Planning for the Regulated Nursing Workforce in Rural and Small Town Canada

Martha MacLeod (University of Northern British Columbia)
Roger Pitblado (Laurentian University)
Irene Koren (Laurentian University)
Norma Stewart (University of Saskatchewan)
Judith Kulig (University of Lethbridge)

2013 Annual CAHSPR Conference
Vancouver, May 28-31, 2013
The Nature of Nursing Practice in Rural and Remote Canada 1999 -- 2004

Defining “Rural”
2012+

RNs, NPs, LPNs, RPNs

What is the nature of nursing practice in rural and remote Canada?

How can access to nursing care in rural and remote Canada be enhanced?

17 researchers from across the country under the leadership of Dr. Martha MacLeod, UNBC

Staff

Advisory Team with members from provincial/territorial nursing regulatory bodies (colleges) and nursing associations, health authorities, federal healthcare providers, and national organizations, including Aboriginal nursing organizations. Chair: Dr. Suzanne Johnston, Northern Health
Nursing Practice in Rural and Remote Canada II
Nursing Practice in Rural and Remote Canada II

- Who are the nurses in rural and remote Canada?

- What is the potential nursing workforce engaged in primary health care in rural and remote Canada?
## Nurses in Rural and Remote Canada 2003, 2010

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rural Population</strong></td>
<td>20%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Rural RNs</strong></td>
<td>13.0% (n=23,238)*</td>
<td>10.8% (n=28,799)</td>
</tr>
<tr>
<td><strong>Rural LPNs</strong></td>
<td>21.2% (n=13,404)</td>
<td>17.5% (n=14,190)</td>
</tr>
<tr>
<td><strong>Rural RPNs</strong></td>
<td>17.4% (n=886)</td>
<td>16.4% (n=848)</td>
</tr>
<tr>
<td><strong>Rural NPs</strong></td>
<td>27.0% (n=176)*</td>
<td>19.9% (n=492)</td>
</tr>
</tbody>
</table>

* Quebec Rural RNs and NPs not available in 2003 NDB
** RPNs in MB, SK, AB, BC only
Workforce Numbers: Nurse-to-Population Ratios

Combined Nurse-to-Population Ratios (per 100,000 population): Eastern Canada
Workforce Numbers: Nurse-to-Population Ratios

Combined Nurse-to-Population Ratios (per 100,000 population):
Western Canada

- 2003 Rural Man.
- 2010 Urban Man.
- 2010 Rural Man.
- 2003 Urban Sask.
- 2003 Rural Sask.
- 2010 Urban Sask.
- 2010 Rural Sask.
- 2003 Urban Alta.
- 2003 Rural Alta.
- 2010 Urban Alta.
- 2010 Rural Alta.
- 2003 Urban B.C.
- 2003 Rural B.C.
- 2010 Urban B.C.
- 2010 Rural B.C.

Legend:
- RNs
- LPNs
- RPNs
## Workforce Numbers: Nurse-to-Population Ratios

Percentage (%) Change in 2003 to 2010 Nurse-to-Population Ratios

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>RNs Urban</th>
<th>RNs Rural</th>
<th>LPNs Urban</th>
<th>LPNs Rural</th>
<th>RPNs Urban</th>
<th>RPNs Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.L.</td>
<td>12.0</td>
<td>1.0</td>
<td>-13.6</td>
<td>-4.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.E.I.</td>
<td>-10.1</td>
<td>40.8</td>
<td>-11.2</td>
<td>-5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.S.</td>
<td>8.2</td>
<td>0.1</td>
<td>9.1</td>
<td>27.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.B.</td>
<td>10.4</td>
<td>-11.0</td>
<td>2.7</td>
<td>25.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Que.</td>
<td>††</td>
<td>††</td>
<td>36.6</td>
<td>-7.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ont.</td>
<td>1.2</td>
<td>0.3</td>
<td>8.6</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man.</td>
<td>7.4</td>
<td>-18.8</td>
<td>6.2</td>
<td>7.2</td>
<td>-8.9</td>
<td>-3.1</td>
</tr>
<tr>
<td>Sask.</td>
<td>7.4</td>
<td>-5.4</td>
<td>21.5</td>
<td>29.1</td>
<td>-18.4</td>
<td>-14.6</td>
</tr>
<tr>
<td>Alta.</td>
<td>3.7</td>
<td>-16.8</td>
<td>34.1</td>
<td>22.1</td>
<td>-15.3</td>
<td>-2.1</td>
</tr>
<tr>
<td>BC.</td>
<td>1.1</td>
<td>-5.4</td>
<td>74.2</td>
<td>40.0</td>
<td>-2.7</td>
<td>-7.0</td>
</tr>
<tr>
<td>National</td>
<td>††</td>
<td>††</td>
<td>20.7</td>
<td>6.8</td>
<td>-10.6</td>
<td>-5.0</td>
</tr>
</tbody>
</table>
Demographic Characteristics: Age

Age Group Distribution (%) of Nurses in Rural Canada, 2003 and 2010

RN Age Group (Years)

- <30
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60+

Percentage (%)

Rural 2003
Rural 2010

LPN Age Group (Years)

- <30
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60+

Percentage (%)

Rural 2003
Rural 2010

RPN Age Group (Years)

- <30
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60+

Percentage (%)

Rural 2003
Rural 2010
Demographic Characteristics: Age

Average Ages of Nurses in Canada

<table>
<thead>
<tr>
<th></th>
<th>Year</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNs</td>
<td>2003</td>
<td>†††</td>
<td>†††</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>††††</td>
<td>††††</td>
</tr>
<tr>
<td>LPNs</td>
<td>2003</td>
<td>44.4</td>
<td>44.6</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>42.8</td>
<td>44.8</td>
</tr>
<tr>
<td>RPNs</td>
<td>2003</td>
<td>46.3</td>
<td>46.1</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>47.6</td>
<td>48.6</td>
</tr>
</tbody>
</table>

†† no urban/rural allocation was made of 2003 Quebec NDB records for RNs.
†††† data to compute average ages were not submitted by Manitoba for the 2010 NDB data year.
Demographic Characteristics: Gender

Proportion of Male Nurses in Canada

- 2010 Rural Canada
- 2010 Urban Canada
- 2003 Rural Canada
- 2003 Urban Canada

Legend:
- RN
- NP
- LPN
- RPN
Employment Status
## Employment Status

### Nurses Employed Full-Time in Canada, 2003

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN</td>
<td>55.5%</td>
<td>50.3%</td>
</tr>
<tr>
<td>NP</td>
<td>74.1%</td>
<td>82.4%</td>
</tr>
<tr>
<td>LPN</td>
<td>52.8%</td>
<td>43.1%</td>
</tr>
<tr>
<td>RPN</td>
<td>69.3%</td>
<td>66.2%</td>
</tr>
</tbody>
</table>

### Nurses Employed Full-Time in Canada, 2010

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN</td>
<td>58.6%</td>
<td>53.9%</td>
</tr>
<tr>
<td>NP</td>
<td>79.8%</td>
<td>80.1%</td>
</tr>
<tr>
<td>LPN</td>
<td>50.5%</td>
<td>45.1%</td>
</tr>
<tr>
<td>RPN</td>
<td>67.1%</td>
<td>66.8%</td>
</tr>
</tbody>
</table>
Place of Work

Primary Place of Work of Rural and Urban Nurses, Canada, 2010

[Bar chart showing the distribution of nurses' employment in various settings: Hospitals, Community Health Agencies, Nursing Homes/ LTC Facilities. The chart compares RNs and LPNs in urban and rural settings.]
Place of Work: Community-PHC Settings

- Nursing Station (outpost or clinic)
- Home Care Agency
- Community Health Centre
- Physician Office/Family Practice Unit
- Public Health Department/Unit
RNs in Community-PHC Settings 2003-2010

Proportion of RNs Working in Community-PHC Settings: Canada, 2003

Proportion of RNs Working in Community-PHC Settings: Canada, 2010
LPNs in Community-PHC Settings 2003-2010
RPNs in Community-PHC Settings 2003-2010
DIRECT CARE
Urban RNs: 88.1% and 89.2% in 2003 and 2010, respectively.
Rural RNs: 90.4% and 90.3% in 2003 and 2010, respectively.

Selected Direct Care Responsibility Areas:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation/Occupational Health</td>
<td>3%</td>
<td>1.6%</td>
<td>2.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Psychiatry/Mental Health</td>
<td>5.3%</td>
<td>2.3%</td>
<td>5.5%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Home Care</td>
<td>1.9%</td>
<td>4.9%</td>
<td>2.4%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Emergency Care</td>
<td>5.2%</td>
<td>6.9%</td>
<td>6.4%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Community Health</td>
<td>6.7%</td>
<td>10.7%</td>
<td>4.8%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>
Primary Responsibility - LPNs

DIRECT CARE
Urban LPNs: 97.9% and 97.9% in 2003 and 2010, respectively.
Rural LPNs: 98.6% and 99.1% in 2003 and 2010, respectively.

Selected Direct Care Responsibility Areas:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation/Occupational Health</td>
<td>~4%</td>
<td>~1.5%</td>
<td>~4%</td>
<td>~2%</td>
</tr>
<tr>
<td>Psychiatry/Mental Health</td>
<td>6.4%</td>
<td>2.3%</td>
<td>5.4%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Home Care</td>
<td>1.6%</td>
<td>&lt;1%</td>
<td>1.9%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Emergency Care</td>
<td>&lt;1%</td>
<td>1.1%</td>
<td>1.7%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Community Health</td>
<td>2.9%</td>
<td>1.6%</td>
<td>4.3%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>
Staff Mix in Community-PHC Settings
Staff Mix in Rural Community Settings

2003

- 85% RN
- 15% LPN

2010

- 76% RN
- 24% LPN
Community-PHC Nurses per Population

- 2010 Rural
- 2010 Urban

Number of Nurses in Community Settings Per 100,000 Population
Conclusions

- Numbers and proportions
  - LPNs increasing overall, but decreasing in rural Canada;
    - however, a higher proportion of LPNs work in rural Canada
  - NPs fastest growing group, but numbers still small making it difficult to analyze
  - NPs and RNs decreasing in rural Canada

- Rural nurse-to-population ratios
  - Decreasing in Western Canada for RNs and RPNs

- More analysis needed to determine the implications of PHC and Community Setting staff mix changes
  - NDB data not well-suited to describe staff mix
What’s Next?

Further analyses:

- Focused analyses on sub-groups of rural nurses including analyses on areas of responsibility, education, inter-provincial mobility, provincial/regional analyses, etc.

Knowledge mobilization:

- Knowledge mobilization of the NDB analysis, the Documentary Analysis with decision-makers across Canada
- Development of the national survey of rural LPNs, RNs, NPs, RPNs
Questions

Dr. Martha MacLeod
Lead Principal Investigator, Nursing Practice in Rural & Remote Canada II
Chair and Professor, School of Nursing
University of Northern British Columbia
250.960.6507 or macleod@unbc.ca

Jessica Place
Project Coordinator, Nursing Practice in Rural & Remote Canada II
University of Northern British Columbia
250.960.5836 or place@unbc.ca

Nursing Practice in Rural & Remote Canada
1.866.960.6409
rrn@unbc.ca
www.ruralnursing.unbc.ca