



Pathology/Biology Section - 2015

H126 Suicides in Manitoba, Canada — A Ten-Year Study From 2003 to 2012

Thambirajah Balachandra, MBBS*, OCME, Manitoba Justice, 210 1 Wesley Avenue, Winnipeg, MB R3C 4C6, CANADA; and Muzeen Ismath, BSc*, 210-1 Wesley Avenue, Winnipeg R3P 2E3, CANADA

After attending this presentation, attendees will better understand suicides that occurred in Manitoba from 2003 to 2012, including the annual incidence of suicides, distribution by sex, locations of suicides across the province, and the presence of alcohol and drugs in confirmed suicide cases.

This presentation will impact the forensic science community by reinforcing the need to continue taking proactive measures and working with suicide prevention agencies and other health care institutions in an attempt to reduce/prevent suicidal deaths.

This was a retrospective study and involved reviewing the electronic case files of all deaths from January 1, 2003, to December 31, 2012, that were classified as suicides per this study's informational resources. The overall annual incidence of suicide was 14.28 per 100,000 population. This was higher than the national average (11.5 per 100,000).¹ The overall incidence per 100,000 population over the years ranged from 11.04 to 15.52.

There were more deaths among males (17.94 per 100,000) than in females (7.15 per 100,000). As well, the incidence of suicide was higher for rural areas (13.54 per 100,000) than for major cities (12.76 per 100,000). There are many First Nations communities throughout rural Manitoba and this could possibly explain why suicide statistics for the rural areas are higher.

From the identified cases of suicides within the ten-year study, the causes of death were found to be: hanging — 802 (50.2%); gunshot wounds — 245 (15.3%); drug overdose — 285 (17.8%); carbon monoxide poisoning — 66 (4.1%); and, other means — 200 (12.5%). The most common method of suicide was hanging. The low number of deaths due to firearms may be due to the low number of firearms in Canada. There were no deaths due to insecticide, pesticide, or weedicide poisoning during this ten-year period. This was due to the strict controls imposed on the use and distribution of these substances in Canada. In less-developed countries, the incidence of suicide due to insecticide poisoning is very high and is estimated to account for 30% of suicides worldwide.²

In 2012, there were 169 suicides; toxicology was performed in 158 of the cases (93%). Of those tested, drugs and/or alcohol were found in 135 cases. Death was due to drug overdose in 28 of these cases; however, only four cases had blood alcohol levels of greater than 80mg/100ml. In the remaining 107 cases, where death was due to causes other than drug overdose, 42 cases had blood alcohol levels of more than 80mg/100ml. Therefore, the prevalence of alcohol and drugs is common in cases of suicide in Manitoba; however, deaths actually due to alcohol and/or drugs are low.

In conclusion, although not all suicides are preventable, any effort taken to prevent even one death from occurring is worthwhile. Other jurisdictions are encouraged to compare their figures with the results of this study and to work with their local agencies and health care programs in suicide prevention.

References:

1. Navaneelan, T. Health at a glance. Suicide rates: an overview. *Statistics Canada*, 2012.
2. Gunnell, D., Eddleston, M., Phillips, M.R., and Konradsen, F. The global distribution of fatal pesticide self-poisoning: Systematic review. *BMC Public Health*, 2007, 7:357.

Suicide, Incidence, Manitoba