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Grant Information:

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| Grant Title | Evaluation of the COUPN NP Continuing Education Program |
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| Reporting Period | February 1, 2008-January 31, 2009 |

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Main Messages (1 page maximum)

This study revealed the design of the five nurse practitioner (NP) continuing education (CE) courses offered by the Council of Ontario University Programs in Nursing (COUPN) to be thorough and comprehensive. NP learners appreciated the computer-based format and online accessibility of the courses, felt that the material was relevant, informative and well-delivered, and appreciated the opportunity to work with, and learn from, the experiences of other NPs and course facilitators. Course developers agreed that COUPN NP CE offerings build upon NPs' knowledge and skills and in so doing, support the ongoing development of NP practice. Upon reviewing the findings of this study, members of the Research Team and Steering Committee generated the following list of recommendations.

Facilitating NP Involvement in CE Offerings

1. NPs view CE as extremely important; yet, they frequently and consistently report barriers including difficulty taking time off work, financial barriers, distance, family obligations, and fatigue. Strategies are required to address these barriers (e.g., increasing access to financial support for course costs and time off work, increasing access to course offerings, offering courses in modules or “short bursts”, providing more flexible timelines (allowing students to work at their own pace) to meet course objectives, offering courses immediately before or after NP conferences).
2. To increase visibility of the NP CE courses (especially the modules), a multi-pronged marketing strategy should be put in place (e.g., information on the web, electronic posters, mailing to graduates of the NP program, NPAO).
3. The learning needs of the NPs should be assessed regularly (e.g., every other year) to ensure that the courses being offered are relevant to NP practice.

Content of CE Offerings

4. The environmental scan revealed the existence of numerous CE opportunities. A database that includes all NP CE opportunities should be made available to NPs; this database should be kept up-to-date and should be easily accessible through the NPAO and COUPN websites. It should be clear whether these CE opportunities are available for all RNs or only NPs.
5. NPs identified mental health, chronic disease/chronic care, specialty care (e.g., neurology, dermatology), updates (e.g., innovations, drug updates), and women's health as learning priorities as well as interpretation of laboratory and diagnostic tests, pain control strategies, prescribing narcotic medications, and early detection and screening for cancer. While CE in mental health is a need for NPs, this course has not been offered in the last 3 years. CE initiatives to address these learning needs at a post-licensure level are required.
6. Pharmacotherapeutics was in high demand and yet time intensive and content heavy. Strategies to ensure ready and flexible access to this course are required (e.g., modules).
7. Some of the existing courses are time and content intensive and may need to be lengthened, divided into two courses, or have fewer readings. For example, the *Care of the Older Adult* and the *Mental Health in PHC* courses are very time-intensive.
8. NPs were interested in interprofessional CE. Groups such as CASN are involved in initiatives to promote interprofessional education and the environmental scan revealed existing

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interprofessional continuing education opportunities. COUPN may wish to explore these opportunities and either inform NPs about them or build on them.

9. Since the OSCE is common to many courses, material describing the OSCE should be included on the COUPN CE website rather than taking course time to describe it.

10. NP CE learners want access to learning that is relevant and not time-intensive. Therefore, the majority of the COUPN NP CE offerings should be made in the form of short bursts (i.e. modules) that address a specific topic and respond to the needs of NPs. The modules should be self-contained rather than students “dropping in” for one week of a full course’s content.

11. To augment CE offerings, simulation activities, including virtual patients, could be used more readily.

Delivery of CE Offerings

12. The challenge is facilitating access to CE opportunities through distance modalities and meeting learner needs for face-to-face contact with instructors. COUPN may want to consider combined approaches (e.g., on-line followed by a 2-day workshop).

13. To improve access to content of COUPN CE offerings, allow learners to have online access to the modules beyond the one-week timeframe. This includes allowing students to complete pre-learning before entering on-line discussions.

14. The COUPN NP CE offerings use a robust, multi-modal delivery style; however, ongoing faculty support for learners must also be provided to accommodate learning.

Credit for CE Completion

15. Many NPs indicated an interest in earning credit towards a graduate degree or speciality certification. Should there be a possibility of moving in this direction, the student evaluation methods would need to be consistent with graduate level expectations.

Evaluation of CE Offerings

16. Learners should be asked for feedback immediately upon completing CE courses to improve their recall regarding their experiences. COUPN should also consider conducting a prompt follow-up telephone interview or written evaluation with all students who drop out of CE courses to understand their rationale for leaving.

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Executive Summary (3 pages maximum)

The Council of Ontario University Programs in Nursing (COUPN) offers a nine-university consortium primary health care nurse practitioner program at the post-baccalaureate level and on-line continuing education (CE) courses targeted to primary health care nurse practitioners (NPs) in Ontario. This study was requested by the Nursing Secretariat in the Ontario Ministry of Health and Long-Term Care (MoHLTC) to examine the experience of students (NPs) and faculty involved in the COUPN NP CE courses between 2004 and 2007, and to identify the CE learning needs of NPs in Ontario.

The **objectives** of the current study were as follows:

1. To survey practicing NPs to identify CE learning needs and preferred methods of CE delivery;
2. To conduct an environmental scan of existing CE opportunities for NPs;
3. To review the existing courses with respect to: reason for development, fit between objectives, content and evaluation methods; student evaluations;
4. To learn about the experiences of students and faculty involved in the COUPN NP CE courses between 2004 and 2007.

The study was a collaborative effort with Dr. Raymond Pong at the Centre for Rural and Northern Health Research (CRaNHR) at Laurentian University. The study's objectives were addressed using a 2-part mixed methods approach. The first part of the study entailed the addition of eleven CE-related questions to a regular survey of all PHC NPs in Ontario conducted by the CRaNHR in 2007, to inform an assessment of CE needs. Questions specifically related to CE asked about the importance of CE to NP practice, intentions to participate in CE over the next 24 months, learning needs, barriers to participating in CE, awareness of the COUPN CE courses, preferred delivery methods, and interest in participating in inter-professional CE activities. In part two of the study, we conducted an environmental scan and a review of the existing courses, and collected data (via an online survey and individual interviews) from those who had enrolled in one or more CE courses between 2004 and 2007. The main focus of this research was the optimization of the NP CE initiatives in Ontario.

Of 351 completed mailed surveys ($351/565 = 62.1\%$ response rate), 289 were included in the analysis. The majority of these respondents (79.9%) indicated that CE was extremely important to their practice, and almost all (98%) indicated that they intended to participate in a CE activity over the next 12 to 24 months. Of those not intending to take any of these courses in the next 24 months, the most common reasons were: lack of time (28.2%), other educational opportunities (e.g., graduate studies) (15.4%); unnecessary (e.g., can meet these needs by reading) (13.8%); and already taken (13.3%).

Of those who reported experiencing barriers to participating in CE opportunities (62%), the most frequently reported barriers included: difficulty taking time off work (43%), financial barriers (38%), distance to travel for CE (34%), family obligations/time away from family (29%), fatigue (23%), lack of information about CE offerings (14%), and lack of relevant CE offerings (14%).

Mental health (39%), chronic disease/chronic care (27%), specialty care (e.g., neurology, dermatology) (25%), updates (e.g., innovations, drug updates) (22%), and women's health (21%) were identified as the top five learning needs. Over half the respondents were aware of the five CE courses that COUPN offers, with the largest number of respondents aware of the

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Pharmacotherapeutics course (76.8%) and the fewest number of respondents aware of the Care of the Older Adult course (58.0%). Over one-third of respondents were aware that the COUPN courses were offered as full course options (39.4%) and just over a quarter were aware that the courses were offered in topic specific modules (28.2%).

An environmental scan of CE offerings (i.e., courses) that are available to NPs in Ontario was conducted by the research team to better understand what CE opportunities are currently available to NPs, and how their CE needs are being met. Since the definition of, “continuing education for nurse practitioners” varies tremendously (i.e., from half-day workshops to 13 week courses) the team decided to focus on CE opportunities of at least 1 week duration (i.e., the same length of time as a COUPN NP CE module). The Nurse Practitioners Association of Ontario (NPAO) provided the most relevant information regarding formal and informal CE opportunities offered to NPs across Ontario. It was noted however, that many related nursing organizations or associations do not clearly identify which health professionals (e.g., physician, RPN, NP, RN, etc.) are attending the various CE learning opportunities.

A detailed review of the design of the five existing CE courses by an external education expert (a non-NP), revealed that all five courses are thorough and comprehensive in their course design. A second reviewer (an NP), who conducted a review of the content of the courses, found it to be relevant and thorough, although some courses were found to be extremely time and content intensive; particularly, the Care of the Older Adult and the Mental Health courses. The reviewer suggested that, as a guide, any weekly content that contains more than two learning activity modules is likely to be too content rich and should be covered over a period of at least two weeks.

Despite the use of a variety of recruitment strategies, the 2008-9 online survey of NPs who had enrolled in one or more of the five COUPN NP CE courses between 2004 and January 2008 (and either completed or did not complete the course(s) or module(s) for which they enrolled) achieved a response rate of 39.7% (83/209). This was attributed to survey fatigue, a lack of interest from those who enrolled in courses in 2004 (i.e., due to the passage of time), and possibly delayed access to the survey.

Just as in the 2007 survey by CRaNHR, most NPs (83.3%) who did complete the survey indicated that continuing education is “extremely important” to their NP practice and 60% did not report any barriers to participating in COUPN NP CE courses. For those who *did* encounter barriers to participating in COUPN NP CE courses, the top five were identified as: “courses are time intensive” (50%); “difficulty taking time off work and/or away from patient care” (33.3%); “family obligations (time away from family)” (33.3%); “lack of finances and/or financial support” (29.2%); and “fatigue” (20.8%). Most NPs preferred that CE courses be delivered in an on-line, self-directed format (73.3%), intensive seminar (e.g., 2-day workshops) (55%); on-line lecture series (53.3%); and NPAO conferences (48.3%). Since 2004, most NPs (75%) had enrolled in the Pharmacotherapeutics course, followed by the Care of the Older Adult course (25%) and the Rural and Remote Health Care course (21.7%). The lowest proportion of respondents had enrolled in the Mental Health in Primary Health Care course (10%); which has not been offered in the last 3 years. With the exception of Care of the Older Adult, and the Mental Health in PHC courses (mean=3.7 and 3.6, respectively) the CE courses received a mean score of 4.0 or higher (out of 5) for quality. In terms of “applicability of the course to NP

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practice”, all but the Mental Health in PHC course (mean=3.8), received a mean rating of 4.2 or higher (out of 5); again, likely owing to the limited offerings of this course and the subsequent small number of respondents who have enrolled in the course. Overall, “balancing work/study demands” (33.3%) was the most common reason given for not completing a course, followed by “required too much time” (19.7%).

Individual interviews with NP CE learners and course developers/facilitators revealed that the content and format of the CE courses were viewed as key strengths. Learners particularly appreciated the computer-based format and online accessibility of the courses. They felt that the material was well-delivered, enjoyed the ability to work at their own pace, and appreciated the opportunity to work with, and learn from, the experiences of other NPs. Several learners identified the course instructors or facilitators as assets to the courses, describing them as knowledgeable and approachable. Learners appreciated having access to a professor who provided guidance and support by answering questions, while course developers and facilitators recognized that student interaction through discussions was a key strategy in the promotion of learning.

Learners often identified the one-week timeframe provided to complete the required work of a module, and the time commitment required to complete the work, as negative aspects of the CE courses. In conjunction with the time commitment required to complete the work, learners and course developers/facilitators identified workload, particularly the large volume of readings, as another negative aspect of the courses. Other learners identified the lack of available course offerings and the need for more course offerings. The lack of course credit or recognition was also raised as a negative aspect of the courses. As with the learners, NP CE course developers and facilitators described the course workload and time issues as key challenges to COUPN CE offerings. For facilitators/developers, other challenges or limitations included engaging learners in group discussions, the time involved in keeping the content of the modules up-to-date, and the uncertainty around funding support for the program. Reducing the volume of reading/content to a manageable level was mentioned often by both learners and course developers/facilitators as an aspect of the CE offerings that requires change. Learners also wish for longer, more flexible timelines for module or course completion and to receive credit for the courses that they did complete, particularly toward graduate education.

Many learners indicated that the CE offerings had reinforced or challenged their learning, were an excellent refresher, and provided valuable references for current and future use in their practice. Similarly, most facilitators/developers stated that the NP CE courses build NPs’ knowledge and skills and in so doing, support the ongoing development of NP practice.

Although many learners were interested in future COUPN NP CE offerings, factors that weighed in their decision to enrol included the time commitment required, the courses’ applicability to practice, whether learners would receive credit towards a Masters, and the equipment required.

Upon reviewing the findings of this study, members of the Research Team and Steering Committee generated the following list of recommendations.

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Facilitating NP Involvement in CE Offerings

1. NPs view CE as extremely important; yet, they frequently and consistently report barriers including difficulty taking time off work, financial barriers, distance, family obligations, and fatigue. Strategies are required to address these barriers (e.g., increasing access to financial support for course costs and time off work, increasing access to course offerings, offering courses in modules or “short bursts”, providing more flexible timelines (allowing students to work at their own pace) to meet course objectives, offering courses immediately before or after NP conferences).
2. To increase visibility of the NP CE courses (especially the modules), a multi-pronged marketing strategy should be put in place (e.g., information on the web, electronic posters, mailing to graduates of the NP program, NPAO).
3. The learning needs of the NPs should be assessed regularly (e.g., every other year) to ensure that the courses being offered are relevant to NP practice.

Content of CE Offerings

4. The environmental scan revealed the existence of numerous CE opportunities. A database that includes all NP CE opportunities should be made available to NPs; this database should be kept up-to-date and should be easily accessible through the NPAO and COUPN websites. It should be clear whether these CE opportunities are available for all RNs or only NPs.
5. NPs identified mental health, chronic disease/chronic care, specialty care (e.g., neurology, dermatology), updates (e.g., innovations, drug updates), and women’s health as learning priorities as well as interpretation of laboratory and diagnostic tests, pain control strategies, prescribing narcotic medications, and early detection and screening for cancer. While CE in mental health is a need for NPs, this course has not been offered in the last 3 years. CE initiatives to address these learning needs at a post-licensure level are required.
6. Pharmacotherapeutics was in high demand and yet time intensive and content heavy. Strategies to ensure ready and flexible access to this course are required (e.g., modules).
7. Some of the existing courses are time and content intensive and may need to be lengthened, divided into two courses, or have fewer readings. For example, the *Care of the Older Adult* and the *Mental Health in PHC* courses are very time-intensive.
8. NPs were interested in interprofessional CE. Groups such as CASN are involved in initiatives to promote interprofessional education and the environmental scan revealed existing interprofessional continuing education opportunities. COUPN may wish to explore these opportunities and either inform NPs about them or build on them.
9. Since the OSCE is common to many courses, material describing the OSCE should be included on the COUPN CE website rather than taking course time to describe it.
10. NP CE learners want access to learning that is relevant and not time-intensive. Therefore, the majority of the COUPN NP CE offerings should be made in the form of short bursts (i.e. modules) that address a specific topic and respond to the needs of NPs. The modules should be self-contained rather than students “dropping in” for one week of a full course’s content.

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11. To augment CE offerings, simulation activities, including virtual patients, could be used more readily.

Delivery of CE Offerings

12. The challenge is facilitating access to CE opportunities through distance modalities and meeting learner needs for face-to-face contact with instructors. COUPN may want to consider combined approaches (e.g., on-line followed by a 2-day workshop).
13. To improve access to content of COUPN CE offerings, allow learners to have online access to the modules beyond the one-week timeframe. This includes allowing students to complete pre-learning before entering on-line discussions.
14. The COUPN NP CE offerings use a robust, multi-modal delivery style; however, ongoing faculty support for learners must also be provided to accommodate learning.

Credit for CE Completion

15. Many NPs indicated an interest in earning credit towards a graduate degree or speciality certification. Should there be a possibility of moving in this direction, the student evaluation methods would need to be consistent with graduate level expectations.

Evaluation of CE Offerings

16. Learners should be asked for feedback immediately upon completing CE courses to improve their recall regarding their experiences. COUPN should also consider conducting a prompt follow-up telephone interview or written evaluation with all students who drop out of CE courses to understand their rationale for leaving.

Full Report (25 pages maximum, double-spaced)

Context

The Council of Ontario University Programs in Nursing (COUPN) offers a nine-university consortium primary health care nurse practitioner program at the post-baccalaureate level and on-line continuing education (CE) courses targeted to primary health care nurse practitioners (NPs) in Ontario. This study was requested by the Ontario Ministry of Health and Long-Term Care (MoHLTC) Nursing Secretariat to examine the experience of students and faculty involved in the COUPN NP continuing education courses offered between 2004 and 2007, and to identify the CE learning needs of NPs in Ontario. It should be noted that the study was conducted at a time of transition in Ontario legislation that restricted the use of the NP title to registered nurses in the extended class of the College of Nurses of Ontario (CNO). From 2004 to 2007, MoHLTC funding was provided to offer the COUPN CE courses (Pharmacotherapeutics offered Jan 05/06/07; Rural and Remote Health Care offered Jan 03/05/06/07; Issues in Mental Health offered Jan 05/06; Fundamentals of Primary Health Care offered May 05; and Care of the Older Adult offered Jan 06). The courses are offered in English and French by the University of Ottawa using a variety of distance education modalities (e.g., web-based newsgroups). Based on previous research described below, these courses were lengthened from 8 to 13 weeks and a clinical component was added to them.

Background

Although the COUPN NP education program prepares a generalist practitioner, many NPs work in unique settings (e.g., long-term care) or with specific patient populations (e.g., those with mental illnesses) and require specialized knowledge. In addition, there is new information

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post graduation that NPs require to maintain and ensure their safe practice (e.g., new drugs or laboratory tests, recent evidence that informs changes in practice). For these reasons, the COUPN NP Program sought and received funding from Health Canada in 2001 (March 2001 to March 2003) to develop CE courses targeted to NPs and RNs practicing in rural and remote areas of Ontario.

To inform the development of CE courses for NPs, COUPN commissioned the Centre for Rural and Northern Health Research (CRaNHR) to determine the perceived CE needs of NPs in primary care settings in rural, northern and remote communities in Ontario. Using a 28-item questionnaire, they surveyed 468 NPs and RNs working in northern and rural southern Ontario in 2001. Of the 227 questionnaires returned (49%), 146 were suitable for analysis (72 respondents from northern Ontario; 38 from southern Ontario; and 36 from FNIHB-funded agencies). On the basis of survey results, CRaNHR made 5 recommendations (Caty et al, 2002):

1. Attend to the paradox of an expressed interest in more face-to-face learning opportunities and the financial and geographic barriers to accessing these opportunities. This may be addressed by using multiple delivery approaches;
2. Develop CE activities that correspond to the nature of current NP practice – health maintenance, prevention, promotion, and treatment. In particular, they need to address the social determinants of health and the three additional controlled acts designated to RN(EC)s;
3. Re-define the meaning of “course”. The NPs were interested in shorter and more focused, practically oriented CE activities and reported a need for both general updates and specific clinical and professional focused content areas;

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4. Make use of existing CE resources that meet the NPs' priority needs (e.g., health agencies, professional organizations, universities and community colleges)
5. Conduct a formative and summative evaluation to assess the NP CE pilot project (track processes of implementation, efficacy of particular delivery modalities, ongoing system support, regional differences in implementation).

Based on this learning needs assessment, COUPN developed 5 courses: 1) Pharmacotherapeutics; 2) Emergency Health Care in Rural Settings; 3) Issues in Mental Health; 4) Persistent Illness; and, 5) Fundamentals of Primary Health Care. Each of the eight-week courses consisted of eight separate modules, with the exception of the Emergency Health Care course, which had nine modules. Each module contained a set of expectations and outcomes, a list of assigned readings, and a case-based scenario followed by a set of questions. The courses were designed to be delivered in English and French as web-based courses. In August 2002, the Fundamentals of Primary Health Care course was first offered. In January 2003, the remaining 4 courses were offered. Feedback during the pilot phase of this initiative suggested the need to expand the content and add a clinical component to the courses.

In 2004, COUPN commissioned CRaNHR to conduct an evaluation of the implementation of the five NP CE courses. The evaluation sought to determine: a) whether the students learned what they needed to learn; 2) whether the method of delivery hindered or helped; and 3) what other CE activities could be developed. A mixed methods design was used with qualitative data collected through focus groups (1 per course) and open-ended responses and quantitative data collected through registration forms and module evaluations.

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Forty-seven individuals expressed interest in the courses; 39 officially registered in at least one of the courses, and 28 (72%) completed the courses. The majority of learners passed the courses and commented that the content was excellent, that their knowledge and skills increased, and that the courses met their personal learning objectives. They liked the combination of on-line delivery and teleconference or news groups. On the basis of this evaluation, CRaNHR made 7 recommendations (Tilleczek et al, 2004; Tilleczek, Pong, Caty, 2005):

- 1) Maintain the high quality of content in the courses;
- 2) Continue a mixed mode of delivery via internet and discussion; ensure a well designed agenda and knowledgeable discussants and facilitators;
- 3) Provide a certificate of recognition of completion for the course;
- 4) Assist learners to integrate their practice community networks (e.g., mentors) into a support system for learning;
- 5) Slow the pace of the delivery (8 or 9 weeks too fast given the density of content);
- 6) Further examine reasons for lower rates of retention in rural and remote areas; internet access and timely receipt of course material are challenging for these learners;
- 7) Consider the difficulties with technical support and internet access in rural and remote communities.

In their 2006 tracking study of NPs in Ontario, CRaNHR included a number of questions about CE. Of 257 respondents, 132 (51%) reported having taken CE courses in the last 12 months and of the approximate 57 who had taken one or more of the 5 COUPN CE courses, the majority rated them as very useful. Many NPs (n = 98) participated in other CE activities with the largest number (n = 29) reporting CME offerings. Barriers to CE participation included:

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difficulty taking time off work, financial difficulties, need to travel to learning venue, family responsibilities, lack of information regarding what CE was available, geographical barriers, fatigue or academic burnout, and poor experience with previous CE courses (CRaNHR PHCNP Tracking Study 2006).

Very little research has been published about CE for NPs in Canada. Silverman, Goodine, Ladouceur and Quinn (2001) conducted a Canada-wide survey to determine the learning needs of nurses working with Canada's Aboriginal persons. Broad thematic areas for continuing education included emergency/acute care and obstetrics/gynecology clinical skills, health and physical assessment, mental health, and prenatal and postnatal care. Specific areas nurses cited for CE included issues related to victims of violence, non-compliant clients, substance abuse, and fetal alcohol syndrome.

Study Objectives

1. To survey practicing NPs to identify CE learning needs and preferred methods of CE delivery;
2. To conduct an environmental scan of existing CE opportunities for NPs;
3. To review the existing courses with respect to: reason for development, fit between objectives, content, and evaluation methods; student evaluations;
4. To learn about the experiences of students and faculty involved in the COUPN NP CE courses between 2004 and 2007.

Methods

We conducted a 2-part mixed methods study. To inform the identification of CE learning needs and preferred methods of CE delivery, we added a number of CE-related questions to the 2007 tracking survey of all PHC NPs in Ontario conducted by CRaNHR (Part I). In Part II of our

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study, we conducted an environmental scan of existing CE opportunities for NPs, a review of the existing courses, and an online survey and individual interviews with those who had enrolled in one or more CE courses between 2004 and 2007.

Part I – Survey of PHC NPs in Ontario

Eleven questions regarding CE opportunities for NPs in Ontario were embedded in the 2007 tracking survey of PHC NPs conducted by CRaNHR. Questions specifically related to CE included the importance of CE to their practice, intentions to participate in CE over the next 24 months, learning needs, barriers to participating in CE, awareness of the COUPN CE courses, preferred delivery methods, and interest in participating in inter-professional CE activities (**Appendix A**).

The survey was approved by the Research Ethics Board at Laurentian University. After pilot testing with a small number of NPs to assess the clarity of the questions and completion time, the survey was mailed to all NPs registered in the Extended Class [RN(EC)] of the College of Nurses of Ontario (CNO), who were practicing in Ontario and had given the CNO permission to release their names for research (n= 565). At the time of the survey, all RN[EC]s were classified as primary health care NPs.

Data were collected using a modified Dillman approach. The survey package contained a cover letter, consent form, and questionnaire. Packages were mailed at three week intervals; second and third mailings of study packages were sent to those NPs who had not returned a questionnaire prior to the next mailing. Data were collected from October through December 2007. Survey data were entered into SPSS, v. 15. The error rate for data entry was 0.002.

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Part II – Environmental Scan and Assessment of COUPN NP CE Offerings

Part II of our study was approved by the Research Ethics Board at McMaster University. It included:

- a) an environmental scan of CE opportunities for NPs in Ontario;
- b) a detailed review of the five existing COUPN NP CE courses (objectives, content, delivery strategies, and evaluation methods);
- c) an online survey of practicing NPs who enrolled in COUPN NP CE courses or modules between 2004 and 2007 regarding their experiences with the course(s);
- d) individual interviews with NP CE learners who either completed or did not complete the CE courses or modules in which they had enrolled;
- e) individual interviews with NP CE course developers and facilitators.

a) Environmental Scan

ZAD Consulting Inc., (Sault Ste. Marie, ON) conducted an environmental scan of distance education technology and opportunities available to NPs practicing in rural and remote settings in Ontario from December 2000 to January 2002 (Szadkowski & Dose, 2002). Using this document as a guide, we conducted an environmental scan of CE offerings (i.e., courses) that are available to NPs in Ontario.

b) Course Review

A detailed review of the five existing CE courses was conducted by an external education expert (a non-NP), who focused on the purpose and description, course goals, teaching strategies, content, evaluation measures, and student learning activities of each course. The design of each course was reviewed using the course design configuration as posited by Iwasiw, Goldenberg

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and Andrusyszyn (2005). A second reviewer (an NP) conducted a review of the content of the 2007-08 courses.

c) Online Survey of NP CE Learners

We developed an online questionnaire to survey NPs who had enrolled in one or more the five COUPN NP CE courses between 2004 and 2007. Administration of the survey, and the usernames and passwords that respondents required to access it, were overseen by the Health Information Research Unit (HIRU) at McMaster University. Before its launch, the survey was pilot tested by six NPs for content, flow and readability and changes were made based on the feedback received. The final survey comprised 23 questions and took approximately 15 minutes to complete (**Appendix B**).

The COUPN PHC NP Programme provided the project's research assistant (RA) with the names and email addresses of all learners who had enrolled in one or more of the five COUPN NP CE courses between 2004 and January 2008. The first mass recruitment announcement was sent by electronic mail in August 2008. Eligible NPs were encouraged to contact the project's RA for information on how to access the survey and, in return, were sent the website address, along with their personal username and password which enabled them to access and complete the survey. Follow-up email announcements were sent in September 2008, while telephone calls were made to follow-up with eligible learners who did not have a working email address. In October 2008, personalized letters of introduction, signed by the Chief Nursing Officer, Vanessa Burkoski, and a co-principal investigator (AD), were sent by email to remind all eligible learners to complete the online survey. Each personalized letter contained the website address, along with the personal username and password of the addressee, which enabled them to access and

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complete the survey. In addition to these recruitment strategies, study announcements were circulated by Jane Sanders, Executive Director of the Nurse Practitioner Association of Ontario (NPAO), via an electronic newsletter (“News You Can Use”) and were posted on the NPAO website. Study announcements and paper copies of the survey were also circulated by the co-principal investigator (PB) and co-investigator (JO) at the NPAO conference in November 2008. In early January 2009, personalized email reminders were sent by a co-investigator (JO) to encourage all non-respondents to complete the survey. A final email was sent near the end of January 2009 to probe non-respondents’ level of satisfaction with CE courses offered by COUPN, reasons for completion or non-completion, preference for a 2-week module on a specific, narrow topic vs. a full course, and interest in an interview.

d) Interviews with NP CE Learners

From November to December 2008, semi-structured individual (telephone) interviews were conducted with learners who completed and did not complete the COUPN NP CE courses or modules for which they enrolled to understand their perceptions of the strengths and limitations of the courses and to garner their suggestions and recommendations for change. Similarly, COUPN NP CE course developers and facilitators were interviewed to understand the need that prompted the development of the courses, their perceptions of the strengths and limitations of the current CE course offerings, and their perceptions of revisions required for future CE offerings.

Using data from completed online surveys, the RA identified NPs who had enrolled in the COUPN NP CE modules or courses between 2004 and January 2008 and were willing to be interviewed. NP CE learners who completed and those who did not complete the modules or

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courses for which they had enrolled were contacted. The RA obtained signed, informed consent from all interviewees prior to the interview.

Taped interviews with NP CE learners ranged from 15-20 minutes in length and focused on the strengths and limitations of the COUPN NP CE module(s) or course(s) in which they had enrolled. Interviewees were asked to comment on the positive and negative aspects of the module(s) or course(s), things they would change, how the course(s) affected their practice, and whether they would consider CE course(s) offered by COUPN in the future. Each tape was transcribed verbatim. Qualitative data were analyzed using a constant comparative method. Using a template analysis approach, the RA reviewed each transcript individually and engaged in line by line coding using a coding list that was generated from the research questions. Once a coding list was developed, the list, along with two transcripts, were given to one of the research team members to independently code. Additional codes were generated and added to the list. Any conflicting or confusing codes were discussed and consensus was reached. The remainder of the transcripts were analyzed using this coding list.

e) Interviews with NP CE Course Developers/Facilitators

Individual, semi-structured, audio-taped telephone interviews, ranging from 20 to 30 minutes in length, were also conducted with six COUPN NP course developers/facilitators (one from each of the five COUPN NP CE courses, and a course facilitator who provides the Pharmacotherapeutics course in French). Interviewees were asked to comment on the reasons that the course was developed, the strengths and limitations of the courses they taught or developed, aspects of the course that they would change, and how the course impacts NP practice.

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The same type of data analysis used for the student transcripts was employed for this set of facilitator/developer transcripts. Each tape was transcribed verbatim. Qualitative data were analyzed using a constant comparative method. Using a template analysis approach, the RA reviewed each transcript individually and engaged in line by line coding using a coding list that was generated from the research questions.

Results

Part I – Survey of PHC NPs in Ontario

Of 351 completed surveys (351/565 = 62.1% response rate), 289 were included in the analysis. The majority of respondents (79.9%) indicated that CE was extremely important to their practice, with 18.7% rating it between somewhat and extremely important; 98% indicated that they intended to participate in a CE activity over the next 12 to 24 months. Of those who reported experiencing barriers to participating in CE (62%), the most frequently reported barriers included: difficulty taking time off work (43%), financial barriers (38%), distance to travel for CE (34%), family obligations/time away from family (29%), fatigue (23%), lack of information about CE offerings (14%), and lack of relevant CE offerings (14%).

Factors and strategies that would make it possible to participate in CE included financial support for course costs and time off work (23%), accessibility/convenient location (18%), support of manager/co-workers (16%), and increased time availability (12%).

Mental health (39%), chronic disease/chronic care (27%), specialty care (e.g., neurology, dermatology) (25%), updates (e.g., innovations, drug updates) (22%), and women's health (21%) were identified as the top five learning needs. Over half the respondents were aware of the five CE courses that COUPN offers, with the largest number of respondents aware of the

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Pharmacotherapeutics course (76.8%) and the fewest number of respondents aware of the Care of the Older Adult course (58.0%). About 30% of respondents reported an intention to take one or more of these 5 courses in the next 24 months, with the largest proportion intending to take the Pharmacotherapeutics course (46.3%) and the lowest proportion intending to take the Fundamentals of Primary Health Care course (8.5%). Of those not intending to take any of these courses in the next 24 months, the most common reasons were: lack of time (28.2%), other educational opportunities (e.g., graduate studies) (15.4%); unnecessary (e.g., can meet these needs by reading) (13.8%); and already taken (13.3%).

Over one-third of respondents were aware that the COUPN courses were offered as full course options (39.4%) and just over a quarter were aware that the courses were offered in topic specific modules (28.2%).

Respondents were asked to indicate their extent of interest in various CE options and delivery methods. The options that the largest number of respondents found very interesting were: credit toward a graduate degree (57.5%), credit toward specialty certification (55.1%), modules with a specific focus on a narrow topic (51.8%), and offerings through distance modalities (47%). Those options that the largest number of respondents found moderately interesting included: courses offered during the spring (61.7%), the fall (54.7%), the winter (49.1%), evenings (50.8%), over 13 weeks (44.7%), through a combination of face-to-face and distance modalities (45.9%), and via face-to-face with instructor (44.9%). Finally, the one option that the largest number of respondents found not at all of interest was the offering of courses during the summer (67.5%). Of the 289 respondents, 84% indicated an interest in participating in inter-professional CE activities.

Part II – Environmental Scan and Assessment of COUPN NP CE Offerings

a) Environmental Scan

In conducting the environmental scan, we learned that definitions and interpretations of what the term “continuing education for nurse practitioners” encompasses varied substantially from half-day workshops to 13 week courses. For the purposes of our study, we were interested in CE opportunities of at least one week duration (i.e., the same length as a COUPN NP CE module). We also found that many nursing organizations or associations do not clearly identify the target audience for their CE learning offerings (e.g., NP, RN, RPN, physician, physiotherapy) and many offerings were aimed at an interprofessional team. None of the organizations that were contacted during the environmental scan referred the research team to the COUPN web site for CE information.

The NPAO provided the most relevant information for the environmental scan. Executive Director of NPAO, Jane Sanders, facilitated email discussions to enable the collection of information about the formal and informal CE opportunities offered to NPs across Ontario. Ms. Sanders provided login member access to the NPAO web site where CE and conference information was available. A summary of organizations contacted and websites searched appears in **Appendix C**.

b) Course Review

The observations and suggestions noted by the education expert, summarized in **Appendix D**, indicate that none of the courses require any major design revisions. Overall, the content of the courses was found to be relevant and thorough, although some were found to be extremely time and content intensive; particularly, the Care of the Older Adult and the Mental

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Health courses. The reviewers suggested that, as a guide, any weekly content that contained more than two learning activity modules was likely too content rich and should be covered over a period of at least two weeks.

Each of the 13-week courses provides two weeks of content to prepare students for an Objective Structured Clinical Examination (OSCE). The OSCE preparation content is very similar across courses. For those students who take multiple courses, repetition of the OSCE content is likely quite tedious. It was suggested by the reviewer that this OSCE content may be better supplied through a central URL freeing up time for course content.

Some inconsistencies were noted in the *Mental Health in Primary Health Care* course. For instance, the newsgroups refer to the “Rural and Remote newsgroups”, rather than mental health. In module 3, the links refer to “depression” rather than the module topic of “counselling techniques”. The modules were found to be somewhat confusing to read and at times, inconsistent regarding evidence-based practice. For instance, facilitator observations are included rather than research or expert panel recommendations. Module 4, section 4 includes the statement:

"Clinically, I rarely use Prozac as generic fluoxetine is issued. In clinical practice clinicians and myself a number of other clinicians do not find them as effective. On average one needs to give twice the amount to get the same response you get from Prozac. The long half-life can be a problem in terms of daily dosing."

No references were cited to support this facilitator’s observation and it was unclear as to whether “them” referred to Prozac or to generic fluoxetine.

The Crisis Intervention references and readings are consistent with the Ontario PHCNP program, but this would not be new material to a graduate of the program. Readings that

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augment rather than repeat the PHCNP program are recommended.

The mental health course was found to be extremely intense and required an extensive amount of time to cover content. Therefore, it was recommended by the reviewer that additional modules be offered over at least 2 to 4 weeks (per module). The content of these modules should focus on: 1) specific counselling techniques; 2) suicide & homicide risk & intervention; 3) addictions & substance abuse; 4) interpersonal violence; and 5) crisis interventions, as these are important content areas and skills for NPs. They each require a more extensive period of learning in CE than can be offered in a one-week module.

The content of the *Pharmacotherapeutics* and the *Care of the Older Adult* courses were judged to be at the NP level. Resources are provided in both courses for students to augment their learning. The Care of the Older Adult course was judged to be content intensive, prompting the reviewer to suggest that it be divided into two courses or multiple modules over a longer period of time per module. This would give the CE student more time to cover the complex materials provided in each module.

According to the reviewer, the content of the Pharmacotherapeutics course is quite dense but offers an appropriate overview of pharmacotherapy, as well as counselling (e.g., smoking cessation) and alternative therapies. It was suggested that the learning outcomes and objectives require some revision to change the wording to behavioural verbs and to improve wording in general, as a significant number of verbs are worded at a very basic level of expectation.

The reviewer questioned the modular approach that allows an NP to “drop in” for only one week of content. From a teaching-learning perspective, the courses are designed to build on

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fundamental knowledge that is presented in the first few weeks. The suggestion was made that modules should be self-contained with fundamental knowledge relevant to the topic.

c) Online Survey of NP CE Learners

From the 209 NP learners surveyed in 2008-9, a total of 83 (39.7%) surveys were completed (**Table 1**).

Table 1. Response to online survey by NP CE learners

| NP CE Learners | N | % |
|-----------------------------|------------|--------------|
| Completed survey | 83 | 39.7 |
| Could not be reached | 11 | 5.3 |
| Ineligible, i.e., not an NP | 6 | 2.9 |
| Declined to participate | 4 | 1.9 |
| No response | 105 | 50.2 |
| Total | 209 | 100.0 |

The majority of respondents (72.3%) indicated that they held extended class registration [(RN(EC))] with the CNO, while 18.1% of respondents identified themselves as non-RN(EC)s and 9.6% provided no response. It is important to note that the study was conducted at a time of transition in Ontario legislation that restricted the use of the NP title to registered nurses in the extended class of CNO. Many of the learners who registered for the NP CE courses were RNs either working under medical directives, or for the First Nations and Inuit Health Branch, as expanded role nurses and not NPs. Although COUPN NP CE courses were open to these non-RN(EC) nurses, only those who identified themselves as RN(EC)s were included in the analysis.

Ninety percent of NPs indicated that they held Primary Health Care NP positions and 71.7% were employed in permanent, full-time positions. Most RN(EC)s (73.3%) had completed the COUPN NP Certificate Program. Respondents reported a mean of 18.3 years of experience as an RN and a mean of 7.9 years of experience as an NP.

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Most NPs (83.3%) indicated that continuing education is “extremely important” to their NP practice and 60% denied experiencing any barriers to participating in COUPN NP CE courses. For those who *did* encounter barriers, the top five were identified as: “courses are time intensive” (50%); “difficulty taking time off work and/or away from patient care” (33.3%); “family obligations (time away from family)” (33.3%); “lack of finances and/or financial support” (29.2%); and “fatigue” (20.8%). Most NPs (73.3%) preferred that CE courses be delivered in an on-line, self-directed format, followed by intensive seminars (e.g., 2-day workshops) (55.0%); on-line lecture series (53.3%); and NPAO conferences (48.3%).

Since 2004, the majority of NPs (75%) had enrolled in the Pharmacotherapeutics course, followed by the Care of the Older Adult course (25%) and the Rural and Remote Health Care course (21.7%). The lowest proportion of respondents had enrolled in the Mental Health in Primary Health Care course (10%). While only a small number of NPs indicated that they had enrolled in the Mental Health and Fundamentals of Primary Health Care courses, over 80% completed the full course for which they had enrolled. Most NPs who enrolled in the Pharmacotherapeutics course indicated that they completed the full course (55.6%). Similarly, most NPs (54.5%) completed the Rural and Remote Health Care course in which they had enrolled. Sixty-nine percent of NPs indicated that they had registered for independent modules in the Pharmacotherapeutics course, while 63.6% had registered for modules in the Rural and Remote Health Care course. Only 27.3% of NPs had registered for independent modules in the Care of the Older Adult.

One NP commented that full (non-modular) courses provide “a good foundation”, but added that the “broad subject matter [makes it] difficult to process all information”. The same

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NP identified an advantage of the modular courses as their focus, “on areas specific to one’s practice”. Other NPs commented that the modules: “focus on specific learning needs”; “...are more relevant to your area of practice”; and “allow individualized learning needs to be met without committing to a full course and repeating topics not relevant to your practice”. Another NP commented that modules enable the learner to “pick and choose a weak area and focus on that information... [and are] less expensive and not so overwhelming”; however, the same NP noted that modules, “do not provide the whole picture”.

NPs indicated that, if offered, they would be interested in CE courses that address the interpretation of laboratory and diagnostic tests (81.7%), pain control strategies (61.7%), prescribing narcotic medications (51.7%), and early detection and screening for cancer (48.3%).

NPs overwhelmingly preferred on-line delivery methods for CE courses: online self-directed formats (73.3%) and on-line lecture series (53.3%); followed by intensive seminars, i.e. 2-day workshops (55%), and NPAO conferences (48.3%). Classroom lectures were the least preferred method of CE course delivery (16.7%). When asked about other CE activities or courses (not offered by COUPN) that they had engaged in since 2004, pharmaceutical sponsored dinners (65%) were the most common, followed by conferences: Provincial/Regional NPAO conferences (53.3%) and Primary Care Today/Primary Care Update conferences (43.3%).

The majority of RN(EC)s identified Email (78.3%) as the most effective method to inform NPs about future COUPN course offerings, followed by the NPAO website (60%), and News You Can Use (56.7%). This is not congruent with how respondents reported that they learn about COUPN course offerings: NPAO website (61.7%), Email (41.7%); and News You Can Use (38.3%).

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Respondents' level of satisfaction with each of the five COUPN NP CE courses was rated on a 5-point scale (5=very satisfied; 1=not at all satisfied). The Pharmacotherapeutics course received a mean score of 4.2 for quality and 4.4 for applicability to practice. Most respondents (76.1%) felt that the knowledge gained in the course assisted in their NP role and 65.2% indicated that the course was worth both the financial cost and time. The Rural and Remote Health Care course received similar mean scores in terms of quality and applicability to NP practice (mean=4.3, respectively), and most learners (70.6%) felt that the knowledge gained assisted in their NP role; however, fewer NPs felt that the course was worth the financial cost (58.8%) or time (52.9%). The Mental Health in Primary Health Care course received the lowest score in terms of quality (mean=3.6) and applicability to practice (mean=3.8). Furthermore, less than half of respondents (44.4%) felt that the knowledge gained from the course assisted in their NP role, and an even smaller proportion (22.2%) felt that the course was worth the financial cost or time.

When asked to explain why they did not complete the full courses for which they had enrolled, most responses related to the Pharmacotherapeutics courses (30/66=45.5%), followed by the Rural and Remote Health Care course (16/66=24.2%), with the most common reason for non-completion being “balancing work/study demands” (11/30, 36.7% and 6/16=37.5%; respectively).

Possible explanations for the survey's low response rate include survey fatigue as NPs receive a fairly large number of surveys, and a lack of interest from those who enrolled in courses in 2004 (i.e., due to the passage of time). We decided not to use Survey Monkey to administer the survey in light of concerns regarding confidentiality of the collected data and

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where the data were housed. Instead, we decided to use services at McMaster, which stored the data on-site but also required the additional step of providing personalized usernames and passwords to interested participants. This additional step limited respondents' immediate access to, and likely negatively affected the completion of, the survey. A possible limitation of the current study is that those who were potentially the least happy with the NP CE courses did not respond to the survey.

d) Interviews with NP CE Learners

Ten NPs who *completed* the CE course(s) or module(s) in which they had enrolled, and nine NPs who *did not complete* the CE course(s) or module(s) in which they had enrolled consented to be interviewed.

Major themes from the interviews with learners who enrolled in, and either completed or did not complete the course(s) or module(s) in which they enrolled were categorized into positive and negative aspects of the COUPN NP CE offerings, things that should be changed, how COUPN NP CE offerings impact practice, and considerations regarding future COUPN CE offerings.

Key positive aspects of the COUPN NP CE courses included: course and module content, delivery format, access and accessibility, the opportunity to speak with and share experiences with other NPs, and the instructor/facilitator. Several learners commented that the material was specific to the needs of the NP and provided the learner with valuable references and resources. Other learners appreciated the computer-based format and online accessibility of the courses. They felt that the material was well-delivered, enjoyed the ability to work at their own pace, and appreciated the opportunity to work with, and learn from, other NPs. Several learners identified

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the course instructors or facilitators as assets to the courses, describing them as knowledgeable and approachable. They appreciated having access to a professor who provided guidance and support by answering questions.

Learners were also asked to comment on the negative aspects of the COUPN NP CE courses in which they enrolled. Included among these themes were excessive course readings, time commitment and workload, timeframes, a lack of course offerings, and a lack of credit or recognition for completing courses. The one-week timeframe that learners worked within to complete the required work of a module, and the time commitment required to complete the work, were raised often. In conjunction with the time commitment required to complete the work, some learners identified workload, particularly the large volume of readings, as another negative aspect of the course. Other learners mentioned the lack of available course offerings and the need for more course offerings. The lack of course credit or recognition was raised on several occasions as a negative aspect of the course(s).

Interviewed learners who ultimately did not complete the courses for which they had enrolled, mentioned various reasons for non-completion, ranging from running out of time to complete the modules, difficulties in registering or getting started (i.e. a late start) in the course which affected their ability to complete the course work, lack of interest in being evaluated (i.e., completing the OSCE or the post-test exams), and a lack of resources and difficulty finding a partner to work with in a remote setting.

Among aspects of the COUPN NP CE courses that require change, the volume of content and readings was mentioned frequently. Along with this, longer, more flexible timelines for

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module or course completion were requested. Learners also wished to receive credit for the courses that they did complete, particularly toward graduate education.

When asked how the COUPN NP CE courses or modules had impacted their practice, many learners indicated that the CE offerings had reinforced or challenged their learning, were an excellent refresher, and provided valuable references for current and future use in their practice. Although many learners were interested in enrolling in COUPN NP CE offerings in the future, the time commitment required was a concern. Other factors that weighed in learners' decisions to enrol in future courses included its applicability to practice, whether learners would receive credit towards a graduate degree, and the equipment required.

e) Interviews with NP CE Course Developers/Facilitators

Addressing the needs of NPs was the most common rationale for the development of NP CE courses, according to the developers and facilitators. As with the learners, the content, format and accessibility of the courses were mentioned as strengths, as was the student interaction generated through discussions. Most facilitators/developers stated that the NP CE courses build NPs' knowledge and skills and in so doing, support the ongoing development of NP practice.

As with the learners, NP CE course developers and facilitators described the course workload and time issues as key challenges to COUPN CE offerings. Some facilitators/developers described the struggle to engage learners in group discussions and others spoke of the uncertainty around funding support for the program as a limitation.

Reducing the volume of reading/content to a manageable level, encouraging more student interaction, and making the content of CE offerings easier to update on an annual basis were suggested as changes by the course developers/facilitators.

Study Recommendations

Based on our study findings, we propose the following recommendations:

Facilitating NP Involvement in CE Offerings

1. NPs view CE as extremely important; yet, they frequently and consistently report barriers including difficulty taking time off work, financial barriers, distance, family obligations, and fatigue. Strategies are required to address these barriers (e.g., increasing access to financial support for course costs and time off work, increasing access to course offerings, offering courses in modules or “short bursts”, providing more flexible timelines (allowing students to work at their own pace) to meet course objectives, offering courses immediately before or after NP conferences).
2. To increase visibility of the NP CE courses (especially the modules), a multi-pronged marketing strategy should be put in place (e.g., information on the web, electronic posters, mailing to graduates of the NP program, NPAO).
3. The learning needs of the NPs should be assessed regularly (e.g., every other year) to ensure that the courses being offered are relevant to NP practice.

Content of CE Offerings

4. The environmental scan revealed the existence of numerous CE opportunities. A database that includes all NP CE opportunities should be made available to NPs; this database should be kept up-to-date and should be easily accessible through the NPAO and COUPN websites. It should be clear whether these CE opportunities are available for all RNs or only NPs.
5. NPs identified mental health, chronic disease/chronic care, specialty care (e.g., neurology, dermatology), updates (e.g., innovations, drug updates), and women’s health as learning

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priorities as well as interpretation of laboratory and diagnostic tests, pain control strategies, prescribing narcotic medications, and early detection and screening for cancer. While CE in mental health is a need for NPs, this course has not been offered in the last 3 years. CE initiatives to address these learning needs at a post-licensure level are required.

6. Pharmacotherapeutics was in high demand and yet time intensive and content heavy. Strategies to ensure ready and flexible access to this course are required (e.g., modules).
7. Some of the existing courses are time and content intensive and may need to be lengthened, divided into two courses, or have fewer readings. For example, the *Care of the Older Adult* and the *Mental Health in PHC* courses are very time-intensive.
8. NPs were interested in interprofessional CE. Groups such as CASN are involved in initiatives to promote interprofessional education and the environmental scan revealed existing interprofessional continuing education opportunities. COUPN may wish to explore these opportunities and either inform NPs about them or build on them.
9. Since the OSCE is common to many courses, material describing the OSCE should be included on the COUPN CE website rather than taking course time to describe it.
10. NP CE learners want access to learning that is relevant and not time-intensive. Therefore, the majority of the COUPN NP CE offerings should be made in the form of short bursts (i.e. modules) that address a specific topic and respond to the needs of NPs. The modules should be self-contained rather than students “dropping in” for one week of a full course’s content.
11. To augment CE offerings, simulation activities, including virtual patients, could be used more readily.

Delivery of CE Offerings

12. The challenge is facilitating access to CE opportunities through distance modalities and meeting learner needs for face-to-face contact with instructors. COUPN may want to consider combined approaches (e.g., on-line followed by a 2-day workshop).
13. To improve access to content of COUPN CE offerings, allow learners to have online access to the modules beyond the one-week timeframe. This includes allowing students to complete pre-learning before entering on-line discussions.
14. The COUPN NP CE offerings use a robust, multi-modal delivery style; however, ongoing faculty support for learners must also be provided to accommodate learning.

Credit for CE Completion

15. Many NPs indicated an interest in earning credit towards a graduate degree or speciality certification. Should there be a possibility of moving in this direction, the student evaluation methods would need to be consistent with graduate level expectations.

Evaluation of CE Offerings

16. Learners should be asked for feedback immediately upon completing CE courses to improve their recall regarding their experiences. COUPN should also consider conducting a prompt follow-up telephone interview or written evaluation with all students who drop out of CE courses to understand their rationale for leaving.

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7. Did you know that COUPN offers the following NP CE courses?

| | | | | |
|--------------------------------------|--------------------------|-----|--------------------------|----|
| Pharmacotherapeutics | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Rural and remote health | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Mental health in primary health care | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Care of the older adult | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Fundamentals or primary health care | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

8. Do you intend to take any of these courses in the next 24 months?

Yes → *If yes, which ones?* _____

No → *If no, could you please tell us why not?* _____

9. Did you know that the current CE-NP Program offers:

A full course option Yes No
 Topic specific modules that match learning needs Yes No

10. Below is a list of possible delivery methods and credit-related statements regarding CE offerings. For each statement, please indicate your level of interest by placing an X in the appropriate box.

| Delivery method/CE credit | Not at all interested | Moderately interested | Very interested |
|--|--------------------------|--------------------------|--------------------------|
| offered as a course over 13 weeks for 2-3 hours a week to fully cover a topic (e.g., issues in mental health) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered as modules with a specific focus on a more narrow topic (e.g., depression in adolescents) over a shorter time (e.g., 1-2 days) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered during work hours | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered during evenings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered in the spring | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered in the summer | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered in the fall | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered in the winter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered via face-to-face with instructor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered through distance modalities (e.g. teleconference, web conference) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered through a combination of face-to-face and distance modalities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered in English | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| offered in French | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| contributes towards graduate degree credit | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| contributes to eligibility for CNA certification in specialty area | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. Would you be interested in participating in *inter-professional* CE activities? No Yes

Appendix B

Online NP Continuing Education Survey

1. Which of the following best describes your position? (select all that apply)

- NP- Child (awaiting registration)
- NP- Adult (awaiting registration)
- NP- Primary Health Care
- NP- Family all ages
- Staff / General Duty Nurse
- Educator / Faculty
- Outpost Nurse
- Retired
- Currently not employed
- Other *(Please specify)*

For this survey, your Main Practice is where you work for more than half of your work hours in an average month. Please consider your Main Practice when answering the following questions

2. Which of the following best describes your present employment status for your main practice?

- Full-time, permanent
- Full-time, contract
- Part-time, permanent
- Part-time, contract
- Casual
- Self-employed
- Other *(Please specify)*

3. Which of the following have you completed? (select all that apply)

- Diploma RN
- BScN/BA/BN
- COUPN NP Certificate Program
- NP program outside of Ontario (Please specify **Province** ___ or **State** ____)
- Masters
- Masters NP
- PhD
- Other *(Please specify)*

4. Which Local Health Integrated Network (LHIN) do you currently practice in?

- Erie St. Clair
- South West
- Waterloo Wellington
- Hamilton Niagara Haldimand Brant
- Central West
- Mississauga Halton
- Toronto Central
- Central
- Central East
- South East
- Champlain
- North Simcoe Muskoka
- North East
- North West
- Other (*specify*) _____

5. How many years of experience do you have as an RN only? _____

6. How many years of experience do you have as a Nurse Practitioner? _____

7. Are you registered as an RN(EC)? Yes No

8. How important is continuing education (CE) to your own NP practice?

| | | | | |
|----------------------|--------------------|----------------------------------|-----------|---------------------|
| not at all important | somewhat important | neither important or unimportant | important | extremely important |
| 1 | 2 | 3 | 4 | 5 |

9. Have you experienced barriers to participating in COUPN NP CE courses?

| |
|------------------------------|
| <input type="checkbox"/> Yes |
| <input type="checkbox"/> No |

If your answer to **Q9** is “**Yes**”, then please answer **Q10** below.

If your answer to **Q9** is “**No**”, then do not answer Q10 below and **proceed to Q11**.

10. What were the barriers to COUPN NP CE? (select all that apply)

- Lack of finances and/or financial support
- Lack of access to (or difficulty accessing) educational resources (eg. library)
- Difficulty taking time off work and/or away from patient care
- Family obligations (time away from family)
- Lack of CE topics and/or courses relevant to my needs
- Lack of information about CE offerings
- Lack of access to distance education technology requirements (e.g., internet, teleconferencing, virtual classroom, webcam)
- Fatigue
- Difficulty learning in an on-line format
- Courses are time intensive
- Other *(Please specify)*

11. Since 2004, have you enrolled in one of the following full CE courses offered by COUPN?

- | | | | | |
|---|--------------------------|-----|--------------------------|----|
| Pharmacotherapeutics (full course-includes all 13 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Rural and remote health | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Mental health in primary health care (full course-includes all 11 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Care of the older adult (full course-includes all 11 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Fundamentals or primary health care (full course-includes all 11 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

12. Did you complete the full COUPN CE courses in which you enrolled?

- | | | | | |
|---|--------------------------|-----|--------------------------|----|
| Pharmacotherapeutics (full course-includes all 13 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Rural and remote health | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Mental health in primary health care (full course-includes all 11 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Care of the older adult (full course-includes all 11 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Fundamentals or primary health care (full course-includes all 11 modules) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

13. Have you registered for any independent modules of the following CE courses offered by COUPN?

- | | | | | |
|--------------------------------------|--------------------------|-----|--------------------------|----|
| Pharmacotherapeutics | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Rural and remote health | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Mental health in primary health care | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Care of the older adult | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Fundamentals or primary health care | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

Q13a-Q13e relate directly to your response to **Q13**. If your answer to any of the 5 options in **Q13** is “yes”, then please complete the corresponding question below.

13a. Which modules have you completed in the Pharmacotherapeutics course?

1 2 3 4 5 6 7 8 9 10 11 12 13

13b. Which modules have you completed in the Rural and Remote Health course?

1 2 3 4 5 6 7 8 9 10 11

13c. Which modules have you completed in the Mental Health in Primary Health Care course?

1 2 3 4 5 6 7 8 9 10 11

13d. Which modules have you completed in the Care of the Older Adult course?

1 2 3 4 5 6 7 8 9 10 11

13e. Which modules have you completed in the Fundamentals of Primary Health Care course?

1 2 3 4 5 6 7 8 9 10 11

14. What is your overall impression of each COUPN NP CE course you have taken so far (whether modular or full)? Please circle your response.

| | Pharmaco-therapeutics | Rural and Remote Health | Mental Health in Primary Health Care | Care of the Older Adult | Fundamentals or Primary Health Care |
|--|------------------------------|--------------------------------|---|--------------------------------|--|
| Quality of Course (1=poor; 5=excellent) | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 |
| Applicability of Course to NP Practice (1=poor; 5=excellent) | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 |
| Did the knowledge you gained from the course assist you in your NP role? | Yes No | Yes No | Yes No | Yes No | Yes No |
| Was the course worth the financial cost? | Yes No | Yes No | Yes No | Yes No | Yes No |
| Was the course worth your time? | Yes No | Yes No | Yes No | Yes No | Yes No |

15. If you did not complete the full non-modular COUPN CE courses in which you enrolled, please indicate your reasons for non-completion (*Select all that apply*)

| | Pharmaco-therapeutics | Rural and Remote Health | Mental Health in Primary Health Care | Care of the Older Adult | Fundamentals or Primary Health Care |
|--|------------------------------|--------------------------------|---|--------------------------------|--|
| Too difficult | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Balancing work/study demands | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Technical difficulties (e.g. dial-up internet) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Educational approach not appealing | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Required too much time | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Too costly | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Content not relevant | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Personal reasons | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (specify) | _____ | _____ | _____ | _____ | _____ |

16. If you are someone who has taken both modular and full courses, please state the advantages and disadvantages of both.

a. Pharmacotherapeutics

Advantages of Full Non-Modular Courses

Advantages of Modular Courses

Disadvantages of Full Non-Modular Courses

Disadvantages of Modular Courses

b. Rural and remote health

Advantages of Full Non-Modular Courses

Advantages of Modular Courses

Disadvantages of Full Non-Modular Courses

Disadvantages of Modular Courses

c. Mental health in primary health care

Advantages of Full Non-Modular Courses

Advantages of Modular Courses

Disadvantages of Full Non-Modular Courses

Disadvantages of Modular Courses

d. Care of the older adult

Advantages of Full Non-Modular Courses

Advantages of Modular Courses

Disadvantages of Full Non-Modular Courses

Disadvantages of Modular Courses

e. Fundamentals or primary health care

Advantages of Full Non-Modular Courses

Advantages of Modular Courses

Disadvantages of Full Non-Modular Courses

Disadvantages of Modular Courses

17. What other CE activities and/or courses (not offered by COUPN) have you engaged in to assist you in enacting your NP role since 2004? (check all that apply)

- Provincial/ Regional NPAO Conferences
- Pharmaceutical sponsored dinners
- Primary Care Today/Primary Care Update Conferences
- Saturday at the University, University of Toronto
- Practice Based Learning Program (PBLP) McMaster University
- Local hospital sponsored workshops
- University affiliated workshops
- Other *(Please specify)*

18. Which current COUPN NP CE courses would you consider taking in the future, as a module or full course?

- Pharmacotherapeutics
- Rural and remote health
- Mental health in primary health care
- Care of the older adult
- Fundamentals or primary health care
- None

19. If offered, would you be interested in CE courses in the following topics? (check all that apply)

| | Yes | No |
|--|--------------------------|--------------------------|
| Cancer prevention | <input type="checkbox"/> | <input type="checkbox"/> |
| Early detection and screening for cancer | <input type="checkbox"/> | <input type="checkbox"/> |
| Follow-up care for patient who have completed cancer treatment | <input type="checkbox"/> | <input type="checkbox"/> |
| Palliative Care | <input type="checkbox"/> | <input type="checkbox"/> |
| Pain Control Strategies | <input type="checkbox"/> | <input type="checkbox"/> |
| Prescribing Narcotic Medications | <input type="checkbox"/> | <input type="checkbox"/> |
| Program Planning and Evaluation | <input type="checkbox"/> | <input type="checkbox"/> |
| Well Women Care | <input type="checkbox"/> | <input type="checkbox"/> |
| Interpretation of laboratory and diagnostic tests | <input type="checkbox"/> | <input type="checkbox"/> |

20. What delivery method would you prefer for CE courses? (check all that apply)

| | Yes | No |
|---|--------------------------|--------------------------|
| On-line self directed format | <input type="checkbox"/> | <input type="checkbox"/> |
| On-line lecture series | <input type="checkbox"/> | <input type="checkbox"/> |
| Classroom lectures | <input type="checkbox"/> | <input type="checkbox"/> |
| Intensive seminars (e.g. 2 day workshops) | <input type="checkbox"/> | <input type="checkbox"/> |
| Problem based group learning | <input type="checkbox"/> | <input type="checkbox"/> |
| NPAO conferences | <input type="checkbox"/> | <input type="checkbox"/> |

21. Are there other topics you would like COUPN to develop CE courses on?

- Yes No

22. Please specify the topics you would like to see developed.

- a.
- b.
- c.
- d.

23. How do you learn about COUPN course offerings? (Check all that apply)

- Email
- Written documents (hard copy)
- News You Can Use
- Website (i.e. NPAO)
- Other (specify) _____

24. What is the most effective method to inform NPs about future COUPN course offerings? (Check all that apply).

- Email
- Written documents (hard copy)
- News You Can Use
- Website (i.e. NPAO)
- Other (specify) _____

25. We would like to discuss the topic of NP CE with you. It is important that your viewpoint is captured in this study and we value your unique perspective. Would you be interested in participating in an in-person or telephone interview at your convenience lasting 30-45 minutes to share your thoughts on COUPN CE courses?

- Yes No

If “Yes”, please provide us with *one* of the following so that we can provide you with more information.

| | |
|----------------------------------|--|
| E-Mail | |
| Name and mailing address | |
| Telephone number (for interview) | |

| |
|---------------------|
| Demographics |
|---------------------|

26. Sex Female Male

27. Year of birth _____ (eg. 1980)

28. Language preference English French

| |
|---|
| If you have questions about this survey, please feel free to contact Tracey Chambers, Research Assistant, at (905) 525-9140 x27533 or by e-mail: chambt@mcmaster.ca |
|---|

Thank you for taking part in this study!

Appendix C

Environmental Scan: Organizations Contacted/Web Sites Searched

| Name of Organization | Web Site | Email Contacted/Date | Response |
|---|---|--|---|
| Northern Ontario School of Medicine (NOSM) | http://www.normed.ca/ | nosm@normed.ca | -Not offering; suggested Laurentian University |
| Ontario Telemedicine Network (OTN) [Independent, not for profit] | http://www.otn.ca/ | otninfo@otn.ca | -Expect that NPs attend CE learning opportunities offered; however do not keep this type of data at the present time. |
| <p>Description: As of April 1, 2006 <i>NORTH Network</i> merged with Ontario's two other regional telehealth service providers: Videocare (Southwestern Ontario) and Careconnect (Eastern Ontario) to form the Ontario Telemedicine Network</p> | | | |
| <p>Continuing Education & Training Opportunities:</p> <ul style="list-style-type: none"> ▪ Types of education supported via telemedicine include continuing professional and student education, offered as in-services, grand rounds and professional mentoring. ▪ Search Events Calendar to determine what is being offered. As a Network, it hosts events that are developed by others, but does not maintain the data. The Events Calendar provides some information about sessions, etc. but learner must contact the individual/organization conducting the session to determine details. <p>To illustrate the variety of topics presented, the sessions offered since 2007 have included [Online Events Calendar]: Oncology RN Education Rounds Pediatic Grand Rounds - Topic: Nutritional Aspects in Hospitalized Pediatric Patients New Strategy to Address Systolic & Diastolic Heart Failure Obstetrics and Gynecology - Topic: Smoking Cessation Program eHealthRisk-Opportunity Report Card Workshop at Waterloo Institute for Health Informatics Research: "Give These Kids a Brake! - An Overview of CPRI's Brake Shop Service for Tourette Syndrome and Associated Disorders"</p> | | | |
| Ontario Hospital Association | www.oha.ca | Marisa Bavaro (416) 205-1309 or e-mail: mbavaro@oha.com | |
| <p>Under "Correspondence Courses" http://www.oha.com/Client/OHA/OHA_LP4W_LND_WebStation.nsf/page/Correspondence+Courses OHA has a variety of distance learning products and services that are designed to integrate and enhance our established educational offerings. These initiatives include the use of modern communications technology to connect with members across the province including Webcasts, Videoconference sessions, the launch of new Online Education and the production of informational CD-ROMs. OHA will continue to offer a full catalogue of Home Study & Correspondence Courses and access to regional programs.</p> | | | |
| College of Nurses of Ontario | www.cno.org | Telephone: 416 928-0900 | No CE education courses specifically offered for NPs through College of Nurses of Ontario |
| <p>Notes: On Aug. 29, 2007, CNO gained the authority to regulate three new Nurse Practitioner specialties: NP-Pediatrics, NP-Adult and NP-Anesthesia. Under the new regulations, the title Nurse Practitioner is protected, meaning it is available only to members registered in the Extended Class.</p> | | | |

| | | |
|--|---|---|
| Nurse Practitioners' Association of Ontario [NPAO] | http://www.npao.org/ | jsanders@npao.org 416-593-9779 |
| <p>Notes: Jane Sanders provided access to the NPAO website membership area and sent an email to seven regional representatives who she knows are doing CE for NPs in an informal manner. She indicated that CE for NPs is divided up into two streams—conferences and other CE courses/seminars/workshops.</p> | | |
| Council of Ontario University Programs in Nursing | http://ohs.cou.on.ca/ | |
| <p>Continuing Education for Nurse Practitioners Web Site http://np-education.ca/ce/</p> <p>With support from the Ministry of Health and Long Term Care, five <i>Continuing Education for Nurse Practitioners</i> courses will be offered in January 2008.</p> <p>Courses offered starting January 14th, 2008:</p> <ul style="list-style-type: none"> Fundamentals of Primary Health Care (English only) Pharmacotherapeutics in Primary Health Care (offered in English and in French) Care of the Older Adult in Primary Health Care Course Description (Please note that modules 12 and 13 are not available to part-time course registrants as these are clinically based modules. These modules are accessible to full time learners only. (offered in English and in French) <p>Future Course may include:</p> <ul style="list-style-type: none"> Issues in Mental Health in Primary Health Care Course Description (Please note that modules 12 and 13 are not available to part-time course registrants as these are clinically based modules. These modules are accessible to full time learners only). Rural and Remote Health: Care of Clients with Urgent and Emergent Health Concerns Course Description (Please note that modules 12 and 13 are not available to part-time course registrants as these are clinically based modules. These modules are accessible to full time learners only). | | |

Webliography

| Organization | URL | Active/Inactive |
|---|--|-----------------|
| Advanced Cardiac Life Support | www.acls.net | Active |
| Advanced Cardiac Life Support (ACLS) | www.acls.net | Active |
| Algoma District Community Network | www.adnetalgoma.ca | Active |
| Athabasca University | www.athabasca.ca | Inactive |
| Athabasca University | www.athabascau.ca | Active |
| Audio-Digest Foundation | www.audio-digest.org | Active |
| Canada's Campus Connection | www.campusconnection.ca | Active |
| Canada's SchoolNet | www.schoolnet.ca | Inactive |
| Canadian Association for Distance Education (CADE) | www.cade-aced.ca | Inactive |
| Canadian Hearing Society (CHS) | www.chs.ca | Active |
| Career PATH | http://careerpath.tv.o.org | Inactive |
| Center for Addiction and Mental Health | www.camh.net | Active |
| College of Nurses of Ontario (CNO) | www.cno.org | Active |
| Community Access Program (CAP) Industry Canada | http://cap.ic.gc.ca | Active |
| Contact North | http://www.cnorth.edu.on.ca/cnorth | Active |
| Council of Ontario University Programs (COUPN) | www.cou.on.ca | Active |
| From Now On (FNO) The Educational Technology Journal | www.fno.org | Active |
| Heal Net | http://hiru.mcmaster.ca | Active |
| Health Canada – Office of Health and the Information Highway – Nursing in First Nations Communities | www.hc-sc.gc.ca | Active |
| HealthStream | www.healthstream.com or www.cmecourses.com | Active |
| Keewaytinook Okimakanak Health Services | www.health.knet.ca | Active |
| Kirkland and District Hospital | www.kdhospital.com | Active |
| K-net Keewaytinook | www.knet.ca/knet.html | Active |
| Ministry of Education | www.edu.gov.ca | Inactive |
| Nishnabe-Aski First Nations | http://communities.knet.ca | Active |
| Northeastern Ontario Medical Education Corporation (NOMECE) | www.nomece.on.ca | Active |
| Northern Ontario Remote Telecommunication Health Network (NORTH Network) | www.northnetwork.com | Active |
| Nurse Practitioners' Association of Ontario (NPAO) | www.npao.org | Active |
| Ontario Council for University Lifelong Learning (OCULL) | www.ocull.ca | Active |
| Ontario Hospital Association (OHA) | www.oha.com | Active |
| Ontario Library Association | www.accessola.com | Active |
| Ontario Library Services North | www.olsn.on.ca/olsn/northlibs | Inactive |
| OntarioLearn | www.ontariolearn.com | Active |
| Regional Networks of Ontario | www.rno.on.ca | Active |
| RNAO Registered Nurses Association of Ontario | www.rnao.org | Active |
| Schoolnet | http://schoolnet.ca | Inactive |
| Southwestern Ontario Rural Medicine | www.sworm.on.ca | Inactive |
| The NODE Canlearn (Network of Ontario Distance Educators) | www.thenode.canlearn.ca | Inactive |
| The NODE Learning Technologies Network | http://thenode.org or http://node.on.ca | Active |
| TVOntario | www.tvontario.org | Active |

| Ontario Universities | | |
|---------------------------------|---|----------|
| Brock University | http://www.brocku.ca | Active |
| Carelton University | http://www.carleton.ca | Active |
| University of Guelph | http://www.uoguelph.ca | Active |
| Lakehead University | http://www.lakeheadu.ca | Active |
| Laurentian University | http://www.laurentian.ca | Inactive |
| McMaster University | http://www.mcmaster.ca | Active |
| Nipissing University | http://www.unipissing.ca | Inactive |
| Ontario College of Art & Design | http://www.ocad.on.ca | Active |
| University of Ottawa | http://www.uottawa.ca | Active |
| Queen's University | http://inof.queens.ca | Inactive |
| Royal Military College | http://www.rmc.ca | Active |
| Ryerson Polytechnic University | http://www.ryerson.ca | Active |
| University of Toronto | http://www.utoronto.ca | Active |
| Trent University | http://www.trentu.ca | Active |
| University of Waterloo | http://www.uwaterloo.ca | Active |
| University of Western Ontario | http://www.uwo.ca | Active |
| Wilfrid Laurier University | http://www.wlu.ca | Active |
| University of Windsor | http://www.uwindsor.ca | Active |
| York University | http://www.yorku.ca | Active |

| Ontario Colleges | | |
|--|--|----------|
| Algonquin College of Applied Arts and Technology | www.algonquinc.on.ca | Inactive |
| Cambrian College of Applied Arts and Technology | www.cambrianc.on.ca | Active |
| Canadore College of Applied Arts and Technology | www.canadorec.on.ca | Active |
| Centennial College of Applied Arts and Technology | www.cencol.on.ca | Active |
| College Boreal | www.borealc.on.ca | Active |
| Conestoga College of Applied Arts and Technology | www.conestogac.on.ca | Active |
| Confederation College of Applied Arts and Technology | www.confederationc.on.ca | Active |
| Durham College of Applied Arts and Technology | www.durhamc.on.ca | Active |
| Fanshawe College of Applied Arts and Technology | http://www.fanshawec.ca/EN | Active |
| George Brown College of Applied Arts and Technology | www.gbrownc.on.ca | Active |
| Georgian College of Applied Arts | www.georgianc.on.ca | Active |
| Humber College of Applied Arts and Technology | www.humberc.on.ca | Active |
| La Cité collégiale | www.lacitec.on.ca | Active |
| Lambton College of Applied Arts and Technology | www.lambton.on.ca | Active |
| Loyalist College of Applied Arts and Technology | www.loyalistic.on.ca | Active |
| Mohawk College of Applied Arts and Technology | www.mohawk.on.ca | Inactive |
| Niagara College of Applied Arts and Technology | www.niagarac.on.ca | Active |
| Northern College of Applied Arts and Technology | www.northernc.on.ca | Active |
| Sault College of Applied Arts and Technology | www.saultc.on.ca | Active |
| Seneca College of Applied Arts and Technology | www.senecac.on.ca | Active |
| Sheridan College of Applied Arts and Technology | www.sheridanc.on.ca | Active |
| Sir Sanford Fleming College of Applied Arts and Technology | www.flemingc.on.ca | Active |
| St. Clair College of Applied Arts and Technology | www.stclairc.on.ca | Inactive |
| St. Lawrence College of Applied Arts and Technology | www.sl.on.ca | Active |

Continuing Education Opportunities

| Title of Course | Description | URL | Notes |
|---|--|---|---|
| Preparing for Adult and Pediatric Extended Class Exams | NPAO has developed the following chart to help members preparing to write these examinations next spring. Information on a wide range of US based exam preparation programs/services is provided. Please watch this site for additional information on services and supports that NPAO will offer to members. | www.npao.org (members only login section) | |
| mdBriefCase | mdBriefCase is a Canadian only Continuing Medical Education (CME) website dedicated to providing the best quality, accredited and innovative on-line programs covering a wide range of health related topics. These programs are all accredited, interactive and multimedia. They are developed by leading Canadian opinion leaders and academic institutions. | www.mdBriefCase.com | register to do free accreditation courses/tutorials online |
| McMaster University Continuing Health Sciences Education | The Office of Continuing Health Sciences Education offers a wide range of CME opportunities | http://www.fhs.mcmaster.ca/conted/ | Practice Based Ad Hoc Small Group Workshops Upcoming Courses 2006/2007 http://fhs.mcmaster.ca/conted/calendar/flyers/practicebased/adhoc2006sept26.pdf |
| Continuing Education, Faculty of Medicine, University of Toronto | | www.cme.utoronto.ca | |
| Development of the NP Specialist in Headache: A Case Based Method | Target Audience - This activity is intended for nurse practitioners and other advanced practice clinicians involved in the management of patients with headache. | http://activities.scimedmedia.com/npacega | Flash Presentation |

Distance Education CE Learning Opportunities for Nurse Practitioners

| Institution | Degree/Certificate/Course | Program/Course Objectives | Courses Offered related to Needs of NPs |
|---|--|---|---|
| Athabasca University | Post-RN Bachelor of Nursing http://www.athabasca.ca/cnhs/ug_rn_bn.php | The post-RN BN program is designed to provide the registered nurse with the opportunity to acquire a broad liberal university education. Particular emphasis is placed on acquiring advanced knowledge and clinical practice skills related to primary health care, leadership, management, family and community health promotion. | The courses selected below are based on NP environmental scan in 2002 needs assessment identified by NPs: 1. Community Health Promotion 2. Family Health Promotion 3. Teaching and Learning for Health Professionals 4. Home Health Nursing 5. Trends and Issues in Nursing and Health Systems 6. Management and Leadership in Nursing Practice |
| Cambrian College (705) 560-0330 continuing@cambridriancollege.ca | 1. Diabetes Education Modules | There are six (6) modules in total in this distance education continuing education diabetes program offering. | Offered in Continuing Ed as individual modules or certificate. |
| | 2. Registered Nurse-Occupational Health Nursing (RNOH) | Ontario College Graduate/ Certificate Continuing Education: The Occupational Health Nursing Program is designed for the registered nurse working in an occupational health care setting or who wishes to work as an occupational health nurse. The program moves from general concepts of occupational health towards specific information that deals with assessing, analyzing and diagnosing problems in the workplace and with the worker. | Ontario Certificate Continuing Education |
| | 3. Diabetes Education and Care (DICT) | Certificate/Continuing Education: This certificate program , designed in collaboration with the Northern Diabetes Health Network, is available only to certain regulated health care professionals. It will cover topics such as disease process, management of diabetes, | Program of Study * DEC 1000 Module I: Diabetes: The Basics * DEC 1001 Module II: Intro. To Diabetes Education * DEC 1002 Module III: Living With |

| Institution | Degree/Certificate/Course | Program/Course Objectives | Courses Offered related to Needs of NPs |
|------------------------------|---|--|--|
| | | patient education, living diabetes, and special issues with diabetes. The program includes two fieldwork components. | Diabetes * DEC 1004 Module V: Special Issues With Diabetes * DEC 1003 Module IV: Diabetes Fieldwork I * DEC 1005 Module VI: Diabetes Fieldwork I |
| Loyalist College | Working and Communicating in a Medical Setting | Learn theory and techniques for successful verbal and non-verbal communication and effective work skills, including communication systems, ethical behavior, confidentiality, stress and time management, hospital organization, human relations. | May 9, 2008 to Aug. 15, 2008 |
| Confederation College | Diabetes Education | This post graduate certificate program offers a firm foundation in current clinical approaches to diabetes education. It is designed for Registered Nurses and Registered Dietitians who wish to specialize in the field of diabetes education. This program is an excellent step towards certification with the Canadian Diabetes Association as a Certified Diabetes Educator. To receive an application for this program, contact our office (807) 473-3782. Health Care Professionals are welcome to take the first 4 theory courses but would not be eligible for the Fieldwork component. Individual certificates will be issued for the 4 theory courses upon successful completion. | * WR440 - Diabetes: The Basics * WR441 - Introduction to Patient Education * WR442 - Living with Diabetes * WR444 - Special Issues in Diabetes * WR446 - Fieldwork I for RN and RD * WR447 - Fieldwork II for RN and RD |
| Durham College | 1. Mental Health Rehabilitation Certificate 2. Gerontology-RN, RPN, PSW, HCA Certificate | | |

| Institution | Degree/Certificate/Course | Program/Course Objectives | Courses Offered related to Needs of NPs |
|--------------------|--|----------------------------------|--|
| | 3. Palliative Care Certificate 4. Oncology Nursing RN/RPN Certificate 5. Occupational Health & Safety Nursing RN Certificate 6. Dementia Studies Multidisciplinary Graduate Certificate | | |

| Care of Older Adult | Fundamentals of PHC | Mental Health in PHC |
|---|---|---|
| <p>Purpose & Description</p> <p>Assessment:</p> <ul style="list-style-type: none"> ▪ Overall purpose is not specifically stated as such but it is apparent in the Course Description – Care of the Older Adult is aimed at.... ▪ Overall description of the course is lengthy and does not necessarily describe the course but presents as a number of statements about older adult care ▪ Course Organization is structured using Gordon’s Functional Health Patterns within the context of 10 modules – also contains elements of course description as state Care of the Older Adult focuses on.... ▪ Extensive overviews for each module are provided but present more in the way of content rather than purpose and description of each module <p>Suggestions:</p> <ul style="list-style-type: none"> ▪ Develop explicit purpose statement by addressing what is the main reason or intent of this course ▪ Address the scope of the course by providing a brief overall course description once all the modules are completed. ▪ Add to the course description preparation and participation expected, learning experiences and/or modalities as well as time expectations ▪ Revise each module overview to clarify the purpose and description and reduce the content | <p>Purpose and Description</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Purpose of the course from the broader nurse practitioner curriculum is imbedded in the Words of Welcome section • Course Description includes pertinent points of information such approach, format, evaluation and facilitator role • Note in Words of Welcome states an eight week course and under Course Description a thirteen week course <p>Suggestions</p> <ul style="list-style-type: none"> • Develop explicit purpose of the course statement by addressing what is the main reason or intent of the course • Include scope of the course under course description • Address consistency in course length | <p>Purpose and Description</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Overall purpose of the course is not explicitly stated although indicate that course is aligned within the nurse practitioner curriculum and that the course “will assist NP’s....” • Course Description focuses on approach to the on-line modules including preparation, nature of the module, expectation of students <p>Suggestions</p> <ul style="list-style-type: none"> • Develop explicit purpose of the course statement by addressing what is the main reason or intent of the course • Provide a brief course description outlining the scope of the course • Add time expectations |
| <p>Course Goals</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Course goal is described under Course Description <ul style="list-style-type: none"> • Include overall Learning Outcomes although in modules use term competencies • Expected or related competencies are included for modules and sub- modules but not consistently done throughout the course <p>Suggestions:</p> | <p>Course Goals</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Learning Outcomes represent the overall course and module goals and include desired learning <p>Suggestions</p> <ul style="list-style-type: none"> • Consider altering Learning Outcomes to competencies in order to be consistent with current thought | <p>Course Goals</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Learning Outcomes represent the overall course and module goals and includes desired learning • Incorporates learning domains in module Learning Outcomes <p>Suggestions</p> <ul style="list-style-type: none"> • Consider altering learning outcomes to competencies in |

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| <ul style="list-style-type: none"> • Formulate overall or general course goals • Be consistent in use of terms such as learning outcomes, competencies • Consider using competencies instead of learning outcomes to be consistent with current thought • Ensure that expected or related competencies are completed for each overall module and each sub-module • Consider what concepts, processes and context for goal achievement should course goals reflect | | <p>keeping with current thought</p> <ul style="list-style-type: none"> • Note that on occasion use “should” instead of “will be able to” |
| <p>Teaching Strategies Assessment:</p> <ul style="list-style-type: none"> • Evidence of a variety of teaching strategies such as discussion, course facilitation, newsgroups and virtual classroom • Noted in overall student evaluations of courses that they do not use the newsgroups very often <p>Suggestions:</p> <ul style="list-style-type: none"> • Explore effectiveness of teaching strategies to ensure best practices • Explore strategies to enhance use of newsgroups if necessary | <p>Teaching Strategies Assessment:</p> <ul style="list-style-type: none"> • Evidence of a variety of teaching strategies including course facilitation for peer discussion etc and various distant education modalities • Overall student evaluation for courses indicate do not use the newsgroups very often <p>Suggestions</p> <ul style="list-style-type: none"> • Continue to ensure that teaching strategies align with delivery method, course goals, student learning needs and promote active learning • Explore effectiveness of teaching strategies to ensure use of best practices • Explore strategies to enhance use of newsgroups if necessary | <p>Teaching Strategies Assessment:</p> <ul style="list-style-type: none"> • Evidence of a variety of teaching strategies in keeping with distance education, such as the module approach, chat, newsgroups etc • Noted in overall student evaluations of the courses that they do not use the newsgroup very often <p>Suggestions</p> <ul style="list-style-type: none"> • Explore effectiveness of teaching strategies to ensure best practices • Explore strategies to enhance use of newsgroups if necessary |
| <p>Content Assessment:</p> <ul style="list-style-type: none"> • Each module presented consistently using headings Overview of the Module, Expected Competencies, Assigned Readings and References/Additional Resources • Online Activities provide detailed content for each module • Overall student evaluations of | <p>Course Content Assessment:</p> <ul style="list-style-type: none"> • Each module outlined consistently using headings Overview of Module, Learning Objectives, Assigned Reading, References and Online Activities • Content is priority core content from the COUPN Primary Health Care Program | <p>Course Content Assessment:</p> <ul style="list-style-type: none"> • Each module outlined consistently using headings Overview of the Module, Learning Outcomes, Assigned Reading, References, Highlights of the Module and Online Activities • Integration of course content and readings |

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| <p>courses indicate concern with the extent of the content and readings to be covered in a module</p> <p>Suggestions</p> <ul style="list-style-type: none"> Keep in mind that content should be the most pertinent | <ul style="list-style-type: none"> No on-line content as questions and case studies are used to apply assigned reading material Overall student evaluations for courses have indicated concern with extent of course content and readings <p>Suggestions</p> <p>Review that content from assigned readings etc is the most pertinent</p> | <p>with on-line activities</p> <ul style="list-style-type: none"> Overall student evaluations for courses have indicated concern regarding the extent of the content and readings for each module <p>Suggestions</p> <ul style="list-style-type: none"> Review assigned readings and content to ensure most pertinent chosen |
| <p>Student Learning Activities: Assessment:</p> <ul style="list-style-type: none"> Online Learning Activities such as short case studies, multiple choice questions etc are used <p>Suggestions</p> <ul style="list-style-type: none"> Review education research literature to ensure most effective and additional/alternative activities are considered | <p>Student Learning Activities Assessment:</p> <ul style="list-style-type: none"> Abundance of student learning activities that involve active engagement of the students through various on-line discussions, learning assignments using case studies with multiple choice questions, short answer questions etc, self-directed learning focus, on-line student activities <p>Suggestions</p> <ul style="list-style-type: none"> Review education research literature to ensure most effective learning activities are used | <p>Student Learning Activities Assessment:</p> <ul style="list-style-type: none"> Student learning activities involve active engagement of students as each module includes discussion points, reflections, questions, exercises, examples, chat room discussion guide, evaluation of own Progress toward Learning Objectives, learning activity of short answer, true and false questions, cases etc at the end of each module <p>Suggestions</p> <ul style="list-style-type: none"> Review education research literature to ensure most effective student learning activities are used |
| <p>Evaluation of Student Learning – Summative Assessment:</p> <ul style="list-style-type: none"> Module Post Tests consisting of 25 multiple choice questions and Objective Structured Clinical Examination (OSCE) are used Both are considered reliable and valid evaluation measures Several queries about OSCE – realistic time frame to complete what is expected?, how discern what is worth 1, 2, or 5 points?, can Clinical Evaluation Ability be incorporated into OSCE | <p>Evaluation of Student Learning - Summative Assessment:</p> <ul style="list-style-type: none"> Module Post Tests consisting of 15 multiple choice questions (MCQ), case presentation and discussion moderation and the Objective Structured Clinical Examination (OSCE) MCQ and OSCE considered reliable and valid evaluation measures Query rationale for Post Test consisting of 15 MCQs for 80% of the grade – other courses have either 25 questions for a similar percentage or a lower | <p>Evaluation of Student Learning - Summative Assessment:</p> <ul style="list-style-type: none"> Module Post Tests consisting of 15 multiple choice questions (MCQ), assigned case presentation and discussion moderation, the Objective Structured Clinical Examination (OCSE) and a Final Exam (MCQs) Both MCQs and the OCSE are considered reliable and valid measures of evaluation Query rationale of Case |

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| <p>Framework and marking scheme ?, consider the use of Marker questions to complement the Examiner one?</p> <ul style="list-style-type: none"> • Student evaluations of courses address need to be introduced to the OSCE earlier in the course and to receive more immediate feedback on the OSCE <p>Suggestions</p> <ul style="list-style-type: none"> • Complete reliability and validity testing on actual course evaluation measures used if not already done • Consider queries as noted above eg. Each expectation needs to be clear, thus if worth 2 or 5 points each one needs to be listed and checked off when completed • Can OSCE be introduced in mid-course as a formative measure? • Immediate feedback can be provided following completion of OSCE as Examiner checklist has been completed – one of the strengths of the OSCE | <p>percentage – besides consistency across courses will 15 questions suffice to assess learning?</p> <ul style="list-style-type: none"> • Query rationale of Case Presentation in terms of 5% grade allocation and also need evaluation criteria • Query OSCE as to realistic time frame to complete what is expected, how discern what is worth 1, 2 or 5 points, can Clinical Evaluation Ability be incorporated into OSCE Framework and marking scheme and consider the use of Marker questions to compliment the Examiner one • Overall student evaluations for courses address need to be introduced to OSCE earlier in the course and to receive more immediate feedback on the OSCE <p>Suggestions</p> <ul style="list-style-type: none"> • Complete reliability and validity testing for actual evaluation measures used in course if not completed already • Consider queries as noted above for example each expectation on the OSCE needs to be clear, thus if worth 2 or 5 points each one needs to be listed and checked off when completed • Introduce OSCE in mid-course as a formative measure? • Immediate feedback can be provided following completion of the OSCE using the Examiner checklist – one of the strengths of the OSCE | <p>Presentation in terms of 5% grade allocation and also need evaluation criteria</p> <ul style="list-style-type: none"> • Queries of the OSCE include the realistic time frame to complete what is expected, how discern what is worth 1, 2 or 5 points, incorporating clinical Evaluation Ability into OSCE Framework and marking scheme and considering use of Marker questions to complement the Examiner one • Note in overall student evaluations of the courses that want OSCE introduced earlier in the course and to receive more immediate feedback on the OSCE <p>Suggestions</p> <ul style="list-style-type: none"> • Complete reliability and validity testing of MCQ and OSCE used in course if not already completed • Consider queries as noted above for example – each expectation on the OSCE need to be evident, thus if worth 2 or 5 points each one needs to be explicit and checked off by the Examiner when completed • Introduce OSCE in mid-course as a formative measure • Provide immediate feedback following completion of the OSCE using the Examiner Checklist – one of the strengths of the OSCE |

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| <p>Purpose and Description</p> <p>Assessment:</p> <ul style="list-style-type: none"> Overall purpose of the course is not explicitly stated although indicate that course is aligned with the nurse practitioner curriculum Course Description focuses on approach to the on-line modules including preparation, nature of the module, expectations of students and time commitment Course description is imbedded in Words of Welcome <p>Suggestions</p> <ul style="list-style-type: none"> Develop explicit purpose of the course statement by addressing what is the main reason or intent of the course Consider moving course description as stands to Course Description offering an explicit but brief scope of the course | <p>Purpose and Course Description</p> <p>Assessment:</p> <ul style="list-style-type: none"> Overall purpose of the course is not explicitly stated although indicate course is aligned within the nurse practitioner curriculum and the course “is designed to help NPs....” Course Description focuses on approach to the on-line modules including preparation, student expectations, nature of the modules <p>Suggestions</p> <ul style="list-style-type: none"> Develop explicit purpose of the course statement by addressing what is the main reason or intent of the course Add to the course description scope of the course and time commitments |
| <p>Course Goals</p> <p>Assessment:</p> <ul style="list-style-type: none"> Learning Outcomes represent the overall course and module goals including desired learning <p>Suggestions</p> <ul style="list-style-type: none"> Consider changing learning outcomes to competencies in keeping with current thought | <p>Course Goals</p> <p>Assessment:</p> <ul style="list-style-type: none"> Learning Outcomes represent overall course and module goals and include desired learning <p>Suggestions</p> <ul style="list-style-type: none"> Consider altering learning outcomes to competencies in keeping with current thought Note in Module 5 and 6 that “The student will be able to” needs to be deleted as repetitive |
| <p>Teaching Strategies</p> <p>Assessment:</p> <ul style="list-style-type: none"> Evidence of a variety of teaching strategies in keeping with distance education such as the module approach, newsgroups, virtue classroom Noted in overall student evaluations of the courses that the newsgroups are not used very often <p>Suggestions</p> <ul style="list-style-type: none"> Explore effectiveness of teaching strategies to ensure best practices Explore strategies to enhance use of newsgroups if necessary Be more explicit regarding the facilitator’s role under Course Description | <p>Teaching Strategies</p> <p>Assessment:</p> <ul style="list-style-type: none"> Use of a variety of teaching strategies in keeping with distance education including modular approach, chat, newsgroups etc Overall student evaluations of courses reflect that students do not use newsgroups very often <p>Suggestions</p> <ul style="list-style-type: none"> Explore effectiveness of teaching strategies to ensure best practices Explore strategies to enhance use of newsgroups if applicable Add course facilitator role to course description |
| <p>Course Content</p> <p>Assessment:</p> <ul style="list-style-type: none"> Each module starts with an Introduction that includes Start Off: A Quick Reminder of the Process, Overview of Module, Highlights of the Module, Learning Objectives, Assigned Reading, Supplementary Reading, References and Online Activities Online Activities provide detailed content for each module Overall student evaluations of courses indicate concern with extent of course content and | <p>Course Content</p> <p>Assessment:</p> <ul style="list-style-type: none"> Each module outlined consistently with headings under Introduction including Overview of Module, Learning Objectives, Assigned Readings, References and Online Activities Online Activities provide detailed content for each module followed by learning activity Overall student evaluations of the courses indicate concern with extent of content and readings to be covered in a module |

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| <p>readings for each module</p> <p>Suggestions</p> <ul style="list-style-type: none"> Review content and readings to ensure the most pertinent information is included | <p>Suggestions</p> <ul style="list-style-type: none"> Review content and assigned readings to ensure most pertinent included |
| <p>Student Learning Activities</p> <p>Assessment:</p> <ul style="list-style-type: none"> Online Learning Activities include case studies and quizzes using short answer questions etc at the end of each module, newsgroups discussions, overall self-directed learning approach <p>Suggestions</p> <ul style="list-style-type: none"> Review education research literature to ensure most effective learning strategies are used | <p>Student Learning Activities</p> <p>Assessment:</p> <ul style="list-style-type: none"> Self-directed learning approach Learning activities include case studies and quizzes using a variety of question formats On line student activities include newsgroups <p>Suggestions</p> <ul style="list-style-type: none"> Review education research literature to ensure most effective learning activities incorporated |
| <p>Evaluation of Student Learning - Summative Assessment:</p> <ul style="list-style-type: none"> Module Post Tests consisting of 25 multiple choice questions (MCQ) comprise final grade for each module MCQs are a reliable and valid evaluation measure <p>Suggestions</p> <ul style="list-style-type: none"> Helpful to indicate the proportion the grade for each module contributes to the final overall grade Consider completing own reliability and validity testing if not already done | <p>Evaluation of Student Learning – Summative Assessment:</p> <ul style="list-style-type: none"> Module Post Tests consisting of 25 multiple choice questions (MCQ) and the Objective Structured Clinical Examination (OSCE) Both are considered reliable and valid evaluation measures Queries about the OSCE as to realistic time frame to complete what is expected, how discern what is worth 1, 2 or 5 points?, incorporating Clinical Evaluation Ability into OSCE Framework and marking scheme and use of Marker questions to complement Examiner one Student evaluations for courses address the need for the OSCE to be introduced sooner in the course and to receive more immediate feedback <p>Suggestions</p> <ul style="list-style-type: none"> Complete reliability and validity testing on Module Post Tests and OSCE if not already done Consider queries noted above as for example – each expectation on the OSCE needs to be clear, thus if worth 2 or 5 points each point needs to be listed and checked off when completed Consider introduction of OSCE at mid-course as a formative measure Offer immediate feedback following completion of the OSCE using the Examiner checklist – one of the strengths of the OSCE |