

Introduction

People with multimorbidity (MM), the **co-occurrence of two or more disease conditions** in an individual, face challenges in health management and incur higher healthcare costs. We developed a new health indicator to monitor MM among residents of British Columbia (BC).

What is multimorbidity and what does it mean for patients and public health?

- The co-occurrence of multiple diseases leads to greater chances of complications and greater severity compared to single diseases.
- The combined burden of MM and resources required to manage it are much greater than the sum of single diseases.
- Anyone can be affected by MM, which is becoming an increasingly important public health issue in BC.

Why should we monitor multimorbidity?

- Single disease-based patient care is not sufficient when patients have 2+ conditions.
- Understanding the pattern and distributions of MM over time and space can help inform strategies for health promotion and chronic disease prevention.
- MM prevalence is greatest in seniors. We can expect significant impacts to our health care system due to Canada's aging population.

Methods

We are introducing an indicator that would monitor multimorbidity in BC residents aged 20+ years. We determined the prevalence of MM using a cross-sectional analysis of linked health data from 2000/01 to 2014/15 for 16 chronic conditions (listed below) in **provincial chronic disease registries (CDR)**. Note that cancer data is not available in CDR.

Chronic Condition	Age
Asthma	1+
Chronic Kidney Disease	1+
Diabetes	1+
Epilepsy	1+
Heart Failure	1+
Mood and Anxiety Disorders	1+
Osteoarthritis	1+
Rheumatoid Arthritis (RA)	1+
Hospitalized Stroke	20+
Hypertension	20+
Ischemic Heart Disease	20+
Multiple Sclerosis	20+
Dementia	40+
Parkinsonism	40+
Chronic Obstructive Pulmonary Disease	45+
Osteoporosis	50+

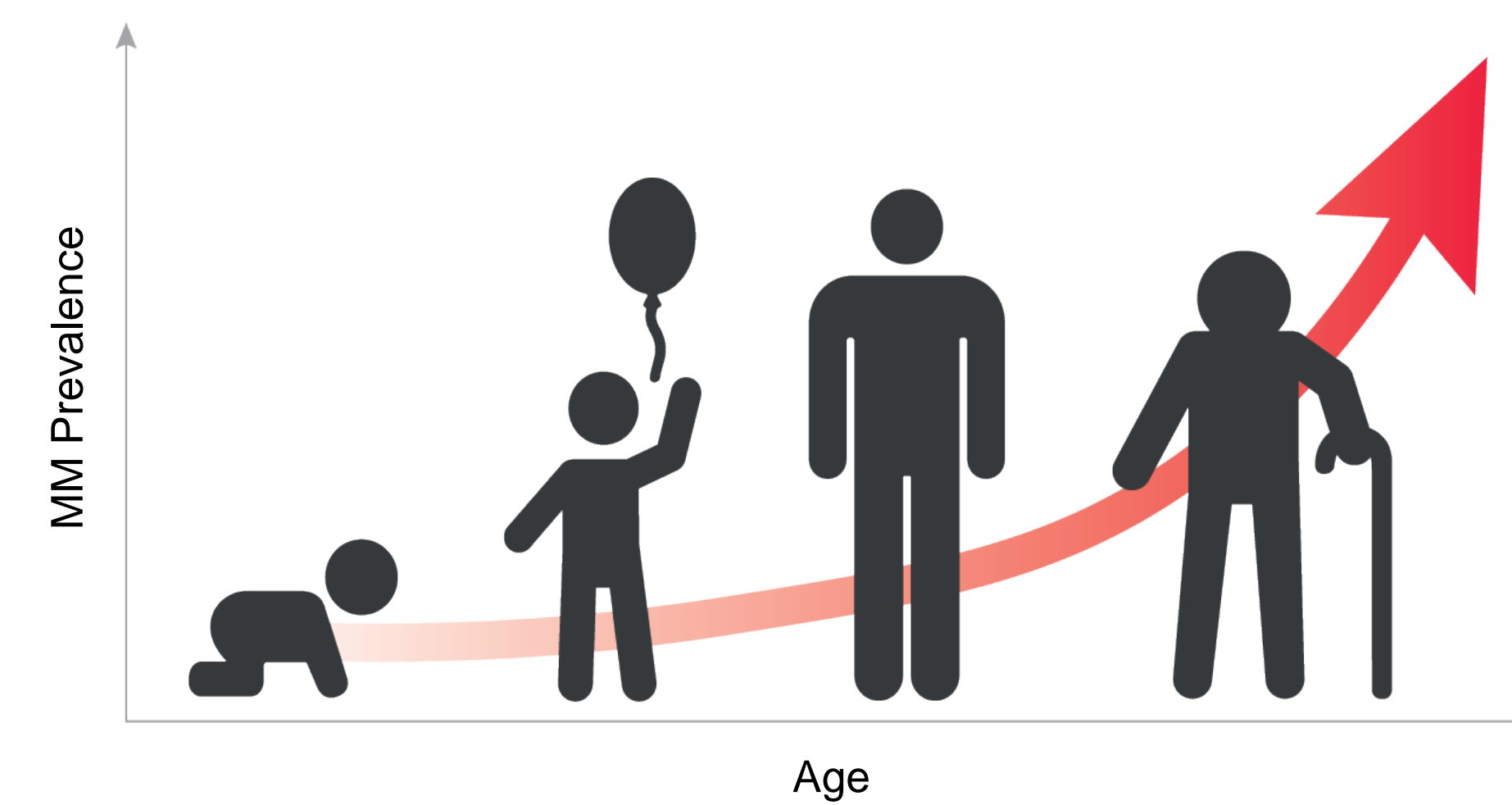
The results are available for the following strata:

- Geography (B.C., Health Authority, Health Service Delivery Area)
- Sex (Female, Male)
- Age groups (20-34, 35-49, 50-64, 65-79, 80+)
- Fiscal year (2000/01– 2014/15)

The results are currently available to health professionals through the BC Observatory Chronic Disease Dashboard.

Introducing a New Multimorbidity Indicator

MM increase over the life course



Multimorbidity (MM) are the co-occurrence of two or more (2+) chronic conditions.

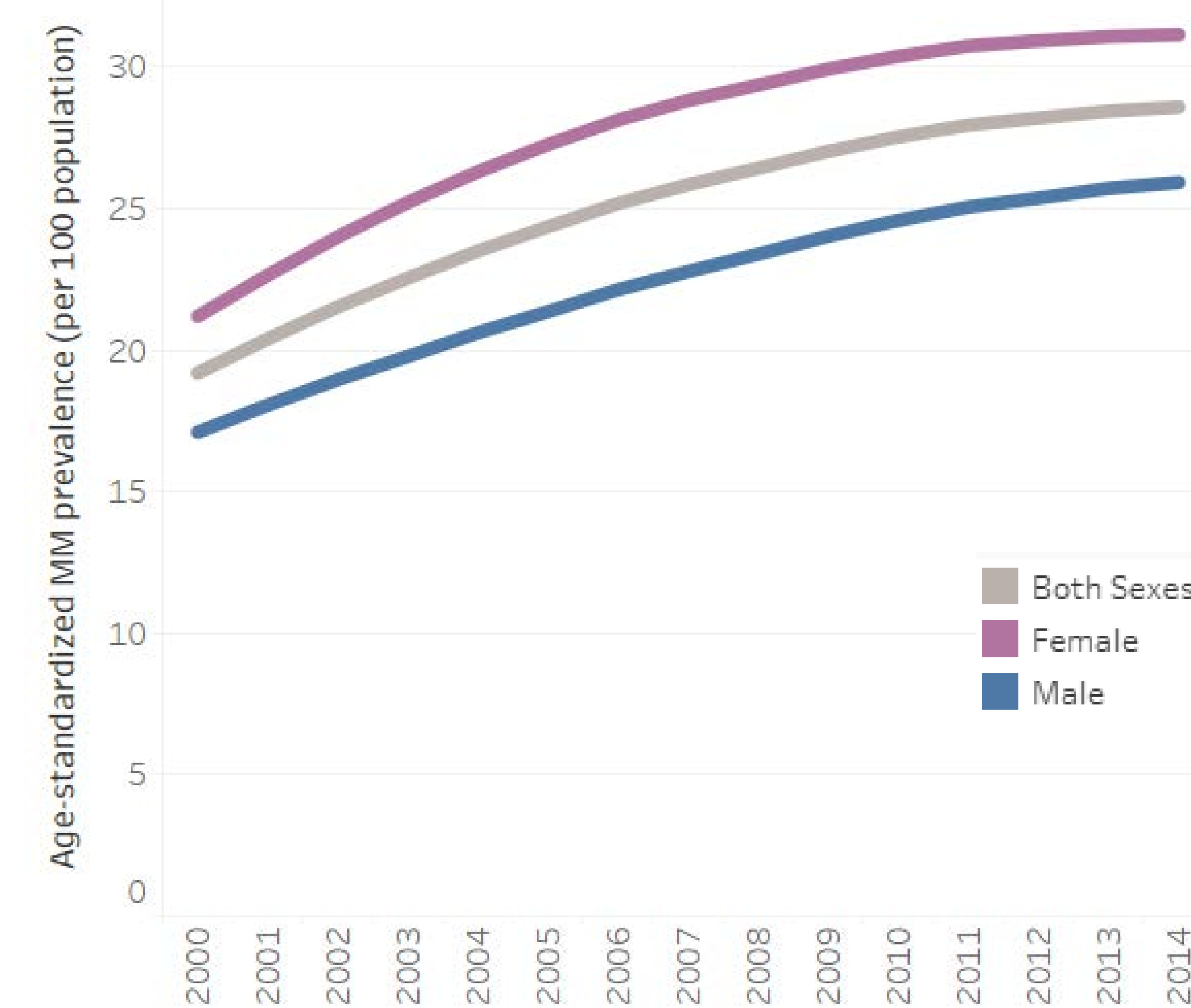
Indicator Name:

Multimorbidity (2+ conditions)

Definition:

Prevalence of multimorbidity among individuals having two or more chronic conditions from a select list of 16 available conditions in provincial chronic disease registries.

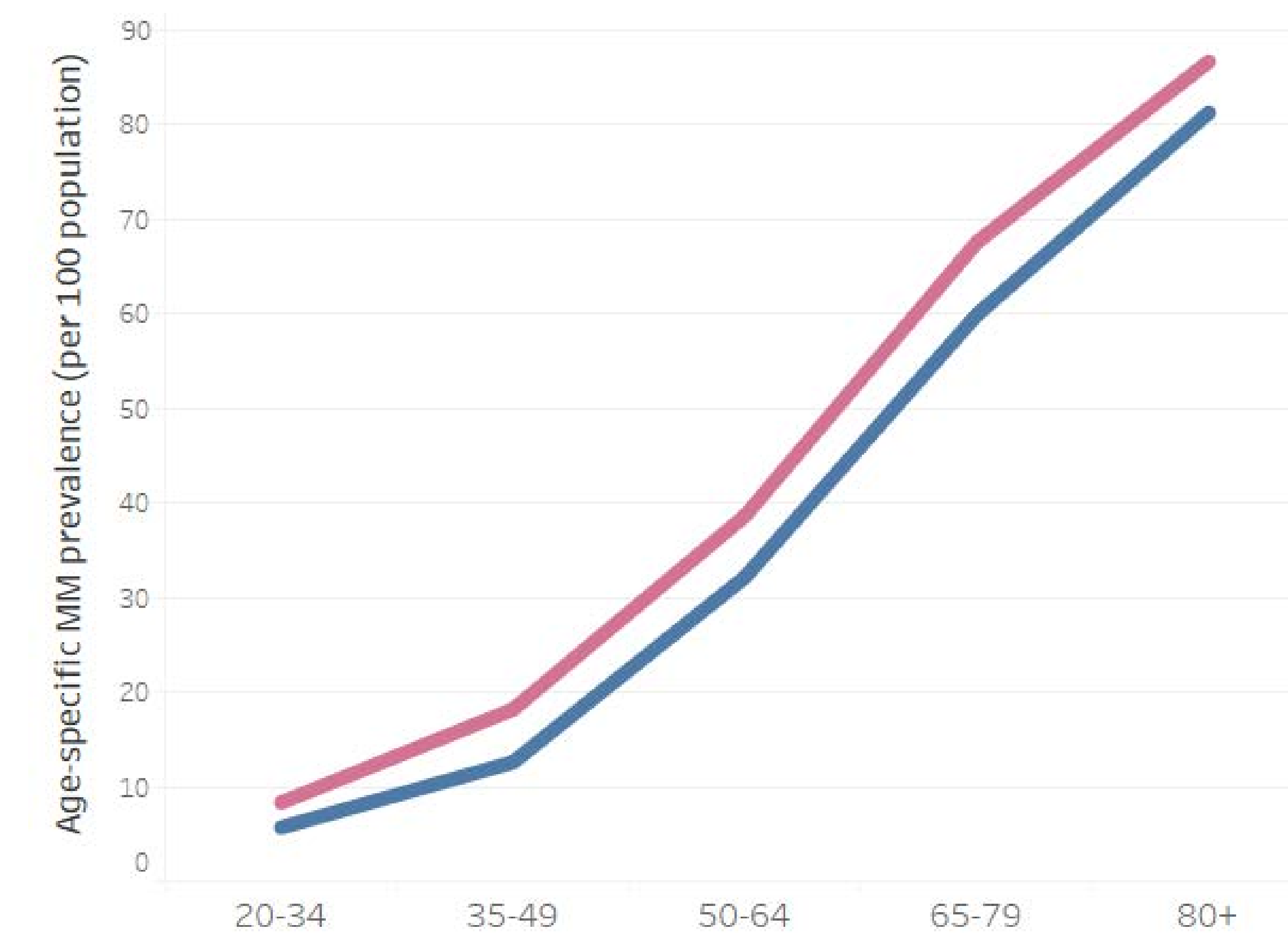
Age-Standardized MM Prevalence (per 100 persons) by Fiscal Year by Sex, 2000/01 – 2014/15, BC



Among B.C. residents, aged 20+,

- Prevalence of MM is increasing over time.
- Females have consistently higher prevalence of 2+ conditions than males.

Age-Specific MM Prevalence (per 100 persons) by Age Group by Sex, 2014/15, BC



Among B.C. residents, aged 20+,

- Age-specific prevalence rate increases with age for both sexes, and the trend is similar for female and male.
- Females have consistently higher prevalence in every age group.

MM in the older population is likely to create additional pressures on the BC health system. MM prevalence is from 7% in 20-34y to 84% for 80+ years in 2014/15.

The BC population aged 65 years+ grew nearly 1.5 times since 2000 and is expected to double by 2040.

Source: Estimates-Statistics Canada Projections- BC Stats, June 2018.

Conclusion

In 2014/15, **one third** of BC residents had two or more disease conditions for 20y+. MM prevalence was higher for females (31%) compared to males (26%); and increased with age: 7%, 15%, 35%, 64%, and 84% respectively among age groups 20-34y, 35-49y, 50-64y, 65-79y, and ≥ 80y. Multi-year results are visualized, which presents the over-time trend, age and sex breakdown, and regional maps.

The data are currently available to health professionals through the BC Observatory Chronic Disease Dashboard. This work will inform chronic disease prevention and chronic disease management strategies.

For more information:

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Age-Standardized MM Prevalence (per 100 persons) by Region, 2014/15, BC

by Health Authority...



by Health Service Delivery Area...

