

## Online Learning for Rural NPs

In August 2002, the Council of Ontario University Programs in Nursing (COUPN) began a nurse practitioner continuing education program with a series of five courses. These eight-week pilot courses each had eight separate learning modules (one had nine).

Nurse practitioners (NPs) had indicated in an earlier needs assessment (conducted by CRaNHR) that they consider continuing education important for keeping up to date in their practice. However, access to continuing education is difficult for many NPs, especially those in rural and remote areas. They cited barriers such as travel, cost, work and family obligations.

To respond to these identified needs, the courses were designed with a short, focused format and were delivered over the Internet, with access supported by the COUPN team. This was supplemented by teleconferences or newsgroups (where students discussed content and posted questions online, with a facilitator and classmates responding).

CRaNHR was commissioned by COUPN to evaluate the five courses in light of three main questions:

- ▶ Did students learn what they needed to learn?
- ▶ Did the method of delivery hinder or help learning?

- ▶ What other continuing education activities could be developed?

The research team examined the course registration forms and the participants' online evaluations for each module, as submitted during the courses. They also held one focus group per course after the final exam.

### The Students

The courses attracted and retained varying numbers of students (only a few signed up for more than one course):

| Course                                  | Registered | Completed |
|---|------------|-----------|
| Fundamentals of Primary Health Care     | 8          | 7         |
| Persistent Illness                      | 5          | 3         |
| Issues in Mental Health                 | 3          | 3         |
| Pharmacotherapeutics                    | 10         | 6         |
| Emergency Health Care in Rural Settings | 15         | 10        |
| <i>Total</i>                            | <i>41</i>  | <i>28</i> |

This issue of Research in FOCUS on Research is based on the report *An Evaluation of the Nurse Practitioner Continuing Education Implementation Project: Final Report to the Council of Ontario University Programs in Nursing (COUPN)*, by Kate Tilleczek, Suzanne Caty, Noreen Russell, Raymond Pong and Ellen Rukholm. The study, completed in January 2004, was conducted by the Centre for Rural and Northern Health Research (CRaNHR), Laurentian University, with the support of the continuing education working group of COUPN.

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The most frequently given reasons for taking a course were: personal interest, career advancement, quality assurance, and to prepare for the certification exam.

Priority was given to NPs in rural or remote Ontario. The 35 registrants worked as follows:

| Location of Practice | Northern Ontario | Southern Ontario | Rest of Canada |
|----------------------|------------------|------------------|----------------|
| Rural                | 3                | 4                | 7              |
| Remote               | 5                | 2                |                |
| Urban                | 2                | 11               |                |
| Not Working          |                  | 1                |                |
| <i>Total</i>         | <i>10</i>        | <i>18</i>        | <i>7</i>       |

Of the 35 students who registered:

- ▶ the average age was 43;
- ▶ 10 had a diploma in nursing, 20 a baccalaureate in nursing, and 5 a master’s degree in nursing;
- ▶ 21 had an NP certificate, 6 had taken some NP courses, while 8 had taken none;
- ▶ nearly half had NP certification (called “extended class”) with the College of Nurses of Ontario, while almost one third reported working in an expanded role or under some medical directives in primary care settings;
- ▶ 13 worked in nursing stations/outpost clinics, 8 in community health centres, 8 in hospitals, 2 in a physician’s office, 1 in an Aboriginal Health Access Centre, and 1 was not working (2 – no response);
- ▶ more than half had 10 or more years of nursing experience;
- ▶ more than three-quarters had been in their present nursing position for less than five years;
- ▶ most had previous experience with distance education;
- ▶ most had their own computer (2 had no access to a computer) with Internet access; those in urban practice were more likely to have high speed service than their rural counterparts.

## Did They Learn What They Needed to Learn?

The modules in the courses were as follows:

*Fundamentals of Primary Health Care:* Endocrine health, Women’s and perinatal health, Cardiovascular health, Upper respiratory tract health, Lower respiratory tract health, Gastro-intestinal health, Genito-urinary health, and Integumentary and musculoskeletal health.

*Persistent Illness:* Assessment and treatment of persistent illness, Diabetes I, Diabetes II, Cardiovascular disease I, Cardiovascular disease II, Respiratory health, Hyperthyroid and anaemia, and Strategies in promoting behaviour change.

*Issues in Mental Health:* Assessment, Violence and abuse, Legal issues, Counselling techniques, Suicide, Alterations in mood and disorders, Altered thought, Substance use and abuse.

*Pharmacotherapeutics:* Basic principles, Genito-urinary, Infections, Respiratory conditions, Issuing prescriptions, Ophthalmology, Dermatology, Gastro-intestinal conditions.

*Emergency Health Care in Rural Settings:* Men’s health, Musculoskeletal system, Integumentary system, GI/GU emergencies, Respiratory emergencies, Neurological, Cardiovascular emergencies, Women’s health, Children’s health emergencies.

The majority of students passed the courses and commented that the contents were excellent. Most of the participants said that the courses increased their knowledge and skills and met their personal learning objectives. The students were mostly highly experienced RNs but relatively new to their NP positions and appreciated the depth and breadth of the course material.

This success can be related to the care taken by the course developers in ensuring that contents were of high quality, relevant to students and pertinent to their client groups. The fact that the modules were directly related to current practice situations was found to be effective.

### Comments about the relevance of course topics

- ▶ The course *“extended the vision of practice” ... “inspired new confidence” ... “helped my vocabulary in dealing with other professionals.”*
- ▶ *“I found it helped me a lot ... especially with patient teaching.”*
- ▶ *“I’m using the information and knowledge every day.”*
- ▶ *“It was a chance to have a fresh look at chronic illness ... it has really refocused me on a daily basis.”*
- ▶ *“I felt more confident applying for a job having this course behind me.”*
- ▶ *“I plan to use the articles and course content as a resource tool in practice.”*

Several students commented on both the immediate and future significance of the course material to their work. This transfer of the knowledge and skills learned to the clinical practice of the participants shows the success of the program.

A few student evaluations were not quite so positive. The Issues in Mental Health course was found to be less helpful and less transferable than the others, and the courses in Pharmacotherapeutics and Emergency Health Care in Rural Settings were deemed more difficult than the others.

## Did the Method of Delivery Hinder or Help?

The students preferred the flexibility of online learning to traditional learning formats and suggested that the online aspects of the courses, including the interface, design and technical support, were excellent.

Some technological problems did arise, however, and learners in rural and remote areas suggested a need to address the problem of access to reliable telecommunications and Internet. There were also some problems with broken links and difficulties printing some of the charts. Students could not download the module without first submitting the online evaluation, with the result that some evaluations were completed more than once.

The students liked the mix of online delivery with teleconferences or newsgroups. Students in the first course, Fundamentals of Primary Health Care, commented on how helpful the teleconferences were, saying that being able to speak directly to other students was very important. They would have liked an agenda in advance. The online newsgroups used in other courses were considered useful in providing a network for learning, but less so than teleconferences. Some said they were too busy to participate in the newsgroup.

Most students found the packaging of courses into separate modules – each with readings, case studies and quizzes – helpful. There were some concerns about the content, validity and relevance of some test questions.

In every course, students raised the need for more timely materials and for quick feedback on case studies, quizzes and the final exam. The students with Internet access appreciated immediate feedback on module quizzes, while the others relied on faxes, which are slower. Some were frustrated when materials arrived too late to be beneficial, due to problems in receiving courier mail in rural and remote areas.

Several students made a strong appeal for some form of official recognition for their efforts.

### Comments about course delivery

- ▶ *“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.”*
- ▶ *“Rural access to the Internet is an absolute nightmare, it would have been good to talk to someone who understands remote computing capacity.”*
- ▶ *“I was delayed two weeks before I was able to get help getting online.”*
- ▶ *“Only half my quizzes reached COUPN.”*
- ▶ *“The interface was very interactive and easy to use.”*
- ▶ *“The doctors where I work might recognize me more if I could say, ‘Oh, I have a certificate in mental health issues for nurse practitioners’ instead of saying, ‘I took a course.’”*

## What Other Continuing Education Activities Could Be Developed?

The students suggested additional content for the various courses, including:

- ▶ issues related to pregnancy
- ▶ respiratory disorders
- ▶ diagnosis and screening for pulmonary TB
- ▶ up-to-date information on arthritis
- ▶ management of childhood problems
- ▶ mental health counselling
- ▶ emergency competencies such as suturing
- ▶ more on gestational diabetes
- ▶ more on assessment and treatment of substance abuse.

Additional courses of interest proposed included women's health, and anti-racism or multicultural awareness.

Also suggested was a series of intensive weekend workshops or a conference. Weekend seminars or workshops could provide some face-to-face contact and be delivered in a condensed format.

## Recommendations

- ▶ Maintain the high quality and relevance of content in the courses.
- ▶ Continue providing a mixed mode of delivery via Internet and discussion. Students prefer teleconference to online newsgroups. Discussions need a clear agenda and knowledgeable facilitators.
- ▶ Consider assisting students to build support systems for their learning within their practice settings.
- ▶ Consider further how best to support NPs in very remote communities where there is no high-speed Internet access and where even regular mail takes a long time to arrive.
- ▶ Consider looking further at the reasons for lower rates of retention of students in the rural and remote areas.
- ▶ Consider the problems with technical support and Internet access in rural and remote communities when designing courses. Consider offering technical support on weekends.

An **annotated literature review**, as part of this evaluation, is available at <http://www.cranhr.ca/np/conted.pdf>. The literature review presents international research that examines the learning needs of nurse practitioners and efforts in continuing education implementation and evaluation.

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