Mind the Gap: Comparing Treated Prevalence of Mental and Substance Use Disorders in British Columbia with Expected Prevalence Based on Epidemiological Literature

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Background

- There is widespread recognition that not all people with mental and substance use (MSU) disorders are receiving treatment. Service planners need a standardized approach to monitor and track service utilization patterns of MSU disorders and whether service use aligns with the expected need within the population.
- Administrative data can assist in tracking and monitoring services utilization patterns of MSU disorders at the population-level.
- The purpose of this project was to examine the feasibility of establishing a standardized approach to monitor the treated prevalence of specific MSU disorders using administrative data and comparing the results with the expected prevalence derived from the epidemiological literature.

Methods

Annual expected and treated prevalence were derived and adjusted to represent individuals aged 15 and above in British Columbia.

Expected prevalence from systematic literature reviews:
- The annual prevalence estimate of each disorder-groupings was derived by conducting a meta-analysis. The prevalence was used to estimate the expected number of people with the disorder in the BC population using the 2016 BC PEOPLE population estimates for individuals aged 15 and over.
- Age and sex-specific prevalence estimates were derived using methodological triangulation from various sources (e.g. systematic literature reviews, published administrative data, and CCHS 2012 Mental Health Supplement), and adjusted to reflect the expected number of people with the disorder in BC.

Treated prevalence using case definition algorithms:
- De-identified health records, Medical Service Plan (MSP), and Discharge Abstract Database (DAD) claims were obtained for the fiscal year of 2015/2016 from Population Data BC.
- To qualify as having the disorder, an individual has to have at a minimum:
  - Either one hospital discharge (DAD) claim with the disorder-specific ICD-10 coding in any position; OR
  - Two MSP claims with the disorder-specific ICD-9 coding within 365 days
- Individuals with only one MSP claim of the disorder were included in the base definition.

Figure 1. Depressive Disorders (ICD-9: 311, 2nd claim with 311 or 50B; ICD-10: F32, F33, F34.1)

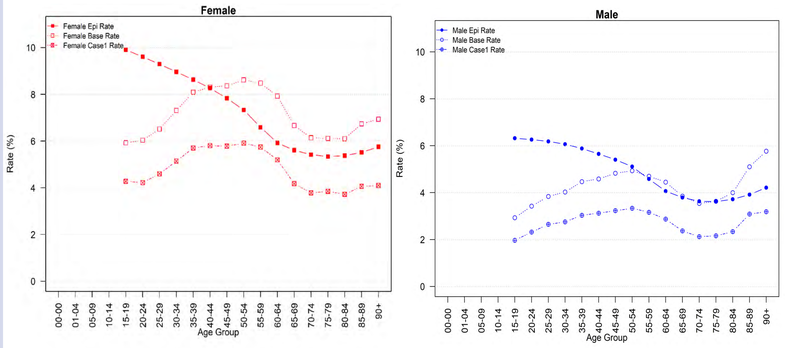

Figure 2. Bipolar and Related Disorders (ICD-9: 296; ICD-10: F30, F31, F34 (except F34.1), F38, or F39)

Figure 3. Alcohol Use Disorders (ICD-9: 291, 303; ICD-10: F10)

Figure 4. Anxiety Disorders (ICD-9: 300 or 50B; ICD-10: F40 or F41)

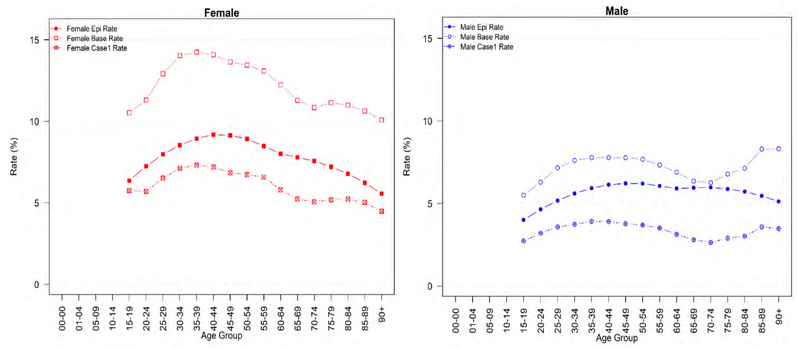

Figure 5. Schizophrenia Spectrum (ICD-9: 295; ICD-10:F20, F21, F22, F23, F24, F25, F28, or F29)

Figure 6. Other Substance Use Disorders (ICD-9: 292, 304, 305; ICD-10: F11, F12, F14, F15, F19)

Note: The epidemiological prevalence combines estimates for opioid-, cannabis, and stimulant-related disorders. The treated prevalence presents estimates for opioid-, cannabis-, stimulant-related disorders, as well as multiple drug use and use of other psychoactive substances.

Results

- The administrative data can be used to track specific mental and substance use disorders, with varying degrees of success.
- As predicted, the expected prevalence were higher than the treated prevalence when using the case definition for each condition. While the baseline definition over-predicted estimates for most disorders, it followed a similar pattern as the case definition for each condition.
- Schizophrenia spectrum had the smallest treatment gap, while alcohol use disorder and bipolar and related disorders had the largest treatment gaps.
- The treated and observed prevalence estimates for substance use disorders, other than alcohol, aligned closely after the age group of 30 to 34 for both males and females.

Conclusions

- Our findings demonstrate that administrative data are useful in capturing the treated prevalence of MSU disorders.
- The demographic variability observed in treated and epidemiological prevalence across the MSU disorders supports the need to monitor MSU disorders separately and is informative for service planners and providers working towards reducing the treatment gap.
- One limitation of this project was that most MSP claims in BC are missing the ICD-9 digits after the decimal level, which reduced the specificity for certain disorders, particularly substance use disorders.
- As a further limitation, the data was limited to MSP billing and hospital discharge claims. The inclusion of community mental and substance use services funded through health authorities and private sector services could strengthen estimates of treated prevalence.

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Acknowledgements

This report has been produced for the British Columbia Ministry of Health with the generous support of the Michael Smith Foundation for Health Research and the British Columbia Mental Health Foundation.

We would like to acknowledge the support of our sponsor, the BC Ministry of Health, particularly Mr. Gerrit van der Leer and Mr. Ross Hayward of the Mental Health Substance Use Services, Specialized Services Division, as well as previous Ministry Directors, Ms. Keva Glynn and Ms. Michelle Wong. Mr. van der Leer also served as the Ministry of Health Lead for the project. We also recognize the significant contributions of the BC Centre for Disease Control (BCCDC) to this ongoing work, in particular Dr. Hasina Samji and former associate Dr. Naomi Dove.

We would like to express our enormous gratitude to the past and present members of the Provincial Data Advisory Committee (PDAC) and its predecessor, the Provincial Working Group (PWG), who supported the analysis of provincial health administrative data to establish a set of case definitions for the selected mental and substance diagnostic groupings.

We thank Population Data BC and the BC Ministry of Health for the provision of the de-identified administrative data used in our analysis. All inferences, opinions, and conclusions drawn in this report are those of the authors, and do not reflect the opinions or policies of the Data Stewards.