


---

# A Decade of Research on Nurse Practitioners: What Have We Learned?

Isabelle Michel, RN, BScN, MA  
*Sudbury & District Health Unit and CRaNHR*  
Raymond W. Pong, PhD  
*CRaNHR*

The image depicts a stage scene. A large, bright white spotlight is centered on a dark blue background, illuminating the text. The stage is framed by heavy, dark red curtains with gold-colored ties-backs on either side. The text is written in a blue, serif font.

A Tribute to  
Prof. Suzanne Caty

# A Research Chronology: 1995 – 2004 .... and beyond

---

- **1995 – 2002: Tracking Study of Students and Graduates of the Nurse Practitioner Education Program:**
  - Study of applicants to the NP education program
  - Surveys of students and graduates:
    - *Entry survey*
    - *Exit survey*
    - *1-year follow-up survey*
    - *3-year follow-up survey*
- **2001 – 2002: Assessing Continuing Education Needs of NPs in Northern and Rural Ontario**
- **2003 – 2004: Evaluation of NP Continuing Education Project**
- **2004 – 2005: NP Employment Profile Survey**

# The Researchers

---

- Suzanne Caty
- Dianne Stewart
- Kate Tilleczek
- Cater Sloan
- Isabelle Michel
- Raymond Pong
- Ellen Rukholm
- Sandy Lemieux

## Funding Sources

- Council of Ontario University Programs in Nursing
- Rural and Remote Health Innovations Initiative, Health Canada
- Nurse Practitioners Association of Ontario

---

The Tracking Study of Students  
and Graduates of the Nurse  
Practitioner Education Program:  
7 years of research in a nutshell

# What are Primary Health Care Nurse Practitioners (PHC NPs)?

---

- Registered nurses with additional nursing education
- Specialists in primary health care
- Provide accessible & comprehensive care
- Provide health promotion, prevention, cure, rehabilitation & support services

# The NP Initiative

---

- 1994 – NP Initiative launched as part of primary health care reform
- 1995 – first students began PHC NP education program
- 1995 – CNO approved ‘Extended Class’ for NPs
- 1999 – Nursing Task Force, McKendry and Health Services Restructuring Commission all recommended broader use of NPs
- 2002 – MoHLTC funded 117 NP positions
- 2003 – funding from MoHLTC for another 348 NP positions

# The PHC NP Education Program

---

- Led by Council of University Programs in Nursing (COUPN)
- Distance education program offered by consortium of 10 universities
- 8 universities provide training in English; 2 in English and French
- 2 Northern universities involved: Lakehead and Laurentian
- BScN and diploma prepared nurses accepted

# The Tracking Study

---

- CRaNHR commissioned by COUPN to undertake tracking study of NP applicants, students and graduates
- Study examines: characteristics, views, career goals of students & employment of graduates
- Involves 4 surveys: entry into and exit from program, one-year & three-year post graduation
- Data collected from 1995 to 2001

# Student Profile

## Entry Surveys 1995-2001

---

655 admissions and 537 respondents (82% response rate)

- 71% resided in Southern Ontario
- 21% resided in Northern Ontario
- 8% resided outside of Ontario
- 22% studied in Northern Ontario (Lakehead or Laurentian)
- Mostly female, married, with children
- Mean age: 38 years
- Mean prior nursing experience: 14 years
- 66% BScN-prepared; 34% diploma-prepared
- 90% admitted in English program; 10% admitted in French program

# Graduate Profile

## Exit Surveys 1996-2001

---

- 339 regular stream graduates
- 41 transition phase graduates
- 380 graduates total
- 519 registered in CNO “Extended class” (2002)

# Percentage of Graduates Who Have Worked as NPs Since Graduation

| Survey                | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|-----------------------|------|------|------|------|------|------|
| Exit survey           | 26   | 32   | 31   | 32   | 44   | 67   |
| 1-yr follow-up survey |      | 79   | 79   | 71   | 76   | 81   |
| 3-yr follow-up survey |      |      |      | 75   | 93   | 93   |

# Regions Where NPs Worked at 3 Years After Graduation

| Region          | %  |    |
|-----------------|----|----|
| Northwestern    | 6  | 24 |
| Northeastern    | 18 |    |
| Eastern         | 17 | 73 |
| Central East    | 19 |    |
| Central West    | 16 |    |
| Southwestern    | 21 |    |
| Outside Ontario | 3  | 3  |

## Percentage of NPs Working in Urban, Rural and Underserviced Areas at 3 Years After Graduation

| <b>Survey</b>                  | <b>Rural</b> | <b>Urban</b> | <b>Mixed</b> | <b>Underserviced</b> |
|--------------------------------|--------------|--------------|--------------|----------------------|
| <b>3-year follow-up survey</b> | <b>28%</b>   | <b>58%</b>   | <b>14%</b>   | <b>51%</b>           |

# Employment Status of NPs at 3 Years After Graduation

| <b>Employment Status</b>   | <b>%</b>  |
|----------------------------|-----------|
| <b>Full-time permanent</b> | <b>54</b> |
| <b>Full-time contract</b>  | <b>18</b> |
| <b>Part-time permanent</b> | <b>15</b> |
| <b>Part-time contract</b>  | <b>13</b> |
| <b>Casual</b>              | <b>0</b>  |

# Major NP Practice Settings at 3 Years After Graduation

| Setting                                 | %  |
|---|----|
| Community health centre                 | 39 |
| Physician's office/family practice unit | 13 |
| Outpost setting/nursing station         | 5  |
| Aboriginal health access centre         | 10 |
| Hospital ambulatory care unit           | 6  |
| Specialty clinic                        | 5  |
| Long-term care facility                 | 8  |

# NP Focus of Practice

---

- Combination of health promotion, disease prevention, health maintenance & treatment of common health problems
- Holistic in nature

# NP Clientele

---

- Many have clients who may otherwise have trouble accessing PHC
- Some work with typical family practice clientele
- Special client groups are emerging

# Percentage of Graduates Not Working as NPs in 2001

---

- **Exit survey** 33%
- **1-year follow-up survey** 19%
- **3-year follow-up survey** 7%

# Barriers to Employment as Reported by NPs

---

- Policy uncertainty regarding NPs
- Lack of NP positions
- Fee-for-service (OHIP) a deterrent
- Inability to relocate for personal/family reasons
- Lack of incentives to relocate
- Compensation issues and employment conditions

# Northern Reflections

---

- 2 Northern universities offer NP education program
- 21% of students resided in Northern Ontario
- 22% of students studied in Northern Ontario
- 24% of graduates reported working as NPs in Northern Ontario at 3 years after graduation

# A Summary

---

- Employment situation has improved over time but many graduates still cannot find NP jobs
- Many worked on contractual basis; funding needed for more permanent jobs
- Must continue to integrate NPs with PHC reform
- Education program appears successful at educating and keeping NPs in the North
- Difficulties reported in filling some positions – mostly in Northern Ontario
- Continued tracking of NP graduates needed to document trends

# Factors Influencing NP Practice Location (based on follow-up surveys of 1998 and 2001 graduate cohorts)

---

|  | <b>1998<br/>Cohort<br/><math>\bar{X}</math></b> | <b>2001<br/>Cohort<br/><math>\bar{X}</math></b> |
|--|---|---|
| <b>Availability of NP employment</b>               | <b>6.34</b>                                     | <b>6.45</b>                                     |
| <b>Ability to exercise full scope of practice</b>  | <b>6.25</b>                                     | <b>6.33</b>                                     |
| <b>Availability of physician back-up</b>           | <b>6.00</b>                                     | <b>5.64</b>                                     |
| <b><i>Availability of continuing education</i></b> | <b><i>5.31</i></b>                              | <b><i>5.25</i></b>                              |
| <b>Size of community</b>                           | <b>3.57</b>                                     | <b>2.55</b>                                     |

## Perceived Barriers to Accessing Continuing Education by NPs in Northern Ontario and Rural Southern Ontario

| <b>Barrier to Access</b>                      | <b>Northern Ontario<br/>% Yes</b> | <b>Rural Southern Ontario<br/>% Yes</b> |
|---|-----------------------------------|---|
| Distance to travel                            | 89%                               | 78%                                     |
| Expense of registration/tuition               | 73%                               | 83%                                     |
| Lack of employer designated funds             | 66%                               | 78%                                     |
| Unaware of continuing education opportunities | 66%                               | 53%                                     |
| Lack of access to a computer                  | 12%                               | 0%                                      |
| Lack of access to Internet and WWW            | 22%                               | 8%                                      |

# Major Health Problems in Rural/ Northern Ontario Identified by NPs

---

- **Diabetes and related complications**
- **Cardiovascular diseases**
- **Psychosocial problems**
- **Lack of access to health services**

# Continuing Education Needs Identified by Rural/Northern NPs

---

- Health promotion and disease prevention
- Women's reproductive health
- Assessment and diagnosis
- Diabetes and related complications
- Psychosocial health issues
- Cardiovascular health
- Drug prescription and interactions
- Interpreting lab tests
- Advanced counselling skills

# Rural/Northern NP Continuing Education Pilot Program

---

- **Funded by Rural and Remote Health Innovations Initiative, Health Canada**
- **Managed by Council of Ontario University Programs in Nursing**
- **8-week courses; each course has 8 learning modules**
- **Internet-based**
- **Supplemented by teleconferences and “newsgroups”**
- **CRaNHR conducted the evaluation**

# 5 Continuing Education Courses Developed for Rural/Northern NPs

---

- **Fundamentals of Primary Health Care**
- **Persistent Illness**
- **Issues in Mental Health**
- **Pharmacotherapeutics**
- **Emergency Health Care in Rural Settings**

# Strengths and Weaknesses of Continuing Education Pilot Program

---

- Students liked flexibility of on-line learning
- Interface and technical support aspects were deemed very positive
- Students liked the module approach and case studies
- Some technological problems:
  - lack reliable Internet access
  - problems in mail and courier delivery

# NPs' Comments Reflect Rural/Northern Reality

---

- **“Rural access to the Internet is an absolute nightmare.”**
- **“I was delayed two weeks before I was able to get help getting on-line.”**
- **“Only half my quizzes reached COUPN.”**
- **“We are not set up in our remote area, but it will be an excellent way to access extra resources once we are set up.”**

# A Summary

---

- A significant number of NPs work in rural/northern areas
- They need support such as continuing education
- Rural/northern areas have special challenges
- One-size-fits-all program may not work

# Next Steps

---

- **NP Employment Profile Survey underway**
  - More up-to-date information
  - All NPs
- **Working with NPAO and Nursing Secretariat**

# Suzanne Caty's Legacy

---

- Foresaw growing role of NPs and need to initiate a program of research
- Important to know trends, not just a one-off survey
- Special focus on NPs working in rural/northern Ontario
- Put CRaNHR on the map in terms of NP research
- Important to share knowledge and use information to support practice and policy

# Research Dissemination

---

- Piles of reports and working papers
- Articles in peer-reviewed journals
- Conference presentations
- Research in **FOCUS** on Research

Suzanne,  
We raise our  
hat to you.

