

Epidemiological Update on Dementia, Including Alzheimer's Disease, in Manitoba: 2015-2016

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Summary

- In 2015-2016, Manitoba had over 13,000 seniors (individuals 65 years and older) living with dementia; roughly six in 100 seniors were living with dementia in that time period.
- Approximately two-thirds of the seniors living with dementia in Manitoba were women.
- In 2015-2016, there were 2,772 *new cases* of dementia diagnosed in seniors in Manitoba; this represents an incidence rate of 14.0 new cases per 1,000 seniors.
- Over a thirteen year period (2003-2004 to 2015-2016), the age-standardized prevalence rate of dementia increased by almost 30% in Manitoba. This increase is greater than the increase experienced by Canada overall.
- In individuals aged 85 years or older, the mortality rate was to 242.1 deaths per 1,000 population.
- The all-cause mortality rates of dementia in Manitoba was higher than the national average across all age groups
- More than two third of Manitobans with dementia (72%) aged 65 years and older had pre-existing or recent health care encounters for omni mental illness conditions in 2015-2016.

Purpose

This epidemiological update is aimed to provide an overall picture and baseline data on dementia, including Alzheimer's disease, in Manitoba. This update will provide information on the prevalence and incidence of dementia, as well as mortality rates, and comorbidities with dementia in Manitoba.

Background

Dementia is an umbrella term for conditions which indicate the brain does not function properly. It is a syndrome of cognitive impairment consisting of a set of symptoms and signs associated with a progressive deterioration of cognitive functions that affect daily activities.

Dementia is caused by various brain diseases and injuries. Alzheimer's disease is the most common cause of dementia. Vascular dementia, frontotemporal dementia, and Lewy body dementia constitute other common types. Symptoms of dementia can include memory loss, judgment and reasoning problems, and changes in behaviour, mood and communication abilities.

Data Sources and Analyses

This report is based on the methodology and infrastructure of the Canadian Chronic Disease Surveillance System (CCDSS). CCDSS is a collaborative network of provincial and territorial surveillance systems, supported by the Public Health Agency of Canada (PHAC). This system uses administrative health data that is available in all provinces and territories. CCDSS currently covers over 16 chronic diseases/conditions based on validated case definitions.

For this analysis, dementia cases were identified among the persons aged 65 years and older who had been diagnosed with dementia, including Alzheimer's disease, if they have:

- at least one hospitalization record or at least three physician claims in a two-year period (with at least 30 days between each claim) with an ICD-9 or ICD-10 code for dementia, including Alzheimer's disease; or
- at least one anti-dementia prescription drug record.

Data extraction date: April 28, 2017

Prevalence and Incidence of Diagnosed Dementia

More than **13,000** seniors (defined as individuals 65 years and older) were living with dementia in Manitoba in 2015-2016. This means that about six in 100 seniors are living with dementia. About two-thirds of the seniors living with dementia in Manitoba were women (n=8680). In 2015-2016, there were approximately **2,772** new cases of dementia diagnosed in seniors in Manitoba. This represents an incidence rate of 14.0 new cases per 1,000 individuals 65 years and older. The incidence rates tend to be higher in women as compared to men. Both the prevalence rates and incidence rates increased with age, as did the difference between the number of cases in men and women (Table 1).

Table 1: Prevalence and incidence of diagnosed dementia, including Alzheimer’s disease, among Manitobans aged 65 years and older, by age group and sex, Manitoba, 2015-2016

Age (years)	Prevalence, % (95% confidence interval)			Incidence, per 1,000 seniors (95% confidence interval)		
	Male	Female	Total	Male	Female	Total
65–69	0.7 (0.6-0.8)	0.7 (0.6-0.8)	0.7 (0.6-0.8)	2.7 (2.1-3.3)	2.6 (2.1-3.2)	2.6 (2.2-3.0)
70–74	2.0 (1.8-2.2)	2.1 (2.0-2.3)	2.1 (1.9-2.2)	4.7 (3.9-5.7)	5.5 (4.6-6.5)	5.1 (4.5-5.8)
75–79	4.8 (4.5-5.2)	5.0 (4.6-5.3)	4.9 (4.7-5.1)	10.3 (8.8-12.0)	11.2 (9.7-12.8)	10.8 (9.7-11.9)
80–84	9.4 (8.8-10.0)	10.5 (10.0-11.0)	10.0 (9.6-10.4)	22.4 (19.7-25.3)	20.6 (18.3-23.0)	21.3 (19.6-23.2)
85+	19.0 (18.2-19.8)	24.4 (23.8-25.1)	22.6 (22.1-23.1)	40.5 (36.9-44.3)	43.0 (40.3-45.8)	42.1 (40.0-44.4)
Total	5.0 (4.9-5.2)	7.6 (7.4-7.7)	6.4 (6.3-6.5)	11.5 (10.8-12.2)	14.8 (14.1-15.5)	13.3 (12.8-13.8)

Annual Trends

Over a thirteen-year period (2003-2004 to 2015-2016), the incidence rates went through some periods of stability, but showed fluctuations. A significant increase in the incidence rate of dementia was observed in 2004-2005 in Manitoba; this was also the time when all the hospital discharge abstracts were transitioning from ICD-9 codes to ICD-10 codes. During this transition, a substantial number of dementia cases were diagnosed in the hospital records in 2004, which contributed to the increased incidence rates. The incidence data in recent years suggested a decline after 2013-2014 in males and after 2014-2015 in females (Figure 1).

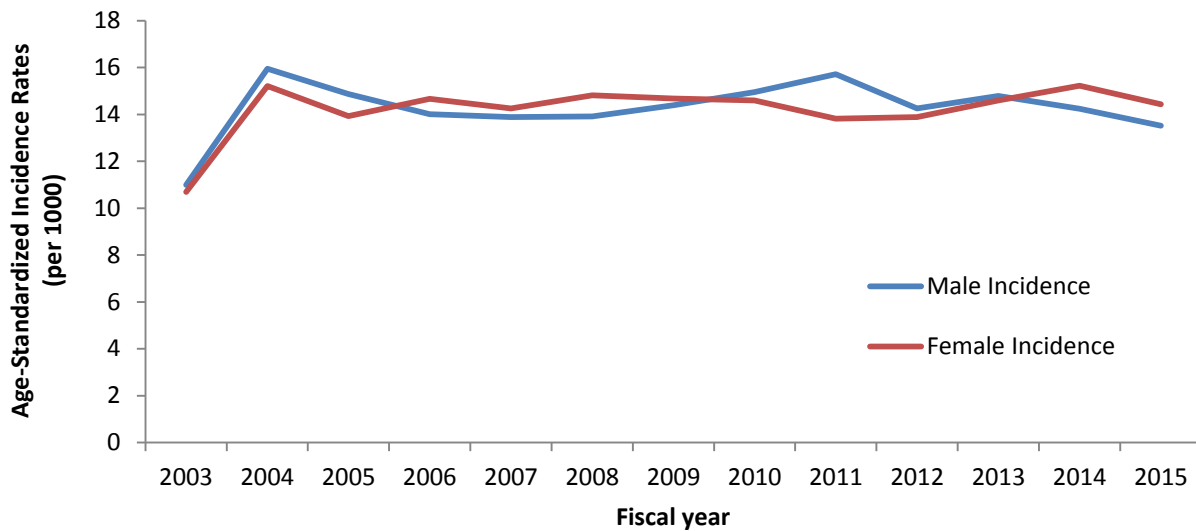


Figure 1: Age-standardized incidence rates of diagnosed dementia, including Alzheimer’s disease, among Manitobans aged 65 years and older, by sex, Manitoba, 2003-2004 to 2015-2016

During the same period, the age-standardized prevalence rate of dementia increased by almost 30% in Manitoba (Figure 2) and across all the health regions (Figure 3). This increase in Manitoba was greater than the increase experienced by Canada overall (21.2%). Winnipeg health region had the highest burden of dementia. Many factors could play a role in the regional differences; further research will be needed to better understand the complexities.

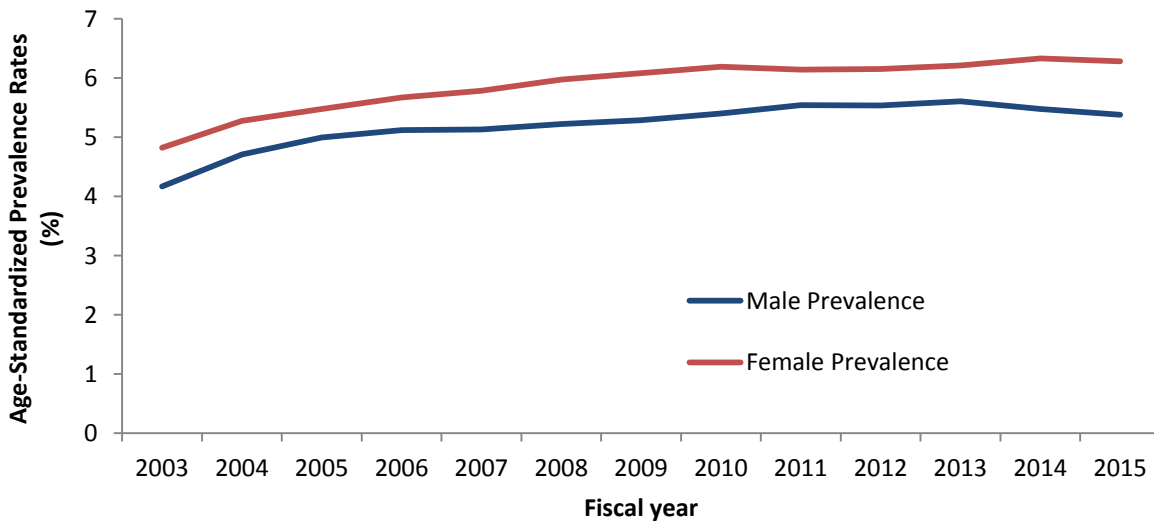


Figure 2: Age-standardized prevalence rates of diagnosed dementia, including Alzheimer’s disease, among Manitobans aged 65 years and older, by sex, Manitoba, 2003-2004 to 2015-2016

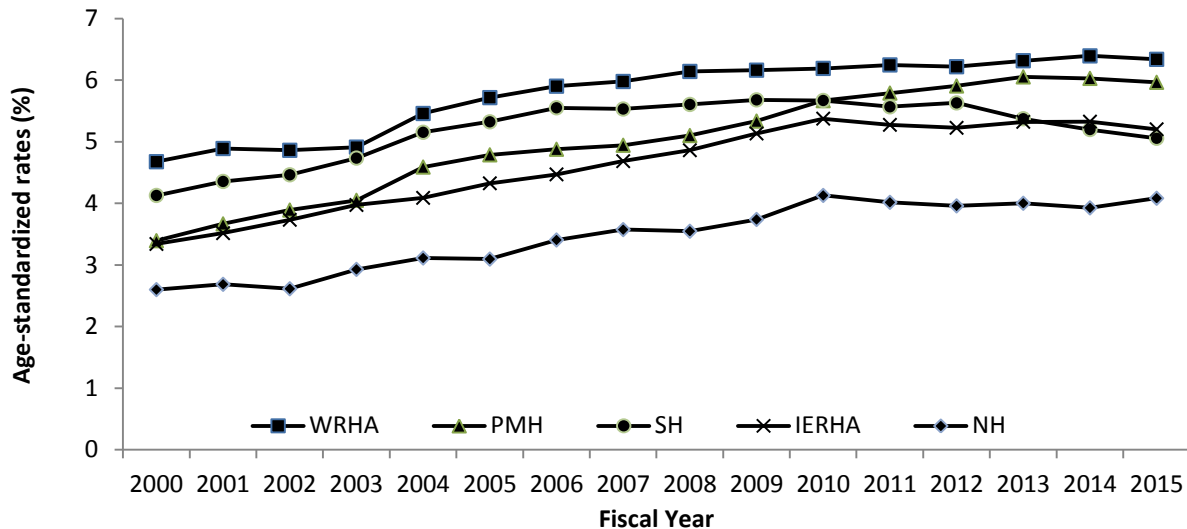


Figure 3: Age-standardized prevalence rates of diagnosed dementia, including Alzheimer’s disease, among Manitobans aged 65 years and older, by RHA¹, Manitoba, 2003-2004 to 2015-2016

Mortality Rates

All-cause mortality rates were found to increase with age. For Manitobans aged 65-69 years with dementia, the mortality rate was 100.4 deaths per 1,000 population in 2015-2016, and the rate increased to 242.1 deaths per 1,000 population in those aged 85 years and older. The all-cause mortality rates of dementia in Manitoba were higher than the national average across all age groups. However, the overall mortality among Manitobans without dementia was similar to the Canadian average. The all-cause mortality rate ratio (comparing the rates of deaths due to any cause among Manitobans with and without dementia) decreased with age. In 2015-2016, the rate ratio was 9.0 in those aged 65-69 years, and decreased to 2.9 in those 85 years and older. The higher mortality rates of dementia appeared to be among the younger dementia population (age 65-69).

In contrast to the overall decreasing trend of all-cause mortality rates in Canadians diagnosed with dementia, the all-cause mortality rates have been stable among all Manitobans diagnosed with dementia since 2000-2001. The Manitoba mortality rates remained higher than the Canadian average mortality rates (Figure 3), but decreased among those Manitobans without dementia. This is illustrated by the increasing rate ratios between 2000-2001 and 2015-2016. In 2015-2016, the age-standardized all-cause mortality rate was about seven times higher among seniors with dementia compared to those without (Figure 4).

¹ WRHA = Winnipeg Regional Health Authority; PMH = Prairie Mountain Health; SH = Southern Health; IERHA = Interlake-Eastern Regional Health Authority; NH = Northern Health Region

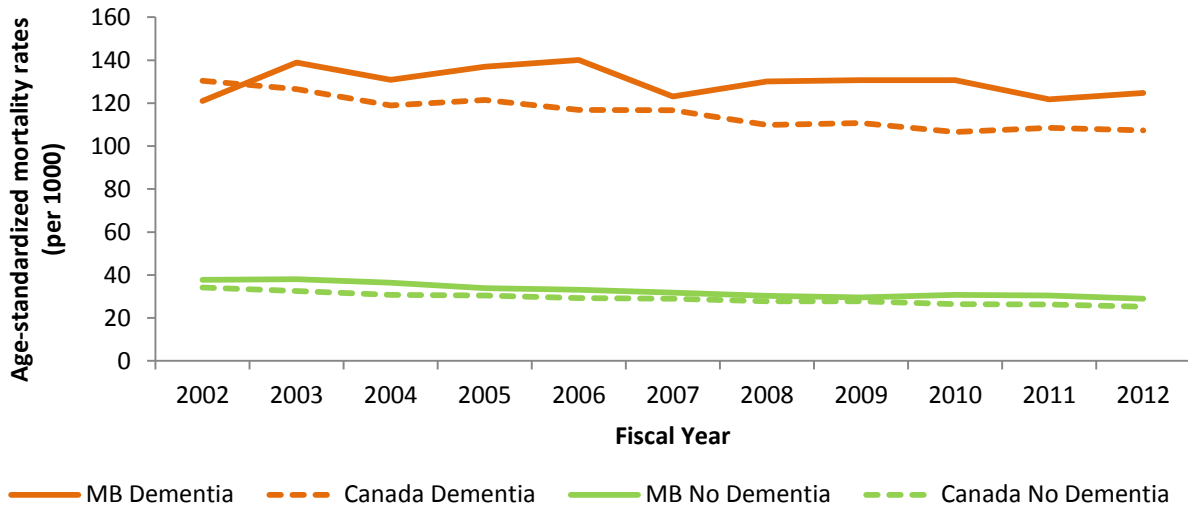


Figure 4: Age-standardized all-cause mortality rates among Manitobans and Canadians aged 65 years and older with and without diagnosed dementia, including Alzheimer’s disease, Manitoba and Canada, 2002-2003 to 2012-2013

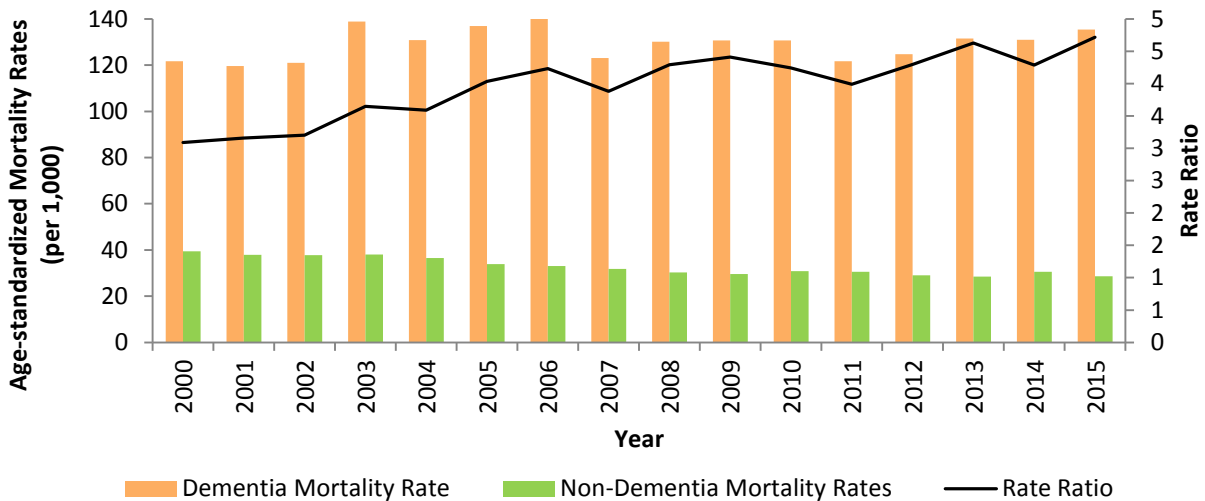


Figure 5: Age-standardized all-cause mortality rates and rate ratios among Manitobans aged 65 years and older with and without diagnosed dementia, including Alzheimer’s disease, Manitoba, 2000-2001 to 2015-2016

Comorbidities

In addition to the data on the burden of diagnosed dementia including Alzheimer’s disease, further CCDSS data on associated comorbidities were analyzed. Prevalence rates of omni mental illness, mood and anxiety disorders, stroke, ischemic heart disease, COPD and diabetes were all much higher in persons with dementia than in those without dementia. More than two third of Manitobans with dementia (72%) aged 65 years and older had pre-existing or

recent health care encounters for omni mental illness conditions in 2015-2016. Over a quarter of persons with dementia had a stroke (27%) and/or COPD (32%) and/or diabetes (34%).

Conclusion

Manitoba has successfully disseminated the strategies for *Alzheimer's Disease and Related Dementias in Manitoba* in 2002, and further implemented the *Manitoba's Framework for Alzheimer's Disease and Other Dementias* in 2014. This epiUpdate showed the current surveillance and time trends on dementia, including alzheimer's disease, in Manitoba seniors aged 65+. The increasing trends of dementia prevalence, greater than the national average increase, signal the continuing demand for health care programs targeting dementia in Manitoba. The high prevalence of other comorbidities, especially the omni mental illness, mood and anxiety disorders, CVD, COPD and diabetes, in persons with dementia is a call for action for effective chronic disease prevention and management.