Collaboration to Change the Landscape of Nursing: A Journey between Urban and Remote Practice Settings

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Abstract
University Health Network (UHN) became a demonstration site to test a health human resource planning model to foster inter-organizational collaboration, knowledge transfer and exchange of nurses between an urban academic health science centre and a remote region in northern Ontario. Funding support was provided by the Ontario Ministry of Health and Long-Term Care. The partnership between UHN, Weeneebayko Health Ahtuskaywin (WHA) and James Bay General Hospital (JBGH) addressed retention, recruitment, professional practice development, planning and
succession planning objectives. The primary goal of this partnership was to supply the staffing needs of WHA/JBGH with UHN nurses at a decreased cost for four- to six-week placement periods. This resulted in a marked decrease in agency use by approximately 40% in the WHA site during the months UHN nurses were practicing in the north, with an overall agency cost savings of $165,000 reported in the pilot year.

The project also served as a recruitment and retention strategy for all organizations. It provided an opportunity to practice in new clinical settings and to engage in knowledge transfer experiences and professional development initiatives between remote and urban practice environments. In the pilot year, 37 nurses (30 from UHN and 7 from WHA) participated. They returned to their respective organizations re-energized by the different “landscape” of practice experience and toward the nursing profession itself.

Introduction
The Canadian healthcare system is faced with a nationwide imbalance between the supply of nurses and demand for them within healthcare institutions. Canada currently has a shortfall of nurses (which is predicted to reach 78,000 by 2011 and 113,000 by 2016) and an insufficient number of new graduates (the primary source of recruitment) to fill vacancies. The shortfall is increasingly related to escalating retirement rates and loss of new graduates (15 to 20% leave the profession in the first three years) (CIHI 2002, 2006).

In rural and remote environments, the imbalance is magnified by several factors. Very small populations are scattered across large geographic areas, and care providers are geographically isolated. Access to education and professional development programs is limited, as is economic interaction with urban areas (CIHI 2007). Remote organizations also face identical professional and personal challenges to those of urban healthcare organizations in respect of recruitment and retention. These issues must be resolved in order to meet the population’s healthcare needs.

Testing ways to address these unique challenges is crucial. Since 2000, 18% of RNs have been practising in the rural, remote and northern communities where 22% of Canadians live (CIHI 2002). An analysis of 2006 Ontario data found that “70.5% of the provincial Registered Nurse workforce lives and works in urban regions. Of those living in rural areas, 3.8% commute to work in the largest cities, 3.3% work in mid-size cities, and 3.3% remain in rural areas” (CIHI 2007: 13). CIHI (2002) reported that the number of nurses in these communities is on the decline, while the number of people living in rural areas and small towns is increasing. This trend also negatively affects the landscape of healthcare delivery. A report by the Northern Development Ministers Forum (2002, as cited in Canadian Nurses
Association 2002) highlights strategies for new and expanded recruitment initiatives for northern communities in Canada. One key recommendation is the need to expand successful urban initiatives to more northern communities.

This article describes an innovative strategy to test a health human resource (HHR) planning and employment model to foster inter-organizational collaboration, knowledge transfer and exchange of nurses between an urban academic health science centre and a remote region in northern Ontario. On average, agency staff cost twice the amount of hospital-employed staff. This model provides four to six weeks of paid leave for urban, hospital-employed nurses to engage in seconded employment in remote settings, thus reducing the level of agency use, with its associated higher cost, in those locations. Inversely, reciprocal two-week educational placements are offered to remote staff for observations at University Health Network (UHN). Through the partnership between the diverse organizational settings of UHN in Toronto and Weeneebayko Health Ahtskaywin (WHA) and James Bay General Hospital (JBGH), the project proactively addressed retention, recruitment, professional practice development, HHR and succession planning.

UHN comprises Toronto General Hospital, Toronto Western Hospital and Princess Margaret Hospital in downtown Toronto. The three sites provide 730 beds accommodating approximately 241,854 in-patient days, 816,822 ambulatory visits and 73,500 emergency visits. The operating budget is more than $850 million. Resources are grouped into seven healthcare programs, focusing on medicine and surgery, community and population health, and cardiac, musculoskeletal, neuroscience, oncology and transplant services.

In contrast, the entire James Bay coastal population of approximately 11,000 inhabitants is serviced by the James Bay General Hospital. JBGH has sites in the remote communities of Attawapiskat, Fort Albany and Moosonee along the west-

Lessons Learned
- Embrace the possibility of healthcare delivery networking outside geographic boundaries to meet recruitment and retention challenges. Offering nurses from an urban academic health science centre and nurses in remote northern regions the opportunity to practice and observe in each others’ settings can foster recruitment and retention in both areas.
- Adapt a philosophy of an “open mind and an open heart” to differing geographic and cultural healthcare delivery environments. This is a valuable adjunct to more physical and psychological preparations for a remote nursing placement, such as skill assessment and personal management strategies.
- Innovative approaches to health human resources can reap rewards beyond initial outcomes. Unanticipated feedback from UHN nurses revealed an increase in confidence gained by the ability to work to full scope of primary care practice, as role restrictions were less evident in remote practice than in urban settings.
ern shores of James Bay, approximately 1,100 km northwest of Toronto. Primary, acute and chronic care healthcare is provided within 33 in-patient beds, as well as 24-hour emergency services.

Weeneebayko Health Ahtuskaywin, located on Moose Factory Island three miles from Moosonee, is a 58-bed acute care teaching hospital. It is the regional referral centre for diagnostic, specialty, obstetric and outpatient services for six communities along the western Ontario shores of James Bay and Hudson Bay. As the primary receiving hospital for the James Bay area, Weeneebayko Health Ahtuskaywin is 309 km from the closest large healthcare centre.

**Overall Project Objectives**
The overall objectives for this project were as follows:

**1. To recruit new nurses to UHN and northern communities**
Today’s new graduates have been characterized as excelling in situations that permit them to go from project to project rather than remain on traditional career paths in healthcare organizations (Stewart 2006). It is believed that offering different learning opportunities in urban and remote nursing practice will attract nurses interested in working at both UHN and in the remote James Bay region.

**2. To retain nurses across the learning continuum of new graduate to late career and identify career pathway opportunities**
An urban–remote nursing experience was offered to nurses across the learning continuum as a career-enhancing initiative that would lead to retaining and motivating valuable employees. The RNAO Healthy Work Environments Best Practice Guideline (RNAO 2007) validates the idea that opportunities to grow professionally and personally are important for nurses. Career development and lifelong learning activities promote job satisfaction and increase retention and the provision of high-quality care. Working conditions where nurses feel challenged in their practice, fairly treated and rewarded also promote retention and job satisfaction (Cameron et al. 2004).

**3. To develop and foster knowledge exchange in the areas of professional development and e-learning**
Lawton et al. (2006) identified that rotational experiences offer excellent professional development opportunities. UHN nurses experienced a variety of opportunities at WHA and within outpost nursing stations and hospitals within the region. While at UHN, remote-based nurses encountered a number of opportunities while shadowing urban staff and programs. Education, in-services and certifications were facilitated through access to advance practice nurses and researchers. Specific observations, such as diagnostic interventions and off-site visits, were
arranged on expressed interest to optimize the urban experience.

UHN nursing offers a complex network of information technology that enhances patient care, communication, education and workload measurement. Technological resources such as e-learning foster information sharing. Nurses at WHA were introduced to UHN’s e-learning system, which consists of over 50 courses for virtual learning opportunities. In addition, five e-learning modules were developed specifically for the remote nurses’ learning needs.

4. To implement the UHN HHR staffing analysis tool in WHA
With the collection and monitoring of valuable metrics, efficient processes can be developed to meet rapidly changing healthcare environments and HHR challenges (Spinks and Moore 2007). The UHN HHR staffing analysis tool was implemented in WHA to test the tool’s applicability in other healthcare settings. Data parameters related to existing staff vacancies and leaves (e.g., vacations, education leaves) were examined to help project WHA’s current and future resource needs, which UHN staff could meet.

Project Implementation
Marketing the program spanned web-based media (Internet information websites, video clip interviews, Facebook), print media, internal presentations and drop-in information sessions, as well as recruitment interviews. Detailed information included remote community descriptions, a tentative placement schedule (four to six weeks), existing staffing complements, travel and accommodation arrangements, and financial support (e.g., salary replacement, isolation incentive allowance). Skill competency checklists and resources pertaining to First Nation healthcare cultural contexts, as well as clinical practice guidelines to further prepare urban staff for remote practice environments, were also included. Staff who had already participated in the program posted reflections and photo journals on the website as a way of sharing their personal experiences with other staff.

Interested candidates submitted resumes and the approval of their clinical manager for the off-site employment leave. The Ontario Nurses Association readily gave its support to offer this unique professional development opportunity to nursing staff. A pre-departure letter of agreement was circulated to every participant for sign-off by all stakeholders; the letter outlined the terms of employment and program administration details to ensure clarity, role expectations and adherence to specific local collective agreements. All associated costs of remote placement (flight, accommodation and salary) were paid by the remote organization, as these expenditures would be budgeted for regardless of staff affiliation. Staff replacement costs at UHN were absorbed through planned variances in staffing levels or through internal staff availability.
Scheduled pre-departure briefings alleviated concerns regarding program administration and work assignments. Areas of discussion included preparation for sensory and physical isolation, as well as cultural sensitivity, scope of practice expectations and pace, skill assessment and personal management strategies (nutrition, communication). Support systems were put in place to establish communication via a weekly email check-in and to promote personal documentation of the experience through journaling. Physical and psychological preparation are of the utmost importance to ensure a successful remote nursing placement (Misner et al. 2008). Insightful advice from one of our first travellers was to readily adapt the philosophy of an “open mind and an open heart.”

Providing reciprocal knowledge exchange opportunities for participating WHA nurses at UHN enabled these nurses to learn about the delivery of nursing care within a quaternary academic health science organization. Visiting nurses were provided with sponsored accommodation in downtown Toronto. Preceptored clinical placement in specific areas of interest was arranged, and professional development activities were scheduled. Opportunity for interprofessional team dialogues and diagnostic interventions, as well as observation of specialty procedures, was also provided.

Within the later phase of the pilot program, data sets were collected and imported into the UHN-based HHR staffing analysis tool to ascertain baseline metrics such as agency utilization hours, overtime and staff vacancy rates. Nursing leadership from WHA participated in a strategic nursing resource analysis symposium to learn about implementing the web-based staffing tool. In-kind resources were utilized for data acquisition and transmission and analysis of baseline and quarterly findings, as the department was willing to expand collecting data from similar data sources to validate the tool’s applicability to remote settings. The goal was to develop and disseminate process guidelines to organizations that may wish to duplicate this initiative in organizations, sectors and regions across the province.

**Results**

**Recruit New Nurses to UHN and Northern Communities**

This experience facilitated the exchange of nursing knowledge and professional development, achieving the anticipated outcome of enriched nursing practice for participants, organizations and, most importantly, clients that the nurses cared for. UHN nurses engaged in teaching and exchanged knowledge with nurses while at WHA. The primary objective of meeting the care delivery needs of the James Bay region with UHN nurses was met. Within
the pilot year, 37 nurses (30 from UHN and 7 from WHA) took advantage of the exchange opportunity. Participants returned to their organizations re-energized in their practice and their nursing. All UHN nurses expressed the desire to return to James Bay, which was validated by two repeat placements within the same year. A limitation affecting staff travel was the occasional inability of managers to release staff for placement requests due to home unit staffing variances. This factor influenced UHN’s ability to meet projected staffing needs at remote facilities on a consistent basis, so those facilities occasionally resorted to using agency staff. As a result of personal exposure to the program, four UHN nurses accepted permanent staff positions at the WHA site in Moose Factory. This creates a positive atmosphere for urban staff to travel and work with past UHN employees, who become on-site resources to guide and support visiting staff.

Retain Nurses and Identify Career Pathway Opportunities
Engaging nursing staff in designing options for career movement is paramount to ensuring their ongoing interest and career development. This is exemplified at UHN by participants’ increased interest in furthering their nursing education in postgraduate studies, particularly in the field of advanced practice nursing. Three nurses investigated the potential to conduct academic clinical practicums in remote northern communities based on previous placement experience or through their expressed interest in the project itself.

A preliminary work plan was established to assess, develop, implement and evaluate an on-site oncology program at WHA in Moose Factory, utilizing UHN staff nurses in the program process. Additional funds allowed for secondment of an advanced practice nurse specializing in oncology services. The project involved identifying the scope of work to provide a remote, on-site oncology certification program for nursing staff, followed by development of on-site resource staff to administer and care for patients receiving chemotherapeutic agents at WHA. This would diminish the emotional, physical and financial impact currently experienced by patients travelling to southern Ontario centres for treatment.

Successful recruitment and retention outcomes are seen through exchange participants who voluntarily promote the program at internal and external venues. Many student nurses have expressed interest in employment at UHN to participate in the program.
Develop and Foster Knowledge Exchange, Professional Development and E-learning

Knowledge transfer between the participating organizations occurred in many ways. UHN nurses gained experiential knowledge of cultural sensitivity and remote healthcare that was directly applicable to a heightened appreciation of cultural diversity issues in urban environments. They also acquired new knowledge and skills related to primary care nursing. Unanticipated feedback revealed an increase in confidence gained by the ability to work to full scope of primary care practice, as role restrictions were less evident in remote practice than in urban settings (e.g., obstetrical and pharmacological services).

During their placements at UHN, WHA nurses expressed clinical interest in specialized learning such as emergency, critical care, diagnostic and operating room observations. Many completed the Ontario Hospital Association’s triage certification program and arranged obstetrical placements in collaboration with a neighbouring facility. Triage certification courses were subsequently facilitated onsite at the remote locations for 24 WHA/JBGH healthcare staff.

E-learning accounts were established for 58 WHA and JBGH staff to access the UHN learning management system, which offers 50 e-learning courses on various topics. Five interactive e-learning modules specific to the needs of our remote practitioners were created and launched. All use the latest technology to educate and transfer knowledge into clinical practice in the areas of acquiring and interpreting diagnostic tests for urinalysis, rapid fibrinogen, pregnancy, point-of-care testing for glucose and hemoglobin. All staff received individual instruction and a unique ID and password to access both the remote nursing e-learning modules designed for them and the existing UHN e-learning courses.

Implement the UHN HHR Staffing Analysis Tool in WHA

Implementation of the HHR web-based data repository (http://www.nursesfortomorrow.ca) within a remote healthcare organization occurred in several phases. Initial data was extracted from various internal and external sources to ensure consistency and accuracy of indicator tracking. The tool itself captures unit-specific actual and predicted vacancies, staff characteristics and staffing changes for three-month periods. The unit staffing analysis template is completed on a quarterly basis by nurse managers and guides decision-making about the number of nurses to be hired, where they should be placed and how they should be supported.
Subsequent reports show analysis of predicted (three months out) changes in turnover (including leaves of absence, maternity leaves, retirements), percentage of novice nurses on the unit, average occupancy, sick time, overtime and agency staff use. Collaborative efforts enabled validation of the tool for its applicability and utility within smaller healthcare organizations. However, refinements to data indicators are continually assessed to accurately reflect small employee-cluster trends in remote sites. Financial data derived during the pilot year showed a 40% decrease in agency use by the remote organizations. Acknowledging administrative and direct expenses associated with both staffing models, the WHA site reported an overall cost savings of $164,000 over a nine-month period.

**Qualitative Outcomes**

Qualitative findings indicate remote communities’ satisfaction with the competence of UHN staff placements by ongoing implementation of the program past the pilot-year funding. Relationship building and appreciation of the other practice environment have spawned plans to include allied health professionals, mental health programs and specialty services within other landscapes of the healthcare continuum in the remote practice environments.

Urban nurses reflecting on their experiences in the North expressed their appreciation of culturally rich environments and their utmost respect for remote nurses practising to full scope. Specifically, skills relating to physical assessment, holistic patient-led healthcare and skill enhancement (suturing, casting, pharmacology) created meaningful career highlights. Greater autonomy and resourcefulness have echoed throughout debriefing sessions, along with expressed goals of further education and practice acquisition to apply in repeat placements. Acknowledgement and pride was evident through the opportunity to practise beyond the boundaries of the base organization. These shared experiences facilitated project growth; they also fuelled the development of a spirit of inquiry, cultural appreciation, and a philosophy of lifelong learning and collegiality that lasted well beyond the placement, toward an appreciation of global nursing practice.

**Sustainability and Beyond**

Sustainability was fostered through marketing initial achievements. Staff enthusiasm was instrumental in spreading the philosophy of knowledge networking and appreciation of nursing practice beyond the geographical boundaries of each participating organization. Both urban and remote staff have generated widespread interest as they share their experiences, which
encourages colleagues to participate. An opportunity for allied health staff participation has also elicited encouraging results from all organizations. This vital healthcare team component experiences similar challenges of recruitment and accessibility within remote practice locations; particularly for dieticians, physiotherapists, occupational therapists, lab technicians and diagnostic imaging personnel. The complex social and mental health needs of remote communities also provide opportunity to replicate this staffing model to the community-based mental health specialties.

Many departments within all participating organizations continually support this initiative through in-kind services. At UHN, nursing informatics provided web page development, as well as web casts of project updates, testimonials of nursing staff and marketing formats. Virtual classroom management personnel created and introduced the learning management system in the North and reviewed existing nursing related e-learning modules for applicability in remote practice settings. Within all organizations, individual department nurse managers, educators, nurse preceptors and administrative staff demonstrated patience and enthusiasm in the planning and execution of logistical issues. These included schedule modifications and flight and accommodation arrangements, as well as unit-level orientation to new practice environments. Human resources and payroll departments at all sites were instrumental in tracking the logistical aspects of this program to provide countless hours of administrative support, consultation and tracking services. Acknowledgement must be made to neighbouring urban teaching hospitals in providing remote nurses with obstetrical clinical observation opportunities during their urban placement.

**Conclusion**

This project demonstrates that a human resource planning and placement model that fosters inter-organizational collaboration, knowledge transfer and exchange of nurses is a viable and valuable endeavour to promote change in the existing landscape of healthcare. Providing creative and innovative employment opportunities is one approach to understanding the complexities of our current workforce. The inclusion of education and professional development support is also crucial to successful implementation. Utilization of this staffing model to meet the care delivery needs of remote healthcare environments enables geographically challenged organizations to decrease the need for costly agency staff, resulting in human resource cost savings. The extension of the innovative staffing model to interprofessional colleagues will allow for the creation of healthcare provider teams in the James Bay region.
Urban and remote organizations can successfully share resources, resulting in decreased costs, increased knowledge exchange and innovative retention and recruitment strategies. The acquired knowledge gained from this project has the potential for replication across practice settings in response to known health human resource challenges.

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