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FAMILY MEDICINE

Chronic disease, Risk factors, and Quality of Life of Older Adults residing in Ontario Subsidised Housing

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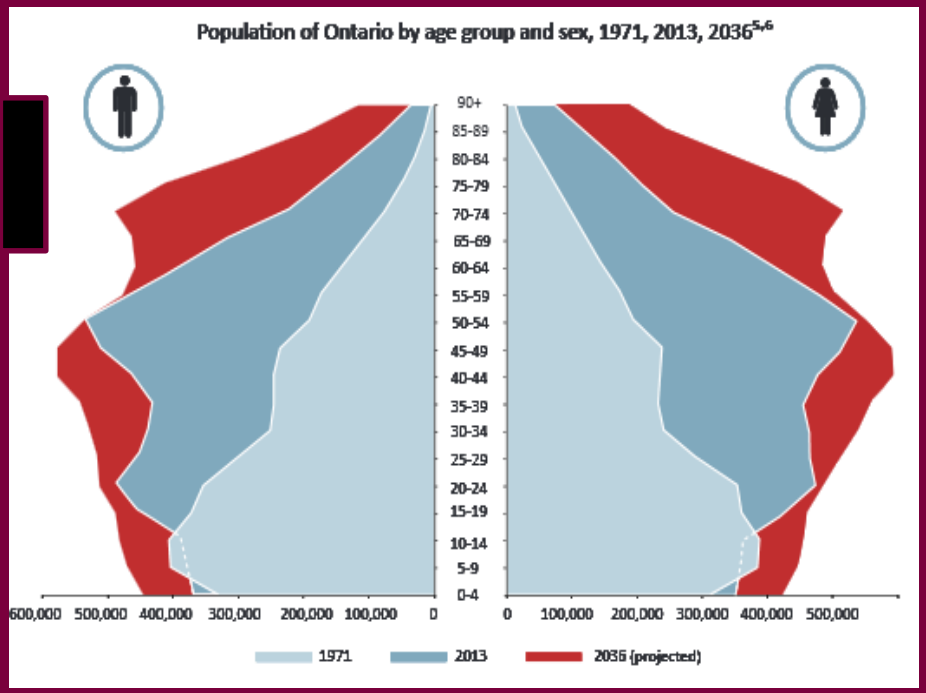
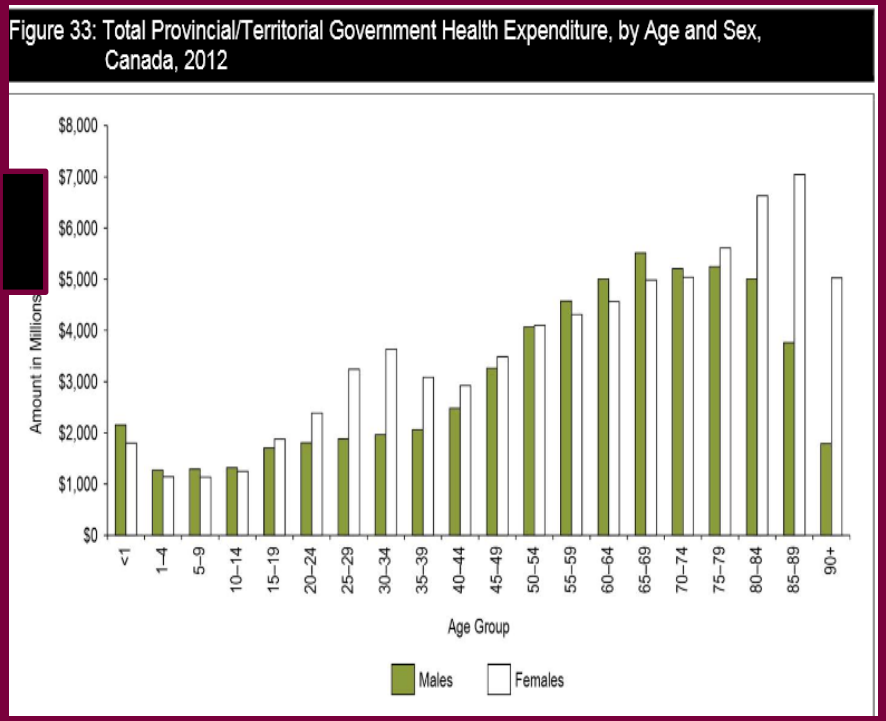
Introduction

- Background
  - High prevalence of chronic disease among older adults
  - High prevalence of lifestyle-related illness among low SES
  - Older adults living in subsidized senior's buildings have lower SES
    - Does this population have a low health-related quality of life?

Community Data: Cost of Healthcare





Health expenditures raise as people age & the older population with in Canada is expected to grow

Graph 1: Public Health Ontario. (2016) Ontario's Population: Determinants of Health. Retrieved from https://www.publichealthontario.ca/en/DataAndAnalytics/OntarioHealthProfile/Pages/default.aspx

Graph 2: Canadian Institute for Health Information. (2014) National Health Expenditure Trends, 1975 to 2014. Retrieved from: https://www.cihi.ca/en/nhex_2014_report_en.pdf

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Introduction

- Objective:
  - Understand health-related quality of life (HRQoL) in this population as measured by
    - Self Reported Health status
    - EQ5D: Pain/discomfort, anxiety/depression, ability to perform daily tasks, self-care, mobility
  - and the factors affecting both these measures:
    - Demographic
    - Health conditions
    - Chronic disease knowledge
    - Lifestyle risk factors and Chronic Diseases
    - Confidence to make changes
    - Health literacy

Methods

- Health Awareness and Behaviour Tool (HABiT)
  - CCHS
  - EQ5D
  - CANRISK
  - CHEP (Cardiovascular risks)
  - Other Diabetes Risk questions (CHAD)
  - NVS-UK (Health literacy)

- Residents 55 years and older
- 12 subsidized apartment buildings in 3 communities
- Trained research staff/paramedics

Methods

- Analysis:
  - Descriptive analysis
  - Regression
    - Outcomes: HRQoL
    - Predictors:
      - Demographic
      - Health conditions
      - Lifestyle risk factors
      - Chronic disease knowledge
      - Confidence to make changes
      - Health literacy

Results

- 437 residents, mean age = 72.2
- Demographics:
  - 73% female
  - 71% high school or less
  - 91% lived alone (widowed, single, divorced)
- Self-reported Health:
  - 42% poor-fair health status
  - 27% diabetes
  - 55% hypertension
  - 39% high cholesterol
  - 33% overweight
  - 33% obese

Results cont.

- Knowledge of chronic disease risk factors
  - Very good (over 80%), less for diabetes
- Health literacy
  - Nutrition label comprehension inadequate in 80%
- HRQoL:
  - 70% pain/discomfort
  - 61% had mobility problems
  - 44% anxiety/depression
  - 42% problems doing usual activities
  - 18% problems with self-care

Results cont.

- What factors are related to HRQoL? (n=437)

	SRHS	HRQoL
Age	.276	-1.195
Gender	-1.374	-1.092
Education	.846	.849
Smoking	3.058**	----
Alcohol Intake	-2.483*	----
High Cholesterol	-2.036*	----
Heart Problems	-5.560***	-3.167**
Stroke	----	-2.034*
Handle Day-to-day	6.315***	3.699***
Confidence to Change	----	2.222*
Sitting- Watching TV	----	1.927

* $p < .05$ ** $p < .01$ *** $p < .001$

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Related to SRHS and QoL

- What factors are related to SRHS/HRQoL? (n=437)

	SRHS	HRQoL
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MODIFIABLE

* p < .05 ** p < .01 *** p < .001

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	Pain/ Discomfort	Mobility	Self-care	Usual Activities	Anxiety/ Depression
Age	1.496	-2.436*	-1.925	-.365	3.777***
Gender	.636	.694	-.785	.838	1.591
Education	-1.775	1.375	-.193	-1.463	-.256
Alcohol Intake	----	-2.384*	----	----	----
Diet	----	2.042*	----	----	----
Heart Problems	----	-2.580*	-3.231**	----	----
Stroke	----	-2.625**	-3.162**	----	----
Diabetes	----	-2.261*	----	----	----
Handle Day-to-day	2.921**	2.131*	2.661**	4.837***	3.678***
Concern of risk	----	----	----	----	-1.881
Confidence to change	2.556*	----	----	----	3.326**
Intent to change	----	----	.310	.638	----
Sitting-TV	1.476	1.520	2.622**	3.487**	----

* p < .05 ** p < .01 *** p < .001

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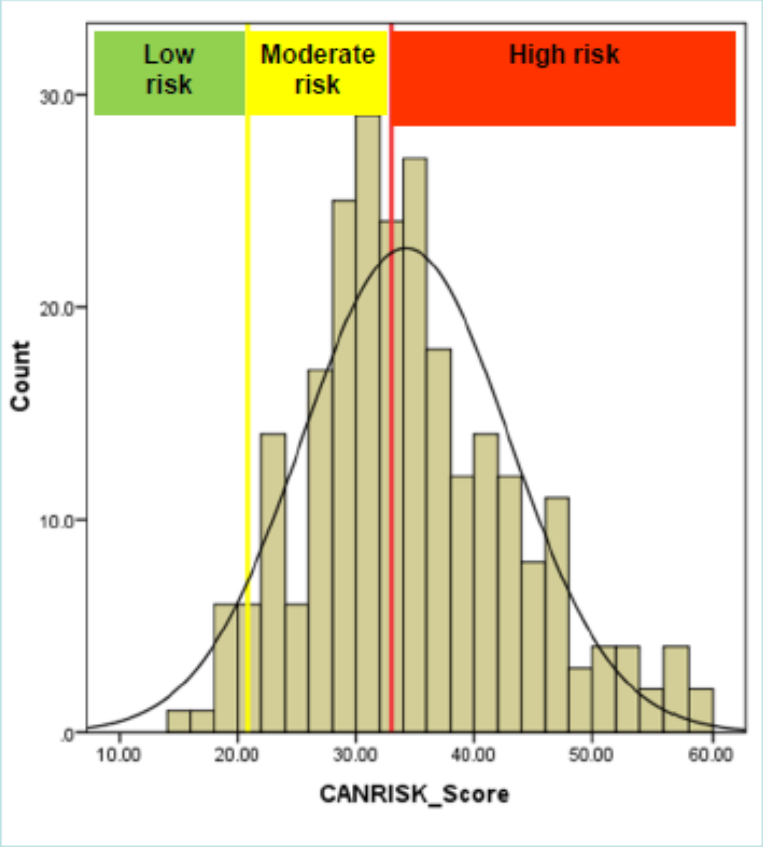
Distribution of CANRISK scores (Risk of developing diabetes)



Predictors of Intent to change behaviour (N= 499 individuals; 135 with and 364 without diabetes)

Intent to change (Nagelkerke R^2 for model fit 0.223)	
Predictors/ Variables	**OR (95% CI)**
Age**	**0.970 (0.947, 0.995)**
Gender	0.826 (0.503, 1.359)
Education	1.156 (0.947. 1.412)
Has Hypertension	1.367 (0.855, 2.186)
Has High Cholesterol	1.172 (0.732, 1.876)
Has Diabetes	1.166 (0.685, 1.982)
Self Efficacy To Change**	**1.361 (1.155, 1.604)**
KnowledgeScores**	**1.362 (0.784, 2.365)**
PerceivedConcernofRisk	1.445 (1.201, 1.738)

** Significant at p<0.05

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Predictors of Health Related Quality of Life and Self Reported Health Status (N= 298 non-diabtetics who completed the CANRISK)

HRQoL (R^2 for model fit 0.142)			Self-reported Health Status (R^2 for model fit 0.171)		
Predictors/ Variables	**B**	**SE**	**Predictors/ Variables**	**B**	**SE**
Has High Cholesterol	-2.087	2.394	**Has High Cholesterol****	-.291	.125
Had Stroke**	-9.542	3.488	**Had Stroke****	-.484	.182
Smoking	.532	.985	Smoking	-.097	.051
Ability to handle day-to-day demands**	5.000	1.245	**Ability to handle day-to-day demands****	.209	.065
Ability to handle personal crisis	.808	1.093	Ability to handle personal crisis	.100	.057
Self Efficacy To Change**	1.883	.909	Self Efficacy To Change	.072	.047
CANRISK_Score**	-.266	.125	**CANRISK_Score****	-.018	.006

** Significant at p<0.05

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Variable	CVD Knowledge		Quality of Life		Intent to Change	
	B (SE)	t	B (SE)	t	B (SE)	OR
Age	-.005(.003)	-1.766	-.005(.005)	-1.091	-.049(0.013)	.952*
Sex	-.150(.057)	-2.606*	-.085(.093)	-.909	-.594(.259)	.552*
Highest Education	.023(.022)	1.039	.037(.036)	1.025	.241(.108)	1.273*
Has Hypertension	.125(.050)	2.516*	-.219(.080)	-2.722*	.508(.227)	1.663*

*p<.05; **p<.005; ***p<.001.

having hypertension, female gender, younger age and higher education were associated with better knowledge

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Discussion

- Overall, poor-fair HRQoL in this population
- High prevalence of chronic disease and lifestyle risk factors
- Older adults are well-informed of the risk factors
- Common factors related to HRQoL measures:
  - Ability to handle day-to-day demands
  - Confidence to make changes
  - Heart problems and stroke
- Anxiety/Depression strongly related to age, ability to handle demands, and confidence to make changes

Discussion

- This population needs support:
  - Resources beyond health education
  - Resources to help meet day-to-day demands
  - Links to programs and supports for healthy behaviours and increase social connectedness
    - Many exist, but may be underutilized
    - Awareness may be a factor (limited internet)

- Limitation:
  - Self-reported data

Next Steps

- CHAP-EMS:
  - Community Health Assessment Program through EMS
  - Health promotion and prevention, referrals to resources, link back to primary physician

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Next Steps

- RCT:
  - 1 year
  - 12 Intervention sites, 12 Control sites
  - Guelph, York, Hamilton (more to come)
  - Weekly, drop-in sessions
  - Subsidized seniors' apartment buildings

- HABiT will be repeated post-intervention

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