



# **The Nature of Nursing Practice in Rural and Remote Canada**

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Charting The Future: Rural and Remote Nursing in Canada

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# 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



# The Study Components

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



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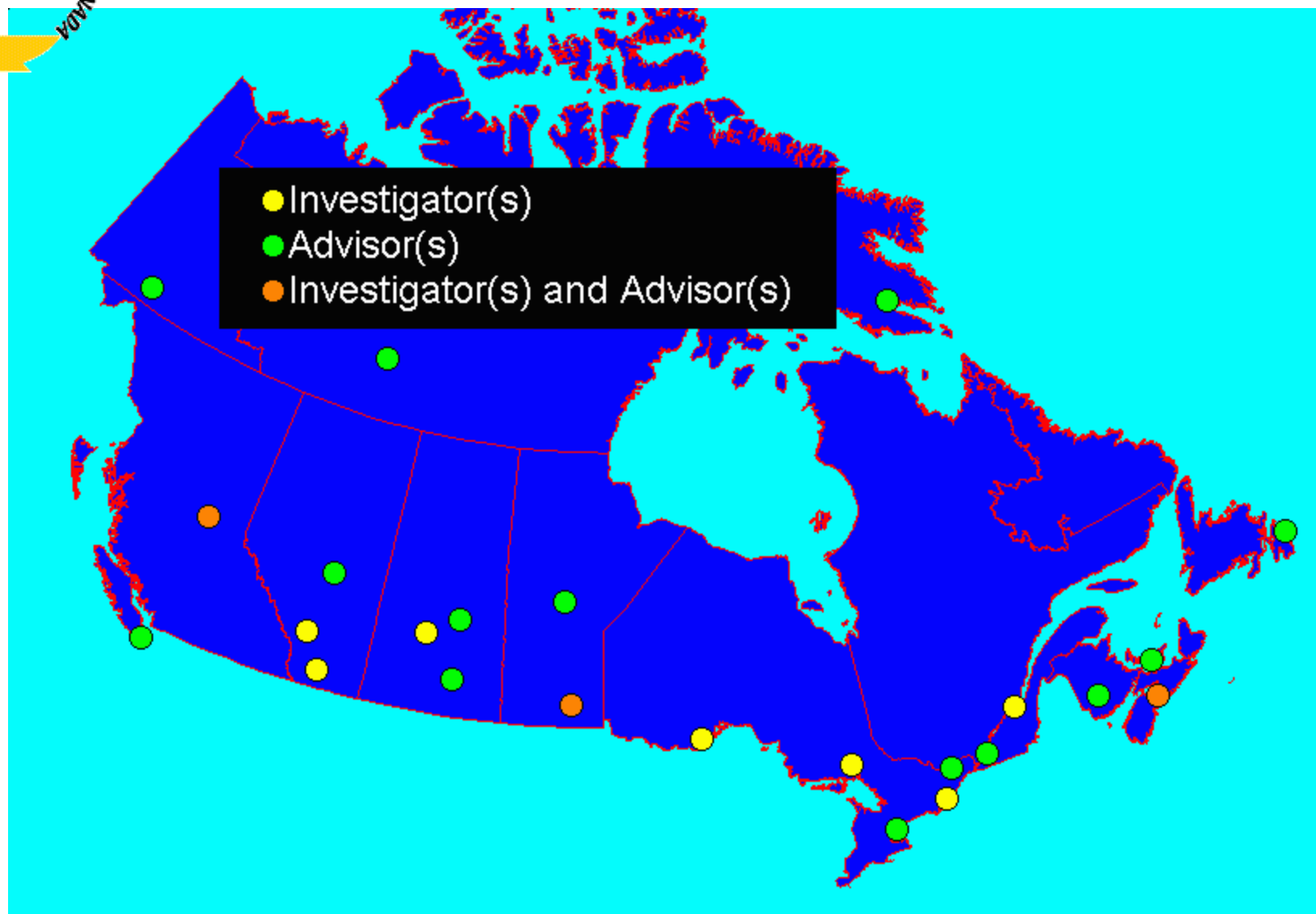
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# Funding Partners

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- **Michael Smith Foundation for Health Research**
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- **British Columbia Rural and Remote Health Research Institute**
- **Saskatchewan Industries 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?**



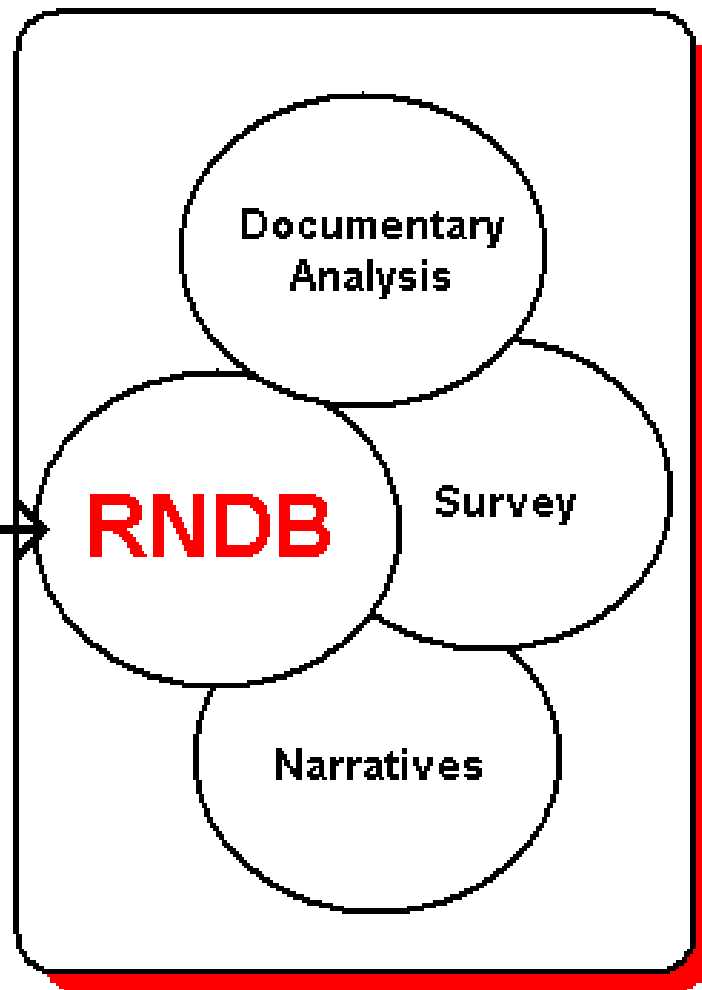
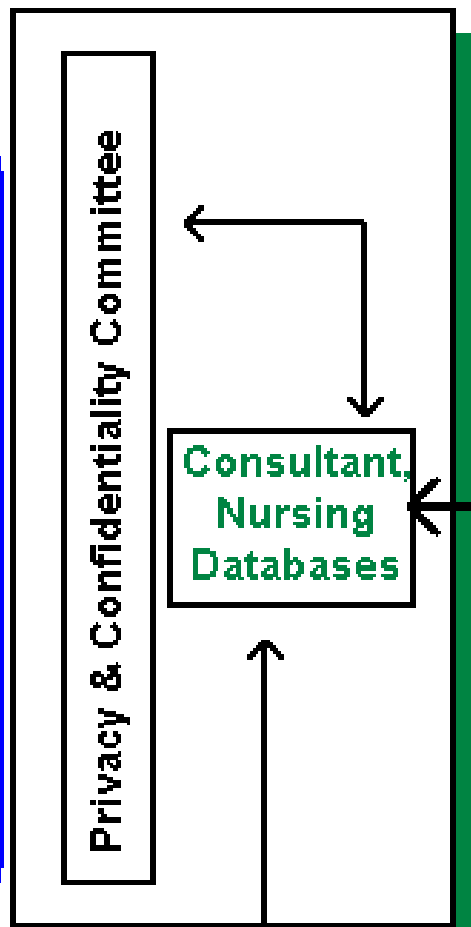
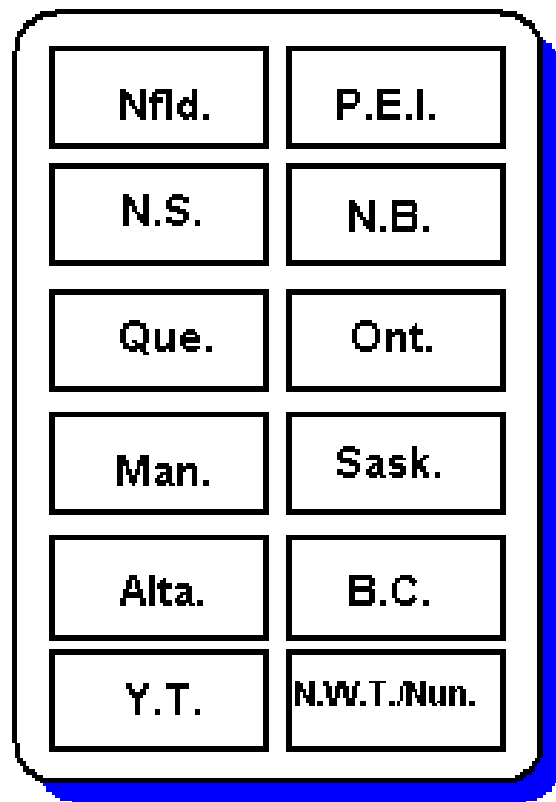
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Provincial/  
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Registrars

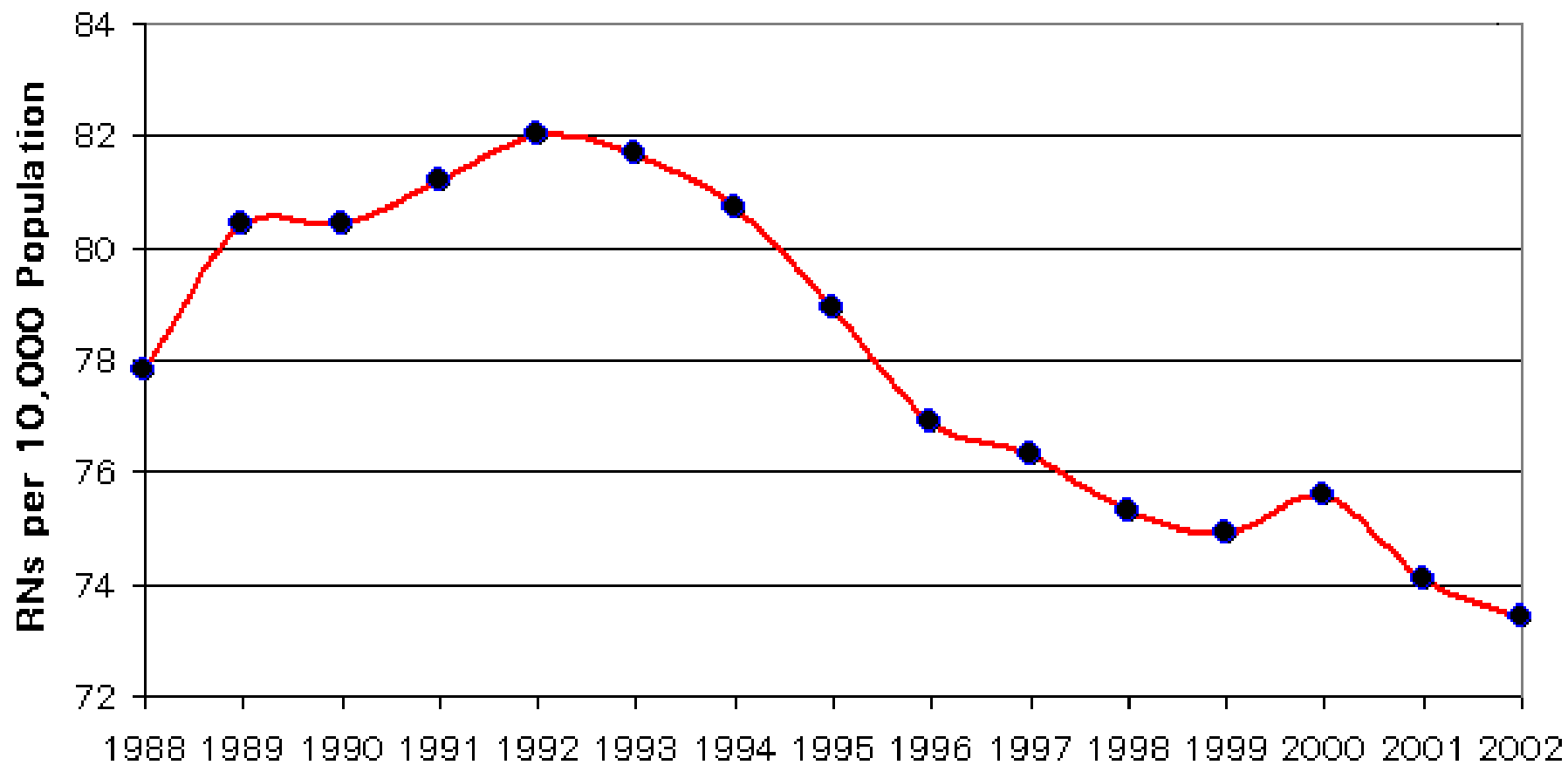
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**Registered Nurses Database**

### Nurse to Population Ratios (All RNs), 1988-2002



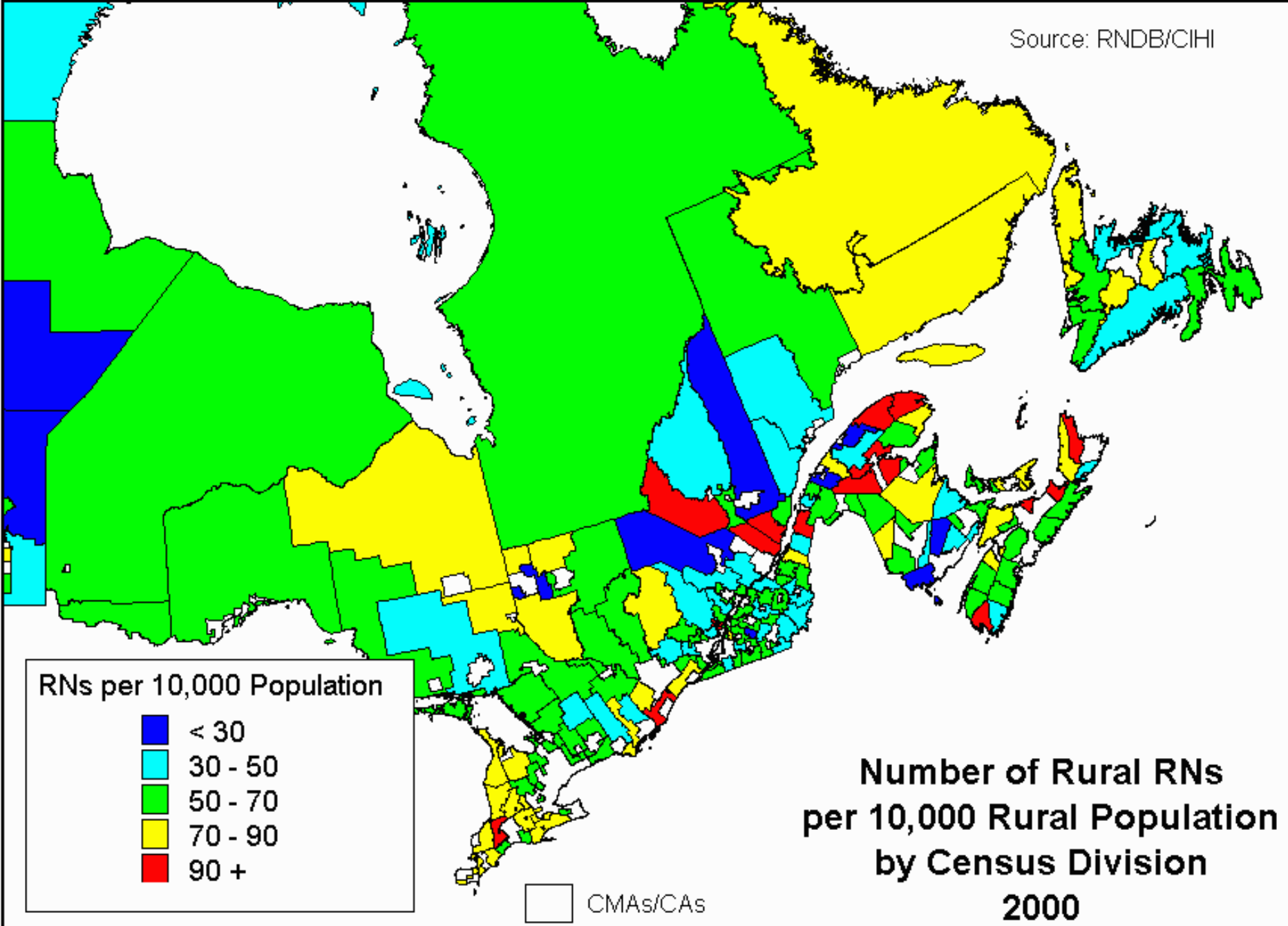
Source: RNDB/Statistics Canada and CIHI

Year	Number of rural (RST) RNs	% of all RNs	Rural (RST) % of total Canadian population
1994	42,303	18.0	22.3
2000	41,502	17.9	21.7
2002	40,648	17.6	20.6

2002 – based on CIHI figure generated without Quebec data



Source: RNDB/CIHI

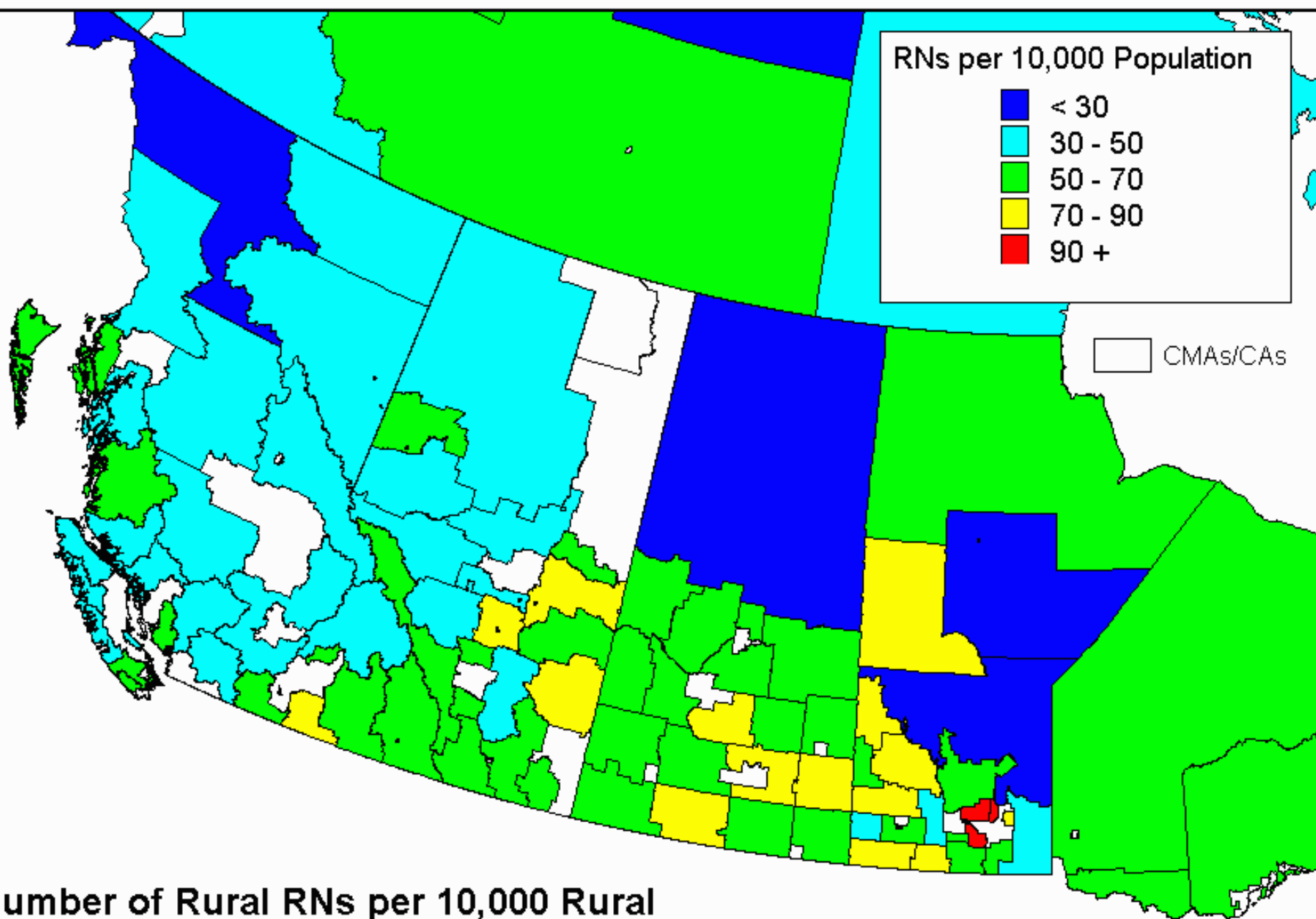


RNs per 10,000 Population

- < 30
- 30 - 50
- 50 - 70
- 70 - 90
- 90 +

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

- **Rural RNs**
  - **1994 average age: 40.6 years**
  - **2000 average age: 42.9 years**
- **Urban RNs**
  - **1994 average age: 41.6 years**
  - **2000 average age: 43.5 years**
- **All RNs**
  - **1994 average age: 41.5 years**
  - **1998 average age: 42.6 years**
  - **2000 average age: 43.4 years**
  - **2002 average age: 44.2 years**

*Canada is projected to lose 29,746 RNs aged 50 or older to retirement or death by 2006, a total equivalent to 13% of the nursing workforce in 2001.*

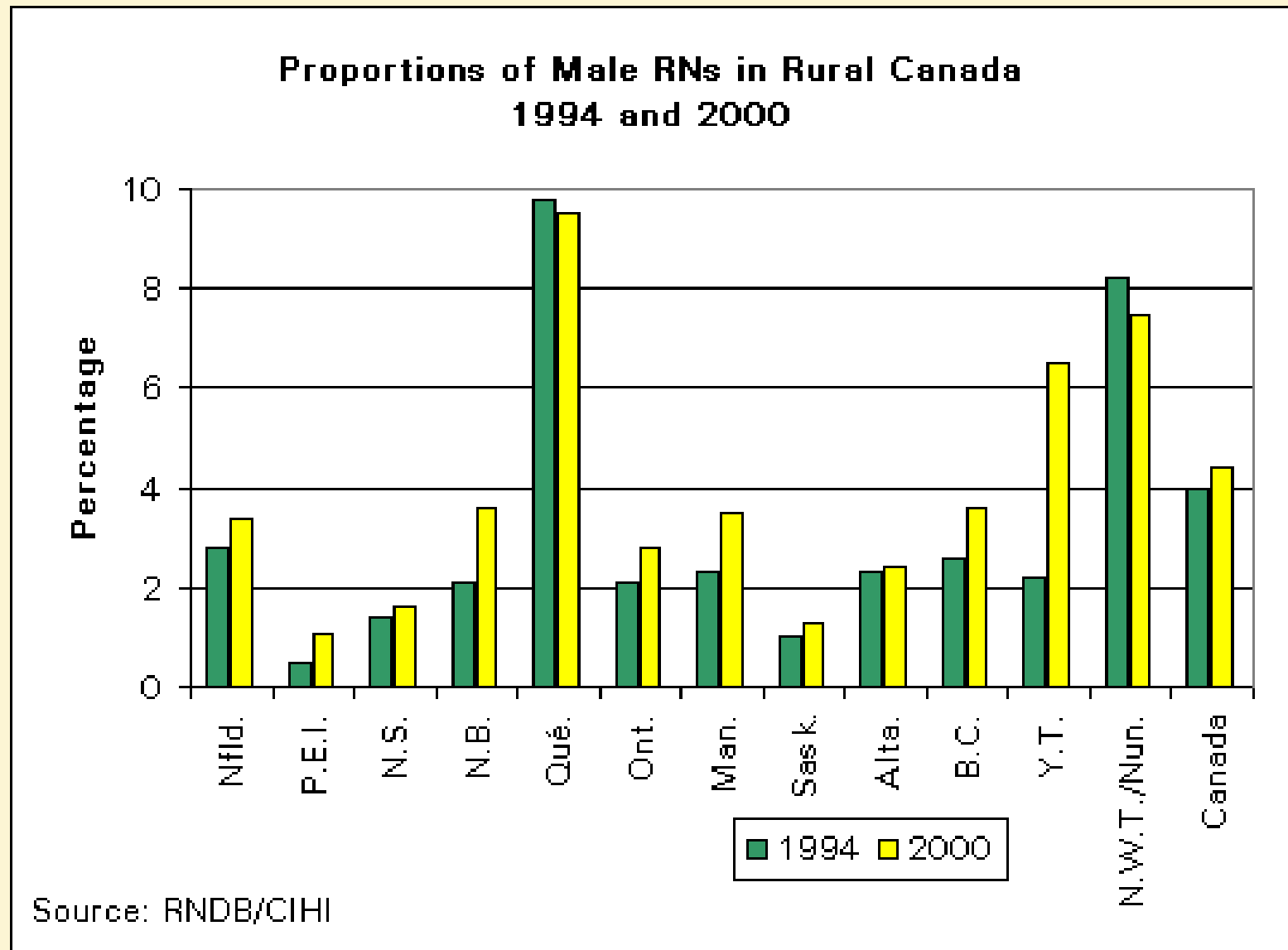
O'Brien-Pallas, et al. (2003). **Bringing the Future into Focus: Projecting RN Retirement in Canada.**

**Table 10. Expected Losses of RNs Employed in Nursing Aged 50 to 65 by Region, Canada, 2002–2006**

	Year					Total	Index Ratio Losses : Nurses
	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006		
Canada	5,316	5,640	5,982	6,267	6,541	29,746	0.13
Atlantic	385	423	457	482	513	2,261	0.10
Que.	1,750	1,823	1,917	1,969	2,013	9,471	0.16
Ont.	1,759	1,873	1,992	2,074	2,180	9,878	0.12
Man./Sask.	365	388	417	439	450	2,060	0.11
Alta.	352	392	408	477	520	2,149	0.09
B.C.	681	714	760	790	828	3,773	0.14

Source: Projections are based on data from RNDB/CIHI

.. Increasing number of male RNs, but only slight increases in rural Canada





# 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



# Education Level of RNs in Rural Canada, 2000

(Source: RNDB)

Diploma	81.4%
Bachelor's	18%
Master's/Doctorate	0.6%



# **Educational Preparation of RNs in Rural and Remote Areas**

- Paucity of information in available reports
- No government documents located that discuss the need to provide educational opportunities for students in rural sites



- Most nursing associations equate rural with accessibility issues regarding education
- Entry-level competencies focus on generic requirements





- Education for remote practice links it with First Nations health issues
- Education documents discuss programs with rural focus at locations such as Aurora College, 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)



# Advice for Educators

(Source: Narratives, Northern responses)

- Need for reality-based cases
- Part of curriculum offered in rural settings
- Educators who are specialized in knowledge and experience



# General Comments from Northern Nurses

(Source: Narratives)

- Basic education inadequate for rural and remote practice
- Rural health nursing needs to part of basic nursing program



# Quality of Care



# 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



## Approximate Location of Narratives Respondents Based on Place of Work







# Community Shaping Practice

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



# Size, Distance, Demographics

*As I stepped off the ski plane I stepped into a foreign world. My role as a nurse was changed completely and my personal life soon became unfamiliar to me in my unfamiliar surroundings*

*We do get a lot of moms with children with various things, but mostly with kids, you know, it's the head colds, bad ear, sore throat, bit of abdo pain. [...] Our kids are basically a healthy population.*

*I remember being up in this same community and working 36 hours straight, no sleep, no break, nothing*



# Expectations of Communities

*I always say it's a double edged sword because they hold you to high respect because you're their own.[...] . And because of that you can't be the normal person that you are. You have to always be this person that everybody looks up to. And the clinic is situated on the top of a hill, so that I can look down at all the [community] around me. And most times I feel that way, that people think it's like that. That I'm the person on the hill looking down on everybody else. And there's a lot of pressure to be the perfect person when you're the nurse.*



# Knowing the Client: Knowing the Community

*We are very responsive in our community because we see those people in our churches and in our grocery stores. And so you know we try and be all things to all people, maybe that is kind of bad. But in the end we are the one who see these people outside of our work life too.*



# Advice: Listen to Learn- Learn to Listen

*Number one, do a lot of listening initially, and very little talking*

*Listen to your nurses! Listen to them and respect their opinions and have an open dialogue*

*Teach them how to use resources – how to find the answers.  
Don't give it to them., don't feed it to them....*



# **Sustainability of Care**

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



# **Sustainability of Care**

- **Predictors of Intent To Leave**

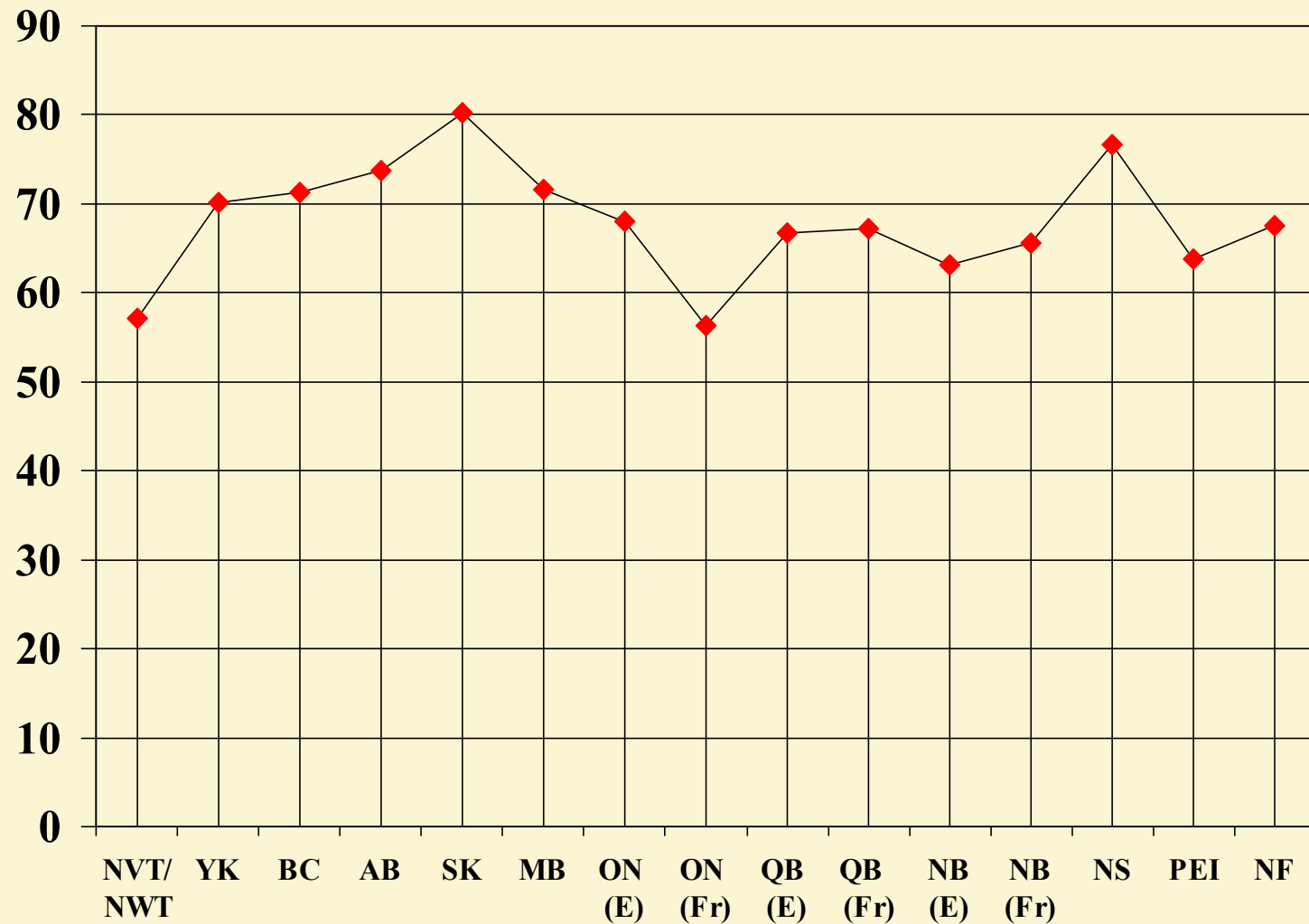


# Survey Method

- 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



# Predictors of Intent To Leave Variables

- Individual
  - Sociodemographic & professional
  - Satisfaction with work & community
- Worklife
- Community



# Predictors of Intent To Leave

Table. Adjusted odds ratios of intent to leave within the following one year period, by selected factors, registered nurses under 60 years of age.

CORRELATES	Adjusted Odds Ratio	95% CI	P Value
Gender			
Male	2.07	1.42 to 3.02	0.000
Female <sup>a</sup>	1.00	---	---
Perceived stress	1.06	1.03 to 1.10	0.001
No dependent children or relatives <sup>b</sup>	1.56	1.27 to 1.93	0.000
Highest attained nursing education			
Master or doctorate	3.61	1.62to 8.07	0.002
Advanced Nursing Practice	1.45	0.96 to 2.19	0.079
Bachelors	1.53	1.21 to 1.93	0.000
Diploma <sup>a</sup>	1.00	---	---

Source: 2001-2002 Nursing in Rural and Remote Canada Survey (n=3051)

Note. Variables were entered in four blocks; odds ratios were calculated using forward logistic regression with likelihood ratio criterion. Nagelkerke R Square=0.20; c statistic=0.76

<sup>a</sup> Reference category

<sup>b</sup> Reference category denotes lack of characteristics



# Predictors of Intent To Leave (cont'd)

CORRELATES	Adjusted Odds Ratio	95% CI	P Value
Years employed in primary agency			
Under 2 years	3.21	2.22 to 4.63	0.000
2-5 years	2.59	1.82 to 3.67	0.000
6-9 years	2.22	1.50 to 3.28	0.000
10-14 years	1.17	0.79 to 1.74	0.437
15-19 years	1.07	0.68 to 1.69	0.772
20 years or over <sup>a</sup>	1.00	---	---
Community satisfaction	- 0.98	0.97 to 0.99	0.014
Scheduling dissatisfaction	1.05	1.03 to 1.07	0.000
Job satisfaction - autonomy	- 0.94	0.92 to 0.96	0.000
Required to be on call <sup>b</sup>	1.30	1.04 to 1.62	0.022
Perform advanced decisions or practice <sup>b</sup>	1.30	1.05 to 1.62	0.018
Workplace remote <sup>b</sup>	1.48	1.17 to 1.87	0.001



# Predictors of Intent To Leave

Registered Nurses were more likely to intend to leave their present nursing position within the next 12 months if they:

- Were male
- Reported higher perceived stress
- Did not have dependent children or relatives
- Had higher education
- Were employed by their primary agency for a shorter time
- Had lower community satisfaction
- Had greater dissatisfaction with job scheduling
- Had lower job satisfaction re: autonomy
- Were required to be on call
- Performed advanced decisions or practice
- Worked in a remote setting

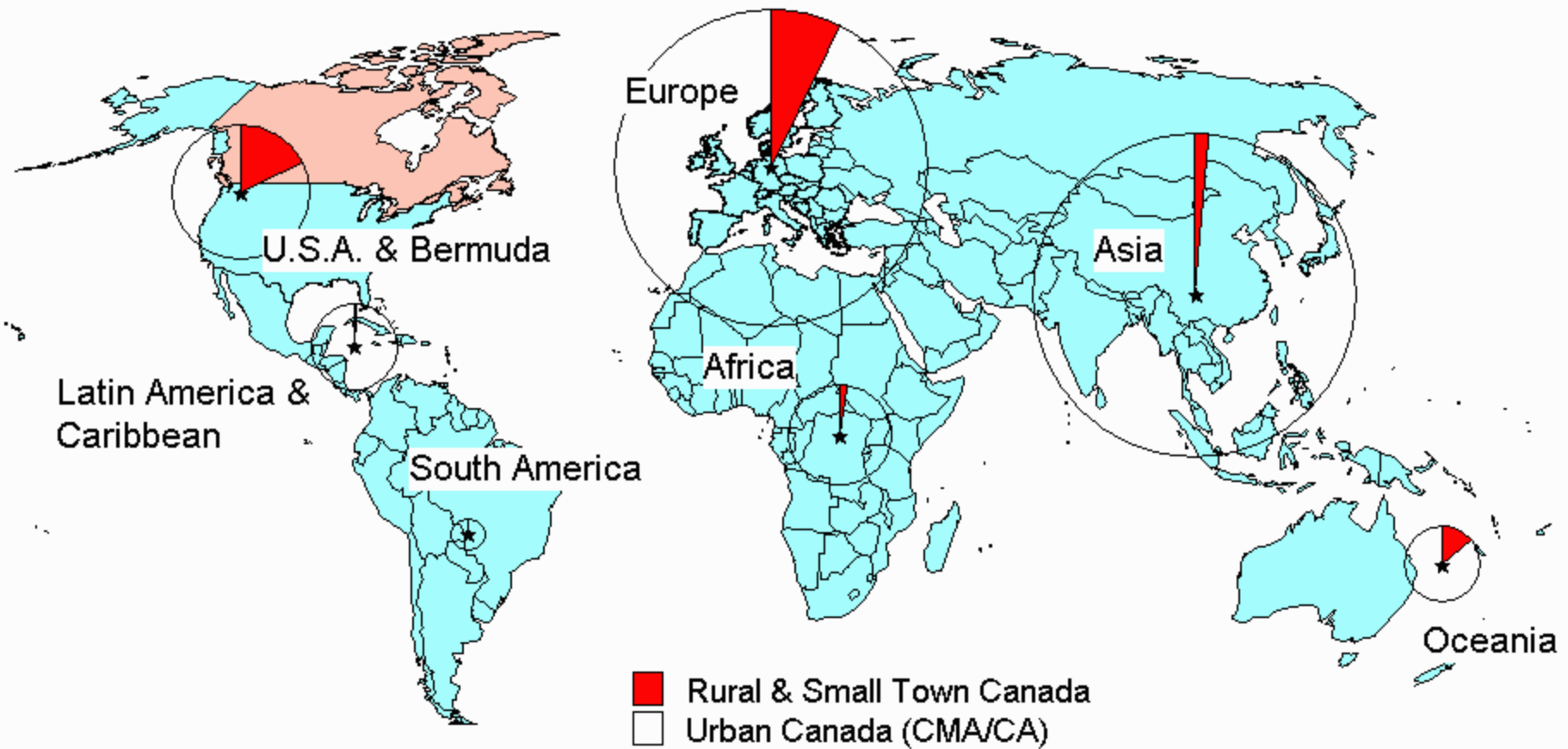


# **Sustainability of Care**

- **Migration of Nurses**



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



Source: RNDB/CIHI, 2000



# International Nursing Graduates

- 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



# Percent Distribution of Rural RNs: Composition of

## Province/Territory of Registration by Province Graduation

		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

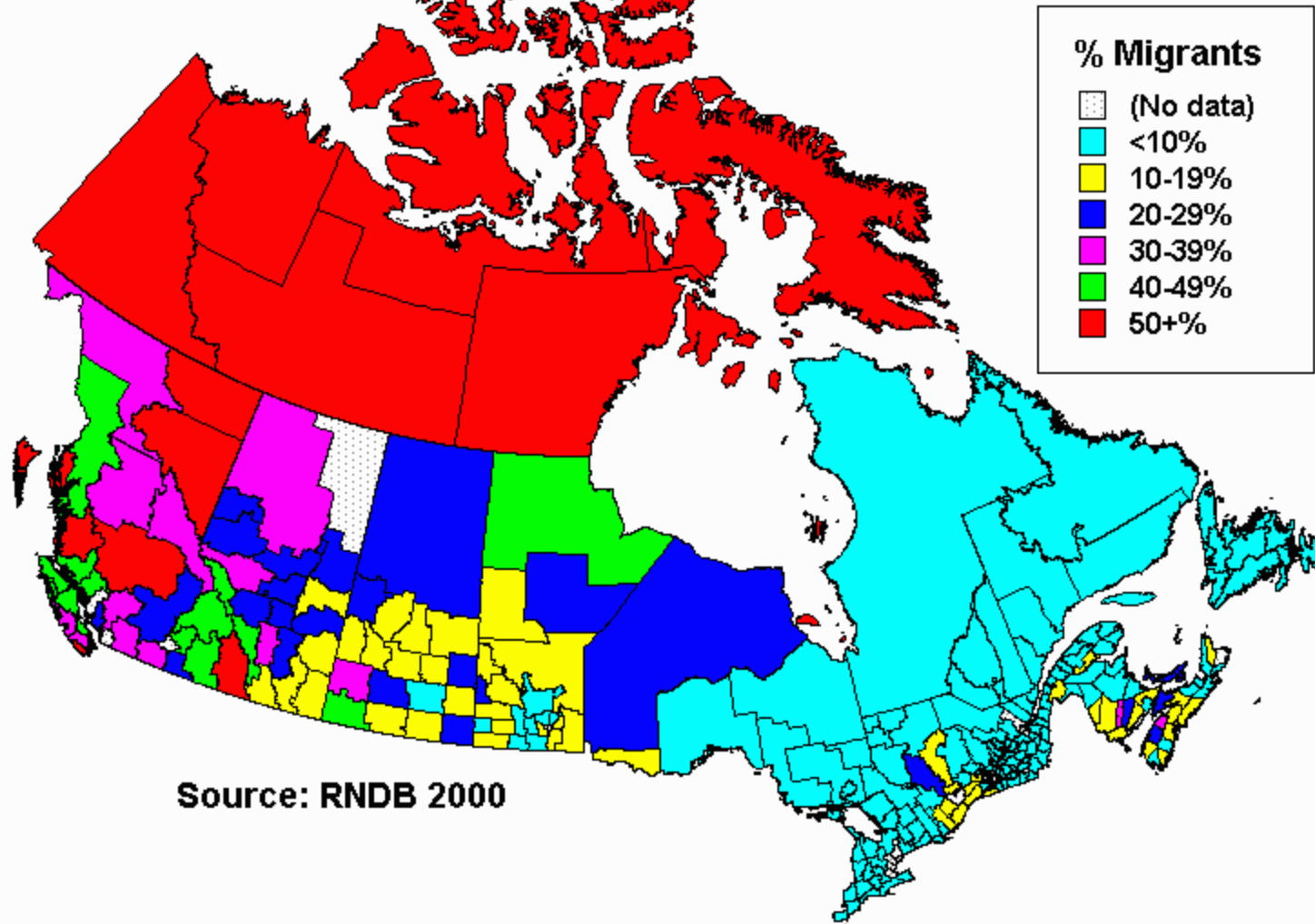
## Distributed Across Province/Territory of Registration

		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





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



Source: RNDB 2000

## Correlates of Migration

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*



# Internal Migration: Items to Consider

- RNDB “internal migration” = 11.8%
- Survey “internal migration” = 26.7%
- 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)
- **For many rural communities, MIGRATION of RNs may be equally or more significant!**



# Nature of Nursing Practice

Recognizing nurses and the complexity of rural and remote practice

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





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