Mortality of Métis Canadian Adults: An 11-year Follow-up Study

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Outline

- Background and objectives
- Census-mortality follow-up study
- Aboriginal definitions
- Results
  - All cause mortality
  - Specific causes
Background

- Aboriginal identity is not routinely captured on death records

- Mortality indicators for some Aboriginal groups (i.e. Métis) are difficult to calculate due to methodological challenges

- A new database linking census and mortality data provides an opportunity to study mortality patterns for different Aboriginal groups
Objectives

- Estimate life expectancy and premature mortality rates for Métis adults
- Examine mortality patterns by age
- Identify causes of death that are:
  - Elevated in Métis adult population
  - Are most responsible for excess mortality
Data source:
Census mortality data base

- Statistics Canada’s objectives is to produce indicators based on mortality for monitoring health disparities in Canada
- Ethics and peer review
- Follows a 15% sample of Canadian adults from 1991 to 2001
- Probabilistic linked database created from the 1991 census and mortality database.
Who’s followed

- Non-institutionalized population aged 25+
- Enumerated by the 1991 census
  - Missed about 3% of the population
  - 78 Indian reserves were either not enumerated or incompletely enumerated
- Métis followed
  - 11,800 with 889 dying by December 31, 2001
Definition of Métis

- Aboriginal (self-)identity question not asked in 1991 census
- Based on ethnic origin question (i.e. ethnic group of a person’s ancestors)
  - A sizeable proportion of Canadians have a mix of Aboriginal and non-Aboriginal ancestry.
- Compared the association between identity and ethnic origin using 1996 census data
Métis Adults 25+

Remaining Life Expectancy at Age 25

Registered Indians

Métis

Entire cohort

<table>
<thead>
<tr>
<th>Years remaining</th>
<th>Registered Indians</th>
<th>Métis</th>
<th>Entire cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>48.4</td>
<td>49.5</td>
<td>52.6</td>
</tr>
<tr>
<td>45</td>
<td>52.9</td>
<td>53.7</td>
<td>59.0</td>
</tr>
<tr>
<td>55</td>
<td>59.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65</td>
<td></td>
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</tbody>
</table>
Métis Adults 25+

Age Adjusted Mortality Rate Ratios by Gender (compared to entire cohort)

![Bar chart showing age-adjusted mortality rate ratios for Métis Adults 25+ by gender. The chart compares the entire cohort to Métis and Registered Indian men and women. The ratios are as follows: Men - Entire cohort: 1.00, Métis: 1.36, Registered Indian: 1.54; Women - Entire cohort: 1.00, Métis: 1.68, Registered Indian: 1.91.]
Métis Men 25+

Mortality Rate Ratios Compared to Men in Entire Cohort

Age group at baseline (years)

Rate ratios

Registered Indians
Métis
Entire cohort
Métis Women 25+

Mortality Rate Ratios Compared to Women in Entire Cohort

Rate ratios

Age group at baseline (years)

25 to 34  35 to 44  45 to 54  55 to 64  65 to 74  75+

Registered Indians

Métis

Entire cohort
Métis Women 25+

Rate Ratios for Selected Causes of Death

<table>
<thead>
<tr>
<th>Cause</th>
<th>Rate Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poisoning</td>
<td>5.00</td>
</tr>
<tr>
<td>Digestive system</td>
<td>2.50</td>
</tr>
<tr>
<td>Infectious</td>
<td>2.00</td>
</tr>
<tr>
<td>Endocrine</td>
<td>1.50</td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>1.00</td>
</tr>
<tr>
<td>Respiratory</td>
<td>0.50</td>
</tr>
<tr>
<td>All cause</td>
<td>0.50</td>
</tr>
<tr>
<td>Ischaemic heart disease</td>
<td>0.50</td>
</tr>
<tr>
<td>Cerebrovascular</td>
<td>0.50</td>
</tr>
<tr>
<td>Nervous system</td>
<td>0.50</td>
</tr>
<tr>
<td>All cancer</td>
<td>0.50</td>
</tr>
<tr>
<td>Suicide</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Métis Men 25+

Excess Mortality (Rate Difference) by Selected Causes of Death

External causes of death account for about 46% of the excess mortality.
Métis Women 25+
Excess Mortality (Rate Difference) by Selected Causes of Death

External causes of death account for about 10% of the excess mortality
Summary

- Métis adults have a shorter life expectancy than the Canadian population
- Métis adults have a much higher rate of premature mortality
- Rate ratios and rate differences differed by both cause of death groupings and gender
- The census-mortality database provides an opportunity to examine mortality indicators for Aboriginal groups
Acknowledgements

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