

Evaluating Continuing Education for Rural Nurse Practitioners:

Literature Review and Annotated Summary

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Reference	Country	Objective	Research Method	Findings
American College of Nurse Practitioners. (n.d.). Positions Statement on Nurse Practitioner Education. Retrieved 01/22/03 from www.nurse.org/acnp/facts/ed.position.shtml	USA	A position statement on NP education	N/A	<ul style="list-style-type: none"> An overview of direction on American NP education
Andrusyszyn, M. A., Cragg, E. D., & Humbert, J. (2001). Nurse Practitioner Preferences for Distance Education Methods Related to Learning Style, Course Content, and Achievement. <i>Journal of Nursing Education, 40(4)</i> , 163-170.	Canada	Evaluate delivery of the PNCHP program	<ul style="list-style-type: none"> Questionnaire Interviews 	<ul style="list-style-type: none"> No one size fits all methodological approach for all students or all content, therefore consider student preferences and offer several delivery methods
Andrusyszyn, M. A., van Soeren, M., Laschinger, H. S., Goldenberg, D., & DiCenso, A. (1999). Evaluation of Distance Education Delivery Methods for a Primary Care Nurse Practitioner Program. <i>Journal of Distance Education, 14(1)</i> , 14-33.	Canada	Evaluate structure, process, outcome of PNCHP program	<ul style="list-style-type: none"> Questionnaire Focus group Interviews 	<ul style="list-style-type: none"> Participants satisfied with all delivery methods. Developed new technological skill sets Satisfied with face-to-face delivery Increased comfort with computer conferencing Require ongoing technical support
Atkin, K., Hirst, M., Lunt, N. & Parker, G. (1994). The role of self-perceived needs of nurses employed in general practice: Observations from a national census of practice nurses in England and Wales. <i>Journal of Advanced Nursing, 20</i> , 46-52.	England and Wales	Evolving role of NPs and their educational needs.	<ul style="list-style-type: none"> Census Questionnaire N=12,589 questionnaires sent out 81% response rate 	<ul style="list-style-type: none"> The numbers of practice nurses have increased dramatically Their role has also evolved i.e. health promotion, home visiting, advice, counselling Many practice nurses express a need for training but barriers exist Continuing education for practice nurses is important in ensuring practice nurses are fully qualified and trained for the tasks they undertake
Bell, P.F., Daly, J. & Chang, E M. L. (1997). A study of the educational and research priorities of registered nurses in rural Australia. <i>Journal of Advanced Nursing, 25</i> , 794-800.	Australia	Identify the educational and research priorities of registered nurses practising in rural and remote areas of Australia To obtain the most reliable consensus of a group of experts by the use of the Delphi technique	<ul style="list-style-type: none"> Questionnaire Delphi method List of registered nurses working in rural and remote settings 100 RN selected from lists 	<ul style="list-style-type: none"> 13 high priorities were identified Study findings highlight perceived needs for clinical nursing research and continuing education for nurses practising in rural Australia There were significant differences between the responses of rural and remote nurses Data from the study may be used to inform development of continuing education and research programs for the study population and their colleagues The majority of rural health nursing workforce are women and particular attention is needed to ensure equitable access to the training and education resources necessary to maintain their skills and competence

<p>Brooks, E. L., Fletcher, K., & Wahlstedt, P. (1998). Focus Group Interviews: Assessment of Continuing Education Needs for the Advanced Practice Nurse. <i>The Journal of Continuing Education in Nursing</i>, 29(1), 27-46.</p>	<p>USA</p>	<p>3 goals of project:</p> <ol style="list-style-type: none"> 1. describe the process of using focus groups to conduct a needs assessment 2. report findings of focus groups 3. critique the process of using the focus group approach 	<ul style="list-style-type: none"> • Focus groups • 27 female APN participated in 6 focus groups • Questionnaire 	<ul style="list-style-type: none"> • Three major continuing education themes emerged from the content analysis: <ol style="list-style-type: none"> 1. need to enhance clinical practice skills and knowledge in speciality areas 2. education about future changes in the APN role 3. education in management strategies for the changing health care delivery system • Several benefits of using a focus group method for needs assessment were identified • The information was most useful in developing a state-wide calendar of CNE offerings
<p>Caty, S., Tilleczek, K., Pong, R., Michel, I & Lemieux, S. (2002). Assessing Continuing Education Needs of Nurse Practitioners in Northern and Rural Southern Ontario</p>	<p>Canada</p>	<p>Needs assessment of distance education needs of rural/remote NPs</p>	<p>Questionnaire Tracking Data Interviews</p>	<ul style="list-style-type: none"> • Rural and remote NPs in Ontario have educational needs in content and delivery modality. • Content should be geared to practice and involve both clinical and professional issues. • Delivery should be flexible, short and utilize multiple methods
<p>Chaboyer, W., Theobald, K., Pocock, J. & Friel, D. (1997). Critical Care Nurses' Perceptions of Their Educational Needs. <i>Journal of Advanced Nursing</i>, 14(3), 15-20.</p>	<p>Australia</p>	<p>The aim of the study was to investigate Queensland critical care nurses' post-registration education needs and to determine whether nurses working in metropolitan and rural critical care units had different education needs</p>	<ul style="list-style-type: none"> • Questionnaire • Sample drawn from 89 hospitals • Study drew on the 'Madrid consensus' of broad subject areas that should be included in any critical care nursing program 	<ul style="list-style-type: none"> • Most respondents, irrespective of geographic location, wanted critical care education to be located in hospitals and to be accredited as a graduate diploma course • Rural and metro nurses had similar education needs and may worked for hospitals that were not offering adequate orientation or in-service critical care education • Nursing staff turnover was a problem in metro units and that the rural workforce was more stable have implications for the development of education programs • Many hospitals were not meeting their CCU nurses' basic educational needs
<p>Chang E, Daly, J., Bell P., Brown, T, Allan, J., & Hancock, K. (2002). A Continuing Educational Initiative to Develop Nurses' Mental Health Knowledge and Skills In Rural and Remote Areas. <i>Nurse Education Today</i>, 22, 542-551.</p>	<p>Australia</p>	<p>Aim is to describe the development, implementation and evaluation of a mental health continuing education program for nurses employed in rural and remote areas of New South Wales Australia.</p>	<ul style="list-style-type: none"> • A training needs questionnaire • Focus group 	<ul style="list-style-type: none"> • Project was rated very favourably, and represents a cost-effective, convenient method of enabling rural and regional nurses to update and improve their skills in mental health nursing • The evaluation found the program to be very effective and to have met its aims • The project provides a foundation for the development of new models of educational delivery in the future • The project demonstrates how careful planning of a distance education mode mental health program that bases its content on the perceived needs of the target group can result in a highly successful, economical program • While the program has assisted the participants it is evident that additional continuing education programs in mental health/psychiatric nursing, including practical aspects, are seen as necessary

<p>Chapman, L. (2000). Distance Learning For Post-Registered Nursing: The Facts. <i>Nursing Standard, 14(18)</i>, 33-36.</p>	<p>UK</p>	<p>To explore nurses' perceptions and evaluate the potential of distance learning for teaching post-RNs working in the community</p> <p>To assess nurses' educational needs</p>	<ul style="list-style-type: none"> • Open-ended questions in focus groups • Each group consisted of 9 students • The interviews were taped and transcribed (n=18) 	<ul style="list-style-type: none"> • The respondents saw distance learning as a necessary way of updating their knowledge, as long as the education provided was relevant to their practice • They also saw this method of learning as an opportunity to take responsibility for their own learning • There was conflict of opinion, however, as some respondents felt the courses to be a flexible way to teach and learn, while others found the courses to be too focussed and not necessarily relevant • Distance learning offers a flexible approach to adult teaching and learning • Student misunderstandings re distance learning can be dealt with through introductory session highlighting method of teaching and effective learning • Learners want to be involved in design of program • Need for support and motivation from teacher and/or peer support networks
<p>Cole, F. L. & Ramirez, E. (1999). Evaluating an Emergency Nurse Practitioner Educational Program For Its Relevance to the Role. <i>Journal of Emergency Nursing, 25(6)</i>, 547-550.</p>	<p>USA</p>	<p>Examine whether the knowledge and skills taught were consistent with implementation of the ENP role in actual clinical practice</p> <p>To assess graduates' ability to interpret diagnostic tests, as well as their performance skills, the procedures and skills taught to ENPs was compared with the</p> <p>Examine the congruency between what the program taught and what graduates were doing in practice</p>	<ul style="list-style-type: none"> • Questionnaire • Used discharge diagnoses as proxy for level of triage category 	<ul style="list-style-type: none"> • Treatment of all the conditions reported as discharge diagnoses were part of the educational program, therefore education provided to ENPs prepared them to manage the conditions of their patients. • Since the discharge diagnoses and referrals correspond to the reported disposition of each patient, it can be inferred that ENPs made correct • The results of this project were useful for validating the beliefs upon which the program was founded and for making decisions about changes • The first belief concerned the ability of graduates to assess, diagnose, and treat patients of all ages with conditions ranging from non-urgent through emergent • The second belief was related to graduates' ability to interpret diagnostic tests, as well as to perform diagnostic and therapeutic non-invasive and invasive skills for these patients • The third belief was that ENPs need to be able to determine the disposition of ED patients • Because the role of the ENP was not well delineated in the published literature, little information was available to assist in the development of this program
<p>Cole, F. L., Ramirez, E., & Mickanin, J. (1998). Skill station models for teaching incision and drainage of abscesses, felons, and paronychia to emergency nurse practitioners. <i>Journal of Emergency Nursing, 24</i>, 455-456.</p>	<p>USA</p>	<p>Development of models to be used for demonstration and practice experience</p>	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • These models have proved useful for educating ENP students about the procedures used to treat felons, abscesses and subungal hetatomas • The models are easy to construct, relatively inexpensive, and are as realistic as possible for teaching purposes • The models also provide an excellent means for students to practice the skills that are within their scope of practice before they attempt them on a human being

Coppel, A. (1999). Nurse prescribing: continuing education and support. <i>Nursing Times</i> , 92(2), 44-45.	UK	Discussion of how the National Prescribing Centre can help nurses to develop new skills and to extend their roles in primary health care	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Nurse prescribing has opened up new avenues for the profession • Nurses will now be able to work even more closely with other health care professionals to improve patient care • Pharmaceutical support and life long learning are essential to ensure a sound knowledge base behind prescribing decisions • The NPC will support nurse prescribers and their managers through educational information and in the future may be able to offer additional support through workshops to nurses
Consortium for Quality Nurse Practitioner Education. (n.d.). White Paper of the Consortium for Quality Nurse Practitioner Education.	USA	<p>The Consortium was formed to identify mechanisms to improve evaluation of nurse practitioner programs and to make recommendations regarding the national need for accreditation of nurse practitioner programs</p> <p>Examine methods to integrate program evaluation standards into the accreditation process for nurse practitioner education programs</p>	<ul style="list-style-type: none"> • Literature Review • Position paper 	<ul style="list-style-type: none"> • Three processes were identified and prioritized by the Consortium as viable methods for undertaking this activity with the specificity necessary to meet the educational and practice standards required of nurse practitioners in the current health care areas. They are: <ol style="list-style-type: none"> 1. have specific nurse practitioner education program evaluation integrated into the Commission on Collegiate Nursing Education (CCNE) and National League for Nursing Accrediting Commission (NLNAC) accreditation processes now undertaken by schools of nursing 2. reconfigure the current DOE-recognized women's health accreditation program to encompass all nurse practitioner specialties, or 3. create a new accreditation program • The Consortium contends that through the development and utilization of such an accreditation process, the established quality of nurse practitioner education will be continually strengthened, and nurse practitioners will be recognized as leaders in both present and future healthcare systems in this country and around the world
Curry, J. L. (1994). Nurse practitioners in the emergency department: Current issues. <i>Journal of Emergency Nursing</i> , 20, 207-215.	USA	<p>Describe how the role of the NP developed in the ED</p> <p>Identify several factors that influence the availability of NPs in the ED</p> <p>Discuss the similarities and differences between NPs and physician assistants</p>	<ul style="list-style-type: none"> • Literature Review 	<ul style="list-style-type: none"> • The functions of nurses are changing primarily because nurses have demonstrated their competence to perform a greater variety of functions • One can easily speculate on the future applications of the NP trained and experienced in emergency care delivery • What is clear is that NPs have more than just paid their dues for the last quarter of the century; they have earned our professional support

<p>Delva, M. D., Kirby, J. R., Knapper, C. K., & Birtwhistle, R. V. (2002). Postal survey of approaches to learning among Ontario physicians: implications for continuing medical education. <i>British Medical Journal</i>, 325(23), 1218-1223.</p>	<p>Canada</p>	<p>To understand the approaches to learning of practising physicians in their workplace and to assess the relation of these approaches to their motivation for, preferred methods of, and perceived barriers to continuing medical education</p>	<ul style="list-style-type: none"> • Postal survey of 800 Ontario physicians • 373 responses • Correlations of approaches to learning and perceptions of workplace climate with methods, motives, and barriers to CME 	<ul style="list-style-type: none"> • Perception of the workplace climate affects physicians' approaches to learning at work and their motivation for and perceived barriers to CME • Younger, rural, family physicians may be most vulnerable to feeling overworked and adopting less effective approaches to learning • Further work is required to determine if changing the workplace environment will help physicians learn more effectively
<p>Dusmohamed, H. & Guscott, A. (1998). Preceptorship: A Model to Empower Nurses in Rural Health Settings. <i>The Journal of Continuing Education in Nursing</i>, 29(4), 154-160.</p>	<p>Australia</p>	<p>Describe the preceptorship program aimed at empowering individual nurses in rural health units of South Australia to develop their roles and responsibilities in identifying education needs and to make changes to meet contemporary standards of nursing practice</p>	<ul style="list-style-type: none"> • Interviews • Written evaluations from students • Questionnaire 	<ul style="list-style-type: none"> • The program has now been offered on their occasions, involving 44 nurses representing 25 rural health units • Documentation from course evaluations suggest that the programs have achieved predicted aims in empowering individuals within their health units • It has encouraged the acceptance of responsibility for the provision of staff development and the facilitation of change strategies to meet the emerging needs of rural health units • Anecdotal evidence accruing since the completion of the first program has demonstrated continuing development among participants within their health units • The degree to which the changes identified are directly related to the program • Fundamental to this program is that significant learning has occurred, resulting in shifts in attitudes and behaviours • It has enabled participants to re-examine, redefine, and reinterpret their roles at both personal and professional levels
<p>Eggenberger, S. K. & Huntley, M. I. (1999). Envisioning Health Care Using a StoryTech Process with Continuing Education Participants. <i>The Journal of Continuing Education in Nursing</i>, 30(6), 246-253.</p>	<p>USA</p>	<p>Describes the use of a 1993 continuing education (CE) conference focused on a process of envisioning health care 5 years into the future and then reviewing the reality of those outcomes in 1998</p>	<ul style="list-style-type: none"> • Concept analysis of narraives • CE participants (n=147) generated their design for a health future by responding to six story scenarios. Stories (n=2502) related to quality of health care were analyzed in a three-step process 	<ul style="list-style-type: none"> • Visioning in a CE environment creates valuable direction for an improved health care future • A CE conference provides the seeds and opportunities for dialogue and partnership by people responsible for implementing action plans that potentially would create a health community • Reporting back to the participants the results of the story-writing process created the momentum for participants to affirm their person and professional visions for a LifeHealth future • During the envisioning conference a clear message was communicated by participants – when health providers work and learn in partnership with each other and with clients and families, the LifeHealth of communities becomes reality

<p>Farmer, J. & Richardson, A. (1997). Information for trained nurses in remote areas: do electronically networked resources provide an answer? <i>Health Libraries Review</i>, 14, 97-103.</p>	<p>Scotland</p>	<p>Examined the potential of the Internet, and other networked information resources, to improve access to information for trained nurses working in remote areas</p> <p>Provide a review of current literature in the field</p>	<ul style="list-style-type: none"> • Questionnaire to all the community nurses, midwives and health visitors working in the Western Isles (n=71) • Response rate 89% • Workshops (n=51) • Literature Review 	<ul style="list-style-type: none"> • Taken together, the findings from this project reveal that many nursing staff lack information searching skills, awareness of information resources and skills in using information technology • The results also indicate the while nursing staff recognize that improved access to information is important, they lack the time to search effectively • Project has revealed some gaps in the nursing information available on the Internet • The Internet and networked resources do have considerable potential to improve access to information for nurses working in remote and rural areas. • However, information skills, along with professional guidance, are also required • Health professionals need skills to cope with this ever-growing library, along with access to guidance from a skilled information professional • Access to the Internet without any support is not a solution • Provision of basic information awareness, searching and using skills are important so that nursing staff can do some of their won searching • The results of this study seem to indicate that in a 'ideal' model of service, trained nursing staff would have information available at their fingertips (via computer networks) as well as the support of a skilled information intermediary
<p>Forney, D. F. & Evan, W. (1997). Development of a Rural Oncology Nursing Conference: Proposal Through Implementation. <i>Oncology Nursing Forum</i>, 24(3), 537-543.</p>	<p>USA</p>	<p>Discuss the funding / implementation process of a continuing nursing education program focusing on cancer care delivery in the rural setting</p>	<ul style="list-style-type: none"> • Data synthesis using books, published articles and personal experience 	<ul style="list-style-type: none"> • The strategie for designing and funding this rural program were successful • The conference was received enthusiastically by rural homecare, nursing home and administrative nurses • More continuing education of rural nurses is needed because many patients with cancer are returning home sooner and remaining home longer • Individual Oncology Nursing Society chapters can make a difference in the nursing care of their communities and can obtain financial support for their projects • Urban nurses can mentor and network with their rural colleagues by offering their services proactively • With the changing complexion of health care funding it is imperative that nurses at all levels learn to access the funding sources available for the enhancement of community nursing services

<p>Greenhalgh, T. & Douglas, H.R. (1999). Experiences of general practitioners and practice nurses of training courses in evidence-based health care: A qualitative study. <i>British Journal of General Practice</i>, 49, 536-540.</p>	<p>UK</p>	<p>To report the experiences of GPs and NPs in training in this area</p>	<ul style="list-style-type: none"> • 30 in-depth semi-structured interviews • 3 focus groups • detailed qualitative analysis 	<ul style="list-style-type: none"> • At the time of the fieldwork for this study (late 1997) remarkably few GPs or PNs had attended any formal EBHC courses • Perceived barriers to attendance on courses included inconsistency in marketing terminology, cultural issues, lack of time and practical and financial constraints • Interviews suggested, however, that the principles and philosophy of EBHC are beginning to permeate traditional lecture-based continuing medical education courses and consultant colleagues increasingly seek to make their advice 'evidence based' • Preliminary recommendations for the organizers of EBHC courses for primary care include: <ol style="list-style-type: none"> 1. offering a range of flexible training 2. being explicit about course content 3. recognizing differences in professional culture between primary and secondary care and between doctors and nurses 4. addressing issues of funding and accreditation at national level
<p>Hannon, P. A., Umble, K. E., Alexander, L., Francisco, D., Steckleer, A., Tudo, G., & Upshaw, V. (2002). Gagne and Laurillard's Models of Instruction Applied to Distance Education: A Theoretically Driven Evaluation of an On-line Curriculum in Public Health. <i>International Review of Research in Open and Distance Learning</i>, 3(2).</p>	<p>USA</p>	<p>Overview of the instructional models of Gagne, Briggs, Wager and Laurillard</p> <p>How did teaching methods provide for the recommendations of Gagne and Laurillard</p>	<ul style="list-style-type: none"> • Online questionnaire • 30 questions using 4-point scale to measure satisfaction, effectiveness, student achievement of course objectives and open ended comments 	<ul style="list-style-type: none"> • The evaluation by students indicated that they perceived they had achieved the course objectives and were generally satisfied with the experience of taking the courses online • However, some students were dissatisfied with the feedback and learning guidance they received • Analyses suggest students felt moderately to very successful learning desired material in a distance learning format • Student grades were consistent with student evaluation of achievement of learning objectives; virtually all passed • Students were able to learn effectively online • Students want quick feedback and active interactions with teachers
<p>Hartley, S., Gill, D., Walters, K. Bryant, P. & Carter, F. (2001). Twelve tips for potential distance learners. <i>Medical Teacher</i>, 23(1), 12-16.</p>	<p>UK</p>	<p>Outline the issues that all students planning a distance learning course should consider, relating to choice of course, time management, funding and adjusting to the different nature of distance learning</p>	<ul style="list-style-type: none"> • Literature review and reflections on experiences of distance learning over the previous 18 months 	<ul style="list-style-type: none"> • The authors advise developing a support network for distance learning students, either in person or electronically, to increase motivation and completion • The authors offer a set of 12 tips: <ol style="list-style-type: none"> 1. Choose a course carefully that is suited to your needs and lifestyle 2. Find out as much as you can about the course, preferably from a number of sources, before committing yourself 3. Funding is available from many sources, but you have to ask for it 4. Distance learning is enriched by the formation of a well functioning support network 5. Determine the standard required of you 6. Set yourself a realistic timetable which achievable goals... and try to stick to it 7. Organise protected time for yourself 8. Make and sustain links with the administrator and course organiser 9. Remember that the timing and the quality of feedback are affected by the nature of a distance learning course 10. If you don't understand something don't assume that you are

				<p>at fault; ask for clarification</p> <p>11. Your constructive evaluation of the modules is valuable for improving the course</p> <p>12. Reward yourself. Make sure too that you inform your employer or your appraiser about your progress</p>
Hemman, E., McClendon, B., & Lightfoot, S. (1995). Networking for educational resources in a rural community. <i>Journal of Continuing Education in Nursing, 26(4)</i> , 170-173.	USA	<p>Outline of four community organizations in a geographically isolated area who shared resources and collaborated in providing a continuing education program on trauma care to meet the needs of the healthcare community.</p> <p>The process, from initial needs assessment and educational design through the steps involved in program planning and implementation among co-providers is outlined.</p>	<ul style="list-style-type: none"> • Workshop • Written course evaluations • Process outlined by ANA's Standards for Continuing Education in Nursing (1984) 	<ul style="list-style-type: none"> • Response was overwhelmingly positive from the participants • Goal to provide a cost-effective, quality continuing education program on trauma care was achieved in spite of some limitations related to the program's development • The positive aspects of the cooperative effort included sharing resources and expertise and using the strengths of each co-provider • An additional positive outcome of the conference was that this diverse group of healthcare professionals developed a deeper understanding and respect for the various roles needed to provide quality healthcare for trauma victims in Alaska
Hersh, W. R., Helfand, M., Wallace, J., Kraemer, D., Patterson, P., Shapiro, S., & Greenlick, M. (2001). Clinical outcomes resulting from telemedicine interventions: a systematic review. <i>BMC Medical Informatics and Decision Making, 1</i> , 5-12.	USA	Evaluate the efficacy of telemedicine interventions for health outcome in two classes of application: home-based and office/hospital-based	<ul style="list-style-type: none"> • Data sources included reports of studies from MEDLINE and other databases, searching of bibliographies of review and other articles and consultation of printed resources as well as investigators in the field 	<ul style="list-style-type: none"> • A total of 25 articles met inclusion criteria and were assessed • The strongest evidence for the efficacy of telemedicine in clinical outcomes comes from home-based telemedicine in the areas of chronic disease management, hypertension and AIDS • There is also reasonable evidence that telemedicine is comparable to face-to-face in emergency medicine and is beneficial in surgical and neonatal intensive care units as well as patient transfer in neurosurgery • Despite the widespread use of telemedicine in virtually all major areas of health care, evidence concerning the benefits of its use exists in only a small number of them • Further randomized controlled trials must be done to determine where its use is most effective
Hewitt-Taylor, J. (2003). Facilitating Distance Learning in Nurse Education. <i>Nurse Education in Practice, 3(1)</i> , 23-29.	UK	Clarify the meaning of the term distance learning, identify some of the advantages and challenges in its use, and the practicalities of facilitating distance learning	<ul style="list-style-type: none"> • Literature Review 	<ul style="list-style-type: none"> • Distance learning courses must be designed and developed in such a way to enable the provision of adequate tutorial support • When considering incorporating technology into such course it is essential to determine the ability of students to effectively utilise the technology associated with the course. This will ensure enhancement, rather than detracting from the student's learning • Despite the concerns regarding individual learning styles not being conducive to distance learning approaches, through the

				development of thoughtful, appropriate, distance learning materials, and adequate tutorial support these may provide the most effective an deficient option for many students and education purchasers
Hicks, C. & Hennessy, D. (2001). An Alternative Technique for Evaluating the Effectiveness of Continuing Professional Development Courses for Health Care Professionals: A Pilot Study With Practice Nurses. <i>Journal of Nursing Management</i> , 9, 39-49.	UK	Exploratory pilot investigation into the use of a valid and reliable training needs analysis questionnaire as a means of evaluating a nurse practitioner training scheme for practice nurses	<ul style="list-style-type: none"> • Questionnaire • Needs analysis 	<ul style="list-style-type: none"> • Overall the course reduced skill deficits in all but seven of the tasks. Of these, six related to research and audit and the seventh to clinical examination of patients • The study is discussed in terms of the implications of the technique for course development and planning to take account of local needs, as well the instrument's reliability and validity, for use in this way • This study has highlighted a potential alternative means by which course evaluation can be conducted, but without the distorting elements, such as lecturer preference or environmental (dis)comfort • The current technique goes some way towards overcoming the methodological shortcomings of existing evaluation tools and may provide a relatively objective measure of course effectiveness, which is based on a more appropriate competency assessment • For a nurse manager concerned to commission suitable courses that meet the precise competencies needed by an y specified nurse group, whilst simultaneously assessing the education provided to develop these, this instrument may be of benefit
Hill, P. & Alexander, T. (1996). Continuing Professional Education: A Challenge for Rural Health Practitioners. <i>Australian Journal of Rural Health</i> , 4, 275-279.	Australia	Describe the strategies adopted to meet the continuing education needs of a group of health professionals working in diabetes education and discusses how other specialist areas can provide similar educational opportunities Discusses a project designed to address the challenges of continuing education for rural health professionals in the field of diabetes education and management	<ul style="list-style-type: none"> • Education needs analysis • Literature Review 	<ul style="list-style-type: none"> • Health professionals in rural and remote areas of Australia are disadvantaged when accessing continuing education • Their geographical isolation influences attendance at seminars, workshops an even informal discussions with colleagues • Formal working agreements were established to achieve the aim of relevant continuing education for rural health professionals and to ensure ongoing ventures • All programs have been positively received, and evaluation identify the need to develop other, related subjects. • Future developments will further utilise advances in technology to extend access and add to the current modes of education delivery • The self-directed learning habits, together with the professional networks established while involved in the programs will help to maintain and increase the participants' knowledge as specialist diabetes health professionals • Through the development of these associations, professional status and education needs have been met • Initiatives such as these projects reaffirm the commitment to the University and the Diabetes Outreach Service to education for students, professionals and the community • Future subjects in this and other area s of professional need are planned through the continued alliance of The Queen Elizabeth Hospital Diabetes Centre, Diabetes Australia and the Faculty of Nursing, University of South Australia

<p>Hovenga, E., Hovel, J., Klotz, J., & Robbins, P. (1998). Infrastructure for reaching disadvantaged consumers: Telecommunications in rural and remote nursing in Australia. <i>Journal of American Medical Informatics Association</i>, 5(3), 269-275.</p>	<p>Australia</p>	<p>Defines rural and remote communities, then reviews rural and remote health services, information, and telecommunication technology infrastructures and their use in Australia to establish the current state of access to information tools by rural and remote communities and rural health workers in Australia today</p>	<ul style="list-style-type: none"> • Literature review • Informed opinion survey 	<ul style="list-style-type: none"> • Both consumers and health service providers need access to u-to-date information, including patient and practice guidelines, that allows them to make decision in partnership about individual and public health in line with the primary health care mode of health service delivery • It is argued that a suitable telecommunication infrastructure is needed to reach disadvantaged persons in extremely remote areas and the inter-sectoral support is essential to build this infrastructure. • In addition, education will make its utilization possible • The infrastructure required for high quality information and health service delivery is far from universally available or reliable • Governments must have the will and the fiscal objectives to resource the necessary telecommunication infrastructure for their citizens irrespective of location • The disadvantaged in rural and remote areas can benefit significantly from these technologies
<p>Jarrett, P., Wainright, P., & Lewis, L. (1997). Education and training practices of nurses. <i>Journal of Telemedicine and Telecare</i>, 3(S1), 40-42.</p>	<p>UK</p>	<p>Assess the value of video-conferencing using simple technology, as a means of providing such education opportunities</p>	<ul style="list-style-type: none"> • Training sessions 	<ul style="list-style-type: none"> • Seventeen nurse in eight rural general practices participated in a distance education project • Low-cost video-conferencing equipment was assessed for its suitability in two training sessions, concerning asthma and travel immunization • The intended learning outcomes were reached and although initially apprehensive, the nurses quickly become accustomed to the medium • Video-conferencing has now become an accepted part of in-service training • Technical reliability remains the most important problem
<p>Kennerson, R. & Chiarella, M. (1996) Going the Distance: Education for Rural Nurses. <i>Lamp</i>, 53(8), 4-7.</p>	<p>Australia</p>	<p>Support and education opportunities currently provided to rural and remote nurses</p>	<ul style="list-style-type: none"> • Literature Review 	<ul style="list-style-type: none"> • Following a research project commissioned by the NSW Health Department Chief Nursing Officer, to identify specific areas of concern regarding nursing vacancies, particularly in speciality areas, a Nursing Retention and Recruitment Taskforce was established by the Minister for Health • One of the issues identified by the Taskforce was that of professional isolation and access to education for nurses working in rural and remote areas • In preparation for undertaking any form of continuing education, nurses must investigate all their options and gather as much information as possible so as to make an informed decision • This investigation should not be restricted to local or State offered education but also include those courses available at facilities in other State of Australia by distance education

<p>Kezar, A. (n.d.) Higher Education Trends (1997-1999): Program Evaluation. (No additional citation information available)</p>	<p>USA</p>	<p>Review of approaches to program evaluation</p>	<ul style="list-style-type: none"> • Review / Informed opinion • Position paper 	<ul style="list-style-type: none"> • The amount of literature on program evaluation is down from previous years, although that on assessment is on the rise • One of the most notable trends is that systemic or comprehensive evaluation is not widespread in the literature, the research, or programs in practice • Most evaluation occurs as students leave school, some occurs after students have graduated and occasionally research or evaluation is performed while students are still in school
<p>Kilmon, C. A. (1996). Computerized Approaches to Teaching Nurse Practitioner Students. <i>Pediatric Nursing</i>, 22(1), 16-18.</p>	<p>USA</p>	<p>Description of two computerized applications and highlights one such personal computer program NP Clinic, which was designed for use with pediatric and family nurse practitioner students</p>	<ul style="list-style-type: none"> • Literature Review 	<ul style="list-style-type: none"> • NP Clinic software is also suitable for providing continuing education to nurses in primary care settings • Advantages of this type of learning include: <ol style="list-style-type: none"> 1. fosters a problem-solving approach similar to that of the actual patient encounter 2. the student receives immediate feedback 3. the possibility of studying individually 'at a distance' allows the learner to select his or her own time and place for studying • Disadvantages of this type of learning include: <ol style="list-style-type: none"> 1. lack of access to computers may be a problem for some educational institutions and students 2. many students enter education programs with inadequate computer skills 3. the cost of computer-assisted instruction may be a concern
<p>Knebel, E. (2001). <i>The Use and Effect of Distance Education in Healthcare: What Do We Know?</i> Operations Research Issue Paper 2(2). Bethesda, MD: Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project.</p>	<p>USA</p>	<p>Review of the current body of published and unpublished research on the use and effect of distance education in health care in developing countries</p>	<ul style="list-style-type: none"> • Literature Review 	<ul style="list-style-type: none"> • This paper reviews: <ol style="list-style-type: none"> 1. Definition and Characteristics of Distance Education (including advantages and disadvantages of distance education; models of delivery; choice of media) 2. Distance education in healthcare (including historical development; relevance of distance education to quality assurance in healthcare) 3. Studies of Distance Education in Healthcare (including comparison studies; factors related to satisfaction; technology and media; costs; culturally appropriate; performance; socialization; gender and completion rates) 4. Distance Education in Developing Country Settings (including collaboration; access) 5. Research issues 6. Research and Implementation Needs

<p>Kretovics, M., & McCambridge, J. (2002). International Review of Research in Open and Distance Learning. Retrieved 4/7703 from http://www.irrodl.org/content/v3.2/krevotics.html</p>	USA	<p>Exploratory research effort in which the extent of MBA student learning on twelve specific competencies relevant to effective business performance was assessed</p>	<ul style="list-style-type: none"> Established assessment instrument – Learning Skills Profile Comparative measures of student competencies at beginning and end of educational experience 	<ul style="list-style-type: none"> Affirms the high quality of learning that can occur via distance education and proposes a strategy to conduct summative, program-level assessment Participants in all three groups self reported significantly higher scores on seven of twelve outcomes (e.g., goal setting, help, information gathering, leadership, quantitative, theory, and technology skills) Distance MBA students self reported significantly higher scores than on-campus students on the learning outcomes related to technology, quantitative, and theory skills and higher scores on technology skills than the executive MBA group. Study adds to the body of literature that attests to the quality of learning that takes place via distance education programs Distance education is no longer a trend, nor is it a mode of education to be implemented in the future
<p>Lee, V. K., & Fletcher, K. R. (2002). Sustaining the Geriatric Resource Nurse Model at the University of Virginia. <i>Geriatric Nursing</i>, 23(3), 128-132.</p>	USA	<p>Describes the continued evolution of the Geriatric Resource Nurse Model at the University of Virginia</p>	<ul style="list-style-type: none"> Literature Review Position paper 	<ul style="list-style-type: none"> The model developed slowly, unit by unit, a few nurses at a time, and has evolved with a multidisciplinary focus Flexibility, mentoring relationships, a core curriculum, additional stimulating offerings and a strong leadership have been key influences on sustainability and growth
<p>Lemley, K. B., O'Grady, E. T., Rauckhorst, L., Russell, D. D., & Small, N. (1994). Baseline Data on the Delivery of Clinical Preventive Services Provided by Nurse Practitioners. <i>Nurse Practitioner</i>, 19(5), 57-63.</p>	USA	<p>Overview of results of 1992 NP Clinical Preventive Services Survey</p>	<ul style="list-style-type: none"> Survey 	<ul style="list-style-type: none"> Survey sent to 2000 randomly selected NPs to obtain information concerning the percentage of their patients who 'routinely' receive the specified assessment and intervention services Data from 892 completed and returned survey instruments indicated that NPs already exceed the Health People 2000 objective targets in some important clinical preventive assessment and intervention areas In some areas, however, NP provision of preventive services was report to be below the health People 2000 targets This data has far-reaching implications for NP practice, basic and continuing education, and curriculum reform The baseline data provides an unprecedented picture of NP clinical preventive assessment and intervention practices in the US The results of the NP Clinical Preventive Services Survey can guide NP providers and educations in spearheading practice and curriculum changes to promote their achievement The findings can also guide researchers in identifying and removing barriers to NP delivery of specific CPSS
<p>Mangan, J. M. & van Soeren, M. H. (2000). Development and Evaluation of a Pathophysiology CD-ROM for Nurse Practitioner Distance Education. <i>Computers in Nursing</i>, 18(2), 87-92.</p>	Canada	<p>Report the results of an evaluation of the effectiveness of a CD-ROM for distance education for PCNPs in a one-semester pathophysiology course</p>	<ul style="list-style-type: none"> Questionnaire 	<ul style="list-style-type: none"> This data set was too small to yield statistically significant relationships However, descriptive analyses of the data, couple with qualitative responses from the free-text statements, yielded a number of interesting observations Generally the CD-ROM was rated very highly on clarity of instruction, level of interest, ease of use, and convenience The survey results show that students generally indicated that the program was easy and convenient to use, thus fulfilling one of the basic goals of the package

				<ul style="list-style-type: none"> • The questionnaire data indicate that the kind of instructional design and technology involved in this package worked very well in maintaining student interest • The generally high grades and pass rates achieved, especially by those using the CD-ROM, indicate that the required material was being conveyed effectively, and that students found the distance education package an effective study aid • The data can be used to explore questions of relationships between ratings and background variables such as age, family and work status, and computer background • The results reported suggest that students benefit from computer adjuncts to traditional distance education material (i.e., written course material packages and textbooks)
Mansfield, C.J., Wilson, E.J., Kobrinski, E.J., & Mitchell, J. (1999). Premature mortality in the United States: The roles of geographic area, socioeconomic status, household type and availability of medical care. <i>American Journal of Public Health, 89</i> , 893-898.	USA	Examined premature mortality by country in the US and assessed its association with metro/urban/rural geographic location, socioeconomic status, household type and availability of medical care	<ul style="list-style-type: none"> • Age-adjusted years of potential life lost before 75 years of age were calculated and mapped by country • Predictors of premature mortality were determined by multiple regression analysis 	<ul style="list-style-type: none"> • Community structure factors statistically explain much of the variation in premature mortality • The degree to which premature mortality is predicted by percentage of female-headed households is important for policy-making an delivery of medical care • The relationships described argue strongly for broadening the biomedical model • For physicians and other health providers, the data provided suggest that more attention should be given to the social components of the biopsychosocial model • Physicians and other should learn how to become more effective in health promotion and prevention to encourage patients to change behaviours
McCosker, H., Madl, R., Harris, M., Anderson, D., & Mannion, J. (1999). Evaluation of a Self-Paced Education Package on Violence Against Women for Rural Community-Based Health Workers. <i>Australian Journal of Rural Health, 7</i> , 5-12.	Australia	To develop, implement and evaluate a self-paced distance education program on violence against women for rural community-based health workers	<ul style="list-style-type: none"> • Pre and post Questionnaire 	<ul style="list-style-type: none"> • There are no reported education programs specifically focusing on the needs of rural health workers in the area of violence against women • Analysis of the quantitative data identified significant changes in participants' knowledge, and the qualitative data highlighted an increased sense of confidence in assisting women, forming support networks and using resources more effectively • Participants reported the most useful aspects of the package were modular and user-friendly format, flexible, practical, health-focused content and real world examples • Participation in education increased knowledge and effectiveness of package can be attributed, in part, to needs assessment • Refinement undertaken based on evaluation results • Further research is required to evaluate the long-term and sustained role of an education package on the effectiveness of health workers who provide services to women affected by violence

<p>Minnesota Office of Rural Health and Primary Care. (2001). <i>Survey of Graduates from Minnesota Graduate Nurse Practitioner/Nurse-Midwifery Education Programs</i>. Minneapolis: Minnesota Office of Rural Health and Primary Care.</p>	<p>USA</p>	<p>To determine if the number of NPs/CNMs employed in rural communities increased</p> <p>Determine the effectiveness of the Collaborative Rural Nurse Practitioner Project in achieving its goals</p>	<ul style="list-style-type: none"> • Survey of NP graduates 	<ul style="list-style-type: none"> • The survey data strongly suggest that recruitment efforts employed through the project were successful in increasing the number of CNPs/CNMs employed in rural communities • Nurse practitioners and nurse-midwives continue to be very successful in obtaining national certification and prescriptive privileges • The use of computers by CNPs/CNMs has increased • The participants continued to emphasize the need for more opportunities for clinical experience and to learn and practice specific primary care skills • Future surveys should continue to attempt to track previous respondents to provide a longitudinal analysis of the respondents' employment and professional characteristics
<p>Mullins, R. G., Havens, D. H., & Lowe, M. (1998). Distance Education in Pediatric Nurse Practitioner Programs. <i>Journal of Pediatric Health Care, 12(6 Part I)</i>, 332-334.</p>	<p>USA</p>	<p>Research was undertaken to answer the following questions:</p> <p>To what extent is PNP education offered nationwide using a distance education option?</p> <p>Does a relationship exist between the various structural components of the distance learning option and the level of perceived satisfaction with the program by the program directors?</p>	<ul style="list-style-type: none"> • Survey and review of all PNP programs approved by National Certification Board 	<ul style="list-style-type: none"> • 63 PNP programs were surveyed regarding their use of a distance education option. 91 percent responded • PNP education was found to be well established with seasoned faculty at the responding institutions, with most faculty having in excess of 10 years experience as educators • The finding of perceived need for ongoing and regular communication among all parties involved was expected • Improved satisfaction was found to be significantly related to perceived community enthusiasm with the option and a similar finding was noted when on-campus students were involved in preplanning activities • Almost all respondents felt competent with the technology used to deliver content and rated effective technology support as highly associated with program satisfaction • Faculty are more satisfied when written materials and e-mail, relatively unsophisticated technologies are also used • Overall, reservation was expressed in relationship to the quality of didactic content delivered, and dissatisfaction with the option in general was expressed by more than half of the respondents • The experiences of these initial programs should provide insight for the 24 PNP programs that plan to initiate a distance education option in the next 3 years
<p>Murdock, J. E. & Neafsey, P. J. (1995). Self-Efficacy Measurements: An Approach for Predicting Practice Outcomes in Continuing Education? <i>The Journal of Continuing Education in Nursing, 26(4)</i>: 158-165.</p>	<p>USA</p>	<p>Describe the use of measurements of self-efficacy in evaluating a continuing education course in pharmacology for advanced practice nurses</p>	<ul style="list-style-type: none"> • Biographical data form • 106 item multiple choice knowledge test • self-efficacy questionnaire 	<ul style="list-style-type: none"> • The study demonstrated that a valid and reliable measure of self-efficacy could be developed from program objectives and used in conjunction with pre-and post-knowledge measures to gain a broader perspective of learning outcomes • Measurement of self-efficacy was a useful adjunct in post-instruction evaluation and may be a cost-effective alternative to longitudinal impact evaluation • Both knowledge and self-efficacy scores increased significantly and had large effect ratios following instruction • The relatively low correlations between the knowledge and self-efficacy measure suggest that each may tap a different dimension of the learning outcomes, thus providing a broader perspective of learning • Study falls short of demonstrating a predictive relationship

				<p>between self-efficacy and prescriptive practice</p> <ul style="list-style-type: none"> • Future studies should focus on assessing these predictive relationships using larger samples so that post-instruction distinctions can be drawn between the actual performance of those showing high and low self-efficacy for the target task or skill
National Association of Nurse Practitioners in Women's Health. (2002). <i>NPWH Professional Issues: Alliance for Nursing Accreditation Statement on Distance Education Policies</i> .	USA	Statement of the policies of distance education of the Alliance for Nursing Accreditation	<ul style="list-style-type: none"> • Policy Statement • Position paper 	<ul style="list-style-type: none"> • All nursing education programs delivered solely or in part through distance learning technologies must meet the same academic program and learning support standards and accreditation criteria as programs provided in face-to-face formats, including the following: <ol style="list-style-type: none"> 1. Student outcomes are consistent with the stated mission, goals, and objectives of the program; and 2. The institution assumes the responsibility for establishing a means to assess student outcomes. This assessment includes overall program outcomes, in addition to specific course outcomes, and a process for using the results for continuous program improvement
National Task Force on Quality Nurse Practitioner Education. (2002). <i>Criteria for Evaluation of Nurse Practitioner Programs. Report of the National Task Force on Quality Nurse Practitioner Education</i> . Washington: Author.	USA	<p>Focus is on faculty, curriculum, evaluation, students, organizations and administration, and clinical resources / experiences for all NP educational programs</p> <p>Collective work of organizations dedicated to maintaining the quality of NP education and offers an important resource for those involved in the preparation, licensing and credentialing of NPs</p>	<ul style="list-style-type: none"> • Position paper 	<ul style="list-style-type: none"> • The <i>Criteria for Evaluation of Nurse Practitioner Programs</i> reflects ongoing emphasis on the quality of nurse practitioner education. However, dissemination of the criteria is only the first step in ensuring the quality of that education. • Significant questions remain regarding the impact of the criteria on education programs. For example, do the criteria actually improve the educational process? What elements of the criteria are most important in creating change? Can we confidently move to more outcome-based criteria that would consume less faculty time in gathering and recording information? • Nurse practitioners needs to focus on these broad questions to be prepared for the challenges of the future
Neafsey, P. (1998). Immediate and Enduring Changes in Knowledge and Self-Efficacy in APNs Following Computer-Assisted Home Study of the Pharmacology of Alcohol. <i>The Journal of Continuing Education in Nursing</i> , 29(4), 173-181.	USA	To measure changes in knowledge and self-efficacy immediately following and 5 months after the program	<ul style="list-style-type: none"> • Post-program evaluation instruments at home returned by mail • Cognitive and self-efficacy questionnaire 	<ul style="list-style-type: none"> • Found significant gains in knowledge and self-efficacy immediately following the program, although deterioration, still cognitive and self-efficacy scores significantly greater than pre-program • Findings indicated that continuing education in substance misuse or other pharmacology content may be effectively implemented at home via computer assisted
Nerdahl, P., Berglund, D., Bearinger, L. H., Saewyc, E., Ireland, M., & Evans, T. (1999). New Challenges, New Answers: Pediatric Nurse Practitioners and the Care of Adolescents. <i>Journal of Pediatric Health Care</i> , 13, 183-190.	USA	Examines pediatric nurse practitioners' (PNP) self-assessed competencies in addressing the common health concerns of adolescents	<ul style="list-style-type: none"> • National Survey data 	<ul style="list-style-type: none"> • The greatest deficits in self-perceived knowledge or skill, as well as low interest in training and low perceived relevance to practice, were around issues of gangs, gay/lesbian/bisexual/transgender youth, HIV/AIDS, and counselling about a positive pregnancy test • PNPs identified the lack of resources appropriate for adolescent referrals as the greatest barrier to working with this population • PNPs assessed their lowest competencies in some of the areas that

				<p>present the greatest threats to adolescents' health and well-being</p> <ul style="list-style-type: none"> • These deficits suggest needed curricular shifts in entry-level and advanced-level preparation for PNPs, as well as new priorities for continuing education
Ockene, J., Wheeler, E. Adams, A., Hurley, T., & Hebert, J. (2003). Provider Training for Patient-Centered Alcohol Counselling in a Primary Care Setting. <i>Archives of Internal Medicine</i> , 157, 2334-2341.	USA	To assess the impact of a brief training program on primary care providers' skills, attitudes, and knowledge regarding high-risk and problem drinking	<ul style="list-style-type: none"> • Questionnaire • Audiotape of counselling session 	<ul style="list-style-type: none"> • After training, providers scored significantly higher on measures of counselling skills, preparedness to intervene, perceived usefulness and importance of intervening, and knowledge • A group training program plus brief individual feedback can significantly improve primary care providers' counselling skills, attitudes, and knowledge regarding high-risk and problem drinkers
Peden, A. R., Rose, H., & Smith, M. (1990). Transfer of Continuing Education to Practice: Testing an Evaluation Model. <i>The Journal of Continuing Education in Nursing</i> , 21(2), 68-72.	USA	Measure impact of CE on nursing practice by testing the individual nurse participant's receptiveness to a proposed change, supportiveness of the social system, and applied knowledge attempts as measured by the nurse and the supervisor	<ul style="list-style-type: none"> • Seminar • Questionnaires • four variables: <ul style="list-style-type: none"> the transfer / application of CE learning in the workplace the relationship between the nature of change and an individual's attempts to alter nursing practice the effect of social system on an individual's efforts to change nursing practice the similarity of views held by nurses and their supervisors about social system and nature of change 	<ul style="list-style-type: none"> • A continuing education (CE) program is successful only to the extent that a recommended practice or behaviour is implemented • The social system in which the nurse practices and the nurse's own receptiveness to change also influence the application of new knowledge • It appears that patient education increased as a result of participating in the CE program • It appears that those in the study say patient education as a desirable change • Evidence indicated that both participants and supervisors viewed their social system as receptive to change • There was no significant difference between participants and supervisors in their view of the nature of change and social system • Developing a new skill in a nurse through CE does not ensure that the practice will be implemented when the participant returns to the social system • This study showed a significant change in behaviour and indicated that the nature of the change and the receptiveness of the social system to change are rated highly by both participants and supervisors
Pitblado, R. & Pong, R. (1995). Comparisons of regional variations in the utilization of medical and dental services in Ontario: A test of several hypotheses. In D.J. McCready and W.R. Swan (eds.). <i>Change and resistance: Proceedings of the 6th Canadian conference on health economics</i> . Kingston, Ontario: Canadian Health Economic Research Association.	Canada	To examine regional variations in medical and dental services	<ul style="list-style-type: none"> • Examination of Ontario Health Survey, 1990 	<ul style="list-style-type: none"> • While PHUs do not differ substantially with respect to contacts with physicians, there are considerable regional differences in contacts with physicians • Differences in regional variations in the utilization of medical and dental services are primarily a function of contacts made with dentists, not physicians • There is some evidence to indicate that while the number of

				<p>dentists in an areas and insurance coverage affect dental service utilization, the effects of human resources supply and insurance do not appear to be consistently linear</p> <ul style="list-style-type: none"> • Although some of the factors affecting regional variations in dental service utilization are individual-level variables, such as dental health behaviours and satisfactions with health, they tend not to be randomly distributed • Unless these is unlimited resources for health promotion and education, it may be necessary to target those regions where a substantial proportion of the population exhibit negative health attitudes and behaviours • The study of regional variations helps identify those regions where remedial actions should be targeted
Pong, R. & Pitblado, R. (2001). Don't take geography for granted! Some methodological issues measuring geographic distribution of physicians. <i>Canadian Journal of Rural Medicine</i> , 6, 103-112.	Canada	Examine the problems inherent in using an arbitrarily defined geographic area, problems such as the mobility of physicians and patients and the lack of consensus on what 'rural' means	<ul style="list-style-type: none"> • Extensive review and critical assessment of the literature, including research studies, health service planning reports and Internet documents 	<ul style="list-style-type: none"> • The physician manpower pendulum appears to be swinging from a perceived surplus to a perceived deficit • Uneven geographic distribution is likely to be aggravated if there are insufficient physicians to go around • Smaller and more remote communities tend to be the first to feel the effects of an impending physician shortage • There will be more demands to find out where physicians are located, and our ability to accurately describe the geographic distribution of physicians, as well as to explain it, will be put to the test • The need to use often artificially defined areal unit in analysis is one of the most perplexing problems. Clearly there is not a single approach that will serve all research or planning purposes • The traditional population-to-physician ratio is a valid general planning tool. However, these ratios are often computed with little critical evaluation of what they actually mean in terms of geography • The issue of mobility looms large in how we describe physician distribution • The need to come up with new approaches to conceptualize and measure physician distribution has never been greater
Ramos, K. D., Schafer, S., & Tracz, S. M. (2003). Validation of the Fresno test of competence in evidence based medicine. <i>British Medical Journal</i> , 326, 319-321.	USA	To describe the development and validation of a test of knowledge and skills in evidence based medicine	<ul style="list-style-type: none"> • Cross sectional study • Fresno test 	<ul style="list-style-type: none"> • The Fresno test is a reliable and valid test for detecting the effect of instruction in evidence based medicine. It's use in other setting requires further exploration • The Fresno test can assess the effectiveness of teaching in evidence based medicine and identify strengths and weaknesses r curriculums and individuals
Rasch, R. & Cogdill, K. (1999). Nurse practioner information needs and information seeking: Implications for practice and education. <i>Holistic Nursing Practice</i> , 13, 90-97.	USA	Exploratory study of the information needs and information seeking in a sample of nurse practitioners approved to practice no North Carolina	<ul style="list-style-type: none"> • Questionnaire 	<ul style="list-style-type: none"> • There is a paucity of research on information needs and information seeking of NPs, a growing segment of the health care professional population • NPs can have an important and direct impact on the health of the patients they serve • It is important they have access to current and accurate information by which they ca use as the basis for decision making for diagnosis and treatment of patient conditions • This study suggests important issues related to the effective us of

				<p>information resources in the context of clinical practice</p> <ul style="list-style-type: none"> • Findings from this research will inform the development of educational interventions for practicing NPs as well as NP students
Sahai, V., Barnett, R. C., Roy, C.R. et al. (2000). A profile of cardiovascular disease in northern Ontario: Public health planning implications. <i>Canadian Journal of Public Health</i> , 91, 435-440.	Canada	Examines CVD trends in Northern Ontario and the prevalence of know risk factors that give an insight into these trends	<ul style="list-style-type: none"> • Examination of 1996 census data and 1990 and 1996 Ontario Health Survey data 	<ul style="list-style-type: none"> • It was determined that CVD rates in Northern Ontario significantly exceeded those of the province • High prevalence of modifiable risk factors, such as smoking, fat intake, physician activity and obesity are all experienced in Northern Ontario when compared to the province • Planning implications, as they related to collaboration, delivery and risk factors and monitoring and evaluation are also discussed
Sanders, D. & Marzillier, J. (1990). Development and Evaluation of a Training Course for Practice Nurses: Helping People to Stop Smoking. <i>Nurse Education Today</i> , 10, 281-289.	UK	<p>Describes a 2-day training course for practice nurses in advice-giving to smokers</p> <p>Measure impact of CE on nursing practice</p>	<ul style="list-style-type: none"> • Training course • Questionnaire 	<ul style="list-style-type: none"> • The results showed that the nurses gained significantly in both knowledge and confidence following the course • The prospect of further training courses for practice nurses in other areas of health promotion is discussed • The training course was specifically concerned with smoking but the formal may be adopted and usefully applied to other areas of health education
Sheperd, J. C. (1992). Analysis of training needs of nurse practitioners. <i>British Journal of Nursing</i> , 1, 310-313.	UK	Outlines a study that attempts to identify a systematic approach to the assessment of training needs of qualified nurse practitioners within three separate health authorities	<ul style="list-style-type: none"> • Descriptive survey approach • Focus groups • Semi-structured questionnaire 	<ul style="list-style-type: none"> • Continuing education needs to address issues relating to the preparation of nurse practitioners in relationship to their current and future developmental role within the care environment • Strategic decision makers and programme designers should ensure that the education provided is of a high quality, is pertinent to the needs of the client group at which it is aimed and results in change of practice which in turn will achieve improvement in the quality of client care provided • Staff development should encompass assessment of prior learning in order to avoid repetition, and should reflect ongoing academic creditation • Appropriate cost-effective continuing education should be available to all practitioners as and when required
Sheperd, J. C. (1995). Findings of a training needs analysis for qualified nurse practitioners. <i>Journal of Advanced Nursing</i> , 22, 66-71.	UK	Describes the results of training needs analysis of nurse practitioners across three health authorities in England	<ul style="list-style-type: none"> • Consumer survey 	<ul style="list-style-type: none"> • Training needs analyses have been identified as an essential part in the development of continuing education programmes and their implementation into practice • The study has demonstrated a major need for revision of current education programmes and provision in order to ensure that post-registration education corresponds directly with the assessed learning needs of the individual learner • The finding from this study have demonstrated that there remain important features on which post-registration education should be focusing its attention in the future • The study has shown that practitioners need to have more confidence in their own skills and knowledge, and to be more assertive in their position as equals in the multi-disciplinary health care team as well as the nursing team

<p>Sheppard, L. & Mackintosh, S. (1998). Technology in Education: What is appropriate for rural and remote allied health professionals? <i>Australian Journal of Rural Health, 6</i> 189-193.</p>	<p>Australia</p>	<p>Discussion of the variety of technologies that can form an educational strategy, including audio-conferencing, videoconferencing, email, CD-ROM, Internet and the world wide web</p>	<ul style="list-style-type: none"> • Informed opinion • Literature review • Position paper 	<ul style="list-style-type: none"> • Recent technological advances provide exciting opportunities for the delivery of education to rural and remote allied health professionals • Distance education modes can overcome barriers of distance and cost • The use of technologies may allow distance education to be more interactive for rural and remote professionals • The important objective is to create a learning environment that maximises interactivity and develops information literacy • Technology can be implemented to advantage to bring postgraduate and continuing education to healthcare professionals in rural and remote areas • Technology offers the opportunities to overcome the barriers of time, cost and distance to the rural and remote professional
<p>Sowell, R. & Opava, W. (1995). The Georgia Rural-Based Nurse Model: Primary Care for Persons with HIV/AIDS. <i>Public Health Nursing, 12(4)</i>, 228-234.</p>	<p>USA</p>	<p>Describe the development and implementation of an education program in HIV/AIDS for rural public health and community nurses</p>	<ul style="list-style-type: none"> • Literature review • Evaluation via written assessments from learners • Classroom, internship • Questionnaire 	<ul style="list-style-type: none"> • The results of the qualitative evaluation show high levels of satisfaction with course content and teaching methods • Results of data analysis reveal that all program participants reported they were willing to treat persons with HIV disease at the onset of training. However, participant levels of willingness to treat persons with HIV/AIDS increased an average of 11% after completing the program • Clinical-preparedness scores increase also, as did scores in non-clinical focus areas after completing the program • The initial outcomes of the program evaluation strongly support the value of the Rural-Based Nurse Training Model as an approach for educating rural nurses in HIV/AIDS care • The model may be especially helpful as a guide in developing rural HIV/AIDS education programs in states and regions with demographic and geographic characteristics similar to those of rural Georgia
<p>Sowell, R., Seals, G., Wilson, B., & Robinson, C. (1998). Evaluation of an HIV/AIDS Continuing Education Program. <i>The Journal of Continuing Education in Nursing, 29(2)</i>, 85-93.</p>	<p>USA</p>	<p>Reports a continuing education program for public health and community nurses designed to increase specific knowledge of HIV/AIDS and to provide information about the availability of HIV/AIDS services in rural Georgia</p>	<ul style="list-style-type: none"> • Program evaluation • Development of a model • Classroom, internship • Follow-up survey 	<ul style="list-style-type: none"> • This article gives an overview of this demonstration project, though it focuses on the evaluation and outcome portions of the project • Program evaluations revealed that after completing the course, participants' professional preparedness, attitudes toward people with HIV/AIDS and knowledge had improved • Nurses participating in the program reported in a follow-up survey that they felt better prepared to care for people with HIV/AIDS • Results of the program support its potential use as a model for other rural communities

<p>St.Clair, C. & Brillhart, B. (1990). Rural Nurses as Self-Directed Learners: Overcoming Obstacles to Continuing Education. <i>The Journal of Continuing Education in Nursing</i>, 21(5), 219-223.</p>	<p>USA</p>	<p>Evaluation that followed a pilot test of the first SDL module of STEP, the Self-Taught Educational Program, an experimental series in basic critical care nursing specifically designed for rural outreach</p>	<ul style="list-style-type: none"> • Mail out survey based on Knowles' Competencies of Self-Directed Learners: A Self-Rating Instrument (1975) 	<ul style="list-style-type: none"> • Significant negative relationship between higher scores on learner survey and the lower scores on the I-E scale (meaning internal motivation) – means internally motivated persons are more independent and strive more for achievement • Nurses tended to rate themselves high on skills in this learning methodology whether they perceived their sources of motivations as internal/external • Internal motivators (for CE) outranked external forces • SDL can offer an alternative way to meet continuing education needs of rural nurses in their efforts to overcome the many obstacles to professional growth in rural practice
<p>Steele, L. L. (2001). Incorporating Research Application Into Nurse Practitioner Education. <i>The Online Journal of Knowledge Synthesis for Nursing, Education Column, Document Number 3E</i>.</p>	<p>USA</p>	<p>Overview of the challenges facing nurse educators today to change the perception that research and practice are mutually exclusive</p>	<ul style="list-style-type: none"> • Informed opinion • Literature review 	<ul style="list-style-type: none"> • Research-based practice is critical to the advanced nursing practice role. It is essential to sound clinical judgment and decision-making about therapeutic choices • NPs must strive to maintain currency with research-based literature, rather than relying on their own opinions or those of others to guide their practice • Literature searches are easily conducted online from either home or office, however, these practices must be incorporated early in the educational programs of NPs and reinforced by their clinical faculty and preceptors • The importance of the role of research in advanced practice and the utilization of research as a basis for evaluating interventions and outcomes must be valued and modeled by faculty involved in the education of nurse practitioners
<p>van Soeren, M., Andrusyszyn, M., Laschinger, H., Goldenberg, D., & DiCenso, A. (2000). Consortium Approach For Nurse Practitioner Education. <i>Journal of Advanced Nursing</i>, 32(4), 825-833.</p>	<p>Canada</p>	<p>Evaluation of the consortium programme after first year from the perspective groups involved in implementation and delivery</p>	<ul style="list-style-type: none"> • Researcher-led focus groups, • face-to-face and email interviews • Semi-structured interview guide 	<ul style="list-style-type: none"> • Recommend sufficient time be allowed for role and course development prior to beginning program • Costly nature of NP programmes makes combined resources, technology and delivery attractive • Consortium of this size and complexity could be a solution for increasing accessibility for nurses in under-served areas • Sharing ideas, resources and delivery and increased student access in remote areas were perceived as positive outcomes • Research concluded that the consortium approach was effective for nurse practitioner education • Key factors identified for programme planning were communication, resources, curriculum and workload • Included among the recommendations was to allow sufficient time for role and course development before beginning a similar programme

<p>Varnell, G., Pollock, S., Klotz, L., Green, A., & Sportsman, S. (2003). Institutional Collaboration Not Competition: Preparing Family Nurse Practitioners to Serve Rural Areas. <i>Journal of Professional Nursing, 18</i>(3), 165-169.</p>	<p>USA</p>	<p>The development of the collaborative model, strategies used for implementation, and evaluation of this collaborative effort</p> <p>To identify outcomes for the communities, students and faculty; challenges and future plans</p>	<ul style="list-style-type: none"> • Evaluation • Focus groups • Student outcomes measured by electronic report card, access file database to record patient encounters, focus groups to assess expertise in use of cyberspace as well as satisfaction with on-line courses and curriculum 	<ul style="list-style-type: none"> • It is possible for 3 organizations located in distinct geographical locations to work together to provide education for NPs • Expand current collaborative distance education program to include programs for acute care NPs, geriatric NPs and pediatric NPs • Student evaluations have been very positive, improving each year because of the improvements made in distance education • Most students now consider themselves as having moderate expertise in cyberspace • The curriculum has been augmented to better prepare the students for their role as FNPs. More content and experience with business skills, managed care, and practice management have been added • Faculty were evaluated for their competence in using telecommunications in the classroom and their level of expertise in the use of cyberspace. These evaluations have been consistently positive and faculty continue to work to improve strategies and methods used for distance education
<p>Walsh, M. (1999). Nurses and Nurse Practitioners 1: Priorities in Care. <i>Nursing Standard, 13</i>(24), 38-42.</p>	<p>UK</p>	<p>Views of a group of nurse practitioner graduates and undergraduates are compared with the views of a group of other nurses taking continuing education courses</p>	<ul style="list-style-type: none"> • Questionnaire (CDI – Care Delivery Inventory) 	<ul style="list-style-type: none"> • The research suggests that there is little difference between nurses' and NPs' perceptions of the relative importance of the aspects of care that make up the CDI. • However, when the importance of psychosocial and technical aspects are considered, NPs place more emphasis on the importance of the psychosocial aspects of care than do nurses • This contradicts the view that NPs tend towards the medical model and are becoming 'min-doctors'. • Significant differences within the CDI can be explained by the fact that NP's usually have greater autonomy than nurses
<p>Wambach, K., Boyle, D., Hagemaster, J., Teel, C., Langner, B., Fazzone, P., Connors, H., Smith, C., & Forbes, S. (1999). Beyond correspondence, video conferencing and voice mail: Internet-based Master's degree courses in nursing. <i>Journal of Nursing Education, 28</i>, 267-271.</p>	<p>USA</p>	<p>Describes Internet-based courses as a unique distance learning platform for preparing primary care nurse practitioners at the University of Kansas School of Nursing</p>	<ul style="list-style-type: none"> • Literature Review • Course description 	<ul style="list-style-type: none"> • Nurses in rural areas that are underserved by primary care practitioners often are faced with time and distance barriers to returning to school for advanced education • Learner-centered principles, flexibility, and methods to overcome time and physical barriers were employed in this Internet-based course pilot program • Student evaluation of the courses to date has been positive • Accomplishment of course objectives compares similarly to campus-based versions of the courses • Faculty members enjoy the challenge of creating learning environments which foster independent learner-centered experiences • Faculty report that student discussions are insightful and written assignments are of equality quality to those of students who were taught on campus

<p>Way, D., Jones, L., Baskerville, B. & Busing, N. (2001). Primary health care services provided by nurse practitioners and family physicians in shared practice. <i>Canadian Medical Association Journal</i>, 195, 1210-1214.</p>	<p>Canada</p>	<p>To determine what primary health care services are provided to patients by FPs and NPs working in the same rural practice setting</p>	<ul style="list-style-type: none"> • Baseline data from 2 rural Ontario primary care practices that participated in a pilot study of an outreach intervention • Unique patient encounter data 	<ul style="list-style-type: none"> • The most frequent reason for visiting an NP was to undergo a periodic health examination, whereas the most frequent reason for visiting an FP was cardiovascular disease other than hypertension • Delivery of health promotion services was similar for NPs and FPs • Delivery of curative services was lower for NPs than for FPs, as was provision of rehab services • In contrast, NPs provided more services related to disease prevention and more supportive services than FPs • For the practices of this study NPs were underutilized with regard to curative and rehab care • Referral patterns indicate little evidence of bidirectional referral (a measure of shared care) • Explanations for the findings include medicolegal issues related to shared responsibility, lack of interdisciplinary education and lack of familiarity with the scope of NP practice
<p>Woodcock, A. J., Kinmonth, A. L., Campbell, M. J., Griffin, S. J., & Spiegel, N. M. (1999). Diabetes Care from Diagnosis: Effects of training in patient-centred care on beliefs, attitudes and behaviour of primary care professionals. <i>Patient Education and Counseling</i>, 37, 65-79.</p>	<p>UK</p>	<p>The Diabetes Care from Diagnosis study aimed to increase patient involvement in consultations, through appropriate training of practice nurses and general practitioners.</p> <p>Focuses upon the practitioners' beliefs, attitudes and behaviour during the trial, as reported by themselves and their patients</p>	<ul style="list-style-type: none"> • Randomized trial with Postal questionnaire 	<ul style="list-style-type: none"> • Trained nurses rated relative importance of patient-centred to professional-centred care as greater than comparison nurses • Trained nurses became less keen on the approach during the trial, and perceived time constraints persisted • Patients diagnosed later in the study were less likely to recognise intervention materials • Trained nurses rated delivery of important aspects of care and satisfaction with style of care as lower than comparison nurses, but patients were more positive about delivery of care from trained than comparison nurses • Although nurses rated patient-centred care as important, whether or not they had been trained as part of the trial, the short, generalisable training programme significantly reduced nurse perceptions of their ability to deliver it • Patients reported that important aspects of diabetes care were delivered more if their nurses had been trained in patient-centred consulting • This raises issues concerning measurement scales completed by trained professionals
<p>Zimmerman, L., Barnason, S., & Pozehl, B. (1999). Distance Education Programs for Advanced Practice Nurses: Questions to Ask. <i>AACN Clinical Issues, Advanced Practice in Acute Critical Care</i>, 10(4), 508-514.</p>	<p>USA</p>	<p>Review the use of distance learning in nursing education and summarizes key questions that must be addressed by programs or students considering advanced practice nursing education using distance technology</p>	<ul style="list-style-type: none"> • Literature review 	<ul style="list-style-type: none"> • The technology is now available for providing new and innovative methods for preparing APNs • To date, however, use of multimedia telecommunications and information technology in offering graduate nursing courses has been limited • Computer-assisted video conferencing and other components of distance education have many potential uses including course work instruction, patient assessment, patient and family education, and student recruitment initiatives for distance education purposes • Knowledge of available technology and components of distance education can enhance the ability of nurses to evaluate and choose educational programs to meet their needs

Appendix B: Continuing Education Registration Form

First Name: **Initials:** **Last Name:**
Address:

City:
Province: **Country:**
Home Phone: () -
Work Phone: () - ext.
Mobile Phone: () -
Fax Number: () -
Email:
Postal Code:

COURSES SELECTION

Course(s) to which you are registering:

- Emergency Health Care In Rural Settings
- Issues In Mental Health
- Issues In Persistent Illness
- Pharmacotherapeutics

PERSONAL DATA

Date of Birth: yyyy mm dd

Sex: M F

Are you a member of a First Nations community or of Aboriginal heritage? Yes No

- Age Group:**
- 18-24
 - 25-34
 - 35-44
 - 45-54
 - 55-64
 - 65 +

First Language:

- French
- English
- Other, please specify:

Language(s) At Work:

- French
- English
- Other, please specify:

EDUCATION

What is the highest level of education you have attained in nursing?

- Diploma Baccalaureate Master's Doctorate

Name of the Institution referred above:

Year you graduated from the above:

Do you have other nursing specialty education that is not captured by the question above (i.e. Northern clinical program, outpost nursing, gerontology)?

- No Yes, please specify:

EMPLOYMENT

Please select the best representation of your nurse practitioner preparation:

- Nurse Practitioner Certificate from the Council of Ontario University Program in Nursing (COUPN) Nurse Practitioner Certificate from another Educational Institution
- Other, please specify: No Nurse Practitioner preparation

Please select one of the following that best represents your primary practice setting:

- Aboriginal Health Access Center Health Service Organization
- Community Health Center Hospital Ambulatory
- Community Home Care Agency Hospital Emergency
- Community Care Access Centre Hospital Inpatient
- Long-Term Care Facility Physician's Office / Family Practice Unit
- Nursing Station / Outpost Nurse Clinic Public Health Unit
- Not Currently Practicing In Nursing Other, please specify:

Which of the following categories best describes your nursing registration situation?

- Registered Nurse With A College Of Nurses Of Ontario Extended Class (EC) Registration Registered Nurse (Without Extended Class Registration) Working In An Expanded Role Or Under Some Medical Directives In Primary Care Setting
- Registered Nurse (Without Extended Class Registration) Working As A Staff Nurse In First Nations Health Centres Funded By Health Canada Registered Nurse, General Class

Nursing registration body (please indicate the full name & province):

Nursing registration number:

Do you currently practice as a primary health care practitioner? Yes No

How many years have you practiced in this role?

- less than 5
- between 5 and 10
- between 10 and 15
- between 15 and 20
- more than 20

What are your total years of RN experience?

- less than 5
- between 5 and 10
- between 10 and 15
- between 15 and 20
- more than 20

How many employers do you presently have? 1 2 3 4

What is your primary employment status?

- Full-Time Permanent
- Full-Time Contract
- Part-Time Permanent
- Part-Time Contract
- Other, please specify:

How many hours do you work in a week?

- N/A
- 1-20
- 20-40
- 40-60
- 60 +

What is the name of the community in which you live?

What is the name of the community in which you practice?

Same as above

If not same, specify:

COMPUTER ACCESS

Regarding your access to a computer (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> I own a computer | <input type="checkbox"/> I can access a friend's computer |
| <input type="checkbox"/> I can access a computer at Work | <input type="checkbox"/> I can access a computer at an Internet Café |
| <input type="checkbox"/> I can access a computer at a School | <input type="checkbox"/> I can access a computer at the Library |
| <input type="checkbox"/> I can access a computer somewhere else (please specify): <input type="text"/> | <input type="checkbox"/> I do not have access to a computer |

How "strong" are your computer skills?

- Not At All Somewhat Moderately Very Extremely

Choose one of the following regarding your Internet connection:

- | | |
|--|---|
| <input type="checkbox"/> N/A | <input type="checkbox"/> High speed (T1/Cable/DSL) |
| <input type="checkbox"/> Dial-up (modem 56 Kbps) | <input type="checkbox"/> Dial-up (modem 28.8-33.6 Kbps) |

LEARNING METHODS

When will you be studying (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Morning (5am-noon) | <input type="checkbox"/> Afternoon (noon-5pm) |
| <input type="checkbox"/> Evening (5pm-midnight+) | <input type="checkbox"/> Weekends |

Do you have any previous experience with distance learning? No Yes

If yes, please specify « Year; Course Title; Modality »:

OTHER

What are your personal learning goals from this course?

What is(are) your main reason(s) for taking this course (check all that apply)?

- | | |
|---|---|
| <input type="checkbox"/> Personal Interest | <input type="checkbox"/> Career Advancement |
| <input type="checkbox"/> Salary | <input type="checkbox"/> Quality Assurance |
| <input type="checkbox"/> Extended Class Registration Exam Preparation | <input type="checkbox"/> Remediation |
| <input type="checkbox"/> Other, please specify: | <input type="text"/> |

How did you hear about our project (check all that apply)?

- | | |
|---|---|
| <input type="checkbox"/> Referral by a peer/colleague | <input type="checkbox"/> Read about it in print |
| <input type="checkbox"/> Internet | <input type="checkbox"/> Link on a Website |
| <input type="checkbox"/> Referral by employer | <input type="checkbox"/> Referral by nursing organization |
| <input type="checkbox"/> Other, please specify: | <input type="text"/> |

Appendix C: Continuing Education Module Evaluation Form

Please complete the following questionnaire as directed under each category. Click on "Continue" when complete. Confidentiality will be respected. The data will be released and used as only as group data and not as individual responses. Your responses will help guide future course development.

Course

Evaluation of Module X - Topic

A) Time Commitment

1. Please estimate the amount of time you have spent working on this module and enter the number in the space provided.

- a) How many HOURS did you spend completing the readings for this module? Hours
- b) How many HOURS did you spend on the case studies for this module? Hours
- c) How many HOURS did you spend on this module in TOTAL? Hours

B) Module Format (please select one response only. You may also enter comments in the space provided.)

1. How helpful did you find the cited references (supporting the correct answer) in supporting your overall learning?

1 Not at all 2 Somewhat 3 Moderately 4 Very 5 Extremely

Comments:

2. How helpful did you find the Problem/Practice-based scenarios (i.e. Case Studies) in supporting your learning?

1 Not at all 2 Somewhat 3 Moderately 4 Very 5 Extremely

Comments:

3. How helpful did you find the Interactive Quizzes in supporting your learning?

1 Not at all 2 Somewhat 3 Moderately 4 Very 5 Extremely

Comments:

4. How helpful did you find the Identified Websites in supporting your learning?

1 2 3 4 5
Not at all Somewhat Moderately Very Extremely

Comments:

5. How helpful did you find the quiz at the end of the module in supporting your learning?

1 2 3 4 5
Not at all Somewhat Moderately Very Extremely

Comments:

6. How would you rate the number of questions contained in the QUIZ?

1 2 3 4 5
Far Too Few Too Few Just Right Too Many Far Too Many

Comments:

7. How helpful did you find the assigned readings in supporting your learning?

1 2 3 4 5
Not at all Somewhat Moderately Very Extremely

Comments:

C) Module Content (please select one response only. You may also enter comments in the space provided.)

1. How comprehensive was this module as a review for this topic area (e.g. cardiovascular, respiratory, gastrointestinal)?

1 2 3 4 5
Not at all Somewhat Moderately Very Extremely

Comments:

2. How **difficult** did you find the material presented in this module?

1

2

3

4

5

Not at all

Somewhat

Moderately

Very

Extremely

Comments:

3. How **helpful** did you find this module in assisting you to **identify your relevant strengths**?

1

2

3

4

5

Not at all

Somewhat

Moderately

Very

Extremely

Comments:

4. How **helpful** did you find this module in assisting you to **identify your learning needs**?

1

2

3

4

5

Not at all

Somewhat

Moderately

Very

Extremely

Comments:

5. How **helpful** did you find this module in **building your knowledge** in this topic area?

1

2

3

4

5

Not at all

Somewhat

Moderately

Very

Extremely

Comments:

6. **OVERALL**, **how successful** was this module in **MEETING** your original learning goals?

1

2

3

4

5

Not at all

Somewhat

Moderately

Very

Extremely

Comments:

7. What **other topics**, if any, should have been included in this module?

Topic 1:

Topic 2:

Topic 3:

8. Do you anticipate that your **learning from this module** will have a positive effect on **your future clinical practice**?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> |
| 1 | 2 | 3 | 4 | 5 |
| Not at all positive | Somewhat positive | Moderately positive | Very positive | Extremely positive |

Comments:

Other Comments:

Thank you for your feedback.