeding.

Conclusion: The data suggest that conflicts in contemporary breastfeeding support practices and discourses can recreate breastfeeding as a technically challenging process that requires expert intervention, rather than the natural and easy process as it is often portrayed and promoted. These findings provide important insights for hospital and community breastfeeding support services.

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Title: THE ROLE OF POLICY CONTEXTS IN THE EFFECT OF HOSPITAL COMPETITION ON PERFORMANCE: A SCOPING REVIEW WITH A CONFIGURATIVE LENS

Type of Abstract: Poster

Objectives: Microeconomics promises optimal outcomes through market competition. Although many countries rely on competitive forces in healthcare, it is unclear whether certain policy contexts support the impact of competition on performance. The purpose of this review is to examine the role of policy contexts in the effect of hospital competition on performance.

Approach: We conducted a scoping review that focused on English language articles investigating the effect of hospital competition on performance in any country covering time period until 2016. We assessed the effect of competition on the IOM dimensions of hospital performance across jurisdictions with varying policy regimes.

Results: Our findings suggest that the (i) bulk of the literature comes from the USA, but also includes eleven other countries; (ii) majority of the studies have strong observational designs; (iii) the effect of competition seems to be stronger on efficiency outcomes (relative to other IOM dimensions of performance) and this finding is largely consistent across jurisdictions; (iv) the effect of competition on performance differs depending on policy regimes; jurisdictions with more unregulated choice of providers and better availability of performance information appear to have stronger effect from competition compared to jurisdictions with constrained choice and/or lack of quality information.

Conclusion: This review adopts a configurative approach to advance conceptual understanding and allows us to describe the limited relationship between policy contexts and the effects of competition. The findings from this review can be used when considering market oriented reforms to achieve health system outcomes.

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Author: Ms. Elyse Fortier

Title: Exploring “Rapid Repeat Pregnancy” in Adolescent Mothers Living in Ottawa, Canada.

Type of Abstract: Poster

Objectives: Adolescent mothers and their children face economic, social, and health challenges. These challenges are amplified when they have subsequent children. The circumstances surrounding “rapid repeat pregnancy” among teenage mothers remain unclear. This project aims to shed light on risk factors associated with subsequent pregnancies among young mothers living in Ottawa.

Approach: We conducted a qualitative study exploring the circumstances and decision making of adolescent mothers who have experienced subsequent pregnancy. We recruited young mothers living in Ottawa who were 25 years of age or younger, had conceived their first child before the age of 20, and had a subsequent pregnancy within 24 months of the birth of their child. We also recruited key informants who work with teenage mothers. We conducted 10 in-depth interviews with young mothers and 10 in-depth interviews with key informants. We analyzed our results for content and themes using deductive and inductive techniques.

Results: Preliminary findings suggest that some young mothers are not using contraceptives following the birth of their child or are not compliant with the chosen contraceptive modality. Young mothers often access information regarding contraception from their peers. This leads to misinformation surrounding contraception especially in regards to long acting reversible contraceptives. Moreover, many factors go into the decision making of young mothers surrounding their pregnancies. Every experience is unique and requires individualized attention.

Conclusion: There is a need for sex-positive contraceptive counselling among youth. Contraception knowledge and resources should be easily accessible to young mothers. There are many resources available to adolescent mothers in Ottawa. However, health care providers and adolescent mothers are not aware of all the resources that they can access.

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Author: Dr. Randy Fransoo

Title: The impact of acute cardiovascular events on employment and income

Type of Abstract: Poster

Objectives: Acute Myocardial Infarction, Stroke, and Cardiac Arrest are leading causes of mortality, morbidity, and health service use - but also affect employment and income. The objective of this study was to quantify the impact of these events on employment and personal income levels three years after hospitalization.

Approach: This study used a unique new linkage of three national datasets: hospital abstracts, mortality data, and personal income tax records, all housed at Statistics Canada (Quebec data not included). Hospital Discharge Abstract Data was used to identify cases of each of the three conditions, using ICD codes. For all patients that survived to three years post hospitalization, we examined employment status and personal income level as reported to the Canada Revenue Agency. We used a difference-in-differences approach with coarsened exact matching to compare 40-61 year olds experiencing these health events to matched controls.

Results: Employment and personal income levels declined slightly for controls, but considerably for people experiencing AMI, stroke or Cardiac Arrest. Patients were 5-20 percentage points less likely to be employed in the third year after the event, and reported annual earnings that were 8-30 percent lower than matched controls not experiencing any of these events. Of the conditions studied, stroke had the highest impact on employment and income. The study also examined heterogeneity of effects in sub-groups stratified by age, sex, and pre-event income level.

Conclusion: Mortality rates for cardiovascular conditions have declined steadily for over 30 years in Canada. However, less is known about non-health related outcomes, largely owing to a lack of appropriate data to study these effects. Our results demonstrate significant employment and financial impacts of AMI, stroke, and cardiac arrest among survivors.

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ID: 356

Author: Ms. Rachel Frohlich

Title: Lessons learned using patient and caregiver complaints to understand gaps and improve care in Ontario

Type of Abstract: Poster

Objectives: To fulfill its expanded mandate under the Excellent Care for all Act (ECFAA), Health Quality Ontario worked with pilot sites to test data submission and reporting on a set of patient relations indicators across hospital, home and long-term care sectors. This work informed measurement refinement and implementation planning across Ontario.

Approach: Following site recruitment, orientation included one-on-one meetings to review the terms of reference and minimum data set. To maintain engagement and support learning across 13 Ontario regions, HQO convened three webinars and there sector-specific webinars. Indicators included: rate of complaints, complaints received by complaint category, time to acknowledge the complaint, time to close the complaint and the actions take to resolve a complaint. Pilot sites engaged patient, family and resident advisors as well as Board quality committees in their planning and reporting. HQO coordinated work through periodic discussions with the Ontario Patient Ombudsman and the sector associations.

Results: Despite legislative requirements for complaint handling, there is variation in the collection of patient relations data. Thirty-four sites were recruited. 29 sites submitted aggregate FY 2015-16 complaints data. HQO analyzed this data and provided facility-level reports which allowed sites to compare their performance on five indicators, by organization, corporation and sector. The reports also highlighted areas for patient relations quality improvement and were used to engage patient advisors, caregivers and Board quality committees on areas of strength and prioritize areas for improvement. The measures and implementation support resources were refined based on the qualitative and quantitative patient, pilot site and advisory group feedback. The project culminated in the submission of the recommendations to the Ministry of Health and Long-term Care to support province-wide implementation.

Conclusion: There is an opportunity to provide a better patient experience in Ontario. Improved collection of patient complaints in a more standardized manner will support facility-level and public reporting. This is essential to be able to effectively use patient reported data to improve care and learning across the province.

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Author: Ms. Lise Gallant

Title: MindTheHeart Project - A gender sensitive stepped-care model for cardiac and mental comorbidity in men: Findings from New Brunswick

Type of Abstract: Poster

Objectives: Considering the increasing prevalence of cardiac and mental comorbidity (CMM), especially among men, and the call for more contextualized evidence for New-Brunswick (rurality, low literacy and higher rates of poverty), a cornerstone for the ongoing primary care reform is to engage key stakeholders in the implementation of gender-sensitive stepped-care model.

Approach: An exploratory qualitative approach was used for gathering in-depth knowledge about key stakeholders' needs, expectations and preferences. In Total, 12 focus groups were held (68 men with or without CMM) and 20 semi-structured interviews with healthcare professionals and managers at all levels of the healthcare system. NVivo 11 was used for managing the interpretative phenomenological analysis process. We performed a triangulation of the gathered information to answer the research question: What dimensions are critical for tailoring stepped-care models to better answer needs and expectations of men with CMM, while containing costs and reducing professional and organizational resistance for change?

Results: Gender role socialisation and lack of time were considered as major barriers to mental health access from both men and service provider's perspective. From the men's perspective, services offered outside working hours or at work with a focus on action oriented messages, short visits, group psychotherapy (8 sessions) and involvement of the life partner are recommended. From the healthcare professionals and managers' perspective, the proposed model appears to be a cost-effective way in bridging the gap in current cardiac and mental services. Implication of nurses and social workers would be preferred when less intensive treatment is needed. The viability and efficiency of the model would depend on its integration in existing cardiac and mental health rehabilitation services with direct link to treating family physicians.

Conclusion: Delivering gender-based mental health services may provide a pathway to reach vulnerable populations such as men to access mental health care following a major cardiac event. Hence, further research is needed to evaluate the efficiency of this approach in primary health care to better adapt existing services for cardiac patients.

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Author: Ms. ISABEL GARCES DAVILA

Title: Out-of-Pocket Spending for Mental Health Reasons: Mental Disorders, Medication Use, and Insurance Coverage

Type of Abstract: Poster

Objectives: This study's objective was to examine the factors related to out-of-pocket spending for mental health reasons. Diagnosis of mental disorders (depressive and substance use disorders), medication use, and insurance coverage were included as factors related to out-of-pocket spending. Satisfaction with mental health services was also examined related to out-of-pocket spending.

Approach: A secondary analysis of data from the Canadian Community Health Survey – Mental Health Component was conducted to examine out-of-pocket spending, mental health care utilization, satisfaction with mental health services, and diagnosis of mental disorders. It was hypothesized that those with mental disorders who sought help from different types of professionals (i.e., family doctors, psychologists), and who received more hours of consultation would have reported out-of-pocket spending. This study included respondents aged 15 and over in CCHS-MH. The analyses were weighted to ensure the sample was representative of the Canadian population, and a series of correlations and regressions were conducted.

Results: The results indicated that out-of-pocket spending for mental health reasons was related to mid-to-high household income (e.g., \$100,000 or more) and medication use. In addition, the results indicated that lack of insurance coverage (i.e., coverage for prescriptions and consultation with psychiatrists, psychologists) and medication use increased the likelihood of out-of-pocket spending among those with mental disorders. Out-of-pocket spending increased the likelihood of reporting higher levels of satisfaction with psychiatrists.

Conclusion: Our study provides information about insurance coverage and out-of-pocket spending for mental health reasons. We highlight the relation between satisfaction with professional mental health care and out-of-pocket spending. Implications for insurance coverage in terms of hours of consultation and different types of services (e.g., psychologists, family doctors) are discussed.

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ID: 84

Author: Mrs. Evgenia (Jenny) Gatov

Title: Trends in Standardized Mortality among Individuals with Schizophrenia from 1993 to 2012: A Population-Based, Repeated Cross Sectional Study

Type of Abstract: Poster

Objectives: We examined all-cause and cause-specific mortality time-trends and premature mortality in individuals with and without schizophrenia over a 20 year period.

Approach: In this population-based, repeated cross-sectional study, we identified all individual deaths that occurred in Ontario between 1993 and 2012 in persons ages 15 and over (31,349 deaths in persons with schizophrenia and 1,589,902 deaths in those without). We plotted overall and cause-specific age-sex-standardized mortality rates (ASMR), stratified all-cause ASMR trends by sociodemographic characteristics, and analyzed premature mortality using years of potential life lost. Additionally, we calculated mortality rate ratios (MRR) using a negative binomial regression adjusted for age, sex, income, rurality, and year of death, and examined differences in time-trends using an interaction term in the model.

Results: Individuals with schizophrenia experienced 3 times greater mortality rates, compared to those without (adjusted MRR, 3.12; 95% CI, 3.06-3.17). All-cause ASMRs in both groups declined in parallel (interaction between schizophrenia status and time $p > 0.75$) by about 35%, and were elevated in men, in those with low income, and in rural dwellers. The absolute ASMR difference declined throughout the study period (from 16.2 to 10.5 deaths per 1,000 persons). Cause-specific ASMRs were greater in those with schizophrenia, with circulatory conditions accounting for most deaths between 1993 and 2012, while neoplasms became the leading cause of death for those without schizophrenia after 2005. Individuals with schizophrenia also died, on average, 8 years younger than those without, and lost more potential years of life.

Conclusion: While individuals with schizophrenia have experienced declining mortality rates over the past two decades, specialized approaches may be required to close the persistent three-fold gap.

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Title: Quality Improvement Plans in Ontario: a post-submission evaluation of stakeholders

Type of Abstract: Poster

Objectives: The Health Quality Ontario Quality Improvement Plan (QIP) program is one of the largest, jurisdiction wide quality improvement efforts in the world. Analysis was conducted on how QIPs support the QI initiatives of the 1,000 + organizations that submit a QIP annually, using a post-QIP submission evaluation of stakeholders.

Approach: We will report on results from data (gathered using an online platform) from three different surveys: 1) Board Chairs; 2) Chief Executive Officers (CEOs), Executive Directors (EDs) and Administrators; 3) Quality Improvement (QI) Leads. The completion rate for the three surveys was approximately 35%. Respondents included 92 Board Chairs, 273 CEOs, EDs and Administrators, and 357 QI Leads. Data was collected between May and June of 2016 and the questionnaires included a mix of closed and open-ended questions. Quantitative data were analyzed using basic descriptive measures and crosstabulations. Qualitative data were analyzed through thematic analysis, using NVivo10 when required.

Results: Board Chairs reported QIPs have a positive impact on a number of areas, with nine out of ten respondents mentioning that QIPs supported the improvement of performance in the organization. Issues related to obtaining and understanding data as well as lack of QI knowledge among Board members were considered the top barriers to QIP development/approval. Among CEOs, EDs and Administrators, about seven out of ten respondents “agree” or “strongly agree” that QIPs promote a “quality driven culture”; “competing priorities” (82%) and “insufficient funding” (59%) were cited as challenges. The majority of QI Leads were aware of QIP-specific resources and found them useful. They identified data-related issues, lack of QI culture, reporting cycle challenges and insufficient resources as barriers faced by organizations while developing the QIPs.

Conclusion: Results affirm how this unique program facilitates quality improvement from different stakeholder’s perspectives, and areas for improvement. Stakeholders agreed that the program supports performance improvement, helps drive a quality driven culture, and provides valuable resources. Stakeholders recommended the program do more to encourage QI dialogue and patient engagement.

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ID: 252

Author: Ms. Yanyan Gong

Title: Using hospital readmission data to identify opportunities for improving health system performance

Type of Abstract: Poster

Objectives: Readmissions to acute care facilities are increasingly being used to measure institutional or regional quality of care and care coordination. The readmission indicators routinely reported by Canadian Institute for Health Information (CIHI) can be used to identify areas for improving care quality and reducing readmission rates.

Approach: The all-cause readmission rates following an acute care hospitalization have been publically reported at facility, health region, province and national levels; and for medical, surgical, obstetric, paediatric patients separately. The CIHI clinical administrative databases are used to calculate these indicators. Medical, surgical, and obstetric patients were defined by their major clinical category (MCC) codes; patients younger than 19 years are considered paediatric. Patients' demographic characteristics, case mix, and reasons for readmissions in the most recent 5 years were examined.

Results: The 30-day overall readmission rates have remained stable in the most recent 5 years (2011-2012 to 2015-2016), at around 9%. Readmission rates for medical patients were the highest (13%); followed by rates for surgical and paediatric patients (7%); and obstetric patients (2%). The overall readmission rates in 2015-2016 ranged from 8% to 17% among health regions. The main reasons for readmissions were similar over the 5-year period for all patient groups: chronic heart, respiratory, and other conditions accounted for 27% of the readmitted cases for medical patients; infections and post-procedural complications accounted for one-third of all readmissions for surgical patients; respiratory infections and post-procedural complications (33%) were among the main reasons for paediatric patients; and postpartum infections (including sepsis) and hemorrhage (33%) for obstetric patients.

Conclusion: The reasons for hospital readmissions remained unchanged over the 5-year period. With chronic conditions better managed in primary care and infections better prevented, the readmission rates can be reduced substantially. CIHI offers a secure online tool (YourHealthSystem Insight) for organizations to look into readmission data and identify areas to reduce readmission rates.

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Author: Dr. Lauren E. Griffith

Title: Comparison of Self-Report vs. Administrative Data in Defining Multimorbidity

Type of Abstract: Poster

Objectives: While researchers have examined agreement between self-reported and administrative data on individual conditions, few have looked at the impact on multimorbidity. We examine multimorbidity measure agreement between administrative data and self-reported CCHS data from Ontario, factors associated with variations in agreement, and the impact on prevalence and service use estimates.

Approach: We will use data from Ontario participants 65 years and older from three waves of the Canadian Community Health Survey (CCHS) linked with multiple administrative databases from the Institute for Clinical Evaluative Sciences to describe multimorbidity; defined using the most common definitions, 2+ and 3+ chronic conditions. Fifteen chronic conditions (CCs) will be assessed using validated algorithms developed for use with administrative data compared to self-reported clinical diagnosis available from CCHS. Socio-demographic data from the CCHS waves will be used to identify factors associated with disagreement on multimorbidity status between data sources and estimates of prevalence and health service use.

Results: Preliminary analyses were conducted on the 7,723 Ontario participants 65 years and older of the 2008 CCHS, of which 58% were female and 50% were over 75 years old. Multimorbidity estimates were based on 15 CCs: anxiety/depression, arthritis, cancer, COPD, dementia, diabetes, hypertension, IBD, IHD, liver disease, osteoporosis, renal disease, stroke, cerebrovascular disease, and upper gastrointestinal bleed. Based on their linked administrative data, the most common CCs were hypertension (71%) and arthritis (61%). Over 72% had 2+ and 44% had 3+, with an average of 2.4 CCs, which is similar to other population-based estimates generated from CCHS data. The next steps are to expand the dataset to include the other two CCHS waves, and compare these results to the self-reported data in CCHS.

Conclusion: Disagreement between self-report and administrative data is large for many individual CCs, particularly diseases with low prevalence; however the impact on multimorbidity estimates is uncertain. This study will shed light on factors associated with disagreement on multimorbidity status between data sources and on prevalence and health service use estimates.

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ID: 334

Author: Dr. Kelly Grindrod

Title: What patients want: Understanding how patients view shared decisions about treatment

Type of Abstract: Poster

Objectives: Patients need to be active participants in managing and understanding their health to best navigate complex health decisions. The objective of this study was to describe how patients make treatment decisions with their healthcare providers (HCPs) and how this process relates to the use of Electronic Health Records (EHRs).

Approach: We used a qualitative approach that included participants over age 30, who lived with chronic illness, spoke English or French, and who were able to consent to participation. Participants were recruited from Ontario, Alberta, Quebec and Nova Scotia. We conducted semi-structured interviews to inquire about participant experiences with treatment decisions, medication management and EHRs. Participants completed a brief demographic survey. We transcribed audio recordings and translated all transcripts into English. The team met for two days to develop a multidisciplinary analytic framework, which was used to code the data.

Results: Over 31 interviews, we identified four themes related to treatment decision making. First, patients' Feelings about Healthcare Experiences are important for decision making, including their personal connection with the family physician (more than the pharmacist or specialist), their understanding of HCP roles and their external influencers such as spouses. Second, patient decisions during Health Encounters are informed by their own shadow records and expectations around communication varies across a treatment course. Third, the Realities of Decision Making do not reflect a shared process even when patients feel engaged with their team. Fourth, when patients want Access to Records, their desire to identify and fix errors in the EHR and to prevent communication breakdown within the care team are of more concern than privacy and security.

Conclusion: For patients to feel they are sharing in treatment decisions, they need two things: a good relationship with their HCPs, especially the family physician, and access to health information they can understand. Patient portals into EHRs should be designed to include the meaning of information rather than just the information itself.

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ID: 533

Author: Dr. Vaibhav Gupta

Title: Treatment patterns, evidence update, survival in esophageal cancer resections in Ontario: a population-based cohort study

Type of Abstract: Poster

Objectives: The purpose of this study is: (1) Define the incidence of esophageal cancer in Ontario, (2) Define the rate of treatment with neoadjuvant, adjuvant, and surgical therapy, (3) Identify variation in practice patterns across the province, and (4) Identify factors predictive of receipt of treatments, negative surgical margins, and survival.

Approach: A retrospective cohort study of esophageal cancer patients in Ontario treated with curative intent between 2002-2015 has been initiated. Adult patients identified through the Ontario Cancer Registry (OCR) were included if they underwent esophagogastrectomy for esophageal or GEJ adenocarcinoma or squamous cell carcinoma. Pathology reports from OCR are being abstracted at ICES and linked to the patient's health administrative data to collect information on demographics, treatment, survival, and cost. Descriptive statistics will explain treatment patterns and regional variation in evidence update. Regression and survival analysis will be used to identify predictors of receipt of treatments, negative surgical margins, and survival.

Results: Analysis regarding the incidence of patients with esophageal cancer in Ontario, and the proportion being treated with neoadjuvant, adjuvant, and surgical therapies are expected to be completed by the conference dates. We will assess patients' access to these therapies by looking at regional variations in their use across Ontario, influence of management at a regional cancer or thoracic surgery centre on treatment decisions, and predictors of receipt of treatment based on patient, provider, and system-level factors. Our analysis plan includes looking at distance and socio-economic variables to identify barriers in access to care. Once pathology data is abstracted for variables such as histology, size, location, grade, stage, surgical margin status, and lymph node status, we will identify factors predictive of negative surgical margins and survival.

Conclusion: This study assesses the treatment of esophageal cancer in Ontario, its change from 2002-2015 as new evidence has become available, and regional variation in practice. It will identify patient, provider, and system-level factors predictive of patient outcomes. This will help inform clinical care, health policy, service planning, and resource allocation.

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ID: 258

Author: Ms. Jennifer Gutberg

Title: Distributed versus centralized leadership in the implementation of Ontario's Health Links

Type of Abstract: Poster

Objectives: Traditional notions of leadership involve centralized power at senior levels, with strategy/vision communicated to operational levels. To date, evidence on how traditional centralized leadership impacts the implementation and functioning of integrated care networks is unclear. There is a need to understand different forms of leadership across organizations involved in integrated care.

Approach: We conducted semi-structured interviews as part of a six case study evaluation of the implementation of Health Links (HL), a "low-rules" integrated care initiative in Ontario. Our analysis of the qualitative data provides insight on leadership in the HL context and provides perspectives on how leadership impacted the success of HL implementation. Our analysis draws upon both traditional and process- or action-oriented theories of leadership that look beyond senior leadership (e.g., distributed and shared leadership, complexity leadership theory). These latter theories posit that non-formal leaders are critical to the functioning of complex organizations and systems.

Results: Preliminary results show that leadership was highly centralized in the implementation of HL and concentrated almost exclusively at the senior level, including governance committees composed of CEOs and senior management. The highly centralized leadership remained important in HL, despite efforts to develop capacity for distributed leadership throughout the partner organizations. Centralized leadership at times impeded front-line workers from understanding HL goals and effectively integrating care. Key factors influencing the nature of leadership included insufficient education and communication regarding HLs, lack of delegation of operational tasks, and failure to meaningfully seek out front-line support. Overall, there was limited ability within the organizations to sustain the integrated care effort without an "overreliance" on senior leadership to drive the initiative forward.

Conclusion: Efforts to implement 'low rules' integrated care initiatives may require a more distributed approach to leadership. Though senior leadership is critical in setting a vision for integrated care networks, failure to develop distributed leadership may undermine Health Links, which rely on new and more effective connections between different providers.

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ID: 524

Author: Mrs. Jeannie Haggerty

Title: Policies and programme innovations that connect primary health care with social services and community supports in Canada: A comparative policy analysis

Type of Abstract: Poster

Objectives: Comprehensive management in primary health care for complex patients often requires integration with social services and community supports. This comparative analysis reviews governance and policies in Canadian provinces that contextualize multi-service integration programs for children and youth with high functional needs and community-dwelling older adults experiencing functional decline.

Approach: We will use Nominal Group Process to identify high priority services to be connected for each of our two patient populations. We will describe the relevant governance structures and regulatory frameworks that influence actions of the workforce to connect these services in each province. We will select about 20 publicly-funded programs where system alterations were made explicitly to connect primary health care services with social and community services for our target populations. The specific policy instruments used to enhance integration will be explored. Finally, we will estimate the degree of resultant integration and evaluate the extent of implementation success.

Results: A database will be created that will assist with the identification of the institutional authorities, regulatory frameworks and workforce organization for each service within the selected public programs. In our description, we will make explicit the structural variation in service entities and governance structures across provinces, in addition to indicators of readiness for spread or scale up associated with integrated multi-service delivery innovations across jurisdictions.

An analysis within and between selected publicly funded programs will identify those policy instruments most frequently adopted to promote change, and the characteristics of the program that correlate with more successful implementation and greater health-social-community integration.

Conclusion: This study will provide a cross-provincial description of the policy context and key factors enabling integration across health-social-community services in Canada. The results will accelerate cross-provincial learning and research on integrated care solutions, especially in the context of the Canadian SPOR Network in Primary and Integrated Health Care Innovations (PIHCI).

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ID: 137

Author: Dr. Mark Harrison

Title: Preventing rheumatoid arthritis: a general population pilot study on perspectives of the risk of developing the disease and potential preventative interventions

Type of Abstract: Poster

Objectives: To determine the features of a preventative treatment program for people at high risk of RA that is likely to drive demand in pre-symptomatic people. We focus on preferences for treatment, the values and most important attributes of preventative treatment programs, and the likely uptake of preventative treatment.

Approach: Discrete choice experiment in a US general population sample. Participants asked to imagined they had been tested as high risk for developing RA, and then asked to choose between sets of 2 hypothetical preventative RA treatments, then between their preferred treatment and 'no treatment for now'. The treatment (risk reduction, way treatment taken, side effects, certainty in estimates, health care provider's opinion) and test attributes (chance test is wrong, who recommends treatment) were identified in focus groups. Responses were analyzed using a conditional logit regression model to estimate the significance and relative importance of attributes in influencing preferences.

Results: 201 respondents completed all tasks in the survey. The majority were 25-54 years old (modal age category 30-39 years (38%)), and 50% were female. 23 members (11%) reported having a physician diagnosis of RA, and 91 (45%) had a family member or close friend with RA. All attributes' levels significantly influenced treatment preferences, but the risk reduction, the way treatment is taken, and health care provider's preference were most influential. Respondents were most willing to trade a reduction in risk of RA for a treatment preferred by their health care professional and oral route of administration. Respondents had similar strength preferences for reducing uncertainty in evidence and reducing risks of side effects. The preferred preventative treatment was chosen over no treatment in 67% of choices.

Conclusion: How a treatment is taken and preferences of their health care providers are as important as benefits, highlighting the importance of agency and perceived asymmetry of information. Knowledge of these factors will help policymakers predict the acceptability and uptake of preventative treatment strategies will be acceptable to target populations.

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ID: 38

Author: Dr. Stephanie Hastings

Title: Facilitators and Barriers to the Use of Licensed Practical Nurses in Alberta Health Services

Type of Abstract: Poster

Objectives: The goal of the current study was to examine the roles and opportunities for Licensed Practical Nurses (LPNs) in different practice settings within Alberta Health Services (AHS). Specifically, we examined LPNs' utilization in emergency departments (EDs), mental health (MH) units, and labour and delivery (L&D) units.

Approach: Phase 2 of the study, reported here, involved interviews with frontline, management, and leadership staff on units with and without LPNs. We also interviewed individuals involved in developing and interpreting scope of practice policy. The goal of the interviews was to examine how decisions about LPN staffing are made, what barriers and facilitators affect LPNs' ability to work to their full scope of practice, and how decisions are made about what activities LPNs are allowed to perform. We conducted a total of 89 interviews across 13 units and all five AHS zones.

Results: LPNs were generally satisfied with their jobs and felt confident in their work. LPNs identified some gaps in their own education that needed to be filled through work experience. Non-LPN interviewees were often unfamiliar with LPNs' formal education and preparation for working in specialty units. Many non-LPNs were ill-informed about LPNs' scope and noted challenges in accessing accurate information about activities LPNs are allowed to perform. Some units provide the same orientation to LPNs as to Registered Nurses (RNs), whereas others provide extensive orientation to RNs and very limited orientation to LPNs. Some units without LPNs were open to introducing them whereas others were adamantly opposed to it. Confusing policies and misinterpretation of regulatory college guidelines influenced some units' ability to fully utilize LPNs.

Conclusion: Decisions about LPN utilization seem to be made at a site or unit level, rather than in a systematic manner led by organizational policy. Information about LPNs' education and scope of practice is needed to increase their representation across the province and their acceptance by other nursing providers.

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Author: Dr. Lindsay Hedden

Title: Is increasing physician supply the key to solving access/provision challenges in primary health care in British Columbia?

Type of Abstract: Poster

Objectives: Reports of access issues in primary health care are ubiquitous in British Columbia (BC); however, per capita physician supply has been increasing since 1986. We examine the extent to which workforce feminization, aging, and secular period effects may explain the conflicting observations of increasing supply and access difficulties.

Approach: This is a population-based, retrospective cohort study. We used fee-for-service (FFS) and alternative payments (non-FFS) billings for all primary care physicians (PCPs) in BC for the years 2005/6-2011/12. We modeled the trend in per-physician remuneration, patient contact counts, and practice size using longitudinal multivariate mixed effects linear models. Models included gender and age, and adjusted for training/practice locations, and the proportion of payments from non-FFS sources. We simulated differences in population-level spending on physician services, patient contacts, and per-physician practice size attributable to shifts in workforce demographics and secular period effects, accounting for the overall growth in the physician population.

Results: We found limited change in per-physician remuneration over the study period, after taking out the effects of changes in fee levels; however, total patient contact counts and per-PCP practice sizes declined by 10% (111,577 total contacts/year) and 13% (38 patients/physician/year) respectively. Although workforce feminization, and to a lesser extent aging, contributed to these declines, the primary driver is a broad secular trend toward reduced clinical activity over time. Removing the effect of this trend while allowing for demographic shifts would have resulted in an additional 2.03 million patient contacts by 2011/12, the equivalent of one additional physician visit for half of BC's population.

Conclusion: Despite overall growth in PCP supply in BC, shrinking per-physician levels of service delivery and practice size have meant that increased supply has not kept pace with demand. Workforce feminization and aging contributed to reduced supply, but their effects were dwarfed by the secular decline in activity levels over time.

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Author: Dr. Marilyn Hodgins

Title: Examination of the Blaylock Risk Assessment Screening Score (BRASS) in Predicting 30-day Readmission: An Analysis of Administrative Data

Type of Abstract: Poster

Objectives: Project objectives were to describe rate of 30-day hospital readmission, examine characteristics of patients readmitted within 30 days of a discharge to home, and evaluate utility of Blaylock Risk Assessment Screening Score (BRASS) in predicting length of hospital stay and 30-day readmission.

Approach: Unplanned readmission within 30-days of discharge warrants preventive measures because it is costly to the healthcare system and to patients and their families. However before such measures can be put in place, those at risk must be identified. Project involved analysis of 13-months of administrative data and 19,351 discharges from one tertiary hospital. BRASS was completed on admission with scores computed based on responses to 10-items. Scores range from 0 to 40 with higher scores indicating increased risk for problems. Patients attaining scores of 10 or higher viewed as requiring more extensive discharge planning. Descriptive and correlational analyses were conducted.

Results: Data included 1,604 30-day readmissions representing 8.3% of all discharges. Cases with BRASS of 10 or higher were less likely to be discharge home (58.7%) than those with scores less than 10 (88.5%). Using 10 as cut-point, sensitivity and specificity as well as positive and negative predictive values (PV) of BRASS were computed for hospital stay 30 days or longer and readmission within 30 days of first discharge to home. Results for specificity and negative PV indicate BRASS did relatively well at predicting those who did not experience problems. However, low percentages for sensitivity (11.2% to 13.8%) suggest many patients who experienced problem were classified as low-risk. Similarly, low positive PV (8.4% to 11.6%) suggest many classified as being at risk did not experience problems.

Conclusion: The reported rate of 30-day readmission is likely conservative as analysis involved data from only one acute care facility. Although findings support the utility of the BRASS in predicting length of hospital stay and discharge disposition, they raise questions about its utility in identifying patients at risk of readmission.

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Author: Dr. Marilyn Hodgins

Title: Use of Acute Care Services within 30-days of Hospital Discharge: An Analysis of Administrative Data

Type of Abstract: Poster

Objectives: Project objectives were to examine the incidence of acute care service use (i.e., hospital readmission or emergency department visit) by patients within 30 days of a discharge to home and to describe the demographic and clinical profile of these patients.

Approach: Unplanned re-entry into the acute care system by recently discharged patients is costly not only to the healthcare system but also to patients and their families. Unplanned re-entry has been described as an indicator of treatment failure (i.e., deficiencies in the discharge process) and as being potentially preventable. Project involved descriptive and correlational analyses of 13-months of administrative data and 19,351 discharges from one tertiary hospital. The median number of hospital discharges per day was 46 but ranged from 5 to 82 per day. The majority of these discharges (84.6%) was to a home or home-like setting.

Results: There were 1,604 hospital readmissions within 30-days of discharge, representing 8.3% of all discharges. The number of 30-day readmissions experienced by patients ranged from 0 to 8. The odds of 30-day readmission was higher for men than women. Although the odds of readmission was lower for those less than 35 years of age, no significant difference was observed in the odds of readmission among older age groups (35 to 64, 65 to 79, 80 years or older). Approximately one-third (36.7%) of 30-day readmissions involved those aged 35 to 64 years. Of cases discharged home, 12.2% (n = 2,004) returned to emergency department (ED) within 30 days. Almost half of these ED visits occurred within 7 days with more than 200 within 24 hours of discharge.

Conclusion: Reported rates of re-entry are likely conservative as analysis involved data from only one acute care facility. An unexpected finding was the high rate of re-entry by patients aged 35 to 64 years, which challenges the assumption that problems during the transition from hospital to home primarily involve the elderly.

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ID: 491

Author: Ms. Sophie Hogeveen

Title: Spending wisely: Home care Reassessment Intervals and Cost in Ontario

Type of Abstract: Poster

Objectives: With an aging population and increased focus on home and community care, questions are raised about how best to allocate limited resources. We sought to answer two common misperceptions about home care assessments: 1) Are we doing too many assessments?; 2) Are we spending too much on assessment?

Approach: In Ontario, long-stay home care patients are assessed using the RAI-Home Care (RAI-HC). For the first question, RAI-HCs completed in years 2012-2014 were retrieved and linked to a subsequent assessment (N=63,653). Change in key outcome scales between assessments was calculated. To answer the second question, RAI-HCs completed in years 2012-2014 were linked to a billed services record (N=288,278). Hours or number of home care visits were aggregated from the assessment date until the next assessment/discharge. Service volumes were multiplied by region-specific costs for providing each service. Assessment cost was based on the assumption that an assessment requires two hours, at a fixed rate.

Results: 82% of home care patients experienced any change in either cognition, functional status, depression symptoms, pain, health instability and risk of caregiver distress or long-term care placement within 6 months of prior assessment. 57% of home care clients experienced any decline and 52% experienced any improvement.

The sum of cost of assessment was divided by the sum of cost of care (assessment and services) provided. 1.56% of total cost of care was spent on assessment. In other words, less than 2% of money spent on home care clients was devoted to their assessment with the RAI-HC. Results were consistent across type of assessment and region.

Conclusion: Regular assessments are needed to capture change in health status for individual care planning and health system planning. Further, the relative cost of assessment is low. Eliminating duplication of assessments and improving sharing of information throughout the health care system can make the assessment process more efficient.

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Author: Ms. Tara Horrill

Title: A Critical Reflection Upon Cancer Disparities Among Indigenous Peoples in Canada: Looking Beyond Individual Risk Factors

Type of Abstract: Poster

Objectives: To critically analyze the evidence informing our understanding of disparities in cancer diagnosis, survival and mortality between Indigenous peoples and non-Indigenous peoples in Canada.

Approach: Critical analysis of health services and policy literature regarding cancer among Indigenous peoples, beginning with a search of peer-reviewed published and grey literature specific to cancer among Indigenous peoples in Canada (First Nations, Métis, Inuit). Selection process was guided by an Indigenous librarian. We sought to look beyond analysis of biomedical and lifestyle risk factors, to evidence supporting a social, political and ideological understanding of health disparities in this population; therefore, we intentionally selected literature that moved beyond a traditional biomedical approach to understanding health disparities. The literature was reviewed for social, political and ideological factors influencing the cancer experience.

Results: Three groups of factors were identified that may influence cancer-related disparities among Indigenous peoples in Canada, including: (1) access barriers, which included (a) physical/geographical access to health services (location and availability of services) and (b) systemic structural mechanisms relevant to access; (2) federal/provincial funding and jurisdictional ambiguities; and (3) neoliberal ideologies underpinning the health care system. Neoliberal ideologies place primary importance on the individual, focusing on micro-level causes of poor health (genetics, lifestyle choices). These results indicate alternate influences on cancer-related disparities, which move beyond the individual level to the broader social, political and historical context of Indigenous health.

Conclusion: The Truth and Reconciliation of Canada report invites healthcare leaders to consider historical and political influences on health. This critical analysis suggests cancer-related disparities cannot be understood or addressed solely through a biomedical lens. An individualistic focus takes Indigenous health concerns out of context and limits health care reform possibilities.

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Author: Dr. Jongnam Hwang

Title: An examination of team-based primary care and self-reported unmet healthcare need in Ontario and Quebec

Type of Abstract: Poster

Objectives: Despite substantial efforts to transform primary health care from single practice to team-based care, minimal research has investigated the association between team-based primary health care and unmet healthcare need in Canada. This study aimed to examine the relationship between team-based primary healthcare and self-reported unmet healthcare in Ontario and Quebec.

Approach: We used cross-sectional survey data from the 2008 Canadian Survey of Experiences with Primary Health Care (CSE-PHC) collected by Statistics Canada. Data included information on Canadians' experience with primary health care and health conditions. A total 3,441 of Ontario and Quebec residents were included in the sample. To compare unmet need by team-based care and non-team based care (i.e. single practitioner), an optimum 1:1 Propensity Score matching (PSM) was done to adjust for age, sex, education, employment, income, self-rated health, health status, and etc. After PSM, logistic regression was conducted to compare the association of team-based care on unmet need.

Results: Before PSM, 205 individuals (5.95%) among a total of 3, 441 respondents reported an experience of unmet healthcare need in the past year while 114 individuals (6.5%) among a total of 1,770 respondents reported an experience of unmet healthcare need in the past year after PSM. Before matching, Ontario and Quebec residents who were treated by team-based care providers were less likely to report unmet healthcare need in the past year (OR: 0.53; 95%CI: 0.39-0.71). After PSM, residents who were treated by team-based care were still less likely to report experiencing unmet healthcare need (OR: 0.59; 95%CI: 0. 40-0.86) compared to those being cared for by providers in a single practice.

Conclusion: The findings from this study suggest that provision of team-based care is a possible solution to address unmet healthcare need in Canada. This also implies that expanding and encouraging team-based care setting in Canada may improve equity in access to primary care.

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Author: Dr. NASER IBRAHIM

Title: Is the North at a Higher Risk! Challenging a Long Held Assumption in First Nations Health in Manitoba

Type of Abstract: Poster

Objectives: To measure the change over time (1986-2014) in the hospitalization rates for acute, chronic and mental health Ambulatory Care Sensitive Conditions (ACSC) in Northern (isolated) and Southern Manitoba First Nations (FN) communities; and determine whether isolated Northern communities have higher hospitalization rates compared to Southern FN communities and all Manitoba.

Approach: A retrospective study utilizing administrative health data collected by the Ministry of Health. The study population included all Manitoba residents eligible under the universal Manitoba Health Services Plan and living in FN communities or urban Manitoba between 1986 and 2014. A population-based time-trend analysis of hospitalization for acute, chronic, and mental health-related ACSC (controlled for age, sex and socioeconomic status) was conducted using de-identified administrative claims data housed at the Manitoba Centre for Health Policy.

Results: Hospitalizations rates for acute and chronic ACSC are decreasing over time in the southern and Northern FN communities and in all Manitoba. However, the rates are significantly higher in the southern compared to the Northern FN communities which are higher than the rest of Manitoba. Alarming, the hospitalization rates for mental health related conditions (Mood disorder and schizophrenia) are significantly increasing over time in the Southern FN communities while they are relatively stable in the Northern FN communities and in all Manitoba. Overall, the rates for all investigated ACSC are significantly higher in the Southern and the Northern FN communities compared to all Manitoba.

Conclusion: Policy and decision-makers need to be aware that health outcomes in FN communities do not appear to be dependent on isolation level only. More studies are needed to determine the relationship between levels of access to care, type and extent of community based care and health outcomes.

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ID: 405

Author: Dr. Jalila Jbilou

Title: Closing the gap between health promotion/prevention and clinical services in primary care: Lessons from a strategic community health needs assessment in NB

Type of Abstract: Poster

Objectives:

- Discuss drivers and challenges of community health needs assessment strategy (CHNA)
- Identify political, structural, and symbolic dimensions of integration between health promotion/prevention and clinical services in primary care in a context of strategic CHNA
- Discuss key recommendations for healthcare managers in New Brunswick and elsewhere in Canada

Approach: A mixed method within the Donabedian Framework and using comparative case study involving four communities in New Brunswick. Secondary analysis of existing databases combined to data gathered from focus groups and semi-structured interviews with key informants, and deliberative forums for results validation and health priority setting. Participatory observational analysis was performed. Data triangulation was done to validate data and research by cross verifying the same information. This triangulation of data aimed to increase credibility and validity of the discussed key recommendations

Results: Quantitative data were gathered from existing surveys and provincial administrative databases. Qualitative data were gathered from four communities (2 semi-urban, 1 rural and 1 urban) were included for a total of 29 focus groups (373 participants) and 13 semi-structured interviews. Cross analysis and validation of qualitative and quantitative data show major intercommunity health disparities, differences in social realities and challenges, inconsistency in healthcare and social services, CHNA process' ownership and understanding, hidden local agendas, and timing. These dimensions were major challenges for the CHNA. Political, structural, and symbolic issues underlie to the integration of preventive services in primary care. These issues are not only related to structural/organizational aspects but also to inter-sectors and intra-sectors dynamics (information flow, budgets, jurisdictions...).

Conclusion:

- Inter-sector and intra-sector coordination and collaboration: Formal contract and informal strategic collaborative network ties need to be identified at early stages
- Strategic data management: Importance to involve patients/population and clinicians in data validation to better understand local realities and expectations
- Political issues: Democratic deliberative processes are cornerstones

All Authors: Jalila Jbilou, Shelley Robichaud

ID: 397

Author: Mr. William Jeon

Title: Patient Utilization of General Practitioner and Emergency Physicians Based on Distance from Ophthalmologists' Offices

Type of Abstract: Poster

Objectives: Eye care services in Prince Edward Island (PEI) are government-insured if provided by general practitioners (GPs), emergency department (ED) physicians or ophthalmologists. Ophthalmologists' offices are unevenly distributed across PEI. We investigated if remoteness from ophthalmologists' offices in Charlottetown influenced patients' utilization of GPs/ED for ocular problems.

Approach: PEI physician billing database from 2010-2012 were analyzed. Ocular conditions were recognized using International Classification of Diseases (ICD-9) codes. Specialty codes were used to identify practitioner's specialty. Five regions (Charlottetown, Kings & Queens, Prince, Stratford and Summerside) identified by their first-three alphanumeric characters of the postal codes were examined. Location of ophthalmologists' and optometrists' offices were mapped. Utilization of GPs and ED for ocular concerns and prevalence of ocular conditions were analyzed by including and excluding ICD-9 code for diabetes as part of the ocular conditions. All rates were age-standardized and 95% confidence interval was used for comparison between regions.

Results: Five of six ophthalmologists in PEI have their offices in Charlottetown, with one located ~11km west of Charlottetown. 52 GPs, 20 optometrists' offices and three EDs are located across the province. Prevalence of ocular conditions were similar across the five regions: 8%-9% in 2010 and 10%-12% in 2012.

The percentage of patients with ocular concerns visiting GPs was lowest in Charlottetown (15%) and highest in Prince (24%, $p < 0.0001$). Prince is the farthest region from Charlottetown. Similarly, ED visits for ocular concerns was 5% in Charlottetown and 10% in Prince ($p < 0.0001$). The percentage of visits to ophthalmologist was 55% in Charlottetown vs. 40% in Prince. These patterns were consistent throughout 2010-2012 whether ICD-9 code for diabetes was included or excluded as part of the ocular conditions.

Conclusion: Patients with ocular concerns visit GPs/EDs more frequently in regions located farthest away from ophthalmologists' offices. Due to lack of instrumentation and knowledge, eye care provided by GP/ED physicians is different from eye care provided by ophthalmologists. The differences in utilization of GPs/EDs and ophthalmologists suggest inequity in eye care.

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ID: 448

Author: Ms. Yunni Jeong

Title: A Population-Based Economic Evaluation of Laparoscopic Versus Open Gastrectomy for Gastric Cancer Patients

Type of Abstract: Poster

Objectives:

- Assess health care system costs for laparoscopic gastrectomy (LG) versus open gastrectomy (OG).
- Compare costs of treatment with LG versus OG.

Approach: A population-based, retrospective, person-level costing study of patients diagnosed with gastric cancer between 2005 and 2008 was performed. A cost-minimization analysis from a health system perspective was conducted with a one-year time horizon. Costs associated with index admission, re-admissions, surgery, physician billings, drug benefits, homecare, and emergency department visits were derived from administrative data. The incremental equipment cost for LG was derived from a multi-center investigation of procedural costs. Mean net costs were derived and adjusted for length of stay. Costs were inflated to 2016 Canadian dollars.

Results: A total of 903 patients were analyzed. LG was conducted in 83 patients and OG in 820 patients. The difference between mean net costs for LG and OG was significant. Cost per patient per thirty days of use was \$7,825 (Standard Deviation = \$16,080) for LG and \$ 9,839 (Standard Deviation = \$ 21,321) for OG ($p=0.02$), representing savings of \$2,014 per patient per thirty days of use with LG.

Conclusion: LG for gastric cancer results in lower costs than OG. Savings from LG adoption could be directed toward training and education in this minimally invasive technique. However, future economic evaluations using randomized controlled data are necessary to confirm our findings.

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ID: 238

Author: Ms. Rachel Jolley

Title: A Conceptual Framework for Practicing Person-Centred Care

Type of Abstract: Poster

Objectives: Canada is among many countries that have begun adopting a person-centred care (PCC) approach to improve healthcare, however a gap remains in practical guidance on PCC implementation. We aimed to develop a conceptual framework to guide the implementation of PCC, and subsequent development of indicators to evaluate PCC practice.

Approach: Collaborating with our patient partner, we developed a generic conceptual framework for describing PCC in actionable ways through a narrative review and synthesis of the literature. The Donabedian model for healthcare improvement was applied to map PCC domains into the categories of 'Structure,' PCC domains as they relate to the healthcare system/ the context in which care is delivered; 'Process,' PCC domains associated with the processes involved in the interaction between patients and healthcare providers; and 'Outcomes,' PCC domains that relate to the results of the interactions between the patient, healthcare provider, and healthcare system.

Results: The framework incorporates an array of PCC domains. Structural elements included: creating a PCC culture across the continuum of care, including an operational definition of PCC; providing a supportive work environment that contributes to PCC; developing policies for patient and family engagement and developing structures to support the use of health information technology in providing PCC. Process elements involved domains of: promoting patient-healthcare provider communication; engaging patients and caregivers in their care; and supporting processes for care coordination and continuity of care. Outcome domains included: providing timely access to care; measuring Patient-Reported Outcomes, using healthcare service utilization data and healthcare costs to evaluate investments in PCC and outcomes.

Conclusion: Overall, this framework provides a roadmap for healthcare systems and organizations to facilitate implementation of PCC, to work towards improving the healthcare and outcomes for patients journeying through the health system.

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ID: 540

Author: Ms. Rachel Jolley

Title: Assessing the reproducibility of medical record coding in Emergency Department data

Type of Abstract: Poster

Objectives: Health system performance indicators use routinely collected data typically generated by trained humans who code/transform information into standardized formats (eg:diagnostic codes). However, conclusions gained from this data can only be trusted after demonstrating their reproducibility of coding processes. We examined the coding reproducibility in Alberta Emergency Department (ED) diagnostic codes.

Approach: An initial audit of ED diagnostic codes was performed by Alberta Health Services (AHS) Health Information Management Working Group which included an approximate 1% random sample of total Emergency Department visits across 11 sites in Alberta between October 1, 2013 to December 31, 2013. The medical records were reviewed and diagnoses were re-coded using the WHO's International Classification of Diseases (ICD-10) system by a data collection coding coordinator or health information management students, further validated by experienced AHS data collection team members. Agreement and reliability analysis was subsequently performed.

Results: The total number of records reviewed was n=1636 with an overall percent agreement of ICD coding across all hospitals of 86.5%, ranging from 68.4% to 95.2%. The disease and symptom categories that had the lowest percent agreement included J18: Pneumonia, organism unspecified, 68.2%; S01: Open wound of head, 77.8%; S82 Fracture of lower leg, including ankle 76.5%; F10: Use of alcohol, 79.5%. The discrepancies in coding between the professional hospital coder and auditor were also categorized, with the highest number falling in the category of the re-abstractor and original coder used a different code to represent the same condition (30.0%); and where both coders had recorded codes for very similar if not identical conditions, often where one code was more precise than the other (18.2%).

Conclusion: Overall this study shows that the data is not completely accurate, and this accuracy determined from reliability is dependent on the hospital site and the different conditions that are being coded. More training should be done with professional coders to improve the accuracy of this data.

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ID: 181

Author: Mr. Aaron Jones

Title: Longitudinal Construct Validity of the Minimum Data Set Health Status Index (MDS-HSI)

Type of Abstract: Poster

Objectives: The MDS-HSI is a preference-based health-related quality of life (HRQOL) measure derived from the minimum data set (MDS). Although the validity of the MDS-HSI has been examined in cross-sectional studies, the longitudinal construct validity of the measure has not been explored.

Approach: A retrospective cohort was created of adult home care patients in a large health region in Ontario with a baseline Resident Assessment for Home Care (RAI-HC) between January 2010 and December 2014 and a follow-up assessment between 90 and 540 days after the initial assessment. Multivariate linear regression models were fit to estimate the responsiveness of the MDS-HSI to clinically significant changes in mobility, cognition, emotion, health stability, pain, self-care, and communication. The relationship between change in symptoms and change in MDS-HSI was also examined.

Results: Adjusted for age and sex, changes in all of the domains were associated with a change in MDS-HSI that exceeded the commonly accepted minimal important difference (MID) of 0.03. The largest changes in MDS-HSI were observed with changes in pain (-0.09), cognition (-0.064) and mobility (-0.055). Resolution or new onset of most of the symptoms were associated a change in MDS-HSI exceeding the MID. The largest change in MDS-HSI related to symptom change was observed in whether pain disrupts usual activity (-0.14).

Conclusion: The MDS-HSI demonstrates good responsiveness to change in the domains of mobility, cognition, emotion, health stability, pain, self-care, and communication. The measure is also responsive to a majority of the symptoms measured in the MDS. These finding support the longitudinal construct validity of the MDS-HSI in a home care population.

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ID: 82

Author: Mr. Kyle Kemp

Title: A Validation Study of the Emergency Department Subsection of the Canadian Patient Experiences Survey – Inpatient Care (CPES-IC) Instrument

Type of Abstract: Poster

Objectives: In 2014, the Canadian Institutes for Health Information (CIHI) introduced a pan-Canadian survey of inpatient experience. One section of this survey pertains to arrival at hospital via the emergency department (ED). The study objective was to validate survey responses regarding ED attendance against four reference standards derived from administrative data.

Approach: From April 2014 to March 2016, data was obtained for 40,292 patients who completed a telephone survey, and provided a valid response (yes/no) to arrival at hospital via ED. Surveys were administered within six weeks of discharge from one of 93 acute-care hospitals in Alberta. Survey data were linked to inpatient (Discharge Abstract Database [DAD]) and ED (National Ambulatory Care Reporting System [NACRS]) records using personal health number, discharge date, and hospital. The four reference standards were variations of the DAD “entry code” field with/without accompanying ED record. Sensitivity, specificity, positive predictive (PPV), and negative predictive values (NPV) were calculated.

Results: The sample had a mean age of 53.5 ± 19.4 years, was predominantly female (63.4%), was admitted to hospital urgently ($n=54.5\%$), and had a mean length of stay of 5.3 days (range=1-465). Of the four reference standards, the one which used the DAD entry code of “E” (emergency) without corresponding ED record performed best (sensitivity=0.946, specificity=0.779, PPV=0.778, NPV=0.947). Despite this, 22.2% (4,891/22,049) of patients who reported going to the ED did not receive care there. Conversely, 5.5% (975/18,243) of patients who reported not going to the ED received care there. Patients who reported attending the ED, but did not receive any care in the ED, tended to be younger, female, and admitted to hospital on an elective basis.

Conclusion: In Alberta, the question regarding hospital arrival via ED can be misleading to respondents. We suggest the addition of a qualifying statement about receiving ED-based care to this question. As the survey will be implemented in other Canadian jurisdictions, future analysis is needed to determine if our findings apply nationally.

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ID: 535

Author: Ms. Cynthia Kendell

Title: The Governance of Research Involving the Secondary Analysis of Health Data: A Comparative Analysis of Canada and Selected Countries

Type of Abstract: Poster

Objectives: Health information collected in clinical and/or administrative health databases is increasingly used for research purposes. This work examines the governance of health research involving the secondary analysis of health data in Canada and selected countries, focusing on the potential implications for individual privacy/confidentiality and the conduct of health research.

Approach: A descriptive analysis of the main policies governing the collection, use, and disclosure of health information (i.e., federal and provincial information legislation, and provincial health sector-specific legislation) and the ethical guidelines governing health research (i.e., the Tri-Council Policy Statement for Ethical Conduct of Research Involving Humans) in all Canadian provinces was performed. A comparative analysis of the Canadian governance model alongside governance models in the United States, United Kingdom, and Australia was then undertaken with an aim to identify potential strategies for improvement.

Results: In Canada, challenges exist specific to the secondary analysis of health data. These include: 1) The complexity of the current governance model undermines compliance given that researchers may not easily determine which pieces of legislation apply; 2) Accepted criteria for determining when data may be considered de-identified do not exist, potentially contributing to the misclassification and over-regulation of certain health information; 3) Research ethics boards are increasingly given decision-making authority on privacy-related issues, which may be beyond their scope and expertise; and 4) Individual consent is only sought if the research ethics board has deemed it necessary, thus notions that informational control rests with the individual are largely illusory.

Conclusion: Clarity around the application and scope of regulatory structures, improvements in the function of oversight mechanisms, and greater transparency regarding the uses of individuals' personal health information are important first steps to achieving a balanced and comprehensive approach to protecting individual privacy while using health information to improve healthcare delivery.

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ID: 389

Author: Ms. Anum Irfan Khan

Title: Examining Income Inequalities in Cancer Screening: A decomposition analysis using administrative data in Ontario, Canada

Type of Abstract: Poster

Objectives: Multiple studies have reported on socioeconomic inequalities in cancer screening. This study sought to further our understanding of the drivers of socioeconomic inequalities in cancer screening uptake through a decomposition analysis. We examined the relative contributions of determinants to measured disparities in cancer screening uptake across income groups within Ontario.

Approach: Ontario residents who participated in the 2009/10 or 2011/12 Canadian Community Health Survey Cycles and were eligible for colorectal (n=22358) or cervical cancer (n=22465) screening were included in the study. We measured income inequalities in screening uptake using the Concentration Index (CI) corrected for binary data (Erreygers-corrected, CERreygers); $CI > 0$ indicates inequality to the disadvantage of the poor and $CI < 0$ indicates inequality to the disadvantage of the rich. A decomposition of CERreygers was performed (using a probit regression with marginal effects) to determine the relative contribution of sociodemographic, socioeconomic and health-system variables to measured inequalities in cancer screening uptake.

Results: Overall, the rate of cancer screening uptake was 61.9% for colorectal cancer and 66.6% for cervical cancer. The corresponding CERreygers (and standard error) were 0.074 (0.008) and 0.148 (0.007) for colorectal and cervical cancer screening respectively, suggesting that receipt of appropriate screening is concentrated within higher income groups - with greater inequality evident for cervical cancer screening. The largest contributors to income inequalities in colorectal cancer screening included household income (102.3%), marital status (42.6%) and home ownership (25.3%). Age (-29.8%), sex (-10.3%), household size (-23.4%), and employment status (-20.7%) all contributed negatively to measured inequality. For cervical cancer screening, household income (38.9%), marital status (18.6%) and home ownership (14.3%) were major contributors to measured inequality. All other determinants contributed less than 10% to CERreygers.

Conclusion: Decomposition of the concentration index provides policymakers with key insights around the determinants of observed inequalities in screening uptake for colorectal and cervical cancer. These findings can play a critical role in shaping public health policy and prevention programming to improve equitable participation and uptake of cancer screening across Ontario.

All Authors: Anum Irfan Khan, Luke Mondor, Deborah Cohen, Walter Wodchis

ID: 205

Author: Ms. Tanya Khan

Title: Steps Toward Comparable Reporting: Using EMR Data for Performance Measurement

Type of Abstract: Poster

Objectives: A national data and standards organization has collaborated with primary health care (PHC) partners in Ontario on two projects to demonstrate aspects of a PHC Electronic Medical Record (EMR) Content Standard. This presentation will highlight key project learnings and consider opportunities to use EMR data for PHC performance measurement.

Approach: In 2015, demonstration projects were initiated between the pan-Canadian stakeholder organization and two PHC organizations in Ontario. The respective projects took on two different implementation approaches (i.e., front-end implementation at point of care versus back-end mapping of the partner's existing standardized terms to the EMR standard). Each project included an evaluation component which explored the impact of implementing the content standard on data collection (including clinician change management), data quality and the ability to calculate PHC indicators.

Results:

- Key findings for the demonstration projects are as follows:
- Both project partners were able to extract and submit usable EMR data for analysis regardless of the implementation approach and despite the varying project challenges.
- The front-end point-of-care implementation approach emphasized a strong need for clinician change management and education.
- Further vendor engagement may facilitate more efficient problem-solving and minimize challenges related to data extraction.
- Using the PHC EMR CS improved data quality by increasing the number of standardized records.
- Structured data decreased the time and resources required to analyze EMR data for calculating performance measures.
- There was high interest in practice profile and clinical indicators. However, more refined technical specifications and longer period of data collection are required to derive benefit for performance measurement.

Conclusion: The demonstration projects tested the feasibility of implementing a PHC EMR Content Standard in existing EMR systems. Further engagement with EMR vendors, as well as enhanced clinician change management support, will drive future progress in EMR data standardization efforts and enable more comparable reporting in Canada.

All Authors: Tanya Khan, Charisa Flach

ID: 86

Author: Dr. Maritt Kirst

Title: What works in integrated care programs for older adults with complex needs? A realist review

Type of Abstract: Poster

Objectives: We conducted a realist review of the evaluative evidence on integrated care programs for older adults to identify key processes that lead to the success or failure of these programs in achieving outcomes such as reduced healthcare utilization, improved patient health, and improved patient and caregiver experience.

Approach: The realist review method sought to identify the relationship between program mechanism, context and outcomes, through processes of initial theory-building, literature search, extraction, quality appraisal and synthesis. Initial theories guiding the review included trust in multidisciplinary team relationships, organizational readiness, and the role of leadership to establish an organizational culture receptive to integrated care programs. We searched for international academic literature in 12 indexed, electronic databases and grey literature through internet searches, to identify evaluative studies on integrated care programs for older adults, published between January 1980 and July 2015, in English.

Results: A total of 65 articles, representing 28 integrated care programs, were included in the review. We identified two context-mechanism-outcome configurations (CMOCs): 1) trusting multidisciplinary team relationships, and 2) provider commitment to and understanding of the model. The review emphasizes the importance of trusting multi-disciplinary team relationships for processes of effective communication and knowledge sharing, and for program success. Contextual factors such as strong leadership that sets clear goals and establishes an organizational culture in support of the program, along with joint governance structures, supported team collaboration and subsequent successful implementation. Provider commitment to and understanding of the model (organizational readiness), as fostered by strong leadership, clear governance, time to build an infrastructure to implement and flexibility in implementation, emerged as key processes instrumental to success.

Conclusion: This review included a wide range of international evidence, and identified key processes for successful implementation of integrated care programs that should be considered by program planners, leaders and evaluators.

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ID: 243

Author: Dr. Koffi Kpelitse

Title: Developing Decision-Support Tools to Improve Residential Care for Canadian Seniors

Type of Abstract: Poster

Objectives: The objective of this work was to update the case mix system for residential care assessment data in Canada: the Resource Utilization Groups version III (RUG-III). This system includes a grouping methodology as well as a relative resource use indicator termed the case mix index (CMI) value.

Approach: Methodological issues with the RUG-III grouping methodology were addressed by applying staff time measurement (STM) data from the Canadian staff time resource intensity verification (CAN-STRIVE) study lead by the University of Waterloo in 2005-2007. This STM data and relative wage rates from the annual Ontario Hospital Association (OHA) wage rate survey were used to derive new CMI values. These new CMI values will be applied to residential care assessment data submitted to the Canadian Institute for Health Information (CIHI).

Results: This work resulted in a new grouping methodology called Resource Utilization Groups version III Plus (RUG-III Plus) and associated CMI values. Like RUG-III, the RUG-III Plus grouping methodology is also organized into 7 clinical categories (from lowest to highest clinical complexity) and 44 groups. In RUG-III Plus, the criteria for three of the groups and three of the categories are updated to better align with data capture in the new suite of residential care assessment tools. The clinical hierarchy for the behaviour and impaired cognition categories are reversed because the CAN-STRIVE data demonstrated higher staff time for residents classified in the behaviour problems category. The CMI values were updated to better reflect staff time provided to residents in Canadian residential care organizations.

Conclusion: RUG-III Plus represents the first update to residential care case mix system in Canada in 20 years. Once implemented in CIHI analytical products and reporting tools, RUG-III Plus will provide a more appropriate tool to identify peers and examine time series trending among CCRS organizations.

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ID: 176

Author: Dr. Grace Kyoon-Achan

Title: Leveraging community-based “Resources” to transform healthcare in Manitoba First Nations Communities

Type of Abstract: Poster

Objectives: Manitoba First Nations rely on external resources to provide healthcare services in communities that are often portrayed as being dependent on the contribution of governments and government funded resources for their health and survival. But that position does not credit the complex contribution made by local strengths, skills and knowledge.

Approach: This qualitative and collaborative study involved 8 First Nations communities in Manitoba the design, implementation and analysis. Interviews were conducted by community-based local research assistants. In thinking about primary healthcare on reserves, participants shared what they consider to be the strengths that their communities leverage to promote health and wellbeing. 299 in-depth interviews were collaboratively analyzed with community partners and further analysis was done using Nvivo software.

Results: Important themes include the role of individuals in the community who are committed to positive change and transformation, they act as advocates for the health of individuals, families and communities. The role that culture and community-based processes and activities play in challenging deeply embedded factors affecting health. Independent local sharing economies that augment nutrition and other needs of communities and livelihoods that are created by local economies and result in community-grown solutions to combat dependency and helplessness. Communities are also well positioned to prioritize resources and programming to suit immediate and long term healthcare needs.

Conclusion: The key to transform seemingly intractable health crises in communities, may lie in strengthening existing community-based sources of health capital. Awareness and support of benign innovations and innovators will involve placing resources in the hands of communities to boost the efficacy of sustainable solutions to the current health crises.

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ID: 317

Author: Dr. Sylvie Lambert

Title: Exploring the Needs, Access, and Understanding of Information among Culturally and Linguistically Diverse (CALD) Patients in Managing Chronic Illness

Type of Abstract: Poster

Objectives: Culturally and linguistically diverse (CALD) patients often do not have access to the health information needed to manage their chronic illness. This study explored the information needs of CALD patients managing a chronic illness, how they access and understand health information, and how existing translated resources address their information needs.

Approach: Using a qualitative descriptive approach, a convenience sample of 10 patients of Italian, Chinese, and Greek backgrounds diagnosed with a chronic illness were recruited at several Montreal-based health centres. Face-to-face, semi-structured interviews were conducted with a researcher who spoke the language or with an interpreter. At the end of the interview, participants completed a sociodemographic questionnaire in their language. All interviews were audio-recorded and transcribed verbatim. Inductive content analysis was used to identify codes, categories, and emerging themes.

Results: Four Italian, five Chinese, and one Greek patient(s) aged from 42 to 83 years were interviewed. Diagnoses included diabetes, cardiovascular disease, and cancer. CALD patients focused explicitly on information needs related to medical and lifestyle management, with variability noted based on illness appraisal. Information needs pertaining to psychosocial management were more implicit and identified throughout the interviewing process. The physician is the designated gatekeeper of health information and family and friends are the primary support for interpretation and translation. Online sources are typically not used. Native language use is preferred when possible or lay terms in English/French. Culturally-adapted available resources are considered to be useful as reminders and should be available in both English/French and native languages, with topics on health promotion.

Conclusion: CALD patients managing chronic illness were found to have varying information needs; revealed difficulty accessing and understanding health information; and would prefer bilingual, culturally-adapted health information materials. Study findings can inform how to improve current interventions and services and how health care professionals can better fulfill CALD patients' information needs.

All Authors: Jane Li, Tracy Nghiem, Andrea Maria Laizner , Nathalie Folch, Élisabeth Gélinas-Phaneuf, Sylvie Dubois , Christine Maheu, Sylvie Lambert, Karissa Clayberg, Ellen Rosenberg

ID: 59

Author: Dr. Lauren Lapointe-Shaw

Title: An Incentive Code for Timely Follow-Up After Hospital Discharge in the Province of Ontario

Type of Abstract: Poster

Objectives: Financial incentives to improve follow-up after hospital discharge have been introduced in the United States and Canada, but it is unknown whether they have been successful. Our objective was to evaluate the impact of a financial incentive program on timely physician follow-up after hospital discharge.

Approach: This was an interventional time series analysis using health administrative data for of all medical and surgical patients discharged home from hospital between April 1st, 2002 and January 30th, 2015 in Ontario, Canada. The intervention was a supplemental billing code (value of \$25 Canadian) introduced October 1st, 2006, for physician follow-up within 14 days of discharge from hospital. The primary outcome was an outpatient visit within 14 days of hospital discharge. Secondary outcomes were 7-day outpatient follow-up and a composite of emergency department visits, non-elective hospital readmission, and death within 14 days.

Results: There were 8,008,934 patient discharges included over the study period. Follow-up occurred for 44.3% (n=3,545,105) within 7 days and 66.0% (n=5,284,742) within 14 days. By 14 days after discharge, 17.1% (n=1,369,382) had reached the composite outcome. The incentive code was claimed in 31% of eligible visits, by 51% of eligible physicians, and cost \$17.5 million over the study period. There was no change in rates of 14-day follow-up (p=0.50), 7-day follow-up (p=0.51), or the composite outcome (p=0.19) after the incentive was introduced.

Conclusion: Despite uptake by physicians, a financial incentive did not alter follow-up after hospital discharge. This lack of effect may be explained by features of the incentive and/or by extra-physician barriers to follow-up. These should be considered by policymakers before introducing similar initiatives.

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ID: 509

Author: Dr. Eric A Latimer

Title: Implementing the strengths model of case management for people with severe mental illness: Early results of a study from 3 provinces

Type of Abstract: Poster

Objectives: Dozens of intensive case management (ICM) teams across Canada seek to support people with severe mental illness in the community, but there is no consensus on how to do so. We describe initial results concerning barriers and facilitators to implementation of a promising way of delivering ICM: the strengths model.

Approach: In the Fall of 2014, 9 case management teams in Toronto, Kingston, Ottawa, Granby, Chicoutimi and Québec City received training in the strengths model from its Kansas-based developers. Another team, in St John's, had already begun the process. Several complementary methods, such as team leadership meetings and regular fidelity assessments, supported implementation. Fidelity assessments, which independent site visitors conducted every six months, also served to measure the success of implementation. Implementation observers made regular site visits to interview and observe case managers, supervisors and directors. Site reports were coded and themed to summarize facilitators, barriers and strategies to implementation.

Results: Except for the St John's site which had received earlier training, all teams were at low fidelity at baseline (range: 15.5 – 26; 27 is needed for moderate fidelity). Two years later, two teams were still at low fidelity, six at moderate and two had reached high fidelity (37.2 and 41.3 out of 45, above the cut-off of 36). Most sites were able to modify program structure and the supervision process quickly, but progress with clinical elements (eg integrating strengths assessments, connecting clients with naturally occurring resources) has been slower. Strength of motivation of program leadership at the outset appears to have been a key facilitator to attaining higher fidelity, and resistance from individual case managers an important barrier.

Conclusion: Training teams in a promising but clinically challenging practice by U.S.-based experts has proved possible, even in the presence of a language barrier. Program leadership motivation to implement the model coupled with initial buy-in from case managers appear to be important conditions for success.

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ID: 485

Author: Dr. Ruth Lavergne

Title: Fee-for-service physician billings through the 2008-09 financial crisis: Did Physicians Change Behaviour?

Type of Abstract: Poster

Objectives: Fee-for-service physicians are largely responsible for planning for their retirements. Changes in financial markets may influence how long they remain in practice and how much they choose to work. The 2008 financial crisis provides an opportunity analyze elasticity of physician service supply in response to dramatic changes in financial markets.

Approach: We examined quarterly fee-for-service data from CIHI's National Physician Database covering all Canadian provinces and territories, with the exception of Prince Edward Island and Yukon territory, over the period from 1999/2000 to 2013/14. We examined changes in the number of specialist physicians, per-physician service volume, and fee-for-service (FFS) payments following the financial crisis in fall 2008, relative to pre-crisis trends. We explored whether patterns differed by physician age, sex, specialty, and by the type of service provided (visits or consultations vs. procedures). We fit segmented regression models to population-level data, adjusting for seasonality and correlation between observations.

Results: The number of physicians billing fee-for-service increased in the years following the financial crisis, but this was driven largely by increased numbers of young physicians entering practice. We observed no relative increase in the number of fee-for-service physicians ages 55 and older. This suggests that the crisis did not measurably alter the timing of retirements. Average per-physician billings increased significantly in the post-crisis period, amounting to an additional \$30,000 (CAD) per physician in annual billings relative to amounts predicted by pre-crisis trends. However, the average number of services per physician did not increase relative to pre-crisis trends. Increases in billings were driven by primarily by increases in per-service medical specialist billings for visits and consults.

Conclusion: We observed no evidence of delayed retirement or increased service volume in the post-crisis period. Increases in payments were observed across all ages and were not driven by increases in service volume immediately following the financial crisis.

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ID: 526

Author: Mr. Matthew Leyenaar

Title: Comparing models of care in community paramedicine using case study analysis

Type of Abstract: Poster

Objectives: Using the findings of a literature review, a comparative case study analysis was conducted to summarize aspects of care planning and case management in community paramedicine (CP) programs. The comparative case study analysis complemented the literature review by clarifying concepts and identifying gaps in the published literature.

Approach: The literature review consisted of a systematic search strategy, pre-determined inclusion/exclusion criteria, multiple reviewers to reduce bias in study selection, and a standardized data extraction tool. Ten studies that met inclusion criteria served as subjects for the case study analysis. The case study analysis investigated: Who was seen? What was assessed? What care was provided? And the rationale for these aspects within the respective models of care. The corresponding authors for each of the articles were consulted to confirm findings. Comparison between findings was used to compare and contrast models of care.

Results: Aspects found in the different models of care were grouped into four themes; enrolment, assessment and management, intervention and care, and collaboration. Patient enrolment in CP programs is usually initiated by paramedic services. Other approaches are patient initiated – either at time of need or through self-selection. Community paramedics use a variety of assessments, often including a functional assessment, and provide point-of-care testing to inform the provision of care and treatment. Treatment without the use of medications and avoidance of hospital emergency departments were the most common aspects of care and intervention. Care plans regularly have a formalized means of communication with other care providers. In all 10 cases, this included collaboration with primary care or family doctors.

Conclusion: Community paramedicine provides immediate or scheduled care with a focus on collaborative approaches to reduce emergency utilization. We cannot conclude that all identified aspects of care planning or case management found in this analysis constitute a fully comprehensive model of care. Future work is needed to develop CP standards of care.

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ID: 463

Author: Ms. Zhiying Liang

Title: Perceived Social Support Trajectories and All-Cause Mortality Risk in Coronary Artery Disease

Type of Abstract: Poster

Objectives: Perceived social support has been acknowledged as an important predictor of health outcomes in cardiovascular diseases. The aim of this study is to investigate the effects of perceived social support trajectories on risk of mortality and health-related quality of life in coronary artery disease (CAD) patients.

Approach: Data were obtained by linking the Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease, a population-based registry of CAD patients who received catheterization in Alberta. Perceived social support was measured using the Medical Outcomes Study (MOS) Social Support Survey, a 19-item self-reported measure of social support that consists of four domains including emotional/informational, tangible, affectionate, and positive social interaction. Growth mixture analysis was used to estimate latent classes of perceived social support trajectories over time. Cox regression was used to assess the effects of perceived social support trajectories on all-cause mortality controlling for patients' demographic and clinical characteristics.

Results: Of the 5159 patients included in this analysis, 535 (10.4%) deaths were reported within five years of first catheterization and 3092 (60.0%) completed MOS Social Support Survey at baseline. Growth mixture analysis revealed three latent classes of support trajectories: high (36.1%), moderate (45.4%), and low (18.5%). Unadjusted analysis revealed significant association between trajectories of social support and all-cause mortality ($p < 0.05$). After controlling for sex, age, type of treatment, depression symptoms, body mass index, history of myocardial infarction, and number of comorbidities, Cox regression analysis revealed that perceived social support trajectories was no longer significantly associated with all-cause mortality.

Conclusion: This study highlights the important role that perceived social support plays in management of CAD. These findings can aid the design of targeted social interventions that promotes tangible and emotional support in individuals with CAD.

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ID: 306

Author: Dr. Morgan Lim

Title: Priority setting for cataract surgery: Development of an appropriateness and prioritization instrument for eye care practice

Type of Abstract: Poster

Objectives: Cataract surgery priority criteria in Ontario are too generic and not based on clinical or quality of life (QoL) factors relevant to ocular disease. The purpose of this study is to develop an Ontario specific tool to assess appropriateness and prioritization of cataract surgery through modification of an existing tool.

Approach: A modified Delphi process was followed using online surveys with 3 rounds of participation and a face-to-face meeting to reach consensus. The survey consisted of criteria from the existing instrument (Western Canada Wait List Project), additional items from other instruments and expert recommendations. An expert panel in eye care was assembled using snowball sampling and asked to rate the relevancy of each criteria on a 5-point Likert scale. Clinical scenarios based on these criteria were used to assess inter-rater reliability. Agreement was measured using the kappa statistic. To contextualize patient experience, 3 patient stories were filmed and shared with panelists.

Results: The expert panel consisted of 9 Ophthalmologists, 3 Optometrists, and 1 General Practitioner. Following the face-to-face meeting, consensus on whether to include or exclude was reached on all criteria. Seventeen criteria were included and sixteen were excluded. The most significant changes to the existing instrument were related to categorization of comorbidities and expansion of HRQoL questions. Seventeen clinical scenarios were developed based on these criteria. The expert panel assessed these scenarios against the criteria, showing moderate (n=6, kappa 0.41-0.6), good (n=7, kappa 0.61-0.8), and very good (n=3, kappa 0.81-1) agreement.

Conclusion: Using the Delphi process we have modified the WCWL to include appropriateness and to better reflect patient QoL. Our next step is to calculate a scoring algorithm for the instrument using patient collected data.

All Authors: Morgan Lim, Bronwyn Thompson, Marvilyn Palaganas, Robert Reid, Devesh Varma, Dean Smith, Sherman Quan, Iqbal Ahmed, Tien Wong

ID: 368

Author: Mr. Cliff Lindeman

Title: A National Surveillance Project on CKD Management in Canadian Primary Care: Overview and representativeness

Type of Abstract: Poster

Objectives: This project has two principal objectives: 1) Determine the current primary health care practice pattern on risk identification and process of care for CKD based on established quality indicators, and 2) investigate the care variation across patients and provider 'demographics, and regional characteristics.

Approach: Although healthcare is provincially/territorially administered in Canada, existing national networks such as the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) are facilitators for the conduct of nationally based quality improvement-based studies to improve chronic kidney disease (CKD) care. The CPCSSN database contains socio-demographics, treatment, laboratory tests, and comorbidity information. Our approach is to develop a national open cohort of CKD patients managed in Primary Care. This project will demonstrate proof of concept for a new model of care delivery, and may provide the basis for developing relevant policies and knowledge translation strategies to enhance the uptake of our findings.

Results: The CPCSSN database was used to develop a cohort of CKD patients being managed in primary care between January 1, 2010 and December 31, 2015. In this cohort, we identified 3,060,836 and 534,823 available serum creatinine and urine albumin measurements respectively. There were ~381,000 urine albumin measurements in individuals with diabetes compared to ~154,000 measures in those without diabetes. The availability and spread of the measures of kidney function (serum creatinine) and albuminuria that defined CKD are comprehensive across multiple timeframes and disease conditions.

Conclusion: To our knowledge, this represents the largest Canadian cohort of CKD in primary care. The coverage and representativeness of the measures appears high and represents an opportunity for understanding the current practice pattern in CKD management. This has implications on providing opportunities for focused and effective CKD care.

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ID: 91

Author: Mrs. Elena Lungu

Title: Generic Drugs in Canada, 2015

Type of Abstract: Poster

Objectives: Generics360 is a PMPRB publication series that compares the price of generic drugs in Canada with those in other industrialized countries. This edition focuses on the 2015 calendar year and includes an analysis of the OECD market.

Approach: The analysis compares the manufacturer ex-factory generic prices of a large sample of drugs in Canada with their corresponding international prices. International comparisons focus on the seven countries the PMPRB considers in reviewing the prices of patented drugs (PMPRB7): France, Germany, Italy, Sweden, Switzerland, the UK and the US, as well as select countries in the Organisation for Economic Co-operation and Development (OECD). Data was collected from the IMS AG MIDAS™ Database.

Results: Generic prices in Canada have been reduced by half over 2010 to 2015, markedly narrowing the gap between Canadian and foreign prices. Both provincial generic pricing policies and the depreciation of the Canadian dollar contributed to the decrease in the difference between foreign and Canadian prices.

Conclusion: While the provinces markedly reduced the prices of generic drugs for all Canadians through the implementation of generic pricing policies, prices in other countries continue to be lower. This analysis is designed to inform policy discussions related to the Canadian prices of generic drugs.

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ID: 255

Author: Ms. Karen MacDonald

Title: THE VALUE OF DIAGNOSTIC TESTING FOR PARENTS OF CHILDREN WITH RARE GENETIC DISEASES

Type of Abstract: Poster

Objectives: Patients with rare genetic diseases traditionally experience a prolonged and expensive diagnostic odyssey culminating in a delayed diagnosis or, too frequently, no diagnosis at all. Whole-exome sequencing (WES) can now rapidly identify mutation(s) responsible for rare, single-gene diseases, and potentially reduce the diagnostic odyssey.

Approach: Before WES is adopted into clinical practice, a clear estimation of the value of a WES-based diagnosis for families is critical. Based on our literature review and qualitative research (focus groups, interviews with parents of children with rare genetic diseases), we developed a discrete choice experiment (DCE) survey which has been administered online to parents of children with rare genetic diseases. The DCE included 14 choice tasks with 6 attributes and 3 alternatives considering orthogonality, D-efficiency and level balance. Preferences were analyzed using conditional logit and hierarchical Bayes.

Results: Preliminary results include n=214 respondents: mean age 41 (range: 22-65 years), female (90%), have university degrees (42%), married (72%), employed full-time (46%), and income >\$80,000 CAD (58%). Overall, 88% reported their child had genetic testing, and 64% reported their child had a diagnosis. Of those who reported no diagnosis, the mean duration spent seeking a diagnosis is 5.7 years (range: 1-25 years). The most valued attributes were time to obtain an answer from the diagnostic test (diagnosis or not), chance of obtaining a diagnosis and cost. The positive or negative impact of results and the type of diagnostic testing were significant but not as strongly valued, with WES preferred to other testing. Parents were willing to pay approximately \$5000 CAD on average for diagnostic testing.

Conclusion: Parents of children with rare genetic diseases place a high value on obtaining information, regardless if it is a diagnosis or not. Additionally, WES is valued over other diagnostic tests.

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ID: 383

Author: Mr. Adrian MacKenzie

Title: The importance of population health needs and cross-profession division of labour in health human resources planning: Examples from applications to pediatric anxiety and depression in Nova Scotia

Type of Abstract: Poster

Objectives: 1) To present a dynamic, multi-professional, needs-based simulation model for health human resources (HHR) planning; 2) To estimate, using this model, the supply of and requirements for physicians, nurses, social workers, and psychologists to address anxiety and depression among school-aged children in Nova Scotia through 2030.

Approach: We present a new simulation model to inform HHR planning which, unlike existing models, a) is dynamic in nature, b) estimates HHR requirements as a function of population health needs, and c) estimates requirements for multiple types of HHR simultaneously and interdependently. We also demonstrate the model's application to planning for anxiety and depression among school-aged children in Nova Scotia using data from population health surveys, administrative databases, relevant published literature, and informal interviews with key policy stakeholders.

Results: Several issues of significance to HHR planning for this specific population, and with general relevance to HHR and health service planning more broadly, are evident. First, estimates of HHR requirements are highly sensitive to even modest differences in the assumed future value of planning parameters, including but not limited to the incidence or prevalence of pediatric anxiety and depression. Second, depending on the planned number and type of services to be provided to address these conditions among this population, the existing supply of HHR in Nova Scotia has the capacity to deliver those services only under certain conditions. Third, a wide range of policy scenarios have the potential to increase or decrease the capacity of Nova Scotia's HHR to address these conditions among this population.

Conclusion: HHR planning models that explicitly considers both measures of population health needs and the division of labour across multiple types of HHR while allowing for the dynamic simulation of changes to planning parameters over time can help reduce unmet needs for health care.

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ID: 109

Author: Dr. Martha MacLeod

Title: Licensed/Registered Practical Nurses in Rural and Remote Canada: Key Concerns for Recruitment and Retention

Type of Abstract: Poster

Objectives: Licensed practical nurses (registered practical nurses in Ontario) (LPNs) are seldom specifically considered in studies of nursing recruitment and retention. The purpose is to identify key personal, practice, and workplace characteristics of LPNs in rural and remote Canada, to better understand LPNs' contributions to the rural and remote workforce.

Approach: A survey was mailed to a stratified systematic sample of registered nurses, nurse practitioners, registered psychiatric nurses, and LPNs in communities of 10,000 or less in every province and all nurses in the territories, with the assistance of nursing regulatory bodies. The Canada-wide survey response rate was 40% (3822) and the LPN response rate was 38% (1,370). Included were questions on demographics, employment status, work setting, satisfaction, scope of practice, perceptions of primary health care in their workplaces, career plans, and intention to retire. Data were analyzed through descriptive and inferential statistics along with thematic analyses of qualitative data.

Results: Rural LPNs worked in a full range of practice settings including primary care, acute care, community health, home care, mental health and addictions, and long-term care. Rural LPNs were more likely than other rural nurses to be employed in part time permanent and casual positions, and were less likely to live in their work communities. LPNs were also less likely than other rural nurses to be satisfied with their work communities and nursing practice and more likely to report working below their regulated scope of practice. Findings will also focus on rural LPNs' perceptions of primary health care in their workplaces, engagement with interprofessional teams, practice demands and resources, career plans, experiences of rural practice, and what it means to work in rural/ remote settings.

Conclusion: Nursing Practice in Rural and Remote Canada II (RRNII) is the first-ever comprehensive study of the rural and remote LPN workforce. The survey findings provide important information for planners and policy makers, particularly in determining an optimal staff mix in primary health care settings in rural and remote Canada.

All Authors: Martha MacLeod, Julie Kosteniuk, Janna Olynick, Erin Wilson, Norma Stewart, Judith Kulig, Davina Banner

ID: 404

Author: Ms. Maggie MacNeil

Title: “The messiest space for technology adoption” : Barriers and Facilitators to Enabling Health Technology Innovation and Adoption for Canadian Older Adults

Type of Abstract: Poster

Objectives: Innovative technologies have the potential to enhance the health and quality of life of older persons; however, there are considerable barriers to developing and implementing new health technologies in Canada. We identified policy and regulatory barriers to, and facilitators of, successful innovation and safe adoption of aging-related technologies in Canada.

Approach: This study is part of AGE-WELL, a Canadian Network of Centres of Excellence focused on technology and aging. We conducted forty semi-structured interviews with policy-makers, innovators and other stakeholders. Interviews were transcribed and analyzed by two independent researchers using NVivo11. Analysis followed a directed coding approach (Hsieh & Shannon, 2005) aimed at mapping the data to the Council of Academic Hospitals of Ontario framework (Michell, 2014), which was further expanded by our scoping review (submitted for publication) (MacNeil et al, 2017). This framework describes key stages of the healthcare innovation pathway and specific themes that crosscut this pathway.

Results: The interviews revealed barriers of particular relevance for older persons. For example, pathways for uptake of technology in home and community care are less clear than pathways for technology adoption in acute care and other health care settings (ie. long-term care). Differences stem from technology assessment processes that do not prioritize, or have the capacity to assess, new or emerging health technologies; rigidity in procurement systems; and an underfunded community care sector. Facilitators include a transition towards value-based procurement; open, early communication in the innovation process to ensure technologies align with system needs; and ability to move resources among the silos across the health care system.

Conclusion: Health system structures, path dependency and current funding models may be bigger barriers than regulatory processes to enabling the successful development and adoption of aging-related technologies in Canada. Further work and research are needed to identify strategies to enable more timely and effective use of aging-related technologies.

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ID: 312

Author: Ms. Mary-Ann MacSwain

Title: Examining the Drivers of High Cost Healthcare Use in Prince Edward Island

Type of Abstract: Poster

Objectives: Our research aims to use administrative health data to identify the main drivers of high cost healthcare use to identify key actionable areas to target in order to improve the efficiency and effectiveness of healthcare delivery to a population of high cost users in Prince Edward Island.

Approach: Healthcare costs (physician billing and acute inpatient stays) were determined for individuals aged 30+ on PEI between 2012-13 and 2014-15. Each individual was assigned a percentile ranking based on their annualized adjusted cost for each year of the study. Chronic disease prevalence and measures of neighbourhood level socio-economic status were assigned to each individual. Trends in healthcare spending among the top 1%, 5%, and 10% of healthcare users were analyzed. The relationship between chronic disease prevalence and the social determinants of health with high cost use healthcare use was examined for all study years.

Results: The top 5% of healthcare users account for just under three-quarters of healthcare spending, while the top 1% and 10% of healthcare users account for 41% and 84% of costs, respectively. Modest reductions in spending among this small portion of the population could result in millions of dollars in recovered costs. Chronic conditions were significantly more prevalent among the top 5% of healthcare users. There was also a significant relationship between levels of material and social deprivation, and the concentration of high cost health care users in a neighbourhood. Additionally, it was observed that the rate of high cost healthcare use varied greatly between neighbourhoods.

Conclusion: Our analysis revealed variation in rates of high cost users across PEI, and a relationship between high cost use, chronic disease prevalence, and the social determinants of health. Further work is underway involving more advanced and in depth analyses aimed at further understanding this population of high cost users.

All Authors: Mary-Ann MacSwain, Michelle Patterson, George Kephart, Juergen Krause

ID: 27

Author: Dr. Leslie Malloy-Weir

Title: Development and pilot testing of a decision aid for dementia patients in long-term care in Saskatchewan and their surrogate decision makers

Type of Abstract: Poster

Objectives: The main objective of this study is to develop and pilot test a decision aid for antipsychotic medications that: (1) meets the information needs of dementia patients in long-term care and their surrogate decision makers; and (2) promotes informed decision making, patient-centred care, and patient safety.

Approach: The decision aid will be developed using a systematic process that involves assembly of a steering group (i.e., dementia patients and their surrogate decision makers, physicians, nurse practitioners, social worker, pharmacist). This group will: (1) identify the decisional needs of patients and surrogate decision makers and their preferred informational format(s), and (2) assess evidence on antipsychotic medication use in long-term care. After a prototype of the decision aid has been developed, it will be pilot tested with dementia patients, surrogate decision makers, physicians and nurse practitioners who are making actual decisions about the use, or non-use of antipsychotic medications.

Results: Quantitative results will include mean ratings of the decision aid's acceptability, comprehensibility, and feasibility by dementia patients, surrogate decision makers, physicians and nurse practitioners. Statistically and non-statistically significant changes in patient and surrogate decision maker's knowledge about antipsychotic medications (i.e., risks, benefits, side effects); treatment preference (antipsychotic medication, no antipsychotic medication, unsure); decisional conflict; and satisfaction with the decision pre- and post-exposure to the decision aid will also be reported. Qualitative findings will include perceptions about the usefulness of the decision aid for decision making purposes, positive aspects of the decision aid, and recommendations for improvement. Qualitative findings will be used to help interpret quantitative findings.

Conclusion: Findings from this study will: (1) address existing gaps in knowledge, (2) reduce uncertainties around how to implement patient decision aids in Saskatchewan and elsewhere in Canada, and (3) inform policy and practice on how information about antipsychotic medications is communicated to patients with dementia and/or their surrogate decision makers.

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ID: 369

Author: Ms. Kimberly Manalili

Title: Developing Person-Centred Quality Indicators Informed by the Patient Voice

Type of Abstract: Poster

Objectives: Despite efforts being made across Canada to implement and measure Person-Centred Care (PCC), quality indicators informed by patient needs, preferences, and values are lacking. Our study aimed to better understand what matters most to diverse communities with respect to their healthcare, to develop indicators from patient and caregiver perspectives.

Approach: We partnered with the Ethno-Cultural Council of Calgary to obtain diverse perspectives and experiences with healthcare. We engaged “Community Connectors,” trained in qualitative research to recruit participants and conduct focus group discussions (FGDs) with 6 ethno-cultural communities, including Chinese, South Asian, Filipino, Latino-Hispanic, East African, and Syrian communities. Additional participants were recruited from the Alberta Health Services Patient and Family Advisory Group (PFG), representing long-term residents of Canada and/or are Canadian-born or Indigenous to participate in FGDs. Connectors and research staff conducted transcription/translation. Data was analyzed using content thematic analysis, and findings were validated by the Community Connectors and PFG.

Results: A total of 8 FGDs were conducted, with 65 participants comprised of people from different ethnicities/cultures, genders, ages (18-80 years), rural/urban communities, living with disability(ies), are Indigenous, and/or identified as LGBTQ+. Participants shared positive and negative perceptions and experiences with healthcare, including cultural-specific perspectives, needs, and values. Analysis resulted in broad themes and sub-themes, which will provide a basis for the development of patient-informed quality indicators that are also culturally relevant/appropriate. Themes included: access to care; cost of care; medical tourism and consultation; equality of care; communication; patient and caregiver engagement; preferences for care; expectations of care; professional ethics; and patient safety. Participants also offered suggestions for improvements to the healthcare system, including online access to their health information and needed education on patient rights.

Conclusion: Our study provided us with the opportunity to better understand diverse perspectives on the healthcare system. In order for quality indicators to be person-centred and improve health and healthcare for all, they must be developed with input from patients and caregivers that reflect the diversity of Canada.

All Authors: Kimberly Manalili, Vic Lantion, María José Santana, Fartoon Siad

ID: 376

Author: Ms. Kimberly Manalili

Title: Collaborating with Ethno-Cultural Communities for Person-Centred Care Research: Approaches to Engagement

Type of Abstract: Poster

Objectives: Person-Centred Care (PCC) seeks to incorporate patient voices to inform research and healthcare policy and practice. However, effective engagement of diverse and under-represented communities is often a challenge, due to various barriers that hinder participation. Our research explored approaches to effectively engage ethno-cultural communities in qualitative PCC research.

Approach: Challenges in engaging ethno-cultural communities in healthcare and research include potential language and cultural barriers, and lack of availability or resources. Thus, we partnered with The Ethno-Cultural Council of Calgary (ECCC), a community-based organization employing a 'broker/connector model,' to engage key individuals with an extensive reach within their communities. "Community Connectors" liaise between their specific community and service providers/institutions. We drew on participatory action research methods, and identified 6 Community Connectors with an interest in research from Chinese, South Asian, Filipino, Latino-Hispanic, East-African, and Syrian communities, who received training in conducting qualitative research for our PCC study over 6 months.

Results: Through active engagement of the Community Connectors, we were able to obtain diverse perspectives needed for our PCC study. 46 participants for 6 focus groups were recruited in August-September 2016. We documented successful and flexible approaches to engage communities in ways that were most suitable or appropriate for a particular community. Various methods included: recruiting participants through their own networks, including use of ethnic media sources; conducting focus groups in other languages, to accommodate language barriers; and use of community settings during evenings/weekend, to accommodate access, availability, and comfort. Through this study, we initiated ongoing partnerships with ECCC and together built research capacity among the Connectors, in the aim of continuing sustained and meaningful engagement with diverse communities through our PCC research.

Conclusion: Partnering with a community-based organization and exploring various approaches to engaging ethno-cultural communities allowed us to obtain diverse perspectives needed for our PCC research. Incorporating patient voices requires addressing potential issues related to equity and understanding the barriers to effective and meaningful engagement that is representative of Canada's diverse make-up.

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ID: 164

Author: Mrs. Redinela Mani

Title: Early integration of palliative care in Ontario: INTEGRATE quality improvement project

Type of Abstract: Poster

Objectives: The INTEGRATE Project aims to identify and manage patients who would benefit from a palliative approach to care early in the illness trajectory and across healthcare settings, through educational resources for primary care (PC) and oncology providers and through the testing of integrated models designed to manage identified patients.

Approach: Palliative care integrated models have been pilot tested in 4 regions in Ontario (4 cancer centres (CCs) and 4 primary care (PC) practices). All participating sites completed Pallium Canada's LEAP module, which provides primary level palliative care education. The need for a palliative care approach for a given patient is identified using the Surprise Question "Would you be surprised if this person died in the next 6-12 months?" Data collection began following implementation, sites submitted patient-level data to evaluate the integrated models and its impact on patients' care.

Results: Implementation of the surprise question began in November 2014 and to date, 294 patients have been identified through participating PC practices, and 933 patients through regional CCs within their Multidisciplinary Cancer Conferences. The integrated models specify that identification of patients with the surprise question should initiate a palliative approach to care, including symptom assessment, Advance Care Planning and Goals of Care discussions, and referrals as needed. PC practices have reported a variety of life-limiting diagnoses for their patients including cancer, heart disease, and renal disease, among others. Participating CCs targeted specific cancer sites: lung, gastrointestinal, glioblastoma and head and neck. Analyses are underway to assess completion rates of Advance Care Planning discussions, palliative care referrals and healthcare utilization, and will be complete by February, 2017.

Conclusion: This project has the potential for significant impact on organizational and health system design for patients and their families who will benefit from earlier identification of palliative care needs in both the PC and oncology setting. The results of evaluation will translate into provincial recommendations for Ontario.

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ID: 72

Author: Mr. Derek Manis

Title: Accessing health and social care services within a suburban community: A case for interprofessional and collaborative networks to improve community-based care

Type of Abstract: Poster

Objectives: Health services and policy research literature examines HIV in urban or rural communities, but suburban communities have not received attention, despite how most of the Canadian population lives within one. We investigated how people living with HIV (PLWH) in a suburban Ontario, Canada community access health and social care services.

Approach: PLWH were recruited by two methods: the regional AIDS Service Organization or snowball sampling. In-depth interviews were conducted, recorded and guided by hermeneutic phenomenology associated with Martin Heidegger. All interviews were transcribed verbatim and housed within the Google Apps for Education platform. Every co-participant had the opportunity to review their interview transcript and add, delete or modify any of their statements to capture their experience in as much detail as they felt appropriate. Transcripts were exported to NVivo for Mac version 11.2.1 for coding and data analysis.

Results: Data saturation was reached after the 13th interview. Data analysis of the co-participants' experiences revealed concerns regarding how they kept their HIV status secret within their suburban community, especially within pharmacies when filling their prescriptions. Co-participants also shared stigmatizing experiences attributed to a lack of education about HIV by health care practitioners (e.g., pharmacists, physicians and nurses) and by others within their community. Ageing with HIV identified the development of multimorbidity and complex care needs, which were suboptimally managed by health and/or social care practitioners working in isolation. The reliance upon public transit as a primary mode of transportation was a significant barrier for many co-participants and illustrated the relationship between transportation, access to care and unmet health needs in suburban communities.

Conclusion: The findings from this research establish how PLWH, and people with multimorbidity, would benefit from improved access to community-based interprofessional health and social care. Additionally, health care delivery could be ameliorated with further sensitivity training to the needs of stigmatized populations. These findings are relevant to policymakers and clinicians.

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ID: 300

Author: Dr. Emily Marshall

Title: Do primary care (PC) provider wait-times and hours of availability predict their patients' use of other PC providers and emergency departments (ED)? Results from the MAAP-NS Study

Type of Abstract: Poster

Objectives: To determine if primary care provider (PCP; family physician and nurse practitioner) wait-times and hours of availability predict their usual patients' use of other PC providers and ED by linking provincial survey data with administrative billing data in Nova Scotia (NS).

Approach: All NS PCP practices were surveyed by telephone, collecting information on each provider and practice including urgent/non-urgent wait-times (response rate 85%; N=632 family physicians and 43 nurse practitioners). MAAP-NS survey data was linked to administrative billing data of patients (N=842,972); usual provider was assigned, and number of visits to other PCPs and ED were counted for the year matching the survey data collection and previous two years; 17% of patients saw only one PCP, 49% saw 2-4, and 34% saw 6+. Analysis will control for seeing PCPs in co-located practices, and within-year comparisons will reduce confounding of patients changing providers.

Results: Usual PCP's urgent wait-times was positively correlated ($p < 0.001$); while wait-time for routine appointments was negatively correlated, to number of providers seen ($p=0.002$). Patients who saw multiple PCPs made more ED visits than those who saw one provider ($p < 0.001$). Patients whose PCPs did not offer after-hours care had more ED visits ($p=0.001$); greater for those with mental illness ($p=0.03$). Patients' ED use increased as PCPs wait-times for urgent ($p < 0.0001$) and routine ($p=0.0002$) appointments increased. Among chronically ill patients, ED visits increased with urgent and non-urgent appointment wait-times. A type of "threshold effect" where a slight drop in ED use when urgent wait-times increased from 1 to 2-5 days was followed by an increase when the wait extended beyond 5 days, which was greater among chronically ill.

Conclusion: As PCP provider wait-times and after hours care are correlated with ED use, particularly among chronically ill patients, it may be useful to explore strategies to reduce wait-times and increase after hours care to see if they lower costs related to use of ED resources, particularly among chronically ill patients.

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ID: 449

Author: Ms. Mary Martin

Title: Applying the Health Links Approach for Adults with Intellectual/Developmental Disabilities and Complex Health Needs in Kingston, Ontario

Type of Abstract: Poster

Objectives: People with intellectual/developmental disabilities (IDD) experience poorer access to healthcare compared to others. This pilot aims to assess a novel interministerial model that links Ontario Ministry of Health and Long-Term Care's 'Health Links' program with the Ministry of Community and Social Services' (MCSS) Developmental Services sector for complex patients with IDD.

Approach: Referrals are made by the MCSS' Pressures and Priorities committee, a group that provides local case management for urgent, complex patients with IDD. Patients and informal/professional caregivers meet with the Health Links nurse to complete a tailored Coordinated Care Plan (CCP). The CCP is disseminated among providers and is intended to help identify goals, document health information and develop an individualized plan. The pilot's implementation and outcomes will be evaluated using mixed methods. Surveys and interviews with patients, caregivers and care providers will explore their experiences and chart review at primary care and hospital levels will examine health service usage.

Results: Our presentation includes the various approaches and tools used to facilitate the referral process and engage representatives from the MCSS' developmental services sector, as well as coordinating health care for this vulnerable population. These include a guide to help Health Links nurses complete the standard CCP for adults with IDD (emphasizing their unique and additional needs), a Health Information Passport to ensure safety and communication in emergencies and a recommendation for completing a comprehensive health review in primary care (including physical exam and preventive manoeuvres). We also highlight early results such as patient demographics, patient and system outcomes related to the implementation of the CCPs, as well as barriers and facilitators related to fostering cross-ministerial coordination and collaboration.

Conclusion: The goal of the intervention is to increase capacity among health and social care providers to deliver coordinated, patient-centered care to vulnerable and complex patients in our region. This pilot can be used as a framework for the expansion of Health Links interventions that target other vulnerable populations across Ontario's

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ID: 254

Author: Ms. Taylor McGuckin

Title: Trends in recent cannabis use among individuals admitted to in-patient psychiatry in Ontario, Canada from 2006 to 2015

Type of Abstract: Poster

Objectives: Cannabis use can interfere with treatment progression in people with mental health illnesses. This study examined trends in cannabis use among individuals in inpatient psychiatry in Ontario, Canada between 2006 and 2015. Demographic, clinical, and health service factors related to use, including concurrent use of other substances, were examined.

Approach: This study used a retrospective cross-sectional study design to evaluate cannabis use among individuals admitted to inpatient psychiatry in Ontario between January 1, 2006 and December 31, 2015. The study used data from the Resident Assessment Instrument for Mental Health (RAI-MH), an assessment system used in all hospitals providing inpatient psychiatry in Ontario. These data include the types and frequency of use of substances, including cannabis. We examined patterns of cannabis use over time by demographic factors, clinical characteristics including DSM IV diagnoses and psychiatry symptoms, prior health service utilization, and patterns of concurrent substance use.

Results: Among the 295,267 individuals admitted to inpatient psychiatry during the study period, 17% (50,125) reported using cannabis within 30 days of admission. There was an increasing trend in the unstandardized prevalence of recent cannabis use over time, from 14.7% in 2006 to 22.6% in 2015. Prevalence of recent cannabis use increased with younger age, among men, and among those with psychotic disorders. Prevalence was lower among mood and anxiety disorders. There was no difference in the prevalence by the number of prior psychiatry admissions. Recent cannabis use was common among individuals reporting use of other substances, particularly cocaine, alcohol, and opiates.

Conclusion: This analysis has implications for monitoring and evaluating the effects that impending recreational cannabis policy-reform may have on cannabis use in individuals in inpatient psychiatry. Public health initiatives can be generated to protect vulnerable populations, such as those in inpatient psychiatry, from potential negative implications of increased access to cannabis for non-medicinal purposes.

All Authors: Taylor McGuckin, Christopher Perlman

ID: 24

Author: Ms. Dale McMurchy

Title: Preventing Alcohol-Exposed Pregnancies: The Evidence and Experience

Type of Abstract: Poster

Objectives: Canadian guidelines recommend pregnant women not drink alcohol. However, 1% of infants develop FASD, costing \$10 billion annually. This research supports efforts to increase awareness about the negative effects of prenatal drinking and improve initiatives to support women of childbearing age and women with alcohol-related problems to prevent prenatal drinking.

Approach: A comprehensive review of the published and grey literature on preventing alcohol-exposed pregnancies and FASD was undertaken. The evidence collected covered drinking patterns, risk and protective factors, and effective interventions related to consumption of alcohol prior to, during and post pregnancy. Evidence was reviewed for quality and relevance, then synthesized and grouped by level of prevention. Additionally, qualitative and quantitative data on awareness and prevention strategies were collected from Ontario health and social service providers. Focus groups and interviews were conducted with key service providers, family physicians and representatives from Indigenous communities; 114 surveys were completed by service providers.

Results: About 60% of women in Ontario drank shortly before pregnancy, 9% during pregnancy. Various profiles identified higher risk for alcohol-exposed pregnancies, including low socioeconomic status, prior drinking patterns, older age, Canadian-born, and higher income and education.

Broad-based prevention can raise awareness about the risks of prenatal drinking and FASD, but this approach is most effective in groups at lowest risk, and does not necessarily translate into reduced drinking. Educating healthcare providers and brief interventions with women are relatively more effective. In Ontario, there are few direct preconception interventions and some women get mixed messages about risks from their providers. Screening, counselling and referral to specialized treatment can be effective. Specialized support for women with alcohol-related problems must be accessible and multi-faceted to be successful.

Conclusion: All women of childbearing age should receive information about the risks associated with alcohol use in pregnancy and, those who need it, further interventions. Prevention requires cross-sectoral integration and coordination across all levels of FASD prevention – from preconception through prenatal care and postpartum – and within overall alcohol reduction.

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ID: 159

Author: Ms. Heather McNeil

Title: Lessons from the field: A province-wide implementation of the WatLX™, a patient experience instrument for rehabilitative care

Type of Abstract: Poster

Objectives: Researchers have worked with providers, patients, and decision makers to develop a valid and reliable instrument that measures rehabilitative care patients' experience across the care continuum. We report on the implementation of the province-wide pilot of WatLX™, a patient experience evaluation tool for rehabilitative care.

Approach: Following a systematic review, a parsimonious measure named the WatLX™ was created and evaluated for content and face validity. Cognitive interviewing (Willis, 2015) tested usability, and feasibility and reliability testing was conducted in three ambulatory care settings in southwestern Ontario; the process of developing that instrument is available in two papers published in the Archives of Physical Medicine and Rehabilitation (McMurray et al., 2015a, 2015b). The WatLX™ was used for a provincial proof of concept study at multiple ambulatory rehabilitative care sites (n=24) involving a broadly representative sample of patients (n=968) by age, gender and primary condition.

Results: This provincial pilot study used the WatLX™ tool to gather patient experience data from participants receiving rehabilitative care in a variety of ambulatory care settings. The results of the study suggest that the WatLX™ is both valid and reliable. The characteristics of the patient, condition for which they were receiving care, and grouping by age, gender, and care setting required adjustments to the WatLX™ survey administration and data collection protocol, however its implementation minimally impacted workflow. Feasibility, as measured by item completion rate, was high. Use of training webinars, the development of a relationship between stakeholders involved in the pilot, clear communication, and a provincial culture in healthcare of a greater focus on the patient experience helped to ensure the success of the pilot study,

Conclusion: Reliable instruments ensure accurate measurement of phenomena, however complementary elements such as effective protocols, and staff training were found to be crucial to the success of this multi-site study. Future research will examine the digitization of the survey to address resource constraints, and data entry challenges.

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ID: 415

Author: Mr. Mark McPherson

Title: Modifying the 'Modified Delphi' – Indicator Selection for Public Reporting at Health Quality Ontario

Type of Abstract: Poster

Objectives: Health Quality Ontario is mandated to publically report on the performance of the provincial health care system. To achieve this mandate, we have developed a novel methodology for the selection of a set of indicators that can help providers, stakeholders and the public better understand how the system is performing.

Approach: Health Quality Ontario is mandated to monitor and report on the performance of Ontario's health system. To maintain the relevance of our reporting, we conduct comprehensive indicator reviews of our publicly-reported indicators. To ensure a robust review, HQO has adapted the modified Delphi process, traditionally based on evidence and expert opinion, to engage in consultations to incorporate public and provider input all multiple stages for the selection process. Consultations included focus groups, survey methods and individual interviews. This process has most recently been used to recommend a robust set of indicators for public reporting on hospital and home care performance.

Results: Using extended consultations, a new communications strategy and open feedback systems, the final set of recommended indicators are relevant and impactful and promote engagement between public reporting and quality improvement priorities for organizations (in scorecards and other internal reporting). We will demonstrate how these modifications have yielded indicators that are more relevant for public reporting. Further, indicators recommended through our process have informed other provincial work including accountability agreements and topics for quality standards. This modified "Modified Delphi" has successfully been used to select indicators for primary care, long-term care, hospital care (patient safety) and home care. This modified "Modified Delphi" has helped mitigate the risks associated with changing reported indicators, by ensuring strong consultation and defensible, rational decision-making.

Conclusion: Our new process has allowed us to identify robust and impactful indicators for public reporting and has increased the transparency of our work. This process is transferrable to all organizations that are interested in systematically producing a set of priority measures based on public, provider and expert consensus.

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ID: 289

Author: Ms. Kaleigh Meisner

Title: Evaluation of a Health and Fitness App (Addo) in Workplaces in Nova Scotia

Type of Abstract: Poster

Objectives: The aims of this study are to evaluate a health promoting mobile app (Addo - developed in Nova Scotia) regarding its implementation and impact on promoting health behaviour changes and management of individual health in workplace settings in Nova Scotia.

Approach: Participants were recruited using word-of-mouth strategies in workplaces throughout the Halifax Regional Municipality and through social media tools such as Linked In and Facebook. Both treatment (n=51) and control groups (n=51) were assessed through a longitudinal and mixed-methods design following the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) model. Data were collected through quantitative surveys (pre-, post- and 3 months post-use) and qualitative interviews.

Results: Results indicate that the implementation of Addo was low in the treatment group. Using validated and standardized survey tools (General Self-Efficacy and RAND-SF-36), the majority of both treatment and control group participants scored 'excellent/very good' at baseline (77%) and 3-months post-use (79%). Addo showed no impact on behavior change and interview feedback on the app was generally negative. The low levels of usage and overall implementation of the app, combined with participants self-reported measures of healthy behaviours may indicate a lack of need for this population. The lack of impact and negative perceptions about the app may have influenced the developer to discontinue the app, which occurred near the end of the evaluation.

Conclusion: Results from this evaluation indicate low use and no impact, however, in populations where need is greater or where apps are more motivating, a more positive outcome is possible. As the app market for health promotion continues to grow, it is important that evidence-based evaluation inform their development and use.

All Authors: Kaleigh Meisner

ID: 288

Author: Dr. Matthew Menear

Title: Strategies for engaging service users and families in collaborative mental health care: a systematic review

Type of Abstract: Poster

Objectives: Service users and families are often considered important partners in collaborative mental health care (CMHC) teams. This study aimed to identify and describe the range of strategies used to engage service users and families affected by depression or anxiety disorders in primary care-based CMHC programs.

Approach: We performed an update of a 2012 Cochrane systematic review on CMHC programs for depression or anxiety disorders and then descriptively analyzed the service user and family engagement strategies featured within all programs (update and 2012 review). The search was performed in Cochrane CCDAN (2011 to present) and CINAHL (2009 to present) databases and three clinical trials registers. An exhaustive list of search terms related to depression, anxiety disorders, and collaborative care was used. Articles were eligible if they described RCTs or clinical controlled trials of CMHC programs meeting the same eligibility criteria used in the 2012 Cochrane review.

Results: The systematic review update yielded 4643 unique citations. A first screening of titles and abstracts by five review authors led to the exclusion of 4339 articles, leaving 304 citations. Two review authors independently read the full-texts of these articles, leading to the inclusion of 69 publications describing 55 CMHC programs. These programs were added to the 79 CMHC programs identified by the 2012 Cochrane review (total = 134 programs). Extraction of data on these programs is ongoing and focuses on the following engagement strategies: psychoeducation, self-management, care planning, shared decision-making, motivational enhancements, access to service user medical records, peer supports, family supports, navigation services, consultation and needs assessments, involvement in quality assessment and improvement, and involvement in service planning and governance.

Conclusion: Improving access to evidence-based mental health services is a shared priority for governments, care providers, researchers and service users. The findings of this systematic review will provide valuable information about the range of strategies that can be used to support the delivery of more person- and family-oriented CMHC.

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ID: 505

Author: Ms. Shandi Miller

Title: Cross-case analysis of coaching support provided to teams implementing innovations in primary care: recommendations and lessons learned from a Quebec based network

Type of Abstract: Poster

Objectives: Every year, Réseau-1 Québec (R1Q, the Quebec-based SPOR network in primary care) funds four practice-based research projects led by researcher-clinician teams looking to implement innovations in primary care. This presentation shares the recommendations emerging from a cross-case analysis of coaching support provided to teams, designed to ensure success in innovation implementation.

Approach: Inspired by an Institute for Healthcare Improvement white paper on organizational strategies to achieve system level changes, Réseau-1 Québec's Oversight and Learning Committee offers structured coaching to teams in the areas of knowledge translation, patient engagement, organizational change and project management. Based on an in-depth literature review and semi-structured interviews with teams, we make recommendations to improve the coaching process.

Results:

- To improve the impact of the coaching process and increase the likelihood of successful implementation of innovations, the following recommendations are made :
- Before projects are implemented, teams should have access to key tools and get training in essential strategies (change management, governance, leadership, performance management and project management);
- The coaching process should be tailored to meet the individual needs of each project;
- Teams should be followed and supported throughout the implementation of their projects and at set points in time;
- Projects selected should be at similar stages of the innovation cycle (i.e. innovation, adoption or diffusion).

Conclusion: This cross-case analysis demonstrates the challenges and complexity of providing coaching support to teams implementing innovations in primary care. R1Q is committed to learning and improving on the process and has already adapted its approach for subsequent cohorts by providing timely, individualized support.

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ID: 474

Author: Dr. Mary Modayil

Title: Supporting health provider practice changes to embed HealthChange® Methodology within a team environment.

Type of Abstract: Poster

Objectives: HealthChange® Methodology (HCM) focuses on a patient's readiness to make health changes by promoting shared decision-making, health literacy, behaviour change and self-management support. We wanted to strengthen our understanding of the implementation supports required to embed HealthChange(R) Methodology into team and clinic processes.

Approach: The Alberta Health Services Primary Health Care program collaborated with the East Calgary Family Care Clinic. Using a combination of qualitative approaches (key informant interviews, focus groups with clinic staff) and quantitative approaches (skills audits, patient experience surveys), we wanted to look at changes taking place at three levels: patient level, provider level and clinic level.

Results: Preliminary results from the focus groups show that adoption of the HCM language and use of select HCM practice principles is evident at an early stage of implementation. FCC providers started incorporating HCM language after participating in HCM training, such as including 'above/below-the-line', 'check RICK', and 'address barriers' into the regular charting and interdisciplinary communications. Six months after the HCM training took place, 76.3% of patients reported that their clinic team asked them what might get in the way of patients looking after their own health concerns; this compared to 57.4% before training. Post-training, patients also reported that providers were more likely to talk to them about what could happen to their health if their concerns were not looked after (75.0% post-versus 61.1% pre-training).

Conclusion: In contrast to what we expected, we learned that a staged approach may be needed to best support clinic teams with the implementation of the HCM. Early stages should focus on the adoption of a common language and using HCM practice principles.

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ID: 494

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Title: Learning inter-sectoral action beyond health discipline: PROTOCOL for a meta-narrative review

Type of Abstract: Poster

Objectives: It has been widely recognized that improvements in health of a population is being sustained by a wide range of social and economic developments. Intersectoral mandate becomes essential to achieve such social goal. Despite this, working across sectors to promote and work on health issues remains a challenge.

Approach: This meta narrative review seeks to explore the concept of inter-sectoral action across public health, environmental and natural sciences, public administration and political science to answer (a) How is inter-sectoral action defined (b) What are the different approaches identified in the following research traditions (c) Identify common and different elements (d) Inform and share learnings for strengthening inter-sectoral practice in health systems research

Results: This is an ongoing review and early results suggest that there are a range of approaches on how inter-sectoral action can be understood and conceptualized for achieving equity and to addressing governance issues. The review affirms the complexity of issue which requires participation and involvement of diverse actors, building of capacities, and a common dialogue to bring about the change in policy planning.

Conclusion: Synthesis of evidence helps in understanding the factors and approaches that constitute different facets of inter-sectoral initiatives. This review highlights and summarises the over-arching narrative of inter-sectoral initiatives and uses it to inform, its application in health systems study.

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Author: Mr. Luke Mondor

Title: Primary care and health inequality: Natural experiment comparing England and Ontario

Type of Abstract: Poster

Objectives: It is not known whether equity-oriented primary care reforms can reduce health inequalities within high-income settings that have pre-existing universal healthcare. We compared longitudinal health inequality trends between England (which implemented a package of equity-oriented primary care reforms through the mid-to-late 2000s) compared to Ontario (where reforms were not equity-focused).

Approach: We analysed whole-population data from 2004/5 to 2011/12 on 32,482 neighbourhoods (with mean population size of approximately 1,500 people) in England, and 18,961 neighbourhoods (with mean population size of approximately 700 people) in Ontario. We examined trends in mortality amenable to healthcare by decile groups of neighbourhood deprivation within each jurisdiction. We used linear models to estimate absolute and relative gaps in amenable mortality between most and least deprived groups, considering the gradient between these extremes, and evaluated difference-in-difference comparisons between the two jurisdictions.

Results: Inequality trends were comparable in both jurisdictions from 2004-6 but diverged from 2007-11. Compared with Ontario, the absolute gap in amenable mortality in England fell between 2004-6 and 2007-11 by 19.8 per 100,000 population (95% CI: 4.8 to 34.9); and the relative gap in amenable mortality fell by 10 percentage points (95% CI: 1 to 19). The biggest divergence occurred in the most deprived decile neighbourhoods.

Conclusion: In comparison to Ontario, England succeeded in reducing absolute socioeconomic gaps in mortality amenable to healthcare, and prevented them from growing in relative terms. Equity-oriented primary care reform in England may have helped to reduce socioeconomic inequality in health.

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Author: Dr. Stephanie Montesanti

Title: Developing a Framework for Primary Health Care Research in Alberta

Type of Abstract: Poster

Objectives: Despite significant investments to improve primary health care (PHC) delivery in Canada, provincial health systems remain fragmented and uncoordinated. Canada's commitment to strengthening PHC should be driven by robust research and evaluation that reflects our health policy priorities and responds to the needs of the population.

Approach: A scoping review of the literature and expert interviews in Alberta were conducted to examine PHC research priorities in Canada. We mapped national research priorities in PHC to research priorities being considered in the province of Alberta. Our scoping review and expert interviews were guided by the following questions: (1) What are the research priorities for PHC in Canada (or Alberta); (2) What process is used to identify PHC research priorities?; and (3) What frameworks exist for PHC research priorities in Canada (or Alberta)?

Results: Six key theme areas for consideration in setting a PHC research agenda were identified: research in practice, research on practice, research about practice, methods, infrastructure, and the intersection of PHC and population/public health. These thematic areas provide a new framework for guiding PHC research in Alberta that were found to generate best practices and new knowledge (e.g., innovation), transform PHC clinical practice or support quality improvement (e.g., spread of ideas), and lead to large-scale health system transformation (e.g., scale-up innovations). Our findings also suggest that a common research priority framework for PHC research in Alberta would ensure that research priority-setting exercises are grounded in an evidence-based process.

Conclusion: Setting PHC research priorities ensures that research is funded that has the greatest potential population health benefit, that research funding and outputs are aligned with the needs of practitioners and decision makers, and that there is efficient and equitable use of limited resources, with less duplication of research effort.

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Title: Evidence of improving EMR data quality in primary care teams

Type of Abstract: Poster

Objectives: Investment in primary care EMRs was intended to improve quality of care. Barriers to realizing this potential are real and perceived issues of Data Quality (DQ). This study describes the impact of efforts to improve EMR DQ in primary care teams.

Approach: The interventions implemented by AFHTO to support improvements in EMR DQ among primary care teams were

- Incorporate EMR-data-based indicators in a performance measurement report
- Incorporate quantitative measure of EMR DQ in same report
- Develop consensus-based consistent searches to extract and compile EMR data for the above indicators
- Develop standardized, tested searches to identify patients with specific chronic diseases

Impact was estimated by the nature and extent of primary care team participation in the relevant searches/data extractions, scores on the measures (where relevant) and extent of uptake by/interest from external stakeholders.

Results: All measures are relative to the time of introduction of each particular feature

- EMR-based measures: 3 indicators (vs 2) of 12 with 125% more teams contributing data
- EMR DQ: 14% higher quality and 26% more teams contributing data. Scope expanded from 1 to 5 components. More conversations and initiatives to improve EMR DQ.
- Consistent EMR searches: 40% (vs 20%) teams using searches. Increased support from EMR vendors.
- Standardized, tested EMR queries: Consistent queries to identify patients with COPD, Diabetes, CHF and Depression developed in multiple EMRs (Predictive value:62 to 85%). Uptake is 59 providers. Incorporating query results into administrative and clinical workflow is challenging. Nevertheless, queries being considered in development of OntarioMD's EMR dashboard specification and used by disease-condition-specific organizations to facilitate recruitment for their interventions.

Conclusion: Quality and capacity to extract useful EMR data are increasing. Use of EMR data in patient management, quality improvement and performance monitoring is increasing, suggesting increased confidence in EMR data. Next steps include expanding scope of EMR DQ indicator and supporting workflow and clinical action based on standardized EMR queries.

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Author: Mr. Brett Nicholls

Title: Who's voice are we hearing? The Equity in Engagement Project

Type of Abstract: Poster

Objectives: CCO's mandate is to build a system that is responsive to the needs of Ontarians. These needs reflect a person's unique characteristics like age, cultural background, socioeconomic status, and education. To examine the current engagement model and identify gaps in representation among our advisors, the Advisor Health Equity Survey was developed.

Approach: Development of the Advisor Health Equity Survey was a 4-step process. First, existing questionnaires were gathered to identify relevant health equity tools and measures. Second, using the Health Equity Impact Assessment (HEIA), social determinants of health and characteristics of interest were identified then extracted from the questionnaires. Thirdly, CCO Public, Patient and Family Advisors (PFAs), in addition to CCO patient, family and public engagement experts reviewed the Advisor Health Equity Survey and provided feedback on the survey draft, in order to inform the final set of questions and instruction wording. Finally, the survey was administered to the CCO Advisor Community.

Results: Five questionnaires were identified. Using the HEIA, social determinants deemed relevant to include in the survey include: Aboriginal identity, age, ability, ethno-racial identity, immigration, language, housing, income, education, employment, religion/faith, sex/gender, sexual orientation, and food security. Questions aligned to the social determinants were extracted from these tools: 1) Black, African, and Caribbean Canadian Health Study questionnaire (n=5); 2) 2014 version of the Canadian Community Health Survey (n=3); 3) African and Caribbean Track questionnaire (n=1); 4) Toronto Central Local Health Integration Network questionnaire on health equity (n=4); and 5) CCO existing Expression of Interest Form (n=5). After feedback, review and approval, the Advisor Health Equity Survey includes 18-questions that were administered to the CCO Advisor community (n=51).

Conclusion: Recruiting a diverse group of Advisors at CCO, who each have unique backgrounds and different experiences with the Ontario healthcare system, will ensure that the voices and perspectives from a representative sample of Ontario's population is captured. This fosters understanding of the full public, patient and family experience in Ontario.

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Title: CIHR Community-Based Primary Health Care Signature Initiative: An Innovative Cross-Team Model of Building Research Capacity for Early Career Researchers

Type of Abstract: Poster

Objectives: In 2012, CIHR launched the Community-Based Primary Health Care (CBPHC) Signature Initiative selecting 12 Teams from across Canada to conduct multidisciplinary, cross-jurisdictional research. These Teams also aimed to build research capacity. As such, a trainee-led Cross-Teams Capacity Building Working Group (CTCBWG) was formed that supports a national network of trainees.

Approach: Each of the 12 CBPHC Teams is composed of senior researchers, international collaborators, early career researchers and trainees (undergraduate, professional, graduate and post-doctoral). The CTCBWG includes over 100 multidisciplinary trainees from 11 of the 12 CBPHC Teams. The Working Group's goal is to enhance trainee involvement within and across Teams by creating training and mentorship opportunities, in partnership with senior researchers. To achieve this goal, an Events Committee and Mentorship Committee have been established. To date, the Working Group has facilitated a number of in-person and online educational and networking events that address the needs and interests of the trainees.

Results: Following an initial needs assessment circulated to all trainees, the CTCBWG established a structure to ensure that activities align with the needs and interests identified through the survey. These structures have included the organization of capacity-building webinars, virtual coffee breaks and the development of an online community. The capacity building webinars and virtual coffee breaks offer online platforms for participants to present their research and discuss relevant topics in research or career development. Content discussed amongst trainees has included topics of measurement, multimorbidity, patient-centred care, Aboriginal health, participatory research and caregiver burden of complex patients. Future capacity building efforts will focus on expanding the CBPHC network of multidisciplinary trainees, engaging members through online and in-person events and facilitating mentorship opportunities between trainees and senior researchers.

Conclusion: The CTCBWG has successfully and actively engaged trainees and early career researchers through tailored capacity building opportunities, broad networking and mentorship activities. These are critical to building research capacity amongst a cadre of multidisciplinary primary health care researchers who will work to address the dynamic, evolving health needs of Canadians.

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ID: 492

Author: Ms. Michelle Olding

Title: A historical timeline of HIV prevention and care initiatives in British Columbia, Canada: 1996-2015

Type of Abstract: Poster

Objectives: Since 1996, British Columbia (BC) has made significant progress in the treatment and prevention of HIV. This study delineates the biomedical, community-level, health service and structural initiatives implemented in BC from 1996-2015 to improve the quality and reach of HIV prevention and care for people living with HIV.

Approach: We constructed a historical timeline of HIV-related initiatives implemented in BC between 1996 and 2015 by reviewing publicly-available reports, guidelines and other documents from provincial health agencies, community organizations and AIDS service organizations; conducting directed searches of the peer-reviewed literature; and administering a structured data collection form to representatives of an AIDS service organization umbrella organization and BC's five regional health authorities. Using linked population-level health administrative data from the STOP HIV/AIDS cohort, we identified key phases of the HIV epidemic in British Columbia, as characterized by distinct changes in HIV incidence, antiretroviral therapy (ART) uptake and the provincial HIV response.

Results: In total, we identified 175 HIV prevention and care interventions implemented in BC from 1996-2015. We identified and described four phases in BC's response to HIV/AIDS: the early Highly Active Antiretroviral Therapy (HAART) phase (1996-1999); the harm reduction and health service scale-up phase (2000-2005); the early Treatment as Prevention (TasP) phase (2006-2009); and the STOP HIV/AIDS phase (2010-present). Sustained declines in HIV incidence and growth in HIV care engagement have been enabled by structural factors unique to BC, including centralized distribution of fully subsidized ART to PLHIV, widespread adoption of harm reduction approaches, and provincial investment since 2009 in a "Treatment as Prevention" (TasP) approach that emphasizes routine HIV testing and early initiation of ART to prevent onward transmission of HIV.

Conclusion: Summarizing prevention and care interventions into a single timeline provides local, national and international scientific and health administrative communities with valuable insight into BC's HIV response and may serve as a basis to evaluate the causal impact of initiatives in future studies.

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ID: 262

Author: Ms. Nicole Olivier

Title: ALBERTA FAMILY PHYSICIAN ELECTRONIC ENDOSCOPY STUDY (AFPEE) FINAL RESULTS

Type of Abstract: Poster

Objectives: Electronically record colonoscopy data from colonoscopies performed by Alberta Family Physicians to measure and compare to existing quality benchmarks. Some studies demonstrate that appropriately trained Family Physicians perform high quality endoscopic exams with high patient satisfaction, while other studies conclude that non-gastroenterologists perform lower quality colonoscopies.

Approach: Multi-centre prospective cohort study of nine Alberta Family Physicians performing colonoscopies in 11 rural Alberta sites over a 6 month period. Collect data using a REDCap™ - based electronic data collection tool. Create data collection tool with stakeholder input from both physician and nurse teams to ensure it meets end-user needs without adversely impacting patient procedures or data collected. Alberta Family Physicians performing colonoscopies collect data in real-time, using quality variables with corresponding pathology entered directly via study iPads™. Provide individualized summary report cards to each physician with their own data for their reflection.

Results: Physicians and their teams are willing to participate in live data collection for research and reporting. Participating Family Physician colonoscopists collected data on 1769 procedures, making this the largest multi-centre study examining the quality of colonoscopies performed by Family Physicians in Canada. All important benchmarks (i.e. proportion of successful cecal intubations, proportion with ≥ 1 adenoma, patient comfort, successful bowel preparations and complications) were achieved by the group. Results of FIT positive cases will be presented (analysis in progress). Overall, Family Physician perform high quality colonoscopies, collectively meeting important quality benchmarks.

Conclusion: Electronic, real-time data collection facilitates reporting back to the practitioner, providing an opportunity for self-reflection and improvement of patient outcomes. In today's climate of health care measurement, this tool could be expanded for provincial data collection, for credentialing of learners, accreditation of hospital programs and expanded to other procedures.

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Title: Pragmatic Trials Collaborative – Measuring What Matters

Type of Abstract: Poster

Objectives: Optimize the use of existing therapeutics in representative “real-world” populations by addressing clinical questions meaningful to care providers, patients and decision makers within primary care practice. Create a primary care-based platform, Pragmatic Trials Collaborative (PTC), and conduct pragmatic clinical trials designed to fit research into practice with minimal workflow disruption.

Approach: Begin by building relationships with primary care providers interested in our pragmatic trial approach to primary care research. Conduct a pilot study, the “INRange RCT”, to set up and refine the infrastructure and processes that will form the foundation for how this network engages in research. Track and measure these processes and use this information to inform ourselves of the needs associated with primary care research and how to fit research into practice. Further expand and refine these processes and continue building on these foundational relationships to successfully acquire funding to conduct a large primary care-based randomized controlled trial.

Results: The PTC has grown to over 460 providers including physicians, medical residents, nurses, and pharmacists in BC, Alberta, Manitoba, Ontario, Nova Scotia and NWT. During the “INRange RCT”, for each participating provider another 1.58 providers joined the study. INRange had 248 providers from 53 Alberta and BC communities. Feedback indicated that providers learned more about the studied condition and used the information to refine their own clinic processes surrounding this patient population. Primary care providers are clearly interested in participating in research. Facilitating their engagement with minimal workflow impact that uses patient-oriented outcomes will ensure continued participation. Our next phase includes the BedMed Initiative, a pragmatic clinical trial evaluating the timing of antihypertensive medication in adults with hypertension, which will launch in January 2017.

Conclusion: Primary care research can play a significant role in answering questions meaningful to care providers, patients, and decision makers. By collaborating and utilizing relevant patient oriented outcomes, Pragmatic Trials Collaborative can conduct influential trials with minimal impact on primary care workflow while optimizing care for primary care patients.

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Author: Dr. Dimitra Panagiotoglou

Title: Structural conditions and health system capacity to address the HIV/AIDS epidemic in six US cities

Type of Abstract: Poster

Objectives: The HIV epidemic in the United States is a diverse set of microepidemics dispersed primarily across large urban centers, with different underlying epidemiological and structural conditions. Here we describe the distribution, demographics, and needs of people living with HIV (PLHIV) to enable stakeholders to optimally allocate their resources.

Approach: We focused our analysis on six of the largest cities (Miami, FL; Atlanta, GA; Baltimore, MD; New York, NY; Los Angeles, CA; and Seattle, WA), accounting for approximately 25% of PLHIV in the US. We synthesized publicly-available surveillance, legal statutes, entitlement and discretionary funding, and service location data for each city for the study period 2008-2014. We reported differences in underlying HIV and injection drug use epidemics, relevant state legislature, funding, and public infrastructure; and compared strategies used within each jurisdiction to strengthen local HIV care systems. We summarized our findings with actionable items to improve stakeholders' service provision.

Results: The proportion of PLHIV in care was low (43.0-75.6%); black/African Americans, and men who have sex with men (MSM) were disproportionately burdened by HIV. New York had the fewest HIV-specific statutes while Miami, Atlanta, and Seattle had the most. Medicare and Medicaid accounted for the majority of funding for treatment and care. Eligibility criteria for discretionary funding varied by state. Each city demonstrated successful strategies to mitigate the effects of funding or service shortages on HIV treatment and care. We recommend improvements in surveillance, decriminalization of HIV and preventive services, harmonization of public funding eligibility, and the targeting of finite resources to improve health systems' efficiency and the health outcomes of PLHIV.

Conclusion: Following the 2016 election outcomes, changes to the funding and provision of insurance for HIV treatment and prevention programs may derail and reverse recent progress. With solutions at hand, reduced healthcare coverage and funding for public health interventions would magnify the public health and economic burden for future generations.

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ID: 35

Author: Ms. Michelle Parker

Title: Measurement and Collaboration to inform progress on Choosing Wisely Canada Recommendations

Type of Abstract: Poster

Objectives: Choosing Wisely Canada (CWC) is a grassroots initiative that encourages physicians and patients to reduce low value tests and procedures. Using administrative data and working with a coalition of partners, we set out to measure the magnitude of unnecessary care and detail improvement initiatives of partner organizations.

Approach: Our analyses of eight CWC recommendations uses administrative data from acute care hospitalizations, emergency departments, physician billing data, drug use and community health data. Provinces, regions and years included vary by recommendation based on data availability. In order to set data within the context of action, we lead a measurement collaborative and partnered with organizations across Canada. Through stakeholder engagement, we were able to profile innovative initiatives, approaches and process changes that are being implemented across the country. Collaborating on measurement will support evaluation while supporting peer learning through success stories will foster faster adoption.

Results: We analyzed eight CWC recommendations spanning the healthcare continuum and found that 5% to 30% of tests and procedures covered by these eight recommendations are potentially unnecessary. Across all recommendations variation in rates across jurisdictions, regions and facilities were observed, suggesting there are opportunities for improvement. The results of our analysis will serve as a baseline for monitoring improvements of adherence to CWC recommendations. Partnering with leading organizations across the country allowed for a discourse over methodology through our measurement collaborative and highlighting the best approaches being taken at facility, region and provincial levels.

Conclusion: The process for engagement in this large, multi-faceted project has faced challenges yet been successful– we intend to discuss our leadership role to set a baseline for CWC work across the country from profiling initiatives to our pan-Canadian findings. We will continue to support CWC and its sustainable, system-wide improvements.

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ID: 331

Author: Dr. Michelle Patterson

Title: Computer Based Training for Cognitive Behavioral Therapy (CBT4CBT); an innovative new substance abuse therapy for Canada

Type of Abstract: Poster

Objectives: The pilot program aims to determine the effectiveness and efficacy of a computer-based treatment option for addiction therapy within specific rural Canadian populations. Introductory trials conducted among urban populations in the US have demonstrated CBT4CBT's effectiveness in providing a meaningful treatment option at moderately low cost and with lasting effects.

Approach: This trial utilizes a similar methodological approach as the trials performed in urban communities of the United States, with participants at each trial site being randomly assigned to one of two groups, both including 'treatment as usual' (standard counseling) but with one group additionally having access to the CBT4CBT tool. This simple 'add-on' design has been shown to be effective at determining the extent to which CBT4CBT confers specific benefits over current standard practices.

Results: Using Prince Edward Island as a gateway, CBT4CBT is currently being implemented and evaluated in sub-populations of high-need individuals as part of a CIHR funded pilot and will subsequently be rolled out across Canada. CBT4CBT is offered at trial sites in PEI and New Brunswick which have been selected as representative of high-needs populations who may benefit from improved addiction treatment options and support. The trial populations include First Nations, youth (age 18-24), post-secondary students, individuals maintained on methadone, and individuals transitioning out of inpatient facilities. Preliminary results from each of these populations will be discussed.

Conclusion: A larger-scale implementation of CBT4CBT across Canada will offer an innovative and in-demand therapeutic option for individuals struggling with substance abuse. A roll-out plan for the implementation of CBT4CBT across Canada is under development, and a list of priority revisions and enhancements for future iterations the program is being established.

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Author: Dr. Mark Pearson

Title: Using 'Realist' reviews to inform decision-making: Challenges and opportunities

Type of Abstract: Poster

Objectives:

1. To introduce the 'Realist Review' approach to systematic review
2. To illustrate, using examples, the different forms that Realist Review can take and how these did (or didn't) inform decision-making
3. Using Glasgow's 'Evidence Integration Triangle', to reflect critically on the strengths and weaknesses of Realist Review for informing decision-making

Approach: Realist reviews, a form of systematic review, endeavour to integrate different types of evidence (quantitative, qualitative, theoretical, experiential) in a way that produces actionable knowledge. These reviews typically address explanatory ('why?') questions, such as 'Why do behaviour change interventions to change antimicrobial prescribing behaviour work in some contexts but not others?'. The findings of these reviews can be complex, with significant variation in the extent to which they are considered 'usable' by decision-makers. The strengths and weaknesses of example Realist reviews for informing decision-making will be analysed using the components of Glasgow's 'Evidence Integration Triangle' (findings, measures, and participatory processes).

Results: Realist reviews are flexible and can be used to answer different types of explanatory questions – accordingly the reviews may be conceptual or applied (typically in-depth or rapid, respectively). The integrative approach of Realist reviews open up opportunities for engagement with stakeholders throughout the review process, from question identification and refinement, to collaborative analysis and translation of findings. However, the extent to which the knowledge produced is actionable by decision-makers is mixed. The analysis of the example Realist reviews here suggests that whilst Realist reviews may use participatory processes, this is necessary but not sufficient to produce findings actionable by decision-makers.

Conclusion: Research is required to develop understanding of how the complex findings of Realist reviews can be:

- presented to decision-makers in a concise, comprehensible and meaningful way
- made 'actionable' through explicit linkage to organisational processes and measures

Current research into Integrated Knowledge Translation may provide an important framework for such research.

All Authors: Mark Pearson

ID: 379

Author: Ms. Ella Pesah

Title: A Review of Cardiac Rehabilitation Delivery Around the World

Type of Abstract: Poster

Objectives: Cardiac rehabilitation (CR) effectively mitigates cardiovascular disease, which is the leading cause of death globally. However, little is known about CR delivery around the world. The objective of this study was to review publications describing CR delivery on a national or regional level to characterize the nature of services.

Approach: Literature was identified through: (a) searching PubMed and Google Scholar electronic databases from database inception to December 2016, (b) hand-searching reference lists of identified citations and global CR reviews, and (c) consulting experts in the field. Inclusion criteria consisted of articles reporting results of surveys assessing delivery and/or components of phase II CR programs on a national or regional level. Non-English papers and abstracts were excluded. Data were extracted in tabular format and qualitatively synthesized.

Results: Twenty-seven articles were identified, reporting on CR delivery in 57 countries, or 47.5% of the 120 countries known to offer CR. Most of the countries were high-income (n=37), with others all middle-income (n=20).

Government funding was the main source of CR reimbursement in most studies (n=41). CR programs reported most frequently treating patients following myocardial infarction and revascularization. Results revealed wide variability in program duration, ranging from 6-22 weeks. CR teams were most often composed of nurses, cardiologists and physiotherapists. Similarities were observed regarding components offered, namely physical activity, patient education and nutrition counseling. A low proportion of programs across countries offered alternative delivery models, such as home-based services. Lack of human and/or financial resources were reported as the major barriers to broader CR delivery.

Conclusion: CR delivery has been characterized in only half of the countries where it is offered. The nature of services delivered is fairly consistent with major CR guidelines and statements, except with regard to dose. However major barriers to delivery remain.

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ID: 377

Author: Dr. Yelena Petrosyan

Title: Development of Quality Indicators for Evaluation of the Telehomecare Program for Patients with Heart Failure

Type of Abstract: Poster

Objectives: 1) to extract and develop a list of candidate indicators from current literature to evaluate the Telehomecare program for patients with heart failure (HF); 2) using Delphi approach, to critically appraise and select an appropriate set of quality indicators for evaluation of the Telehomecare program for patients with HF.

Approach: A systematic review of the literature was conducted to develop quality indicators for evaluation of Telehomecare programs for patients with HF. The identified list of candidate indicators was then submitted to two independent expert panels for methodological assessment using a Delphi technique: 1) a patient panel which included HF patients who participated in the Telehomecare program; and 2) a provider panel which included Telehomecare nurses, decision-makers, coordinators and administrators, and primary care physicians and cardiologists. A 73% agreement threshold was required for 'high consensus', and 60-72% for 'moderate consensus' as measured on a 5-point Likert type scale.

Results: A list of 60 candidate indicators was developed from the literature review. These indicators were then critically appraised using a 2-stage Delphi study. The provider panel appraised 60 indicators, and the patient panel 32 indicators. The final list included 46 quality indicators for evaluation of the Telehomecare program for patients with HF, including 23 indicators related to 'clinical aspects', 9 to 'patient monitoring', 3 to 'technical aspects', 4 to 'economic aspects', 5 to 'organizational aspects', and 2 to 'social aspects'. The provider panel reached consensus on inclusion of 43 out of 60 indicators and patient panel of 21 out of 32 indicators in the final list. There were 10 indicators which were selected by one of the panels, but not by the other.

Conclusion: The developed set of quality indicators will allow Telehomecare health providers to initiate local quality improvement initiatives, managers and coordinators to identify and correct system-wide problems, and policy makers to plan new strategies for future programs of care for patients with HF.

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ID: 239

Author: Dr. Jenny Ploeg

Title: Community Program Improves Quality of Life and Self-Management in Older Adults with Diabetes and Multimorbidity

Type of Abstract: Poster

Objectives: Older adults with Type 2 diabetes mellitus (T2DM) and multiple chronic conditions are medically complex, and are often excluded from most clinical trials. In this trial, we examined the effectiveness of a 6-month self-management program for community-dwelling older adults with T2DM and comorbidity.

Approach: This multi-site pragmatic randomized controlled trial (RCT) evaluated the effects of a 6-month interprofessional nurse-led program delivered by Registered Nurses and Registered Dietitians from a Diabetes Education Centre partnered with the YMCA or a community centre. The program was client-driven, tailored, and consisted of in-home visits, monthly group wellness sessions and monthly team conferences. Outcomes included health-related quality of life (physical functioning, mental functioning), depressive symptoms, anxiety, self-efficacy, self-management, and the costs of health service use, from a societal perspective. ANCOVA was used to test group differences in outcome variables and multiple imputation was performed to address missing data.

Results: The trial involved 159 older adults from four sites in Ontario and 144 (91%) successfully completed the 6-month follow-up. Half of the participants were female and morbidity burden was high (average of 8 comorbidities). Of the 80 program participants, 77(96%) received at least one home visit and 67 (84%) attended at least one group wellness session. Intention to treat analysis showed differences favoring the intervention for the following outcome (scores): mental functioning (2.68, 0.28 to 5.09, $p=0.029$), self-management (3.79, 1.02 to 6.56, $p=0.008$), and depressive symptoms (-1.45, -0.13 to -2.76, $p=0.031$). Program benefits were achieved at no significant increase in total costs compared to usual community-based care.

Conclusion: Participation in a 6-month community-based self management program resulted in improvements in quality of life and self-management behaviour and a reduction in depressive symptoms in older adults with T2DM and multiple comorbid conditions. These benefits were achieved at no additional cost than usual diabetes care.

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ID: 142

Author: Mr. Jeff Proulx

Title: PRESCRIBED DRUG SPENDING IN CANADA, 2016: A FOCUS ON PUBLIC DRUG PROGRAMS

Type of Abstract: Poster

Objectives: This analysis provides an in depth look at public drug program spending in Canada, examining spending by therapeutic categories and drug classes that contribute to increase spending. Differences in drug spending between seniors and non-seniors and high cost users were also examined.

Approach: This report provides an in-depth look at public drug program spending using claims data from the 9 Canadian provinces and 1 federal program currently reporting to CIHI's National Prescription Drug Utilization Information System (NPDUIS) Database. Public drug program spending in these jurisdictions represents roughly 65% of the total public drug spending reported in CIHI's National Health Expenditure (NHEX) Database.

Results: Public drug program spending in 2015 in these 10 jurisdictions was almost \$8.8 billion, an increase of 9.2% compared to 2014. Almost two-thirds of the growth in spending in 2015 was due to the introduction of two new drugs used to treat Hepatitis C. However drug program spending still increased by 3.6% when spending on these drugs was excluded. While growth in spending on biologic drugs slowed in 2015, they continued to be one of the top contributors to spending growth. At the same time, savings on drug spending due to patent expirations and generic pricing policies slowed significantly compared to previous years; however, the savings achieved in earlier years still persist.

Conclusion: The introduction of new and expensive chemicals to treat hepatitis C contributed to almost two-thirds of growth in spending in 2015. Patent expiries and generic pricing policies are no longer leading to significant reductions in year over year growth; however, the savings they achieved persist.

All Authors: Jeff Proulx

ID: 143

Author: Mr. Jeff Proulx

Title: USE OF ANTIPSYCHOTICS AMONG SENIORS LIVING IN LONG-TERM CARE FACILITIES

Type of Abstract: Poster

Objectives: This analysis examines the use of antipsychotics among seniors living in long-term care (LTC) facilities, and the concurrent use of antipsychotics with other psychotropic drugs, which further increases risk of side effects. It also looks at the characteristics of residents treated with antipsychotics, including diagnoses, behaviours and other functional measures.

Approach: Drug claims data from the National Prescription Drug Utilization Information System (NPDUIS) Database, housed at the Canadian Institute for Health Information (CIHI), provide detailed information about antipsychotic use. LTC resident assessment data from CIHI's Continuing Care Reporting System (CCRS) provide detailed resident information.

Results: Residents with severe cognitive impairment and those exhibiting highly aggressive behaviour were more likely to have used an antipsychotic. However, a large proportion of seniors exhibiting severe aggression were not treated with antipsychotics, suggesting that non-drug alternatives were often considered.

Quetiapine was the most commonly used antipsychotic (19.2% of LTC residents), followed by risperidone (14.1%).

Among seniors who were chronic users of an antipsychotic, 64.3% were also chronic users of an antidepressant. The use of more than 1 psychotropic drug increases the risk of side effects — including falls.

In Manitoba, antipsychotic use decreased from 38.2% in 2006 to 31.5% in 2014. This was due in part to initiatives implemented by the Winnipeg Regional Health Authority, to reduce inappropriate antipsychotic use in LTC facilities.

Conclusion: In September 2014, The Canadian Foundation for Healthcare Improvement began supporting several health care organizations across Canada to adopt initiatives to reduce inappropriate antipsychotic use in LTC facilities. As more facilities start implementing similar strategies, the overall rate of antipsychotics use in LTC facilities may decrease.

All Authors: Jeff Proulx, Diana Craiovan

ID: 322

Author: Ms. Kinza Rizvi

Title: Barriers to Cervical Cancer Screening Faced by South Asian Muslim Immigrant Women in Calgary: A Qualitative Study

Type of Abstract: Poster

Objectives: South Asian immigrant women are less likely to participate in cervical cancer screening compared to other immigrants and non-immigrants. Many of this sub-population are Muslims. Understanding their ideas and needs may enable development of programs and services so they can benefit from screening and reduce the effects of cervical cancer.

Approach: We interviewed a sample of South Asian Muslim immigrant women in Calgary to identify the barriers that prevent them from having a Papanicolaou test. Snowball sampling was used to recruit South Asian Muslim immigrant women in Calgary who had not been screened or infrequently screened for cervical cancer. We conducted qualitative, semi-structured in-depth interviews. Data were analyzed using thematic analysis.

Results: Eighteen women were interviewed: the majority (66%) had never had a Pap test. Barriers to cervical screening were divided into three categories: healthcare provider, healthcare system and personal barriers. Provider and system barriers included: lack of communication by healthcare providers, limited access to female physicians, miscommunication by healthcare system, and transport. Personal barriers included: lack of knowledge about cervical cancer and screening, views and beliefs about cervical screening, including previous painful Pap tests, role of family and language.

Conclusion: Strategies are needed at the system and provider level to promote cervical cancer screening. More skilled female physicians, increasing knowledge about cervical screening, providing resources such as transport, and screening reminders that explain the disease and procedure in detail could potentially increase screening practices among South Asian Muslim immigrant women.

All Authors: Kinza Rizvi , James Dickinson, Marilynne Hebert , Bejoy Thomas, Rebecca Malhi

ID: 531

Author: Dr. Christian Rochefort

Title: Nurse staffing policies and patient outcomes in long term care and nursing homes: a literature review

Type of Abstract: Poster

Objectives: There is mounting evidence suggesting that nurse staffing policies in long term care (LTC) and nursing home settings may be associated with patient mortality and the occurrence of adverse events. The purpose of this study was to summarize existing evidence and identify avenues for further research and policy development.

Approach: A systematic review of the literature was conducted in Pubmed. Relevant studies, published between January 2000 and December 2016, were identified by combining selected keywords (e.g., nurse staffing, patient outcomes, long term care). To be included, these studies needed to: a) report on the association between at least one nurse staffing policy and a patient outcome in a LTC or nursing home setting or; b) summarize existing evidence for such associations. The reference lists of the identified studies were searched to identify any other relevant primary studies. The methodological quality on the retained primary studies was assessed using published criteria.

Results: A total of 67 studies was identified, including 48 cross-sectional and 19 longitudinal studies. As a group, cross-sectional studies suggest potential associations between several nurse staffing policies (e.g. richer skill mixes, fewer overtime hours, higher staffing levels) and better patient outcomes (e.g., fewer falls, decubitus ulcers or medication errors, less restraint use). However, these associations are not observed in longitudinal studies which, for the most part, report inconsistent associations between these staffing policies and patient outcomes. Overall, the strength of evidence in this body of literature is reduced by several important methodological limitations (e.g., small sample size, poor risk adjustment strategies, staffing policies with inconsistent operational definitions across studies). The accuracy with which both the exposure and the outcomes are measured is also limited.

Conclusion: To support safe nurse staffing policy development in LTC and nursing home settings there is a pressing need for large scale and robust longitudinal studies conducted at the patient level of analysis. Important methodological development is also required to increase the accuracy of both nurse staffing and patient outcome measures.

All Authors: Christian Rochefort

ID: 157

Author: Ms. Dana Ryan

Title: The Role of Nurse Practitioners in Long-Term Care Settings in Newfoundland and Labrador

Type of Abstract: Poster

Objectives: We explored the roles of family physicians (FP) and nurse practitioners (NP) in long-term care facilities in Newfoundland and Labrador (NL). We examined support for different approaches to improving the provision of primary care in facilities with no regular primary care provider, with only FP, and with FP and NP.

Approach: We surveyed the managers of personal care homes and long-term care facilities in NL (hereafter LTC facilities) identified through the Department of Health and Community Services website. We assessed their opinions about the roles of various health care providers and their support for different approaches to improving primary care using a 5 point Likert scale (1= strongly disagree, 5= strongly agree). We used frequencies to describe the characteristics of the facilities, as well as the roles of FP and NP. We used ANOVA to identify differences in the attitudes among facilities with no primary care provider, FP only, and FP/NP.

Results: A total of 91 of 127 (71.7%) facilities completed the survey; 19 (21.3%) facilities had no primary care provider, 42 (47.2%) had FP only, and 28 (31.5%) had both FP and NP. The most common services provided by FP were assessing lab/diagnostic test results (100%), meeting with families (90.1%), and specialty/rehabilitation referrals (82.9%). The most common services provided by NP were treating pressure sores (63.3%), meeting with families (62.1%), receiving phone calls (59.4%), and participating on committees (59.4%). Facilities with no provider were more likely to rate continuity of care lower (2.59; $p=0.000$) than either facilities with FP (3.85) or facilities with FP/NP (3.78). All facilities agreed with the statement that increased availability of other health professionals (4.64) and using NP (4.47) would improve care.

Conclusion: One fifth of all LTC facilities in NL have no regular primary care provider. NP currently have limited roles in LTC. There is widespread support for increasing the role of NP to improve physician resource issues and quality of care in LTC facilities.

All Authors: Dana Ryan, Maria Mathews, Power Melissa

ID: 423

Author: Dr. Yeva Sahakyan

Title: The value of public investment in vaccine development: a case study

Type of Abstract: Poster

Objectives: Using a case study of a hypothetical vaccine for Clostridium difficile infection (CDI), the study aims to illustrate an approach of quantifying the relationship between costs and benefits of the investment in innovative solutions.

Approach: This study compared strategy of vaccination (hypothetical) for CDI with no vaccination among elderly population (>65 years old) in Canada. Using historical information on CDI incidence, we projected the expected number of persons affected during 2024-2035 (estimated as 217,000 people), the years of life lost (YLL=108,271) with \$3.6B in monetized value. Another \$3.6B would be spent to cover CDI-related healthcare costs. Subsequently we attempted to estimate the probability of successful vaccine development targeting C. difficile, given the investment level and the associated benefits for such a therapy. Next, to measure the profitability of the potential investment, we calculated an internal

Results: Under the current care strategy, CDI would cost the Canadian government over \$7.2 B over the period of 2024-2035. Assuming a 40% vaccine coverage rate and \$180 vaccine cost per patient, the vaccination would avert 38,531 CDI cases, resulting in overall \$639M net monetary benefit compared with the strategy of no vaccination. Under base-case scenario an IRR comprised 11%. One-sensitivity analyses were conducted to address the uncertainty in key parameters: vaccine effectiveness, coverage, costs, and uncertainties around successful vaccine development.

Conclusion: The illustrated approach can be used by researchers and policy-makers in determining the value of investment for the innovative solutions.

All Authors: Yeva Sahakyan, Nicholas Mitsakakis, Lusine Abrahamyan, Valeria Rac, Murray Krahn, Nick Daneman, Natasha Nanwa, Beate Sander

ID: 177

Author: Mr. Mohammad Nazmus Sakib

Title: Multimorbidity: A Challenge for Health Services for an Aging Population

Type of Abstract: Poster

Objectives: Multimorbidity, defined as the presence of two or more chronic diseases in an individual, is one of the major public health concerns in Canada. The objective of the poster is to provide a review of the literature on multimorbidity while identifying the recommendations and directions for future health care system reform.

Approach: A comprehensive literature search was conducted to identify elements of multimorbidity and related topics. Several online databases were searched with different combination of following keywords: “multimorbidity”, “chronic diseases”, “aging”, “senior”, “prevalence”, “risk factor”, “impact” “cost”, and “health care”. All the relevant articles were selected and the reference list of selected articles were also reviewed. All the collected articles were read thoroughly and important information was compiled to present in the poster.

Results: The term comorbidity is often incorrectly used for multimorbidity but these two terms are not synonymous. The prevalence of multimorbidity was found very high in older people. The common determinants are age, sex, socioeconomic status, the level of education, mental health disorders and obesity. Chronic diseases tend to occur in clusters and three main patterns were identified in the literature. The impact of multimorbidity is manifold. It greatly decreases the quality of life and impairs the functional status. Chronic disease indicator framework, developed by the Public Health Agency of Canada, is an important tool to interpret the trends of chronic diseases and develop public health interventions. The Chronic Care Model (CCM) was found better than the conventional care to support people suffering from multimorbidity.

Conclusion: The rise of multimorbidity cases with aging population would create great instability in the health care system of Canada. However, they are often neglected in regards to both policy and from a care perspective. Frameworks like the CCM provide a useful way to conceptualize how multimorbidity could be managed.

All Authors: Mohammad Nazmus Sakib

ID: 265

Author: Dr. Chiranjeev Sanyal

Title: A Systematic Review of Economic Evaluations of eHealth Technologies

Type of Abstract: Poster

Objectives: The objective of this study was to perform a systematic review of economic evaluations of eHealth technologies in study populations comprising older adults.

Approach: We searched multiple databases (MEDLINE, EMBASE, Cochrane Library, CINAHL, and PsycINFO) for peer-reviewed studies in English that examined cost-effectiveness of eHealth technologies. Two reviewers independently screened the literature, abstracted data from full-text articles, and assessed methodological quality using the Drummond ten item methodological quality tool.

Results: Twelve studies were included in the review. eHealth technologies evaluated by these studies includes computerized decision support systems, a web-based physical activity interventions, internet-delivered cognitive behavioral therapy, telecare, and telehealth. While clinical trials have provided some evidence of efficacy of these interventions, our quality assessment found limited information on their implementation, feasibility, and health system adoption.

Conclusion: This review identified growing number of eHealth economic evaluations in the management of chronic diseases. The quality of the current evidence is limited and well-designed studies are required to determine the longer-term cost-effectiveness of eHealth technologies in older adults from the health care system and societal perspectives.

All Authors: Chiranjeev Sanyal, Paul Stolee, Don Juzwishin, Don Husereau

ID: 499

Author: Ms. Jamie Schaffler

Title: A qualitative analysis of the needs, access, and understanding of information among caregivers of patients from a culturally and linguistically diverse background with a chronic illness

Type of Abstract: Poster

Objectives: To explore (a) the information needs of caregivers of culturally and linguistically diverse (CALD) patients, (b) their access to the information they need to take on their caregiving role, and (c) caregivers' opinions of available educational support

Approach: Eleven caregivers of CALD patients were recruited from outpatient clinics associated with academic health care centres in Québec, Canada. Caregivers were nominated by eligible CALD patients identified by a member of their health care team. Caregivers also self-referred to the study through community-based advertisement of the study. Consenting caregivers participated in a face-to-face interview with a research assistant. A qualitative descriptive design and inductive content analysis were used to identify emerging themes.

Results: Caregivers described two categories of information needs: perceived and unperceived. Perceived information needs were explicit, and centered on management of medical tasks. Unperceived needs were initially unrecognized knowledge gaps that emerged during interviews and mostly focused on managing emotions, self-care strategies, and skills training. Traditional sources of health information, notably healthcare providers (HCPs), addressed caregivers' perceived, but not unperceived needs. Caregivers described a "village" approach to caregiving, which allowed for division of roles and responsibilities among the caregiver network of individuals. A few participants expressed difficulty in understanding illness-management instructions, and/or faced challenges in communicating this information to the patient. All caregivers reported that caregiver materials had the potential to meet both their perceived and unperceived needs.

Conclusion: Conveying health information to patients in their native language is challenging for caregivers. HCPs may not be equipped to provide information on emotional and role management aspects of caregiving. Research should explore the information needs of the caregiving network to develop instructional materials that meet their perceived and unperceived needs.

All Authors: Jamie Schaffler, Sylvie Lambert, Andrea Maria Laizner , Sarah Tremblay

ID: 372

Author: Mrs. Olena Schell

Title: Data Insufficiency for Priority Cancer Care Workforce Research in Canada

Type of Abstract: Poster

Objectives: There are several factors that may exacerbate health human resources (HHR) shortages in cancer care, yet, there is surprisingly little known about the cancer control workforce landscape in Canada. This project identifies gaps in existing cancer control workforce knowledge and maps them to available data resources that might address them.

Approach: A mixed-methods approach was developed consisting of three phases. First, a national “asset map” of existing cancer control workforce data was developed through a general online search to identify potential database holders. In addition, key informant interviews were conducted to verify findings and identify other potential data sources. Second, we conducted a scoping review of the academic and grey cancer control HHR literature to identify key workforce-related questions in cancer care. Finally, we mapped the key workforce questions to the existing data sources.

Results: Fifty-four data holders responded to requests for information and 41 relevant databases were identified. Thirty-two studies met the inclusion criteria of our literature review, identifying four general categories for cancer workforce research priorities: access to care and supply of cancer workforce; overtime/unpaid time; job dissatisfaction and absenteeism; and increased pressure to meet patient expectations/needs. Data elements within the relevant databases contain limited information that could be used to address the identified cancer workforce research priorities. In most cases, existing databases available to researchers could be used to describe socio-demographic information about individual professions, including their distribution, education, and employment. Information from provincial and territorial physician payment databases could be used to make some estimate of current supply of physicians working in cancer care.

Conclusion: Available data currently prevent researchers and decision-makers from addressing the key research priorities within the cancer workforce, and from accurately estimating current and future service supply in this area. Little progress has been made to ensure timely access to data sources that would help us address these HHR challenges.

All Authors: Olena Schell, Lindsay Hedden, Morris Barer

ID: 381

Author: Mrs. Olena Schell

Title: Identifying frailty to support policy and care using administrative and electronic medical record data.

Type of Abstract: Poster

Objectives: This study aims to identify frail patients seen in primary care using administrative and electronic medical record (EMR) data. This presentation describes the processes used to derive an algorithm of frailty in community dwelling seniors through administrative and EMR data.

Approach: Using multiple methods and cross-jurisdictional (BC, AB, MB) approach, we developed an algorithm for use with administrative data (2006-2012) to identify frailty. We used linked data including physician claims, hospitalizations, and prescription medications. We examined health care use and costs in those who were identified as frail compared to those with no chronic conditions or associated events indicating medical complexity (i.e. healthy). We developed an algorithm for use with EMR data based on abnormal laboratory values, age, 10+ visits in 12 months, and multiple morbidities. Clinician input was sought to develop the EMR algorithm.

Results: Many operational definitions for frailty exist. These vary in terms of the nature and number of components included in the definitions. A modified definition of frailty (in the administrative data) was developed based on the BC Ministry of Health definition that focuses on three decision rules: (1) resident in a long-term care or assisted living facility; (2) terminally ill; and (3) at least two indices from the Edmonton Frail Scale. About 3% of BC's population was identified as frail; they had a mean age of 81 years and an average of 4.6 chronic conditions. Mean total days in hospital for frail persons was 6.5, compared to 0.2 days for healthy patients. By the conference date, we will have results to report on the EMR algorithm.

Conclusion: The study identifies frailty algorithms that could be used with BC, AB, and MB data and EMR data. Identification of frailty could be of use for health services planning and delivery of primary and community services.

All Authors: Olena Schell, Sabrina Wong, Tyler Williamson, Alan Katz, Kimberlyn McGrail

ID: 444

Author: Dr. Michael Schull

Title: SPOR at the Institute for Clinical Evaluative Sciences (ICES): A case study identifying planned and unanticipated outputs and outcomes.

Type of Abstract: Poster

Objectives: In 2013/14, ICES received five-year funding as one of 12 research centres under the Ontario SPOR SUPPORT Unit (OSSU). The objective of this case study was to assess how the six SPOR core functions and SPOR principles impacted ICES' operations and strategic priorities.

Approach: Case study including comparison of ICES activities and metrics before and after SPOR funding (e.g., data access metrics, patient/public engagement, KTE, partnerships, ICES' 2017/18-2019/20 strategic plan vs. the 2013/14-2015/16 strategic plan) combined with qualitative assessment of the ways in which specific activities led or contributed to other ones.

Results: SPOR funding to ICES was primarily focused on increasing access to linked administrative health data holdings for Ontario-based researchers through a new ICES division, Data & Analytic Services (DAS). The institution of DAS combined with the principles of patient engagement and collaboration led to additional SPOR-related outputs. These included: DAS for non-Ontario researchers, novel research including linkage of existing non-ICES randomized clinical trial data to ICES data, a pilot of analytic services for the private sector, a stronger focus on knowledge translation and exchange (KTE) in ICES' research and communications, direct engagement with patients and members of the general public, and new collaborations with research centres within Ontario, nationally and internationally. ICES's revised strategic plan has evolved substantially to now include these new core areas.

Conclusion: In addition to the main planned impact of increasing researcher access to data, SPOR funding and involvement of ICES in the OSSU has directly led to additional SPOR-related activities, outputs and outcomes in ways that were not specifically anticipated. ICES' direction moving forward has also been influenced by SPOR.

All Authors: Michael Schull, P. Alison Paprica, J. Charles Victor, Astrid Guttman

ID: 236

Author: Dr. Cara Settipani

Title: Integrated Collaborative Care Models for Youth Mental Health and Addictions: a Scoping Review to Inform Health Policy

Type of Abstract: Poster

Objectives: As policymakers at federal and provincial levels strive to improve mental health care while containing costs, integrated care approaches that bring together traditionally separate services to improve care access and reduce system fragmentation have gained attention. A scoping review is being conducted to understand the development of integrated care hubs.

Approach: Seven electronic databases and over 25 grey literature sources have been searched for material from 2001-2016. Inclusion criteria is broad with respect to type of work, as all research studies are included as well as policy-documents, reports, and other documents that provide information relevant to characteristics and constructs measured in the context of integrated care for youth mental health. Titles and abstracts have been independently screened for eligibility by two raters using inclusion criteria. Full text articles are being independently screened for inclusion. A formal data extraction method is being used to synthesize results in quantitative and qualitative formats.

Results: The following data is being extracted from the literature: (1) characteristics of integrated care, namely, populations included, service settings, types of service providers, and interventions employed; and (2) constructs that have been specified, measured, or evaluated in the context of youth integrated care, such as outcomes and treatment engagement. By systematically reviewing the published and grey literature, this study provides an overall mapping of who has been involved in integrated care, where this care is delivered, what services are included, and what aspects of integrated care have been evaluated. This information will improve understanding of the goals behind efforts to implement integrated collaborative care models and ultimately enable identification of essential components of integrated care hubs addressing youth mental health and addiction.

Conclusion: The landscape of mental health care is changing with the creation of youth-friendly integrated care hubs. This scoping review will identify what knowledge is available about integrated hubs and their implementation, what remains to be determined, and essential next steps for widespread scale-up, providing critical information for health service policymakers.

All Authors: Cara Settipani, Kristin Cleverley, Lisa Hawke, Maureen Rice, Joanna Henderson

ID: 201

Author: Ms. Nida Shahid

Title: Impact of Telehomecare on Patients' Quality of Life and Disease-Management Skills

Type of Abstract: Poster

Objectives: This abstract reports on the impact of Telehomecare on quality of life, disease-management skills and satisfaction among heart failure (HF) and chronic obstructive pulmonary disease (COPD) patients in Ontario.

Approach: From June to August 2014, 57 patient longitudinal surveys (EQ-5D, SF-12, Stanford Self-Efficacy Scale-33, CSQ-8, TMPQ-17) were administered at baseline, months 1, 2, 3 after patient enrolment in the Telehomecare. Responses were analyzed using general linear mixed model in SAS.

Results: Overall, patients reported high levels of satisfaction and positive perception of the Telehomecare. Quality of life scores varied between baseline to month 3: average unadjusted physical component summary (PCS) of SF-12 survey (HF patients: 33.3-34.9 and COPD patients: 28.0-31.1); mental component summary (MCS) score (HF patients: 48.2-51.9 and COPD patients: 45.3-48.8); EQ-5D index score (HF patients: 0.70 - 0.78 and COPD patients: 0.60-0.67 within baseline to month-3). After adjusting for age and gender, quality of life did not change significantly over time. Following age and gender adjustments, no differences in self-management scores were found across conditions, except in the symptom and shortness of breath management domains, which was better for HF patients (+1.10, $p = 0.053$ and +1.68 $p = 0.007$). None of patient self-management

Conclusion: Results suggest patient acceptance of the Telehomecare. Analysis did not detect significant impact of Telehomecare on the patient quality of life and disease management skills.

All Authors: Nida Shahid, Valeria Rac, Yeva Sahakyan, Aleksandra Stanimirovic, Murray Krahn

ID: 129

Author: Ms. Gilla Shapiro

Title: Opposition to HPV vaccination on Twitter

Type of Abstract: Poster

Objectives: The aims of this research were to evaluate the proportions and types of concerns expressed about the HPV vaccine on Twitter among users from Australia, Canada and the UK; and to examine the social network within and between users posting tweets about HPV vaccines in the three countries.

Approach: Tweets related to HPV vaccines during January 2014 to April 2016 were collected in Australia, Canada and the United Kingdom. A gazetteer was used to transform the text provided by users into coordinates. To enable the classification of a large number of tweets, two stages of machine learning classifiers were constructed from a sample of tweets that were manually coded by two investigators. Data captured included the text of tweets, information about users' locations, and social connections (who they follow). The Macquarie University Human Research Ethics Committee (#5201401028) and the University of Melbourne's Research Ethics Board (#1647488.1) provided ethics approvals.

Results: Of 129,286 users posting tweets in the period, 2,792 were from users in Australia (19.3% of 7,173 tweets expressed concerns); 7,237 were from Canada (14.9% of 18,927 tweets expressed concerns), and 6,760 were from the UK (22.6% of 17,752 tweets expressed concerns). The types of concerns expressed were similar across the three countries, with barriers to vaccination the most common. Users who posted tweets expressing concerns about HPV vaccines tended to have a greater proportion of followers who also expressed concerns, and a greater proportion of followers from across international boundaries. The results indicate the relative strength of international ties among users who express concerns about HPV vaccines.

Conclusion: HPV vaccination uptake is critical to cancer prevention efforts but vaccine-related controversies and safety concerns expressed in social media have the potential to spread across countries. Monitoring networks of users who express concerns by location can support public health professionals in the development of interventions to address concerns.

All Authors: Gilla Shapiro, Didi Surian, Adam Dunn, Ryan Perry, Margaret Kelaher

ID: 358

Author: Ms. Gilla Shapiro

Title: Policies in flux: Canada's HPV vaccine programs

Type of Abstract: Poster

Objectives: Because human papillomavirus (HPV) can result in morbidity and mortality, Canada has initiated vaccination programs to reduce this health burden. This research aims to provide an accurate and current overview of Canadian school-based HPV vaccination programs and vaccination rates, and to identify foreseeable policy considerations in Canada.

Approach: Between July and October, 2016, we searched the academic and grey literature and contacted administrators of provincial and territorial immunization programs to compile information regarding HPV vaccine program administration and vaccination rates in Canada's 13 provincial and territorial jurisdictions. We sought to identify the most current details of school-based HPV vaccination programs (such as the eligible population, the type of vaccine, and the number of doses administered) and HPV vaccination rates in each Canadian jurisdiction (such as "uptake" or first dose and "completion" or final dose).

Results: All 13 Canadian jurisdictions vaccinate girls, and six jurisdictions currently include boys in school-based publicly funded HPV vaccination programs. As of September 2016, eleven jurisdictions administered the HPV vaccine in a two-dose schedule. The quadrivalent vaccine (HPV4) has been the vaccine predominantly used in Canada; however, the majority of provinces will likely adopt the nonavalent vaccine in the future. British Columbia has recently announced that it will also fund the HPV vaccine for all boys beginning in September 2017. According to available data, vaccination uptake among females ranged between 47%-93.9%, while vaccination uptake among males (in programs with available data to date) ranged between 77.9%-87.4%.

Conclusion: Canadian jurisdictions will soon need to consider whether to administer the nonavalent vaccine, whether to implement a two or one-dose vaccination schedule, and how to improve uptake and rates of completion. Standardizing methodologies for reporting HPV vaccination coverage and implementing a national registry were identified as important priorities.

All Authors: Gilla Shapiro, Juliet Guichon, Margaret Kelaher

ID: 479

Author: Mr. Graham Shaw

Title: Development of a short form instrument to measure engagement of physicians and managers in Canadian health-care facilities [Work in Progress]

Type of Abstract: Poster

Objectives: Physician engagement is an important focus of health system improvement initiatives in Canada. Based on an instrument developed and tested for the Québec Association of Health and Social Service Centres, this study reports on progress towards a short-form version that aims to reduce survey administration costs and response burden.

Approach: Items for a short form survey were derived using factor loadings on a principal components analysis of Quebec data. Representative items from the separate factors (using the 66-item instrument) were combined into an 11-item instrument representing primary dimensions of the engagement construct. The value of the short form as a proxy for the longer form was estimated by examining correlations between the short and long-form scores (scales and totals). A sensitivity analysis was conducted using dichotomized scores for engagement on both forms of the instrument across a range of cut-off scores representing decision criteria (25th 50th and 75th percentiles).

Results: The results based on Quebec data show that short form score totals correlate $r = .94$ (361) ($p < .01$) with longer instrument score totals. The strength of the correlations is similar for physicians only $r = .925$ (221) ($p < .01$) and for physician managers $r = .938$ (353) ($p < .01$). Using dichotomized scores (on both versions of the scale) across the selected cut-points, a sensitivity analysis showed a minimum sensitivity of 84% and a minimum specificity of 82%. Range: 25th percentile cutoff (sensitivity = 86%, specificity = 94%), median cutoff (sensitivity = 84%, specificity = 84%) and 75th percentile cutoff (sensitivity = 94%, specificity = 82%).

Conclusion: This work contributes to operationalizing the construct of physician engagement for use in the Canadian context. Findings suggest further work to confirm the validity and generalizability of this low-burden instrument. Initial application of the new short form is planned in a number of BC Health facilities through 2017.

All Authors: Graham Shaw, Asif Khowaja, Neale Smith, Craig Mitton, Chris Lovato, Jean-Louis Denis, Ann Langley

ID: 150

Author: Dr. Jay Shaw

Title: Managerial strategies for integrated care: Health care provider engagement in the iCOACH project

Type of Abstract: Poster

Objectives: The implementation of integrated care involves efforts to engage health care providers in a vision of health care delivery that includes coordination and collaboration for the care of individual clients. The objective of this analysis was to examine how health care providers engage with an organizational vision for integrated care.

Approach: This paper reports initial findings on health care provider engagement in efforts to implement integrated community-based primary health care from the iCOACH project (Integrated Care for Older Adults with Complex Health Needs). The research project draws on in-depth international case studies of organizations in 3 jurisdictions: Ontario, Canada (n=3), Quebec, Canada (n=3), and New Zealand (n=3). Drawing on the theory of institutional logics, this report will include data from health care provider and organizational management/leadership interviews across all 9 case studies.

Results: Preliminary findings suggest that health care providers respond to organizations' visions for integrated care differently depending on whether they feel supported to practice in more integrated ways. Even within a single organization, health care providers may enact or resist the organizational vision (and thus institutional logic) toward integrated care depending on the extent to which they feel engaged. Managerial approaches were found to be of central importance, helping to determine the extent to which health care providers adopted more integrated practices in the provision of everyday care delivery. These findings were illustrated across case studies in each of the 3 study jurisdictions.

Conclusion: Our findings point to the importance of managerial engagement strategies to promote health care provider buy-in to an organizational vision of more integrated care. The key lesson learned is that health care providers respond differently to a single managerial approach, and leaders should anticipate different reactions from different health providers.

All Authors: Jay Shaw, Walter Wodchis, Mylaine Breton, Gayathri Embuldeniya, Maxime Guillette, Ross Baker, Jan Barnsley, Ann McKillop, Nicolette Sheridan, John Parsons, Carolyn Steele Gray

ID: 385

Author: Dr. Keiko Shikako-Thomas

Title: CP2: Community Partners for Children's Participation

Type of Abstract: Poster

Objectives: To identify socio-demographic and policy and programs-related factors that influence the participation of children with cerebral palsy (CP) in the community, and to engage a variety of stakeholders in this process. To explore trajectories of participation across communities in Quebec to inform policy interventions.

Approach: 89 participants from the Quebec CP registry were recruited using a stratified randomized sampling strategy based on deprivation index quintiles and Gross Motor Function levels. Participants' material and social deprivation index was associated to the postal code at time of registration. Parents completed a socio-demographics questionnaire, commented on their access to policies and programs in their communities, and their perceived usefulness of existing programs to their child's participation. Retrospective data was taken from the Quebec Office for Persons with Disabilities, to ascertain existing programs in different regions. Participation levels and environmental barriers were measured using the Participation and Environment Measure.

Results: Children with CP participated mainly in unstructured activities such as neighbourhood outings and informal gatherings than organised and formal activities such as classes, volunteering or spiritual gatherings. Barriers to participation included stress to coordinate child needs and activity structure, lack of adapted transportation and information, distance from home and finances. Best predictive model containing socio-economic and neighborhood factors explained 41% of the variance in participation in the community. Family income (coef. = 0.99; CI= 0.3 - 1.69) as well as the number of resources parents consult to find activities (coef. = 0.28; CI=0.0322 - 0.383) were positively and significantly associated with participation in leisure activities. Social and material deprivation of the neighbourhood had a negative relation (coef.= -0.579; CI= -1.062 - -0.0969) with participation frequency.

Conclusion: Socio-economic factors and access to information play a vital role in enabling participation in the community for children with CP. Public health policies and initiatives should create equitable, inclusive and accessible communities, considering social and material deprivation and the needs of vulnerable populations such as children with disabilities and their families.

All Authors: Keiko Shikako-Thomas, Lawrence Joseph, Michael Shevell, Maryam Oskoui, Chantal Camden, Doug Maynard

ID: 36

Author: Dr. Esther Shoemaker

Title: A population-based study of care at the end of life among people with HIV in Ontario

Type of Abstract: Poster

Objectives: The demographic shift of an aging and increasingly comorbid population is changing the end-of-life experience of people with HIV in developed settings. Our objective was to quantify, at a population level, the health care use and associated costs across a comprehensive set of sectors among decedents with and without HIV.

Approach: Retrospective population-level observational study of decedents and their health care use, captured through linked health administrative databases in Ontario, the Canadian province with more than 13 million residents and the highest number of people living with HIV. We included all decedents in Ontario from April 1, 2010 to March 31, 2013 and identified decedents with HIV using a validated algorithm. We described the characteristics of the population dying with HIV and their health care use and associated costs by health care sector in the last 90 days of life.

Results: We observed 264,754 eligible deaths, 570 of whom had HIV. Only 20.2% of decedents without HIV were younger than 65 years of age compared to 73.9% of those with HIV. Decedents with HIV died more often in acute care (57.54% vs. 45.67%). Mean costs of care in their last year were significantly higher among decedents with HIV (\$82,047.54 vs. \$53,600), mostly attributable to acute care costs. Decedents with HIV spent a mean of 20.1 days in an acute care hospital in the last 90 days of life compared to 12.0 days for decedents without HIV; after adjustment, HIV was associated with 4.9 more acute care days.

Conclusion: People with HIV in Ontario are dying younger, spending more time and dying more often in hospital, and at significantly increased costs prior to death than people without HIV. Interventions such as greater involvement of primary care in the community can potentially improve the dying experience for this complex population.

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ID: 360

Author: Dr. Esther Shoemaker

Title: Chronic disease self-management among people living with HIV

Type of Abstract: Poster

Objectives: People living with HIV on antiretroviral therapy are aging with episodic chronic conditions and may benefit from chronic disease self-management approaches used in conditions like diabetes. As a first stage in understanding self-management ability of people with HIV, we measured their self-management skills using the validated Patient Activation Measure (PAM®).

Approach: We conducted a cross-sectional survey study in 2016 with two cohorts, people living with HIV and people living with diabetes mellitus. We used the PAM® to assess respondents' self-management ability. This quantitative assessment tool asks about respondents' knowledge, skills, confidence, and engaging in and maintaining health behaviours. The scores are then categorized into one of four activation levels. We used descriptive statistics to compare the demographics of the two cohorts and conducted univariate and multivariable logistic regression, adjusted for patient characteristics, to assess associations between the patient demographics and PAM® scores.

Results: The survey was answered by 156 people with HIV and 162 people with diabetes. The cohorts had similar mean ages (50.5 for HIV versus 52.5 for diabetes) but differed based on gender and ethnic background, with a higher proportion of people who identified as men and African/Caribbean/Black in the HIV cohort. People with HIV had high levels of activation that were no different from those of people with diabetes (mean score=67.2, SD=14.2 versus 65.0, SD=14.9, $p=0.2$). A similar proportion of people from both cohorts was considered fully activated (34.6% for HIV versus 28.2% for diabetes). After adjusting for patient characteristics, the odds of being fully engaged were only lower for people on disability compared to being employed (aOR=0.3, 95% CI=0.1 - 0.7, $p=0.01$).

Conclusion: People living with HIV have high levels of activation that are comparable to patients with diabetes mellitus. Our study sheds new light on the potential for the implementation of already existing standardized chronic disease self-management programs to enhance the care delivery and improve outcomes among people living with HIV.

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ID: 534

Author: Ms. Fartoon Siad

Title: Understanding the Experiences of East African Immigrant Women with Gestational Diabetes Mellitus

Type of Abstract: Poster

Objectives: East African (EA) women are a sub-population that are at high-risk of gestational diabetes mellitus (GDM) and poor obstetrical outcomes. With little known about the care experiences of this under-studied group, this study aimed to document the impact of a GDM diagnosis and perceptions of care among EA immigrant women.

Approach: Semi-structured in-depth interviews were conducted with 10 EA women diagnosed with GDM in Calgary recruited from community and tertiary care settings. Interviews were transcribed verbatim and analyzed using inductive thematic content analysis to explore participants' experiences accessing and receiving care.

Results: EA immigrant women had varied GDM experiences. Thematic analysis revealed the negative impact of GDM diagnoses on women which included the burden of self-care, fear, community influences, cultural and financial barriers. Positive impacts of diagnoses experience primarily noted through empowerment to make healthy behaviour changes. Women desired more context-specific and culturally-appropriate support and care.

Conclusion: Diagnoses of GDM extended beyond the individuals affected, impacting families culturally, psychologically, and financially. Addressing the emergent themes during pregnancy is imperative to improving care providers' engagement of EA women in postpartum diabetes screening activities and beyond. Study findings contain elements transferable to immigrant groups with a similar social-ecological context.

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ID: 49

Author: Ms. Ayesha Siddiqua

Title: Factors influencing the development of the combined Applied Behavioural Analysis/Intensive Behavioural Intervention Program in Ontario

Type of Abstract: Poster

Objectives: To provide children with Autism Spectrum Disorder (ASD) with more comprehensive services, a combined Intensive Behavioural Intervention (IBI) and Applied Behavioural Analysis (ABA) based therapy program will be introduced in Ontario in 2018. The purpose of this analysis is to determine factors that contributed to the development of this program.

Approach: Using the 3-I framework, institutions, interests, and ideas influencing the development of the new program were examined. The analysis was based on document analysis. A Google search was conducted for “ABA services Ontario” and “IBI services Ontario”. This search identified government and organizational documents, court case proceedings, and media articles. These documents were reviewed, followed by another Google search to determine additional details on events mentioned in these documents if they appeared relevant for the analysis. The websites of different stakeholders identified through Google search were also searched for relevant documents.

Results: Institutionally, the close alignment of the mandate of the new program with longstanding policy legacies supported its development. Informal interest groups (parents) and formal interest groups (Ontario Autism Coalition) led many advocacy initiatives that presented a strong opposition to the provincial government to change current practice of IBI service delivery. While different ministries justified their service delivery approach based on research evidence, the research evidence and colloquial evidence presented by Ontario Autism Coalition and parents respectively played a superior role in supporting the development of the new program. Although different ministries emphasized the importance of providing cost-effective services, mass opinion dictating children should not be denied services on the premise of return on investment highlighted the necessity of the new program.

Conclusion: Findings of this analysis can support decision makers by improving their understanding of different factors and their relative importance in driving policy change related to ABA and IBI services delivery, which can help generate insights for how policy processes, policy advocacy, and policy implementation can be improved in the future.

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Author: Ms. Thushara Sivanandan

Title: COPD in Alberta: Examining the Characteristics and Health Care Use of High Users

Type of Abstract: Poster

Objectives: Improving care for people with COPD is a priority in Alberta. This study describes the socio-demographic characteristics and health care use of people with COPD to examine: (1) differences between high users and low/moderate users of hospital services, and (2) variations across Alberta's 5 health zones.

Approach: Comprehensive administrative data from acute care, ambulatory care, physician billings and seniors' drug claims for Alberta were linked to describe people with COPD who had been hospitalized in the study period (April 1, 2012 to March 31, 2014). CIHI's High Users of Hospital Beds indicator was used to further categorize hospitalized people with COPD into high user and low/moderate user groups. Socio-demographic characteristics and health care use were described over one year. Information about health conditions was drawn from CIHI's population grouping methodology and information about health zone of residence from linkage to Census data using residential postal code.

Results: Fifty-nine per cent of people identified with COPD had been hospitalized for any reason at least once in the study period. Of those, 15% were High Users of Hospital Beds (COPD high users). COPD high users were, on average, older, had more health conditions, and used more primary care, ED services, and medications than COPD low/moderate users. COPD high users were also more likely to have died at the end of their most recent hospitalization. While the prevalence of COPD was highest in the North Zone, patients visited primary care physicians and specialists less frequently and the ED more frequently than in other zones. Furthermore, fewer COPD high users were discharged from hospital with continuing care services in the North Zone compared to other zones.

Conclusion: Regional variations in COPD prevalence and health care use were identified among people with COPD in Alberta. This study highlighted multi-morbidity and high health care needs among COPD high users. Interventions targeting integration and access may improve care for these complex patients and reduce their need for costly hospital care.

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ID: 32

Author: Mr. Robert Smith

Title: Investigating the social determinants of 30-day hospital readmission among medical patients in Toronto, Canada.

Type of Abstract: Poster

Objectives: Hospital readmissions remain a common and costly health system performance issue. The causes of readmission are complex and not well understood—particularly the role of sociodemographic factors. The aim of this study was to examine the influence of patient-level sociodemographic factors on hospital readmission within 30 days among medical patients.

Approach: Patients treated on general internal medicine units at an urban teaching hospital in Toronto participated in a detailed survey of sociodemographic information. A linked dataset including 1427 adult, non-palliative patients discharged home was analyzed. Guided by a retrospective cohort design, multivariable Cox regression analyses examined relationships between 13 sociodemographic variables and unplanned all-cause readmission over 30 days. Indicators of illness-level that were controlled for include Hospital Admission Risk Prediction (HARP) index score (age, primary diagnosis, frequency of previous hospital utilization, discharged disposition), Charlson Comorbidity Index score, and inpatient length of stay.

Results: Approximately 14.4% (n = 205) of patients experienced readmission within 30 days. Patient-level sociodemographic factors did not exhibit significant associations with 30-day readmission. HARP scores from nine to 29 (compared to 0-2), were associated with 66% greater hazard of readmission (adjusted HR=1.66, 95% CI: 1.08-2.54, p = 0.02) and fair self-perceived health was associated with increased hazard of readmission (adjusted HR=1.45, 95% CI: 1.02-2.05, p = 0.04). When HARP variables were analyzed as separate covariates, having experienced one previous admission (adjusted HR=1.78, 95% CI: 1.22-2.59, p 2.33, 95% CI: 1.46-4.43, p 1.39, 95% CI: 0.98-1.98, p=0.07).

Conclusion: The influence of sociodemographic factors on the incidence of 30-day unplanned all-cause readmission remains unclear among medical patients. Attentiveness to patients' sociodemographic circumstances is an important component of patient-centered care. However, to prevent readmissions, improving standardized hospital-to-home care transition processes and follow-up care in the community should remain paramount.

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ID: 489

Author: Ms. Sepideh Souri

Title: Identification of validated case definitions for chronic disease using electronic medical records (EMRs): A systematic review

Type of Abstract: Poster

Objectives: Secondary data, derived from primary care electronic medical records (EMRs) are being used for research and surveillance. To broaden their usability, we must specify case definitions to identify important chronic conditions. The purpose of this study is to identify case definitions that have been validated in primary care EMR data.

Approach: We performed a systematic search of Embase and MEDLINE to identify studies that describe case definitions for clinical conditions in EMR data and reported the performance of these definitions using validity metrics (specificity, sensitivity, positive and negative predictive values). We then compared the performance of different case definitions for the same conditions and explored the influence of data sources, jurisdiction, and patient population. Two independent reviewers screened abstracts and full-text articles. The quality of each study was evaluated using the QUADAS tool.

Results: The initial search produced 6664 articles after removing duplicates and 40 were selected for inclusion in the review. The majority were published between 2010-2016 (82.5%) and most took place in Europe (62.5%). Case definitions were identified for 47 acute and chronic conditions. There were multiple definitions for diabetes (n=8), colorectal cancer (n=2), depression (n=3), hypertension (n=6), Chronic Obstructive Pulmonary Disease (COPD) (n=6), asthma (n=3), arthritis (n=3), and skin and soft tissue infections (n=2). The studies used International Classification of Disease version 9 (ICD-9) criteria and read codes along with laboratory values and medications for the algorithms. The most frequently used validity measure was positive predictive value (PPV). Most studies (70%) were found to be of good quality (score > 3/6) using the QUADAS tool.

Conclusion: Our review of the literature found a significant number of validated case definitions with good accuracy for use in EMR data. Existing case definitions will serve as a starting point for the development of new case definitions and will enable better surveillance based on detailed clinical EMR data.

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ID: 329

Author: Ms. Brittany Speller

Title: Development of a Decision Aid for Young Canadians Diagnosed with Breast Cancer who are at Risk of Infertility Following Cancer Treatment

Type of Abstract: Poster

Objectives: Young breast cancer patients are at risk of temporary or permanent treatment-related infertility. The study aimed to determine the fertility-related information health care providers and breast cancer survivors consider valuable for inclusion in a Canadian fertility decision aid for young breast cancer patients by reviewing existing decision support resources.

Approach: A qualitative descriptive approach was used to evaluate 6 decision support resources created in other jurisdictions. Using purposeful sampling, 8 multi-disciplinary health care providers and 8 breast cancer survivors from across Canada evaluated 1 to 2 decision support resources in structured interviews. Interviews were conducted in-person and by telephone from March to June 2016 and ranged in length from 30 to 90 minutes. Interviews were transcribed verbatim, organized in NVivo, and analyzed deductively against the components of the interview guide.

Results: Each decision support resource had useful components to adapt for the Canadian fertility decision aid. Participants felt it would be useful to include Canadian-specific and accurate information on resources for additional support and the success rates and cost ranges of fertility preservation procedures. There were mixed views on the impact and value of including in-depth fertility information such as adoption and other fertility-related options after treatment. Discrepancies were also seen on the value of personal stories and including an exercise to help patients clarify the value they place on the different fertility options. There was overall consensus on the inclusion of only pertinent fertility-related information that does not replicate information in supplementary patient education material to avoid overwhelming patients.

Conclusion: The evaluation revealed sections of existing decision support resources that can be adapted for the Canadian fertility decision aid. Findings were used in combination with the International Patient Decision Aid Standards criteria to ensure the decision aid meets best practices and the information needs of young women with breast cancer.

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ID: 95

Author: Ms. Sarah Spruin

Title: Examining the trajectory of cognitive decline in the home care and long term care (LTC) population in Ontario

Type of Abstract: Poster

Objectives: Dementia is associated with a decline in cognitive function, but the rate of decline has not been previously examined at a population level. This study aims to describe the change in cognitive function among populations receiving home and long term care (LTC) in Ontario over 3 years.

Approach: Using administrative health data at the Institute for Clinical Evaluative Sciences (ICES), we captured home care and LTC residents with more than 1 Residential Assessment Instrument (RAI) record beginning January 1, 2007 (home care) and January 1, 2009 (LTC), and ending June 30, 2015. A baseline Cognitive Performance Scale (CPS) score, along with demographic/functional characteristics (e.g., age, sex, chronic health conditions), were obtained from the earliest RAI assessment for each care recipient. Cognitive decline was measured by changes in the CPS score over subsequent assessments. Statistical techniques, including subgroup analyses, will be used to model the trajectory of cognitive decline.

Results: 489,056 Ontarians were found to have at least 2 assessments (home care or LTC) based on the criteria above. Approximately 50% had at least 6 assessments combined. Most Ontarians (over 90%) entered the study with an initial CPS score between 0-3 indicating moderate to no cognitive impairment, with 38% of residents entering with no impairment. Preliminary results demonstrate an average increase in the CPS score of Ontarians by 0.2 between the first and second RAI assessments, and 0.8 between the first and last assessments, indicating a temporal decrease in cognitive function over both number of assessments and time. Greatest cognitive declines were observed in Ontarians with an initial CPS of 0 with an average increase in CPS between the first and last assessments of 1.1.

Conclusion: We show, at a population level, Ontarians entering LTC or home care have similar rates of cognitive decline over multiple assessments and time. These results give a better understanding of cognitive decline at the population level which will help improve dementia identification and inform home care and LTC planning.

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ID: 130

Author: Dr. Tara Stewart

Title: Describing 'success cases' of an outpatient case management service: A realist analytic approach to an intervention designed to address a complex issue

Type of Abstract: Poster

Objectives: Outpatient case-management is a common approach to redesigned care for frequent-users of acute services; yet knowledge-gaps exist regarding for whom it works best. Underpinned by IHI quality improvement goals, we used a realist analytic approach to identify and describe patients for whom outpatient case-management was associated with decreased ED visits.

Approach: N=114 patients (60% female, average age=73) receiving outpatient case-management were each matched to a no-intervention/treatment-as-usual comparison case on three characteristics: Age, gender, and annual frequency of ED visits. We compared pre-post changes in frequency of ED visits across each patient and his/her matched counterpart: Any patient whose ED visits decreased by a margin of greater than one, as compared to his/her matched counterpart, was considered a success case. We removed all neutral cases, patients confirmed deceased, those who were transitioned to institutional care, and those who voluntarily withdrew. This left n=25 successful cases and n=37 unsuccessful cases for in-depth analysis.

Results: Multiple administrative data sources were used to compare successful cases to unsuccessful cases on a range of variables in the following categories: Sociodemographics; Health Status (physical, mental); Behavioral Health; Functional Status; and Social Support (quantity, quality). One a priori hypothesis, based on frontline service-providers' experience with patients, was tested: Outpatient case-management would be maximally effective for patients lacking in social support (quantity/quality). All other analyses were exploratory in nature. Several statistically-significant differences emerged from a series of Chi-Square and t-tests, resulting in the following characterization of successful cases: A decrease in ED visits following outpatient case-management was most likely for patients with advanced age (M = 76 vs. M = 68); patients with diagnosed cardiovascular conditions; and, as hypothesized by providers, patients who were lacking in social support.

Conclusion: Findings suggest that success of this particular outpatient case-management service may vary by patient age, cardiovascular history, and social support. A data-driven approach and small sample size means this analysis must be interpreted with caution; further analysis may be warranted to refine the target population for this outpatient case-management service.

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ID: 427

Author: Ms. Heebah Sultan

Title: Development of the Home Care Categorization Tool (HCCT) for Long-Stay Patients

Type of Abstract: Poster

Objectives: Ontarians deserve high-quality and consistent home care that is delivered using solutions that are evidence-informed. As the home care sector transitions to using the interRAI HC, a new Home Care Categorization Tool (HCCT) was developed to provide care coordinators with evidence-informed decision support and a consistent process for population identification.

Approach: Ontario long-stay home care patients who completed at least one RAI-HC assessment in fiscal year 2015-2016 were identified using the provincial technology solution utilized by care coordinators. Classification-and-Regression-Tree (CART) analysis was used to determine the best predictors of the Client Care Model (CCM) patient population categories. Site level validation was performed to assess the tool's robustness and clinical expert consultations also contributed to the development of the HCCT. Field testing of the tool was conducted in six sites in the fall of 2016.

Results: The foundation of the HCCT is the Personal Support Algorithm, a new tool that considers patients' functional needs, and thus, 6 trees were developed, one for each care group. Other components of the tool include the CPS, MAPLe, CHESS, ADLH, CRISIS Score, and DIVERT Score. The model accuracy ranges from 65-76%, with increasing CCM population complexity from care groups 1 to 6. Results from the field testing showed that approximately 81% of the CCM populations selected by the care coordinators match the population predicted by the HCCT; 7% did not match, though care coordinators indicated that, if given a choice, they would change to the population predicted by the tool; and for 12% of the assessments, the care coordinators disagreed with the HCCT predicted population.

Conclusion: The HCCT tool is expected to be implemented in the provincial technology solution prior to the transition to the interRAI-HC to support care coordinators in their decision-making process. The HCCT is intended to be used conjointly with care coordinators' clinical expertise and judgment, and patient and caregiver needs and preferences.

All Authors: Heebah Sultan, Janet McMullan

ID: 442

Author: Ms. Heebah Sultan

Title: Scheduled Day Surgery for Type II Supracondylar Fractures in a Paediatric Tertiary Care Hospital: A Cost-Minimization Analysis

Type of Abstract: Poster

Objectives: The study objective was to quantify and compare costs of a scheduled day surgery approach to the standard of care (inpatients undergoing surgery) for type II supracondylar humeral fractures (SCH#) at an Ontario paediatric hospital, as evidence suggests that surgical delays for up-to four days does not affect clinical outcomes.

Approach: Using a cost-minimization approach, the base case analysis adopted was the health system perspective and a secondary analysis adopted the societal perspective. The time horizon was from the episode-of-care to discharge following surgery. A decision tree was developed to model both pathways using probabilities derived from chart reviews and costing data sources. Uncertainty in model parameters were assessed using one-way and probabilistic sensitivity analyses for the probabilities of requiring an open reduction, ambulatory costs for the hospital and for transfers, and average inpatient and acute care costs. Results were expressed as costs per patient per episode-of-care in 2016 Canadian dollars.

Results: Findings demonstrated cost savings of \$2,697 from the health system perspective and \$2,348 from the societal one. On average, adoption of the scheduled day surgery approach would save the health system 1.2 inpatient days. Another significant cost saving included the option to schedule surgeries on weekdays and during regular work hours, avoiding additional after hours and weekend fees for physicians. For the societal perspective, hospital stay and physician costs were significant cost drivers. Increased travel time, parking, and productivity loss costs would be absorbed by families and businesses, despite the cost savings to the health system. Sensitivity analyses confirmed that the day surgery approach would yield savings 98% and 99% of the time for the health system and societal perspectives, respectively.

Conclusion: This study suggests that a scheduled day surgery approach for pediatric type II SCH# represents significant cost savings from both health system and societal perspectives. Exploration of costs absorbed by families and examining how the proposed approach affects the experience of children and families should be examined in greater depth.

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ID: 261

Author: Dr. Winnie Sun

Title: Improving Clients' Self-Care and Their Informal Caregiver's Care-Giving Experiences To Promote Home Care Safety

Type of Abstract: Poster

Objectives: The purpose of this study was to explore the clients and their informal caregivers' perspectives of home care safety in relation to self-care and caregiving activities.

Approach: This qualitative research study utilized one-on-one, in-depth, semi-structured interviews with the clients and their informal caregivers recruited from one home care agency in Ontario, Canada. Older home care clients (over the age of 65) and their informal caregivers were asked to describe the safety challenges and concerns in their homes, and to identify the role for health practitioners in home care to provide support for their self-care and disease management.

Results: Analyses of the qualitative descriptions revealed four over-arching themes: (1) Struggling through multiple aspects of safety challenges; (2) Managing therapeutic self-care by developing knowledge, competency and self-confidence; (3) Coping with informal caregiving through problem-solving, stress management and caregiver relief; (4) Seeking education, support and collaboration from home care. These findings highlight the need for developing health care delivery model that builds more collaborative partnerships with clients and their caregivers to promote safety in homecare.

Conclusion: The study findings provided insight into the safety problems related to therapeutic self-care, and the role of health practitioners in improving client's self-care ability to reduce safety related risks and burden for older home care recipients.

All Authors: Winnie Sun

ID: 186

Author: Mrs. Chantal Sylvain

Title: Participants' perspectives of a work rehabilitation program integrated into mental health services in primary healthcare

Type of Abstract: Poster

Objectives: In Canada, few early work rehabilitation services are offered to prevent long-term work disability due to common mental disorders, despite population-level needs. Our study sought to describe the active components of a work rehabilitation program recently implemented in primary healthcare, from the participants' perspective.

Approach: This study is the qualitative part of a broader research project aimed at the developmental evaluation of the program using a mixed methods approach over a two-year period. We conducted semi-structured interviews of 26 participants who agreed to be contacted after program completion. One inclusion criterion was having completed at least four weeks in the program. The interview questions concerned the program components they considered beneficial and their reasons. The interviews were conducted by telephone and recorded. Thematic analysis was performed on detailed summaries of the interviews. Converging themes were identified and classified by component type.

Results: The active components identified concerned the interventions' group format, activities, and occupational therapists. Participants saw the group format as offering three benefits: (1) offsetting the feelings of isolation and shame associated with mental disorders; (2) allowing them to adjust their view of their work disability and means for reducing it; and (3) reactivating their social interaction skills. The activities seen as most beneficial concerned training on techniques to better cope with work and daily life (e.g. mindfulness meditation). Occupational therapists were seen as having three main functions: (1) relaying information to the physician, insurer, and other partners; (2) coaching (supporting integration of the techniques, giving meaning to the experience, pointing to resources outside the program); and (3) ensuring the therapeutic environment of the group interventions.

Conclusion: Work rehabilitation programs in mental health are still scarce in primary healthcare in Canada. The results of our study provide valuable insights into components that should be given priority if we are to ensure that future programs meet this population's needs and promote their health.

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ID: 100

Author: Dr. Peter Tanuseputro

Title: Level of Need, Divertibility, and Outcomes of Newly Admitted Nursing Home Residents

Type of Abstract: Poster

Objectives: To describe – at a population level – the level of need and divertibility of newly admitted nursing home (i.e., long-term care facility) residents. We also describe the factors that drive need and the outcomes of residents across different levels of need.

Approach: We captured all newly admitted residents in Ontario's 640 publicly-funded nursing homes between January 1, 2010 and March 31, 2012. We categorized residents into 36 groups based on their: cognitive impairment, difficulty in Activities of Daily Living (ADL), difficulty in Instrumental ADLs (IADL), and caregiver presence at home. Residents were further categorized as low, intermediate, or high needs; applying results from previous 'Balance of Care' studies, we also captured who could have been cost-effectively diverted into the community. Characteristics and outcomes were contrasted across needs and divertible groupings, including for: hospital admissions, emergency room visits, mortality, and return to home.

Results: A population-level cohort of 64,105 incident admissions was captured. About two-thirds had great difficulty performing ADLs (65%) or mild to severe cognitive impairment (66%); over 90% had great difficulty with IADLs. Just under 50% were considered to have high care needs (cognitively impaired with great ADL difficulty), while only 4.5% had low care needs (cognition and ADL intact). Those with dementia (71.0%) and previous stroke (21.5%) were over-represented in the high needs group. 41.3% (n=26,502) of residents cannot be diverted to anywhere but an institution with 24-hour nursing care. Only 5.4% (n= 3,483) could potentially be cost-effectively diverted to the community. Those at higher needs experienced higher rates of mortality, higher cost across all health sectors, and lower rates of return to home.

Conclusion: Newly admitted nursing homes residents generally have high needs – driven largely by dementia and stroke– and could not have their needs met cost-effectively elsewhere, suggesting a system at capacity. Meeting the long-term care needs of the aging population should consider the balance of investments in institution and community settings.

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ID: 5

Author: Mr. Simon Tavasoli

Title: Women's behaviors toward mammogram and Pap test: opportunities to increase cervical cancer screening participation rates

Type of Abstract: Poster

Objectives: Screening rates for breast and cervical cancer remain moderate among women over 50 years of age. Because cervical and breast screening interventions can be linked, evaluating screening factors relating to both is important. This study evaluates characteristics associated with breast and cervical cancer screening participation in women aged 52–69.

Approach: A cross-sectional study was used to describe individual and physician characteristics associated with breast and cervical cancer screening behaviours of 1,173,456 eligible women aged 52 to 69 in Ontario, Canada. Overdue for screening was defined as >2.5 years from last mammogram or >3.5 years from last Pap test. Factors that might influence uptake of mammogram or Pap test were included as covariates in a multivariable multinomial logistic regression model.

Results: Overall, 52.4% of eligible women were up-to-date for both, 21.3% were overdue for both, 14.4% were overdue for Pap test but were up-to-date with mammogram, and 12.0% were overdue for mammogram but were up-to-date with Pap test. There was an opposite effect of age on likelihood of being overdue for Pap test only versus mammogram only. Women aged 67–69 compared to 52–54 were more likely to be overdue for Pap test only (AOR=2.3; 95% CI 2.3–2.4) and less likely to be overdue for mammogram only (AOR=0.5; 95% CI 0.5–0.6). Women rostered to a male physician versus a female physician were more likely to be overdue for Pap test only (AOR=2.3; 95% CI 2.3–2.4) or to be overdue for both tests (AOR=5.2; 95% CI 5.0–5.2).

Conclusion: Comparing screening patterns may provide physician and patient directed strategies to increase cervical cancer screening participation by recruiting women who are overdue for Pap test but undergoing breast cancer screening.

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ID: 134

Author: Dr. Vidhi Thakkar

Title: Relationships between preferred role in treatment decision-making and e-health literacy

Type of Abstract: Poster

Objectives: Involving patients in treatment decision-making requires understanding and respecting their preferred roles, which are known to vary. In this study, we are examining the inter-relationships between patients' use of information resources, trust in the physician, perceived e-health literacy, and their preferred roles.

Approach: This mixed methods study combines a quantitative survey and interviews. The survey uses validated scales to measure: preferred role in treatment decision-making (PSDM scale), perceived level of e-health literacy (e-HEALS scale), and trust in the physician, as well as participant demographics. Supplemental qualitative interviews are conducted with a subset of respondents to further examine their views on patient participation, including the impact of the availability of on-line information on their preferred roles. These are analyzed using thematic analysis approach. The study populations include a pilot study of healthy participants and, pending ethics approval, glaucoma and primary care patients.

Results: The PSDM scale distinguishes between preference-independent 'problem-solving' (PS) tasks and 'decision-making' (DM) tasks, classifying preferred roles into autonomous, shared or passive. Although previous work found few preferred an autonomous role, this did not capture increased availability of health information. Preliminary pilot study results from 6 healthy participants (mean age = 34, 67% female) found that even in a population with a high level of e-health literacy, all participants preferred a shared role, and showed a greater tendency to hand over PS tasks for chest pain. After ethics approval, data collection will begin with glaucoma and primary care patients. Results of this part of the study, which show the relationship between the PSDM, e-HEALS, trust in the physician scale, and interview thematic findings will be presented.

Conclusion: Although based on a small convenience sample, preliminary findings suggest that even with high amount of information online and a high level of perceived eHealth literacy, healthy participants still preferred a shared role in decision making over an autonomous role. Current models of patient engagement may not reflect these patient preferences.

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ID: 307

Author: Ms. Bronwyn Thompson

Title: Modification of a priority setting instrument for cataract surgery: Application of a modified Delphi process in a community setting

Type of Abstract: Poster

Objectives: The Delphi process, a method to derive group consensus, is frequently employed in healthcare with the optional addition of a face-to-face meeting depending on the purpose. This presentation illustrates the approach and lessons learned using a modified Delphi process to reach consensus with the purpose of modifying a measurement instrument.

Approach: An expert panel was assembled through snowball sampling using an emailed letter for recruitment. An electronic survey was developed incorporating criteria from the existing instrument and other related items identified through a literature search and expert opinion. The panelists were asked to rate the relevancy of each criteria on a 5-point Likert scale to determine appropriateness and prioritization for cataract surgery. Panelists also had the opportunity to add items they felt were missing. To derive group consensus, two rounds of the survey were deployed, followed by a structured and moderated face-to-face meeting including a final round of the survey.

Results: An expert panel of 13 eye care specialists (Ophthalmologists, Optometrists, General Practitioners) was recruited. The survey incorporated 33 criteria (18 clinical, 10 quality of life, 5 panelist-suggested). After each survey, panelists were provided their own ratings and the group median for each item. Those whose ratings differed from the median by greater than one point were asked to provide rationale. Items where consensus, defined as IQR of less than 2, was not reached were discussed at the face-to-face meeting. The meeting was essential in clarifying definitions for all criteria and ensuring consistent interpretation of instructions. Participants were able to share opinions reciprocally and follow-up on the thoughts of others. The facilitator ensured structured open discussion. Following the face-to-face meeting, consensus was reached on all items.

Conclusion: A modified Delphi process was successfully employed to adapt a cataract surgery measurement instrument. The face-to-face meeting was essential to ensure shared understanding and clarity of purpose. It would be helpful to have a teleconference with panelists prior to the first survey to establish understanding of purpose, terminology and instructions.

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ID: 425

Author: Ms. Selma Tobah

Title: Constructing Mental Illness: Comparing Perspectives on Mental Health, Illness, and Depression by Muslim Leaders with those found in Consumer Health Materials

Type of Abstract: Poster

Objectives: The purpose of this research project was to investigate the information landscape with respect to mental health, mental illness, and depression as it might be encountered by Muslim immigrants in a mid-size Ontario city.

Approach: Pamphlets concerning mental health and depression, intended for the lay public, were collected from several health and social service centres that provide services to immigrants. As well, semi-structured interviews were conducted with eight Muslim religious leaders about their understandings of mental health and depression, particularly as they relate to immigrants to Canada. 'Muslim leaders' was defined as Imams (congregational leaders) as well as those that led religious study circles in the Muslim institutions in the city. This allowed for the participation of both men and women. Using a constructivist paradigm, a discourse analysis was conducted on each of the 'texts' (pamphlets and interview transcripts) using a pre-structured template.

Results: Overall, the study indicates that the pamphlets clearly reflect a primarily medicalized construction of mental illness and depression. While recognizing the possible necessity for medical intervention to deal with mental health problems, the religious leaders emphasized the significance of overcoming social isolation, especially for those who are immigrants. They described religion as assisting in maintaining good mental health but did not connect a lack of religious practice with mental illness or depression. Religious leaders were aware of their lack of medical knowledge, weary of using the term 'counselling' to define their role. They expressed what they saw as their own limitations and boundaries, while describing their role as actively listening and finding ways to be of support to the individual requesting help. This included connecting to a counsellor or medical referral.

Conclusion: The results possibly position Muslim leaders as mediators or intermediaries by either contextualizing or simply transferring information for congregants. Furthermore, the lack of discussion on spirituality in the pamphlets demonstrates a possible further bridge in the public discourse for connections to religious centres, where individuals may seek assistance for mental health issues.

All Authors: Selma Tobah

ID: 433

Author: Dr. Ruta Valaitis

Title: Building Better Linkages between Primary Care and Community-Based Health and Social Services for Healthy Ageing

Type of Abstract: Poster

Objectives: Little is known about primary care (PC) and community-based health and social services (CBHSS) integration for healthy ageing. This study examined: PC and CBHSS providers' perceptions of older adults' health and social needs and barriers to access services; the nature of PC/CBHSS relationships; and strategies to facilitate PC/CBHSS integration.

Approach: This qualitative descriptive study involved four focus groups (n=21). Two of them included primary care providers working at two McMaster Family Health Team clinics and the other two included CBHSS providers from various organizations who served older adults (e.g., housing, recreation, home care, home support, etc.). A researcher and note-taker conducted the focus groups guided by five broad questions. Focus groups were audio-taped, transcribed verbatim, inductively coded, and collapsed into major themes using NVivo. Matrix queries were conducted to explore differences in perceptions by PC and CBHSS providers.

Results: Participants explained that health and social services needs were exacerbated for community-dwelling older adults with multiple chronic conditions and a lack of social support and advocacy. Barriers to access CBHSS and PC services included: lack of, or poor care coordination; financial challenges; lack of accessible transportation; incongruent assessments among providers and older adults (self-assessments); wait times and eligibility criteria; communication and health literacy barriers; and lack of programs to address older adults' needs. With challenges, CBHSS referred older adults' to PC for medical needs and gathered information to gauge program eligibility. PC links were stronger with health services (specialty care) than with CBHSS. PC providers were frustrated by the time consuming and complex nature of CBHSS navigation.

Conclusion: Results provide direction and strategies to strengthen PC/CBHSS integration to support older adults including: use a patient-centred approach; employ effective PC/CBHSS communication strategies; apply effective case coordination; build PC/CBHSS trust; advocate for improved program access for older adults; and adapt services/programs to address access barriers and meet older adults' needs.

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ID: 325

Author: Dr. Isabelle Vedel

Title: Learning from Different Worlds: innovative mixed-methods research design for studying dementia care initiatives.

Type of Abstract: Poster

Objectives: Our pan-Canadian research group is studying the implementation of different primary care-based initiatives in dementia care across Canada. Identifying key success factors across provincial-wide, top-down as well as grassroots, bottom-up approaches, in diverse primary care organizations, requires an innovative mixed methods design.

Approach: To ensure effective dissemination of study results and maximize research impact, this study involved stakeholder engagement and an integrated knowledge translation plan. Stakeholders include clinicians, patients, caregivers, health care managers, and local and provincial decision-makers. Due to their contributions to the development of the study objectives, design and methodology, stakeholders will receive additional benefits from the study results, for example, data emerging from the study may serve as a baseline for quality improvement initiatives. The knowledge translation plan includes regular feedback to research sites to support change management and a series of events with national and international partners and experts.

Results: The research program is comprised of two convergent streams, where complementary quantitative and qualitative methods cross-fertilize each other. The program will be conducted in 28 primary care organizations across Quebec, Ontario and New Brunswick. The first stream is an observational cross-sectional study using chart reviews together with clinician and organizational survey data to assess quality of care, clinicians' attitudes, knowledge and practices as well as organizational characteristics. The second stream uses multiple case-study design involving interviews and document analysis to assess the implementation process. During the integration phase, a full data dossier will be developed for each site which uses the quantitative and qualitative data to build a matrix across which conclusions can be drawn on key clinical and organizational factors impacting successful initiatives.

Conclusion: This project requires the integration of data from multiple sources and across different sites in a way that maintains their rich context. The innovative methods developed by our stakeholders and research team members allow for results that create and empower transformative change in dementia care.

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ID: 303

Author: Dr. Silvia Vilches

Title: Enabling Problem-Solving Capacity through Leadership Development: Findings of an Embedded Multi-Case Study Approach to Understanding Leadership Development Across Canada

Type of Abstract: Poster

Objectives: The health care system is challenged to support innovation within systems of accountability. Findings of a two year study of the implementation of the LEADs leadership framework demonstrate personal and networked growth. The study also demonstrates how to use an embedded multi-case approach to understanding health care systems.

Approach: Following Yin (2014) an embedded multi-case approach was used. This allows within- and between-case study analysis of qualitative interviews and focus groups with various levels of leaders (n=7 to 29 within each organization) as well as learning about individual development across all the cases (n=76). Five organizations with longer trajectories of LEADS implementation were approached to share their successes. This exploratory study confirms anecdotal and personal information about the impacts of successful leadership development and lays the groundwork for future studies which should delineate outcomes frameworks.

Results: The results show a variety of systemic level impacts as well as individual capacity development. At the individual level, people expressed a greater capacity to identify challenges and act on them. In addition to personal capacity (skills, knowledge, reflection), organizational endorsement LEADS offered a common language that made the rationale for actions transparent and acceptable in the organizational environment. The development process encouraged network formation, and informal connections empowered individuals to resolve challenges by drawing on sources. Third, ongoing supports were available. Challenges included lack of time to implement plans or to reflect on practice, and in some cases, lack of transparency around next steps. Human resource staff faced barriers in proving accountability, suggesting room for improvement in documentation

Conclusion: The LEADS framework was shown to be effective, flexible and scaleable. Leadership development was shown to be individually relevant and valuable, with demonstrable outcomes within a range of types of positions. More study needs to be focused on appropriate outcome documentation so that value is more widely understood.

All Authors: Silvia Vilches

ID: 198

Author: Ms. Sanja Visekruna

Title: Health Need, Economics And Funding Of Paediatric Insulin Pump Therapy Use: A Scoping Study

Type of Abstract: Poster

Objectives: The purpose of this scoping study was to explore the breadth of existing Canadian health policies in place subsidizing the costs of insulin pump therapy (IPT) for youth with type 1 (T1) diabetes, and the impact of this health technology (i.e., clinical, psychosocial, financial) on this population.

Approach: Using Arksey and O'Malley's (2005) framework, four research questions were defined and guided search of the literature. Relevant studies and grey literature were retrieved from six electronic databases (e.g., Medline, CINAHL, PAIS International, ABI/INFORM Global, Business Source Premier, and Scopus) and websites. Literature were scanned for relevancy and selected based on inclusion/exclusion criteria. A narrative and synthesis of the literature shaped the developed of five overarching themes. To appraise the literature quality as well as validate the themes and findings, select study data was extracted into tables. Consultations with relevant stakeholders also informed the study findings.

Results: Insulin pump therapy can benefit youth with T1 diabetes (i.e., blood glucose levels, health-related quality of life) and their families (i.e., less stress/worry, easier diabetes management), although this therapy is expensive. The Ontario Ministry of Health and Long-Term Care Assistive Devices Program (ADP) subsidizes the costs of IPT for eligible children, adolescents and adults with T1 diabetes. The ADP, however, does not cover 25% of IPT expenses, or the costs of continuous glucose monitoring, an advancing diabetes health technology. Socioeconomic and economic considerations related to these health technologies will be presented and discussed relative to existing provincial/territorial funding available for these technologies. Ongoing Doctoral evaluation research addressing a literature gap will also be discussed.

Conclusion: Provincial/territorial funding is important to support the health needs of youth with T1 diabetes. Socioeconomic differences related to IPT use and clinical outcomes exist in this population, thus evaluation research is pivotal to examine potential access issues and funding adequacy relative to this population's health needs.

All Authors: Sanja Visekruna, Linda McGillis Hall, Monica Parry, Karen Spalding

ID: 387

Author: Dr. Sina Waibel

Title: How does relational continuity differ in primary and secondary care? A qualitative study of perceptions of users of the Catalan national health system

Type of Abstract: Poster

Objectives: To analyse the differences in perceptions of relational continuity with the primary and secondary care physicians and its influencing factors from the viewpoint of users of the Catalan national health system (Spain).

Approach: An interpretative qualitative study was conducted with a two-stage theoretical sample; (i) the study contexts: three healthcare areas in Catalonia with different management models of primary and secondary care services; (ii) users 18 years or older who had been attended to at both care levels for the same health problem. Data were collected by means of individual semi-structured interviews (n=49), which were audio recorded and transcribed. A thematic content analysis was conducted segmented by study area with a mixed generation of categories and triangulation of analysts.

Results: Patients across the areas studied generally perceived consistency of primary care physicians (PCP) – described by usually being seen by the same physician over longer periods of time and only in rare occasions by locum physicians – whereas some inconsistencies of specialists were indicated. Patients who perceived consistency and frequency of visits described having established an ongoing relationship characterised by trust and mutual accumulated knowledge. The ascription to a PCP, a health system related factor, facilitated relational continuity with PCP. Different organizational factors, e.g. the appointment making system, favoured consistency; whilst the re-organization of patient adscription distracted from it. Physician-related factors (medical practice, patient-physician communication, attitude and commitment to care) mostly coincided in both care levels and fostered the development of an ongoing relationship.

Conclusion: Perceptions of consistency of personnel seem to differ depending on the care level but are similar regarding the development of an ongoing relationship. The system-related factor (gatekeeper system) favours relational continuity with PCP, whereas organizational and physician-related factors seem to be applicable to both care levels.

All Authors: Sina Waibel, Ingrid Vargas, María Luisa Vázquez

ID: 33

Author: Dr. Elizabeth Wall-Wieler

Title: Predictors of Having First Child Apprehended at Birth: A Population-Based Longitudinal Study

Type of Abstract: Poster

Objectives: This study links events and diagnoses in the two years before childbirth to identify women who may be at higher risk for having their first child apprehended at birth.

Approach: A cohort of women whose first child was born in Manitoba between April 1, 1998 and February 28th, 2015 and lived in Manitoba at least two years before the birth of her first child (n = 53,565) was used. A logistic regression model determined the adjusted odds ratios (AORs) of having a child apprehended at birth. Several time-varying covariates (diagnoses of substance abuse, and mood and anxiety disorders, involvement with the criminal justice system, receiving Employment and Income Assistance, and residential mobility) are examined in two time periods in the two years before the birth – during pregnancy and pre-pregnancy.

Results: Characteristics producing the greatest odd of apprehension at birth are substance abuse in both time periods (AOR = 10.25), disability (AOR = 6.56), schizophrenia (AOR = 6.29), not having had any prenatal care (AOR = 5.28), being a teenage mother (AOR = 4.29), and involvement with the criminal justice system in both time periods (AOR = 4.21). When examining criminal justice involvement during pregnancy, those involved as the accused (AOR = 2.93) and as victims (AOR = 2.37) had the greatest odds of apprehension. For all variables examined in the two time-periods, sustained exposure produced the greatest odds of apprehension. Covariates included in the adjusted model produced great discrimination (C-Statistic = 0.912).

Conclusion: Most characteristics of women deemed to be at high risk for having their child apprehended at birth are modifiable or could be mitigated with appropriate services. Allowing the attachment of mother and child in the critical first year of life increases the likelihood of a better long-term mother-child relationship.

All Authors: Elizabeth Wall-Wieler, Leslie Roos, Nathan Nickel, Marni Brownell, Dan Chateau, Kendra Nixon

ID: 115

Author: Dr. Li Wang

Title: Screening History in Women with Cervical Cancer

Type of Abstract: Poster

Objectives: To determine how cervical screening history affects the presentation of cervical cancer.

Approach: Index cases are identified in Ontario cancer registry and linked to a cervical cytology database using a patient unique identifier. Screening history data goes back to the year 2000.

Results: 2206 women were diagnosed between 2011 and 2014. Age distribution of the cohort is: 21-29: 6%; 30-39: 19%; 40-49: 26%; 50-59: 21%; 60-69: 15%; 70+: 13%.

Screening history prior to the diagnosis for the entire cohort follows: 2-5 years: 47%; 5-10 years: 17%; 10+ years/ never: 36%.

Rate of being remotely screened (10+ years /never) increased with age: 21-29: 15%; 30-39: 19%; 40-49: 31%; 50-59: 41%; 60-69: 48%; 70+: 60%.

Stage distribution of the cohort: IA: 29%; IB: 25%; II 16%; III: 18%; IV: 12%.

Advanced disease was associated with remote screening history of 10+ years/never and is as follows by stage at diagnosis: IA: 27%; IB: 25%; II: 46%; III: 49%; IV: 58%.

Conclusion: Cervical screening history becomes more remote with age and stage of disease. 46.5% of women with cancer had a pap within 2-5 years prior to their diagnosis; evaluation of the screen results will provide insights into screening failures. It is possible that screening may be protective against advanced cervical cancer.

All Authors: Li Wang, Rachel Kupets, Julia Gao, Diane Green

ID: 132

Author: Dr. Li Wang

Title: Cervical Screening and Colposcopy Management of Women Ages 24 and Under

Type of Abstract: Poster

Objectives: In many jurisdictions age of initiation of screening is 21 years, and women ages 21-24 with cervical dysplasia are considered special population who should be managed conservatively. The purpose of this study is to assess cervical cancer screening and colposcopy management for women ages 24 and under.

Approach: A population based retrospective cohort study linked Registered Personal Database to screening cytology data and health care administrative databases from 2012 to 2014 by women's unique health number.

Results: Among 270,391 Pap tests performed, age distribution for women ages 12-17, 18-20 and 21-24 were 5.5%, 24.3% and 70.1%. The trend revealed a decreasing proportion of women ages 12-20 who had a Pap test: 36.7% of cohort in 2012 to 15.2% in 2014.

87.0% of Pap smears were normal; 12.1% low grade; 0.5% high grade. Of index LSIL smears, referral rates to colposcopy in ages 12-17, 18-20 and 21-24 were 21.8%, 45.1% and 51.4% respectively.

Of index HSIL smears, referral rates to colposcopy in ages 12-20 and 21-24 were 81.1% and 91.4%.

In women ages 12-20 and 21-24 rate for carcinoma in situ were 41.9 and 393.5 per 100,000 women, while the rates were 0.3 and 2.4 per 100,000 for cancer.

Conclusion: Screening and treatment of very young women with cytologic abnormalities is still occurring despite low underlying risks of serious dysplasia.

All Authors: Li Wang, Rachel Kupets, Julia Gao, Anna Koné

ID: 525

Author: Dr. Wenhua Wang

Title: Validation of Primary Care Assessment Tool-Tibetan version: an advanced psychometric analysis

Type of Abstract: Poster

Objectives: Valid measurement tools are needed to measure patient experience as feature of highly performing health systems. The Primary Care Assessment Tool (PCAT) has been used extensively in many countries to evaluate primary health care. This study aimed to examine the psychometric properties of PCAT-Tibetan version through advanced psychometric analysis.

Approach: This was a further analysis of the initial PCAT-Tibet validation study that was conducted of using a previous database including 1386 patients who visited their primary care providers in Tibet in 2013. The initial PCAT-Tibetan version included eight domains and 37 items. First, exploratory and confirmatory factor analysis examined fit to the theoretically underlying structure of primary care. Then, Item response theory analysis evaluates how well questions and individual response options perform at different levels of patient experience. Finally, multiple linear regression modeling was used to examine the association between each domain and patient satisfaction.

Results: A shorter PCAT-Tibetan version was finally developed, including six domains and 25 items: First Contact (four items), Ongoing Care (five items), Coordination (four items), Comprehensiveness (four items), Family Centeredness (four items), Community Orientation (four items). The theoretical structure of primary care domains fitted well with the empirical results in Tibet in total. However, extreme favorable response option ("4=definitely") was overwhelmingly endorsed for most items. Domains correlated well and were good predictors of patient satisfaction. Ongoing Care domain had the strongest relationship with patient satisfaction among all domains.

Conclusion: The 25 items PCAT-Tibet version is a valid instrument that can be used to monitor and evaluate primary care performance in Tibet. Continuity of care should be a priority in local primary care system building.

All Authors: Wenhua Wang, Jeannie Haggerty

ID: 97

Author: Mr. Gary Warwick

Title: Potential Savings from Biosimilars in Canada

Type of Abstract: Poster

Objectives: A number of biologic drugs, representing 12% of Canadian pharmaceutical sales in 2015, recently began to face, or soon will face, competition from lower-cost biosimilars. This study assesses the potential cost savings based on various assumptions of market uptake and pricing.

Approach: The drugs considered in the study are Avastin, Enbrel, Eprex, Gonal-F, Herceptin, Humira, Lantus, Neupogen, Remicade, Rituxan, Tysabri, and Xolair. Data from the IMS AG MIDAS™ Database, was used to forecast the Canadian utilization for each drug for three years following the expected biosimilar entry. A number of sensitivity analyses were conducted to evaluate the cost implications of different scenarios of biosimilar pricing and uptake based on Canadian and international observations. The analysis is conducted based on a number of OECD countries. The results are reported for the national market, as well as for public and private drug plans.

Results: At a drug level, the savings from biosimilar entry vary depending on the size of the market as well as assumptions of price level and potential market penetration, both of which depend on the policies governing the reimbursement of biosimilars. The findings suggest that the greatest savings could be realized by modeling similar market conditions to those prevailing in Norway and Finland.

Conclusion: As biosimilars and originator products are not interchangeable, the market penetration and pricing of biosimilars depends on regulations and reimbursement policies. Understanding the potential savings under different scenarios of uptake and pricing provides valuable insight into the cost impact of various policy levers.

All Authors: Gary Warwick, Greg McComb

ID: 141

Author: Ms. Daniala Weir

Title: Medications Prescribed, Stopped and Modified at Hospital Discharge and Filled Medications in the Community: Predictors of Failure to Follow in-Hospital Medication Changes 30-days Post Hospital Discharge in Patients with Multiple Chronic Conditions

Type of Abstract: Poster

Objectives: To determine which factors are associated with failure to follow changes made to patient drug regimens during hospitalization in the 30-day period post discharge for patients admitted at two urban, tertiary care academic hospitals in Montreal, Quebec between October 2014 and May 2016 with at least two chronic conditions

Approach: This study was restricted to solid, oral medications covered under the provincial drug plan. Failure to follow medication changes was measured by comparing patient discharge prescriptions (from the patient chart) to medications filled in community 30-days post-discharge (via dispensing data). Failure to follow changes made in-hospital included i) community medications that were stopped in-hospital and filled post-discharge, ii) community medications that were modified in-hospital but not filled according to the modified daily-dose, and iii) new medications which were not filled post-discharge. Poisson regression was used to determine characteristics associated with the total number of change failures

Results: Among the 872 included patients, mean age was 72 (SD 13) and 37% were female. Patients had a median of 9 (IQR: 7-11) changes made to their drug regimens during hospitalization. 383 (44%) patients followed all changes made to their medications while 261 (30%) patients had one failure, 113 (13%) had two and 115 (13%) had 3+ failures post discharge. The most important predictors of the number of failures a patient had included sex, and the average out of pocket cost for the discharge prescription; females had a failure rate that was 20% higher than males (IRR:1.20, 95% CI: 1.05-1.36), and each additional \$25 increase in out of pocket costs was associated with a 13% higher failure rate (IRR: 1.13, 95% CI: 1.07-1.19).

Conclusion: Most patients did not follow all of the medication changes that were made during hospitalization in the 30-day post discharge period. Policy related to the extent to which patients with multiple chronic conditions are required to pay out of pocket for their medications should be considered to improve adherence.

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ID: 193

Author: Dr. Erin Wilson

Title: What Patients Value about Team-Based Primary Care

Type of Abstract: Poster

Objectives: Attention to patient satisfaction with team-based primary care is increasing, however the particular aspects of care that are of value to patients tends to be overlooked. This presentation offers a nuanced analysis of patient perspectives and experiences with interprofessional teams in relation to the delivery and timing of care.

Approach: This study examined practices of connection between primary care providers, interprofessional team members, and patients. Data were collected during early implementation of a non-co-located Primary Care Home model of team-based primary care in British Columbia. Data include observation of 37 patient-clinician interactions, seven patient interviews and 16 interviews with primary care providers and interprofessional team members. The interpretive analysis surfaced specific practices of interprofessional team members that reflect how team-based care can be offered in a manner that improves patient experiences. This approach draws attention to some unanticipated benefits that are of value to patients engaged with an interprofessional team.

Results: In early stages of implementation of interprofessional primary care teams, patients value aspects of team-based care that reflect attributes of patient-centredness and coordination. Four situations are described to illuminate practices of team-based care that patients report are of value. Within these situations, attention is directed towards understanding how practices of communication and information sharing that occur between team members and with patients can influence patient experience. How and when interprofessional team members are first connected with patients, and how they engage with patients over time have both anticipated and unanticipated benefits. The unanticipated benefits are discussed in light of how timing and delivery of team-based care might be improved within a primary care home model.

Conclusion: Patient-perceived benefits of team-based primary care are more nuanced than generally found in the research literature. Attention to patient experiences is necessary to improve the design and delivery of care when making decisions about who needs an interprofessional team, or the timing of involvement of one or more team members.

All Authors: Erin Wilson, Martha MacLeod

ID: 282

Author: Mr. Guosong Wu

Title: Outcome differences of delayed Medical Emergency Team Activation for hospitalized patients with Sudden Clinical Deterioration

Type of Abstract: Poster

Objectives: Medical Emergency Team activation could be delayed due to multiple calls take place in a short period, and the patient healthcare outcomes may vary. The purpose of this retrospective cohort study was to focus on the outcome differences of simultaneous call inpatients with Sudden Clinical Deterioration and MET Activation.

Approach: This study identified hospitalized adult patients who had experienced a SCD and an activation of MET recorded by the Rapid response system (RRS) in Calgary, Alberta, Canada from January 1st, 2007 to December 31st, 2009. Four databases include MET database, ICU database, Discharge Abstract Database and Hospital Electronic Medical Records were linked in this study. We compared ICU Admission within 2 hours of MET Activation; Change in Patient Goal of Care (resuscitative, medical, and comfort) and in-hospital mortality in Generalized Estimating Equations (GEE) model adjusted for patient, physician and hospital factors, leveraging administrative and clinical databases.

Results: There are totally 3494 patients in this study (3.19 MET activation per day). As defined in this study, 190 (5.44%) cases were identified as simultaneous call patients. The median of overlap time of MET activation is 12 minutes. The median age of study population was 72 years, with interquartile range (IQR) 57-81 years, 46.16% patients had one or more comorbidities. In multivariable-adjusted analyses, the simultaneous first call patient had lower odds [OR=0.55, 95%CI (0.3-0.85)] of ICU admission and a higher odds [OR=2.08, 95%CI (1.17-3.7)] of change in Patient Goal of Care after MET activation compared to the second call patient, though this seems not associated with in-hospital mortality [OR=0.88, 95%CI (0.54,1.43)].

Conclusion: In this population-based study, we detected a strong association between delayed MET activation and ICU admission and change in Patient Goal of Care among hospitalized patients with SCD and MET activation, though the delay may not associated with in-hospital mortality.

All Authors: Guosong Wu, Tom Stelfox, Hude Quan

ID: 283

Author: Mr. Guosong Wu

Title: The Association of Patient Safety Culture with Hospital Safety Performance: A Cross-sectional Survey

Type of Abstract: Poster

Objectives: Patient safety culture (PSC) may have an impact on hospital safety performance. The association is barely discussed in the literature. The aim of this study is to establish the association between patient safety culture and hospital safety performance.

Approach: A convenient sample of five tertiary general hospitals in Harbin, China, with more than 1000 beds respectively, evolved in this onsite cross-sectional survey. We measured 12 dimensions of Hospital Survey on Patient Safety Culture, 2 dimensions of safety behavior and 5 dimensions of hospital safety performance among 507 doctors and nurses using a previously validated self-evaluation questionnaire. The positive response rate and Cronbach's alpha was calculated to assess the quality of this investigation. Logistic regression model was utilized to examine the association between dimensions of patient safety culture and hospital safety performance.

Results: The internal consistency of this study was evaluated by Cronbach's $\alpha=0.94$, with a survey positive response rate 60%. In our final logistic models, after controlling for the physician/nurse factors (age, gender, education background, working hours/week and healthcare working experience in years), we detected a higher level of safety training resulted in a significant increase in the odds of teamwork across hospital units (OR=2.63, 95%CI [1.59-4.35]), also a significantly associated between safety event report procedure and participation behavior (OR=2.2, 95%CI [1.28-3.77]).

Conclusion: This study indicated a positive association between patient safety culture and safety hospital performance, which suggested the need for improvement in teamwork across hospital units, handoffs and transitions, participation/compliancy behaviour to produce high patient safety performance.

All Authors: Guosong Wu, Jingfu Mao

ID: 127

Author: Ms. Nicole Yada

Title: A consistent approach for measuring the impact of Communities of Practice

Type of Abstract: Poster

Objectives: Communities of practice (CoPs) help generate knowledge and can support a culture of quality improvement in care delivery. However, a standard approach for monitoring CoPs in health care does not exist. This work aims to define a consistent measurement approach for demonstrating the impact of a CoP.

Approach: To guide the selection of metrics for ongoing monitoring, we developed a framework that incorporates the necessary dimensions for fostering a knowledge-generating CoP with the concept of a community life cycle. We translated the knowledge-generation process into four dimensions: collaboration includes two-way exchange of information; connection captures relationship-building and an overall sense of community; content refers to static knowledge objects; and value is the community member's satisfaction with and perceived relevance of the community. In this life cycle, communities follow the stages of inception, establishment, maturity, and mitosis, based on levels of growth, activity, and sense of community.

Results: We applied the framework to four existing CoPs supported by Health Quality Ontario. Selected evaluation metrics include number of replies in a discussion forum to assess collaboration, counting items in a document library for content, and analyzing repeat attendance at events for value. The strength of connection between members was not explicitly captured, but could be assessed in the future by recording the frequency of supportive language used. Overall, attempts to apply the framework revealed gaps in data collection, particularly for the connection dimension; as a result, we could not always accurately assess a community's impact. For CoPs being planned, opportunity exists to create a holistic measurement plan from the outset to support their potential for continuous knowledge generation.

Conclusion: CoPs support quality improvement by facilitating knowledge transfer and generation. To realize these benefits, we have developed a consistent approach to monitoring CoPs throughout their life cycles. This approach is being used across Health Quality Ontario's CoPs to identify opportunities for improvement and to optimize knowledge-building capacity.

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Title: A Mixed Methods Process Evaluation of an Opt-In Physician Enrolment Model for Physician-Linked Correspondence

Type of Abstract: Poster

Objectives: To improve cancer screening participation, physician-linked correspondence (PLC) was expanded in Ontario's colorectal cancer screening program (ColonCancerCheck) in 2016. Physicians enrolled in PLC have their names included in their patients' cancer screening letters. The objectives are to evaluate the success of physician recruitment for PLC and understand barriers to enrolment.

Approach: All Ontario physicians practicing in Patient Enrolment Models (PEM) were invited to enrol in PLC. A mixed methods evaluation approach was used. Descriptive characteristics of physicians enrolled in PLC were reported. Associations between PLC enrolment and physician characteristics such as sex, LHIN, previous cancer screening rates, practice volumes, PEM type, and use of the Screening Activity Report (SAR) were evaluated using logistic regressions. Analyses were done separately for physicians who participated in a 2009 PLC pilot and those who did not. A sub-set of unenrolled physicians were selected to participate in semi-structured interviews to understand underlying barriers to PLC enrolment.

Results: A total of 8,400 physicians (971 pilot; 7,429 non-pilot) were invited to enrol in PLC between November 2015 and February 2016. As of August 2016, 518 (53%) pilot and 2,731 (37%) non-pilot physicians were enrolled in PLC, for a total of 3,249 (39%) physicians enrolled. Among non-pilot physicians, female sex, higher fecal occult blood test and mammogram screening rates, higher practice volumes and more frequent use of the SAR were significantly associated with increased PLC enrolment. Among pilot physicians, more frequent SAR use was associated with increased enrolment, while higher practice volumes were associated with decreased enrolment. Several themes emerged from physician interviews, including overall positive attitudes towards PLC, low reach as the main barrier to enrolment and a need to improve communication strategies.

Conclusion: This process evaluation highlighted opportunities to continue to improve enrolment in PLC and a need for more effective communication strategies with primary care physicians. Important factors that influence physicians' likelihood to enrol were also identified. Findings from this evaluation will inform the design and implementation of future physician engagement efforts.

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Title: Building Capacity to Improve & Sustain Antimicrobial Stewardship Programs in ICUs

Type of Abstract: Poster

Objectives: Although evidence on the benefits of Antimicrobial Stewardship Programs (ASPs) exists, less is known about what components, factors, and conditions influence the sustainability of ASPs. In response, a Quality Improvement (QI) strategy with integrated sustainability planning was developed to improve and sustain optimal antimicrobial use.

Approach: An intervention (referred to as ASP-SUSTAIN) was developed that focused on sustainability using the HQO sustainability planner and iterative plan-do-study-act (PDSA) cycles. Four teams from different hospital Intensive Care Units (ICUs) participated in ASP-SUSTAIN. ASP-SUSTAIN involved a series of five learning modules delivered in an interactive, networked Communities-of-Practice model. Each team implemented a project with the guidance of a mentor that focused on optimizing antimicrobial use in the ICU setting. A qualitative research design with content analysis was employed involving 6 focus groups (2 at six months and 4 following the completion of the program) with the participating teams.

Results: The following themes emerged from the focus group dataset of 25 participants – benefits of participating in ASP-SUSTAIN include: keeping on track and moving forward; hearing from others and brainstorming with team; and identifying areas for improvement. In terms of sustainability the following themes emerged: getting leadership and local stakeholder engagement and buy-in; making it a routine practice; and having a ripple effect. The following challenges were identified by participants: not being able to leverage information technology (IT); lack of physician engagement; having a short time frame for project completion; and lack of clarity on ASP-SUSTAIN expectations. Three key recommendations also emerged and include: understanding the nature of the program/commitment; having resources to collect data and IT solutions; and having more background on QI.

Conclusion: Study findings add to the evolving body of knowledge around the benefits of engaging clinicians and staff in an integrated QI sustainability strategy and the components, factors, and conditions that influence application of QI into practice, and the sustainability of QI projects aimed at optimizing antimicrobial stewardship.

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Title: Conditions and factors associated with potentially inappropriate medication use in frail older adults: a mixed methods analysis in long-term care

Type of Abstract: Poster

Objectives: Older adults in long-term care (LTC) are often frail and have multiple chronic conditions that increase their exposure to multiple medications and risk for inappropriate medication use, adverse events, and higher healthcare utilization. This multi-method study explored conditions and factors associated with potentially inappropriate medication (PIM) utilization with older adults.

Approach: An embedded single case design with cross case synthesis. Using Ontario linked administrative data as a sampling frame seven LTC facilities located across Ontario were recruited using maximum variation sampling based on facility size, median frailty level of residents and average rates of polypharmacy across residents. Within each facility, the following priority drug categories were examined: antimicrobials; antipsychotics; cholinesterase inhibitors; and lipid-lowering medications. For each LTC facility, data sources included chart reviews, observations, interviews with administrators/providers and patients/families. An iterative directed content analysis was employed to analyze interviews and observation field notes.

Results: Several thematic groups emerged from the data collected from 15 administrators and directors of care; 17 residents; 31 caregivers; and 64 healthcare providers on experiences and perceptions associated with PIM including: 1) reconciling the use of antipsychotics as a last resort; 2) lacking knowledge of resident and their medication history; 3) viewing 'doctor knows best' with limited awareness of what medications they are on; and 4) varying levels of family engagement. The following recommendations to optimize prescriptive practices emerged: 1) providing education; 2) accessing and enacting behavioural support; 3) upholding bill of rights/legislation; 4) staffing appropriately and having clarity of roles; 5) implementing 'best practices' on assessing, monitoring and documenting; and 6) leveraging internal and external resources.

Conclusion: Study findings highlight the experiences, perceptions, conditions and factors associated with PIMs with older adults in LTC. Further, mitigating strategies to minimize PIM utilization were identified by study participants that can inform future interventions aimed at optimizing prescriptive practices with older adults in LTC.

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Title: Modeling Emergency Vehicle Usage Decision for Children and Youth with Mental Health Issue in Nova Scotia

Type of Abstract: Poster

Objectives: It is crucial but challenging to predict a patient's selection of a particular health service offered. In this research, a modified discrete choice model (DCM) is proposed for modeling emergency vehicle use for children and youth with mental health problems in Nova Scotia. Proposed modification improves prediction error significantly.

Approach: Records of emergency vehicle use for children and youth (ages between 6 to 18 years) were obtained during 2010-2015 in Nova Scotia. Obtained data was cleaned and secondary variables were generated using the available data (like, distance was calculated from the postal codes using Google Map API). Exploratory analysis was carried out and the variables are identified for modeling. Considering a service user as a rational agent as a utility maximizer is the basis for DCM modeling. We incorporated 'affect-probability weighting' in probability calculation with logistic regression. The model is fitted and validated with 70% and 30% of the data.

Results: Selection of a particular health service depends on different factors. Here, based on available data, we considered distance, gender, time-of-day and risk are the governing factors for calling an emergency service. The parameter estimation of the standard DCM and proposed DCM models are carried out using maximum likelihood estimation (MLE) method using the same 'testing' dataset alone. The 'validation' dataset is then used for prediction error calculation. Obtained results show that the modified DCM gives more than 9% correct prediction compared to that of the basic DCM. However, in both cases, prediction accuracy is still low and therefore, other statistical performance measures (like sensitivity, specificity etc.) are calculated.

Conclusion: Proposed modification to the DCM for health service decision making looks promising. However, poor performance might have resulted from leaving out key factor(s) that are not available in our dataset. As more relevant data will be available, we can update and fine tune our model accordingly.

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Title: Home care clients with a stroke diagnosis in Ontario have increased limitations with communication and ADLs

Type of Abstract: Poster

Objectives: To develop a comprehensive profile of community-dwelling stroke clients receiving home care services. The profile will describe clients with respect to demographic and clinical characteristics, as well as functional performance, cognitive performance, and social engagement. The profile will be described comparing clients with a history of stroke to those without.

Approach: Data were sourced from clients, aged 65+, who received a routine assessment from 2007-2012 using the Resident Assessment Instrument for Home Care (RAI-HC) in Ontario. The RAI-HC contains a number of embedded health index scales, including the Activities of Daily Living Self-Performance Hierarchy Scale, Cognitive Performance Scale, and the Depression Rating Scale. With outcomes dichotomized, the impact a history of stroke has on health status was assessed through a series of logistic regression models, each adjusted for age, sex, and number of comorbidities (< 3 or ≥ 3). A conservative odds ratio of 1.5 was considered to be clinically meaningful.

Results: Population-level data for 319 694 clients were analyzed, including 56 909 with a stroke diagnosis. In the general home care population, 62% of clients had diagnoses of three or more chronic conditions compared with 86% of stroke clients. The most common comorbidities for stroke clients included hypertension, arthritis, coronary heart disease, and diabetes. Clients with a history of stroke were at higher risk of presenting with difficulty in both expressive and receptive communication, locomotion, and bowel and bladder continence. These clients also were found to have higher (i.e., less favourable) scores on scales assessing activities of daily living and cognitive performance. Though statistically significant ($p < 0.05$), stroke survivors were not found to have clinically meaningful higher scores on the Depression Rating Scale.

Conclusion: Clients with a history of stroke were found to have more limitations with respect to communication, locomotion, and activities of daily living. Our findings align with the literature. This work highlights the specific needs of this client population and may be used by clinicians to tailor programs to these individuals.

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