



The Nature of Nursing Practice in Rural and Remote Canada

Martha MacLeod, RN PhD

University of Northern British Columbia

Prince George, BC, Canada



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Judith C. Kulig, DNSc, RN

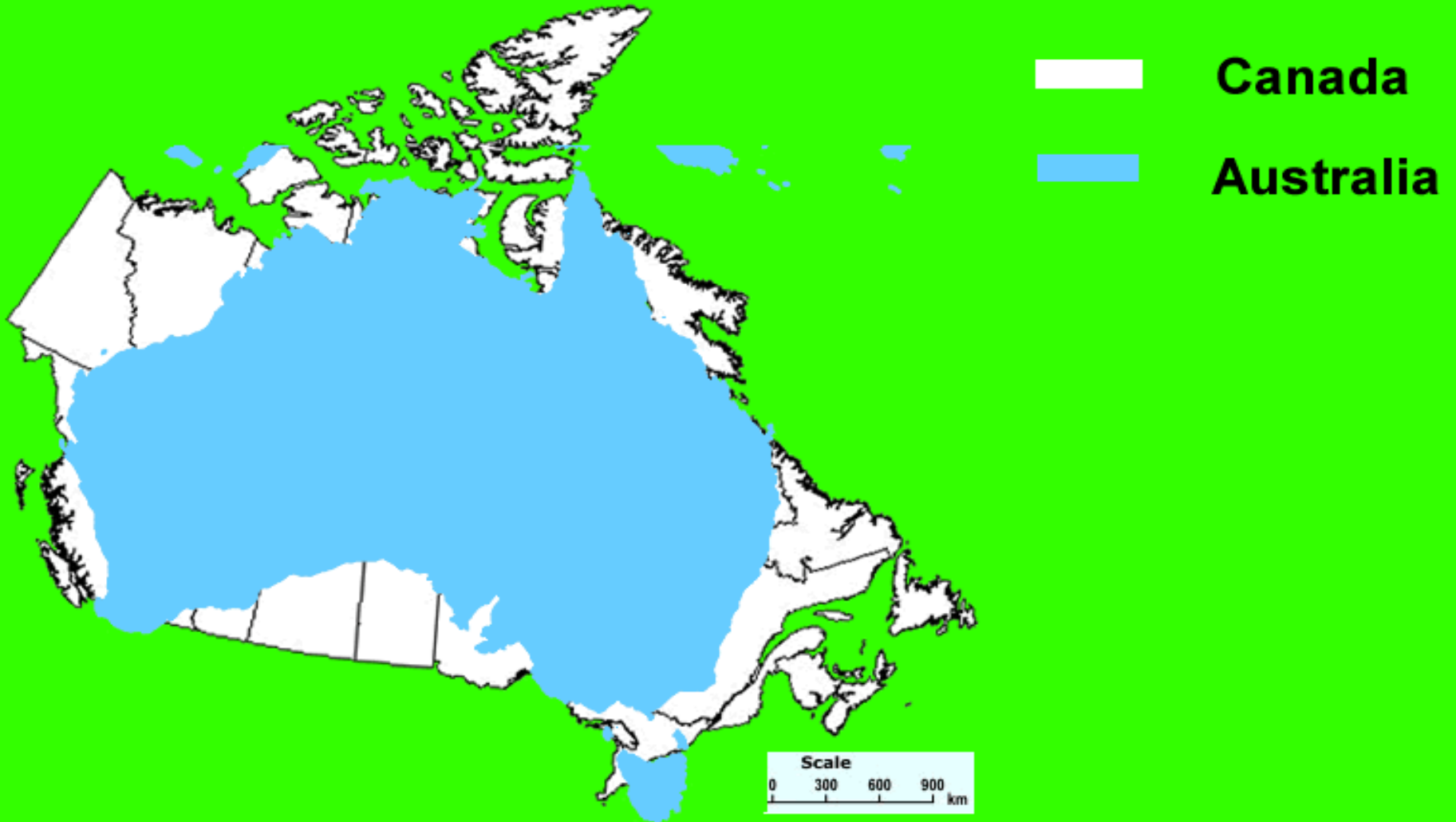
Norma Stewart, PhD, RN

Roger Pitblado, PhD

Rural Nursing - A Research Phenomenon

September 25, 2004 - Dunedin, NZ

Geographical size comparison Australia and Canada



Australia and British Columbia

Australia

- 7,686,850 sq km¹
- 19,913,144 people¹
- 2.6 people/sq km³

British Columbia

- 947,800 sq km²
- 4 177 400 people²
- 4.2 people/sq km⁴

(NHA <0.83 people/sq km)

1. CIA The World Factbook (2004). Australia. Accessed from <http://www.cia.gov/cia/publications/factbook/geos/as.html> on February 8th 2004

2. BC Stats. (2004). Quick Facts. Accessed from <http://www.bcstats.gov.bc.ca/> on February 2th 2004

3. Microsoft® Encarta® Online Encyclopedia. (2005). Aboriginal Australians. Accessed from http://encarta.msn.com/encyclopedia_761572789_3/Aboriginal_Australians.html on February 8th 2004

4. Stats Canada. (2001). Population density per square kilometre, Canada, provinces, territories, health regions and peer groups, 2001. Accessed from http://www.statcan.ca/english/freepub/82-221-XIE/00604/tables/html/42_01.htm on February 4th 2004

Australia and Canada Aboriginal population comparison

Australia

- Aboriginal population of 427, 000 people represent 2.2% of total population

Canada

- Aboriginal population of 1, 007, 330 people represents 3.4% of total population

British Columbia and NHA Aboriginal population comparison

British Columbia

- Aboriginal peoples (170, 280 people) represent 4.4% of total population

Northern Health Authority

- Aboriginal peoples (44, 165 people) represent 15.6% of total population





LUNGEAR CENTRE

HOSPITAL
EMERGENCY
ENTRANCE
←





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**



Principal Investigators and Decision-maker

- **Martha MacLeod, PhD RN**
**University of Northern
British Columbia**
- **Norma Stewart, PhD, RN**
University of Saskatchewan
- **Judith Kulig, DNSc, RN**
University of Lethbridge
- **Roger Pitblado, PhD**
Laurentian University
- **Marian Knock**
**B.C. Ministry of Health
Planning (to 2003)**



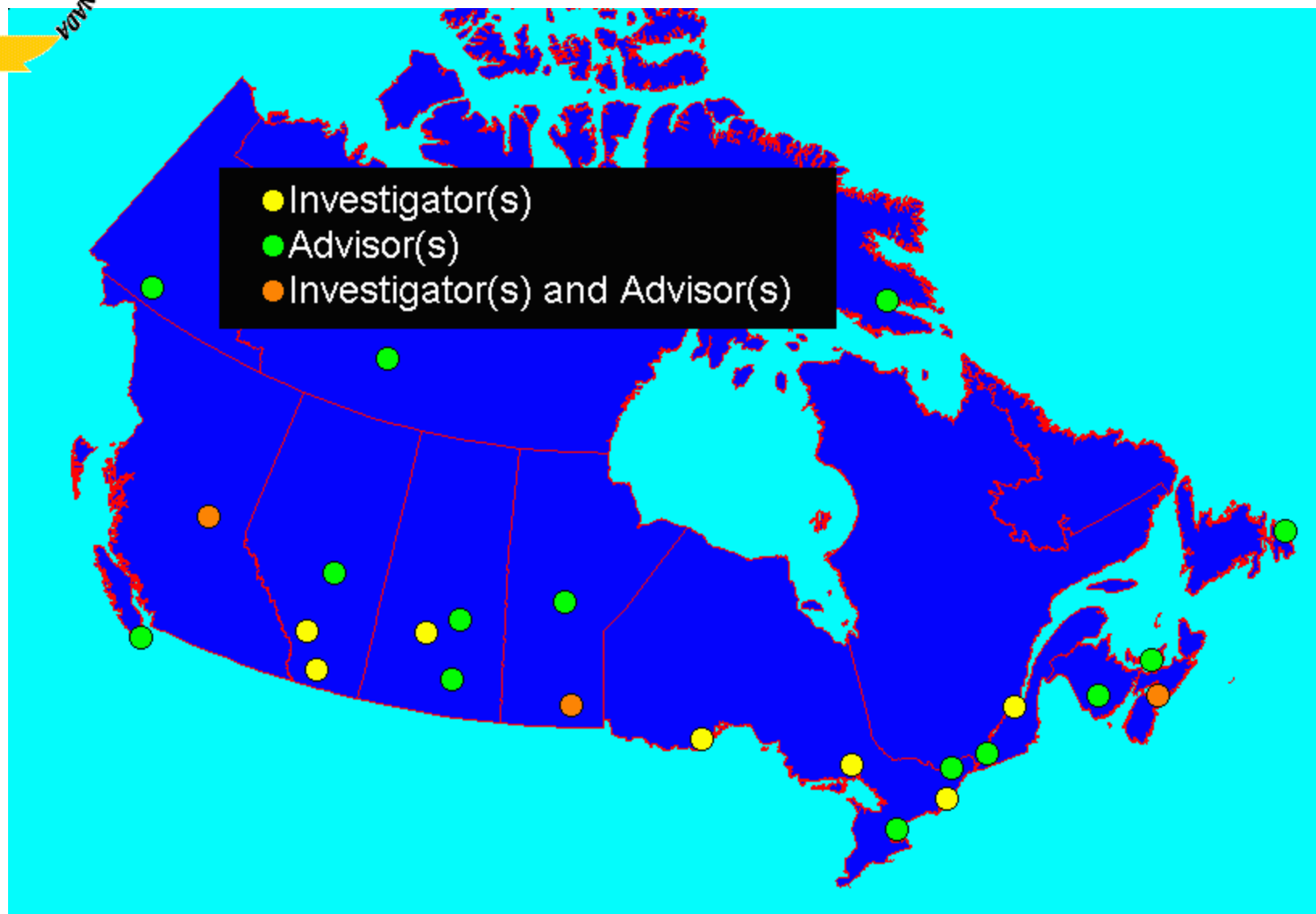
Co-Investigators

- **Ruth Martin-Misener**
Dalhousie University
- **Ginette Lazure**
Université Laval
- **Jenny Medves**
Queen's University
- **Michel Morton**
Lakehead University
- **Carolyn Vogt**
U. Manitoba
- **Gail Remus**
U. Saskatchewan
- **Debra Morgan**
U. Saskatchewan
- **Dorothy Forbes**
U. Saskatchewan
- **Barbara Smith**
U. Saskatchewan
- **Carl D'Arcy**
U. Saskatchewan
- **Kathy Banks**
BC Women's Hospital
- **Elizabeth Thomlinson (to 2004)**
- **Lela Zimmer**
UNBC



Advisory Team Members

- **Cathy Ulrich, BC**
- **Anne Ardiel, BC**
- **Debbie Phillipchuk, AB**
- **Cecile Hunt, SK**
- **Donna Brunskill, SK**
- **Marlene Smadu, SK**
- **Marta Crawford, MB**
- **Sue Matthews, ON**
- **Suzanne Michaud, QC**
- **Roxanne A. Tarjan, NB**
- **Adele Vukic, NS**
- **Barb Oke, NS**
- **Elizabeth Lundrigan, NF**
- **Joyce England, PEI**
- **Barbara Harvey, NU**
- **Madge Applin, NWT**
- **Elizabeth Cook, NWT**
- **Fran Curran, YT**
- **Jan Horton, YT**
- **Francine Anne Roy, CIHI**
- **Brenda Canitz, FNIHB – Health Canada**
- **Maria MacNaughton, FNIHB - Health Canada**
- **Lisa Dutcher, Aboriginal Nurses Ass'n**
- **Lisa Little, CNA**





Funding Partners

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- **Nova Scotia Health Services Research Foundation**
- **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?**



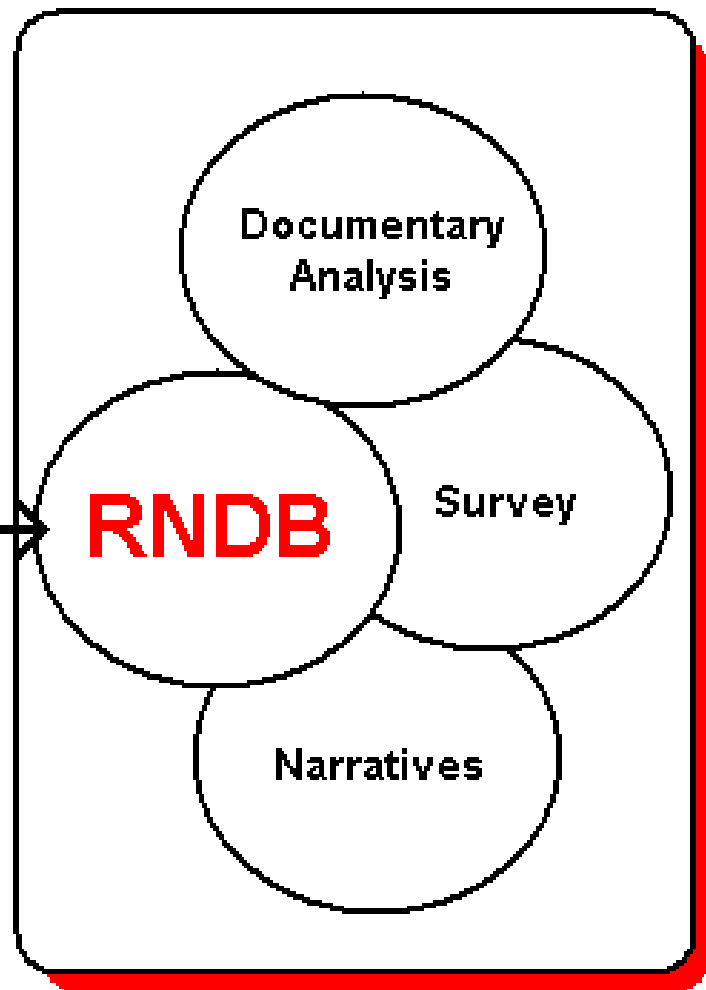
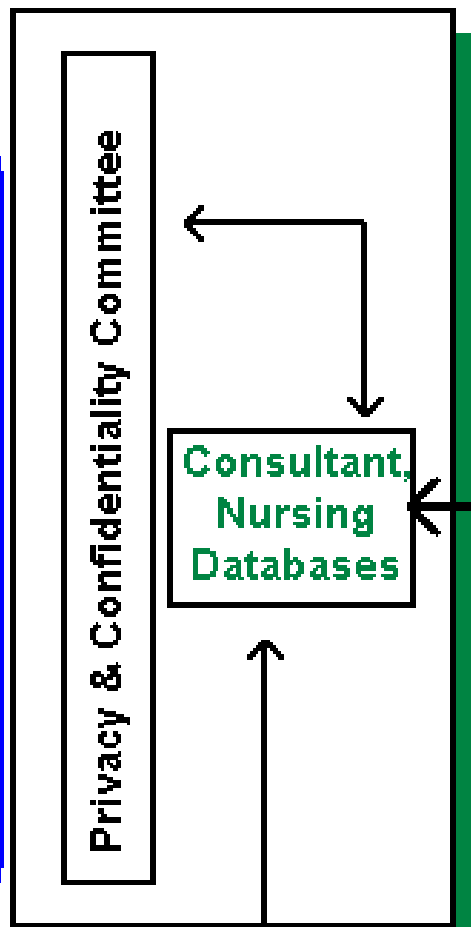
Canadian Institute
for Health Information
Institut canadien
d'information sur la santé



Provincial/
Territorial
Registrars

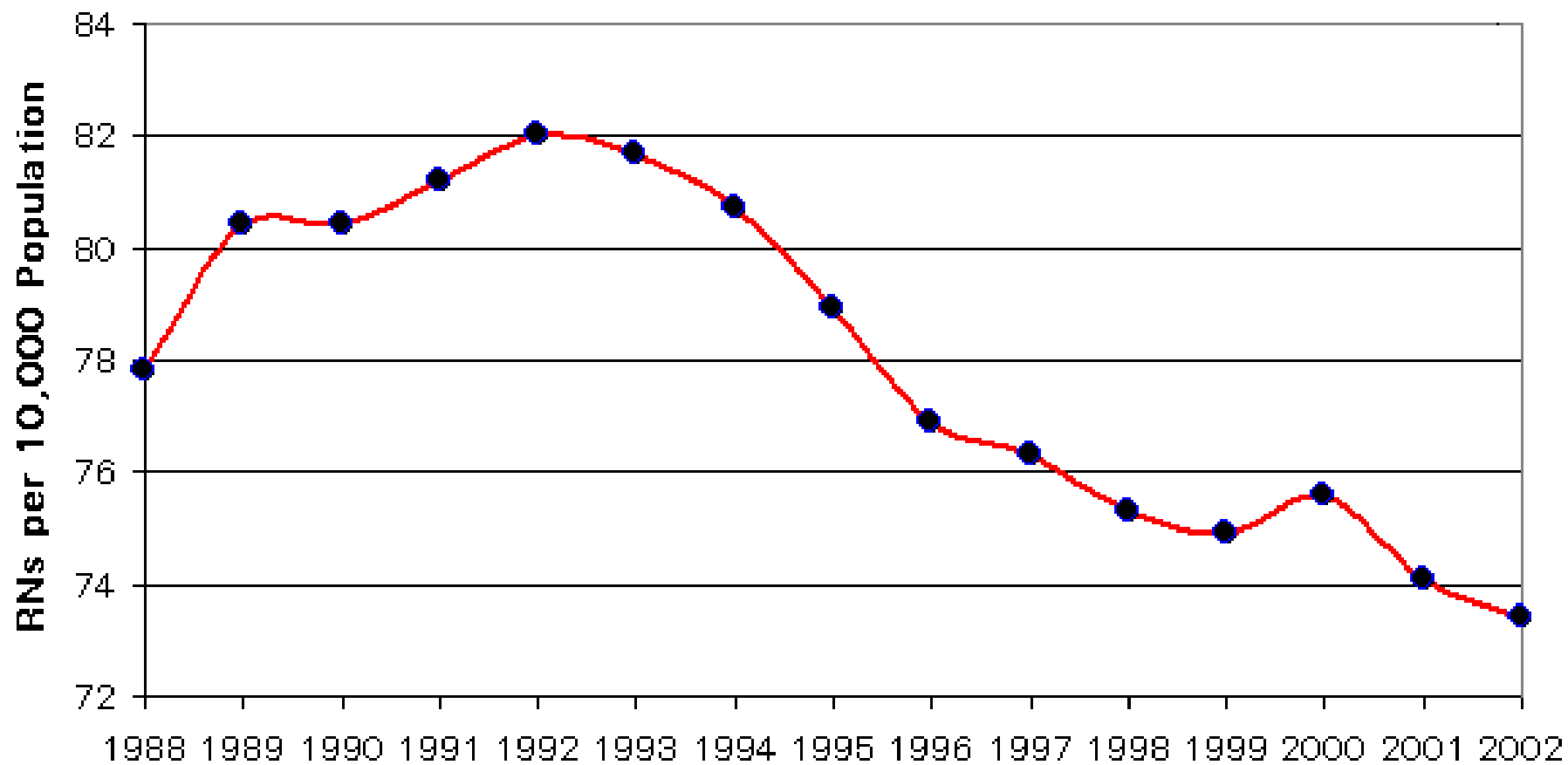
Canadian Institute for
Health Information

Nursing Practice in
Rural & Remote Canada



Registered Nurses Database

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

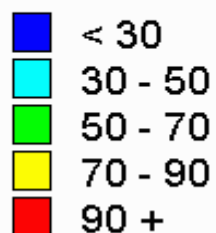


Source: RNDB/Statistics Canada and CIHI

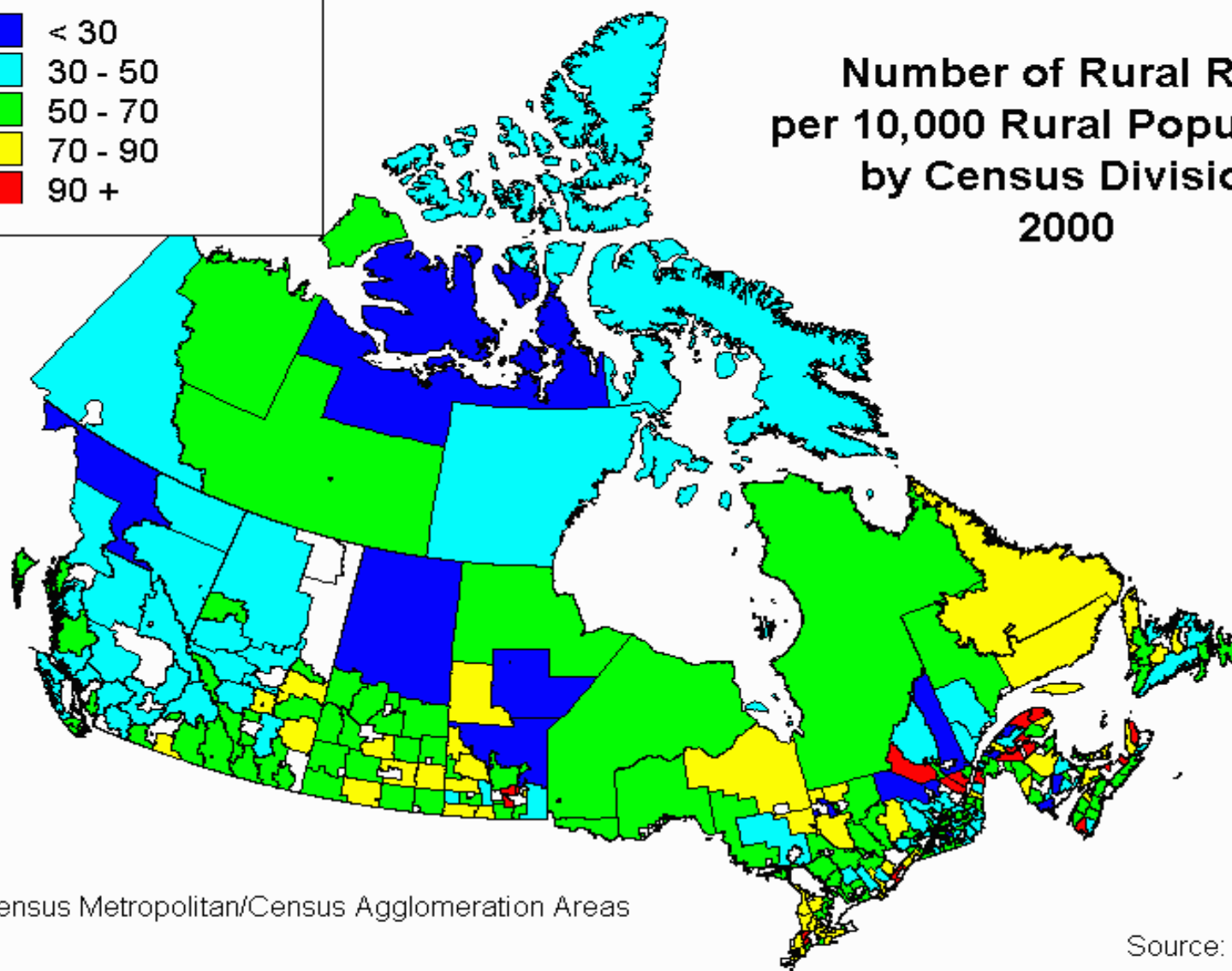
Year	Number of rural (RST) RNs	% of all RNs	Rural (RST) % of total Canadian population
1994	42,303	18.0	22.3
2000	41,502	17.9	21.7
2002	40,648	17.6	20.6

2002 – based on CIHI figure generated without Quebec data

RNs per 10,000 Population



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



□ Census Metropolitan/Census Agglomeration Areas

Source: RNDB/CIHI

From:
Pitblado, R., Medves, J., MacLeod, M., Stewart, N., and Kulig, J. (2002).
Supply and Distribution of Registered Nurses in Rural and Small Town Canada, 2000.
Ottawa: Canadian Institute for Health Information.

.. 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.

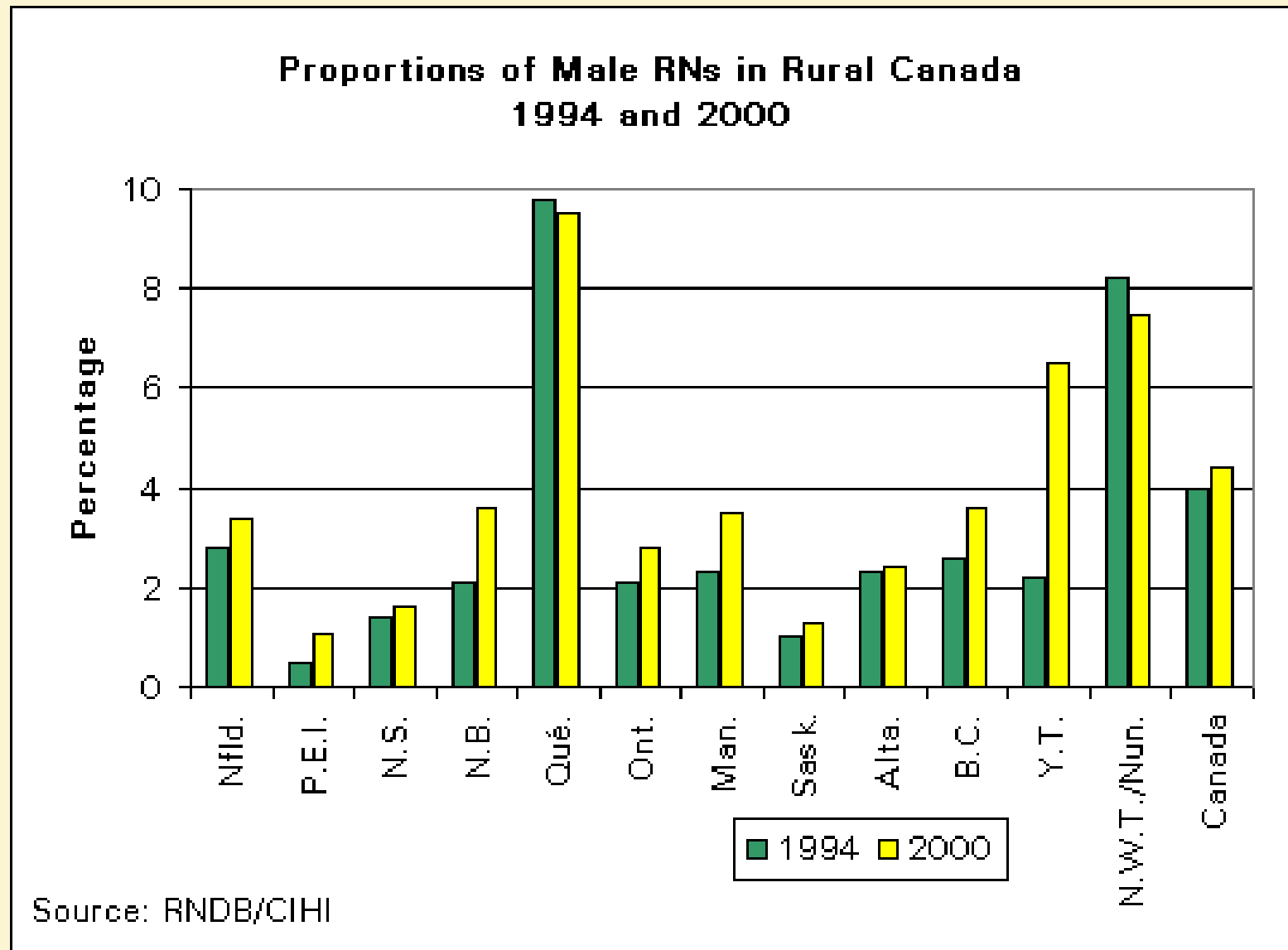
O'Brien-Pallas, et al. (2003). **Bringing the Future into Focus: Projecting RN Retirement in Canada.**

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%
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Bachelor's	18%
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Master's/Doctorate	0.6%
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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, UNBC, University of Saskatchewan, First Nations University of Canada, University of Lethbridge



- 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)

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



General Comments from Rural and Remote Nurses

(Source: Narratives)

- Basic education is inadequate for rural and remote practice
- Rural health nursing needs to part of basic nursing program
- Additional infrastructure and financial support is needed for educational institutions that are preparing nurses for rural nursing



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 & descriptive thematic analysis

Place of Work of Narratives Respondents





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

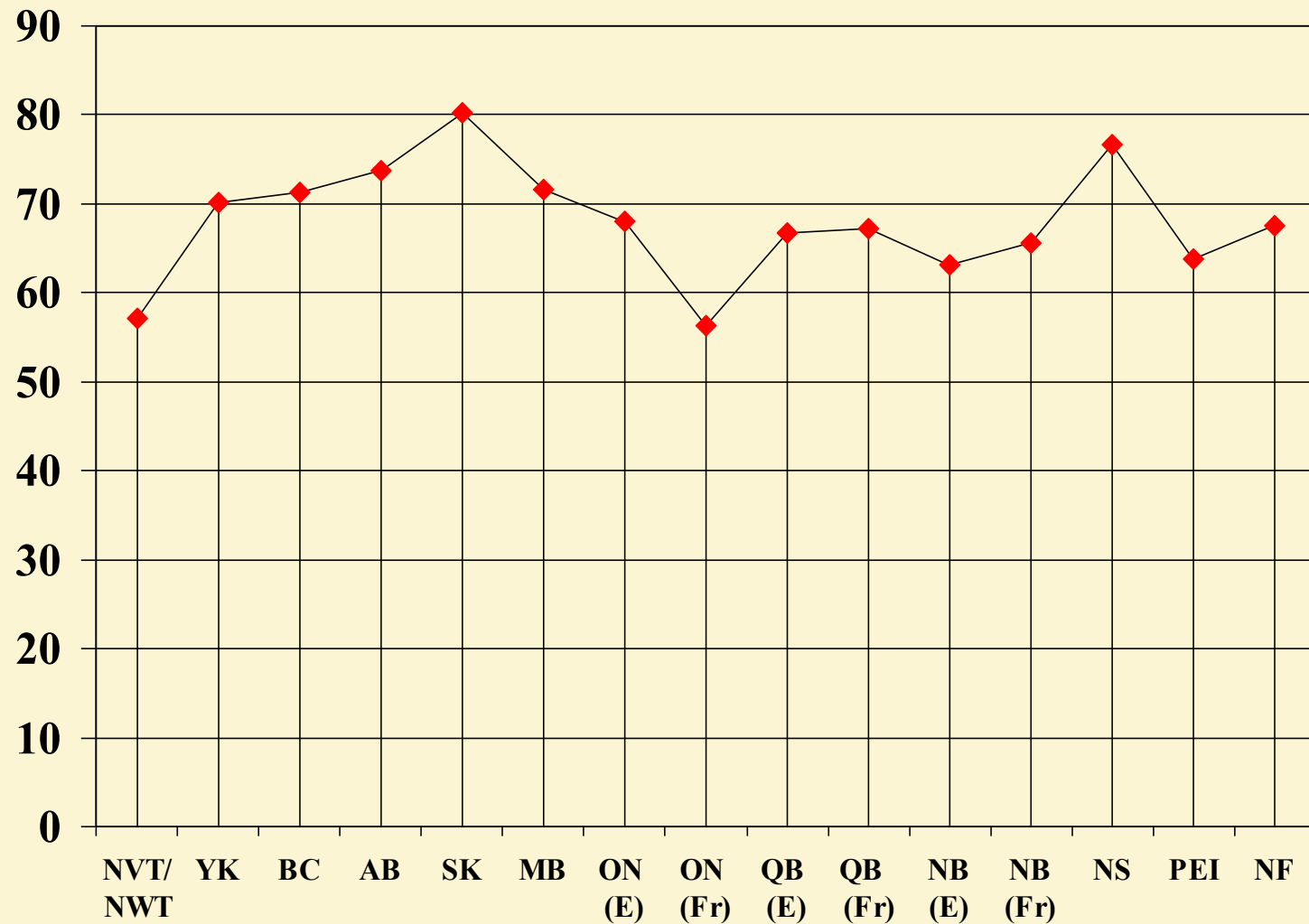
- **Predictors of Intent To Leave**



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
- Work place
- 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 ^a	1.00	---	---
Perceived stress	1.06	1.03 to 1.10	0.001
No dependent children or relatives ^b	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 ^a	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

^a Reference category

^b 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 ^a	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 ^b	1.30	1.04 to 1.62	0.022
Perform advanced decisions or practice ^b	1.30	1.05 to 1.62	0.018
Workplace remote ^b	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

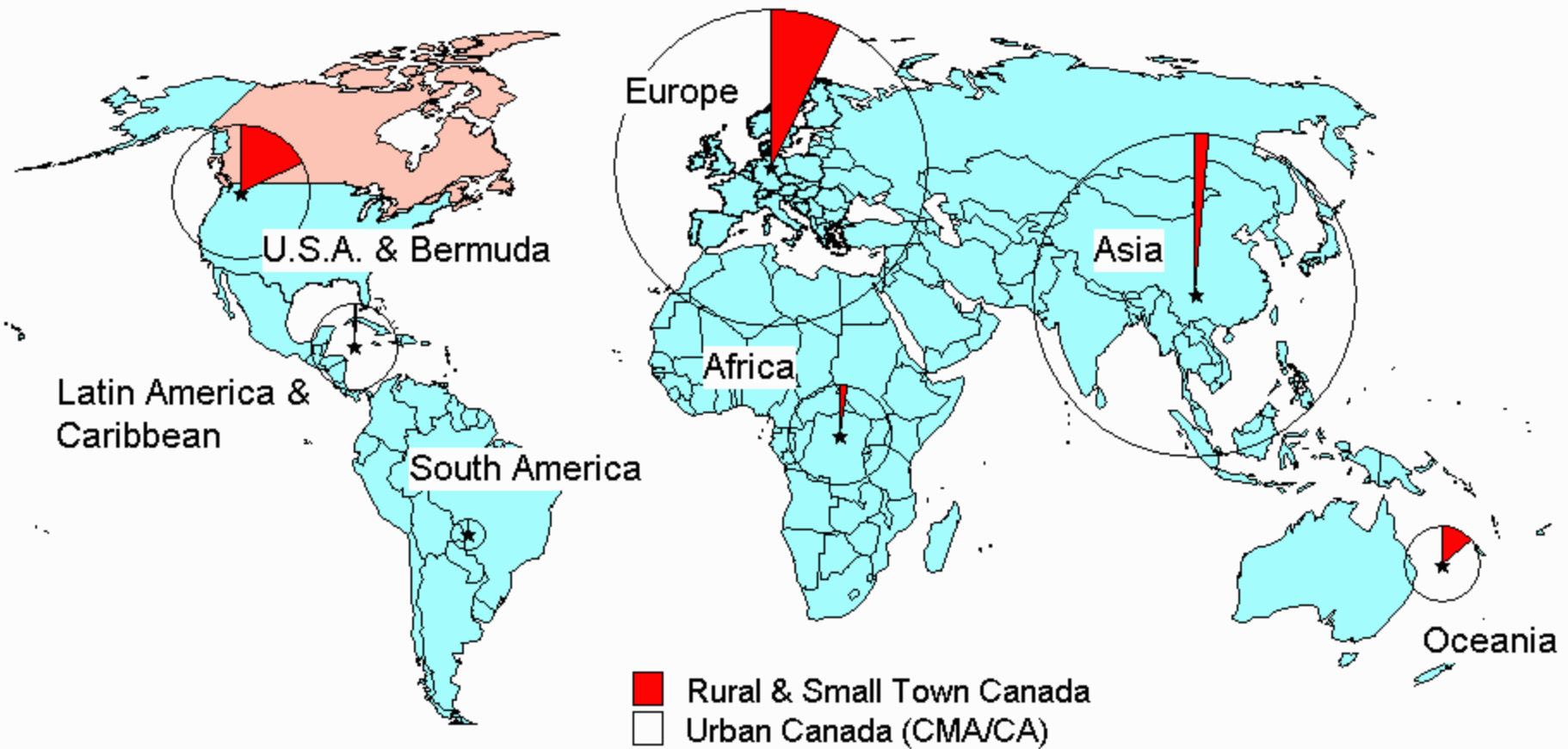


Sustainability of Care

- **Migration of Nurses**



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



Source: RNDB/CIHI, 2000

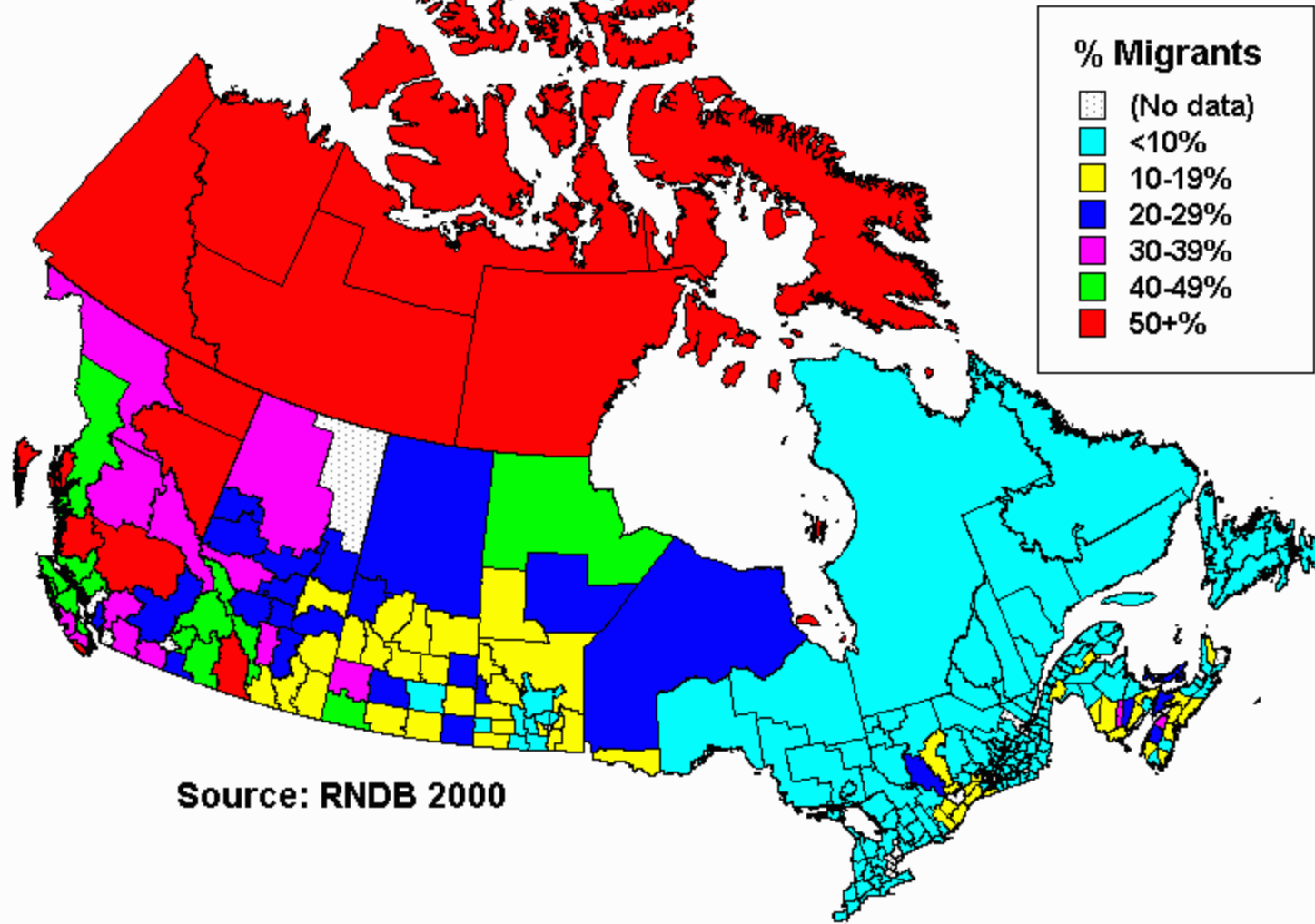


International Nursing Graduates

- 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



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

Correlates of Migration (Continued)

Correlates	% Migrants	Odds Ratio
Place of Work		
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
Primary Responsibility		
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
Position		
Manager	14.5	1.00
Staff/Community Nurse	11.7	1.07*
Other	10.1	0.72*
Metropolitan Influenced Zone		
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



Implications

- Create a “rural lens”
- Understand and support the fact of the inseparability of nurses’ professional and personal roles
- Provide supports at a distance - in-person and via technology
- Partner with nurses and communities in recruiting and retaining nurses



Implications

- Develop new models of interprofessional practice
- Attend to the needs of Aboriginal communities
- Develop undergraduate and post-graduate education for rural nursing



Implications

- Develop and design relevant continuing education
- Do not rely on recruiting nurses from overseas
- Improve nursing databases and rural indicators



Contact Information

Overall Project and Narratives:

Tel: 1-866-960-6409

e-mail: rrn@unbc.ca

macleod@unbc.ca

<http://ruralnursing.unbc.ca>

Project Coordinator:

Donna Bentham, RN, BSN

Documentary Analysis:

(403) 382-7119

e-mail: kulig@uleth.ca

Survey:

(306) 966-6260

e-mail: stewart@sask.usask.ca

RNDB:

(705) 675-1151 ext: 3355

e-mail: rpitblado@laurentian.ca

