



# The Nature of Nursing Practice in Rural and Remote Canada





## **Aim of the Study:**

- to examine and articulate the nature of registered nursing practice in primary care, acute care, community health, continuing care (home care) and long term care settings within rural and remote Canada

## **Study Components:**

- **Survey**
- **Registered Nurses Data Base (RNDB)**
- **Narrative Study**
- **Documentary Analysis**



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- Advisor(s)
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# Funding Partners

- **Canadian Health Services Research Foundation**
- **Canadian Institutes of Health Research**
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- **British Columbia Rural and Remote Health Research Institute**
- **Saskatchewan Industry and Resources**
- **Provincial and Territorial Nurses Associations**
- **Government of Nunavut**
- **Canadian Institute for Health Information**



# **Rural and Remote Nursing**

**Access to Care**

**Quality of Care**

**Sustainability of Care**





# Access to Care

- **Supply and Distribution of Nurses**
- **Education of Nurses**

# Supply and Distribution of Registered Nurses in Rural and Small Town Canada



**How many  
Registered Nurses  
are there in rural  
and remote  
Canada?**



Canadian Institute  
for Health Information  
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d'information sur la santé

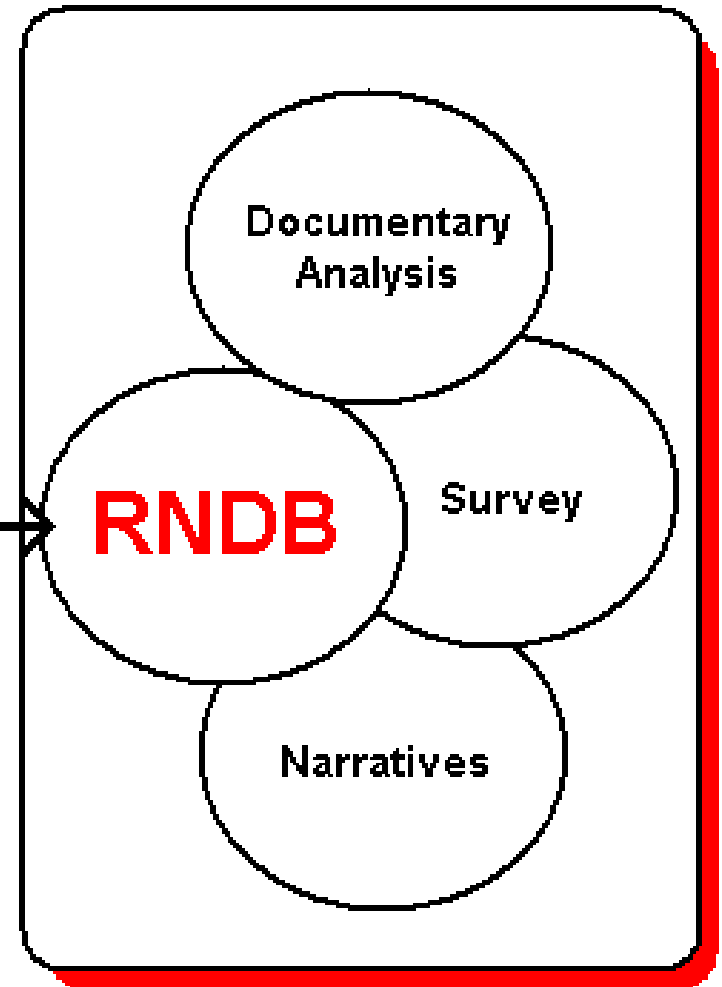
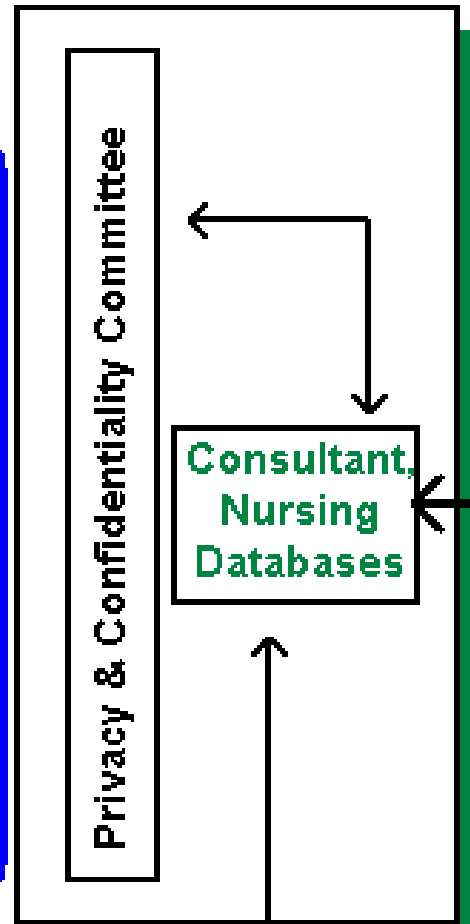


Provincial/  
Territorial  
Registrars

Canadian Institute for  
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Nursing Practice in  
Rural & Remote Canada

Nfld.	P.E.I.
N.S.	N.B.
Que.	Ont.
Man.	Sask.
Alta.	B.C.
Y.T.	N.W.T./Nun.



**Registered Nurses Database**



# RNDB Highlights: National

- 41,502 registered nurses were located in rural and small town Canada in 2000, a 2% decrease since 1994
- In 2000, 17.9% of the total RN workforce were in rural Canada where 21.7% of the total population live
- 62.3 RNs/10,000 population in rural compared to 78.0/10,000 population in urban Canada
- More rural (12.7%) than urban (7.8%) nurses work in community settings
- Rural nurses predominantly educated at the diploma level at their initial period of work (90.8%) and subsequently during their work life (81.4%)

Year	Number of rural (RST) RNs	% of all RNs	Rural (RST) % of total Canadian <b>NU</b> / population
1994	42,303 <b>134</b>	18.0 <b>100</b>	22.3 <b>100</b>
2000	41,502 <b>92</b>	17.9 <b>100</b>	21.7 <b>100</b>
2002	40,648	17.6	20.6

2002 – based on CIHI figure generated without Quebec data

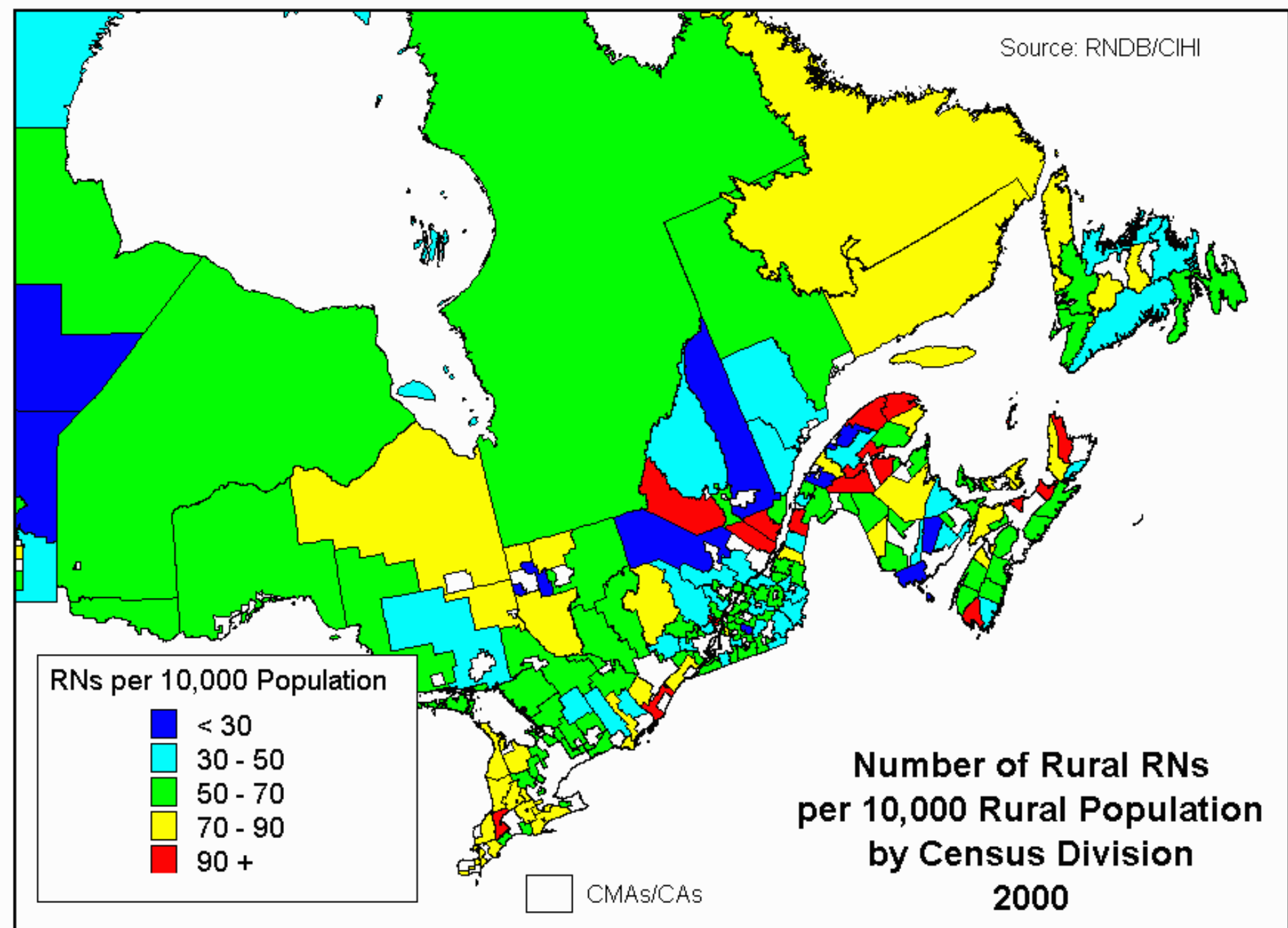
Source: RNDB/CIHI

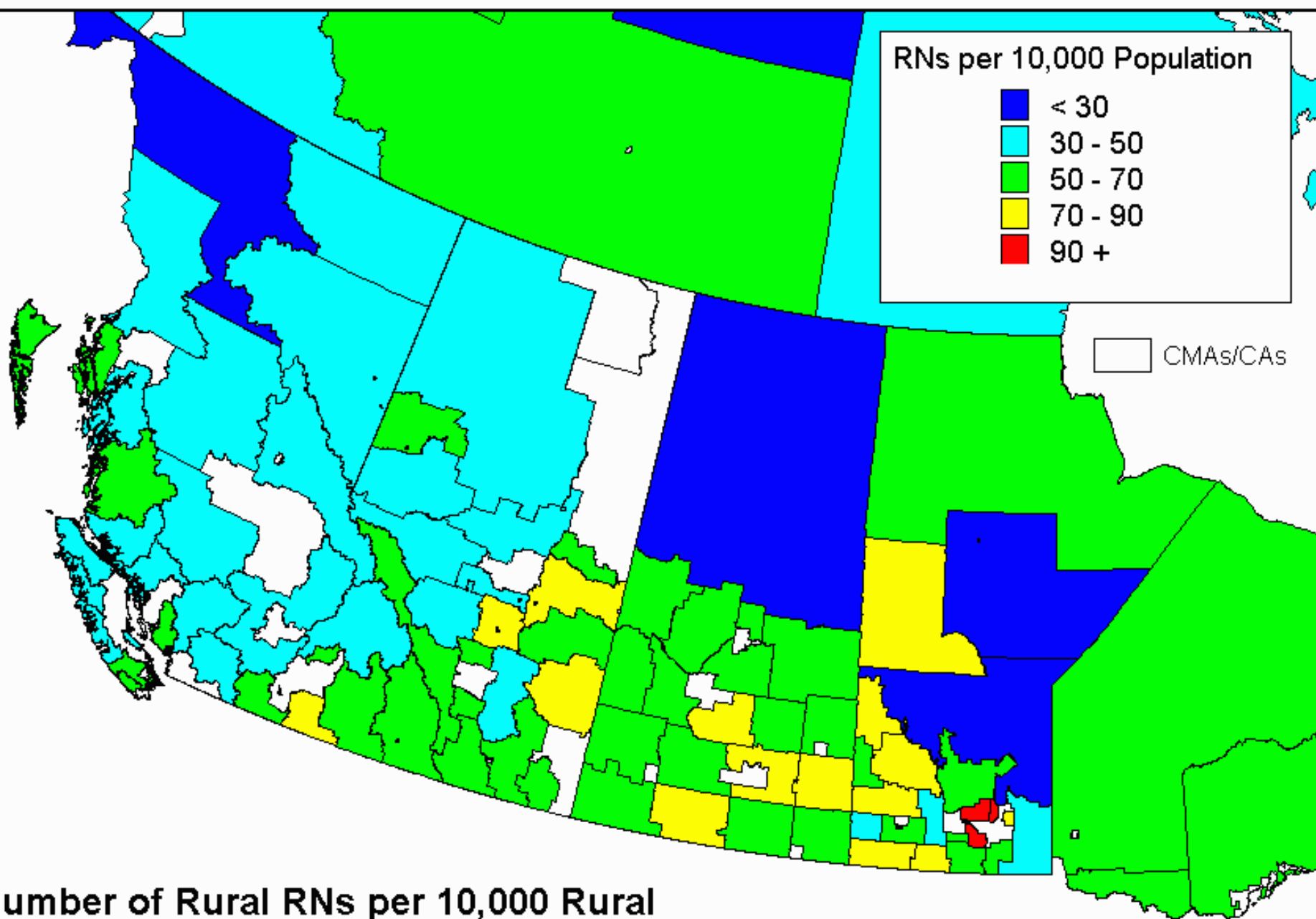
RNs per 10,000 Population



CMAAs/CAs

**Number of Rural RNs  
per 10,000 Rural Population  
by Census Division  
2000**





**Number of Rural RNs per 10,000 Rural Population by Census Division, 2000**

Source: RNDB/CIHI

# **.. an aging workforce**

(Source: RNDB)

- **Rural RNs -Canada/NU & NWT**
  - 1994 average age: 40.6 years/ **39.4 years**
  - 2000 average age: 42.9 years/ **43.1 years**
- **Urban RNs**
  - 1994 average age: 41.6 years/ **39.5 years**
  - 2000 average age: 43.5 years/ **41 years**
- **All RNs**
  - 1994 average age: 41.5 years/ **39.4 years**
  - 1998 average age: 42.6 years
  - 2000 average age: 43.4 years/ **42 years**
  - 2002 average age: 44.2 years





# Highest Education Level of RNs in Canada, 2000

(Source: RNDB)

	Rural	Urban
Diploma	81.4%	75.6%
	<b>63%</b>	--
Bachelor's	18%	22.8%
	<b>35.9%</b>	--
Master's/Doctorate	0.6%	1.7%
	<b>1.1%</b>	--



# Access to Care Education of Nurses

## Documentary Analysis Methods:

- conducted to achieve a contextual understanding of the policy and practice environment
- systematic collection and analysis of relevant documents according to the policy cycle: policy formulation, policy implementation and policy accountability (Rist, 1994)
- using this cycle, developed a guide to examine the materials
- located 200+ documents with input from advisory board  
- over 150 analyzed



# Five Policy Areas Emerged

(Source: Doc. Analysis)

- Advanced practice—an overall move to support this initiative
- Nursing practice issues in Aboriginal Communities—support needed for aboriginal nurses and those who work in aboriginal communities
- Educational preparation—no additional infrastructure to support preparation of rural & remote nurses
- Physician supply—interprofessional context of practice has not been examined
- Health care delivery—support of telehealth but no funds or opportunity to use in educational institutions



# Educational Preparation of RNs (Source: Doc. Analysis)

- Little information in available reports
- No government documents –provision of educational opportunities in rural sites
- Rural equated with accessibility issues regarding education
- Entry-level competencies - generic requirements
- Education for remote practice- advanced practice & First Nations health issues



- Education documents - programs with rural focus: UNBC, University of Saskatchewan, First Nations University of Canada
- No indication of any telehealth education occurring within nursing programs
- Nursing programs prepare graduates to be computer-literate but technology not always available or feasible in rural and remote settings
- Extended mentoring or orientation programs need consideration (documentary analysis) but do not replace basic education with employment mentoring (narrative)



# General Comments and Advice

(Source: Narratives)

- Most basic education does not prepare new grads for rural and remote practice
- Rural health nursing needs to part of all basic nursing programs
- Need for reality-based education
- Part of curriculum offered in rural settings
- Educators who are specialized and experienced in rural practice



# Quality of Care

- **Community as Shaping Practice**
- **Scope of Practice**



# Quality of Care Community Shaping Practice

## Narrative Approach:

- 152 Nurses (11 Francophone)
- Areas of Practice: Acute, Long-term Care, Public Health, Home-care, Community, Primary Care
- Telephone Interviews
- Analysis: interpretative phenomenology & thematic analysis





# Place of Work of Narratives Respondents





# Community Shaping Practice

(Source: Narratives)

- Size, distance, demographics
- Expectations of communities
- Knowing the client in the context of community; the community in the context of the client

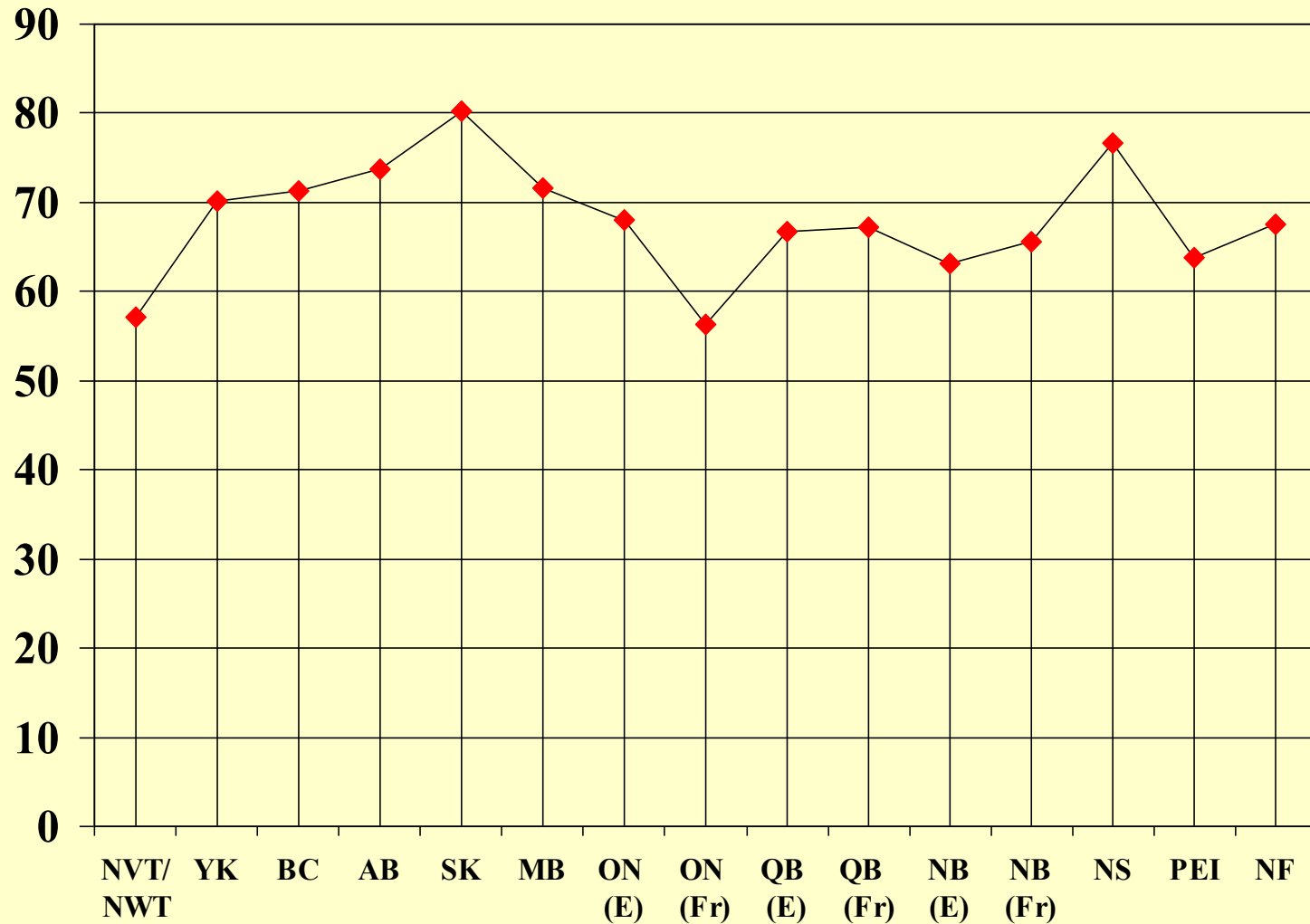


# Quality of Care Scope of Practice

## Survey Method

- Mailed questionnaire with persistent follow-up  
(Dillman's Tailored Design Method)
- Sample (N=3933)
  - 1) random sample of registered nurses (RNs) living in rural areas in all Canadian provinces
  - 2) total population of RNs who work in outpost settings or the northern territories

# Sample Response Rates by Province and Territory (N=3933)



Source: 2001-2002 Nursing in Rural and Remote Canada Survey



# Primary Care as Main Practice

- **National level – 8.3%**

- **Territories**

**Nunavut – 20%; Yukon – 15.6%; NWT – 11.5%**

- **Provinces**

**Ontario – 13.5%**

**Manitoba – 11.4%**

**British Columbia - 10%**

**Saskatchewan – 8.4%**

**Newfoundland – 6.1%**

**New Brunswick – 6.1%**

**Alberta – 5.7%**

**Nova Scotia – 4.9%**

**Quebec – 4.6%**

**PEI – 0%**



# Advanced Decision-Making or Practice

- **Total – 39.1%**
- **Territories – 47.8%**
- **Provinces**
  - **Ontario – 50%**
  - **BC/AB - 42.7%**
  - **SK/MB – 38.7%**
  - **Atlantic – 32.6%**
  - **Quebec – 31.0%**



# Health Promotion in Community

- **Total – 48.6%**
- **Territories – 56.3%**
- **Provinces**
  - **BC/AB – 54.7%**
  - **Ontario – 52.7%**
  - **SK/MB – 49.3%**
  - **Atlantic – 44.9%**
  - **Quebec – 36.6%**



# Main Area of Nursing Practice by Territory and All of Canada (n = 3493\*)

<b>Practice Area</b>	<b>NU (%)</b>	<b>NT (%)</b>	<b>YT (%)</b>	<b>All of Canada (%)</b>
Acute Care	<b>40.0</b>	51.5	44.2	44.4
Long term Care	---	7.3	8.4	17.7
Community Health	<b>36.9</b>	17.6	20.1	16.1
Home Care	<b>1.5</b>	5.5	5.2	8.7
Primary Care	<b>20.0</b>	11.5	15.6	8.3
Other	<b>1.5</b>	6.7	6.5	4.8
<b>Total n</b>	<b>65</b>	165	154	3493

Survey question: “In which of the above practice areas do you spend most of your time?” \*Excluded here – education, administration, research





# Advanced Nursing Practice by Territories and All of Canada (n = 3493) (Source: Survey)

<b>Scope of Practice</b>	<b>NU (%)</b>	<b>NT (%)</b>	<b>YT (%)</b>	<b>All of Canada (%)</b>
Advanced nursing practice and decision-making	<b>68.9</b>	43.5	50.3	39.9
Facilitation of community health promotion activities	<b>63.5</b>	52.5	53.0	47.8
Nothing in my day is routine	<b>80.0</b>	60.8	61.7	63.3
I am required to take on other roles depending on demand	<b>46.2</b>	54.2	59.1	58.2
I use protocols specific to ANP	<b>64.6</b>	44.0	37.7	36.9
<b>Total n</b>	<b>65</b>	165	154	3493



# Maternity Care

## by Territory and All of Canada (n = 3493)

(Source: Survey)

Scope of Practice	NU (%)	NT (%)	YT (%)	All of Canada (%)
Pre-natal Care	<b>72.3</b>	45.5	43.5	35.1
Management of labor	<b>60.0</b>	30.9	16.9	22.8
Management of delivery	<b>60.0</b>	29.7	14.9	20.8
Post-natal care	<b>78.5</b>	52.1	44.2	40.5
<b>Total n</b>	<b>65</b>	165	154	3493



# General Diagnostic Tests

By Territory and All of Canada (n = 3493)

(Source: Survey)

Scope of Practice	NU (%)	NT (%)	YT (%)	All of Canada (%)
Ordering diagnostic tests	63.1	39.4	36.4	28.5
Performing diagnostic tests	64.6	40.0	46.8	32.5
Interpreting diagnostic tests	69.2	42.4	48.1	35.0
<b>Total n</b>	<b>65</b>	<b>165</b>	<b>154</b>	<b>3493</b>



## Medication and Referrals by Territory and All of Canada (n = 3493) (Source: Survey)

Scope of Practice	NU (%)	NT (%)	YT (%)	All of Canada (%)
Prescribing medication	<b>66.2</b>	29.1	27.3	17.8
Dispensing (not administering) medication	<b>81.5</b>	54.5	51.9	46.7
Direct referral to an <i>allied health professional</i>	<b>66.2</b>	48.5	52.6	49.3
Direct referral to a <i>medical specialist</i>	<b>52.3</b>	22.4	23.4	21.9
<b>Total n</b>	<b>65</b>	165	154	3493



## Emergency/Acute Care by Territory and All of Canada (n = 3493) (Source: Survey)

Scope of Practice	NU (%)	NT (%)	YT (%)	All of Canada (%)
Suturing	<b>67.7</b>	26.1	26.6	20.2
Taking X-rays	<b>56.9</b>	20.6	24.7	8.2
Casting/Splinting	<b>66.2</b>	32.1	31.2	25.4
Evacuating patients	<b>83.1</b>	55.2	45.5	37.0
Pronouncing death	<b>55.4</b>	21.2	29.9	41.8
<b>Total n</b>	<b>65</b>	165	154	3493



# Specific Diagnostic Tests

## by Territory and All of Canada (n = 3493)

(Source: Survey)

Scope of Practice	NU (%)	NT (%)	YT (%)	All of Canada (%)
Performing pap smears	61.5	27.3	25.3	15.9
Audiometry	49.2	23.0	25.3	12.6
Refraction	21.5	7.9	5.2	3.8
Pulmonary function testing	36.9	20.0	15.6	12.4
<b>Total n</b>	<b>65</b>	<b>165</b>	<b>154</b>	<b>3493</b>



# Advanced Nursing Practice

(source: Survey)

- 8% work in Primary Care  
(i.e., advanced practice/nurse practitioner)
- BUT 39% make advanced decisions on a daily basis
- AND less than 10% have advanced education



# Sustainability of Care

- **Predictors of Intent To Leave**
- **Migration of Nurses**





# Predictors of Intent To Leave

(Source: Survey)

- Individual
  - Sociodemographic & professional
  - Health (perceived stress)
  - Satisfaction with workplace & community
- Workplace
  - On Call
  - Advanced decision making
- Community
  - Remote setting



# Retaining Rural Nurses

(source: Survey)

RNs who plan to leave their jobs were:

- Unsatisfied with job scheduling, level of autonomy & on call requirements
- More likely to be making advanced decisions & working in remote settings
- Less satisfied with the community where they work

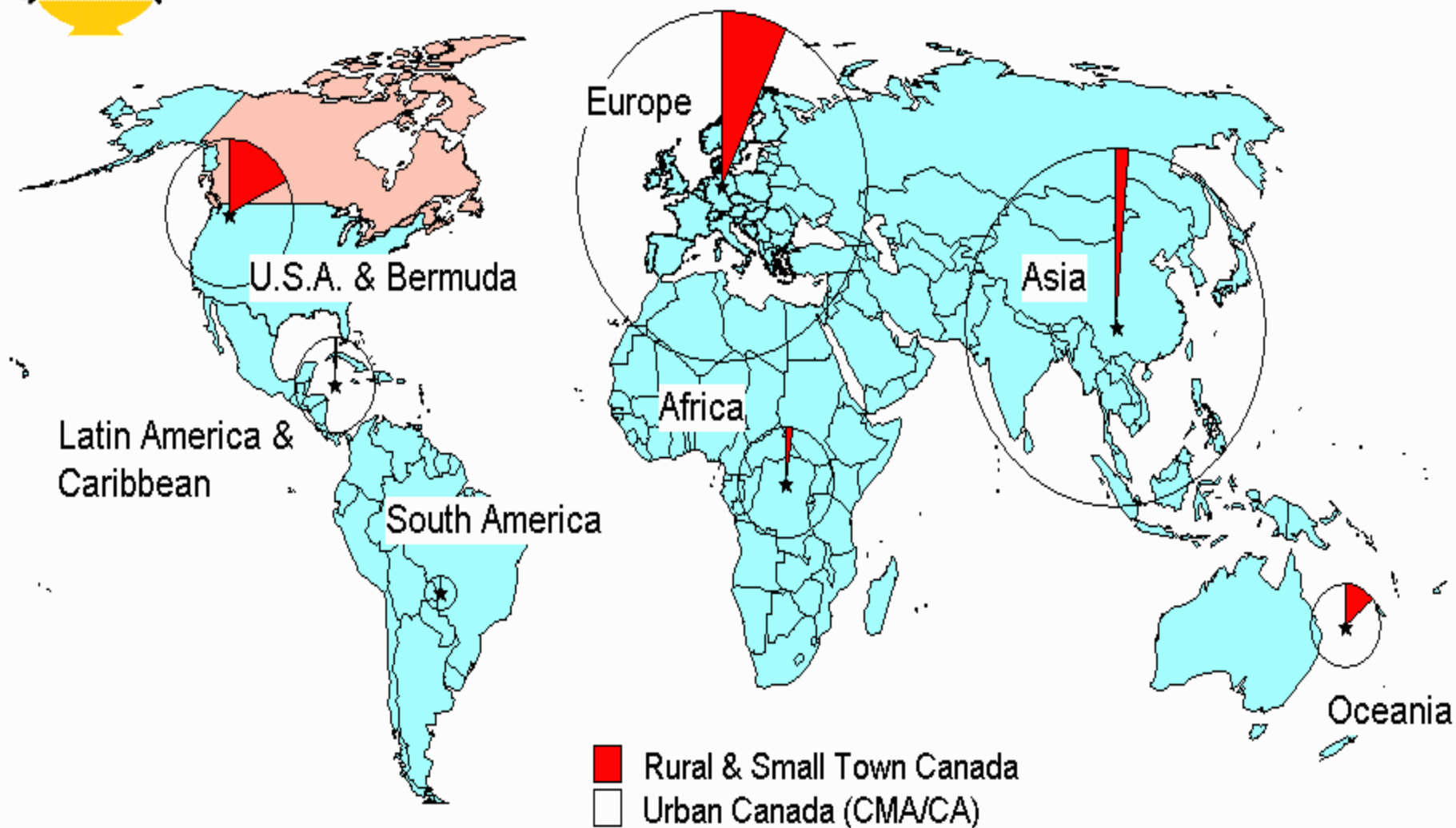


# Sustainability of Care

- **Migration of Nurses**



# Major World Region Origins of the International Nursing Graduate RNs of Canada



Source: RNDB/CIHI, 2000



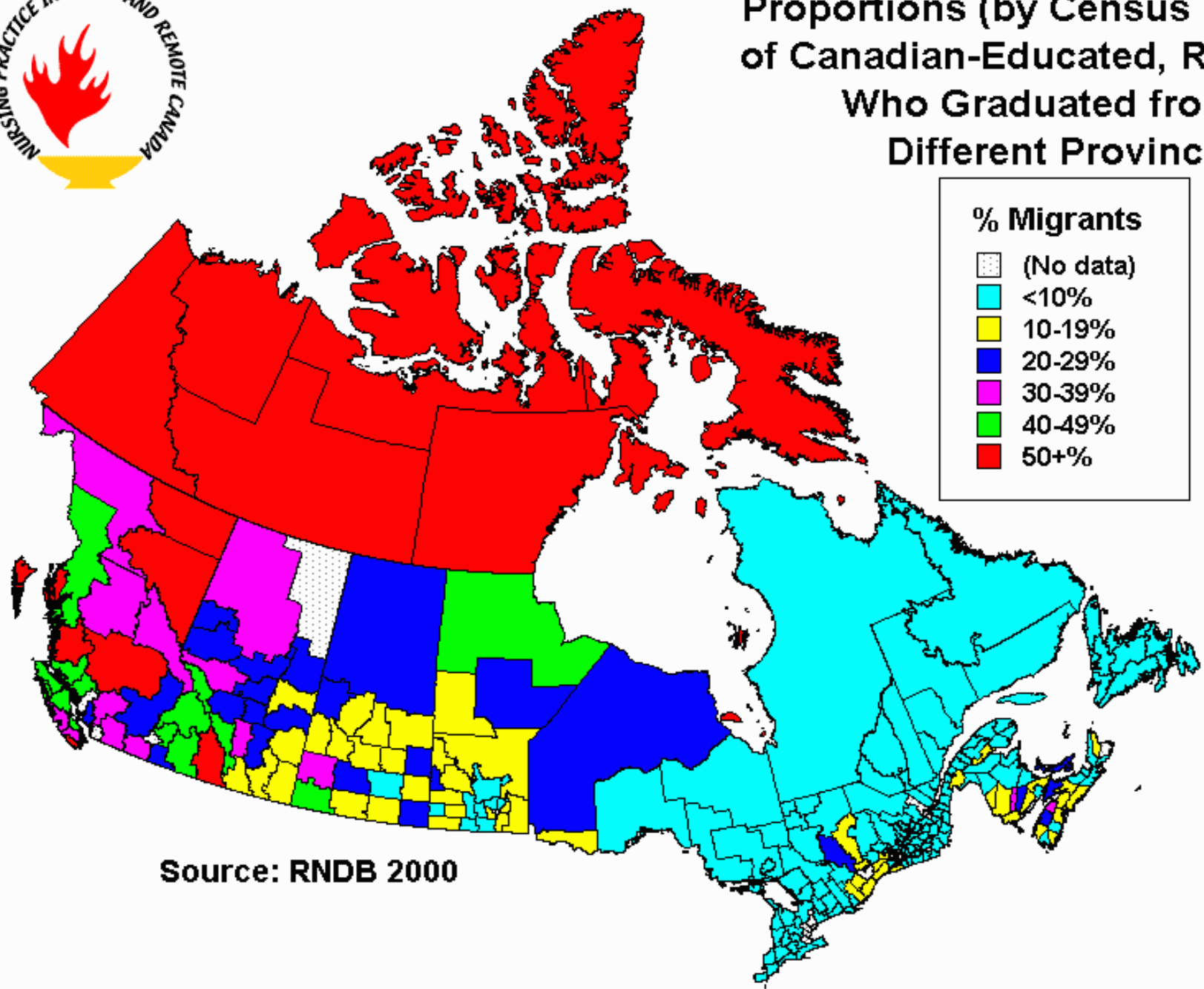
# International Nursing Graduates

(Source: RNDB)

- In 2000 14,177 international nursing graduates were registered and employed in nursing in Canada
- 5.7% of international nursing graduates worked in rural Canada
- But this represented only 1.9% of rural RNs
- Therefore, our analyses focus on **INTERNAL MIGRATION** of Canadian-educated, rural RNs



# Proportions (by Census Division) of Canadian-Educated, Rural RNs Who Graduated from a Different Province



Source: RNDB 2000

# Percent Distribution of Rural RNs: Composition of Province/Territory of Registration by Province Graduation

(Source: RNDB)

		Province/Territory of Registration										
		NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	TR
Province of Graduation	NL	100.0	1.8	2.9	0.5	0.0	0.5	0.5	0.2	1.0	0.9	12.8
	PE		74.2	0.8	0.5		0.1	0.0	0.1	0.2	0.2	
	NS		10.6	83.0	2.9	0.0	0.8	0.5	0.3	1.0	1.2	5.8
	NB		7.2	4.7	90.1	0.7	0.5	0.4	0.1	0.3	0.9	3.3
	QC		0.7	1.6	2.5	97.9	1.9	0.4	0.2	0.8	2.2	3.3
	ON		3.6	4.2	1.9	1.2	94.2	3.7	2.3	6.7	11.6	35.5
	MB		0.7	0.8	0.2	0.0	0.9	88.4	5.2	3.2	4.1	7.9
	SK		0.4	0.3	0.1	0.1	0.3	3.8	83.4	8.1	5.2	8.3
	AB		0.7	0.9	0.4		0.5	1.6	7.3	75.3	14.1	14.9
	BC		0.2	0.6	1.0		0.4	0.7	1.0	3.6	59.7	8.3

# Percent Distribution of Rural RNs: Province of Graduation

## Distributed Across Province/Territory of Registration

(Source: RNDB)

		Province/Territory of Registration										
		NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	TR
Province of Graduation	NL	86.8	0.4	3.8	0.5	0.1	2.8	0.6	0.2	1.9	1.3	1.6
	PE		85.9	5.5	2.3		2.3	0.3	0.5	1.8	1.3	
	NS		2.0	87.2	2.3	0.1	3.9	0.5	0.3	1.7	1.4	0.6
	NB		1.5	5.7	83.9	3.3	2.9	0.5	0.1	0.5	1.2	0.4
	QC		0.0	0.4	0.5	95.7	2.2	0.1	0.1	0.3	0.6	0.1
	ON		0.1	0.9	0.3	1.0	90.7	0.8	0.5	2.2	2.8	0.7
	MB		0.1	0.8	0.1	0.1	4.0	80.1	5.0	4.7	4.4	0.7
	SK		0.1	0.3	0.1	0.2	1.1	3.3	77.3	11.5	5.4	0.7
	AB		0.1	0.6	0.2		1.6	1.0	5.0	79.6	10.9	1.0
	BC		0.0	0.8	1.0			2.1	0.8	1.3	7.0	86.0





# Correlates of Migration

(Source:RNDB)

Correlates	% Migrants	Odds Ratio
<b>Gender</b>		
Male	7.2	1.00
Female	12.0	1.31*
<b>Highest Nursing Education</b>		
Diploma	11.0	1.00
Baccalaureate	14.9	0.90
Graduate Degree (MA/PhD)	24.0	1.55*
<b>Full-Time/Part-Time Employment</b>		
Part-Time	10.8	1.00
Full-Time	12.7	1.07*

# Correlates of Migration (Continued)

Correlates	% Migrants	Odds Ratio
<b>Place of Work</b>		
Hospital	10.6	1.00
Nursing Station	34.4	2.40*
Nursing Home/Long-Term Care	10.4	0.69*
Home Care/Community Health Centre	14.1	0.86*
Education/Association/Government	17.8	1.10
Other	12.8	0.96
<b>Primary Responsibility</b>		
Direct Care	11.9	1.00
Administration	10.8	0.68*
Teaching/Education	18.2	1.41*
Research	11.1	1.18

# Correlates of Migration (Continued)

Correlates	% Migrants	Odds Ratio
<b>Position</b>		
Manager	14.5	1.00
Staff/Community Nurse	11.7	1.07*
Other	10.1	0.72*
<b>Metropolitan Influenced Zone</b>		
Strong MIZ	8.4	1.00
Moderate MIZ	10.1	0.84*
Weak MIZ	15.4	1.31*
No MIZ	16.5	1.32*



# Mobility of Rural Nurses

- By 2006, Canada is projected to lose the equivalent of 13% of the 2001 RN workforce through retirement and death (O'Brien-Pallas et al., 2003)
- BUT, up to 27% of Canada's rural nurses have moved from their province of graduation (Survey)
- AND 20% of rural nurses plan to retire by 2007 (Survey)



# Nature of Nursing Practice

Recognizing nurses and the complexity of rural and remote practice

- Access to Care
- Quality of Care
- Sustainability of Care



# Who will be there for rural communities?

- Create a “rural practice lens” for relevant planning, policies and programs
- Partnerships between communities and health authorities are needed to successfully recruit and retain rural nurses
- Workplace supports in health authorities and agencies will enhance the retention of rural nurses
- Better supports are required for nursing education programs that prepare rural nurses



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