



Nursing Issues

Telehealth, Technology and Nursing Practice: Complementary Futures

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For most people today, telehealth is recognized as the delivery of clinical services, healthcare and/or health education at a distance using telecommunications and information technologies. In other words, it is much broader than the traditional notion of telemedicine. Telehealth started in Nova Scotia when TecKnowledge Healthcare Systems Inc. was co-founded in 1993 in response to the growing system-wide pressure to cut costs yet maintain the coverage and quality of healthcare while reducing the inequity between urban and rural areas in the accessibility of vital health services. At the time Nova Scotia was the first province in Canada to establish a province-wide network and today it is possibly the largest in North America. The purpose of the telehealth network is to increase access to health services for physicians, nurses, other healthcare providers and patients, as well as to provide clinical and education support. When TecKnowledge launched the network in the eastern region of the province in 1998 the Registered Nurses' Association of Nova Scotia (RNANS) capitalized on the opportunity to integrate the technology for clinical education support to registered nurses.

The idea was exciting and the timing could not have been better given the results of the Association's provincial survey of staff nurses' clinical education priorities. This information, combined with the external context of rapidly evolving health system changes, created the impetus for finding innovative approaches to providing clinical education support to nurses in their workplaces. Specifically, the survey findings under-

scored the importance of relevant, accessible education that would be available on an ongoing basis at no cost to participants. The overall absence of a coordinated, integrated approach to assessing and responding to nurses' clinical education needs was also notable, as was the identification of cost and distance barriers underlying accessibility. At the same time, continued restructuring of health services along with changing patient acuity levels in hospitals, long-term care and home-care settings accelerated the demand for a knowledgeable, clinically competent nursing workforce. Furthermore, facilities and employers lacked the critical resource capabilities to respond effectively to a range of site specific clinical education priorities for nurses. There was justification for moving forward with a telehealth education initiative but there were also funding challenges for the RNANS to be able to sustain this initiative, especially when the network would potentially link all healthcare facilities in the province.

As the provincial regulatory organization for registered nurses, the RNANS operates within a mandate that includes, among other services, programs that support the delivery of safe, competent, ethical nursing care. On the strength of this mandate and the organization's values of accountability and life-long learning, a proposal and a business plan were developed to obtain funding from the Department of Health. Knowledge development was at the core of the proposition to integrate telehealth technology for accessible, appropriate, cost-effective clinical education for registered nurses that would contribute to continuing competence and improved


patient care. The Department of Health recognized the idea as one solution to immediately benefit the nursing workforce during a period of considerable government-driven health system change. The government also recognized the potential public service benefit of improved patient care and agreed to 100% funding for the first year of the project in the Eastern Health Region. Other RNANS partnerships working to make clinical education via telehealth a reality involved the Eastern Regional Health Board, which provided office space for the new staff coordinator. TecKnowledge also partnered to assist with staff recruitment and implementation logistics for program delivery.

Clinical education programs via telehealth were launched in the Eastern region in May 1998 to the 14 health facilities where 1,100 registered nurses practice. Six one-hour sessions are delivered by clinical nurse specialists and other clinical experts each month based on education priorities identified by nursing staff. Some of the priorities identified included specialized content areas such as oncology, palliative care (pain management, practice guidelines, program development), emergency care (assessment, triage, practice guidelines), mental health (critical incident debriefing, assessment, pharmacology), gerontology (functional assessment, family counselling) and communicable disease control including HIV management. Sessions may be repeated to extend access when scheduling or workloads are deterrents to participation.

After one year 1,449 participants accessed telehealth clinical education sessions. Of these, 1,082 were registered nurses and 367 represented other health professionals for whom the content was relevant, for an average of 20 participants per session. The telehealth interactive video conferencing technology was readily adopted by participants as an acceptable approach to delivering clinical education support. The appropriateness and relevance of the education content was highly rated by 98-100% of participating nurses, the majority of whom accessed the network from rural areas. Prior to the availability of telehealth, nurses would have had to travel considerable distance and pay a workshop fee. The evaluations frequently noted the need for continued clinical education on-site and appreciation for the effectiveness of telehealth in eliminating traditional access, cost and distance barriers.

As access to knowledge becomes increasingly critical to delivering quality health services, it is notable that many nursing practices are based on intangible knowledge such as experience, tradition, intuition, common sense, and untested theories. By contrast, tangible knowledge comes from captured data such as research reports, databases and best practices. Telehealth is helping nurses to learn best practices for enhancing clinical competence and improving patient care. Almost 90% of participating nurses noted the impact of the education sessions in terms of updating procedures, more comprehensive

patient assessments, improved accuracy on test interpretations, and integration of new communicable disease and pharmacology information. Some unanticipated but positive comments from participants suggested a greater sense of loyalty to the RNANS for initiating the project, acknowledgement of a larger sense of “professional community” among nurses from the various participating sites and with the clinical expert delivering the content and recognition for education solutions that fit site specific contexts. Experience with the network has also engaged nurses in using the technology for direct patient services, for example, demonstrating nursing care procedures from the hospital to home care nurses in remote communities to support continuity of care for discharged patients.

Today the telehealth network links all health care facilities in the province by interactive video conferencing, related telehealth equipment and high speed telephone lines. This expansion means that every registered nurse (9,400) can access clinical nursing education through the network. The RNANS has moved forward with the delivery of education services to all sites and continued evaluation of the effectiveness of this strategy for enhancing continuing competence and improving patient care. The Department of Health has sustained funding support at 66% of the total operating costs. Overall, telehealth has proven to be a strategic initiative for the Association and a powerful stimulus for other technology applications that increase our capacity to deliver on our mission including improving connections with nurses and the public for better healthcare. 



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