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From the Editor-in-Chief

In 2005, the Healthcare Council of Canada released a report on healthcare renewal, identifying the renewal of health human resources (HHR) as an urgent priority. Shortly thereafter, a task force in Ontario identified the need to address mechanisms for better HHR planning among healthcare employers. Subsequently, 17 nursing HHR demonstration projects were funded by the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care (MOHLTC) from 2007 to 2009. With goals to (a) *increase employer capacity for nursing health human resource (HHR) planning*, and (b) *support the creation of more full-time nursing positions*, the initiative was designed to address Ontario-specific issues. Nonetheless, the broad applicability of the nursing HHR planning tools, best practices and resources developed suggests that the projects described herein undoubtedly have relevance to other jurisdictions.

This special issue of *CJNL* chronicles the experiences and outcomes of these projects. Due to the number of projects, only eight are published in detail, while the remaining nine are described in summary abstracts. It is important to note that these projects were designed to glean insights and inform future strategies and not intended to be rigorous research efforts. The projects focused on an array of issues central to nursing HHR planning, including planning capacity; the use of evidence, tools, knowledge and modelling to support planning; and the variability of issues faced by different care sectors. To this end, projects were funded within a variety of sectors, including acute care, long-term care, mental health, public health and community nursing, and urban and rural settings. It is notable that these initiatives involved numerous organizational partnerships and engaged a rich cast of nurse leaders from chief nurse executives to front-line care providers.

Burkoski and Tepper set the stage for the papers that follow by providing a background to the demonstration projects, including the rationale, qualifications and process for selection of participant sites, the evaluation process and the resultant recommendations for policy and program formulation in support of future nursing HHR planning.

In the face of ubiquitous, yet much maligned, workload measurement tools, Ferguson-Paré and Bandurchin tested the Health Outcomes for Better Information and Care (HOBIC) measures as an alternate approach to the

measurement of nursing work. Additionally, they examined the use of key metrics to measure nursing work and make informed staffing decisions. They also developed a model to predict acute care nursing costs. Not surprising, they identify the importance of considering the multiplicity of patient and environmental factors that impact nursing decision-making.

Another tool development effort to support HHR planning is described by Blastorah and colleagues. They discuss the development and testing of a Registered Nurse/Registered Practical Nurse (RN/RPN) toolkit designed to inform staff mix decision-making on medical–surgical units with a model of total patient care. This toolkit provides a framework of client, environment and nurse factors through which decisions regarding nursing staff mix requirements can be informed. While initial findings are promising, the tool requires further testing and evaluation, as does the quality of the decisions informed by its use.

Vincent and Beduz describe the development and pilot dissemination of a Nursing Human Resource Best Practices Toolkit (NHRBPT). With a number of acute care organizations participating in the development, a primary goal was to facilitate the sharing of knowledge regarding nursing human resource planning practices among the hospitals. Overall, the output of a "comprehensive, evidence-informed resource" with "practice-ready tools" is intended to have broader jurisdiction applicability for first-line managers.

The merits of collaboration among home healthcare providers in Ontario is evident in the results of the ALIVE web-based leadership training program. The goal of this initiative was to create a transformational leadership model addressing the unique needs of nursing leaders in the home care sector. The authors (Lankshear et al.) conducted an assessment of educational gaps, identified key leadership competencies and developed evidence-based resources for home care nurse leaders. Having access to these resources and the opportunity to engage with a wider network of leaders was demonstrated to be highly beneficial to home care leaders, who often work in isolation.

The overall objective of the training program described by O'Brien and colleagues was to develop programs and tools to help address barriers in the recruitment and retention of RNs and RPNs in long-term care. Within the program were two initiatives focused on leadership and mentorship. The "Excelling as a Nurse Leader in Long-term Care" training program was designed "to enhance and develop nurses' leadership skills in verbal communication, human relations, abstraction, reflection, question-framing and time management." The mentor team provided for a "permanent, facility-wide team of trained mentors … available to answer questions about their departments from all staff, both new and longer-term."

Preliminary results from both are positive, but it is early days to determine the longer-term impacts on recruitment and retention.

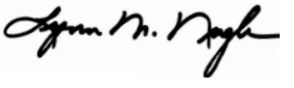
A novel recruitment and retention effort is described in the Weeneebayko Health Ahtuskaywin, James Bay General Hospital and University Health Network exchange program (Ferguson-Paré et al.). This inter-organizational collaboration focused on knowledge transfer and exchange of nurses between an urban academic health science centre and a remote region of northern Ontario. Provided with an opportunity to practise and learn in a new clinical environment, participating nurses derived many positive benefits, including a sense of appreciation for another's practice environment.

Another recruitment and retention project was structured to be delivered through a partnership of mental health and educational institutions (Ng et al.). These partners focused on the creation of the Mental Health Nursing Residency Program with an intent to "dispel myths associated with practising in the sector by promoting mental health as a vibrant specialty." The program curriculum is a combination of clinical time, collaborative learning and mentored clinical practice. The evaluation of this program demonstrated benefits to clinical practice and an improved ability to recruit and retain nurses.

Simpson and colleagues describe the changing landscape of public health in Canada such that new standards and competencies are presenting a challenge to leaders who need to orient staff to public health nursing. In order to improve retention and integration of new hires, they developed a standardized, general orientation toolkit encompassing a wide range of public health knowledge and issues. The Orientation: Transition to Public Health Nursing Toolkit has already been disseminated to other Canadian jurisdictions but has yet to be evaluated for its impact on retention.

The project summaries address another array of initiatives, including (1) a program investing in "Rising Stars," or emerging nurse leaders, emphasized the value of cross-sector collaboration, (2) a multi-faceted retention program focused on leadership development of mid-career point-of-care nurses, flexible and innovative scheduling, and testing for optimal span of control, (3) a supportive program for nurse managers hiring, managing and retaining internationally educated nurses, (4) optimizing nurse staffing and scheduling, (5) long-term care nursing recruitment strategy, (6) utilizing a best-practice staffing framework, tools and processes to enhance interprofessional collaboration and teamwork, (7) use of a workforce demand forecaster tool, (8) a nursing internship program and human resources planning across rural communities, and (9) the experience of sharing unionized, full-time positions between rural and urban emergency rooms.

Upon review of each of these initiatives, it is clear that there is incredible merit to be derived from inter-organizational and cross-sectoral collaboration when looking for innovative strategies and solutions, best practices and decision-making tools. Although there are specific nuances and unique considerations in every setting, most share many of the same human resource planning and management challenges. It is our sincere hope that you derive value from the explication of these projects and that they inspire creative solutions and encourage collaboration as we collectively strive to provide the very best of leadership in the management of our nursing resources.



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In This Issue

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The Demonstration Projects: Summaries

 Indicates Peer-review

The views expressed in this issue do not necessarily reflect the views of the Ontario Ministry of Health and Long-Term Care.

The Demonstration Projects: Creating the Capacity for Nursing Health Human Resource Planning in Ontario's Healthcare Organizations

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Abstract

Timely access to healthcare services requires the right number, mix and distribution of appropriately educated nurses, physicians and other healthcare professionals. In Ontario, as in several other jurisdictions, changing demographics, patterns of health service utilization and an aging workforce have created challenges related to the supply of nurses available now and in the future to deliver quality patient care. From 2006 to 2009, the Nursing Secretariat (NS) of Ontario's Ministry of Health and Long-Term Care (the ministry) undertook a progressive and comprehensive approach to address the issue of nursing supply across the province through the introduction of 17 Nursing Health Human Resources Demonstration Projects (demonstration projects). The demonstration projects initiative has led to the creation of a unique collection of best practices, tools and resources aimed at improving organizational planning capacity. Evaluation of the initiative generated recommendations that may guide the ministry toward policy and program development to foster improved nursing health human resource planning capacity in Ontario healthcare organizations.

Background

The demonstration projects initiative had its inception in 2006 with the Nursing Graduate Guarantee initiative, whereby the Ministry of Health and Long-Term Care (MOHLTC) promised full-time employment to every nurse graduating in Ontario. A task force was formed and charged with developing policy recommendations for the implementation of the guarantee. The task force identified the need for improved health human resource (HHR) planning among healthcare employers, resulting in the creation of the Employer Capacity Building Working Group, made up of employers and associations from across the healthcare sector.

The working group identified several challenges with respect to nursing HHR planning in healthcare organizations across Ontario. These challenges include (a) the wide variability in HHR planning capacity by organizations across the province, (b) a lack of evidence about the ability of healthcare organizations to undertake HHR planning, (c) the lack of efficacy of the existing tools and models to support HHR planning, (d) a need for simple and easy-to-implement solutions in the face of a complex problem, (e) the variability across the continuum of care of organizational infrastructure to support effective HHR planning, (f) the different challenges different sectors face in HHR planning requiring different solutions, and (g) the greater support and knowledge transfer that mid-managers require in order to effectively develop, implement, manage and evaluate HHR plans (MOHLTC 2007).

The initiative's goals were to increase employer capacity for nursing HHR planning and to support the creation of more full-time nursing positions, with the target of achieving 70% full-time employment for all nurses practising in Ontario.

In response to these findings, the ministry supported the development of the demonstration projects initiative. The goals of the initiative were to increase employer capacity for nursing HHR planning and to support the creation of more full-time nursing positions, with the target of achieving 70% full-time employment for all nurses practising in Ontario. The initiative was identified as an opportunity to facilitate the development of practical, Ontario-specific solutions to the challenges articulated for nursing HHR planning.

Overview of the Demonstration Projects Initiative

In October 2007, the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care solicited applications from healthcare organizations across all sectors that were interested in becoming demonstration sites for designing, implementing, evaluating and sharing innovative HHR planning tools and practices (MOHLTC

2007). Applicants were required to demonstrate a partnership, new or existing, to facilitate sharing and collaboration throughout the duration of the demonstration projects initiative. Eight workforce building blocks, including (1) planning tools, (2) a service delivery model, (3) professional practice, (4) retention, (5) succession planning, (6) recruitment, (7) human resources management, and (8) labour relations and negotiation, were identified in the literature as critical factors in nursing workforce planning.

Tools that enable effective forecasting of workload measurement and monitoring of the supply and utilization of the nursing workforce are required to develop sound HHR plans (McGillis Hall et al. 2006; Morris et al. 2007; Tomblin Murphy et al. 2007). Tools and resources are also needed to assist with organizing clinical care models, determining the number of staff and skill mix required to increase positive patient outcomes, supervising staff and identifying clinical indicators to monitor the delivery of healthcare services (Lookinland and Crosson 2005; Tiedeman and Lookinland 2004). Literature regarding specific human resource (HHR) tasks such as scheduling is limited. Tools that provide a framework for developing flexible scheduling and job-sharing opportunities may also support effective HHR planning (Berkow et al. 2007; Provincial Scheduling Working Group, Health Employers Association of British Columbia and British Columbia Nurses' Union 2003).

… many nurse managers do not have formal education in HR management and/or administration. Most training in this area is conducted informally, on the job, with little mentorship and human resources support.

Nursing managers require education and training regarding *soft skills* to support nursing retention as well as skill in promoting healthy work environments (Hart 2007; Wolf and Greenhouse 2006). Succession planning is an important component of nursing workforce planning that may be accomplished through leadership development programs, defining and providing support to middle managers and career planning and development activities (Canadian Nurses Association 2003; Coonan 2005; Laschinger 2006). Innovative HHR planning tools and resources to support the stabilization and sustainability of the nursing workforce are necessary (Beauregard et al. 2007; Christmas 2007; Woods and Cardin 2002).

Each of the workforce building blocks was identified as essential to effective nursing HR planning and formed the basis upon which the demonstrations projects were developed.

Over the course of approximately two years, 17 healthcare organizations developed, implemented and evaluated the innovative tools and resources produced to support nursing health human resources planning in Ontario healthcare organizations. The description, details and evaluation results of the individual demonstration projects are addressed in articles that follow in this special edition of the *Canadian Journal of Nursing Leadership.*

Evaluation of the Demonstration Projects Initiative

The ministry evaluated the demonstration projects initiative to identify lessons learned from developing and implementing the HHR tools and best practices at each site, and to determine whether the projects produced the anticipated results. Members of the Employer Capacity Building Working Group (originally convened under the Nursing Graduate Guarantee), MOHLTC staff members and key participants from each demonstration project formed the evaluation team, which was led by a consulting firm procured by the ministry. Findings from the evaluation of the initiative were intended to guide the ministry toward policy and program development that could foster improved nursing HHR planning capacity in Ontario healthcare organizations.

Methodology

A mixed methods approach was used to conduct the evaluation. Data were collected through interviews, focus groups, site visits, documents and data analysis of HR metrics. Additionally, secondary source data were collected and analyzed for the year prior to the implementation of the demonstration project to establish baseline nursing HR metrics that could be used as a comparator in the data analysis.

Telephone and face-to-face interviews were conducted at the mid-point of the initiative with the coordinator of each project to assess the status, document lessons learned and identify anticipated challenges that might prevent the successful completion of the project. Site visits were conducted at 11 of the demonstration sites to gain an understanding of the development and implementation of the tools and resources being produced and gather observations regarding the use of the tools at the site (Virani 2009). At the conclusion of the demonstration project, focus groups were held with representatives from each project team, including members of the demonstration project advisory or steering committee, end users of the resources developed through the project and representatives from each of the partner organizations involved in the project. In addition, on completion of the projects, telephone interviews were conducted with project coordinators to once again gather data regarding key insights, barriers, facilitators and lessons learned. Finally, additional data from end users of the resources developed by the

demonstration projects were collected through an online survey. Analysis of the data included pre and post data comparisons and extraction of emerging themes.

Discussion

Results of the analysis provided the basis for the development of 13 recommendations aimed at guiding the ministry toward policy and program enhancement to foster improved nursing HHR planning capacity in Ontario. Recommendations drawn from the findings of the evaluation of the initiative include:

1. Knowledge, skills and capacity development. *Ontario nurse managers require support in enhancing their knowledge, skills and capacity in workforce planning human resources management.*
Findings from the evaluation revealed that nurse managers in Ontario are not appropriately prepared to meet HHR challenges. In part, this can be explained by the fact that many nurse managers do not have formal education in HHR management and/or administration. Most training in this area is conducted informally, on the job, with little mentorship and human resources support (Virani 2009).

Determining and addressing the various needs of the nursing workforce, such as generational, internationally trained and career path requirements of nurses, is necessary to promote effective HHR planning (Virani 2009). In addition, nurse managers require requisite skills to access, collect and analyze pertinent HR data to conduct effective HHR planning. Important HR data such as staffing models, scheduling options, methods of addressing issues of diversity in the workplace, information regarding labour union issues, succession planning strategies, and methods to support and mentor nurses at different stages in their careers were identified as essential for supporting nurse managers in developing sound nursing HHR plans (Virani 2009). Finally to address gaps in the HHR knowledge of nurse managers, the creation of a standardized and accessible education program focusing on common HR issues that nurse managers may experience in performing their role was recommended (Virani 2009).

2. Collaboration between nurse managers and human resource experts. *Nurse managers require access to HR experts to support their ability to forecast, plan and manage nursing human resources.*
Evaluation results revealed that there were insufficient structured relationships between nurse managers and HR specialists operating within the same organization. Involvement of HR departments in nursing HHR planning

was often limited to providing support in relation to recruitment and hiring processes and emerging labour relations issues. Confusion and lack of clarity with respect to the HHR obligations of nurse managers and HR specialists was an important finding. More opportunities for collaboration between nurse managers and HR specialists are required to foster improved HHR planning within healthcare organizations (Virani 2009).

3. Enhancing systems to support workforce planning and human resources management. *Healthcare organizations require consistent human resource information systems, preferably electronic (automated).*
Findings revealed a lack of centralized electronic nursing HR data and inconsistent methods of defining and collecting the HR data within healthcare organizations. Furthermore, the nursing HR data that did exist were missing several essential elements necessary for forecasting and developing effective nursing HHR plans. Deficiencies in the accessibility and collection of nursing HR data may be explained, in part, by the finding that HR departments often lack the necessary tools, processes and expertise required to establish appropriate nursing HHR databases to support effective planning (Virani 2009).

4. Inter-organizational learning as a powerful capacity development tool. *Promoting project-specific partnerships to develop health human resource capacity is highly recommended.*
There was unanimous agreement among organizations that participated in the initiative that partnership arrangements were beneficial in promoting shared learning and creating economies of scale. Findings revealed that the opportunity to establish partnerships through the initiative was critical to the ability to access dedicated funding and expert resources necessary to build tools and resources that might support enhanced nursing HR planning (Virani 2009).

To foster continued learning and development in relation to HHR planning and management, the establishment of inter-organizational and local community forums was recommended.

5. Inter-professional collaboration. *The interface between the inter-professional collaboration and service delivery models and issues of human resource management requires focused attention.*
Findings revealed a lack of understanding regarding the relationship between inter-professional collaboration and service delivery models, and HHR management issues. Further research is necessary to examine the implications of nursing HR planning, collaborative models of practice and service deliv-

ery in relation to HHR management issues such as collective bargaining and scope of practice (Virani 2009).

6. Gap between graduation and full productivity. *Enhanced orientation, education and mentorship are necessary.*
Evaluation results indicated that infrastructure and resources necessary for educating novice nurses, new nurses and nurses transitioning to different patient care areas were insufficient. Existing orientation programs were found to be too general and inadequate for the effective transitioning of nurses to fully productive clinicians within a reasonable time frame (Virani 2009). The implication is that inefficient transition of nurses to full productivity impedes the ability to plan and manage nursing resources. Enhanced orientation programs, sector-specific residencies, and internships were recommended as a means to support the efficient transition of nurses to fully productive clinicians, thereby improving the potential for effective HHR planning.

7. Scope of practice. *Seize the opportunity to maximize the scope of practice of Registered Nurses and Registered Practical Nurses.*
Virani (2009) recommended that healthcare organizations maximize nurses' scope of practice to ensure that their knowledge and expertise is used to its full extent. However, organizations must consider the regulatory requirements associated with scope of practice and the education, training and mentoring that may be required to support maximizing scope of practice.

8. Regional workforce planning and recruitment. *Local Health Integration Networks across the province need to provide the leadership for regional workforce planning and recruitment.*
A significant finding that arose from the evaluation was the need to foster a regional strategy for nursing workforce planning and recruitment. Shifting away from regional competition between healthcare organizations to a more collaborative environment regarding regional HHR strategies was recommended (Virani 2009). Providing Local Health Integration Networks (LHINs) with best practices developed through the initiative could support regional workforce planning strategies (Virani 2009).

9. Develop a focused nursing HR strategy for supporting urban/northern nursing shortages.
Findings revealed that the creation of a focused strategy to address the shortage of nurses in rural and isolated communities in Ontario is necessary (Virani 2009).

10. Sector-specific marketing.
Results of the evaluation revealed that increased marketing related to nursing in the long-term-care sector is necessary to change negative perceptions of practising in this area. Funding to support the transition and retention of internationally educated nurses was also recommended as a method to increase the supply of nurses and address retention of this cohort of nurses (Virani 2009).

11. Healthy work environments. *Create positive work environments as this is intricately linked to recruitment, retention and succession planning.*
According to the Registered Nurses Association of Ontario (RNAO), "a healthy work environment is a practice setting that maximizes the health and well-being of nurses, quality patient care outcomes, organizational performance, and societal outcomes" (RNAO 2008: p. 88). Tomey (2009) suggested that unhealthy work environments may increase healthcare organization costs related to high absenteeism and stress levels, inadequate work performance and work-related accidents. Implementing best practice guidelines in all healthcare organizations that support the workplace health and safety of nurses is critical to patient outcomes and the sustainability of the nursing workforce in Ontario.

12. Dissemination of best practices. *Create a multifaceted plan to share the best practices and products generated from the 17 demonstration projects.*
The creation of a centralized repository was recommended in order to maximize the benefits of the initiative and ensure accessibility and dissemination of the tools and resources developed to healthcare organizations across the province. The HealthForceOntario website was recommended as the ideal forum for establishing the repository. Webinars and discussion forums regarding approaches for implementing HR planning tools and resources to support nursing workforce planning were also recommended (Virani 2009).

13. Sustainability. *Continued financial support is necessary to sustain gains achieved through the initiative.*
There is a shared responsibility for sustaining the development and implementation of best practices in nursing HR planning (Virani 2009). Healthcare organizations were also encouraged to be innovative and examine existing and new partnership opportunities between organizations as a mechanism to create economies of scale and cost savings in relation to ongoing nursing HR planning initiatives. Financial support provided by the LHINs and the Ministry of Health and Long-Term Care was also recom-

mended to support the implementation of nursing HR planning across the province (Virani 2009).

Summary

The demonstration project initiative has led to the development of an innovative collection of nursing HHR planning tools, best practices and resources with the potential to enhance organizational nursing HHR planning. A comprehensive dissemination plan is presently being developed to maximize the return on investment of this initiative and stimulate continued dialogue, development and implementation of best practice tools and resources for nursing HR planning. A key component of the plan involved implementation workshops, which were conducted by demonstration project coordinators in October 2009. Over 120 representatives from healthcare organizations, local health planning bodies and the ministry attended workshop sessions to learn about the HHR tools and resources that were developed and to gain practical knowledge and insight regarding strategies for implementation.

Province-wide access to the tools and resources developed through this initiative will be available on the Nursing Secretariat website in the near future. Finally, the Local Health Integration Network Engagement Strategy was developed to provide the opportunity for local health planning bodies to apply for funding to support regional nursing HR planning and the implementation of key demonstration project tools and resources in healthcare organizations. Stabilizing and sustaining the nursing workforce requires effective HHR planning at the provincial, local and organizational level.

Conclusion

The Nursing Health Human Resources Demonstration Projects was an initiative of the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care aimed at building nursing HHR planning capacity to address supply needs in Ontario. The initiative led to the creation of a unique collection of best practices, tools and resources that may facilitate improved nursing HHR planning and contribute to the stabilization and sustainability of Ontario's nursing workforce. Evaluation of the initiative generated recommendations that may guide the ministry toward policy and program development to further enhance nursing HHR planning capacity in Ontario.

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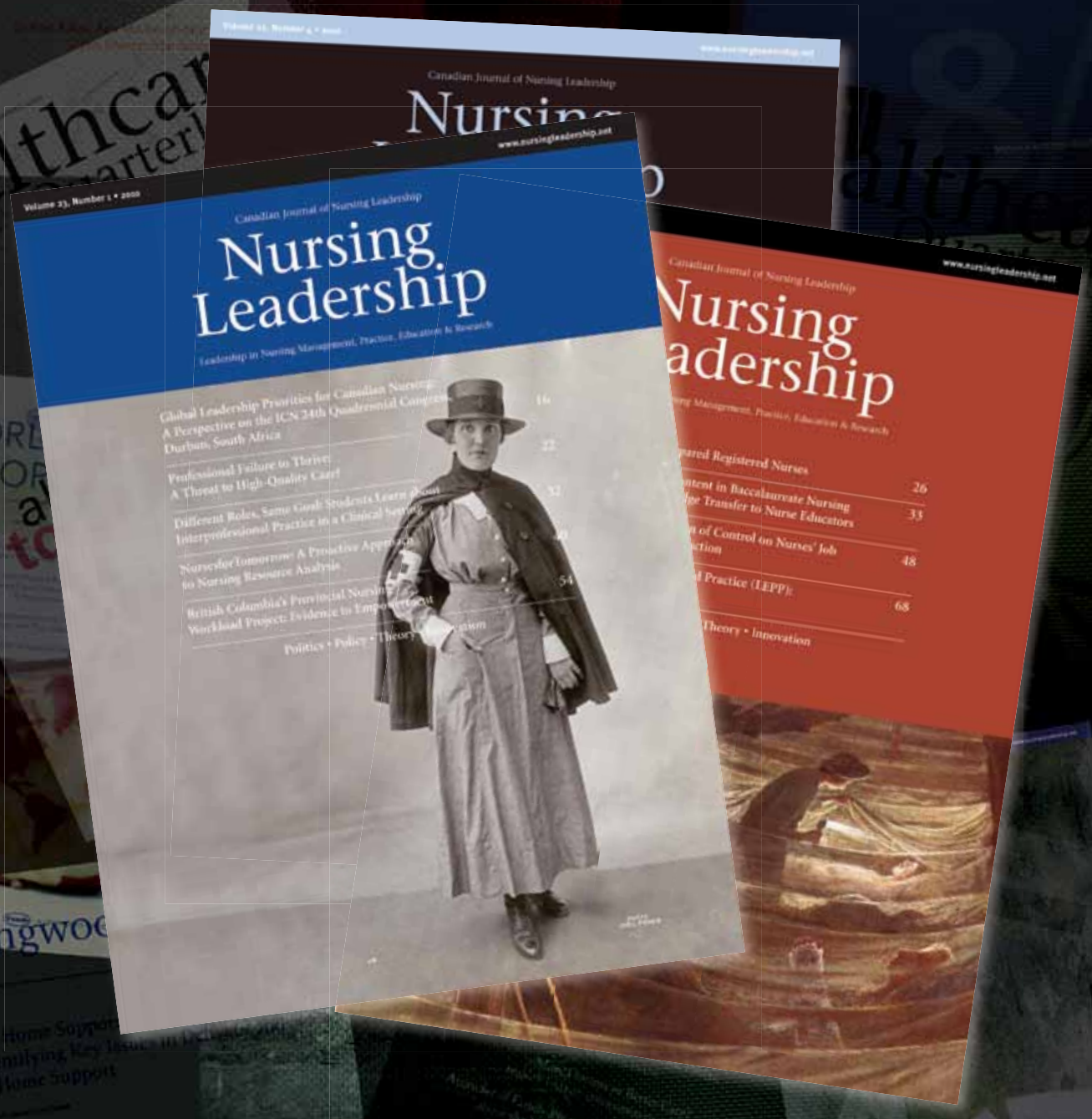

The Demonstration Projects
Papers

The Ontario Nursing Workload Demonstration Projects: Rethinking How We Measure, Cost and Plan the Work of Nurses

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Abstract

Background: In 2008 the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care formed a Nursing Workload Steering Committee to oversee the implementation of three demonstration projects with the objectives: to assess the feasibility of Health Outcomes for Better Information and Care (HOBIC) data as a measure of nursing workload, determine the indicators that best support nurse leaders to measure nursing work and make informed staffing decisions, and develop a model that predicts acute care nursing costs. *Results:* Three HOBIC scales – activities of daily living (ADLs), continence and fatigue – explained a small amount of the variance in nurse judgment of the amount of nursing time patients require in the first 24 hours of care. Nurses in the study appreciated providing their professional judgment to help estimate the nursing work requirements of patients. The priority and secondary indicators most important for decision-making included medical severity of patients, environmental complexity, nurse experience, patient turnover, nurse-to-patient ratio, cognitive status, infection control, nurse vacancy, predictability of patient types, nursing interventions, patient volumes, co-morbidities, patient

self-care abilities, physical and psychosocial functioning, unit type and medical diagnosis. A fairly robust model was developed using existing data sources to estimate nursing input into a patient's costs. The model explained between 69% and 80% of the variation in nursing costs for each patient. *Conclusion:* In order to effectively measure, plan and cost nursing, we need to determine what nursing is. In the future, recognition of nurses as knowledge workers will require us to consider the many patient and environmental factors that affect the ability of nurses to apply their professional judgment to care for patients.

Introduction

Over the years, numerous concerns have been raised regarding the validity and reliability of nursing workload data (Duffield et al. 2006; McGillis Hall et al. 2006; Hernandez and O'Brien-Pallas 1996; Hughes 1999). In response to these concerns, the Ontario Ministry of Health and Long-Term Care (MOHLTC) Health Results Team for Information Management and the Nursing Secretariat jointly commissioned a study in 2005 to assess the quality and value of nursing workload data collection. The study included a comprehensive consultation process with users, academics, researchers and front-line nursing staff. Results of the study led to the ministry recommendation in 2006 that only case-costing hospitals would be required to report nursing workload data to the MOHLTC (Government of Ontario 2006b). In response, in 2008 the Nursing Secretariat formed a Nursing Workload Steering Committee to oversee the implementation of three specific demonstration projects with an overall mandate to investigate "new generation" workload measures.

Lessons Learned

- Nurses appreciate providing their professional judgment to help estimate the nursing work requirements of patients.
- Nurses need and want information to facilitate decision-making. However, real, useful and important nursing information is unavailable from current administrative data sets.
- The cost of nursing care can be predicted without using a time-intensive system that requires the measurement of each and every task a nurse performs on a shift.

The HOBIC Project

Assess the feasibility of Health Outcomes for Better Information and Care (HOBIC) data as a measure of nursing workload.

In Ontario, nursing workload data have been collected using a variety of different systems, thus producing a variety of different data sets that were often inconsistent and not comparable from a provincial perspective. HOBIC is currently being implemented province-wide, as a standardized collection of patient health outcomes

information that is valid, reliable, patient centred, evidence based, outcome focused and comparable across all sectors (Government of Ontario 2006a; Pringle and White 2000, 2002, 2003; White and Pringle 2005). Since the HOBIC data set includes standardized variables that are comparable across different organizations, there was optimism that HOBIC could be the consistent and comparable provincial data set for nursing that could potentially also supply new generation workload measures. The goal of this project was to determine the relationship between HOBIC and nursing workload.

HOBIC Project Demonstration Sites

Five demonstration sites across Ontario participated in the project.

Headwaters Health Care Centre, Orangeville
Collingwood General & Marine Hospital, Collingwood
Southlake Regional Health Centre, Newmarket
Niagara on the Lake Hospital, Niagara on the Lake
North Simcoe Hospital Alliance, Midland

The Dashboard Project

Determine the indicators that best support nurse leaders to measure nursing work and make informed staffing decisions in order to populate a "nursing dashboard" inclusive of these indicators that could become a meaningful tool for decision-making.

Nursing workload data has not consistently been used to predict staffing requirements and make staffing decisions (McGillis Hall et al. 2006). Too often, little time is paid to designing and monitoring a workload measurement system that accurately reflects the practice environment, leading to distrust that workload data reflects actual workload (Hernandez and O'Brien, 1996). As a result, there are currently very few tools available to nurses to help them make staffing decisions. Researchers have called for the development of meaningful tools that are based on knowledge that experienced nurses use to make best practice staffing decisions (McGillis Hall et al. 2006). This project aimed to develop a decision-making tool that would value the experience of nurses.

The Nursing Cost Project

Develop a model that predicts acute care nursing costs.

Nursing workload measurement systems were originally developed to enable nurses to predict nurse staffing requirements (Edwardson and Giovanetti 1994). Since nursing is the largest component of the cost of a patient's stay in hospital (Cockerill et al. 1993), later, when the Ontario Case Costing Initiative was developed, it was agreed that determining the cost of nursing would be fundamental to accurately determining a patient's cost. To estimate the cost of nursing, experts looked to pre-existing data sources for potential predictors. At the time, nursing workload data was easily available and was the most reliable data source thought

to estimate the amount of time a nurse spent with a patient and thus determine the cost of nursing. However, the data set is much more detailed than necessary; the only requirement of case costing is the total amount of nursing time a patient receives, not a detailed description of each task a nurse completes in a shift. The goal of this project was to determine if there is an alternate way to predict the cost of nursing care without nursing workload data.

Methods and Results

The HOBIC Project

HOBIC admission assessments, nurse judgment scales and nursing workload data were collected prospectively for 4750 patients within 14 acute care units between August 2008 and January 2009. HOBIC admission assessments were completed within four hours of a patient's admission. The HOBIC scales that were included in the analysis were functional status (ADLs, or activities of daily living), pain, nausea, fatigue, dyspnea, falls and pressure ulcers. Nurses also completed three judgment scales along with the HOBIC admission assessment:

- The patient's *need* for nursing care in the first 24 hours will be: (very low, low, average, high, very high)
- Compared with similar patients admitted to this unit, the amount of nursing *time* this patient will need in the first 24 hours of admission will be: (very low, low, average, high, very high)
- Compared with similar patients admitted to this unit, the *level* of nursing care this patient will need in the first 24 hours of admission will be: (very low, low, average, high, very high)

Nursing workload data was collected at three of the five demonstration sites. Each site had a "home-grown," task-oriented, nursing workload measurement system that enabled the capture of workload data through electronic documentation; thus, complete documentation would result in complete workload data. However, the mean workload values varied considerably between sites (see Table 1), confirming that workload was captured and measured differently between sites. Disregarding potential differences in patient populations, it is unrealistic that out of a possible 1,440 minutes in a 24-hour day, Site A could be giving approximately 190 minutes of care and Site B could be giving 1,200 minutes. Since it was not possible to test the reliability of the data, it was determined that the nursing workload data were not of sufficient quality and consistency to contribute to the project.

A Spearman correlation coefficient was calculated to assess the correlation between HOBIC admission scales and nurse judgment of patient care requirements. The degree of correlation between the three judgment scales was very high (need, 1.000; time, 0.895; level, 0.893). The highest correlations were between the need

for nursing care and ADLs (0.467), continence (0.377) and fatigue (0.315) scales. When combined in a multivariate model, ADLs, continence and fatigue together explained over 25% of the variance in the nurses' judgment of the amount of nursing time a patient needed in the first 24 hours. ADLs alone explained 23% of the variance in judgment, while continence explained 12% and fatigue explained 10%.

Table 1. Nursing workload minutes within the first 24 hours of admission by site and unit

Site	Unit	Maximum	Mean	Minimum	*N*	Std	Total
A	1	332.0	192.9	0.5	130	48.2	703.6
	2	474.0	198.3	6.0	231	69.3	978.6
B	1	3129.0	1271.8	89.5	538	219.1	5247.4
	2	2696.5	1145.0	51.2	486	400.3	4779.0
C	1	1039.5	765.9	4.0	31	182.4	2022.9
	2	1322.3	814.2	55.2	560	140.9	2892.7
	3	1558.7	783.3	6.5	654	139.5	3141.9

A questionnaire was conducted with a convenience sample of 45 nurses from the five demonstration sites to understand how nurses answered the questions and how they felt about providing their judgment about the nursing care requirements of patients. Overall, 84% of the sample of surveyed nurses indicated that they would like to continue to complete the judgment scales; 49% strongly agreed and 36% somewhat agreed that the scales captured their opinion of the patient's workload requirements. Almost all (98%) used their assessment and observation skills to complete the scales. Thirty-eight percent were willing to complete a short set of judgment scales daily or more often, and another 38% were willing to complete the scales either at admission only or on admission and discharge, indicating that the nurses surveyed were willing to share their professional judgment on an even more regular basis than what was required for this study.

The Dashboard Project

Approximately 30 nurse leaders, including managers, directors and vice presidents from the demonstration sites (see sidebar), were involved in the four-step process to determine the indicators that best support nurse leaders to make staffing decisions. After the indicators were determined, demonstration sites created dashboards to display the indicators.

1. Gather and study attributes that affect staffing requirements.

In 2007, a Nursing Workload Task Group reviewed the literature to develop a comprehensive list of over 50 attributes where evidence exists to suggest an impact on nursing work. The Patient Care Delivery Model (O'Brien-Pallas et al. 2001) provided the underlying theoretical framework for the selection of each evidence-based attribute. The model suggests a logical, systems approach to understanding the various elements that dynamically combine to describe the context for and outcomes of nursing care. The model identifies an iterative phenomenon among four phases: inputs, throughputs, outputs and the feedback loop. The phases of the model have key concepts, each of which has a variety of attributes. For example, the inputs to the system include patient, nurse and system characteristics (concepts). Depending on the service or program, patients would be characterized by age, gender, medical diagnosis and health status (attributes). The attributes characterizing nurses, such as experience, skills and knowledge, should meet the needs of the patients. The system for that care would be described using attributes such as the type and size of the unit. Working through the model adds the context, processes and complexities of care and the ensuing outcomes for patients, nurses and the system (unit, organization and beyond), which are then fed back for explanatory evaluation, education or program planning.

Dashboard Project Demonstration Sites

Seven sites from across Ontario participated in the project. Demonstration sites were selected to represent a cross-section of small, community, large and academic healthcare settings, as well as urban, rural and remote geographic locations.

Hamilton Health Sciences Centre, Hamilton
James Bay General Hospital, Moosonee
Lake of the Woods District Hospital, Kenora
Markham Stouffville Hospital, Markham
Queensway Carleton Hospital, Ottawa
St. Mary's General Hospital, Kitchener
Sunnybrook Health Sciences Centre, Toronto

In June 2008, 23 nurses and other stakeholders from the demonstration sites attended a retreat where an open discussion was held about the impact each evidence-based attribute had on nursing work and how each attribute may or may not affect staffing requirements on a unit. The sites worked in groups to consider what indicators could be used to describe each attribute and discussed the relative importance of each attribute.

2. Determine preferred attributes and data availability.
Between June and August 2008, using the list of evidence-based attributes as a starting point, each demonstration site began to develop a preferred "wish list" of attributes for a dashboard that were considered the most important and relevant for making staffing decisions. Each site had different stakeholders present during the discussions – some had stakeholders with knowledge of hospital information

systems present, and some did not. As a result, the process used at each site to determine preferred attributes varied, and it is unclear whether attributes were selected on the basis of importance or availability of potential indicators for the attribute. Demonstration sites then began to build their own unique "nursing dashboards." At this point, it became evident that some information was unavailable and that new data sources would need to be created to gather the necessary information.

3. Prioritize most useful attributes for decision-making.
In August 2008, before use of the nursing dashboard began, a baseline survey was completed by 30 nurse leaders from the demonstration sites to evaluate the usefulness of the full list of attributes for making staffing decisions. The top 12 attributes are presented in Table 2 in order of the percentage of stakeholders that agreed that the attribute is "very useful" (on a scale of "somewhat useful, "not very useful" or "not at all useful) for making staffing decisions.

Table 2. Top 12 "very useful" attributes for making staffing decisions

Attribute	Percent
Patient volumes	80%
Co-morbidities	77%
Nurse experience	77%
Patient turnover	73%
Cognitive status	72%
Predictability of patient types	72%
Medical diagnosis	67%
Medical severity	67%
Workload	64%
Nurse-to-patient ratio	63%
Environmental complexity	63%
Unit type	62%

4. Rank and validate the key priority and secondary attributes.
In December 2008, a second retreat was held, where 30 nurse leaders involved in the project participated in a consensus exercise to rank by importance the "very useful" attributes from the baseline survey. Taking into consideration both the baseline survey results and the consensus exercise, participants classified each

attribute subjectively as either "priority" or "secondary." In February 2009, a final survey was completed by 28 nurse leaders to further validate the priority and secondary rankings from the baseline survey and consensus exercise. Table 3 shows the results. There was a high level of agreement among respondents that each previously selected priority and secondary attribute was important for making staffing decisions.

Table 3. "Priority" and "secondary" attributes for making staffing decisions

Percent agree attribute is priority for making staffing decisions		
Priority	Medical severity	100%
	Environmental complexity	96.4%
	Nurse experience	96.4%
	Patient turnover	96.4%
	Nurse-to-patient ratio	92.6%
	Cognitive status	92.6%
	Infection control	89.3%
	Nurse vacancy	85.2%
	Predictability of patient types	84.6%
Percent agree attribute is secondary for making staffing decisions		
Secondary	Nursing interventions	88.5%
	Patient volumes	87.5%
	Co-morbidities	84.6%
	Patient self-care abilities	80.8%
	Physical and psychosocial functioning	80.8%
	Unit type	80.0%
	Medical diagnosis	76.0%

The Nursing Cost Project

To gain a "gold standard" data set for the total amount of nursing time received by a sample of patients, time and motion studies were conducted on three units in August 2008. Each staff nurse on the unit was shadowed by a nursing student 24 hours a day for seven days, allowing all patient activity to be captured. Students used custom software on a portable computer to capture all the time spent by

nurses on 12 activities originally identified by Hendrich et al. (2008): patient care activities, assessment/vital signs, care coordination, unit-related functions, documentation, medication administration, waiting, retrieving/delivering, patient/family care, administration/teaching and personal time. For patient-specific activities, the patient's unique visit number was captured so that it could later be linked to other administrative data sets. Total nursing time for the full length of stay of 57 patients was captured.

To determine if it was possible to increase the sample size by using the case costing data set, analyses were performed to investigate the amount of variation explained by the total nursing time spent in the time and motion study on the nursing costs reported in the case costing data set. The investigation found that 78.9% of the observed variance in direct nursing costs is explained by total nursing time spent ($p < .0001$). Since the nursing time received by patients in the time and motion study was highly correlated to the direct nursing costs reported in the case costing data set, sample size was increased by using the direct nursing cost data from case costing to correlate potential variables that might explain the variation in nursing costs for a particular patient.

Table 4 shows that a multiple regression model of the relationship between direct nursing costs from case costing and length of stay, and therapy, laboratory, diagnostic, ICU/CCU and pharmacy costs explained between 69% and 80% of the variation in nursing costs ($p < .001$). Other variables, such as costs of intervention, emergency department, clinics and operating room were significant but increased the *R*-square very little.

Table 4. Multiple regression models of the relationship between direct nursing costs and length of stay, therapy costs, laboratory costs, diagnostic costs, ICU/CCU costs and pharmacy costs

Unit	Number of patients	*R*-square	Coefficient of variation	Root mean square error
Medical	6,598	0.73	8.21	0.60
Surgical	11,642	0.69	8.17	0.56
Combined	4327	0.80	6.63	0.47

Discussion

Three HOBIC scales, ADLs, continence and fatigue, explained a small amount of the variance in nurse judgment of the amount of nursing time

patients require in the first 24 hours of care. However, much of the variance was still unexplained, suggesting there are factors other than those captured in the HOBIC admission assessment that contribute to the amount of nursing time patients require.

The variation in workload data between demonstration sites in the HOBIC project was consistent with studies by Cockerill et al. (1993) and O'Brien-Pallas et al. (1993), which found that when different workload measurement tools are applied to the same patients, clinical and statistical differences are witnessed in estimated hours of care. As a result, workload data was not used to correlate HOBIC scales. Instead, nurse judgment scales were developed to conduct the correlation analyses. The survey results showed that nurses in the study appreciated providing their professional judgment to help estimate the nursing work requirements of patients: 84% of the surveyed nurses indicated that they would like to continue to complete the judgment scales after the study was over. In future, an inter-rater reliability study of the nurse judgment scales will help determine whether there is value in using nurses' professional judgment to predict patient workload requirements. A study by Gran-Moravec and Hughes (2005) demonstrated that a tool utilizing RN professional judgment maximized appropriate staffing allocation to meet the needs of patients, staff and administration. The authors suggest a study to test the value of collecting nurse judgment variables on a daily basis, including exploring the possibility of adding nurse judgment scales to the HOBIC data collection.

Since the HOBIC data set includes standardized variables that are comparable across different organizations, there was optimism that HOBIC could be the consistent and comparable provincial data set for nursing that could potentially also supply new generation workload measures.

A small group of nurse leaders representing demonstration sites from across Ontario came together and determined several attributes that were most important for making staffing decisions. These demonstration sites faced many barriers to successfully developing and implementing a dashboard. Many of the indicators selected and developed by the sites were not available from currently available data sources. In fact, most available data from hospital data collection systems have been designed for administrative

purposes at an organizational level; whereas, nurse staffing decisions are made at the unit level. To create indicators, administrative data, including data from human resources, finance and ministry-mandated data sources, had to be re-purposed, or substitute measures were used. This is similar to the Australian experience, where it has been difficult to measure demand for nursing services because the routinely collected management information does not include the detailed patient-level information necessary to do so Twigg and Duffield 2008). The authors suggest taking advantage of the current evolution of the work to design and define the parameters for a "nursing data set" based on the most important attributes for decision-making, rather than what is currently available via administrative data sets. A web-based nursing dashboard template for the "nursing data set" that can send data to the MOHLTC for provincial roll-ups but can also be retrieved on demand by nurse managers would give each and every organization in the province the opportunity to begin to use this information in their decision-making.

Researchers have called for the development of meaningful tools that are based on knowledge that experienced nurses use to make best practice staffing decisions

Currently, standard indicator definitions for important attributes do not exist. As a result, each demonstration site constructed their own indicator definitions for their nursing dashboard, based on the data that was available. However, demonstration site participants consistently mentioned the value of standard indicator definitions for enabling clear unit, program, regional and provincial comparisons as well as consistent interpretation between organizations. To continue this work, the development and validation of clear and consistent indicator definitions for important nursing attributes will be crucial.

Effective use of a dashboard requires that users understand how to interpret indicator results. Many nurse leaders have been making staffing decisions using intuition based on years of experience, a method Arthur and James (1994) referred to as the most widely used, despite explosions in more sophisticated technologies. During the project it was clear that a change in decision-making will be required if dashboards are to be used effectively; as a result, education will need to be a key part of any dashboard project.

A fairly robust model was developed using existing data sources to estimate nursing input into a patient's costs. The model was able to explain between 69% and 80% of the variation in nursing costs for each patient, demonstrating that the cost of nursing care can be predicted without using a time-intensive system that requires the measurement of each and every task a nurse performs on a shift. Next steps for this project should include testing the model against several years of data in other organizations where the current workload measurement system is highly reliable to determine if this model is robust enough to use province-wide. Additional patient-level variables that can be easily extracted from an electronic record (e.g., operating room times, discharge disposition, admission source, HOBIC scales) should be investigated to determine if they add power to a model that predicts the cost of nursing care.

Conclusion

In order to effectively measure, plan and cost nursing, we need to determine what nursing is and what nurses do. Organizations need to engage nurses in a discussion to understand the variation as well as the uniqueness of the nursing role in different practice environments. In the future, recognition of nurses as knowledge workers will require us to consider the many patient and environmental factors that affect the ability of nurses to apply their professional judgment to care for patients. Only then will we be able to build the measurement tools that can capture what Duffield et al. (2006) so aptly refer to as the "invisible nature" of nursing.

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Development and Evaluation of an RN/RPN Utilization Toolkit

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Abstract

Purpose: To develop and evaluate a toolkit for Registered Nurse/Registered Practical Nurse (RN/RPN) staff mix decision-making based on the College of Nurses of Ontario's practice standard for utilization of RNs and RPNs. *Methods:* Descriptive exploratory. The toolkit was tested in a sample of 2,069 inpatients on 36 medical/surgical units in five academic and two community acute care hospitals in southern Ontario. Survey and focus group data were used to evaluate the toolkit's psychometric properties, feasibility of use and utility. *Results:* Results support the validity and reliability of the Patient Care Needs Assessment (PCNA) tool and the consensus-based process for conducting patient care reviews. Review participants valued the consensus approach. There was limited evidence for the validity and utility of the

Unit Environmental Profile (UEP) tool. Nursing unit leaders reported confidence in planning unit staff mix ratios based on information generated through application of the toolkit, specifically the PCNA, although they were less clear about how to incorporate environmental data into staff mix decisions. *Conclusions:* Results confirm that the toolkit consistently measured the constructs that it was intended to measure and was useful in informing RN/RPN staff mix decision-making. Further refinement and testing of the UEP is required. Future research is needed to evaluate the quality of decisions resulting from the application of the toolkit, illuminate processes for integrating data into decisions and adapt the toolkit for application in other sectors.

Introduction

There is a growing body of research linking nurse staffing with nurse and patient outcomes (Canadian Health Services Research Foundation 2006; Canadian Nurses Association [CNA] 2004). In particular, having the appropriate mix of nursing staff is seen as essential to providing safe and effective nursing care. Studies conducted over more than a decade provide support for the value of a skill mix that is rich in regulated professional nurses (Aiken et al. 2002; Blegan et al. 1998; Lichtig et al. 1999; McGillis Hall 2003; McGillis Hall et al. 2003, 2004; Needleman et al. 2002; Sochalski et al. 1997; Tourangeau et al. 2006).

Research evidence from the United States (US) and Canada has demonstrated superior patient outcomes associated with higher levels of RN care compared with models with higher proportions of care provided by Registered/Licensed Practical Nurses (R/LPNs[1]) and unregulated care providers (Needleman et al. 2002; Tourangeau et al. 2006). In addition, registered nurses are more frequently involved in most elements of the decision-making process, suggesting that they may be better equipped to make decisions where client complexity is increased (Boblin et al. 2008).

Despite the increasing body of knowledge and evidence linking staffing with patient outcomes and safety, there remains a gap in available evidence-based tools and literature to guide decision-making processes that can assist managers in making staffing decisions that best meet patient care needs.

Because differences exist between Canada and the US and across provinces in Canada in the educational preparation, entry-to-practice requirements and regulatory structures for RNs and R/LPNs, it is important to interpret current

literature with an understanding of these variations. In Canada, baccalaureate education is (or is becoming) the minimum entry to practice for RNs in all provinces and territories except Quebec and the Yukon (CNA 2009). Educational preparation of R/LPNs varies across the country, with some jurisdictions accepting a certificate as the minimum qualification, while others require a diploma. Beginning in 2005 in Ontario, where the current project was undertaken, a two-year (four-semester) diploma program was established as the requirement for entry to practice for registered practical nurses (Baumann et al. 2009; College of Nurses of Ontario [CNO] 2004). The practice of both RNs and RPNs in Ontario is regulated by the CNO.

Lessons Learned

- The toolkit, composed of the Patient Care Needs Assessment, the Unit Environment Profile and the process of how these tools are used, provides an evidence-based approach to staff mix decision-making. Clinicians and administrators can rely on this toolkit to generate relevant, meaningful data to inform appropriate ratios of RN/RPN staffing for the patient population on the unit.
- Staff involvement is a fundamental component in the use of the Patient Care Assessment tool. The input from front-line staff caring for the patients leads to consensus-based decision-making about the complexity, predictability, stability and degree of risk for negative outcomes for each patient.
- Integration of the information from the Unit Environment Profile tool into making nursing staff mix decisions is a critical component of the process. Elements such as patient turnover rate, diversity of patient diagnoses and the availability of emergency resources must be factored into the staff mix decision.

The CNO (2005)[2] has developed a practice standard to guide the utilization of RNs and RPNs. This standard proposes that the more complex the client situation, and the more dynamic the clinical environment, the greater the need for an RN to provide the full range of care, assess changes, re-establish priorities and determine the need for additional resources. For this reason, decision-making related to nurse staffing and staff mix should be done at the unit level to ensure appropriate consideration and appreciation of patient, nurse and environmental characteristics (Registered Nurses' Association of Ontario [RNAO] 2007).

Evidence suggests that application of frameworks for nurse staffing remains a challenge for decision-makers (McGillis Hall et al. 2006). Despite the increasing body of knowledge and evidence linking staffing with patient outcomes and safety, there remains a gap in available evidence-based tools and literature to guide decision-making processes that can assist managers in making staffing decisions that best meet patient care needs.

This article will describe the results of a project that addressed this gap. The project involved the development and testing of a "toolkit" of instruments and processes designed to assist nurse leaders to make informed, evidence-based deci-

sions for unit staffing plans that include the appropriate mix of RNs and R/LPNs in the staffing complement. The toolkit has been designed based on a model of total patient care on adult medical/surgical units. The intent is to support managers with an evidence-based approach to determining their overall nursing staff mix plan, with consideration of the trending patterns of their patient population and the characteristics of the nursing unit environment.

Background to the Project

The study was undertaken as a demonstration project in nursing health human resource planning funded through the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care. The purpose of the project was to develop and evaluate a toolkit of instruments and processes to inform decision-making regarding nursing staff mix in adult acute care medical and surgical hospital units. Seven hospital organizations in southern Ontario participated in the project. A previous version of the tools and processes had been developed at one of the participating hospitals to support nursing staff mix decision-making. Three of the other hospitals had subsequently used the tools and processes with some modifications.

The toolkit was based on the CNO's (2005) standard for the utilization of RNs and RPNs. The standard asserted that decisions regarding the appropriate category of nurse to care for a client's needs must account for client (complexity of care needs, predictability of outcomes, risk of negative outcomes), nurse (knowledge, skill, judgment) and environmental (support tools, consultation, stability of the environment) factors. The goal of the toolkit was to operationalize client, environmental and nurse factors and provide a process for integrating this information to support decisions regarding nursing staff mix. It consisted of four components, designed to work together to ensure an integrated, complementary approach:

- The Patient Care Needs Assessment (PCNA – Appendix A *see http://www.longwoods.com/content/21733*)
- A consensus-based unit review procedure
- The Unit Environment Profile (UEP – Appendix B *see http://www.longwoods.com/content/21733*)
- A decision-making process for determining nursing staff mix

The specific aims of the project were to:

- Assess the reliability, validity and feasibility of the PCNA,
- Assess the validity and feasibility of the UEP,
- Describe the process through which nurses use these tools in formulating nursing staff mix decisions, and
- Identify critical success factors and lessons learned regarding application of the tools and review process

Study Design and Methods

A descriptive, exploratory design using a convenience sample from seven hospital organizations was used. Both quantitative and qualitative analyses were employed. Ethics approval was obtained from the Research Ethics Boards of each participating hospital.

Setting and Sample

The study was conducted across 36 medical/surgical adult inpatient units from five academic teaching hospitals and two community hospitals in southern Ontario.

Development of the Toolkit

Patient Care Needs Assessment (PCNA) Tool

The blueprint for the PCNA consisted of four key patient elements from the CNO's (2005) standard: stability, complexity, predictability and risk for negative outcomes. Items were derived from the original tool developed at Sunnybrook Health Sciences Centre and were revised based on a review of the relevant literature. The questionnaire was subjected to review and critique by a panel of 10 nursing practice experts from the partner hospitals to establish content validity. The resulting version was pilot tested on two surgical units and revisions were made. The final version of the PCNA consisted of one open-ended question designed to elicit information about the patient's priority needs for nursing care; 11 yes/no items related to specific aspects of the patient's and family's situation and needs; and four Likert-type scaled questions that addressed the patient's stability, complexity, predictability and risk for negative outcomes. Definitions were developed for each of these four dimensions, based on the CNO standard and experience during the pilot. It was intended that the yes/no items would illuminate factors that affected each of the dimensions of stability, complexity, predictability and risk for negative outcomes, such that the scoring on the four dimensions would be informed by the yes/no items.

Unit Environment Profile (UEP)

The UEP tool was based on an instrument previously developed at the University Health Network in Toronto. Revision of the tool for the current study was guided by relevant literature, particularly the work of Dr. Linda O'Brien-Pallas and colleagues (1997) on nursing unit environmental complexity, and the CNO (2005) standard. The tool was reviewed for content validity by the panel of 10 nursing experts from the participating hospitals. The UEP was pilot tested with three nurse managers, and modifications were made to enhance clarity and consistency of interpretation. The final UEP contained 41 items addressing characteristics of the patient population, nursing staff and supports available to nurses.

Consensus-Based Unit Reviews

Reviews were conducted of every patient's care needs on each participating unit on two separate occasions approximately one week apart. Using a consensus-based approach, the review process involved application of the PCNA to each patient on the unit. The review team consisted of the patient's nurse (RN or RPN) and unit nursing leaders. The type of nursing leader varied depending on the nursing roles within the organization, but generally included the manager, advanced practice nurse, nurse educator and charge nurse or team leader. All reviews were facilitated by a nursing leader who was external to the unit team; a second external nurse leader documented the results for each review. The facilitator posed each PCNA question in turn to the entire unit nursing team, who collaborated to determine the appropriate response. To achieve respectful engagement of all participants during the review process, guidelines were created for facilitators based on feedback from the pilot (Appendix C *see http://www.longwoods.com/content/21733*).

Decision-Making Process

Following the unit patient reviews and completion of the UEP by the managers, debriefing meetings were held with nursing leaders from each unit to review their summarized PCNA and UEP data and explore ways in which the data could be used to support nursing staff mix decision-making.

Evaluation of the Toolkit

Central to the development of the toolkit was the belief that appropriate skill mix decisions require the participation of the nurses who will be involved in their implementation. Therefore it was critical to the evaluation of the toolkit that the perspectives of the nurses who participated in the reviews – the clinical nurses, managers, advanced practice nurses, charge nurses and educators – were solicited. A combination of surveys and focus groups was employed to elicit data from these groups.

Instruments

Three surveys were developed for this study to gather information about the nurses' experiences with the toolkit. The Patient Care Needs Assessment Opinion Questionnaire (PCNAOQ) was a self-report survey consisting of five questions that captured the nurses' perceptions of the comprehensiveness and accuracy of the items with respect to patient care needs, and two items related to the clarity and ease of use of the instrument. This provided information regarding the face validity and feasibility of the patient assessment tool. Responses were documented on a three-point Likert-type scale with anchors 1 = "Not at all" and 3 = "Very much so" and one open-ended question for any additional comments.

The Unit Environment Profile Opinion Questionnaire (UEPOQ) was designed to understand the opinions of managers regarding the applicability and use of the

UEP tool. It was similar in form to the PCNAOQ and included four questions that addressed face validity, two that addressed feasibility and one open-ended question for comments. Response options for this instrument were the same as those for the PCNAOQ.

The Questionnaire for Unit Nursing Leaders (QUNL) was a self-report survey consisting of five open-ended questions to elicit nursing leaders' perceptions and opinions about the review process. Questions addressed participant thoughts regarding the impact of the review process on their nursing staff mix decision-making, the content of decisions they would make resulting from the review and the strengths and limitations of the review/decision process.

The fourth tool employed in the toolkit evaluation was the Patient Requirements for Nursing Care (PRNC) instrument (Fulton and Wilden 1998). This 15-item tool was designed to quantify medical/surgical patients' needs for nursing care, based on the patient's complexity of care requirements, acuity of illness and level of dependency. The PRNC was used for convergent validation of the PCNA.

Data Collection Procedures

Responses to the PCNA questions were documented during the unit reviews. On Day 1 of the reviews, three randomly selected patients per unit across all hospitals ($N = 106$) were also assessed with the additional tool (PRNC), testing for convergent validity. Using the consensus-based review process, two assessments were conducted on these patients, one using the PCNA and one using the PRNC. In half of the patient reviews, the PCNA assessment was conducted first, followed by the PRNC assessment. In the other half, the order was reversed.

Following each review, all participants were given a copy of the questionnaire to assess the PCNA tool and were asked to voluntarily complete it anonymously and deposit it in the designated collection box on each unit. Additionally, on the first review day every manager was given the UEP, with direction that it be completed within two weeks after the patient reviews were conducted. Completed UEPs were returned to each site's project coordinator. Unit managers were then given a copy of the questionnaire (UEPOQ) to provide feedback on the UEP tool itself and were asked to voluntarily complete it anonymously and return it to the study coordinator. Further, following the debriefing meetings, the unit nursing leaders were given a copy of the questionnaire focused on understanding their thoughts related to the review process and its impact (QUNL), which they also returned (anonymously) to the study coordinator.

Finally, focus groups were conducted with a volunteer sample of members from all clinical review teams to seek their opinions regarding the comprehensiveness

and accuracy of the unit reviews, as well as their views on the review process itself. Focus groups were facilitated by an external nurse consultant.

Statistical analysis of the PCNA data was conducted through the Institute for Clinical Evaluative Sciences using SAS Version 9.1.3. Responses to the yes/no items were dummy coded for this analysis, with "yes" responses coded as 1 and "no" coded as 0. Questions where a "yes" response reflected a favourable patient condition were reverse coded so that all scores operated in the same direction.

Descriptive statistics were calculated for variables on the patient assessment tool (PCNA) and the two opinion questionnaires regarding the patient assessment tool and the environmental tool (PCNAOQ and UEPOQ). Inter-item and internal consistency reliability coefficients were calculated for PCNA data; correlation analyses were conducted to compare results between the two patient assessment tools (PCNA and PRNC). Focus group discussions were audiotaped, transcribed and analyzed for thematic content.

Results[3]

PCNA Reviews

A total of 2069 patient reviews were conducted. Distribution of responses to the yes/no questions is summarized in Table 1. Questions that addressed anticipation of complications, need for adjustment in the plan of care, presence of high-risk interventions, unexpected events and complex patient or family needs showed the most balanced distribution between "yes" and "no" responses. Questions related to vital signs within predetermined limits and level of consciousness within expected range elicited positive responses in over 90% of the patient reviews. Similarly, almost all patients were assessed as having no fluctuations in level of consciousness at the time of the review.

Frequency of vital signs measurement ranged from continuous monitoring of vital signs to once every 24 hours ($M = 6.76$ hours; $SD = 3.13$). More than half of the patients reviewed required monitoring of vital signs more frequently than every eight hours.

Items 11 through 14 on the PCNA questionnaire assessed the patient on the dimensions of stability, complexity, predictability and risk for negative outcomes. As demonstrated in Table 2, the most frequent response for each dimension was in the middle range (2.1–4.0), with fewer patients assessed at the higher and lower extremes of the scales.

Reliability and Validity of the PCNA

Cronbach's alpha coefficient for the yes/no component of the PCNA was 0.70.

Table 1. Response frequencies for PCNA items 2–10

Question no.	Question focus	Response	Frequency (percent)
2a	Vital signs been within criteria	Yes No Not applicable	1,894 (91.5) 170 (8.2) 5 (.2)
2b	Vital signs within expected range	Yes No Not applicable	1,797 (86.9) 264 (12.8) 5 (.2)
3a	Level of consciousness (LOC) within expected range	Yes No	2,013 (97.3) 55 (2.7)
3b	Currently experiencing fluctuations in LOC	Yes No	169 (8.2) 1,900 (91.8)
4	Requires increased monitoring for development of complications	Yes No	1,096 (53.0) 972 (47.0)
5	Acute confusion/agitation requiring ongoing assessment and treatment	Yes No	321 (15.5) 1,746 (84.4)
6	Requires increased assessment and adjustment in the plan of care	Yes No	1,177 (56.9) 892 (43.1)
7	Requires interventions/treatments that will have an immediate systemic effect, which may create an urgent or emergent situation	Yes No	618 (29.9) 1,451 (70.1)
8	Unexpected health event or crisis in the past 48 hours	Yes No	731 (35.4) 1,336 (64.6)
9	Patient and/or family have complex support needs	Yes No	1,233 (59.6) 836 (40.4)
10	Patient and/or family facing complex decisions	Yes No	1,172 (56.7) 897 (43.4)

Polychoric correlation coefficients for the relationship between individual yes/no questions and the dimensions of stability, complexity, predictability and risk for negative outcomes (Table 3) were all significant ($p < .001$). Analysis of the magnitude of the correlations revealed that the items most strongly associated with both patient stability and predictability were those that assessed the need for more frequent monitoring for complications, and reassessment and revision to the patient's plan of care. Complexity was most closely aligned with questions related to revision of the plan of care, patient and family support needs, and supporting patients and/or families with decision-making. Correlations for all of these

relationships were 0.60 or higher. Inter-item correlations for the dimension of risk for negative outcomes were generally lower than for the other dimensions; however, items related to increased monitoring, increased adjustment in the plan of care, high-risk interventions, support needs and complex patient or family decisions were all correlated with risk for negative outcomes at *r* values of 0.50 or higher.

Table 2. Response frequencies for PCNA items assessing stability, complexity, predictability and risk for negative outcomes

Question no.	Question	Mean (SD)	Response category	Frequency (percent)
11	Overall how stable is this patient?	2.97 (1.15)	0.1–2.0 2.1–4.0 4.1–6.0	761 (36.8) 1,062 (51.3) 246 (11.9)
12	Overall how complex is this patient?	3.43 (1.24)	0.1–2.0 2.1–4.0 4.1–6.0	503 (24.3) 1,080 (52.2) 486 (23.5)
13	Overall how predictable is this patient?	3.25 (1.23)	0.1–2.0 2.1–4.0 4.1–6.0	629 (30.4) 1,012 (48.9) 428 (20.7)
14	Overall how at risk is this patient for negative outcomes?	3.63 (1.30)	0.1–2.0 2.1–4.0 4.1–6.0	447 (21.6) 967 (46.8) 653 (31.6)

The consistency of the yes/no questions with the scores on the individual dimensions of stability, complexity, predictability and risk for negative outcomes was also analyzed by comparing the total score for the yes/no items to the scores on each of the dimension scales (Table 4). While the PCNA tool is not intended to yield a total score for the purpose of identifying patients' needs for nursing care, comparison of the sum of the yes/no items to each of the dimension scales provided insight into the extent to which the process of answering these questions supported the determination of the ratings on the four dimensions. Spearman correlation coefficients demonstrated a strong positive relationship between the yes/no questions and each of the four dimensions. In each case the coefficients were significant and greater than 0.62. There was also a strong positive relationship among the four dimensions of stability, complexity, predictability and risk for negative outcomes, with correlation coefficients ranging from 0.67 to 0.79.

Face validity of the PCNA tool was assessed through responses to the PCNAOQ and focus group comments. Responses to the PCNAOQ were positive, with mean scores of 2.3 or higher for each question, with the exception of the item related to

Table 3. Correlations between yes/no items and dimension scales

Question no.	Question focus	Stability (Q. 11)	Complexity (Q. 12)	Predictability (Q. 13)	Risk for neg. outcomes (Q. 14)
2a	Vital signs within established limits	.32	.21	.25	.18
2b	Vital signs within range for condition	.49	.40	.38	.31
3a	Level of consciousness within range for condition	.32	.26	.23	.18
3b	Fluctuations in level of consciousness	.33	.32	.30	.31
4	Increased monitoring for development of complications	.63	.53	.60	.55
5	Acute confusion/ agitation requiring ongoing assessment and treatment	.29	.35	.35	.34
6	Increased assessment and adjustment in the plan of care	.64	.60	.60	.53
7	High-risk interventions/ treatments	.56	.49	.53	.50
8	Unexpected health event or crisis in past 48 hours	.45	.24	.38	.25
9	Complex support needs	.44	.63	.50	.56
10	Complex decisions	.45	.64	.52	.58

Table 4. Relationship between total of yes/no questions and patient stability, complexity, predictability and risk for negative outcomes

Stability (Spearman *r*)	Complexity (Spearman *r*)	Predictability (Spearman *r*)	Risk for negative outcomes (Spearman *r*)
.67*	.66*	.66*	.62*

* $p < .0001$.

information missing from the PCNA, which yielded a mean score of 1.9. Similar positive responses were elicited during the focus group discussions, as illustrated by the following sample comments:

> We went through the patients that I had that day, and a lot of those criteria met my patients' needs, and I felt it gave a reflection of my patients that particular day.
>
> It's a pretty broad scope. It encompasses everything.
>
> I think it is comprehensive in terms that you're getting input from a variety of sources versus just it being like on a management level or a senior team level, it's actually asking the nurses.

Convergent validation of the PCNA was performed by comparing PCNA results with those generated with the comparison instrument, the PRNC. The Spearman correlation coefficient for the summary scores from the two instruments was 0.63 ($p < .0001$), indicating considerable congruence between the results generated by the two instruments in the 106 patients reviewed. Significant correlations were also noted between individual items on the PCNA and PRNC that addressed level of consciousness, confusion or disorientation, need for increased monitoring and adjustments to the plan of care, and support for patients and families. In addition, the stability dimension score on the PCNA was associated with the need for analysis of condition and problem-solving items on the PRNC. The PCNA measurement of complexity was also associated with problem solving on the PRNC, while the PCNA dimension of predictability was associated with need for analysis of condition on the PRNC. The PCNA dimension "risk for negative outcomes" did not exhibit significant correlations with any of the PRNC items. Conversely, PRNC items that were more task focused – such as number of systems requiring assessment; number of medications, treatments and dressings; provision of education and counselling; and physical care needs – were not correlated strongly with any of the PCNA items.

The project involved the development and testing of a "toolkit" of instruments and processes designed to assist nurse leaders to make informed, evidence-based decisions for unit staffing plans that include the appropriate mix of RNs and R/LPNs in the staffing complement.

Feasibility and Validity of the UEP

The number of responses obtained for the UEPOQ and QUNL was quite low (7/36 and 16/36 respectively), limiting conclusions regarding the UEP. However these responses together with comments during the focus group discussions suggested that the managers had a moderate level of satisfaction with the tool but felt additional items were needed to provide a complete picture of the unit environment. Managers also noted that some data were not readily available to them. Comments from the nursing leaders during the debriefing meetings also suggested that they were less clear about how to incorporate environmental information into staff mix decisions.

Evaluation of the Review Process

One hundred and fifteen nurses participated in the focus groups, including staff nurses, unit managers, team leaders, advanced practice nurses and educators. Five themes related to the process were identified. The collaborative approach was seen as supporting front-line staff, and the discussions leading to consensus provided additional clinical knowledge and assisted in answering questions and determining the scores on the rating scales. Participants also valued the support of an extra nurse on the day of the review, and having an opportunity to review the PCNA instrument prior to the unit review.

> Central to the development of the toolkit was the belief that appropriate skill mix decisions require the participation of the nurses who will be involved in their implementation.

Both staff and leaders noted that the reviews required considerable time. Some nurses commented that they felt anxious going into the review and were uncomfortable answering questions in front of their unit leaders.

Responses to the QUNL indicated that participants found the review process beneficial, both in terms of informing nursing staff mix decisions and as an opportunity to witness nursing staff discussing patient care. They noted that some questions were subjective in nature but acknowledged that the consensus approach balanced this subjectivity.

Utility of the Toolkit in Supporting Nursing Staff Mix Decision-Making

Data from the focus groups and unit leader questionnaires indicated that overall nursing leaders felt the toolkit would be helpful in supporting nursing staff mix decision-making and that they would make changes based on the information generated by the tools and review process.

Discussion

Results from this evaluation project suggest that the RN/RPN Utilization Toolkit can support nursing staff mix decision-making. The PCNA appears to capture information about patient stability, complexity, predictability and risk for negative outcomes. By considering each patient's constellation of scores on these four dimensions, a coherent and comprehensive picture of the patient's needs emerges. In particular, the dimension of patient risk for negative outcomes, a recommended consideration in staff mix decisions (CNO 2005), was addressed in the PCNA but not in the comparison tool. Conversely, the lack of correlation between PCNA data and task-focused items on the PRNC suggests that the PCNA captures information that is distinct from workload, as intended.

The results also suggest some opportunities to enhance the utility of the PCNA tool. Vital signs and level of consciousness showed little variability in this sample, suggesting that these items may not contribute substantially to assessment of patient care needs in this population. The lower correlation of the risk dimension with the yes/no items may have been due to inconsistency in the interpretation of this question. In light of this, it is recommended that the question be revised to include a timeframe for the assessment of risk (e.g., within the next 48 hours).

Engagement of clinical nurses and unit leaders in generating the data on which decisions are made, as recommended in best practice guidelines (RNAO 2007), provides an opportunity for nurses to contribute to key decisions regarding their work and may enhance confidence in and credibility of decisions. In addition, staff involvement in decision-making may have a positive impact on recruitment and retention.

Study results suggest that incorporation of environmental data into staff mix decisions remains a challenge for nurses. Refinement of the UEP is required to ensure that it captures those elements of the practice environment that are relevant to staff mix decisions. For example, provisions for continuity of caregiver (RNAO 2007), although potentially addressed though UEP items related to percentage of full-time staff, may need to be articulated further. An organization's vision of its model of care must also be considered. In addition, ensuring access to required information, and supporting nurse leaders to incorporate this information into staff mix decisions, is necessary.

One aspect of nursing work that is not captured through the toolkit is the amount of time and physical demands associated with meeting the needs of patients. Nursing workload measurement processes are designed to assess the volume of work that patients' needs generate and to estimate the time required to meet those needs. In applying the results of the toolkit to staff mix decision-making, it is important that this aspect of nursing work be integrated into the decision.

Implications for Future Research

Results of the current study provide support for the reliability and validity of the inferences drawn from the application of the PCNA to identify patients' needs for nursing care. However, additional research is required to understand the processes through which clinical nurses and nurse leaders can use this information to support effective decisions regarding nursing staff mix. For example, prior application of the unit review process included an additional step in which each patient was identified as appropriately assigned to either an RN or an RPN. Studies exploring this and other procedures for moving from data collection to staff mix decisions are required.

Further work is also urgently needed to evaluate the quality of staff mix decisions as determined by patient, nurse and system outcomes. In particular, the use of nurse sensitive outcomes data to measure the impact on patient outcomes is key. The Canadian Nurses Association *Evaluation Framework to Determine the Impact of Nursing Staff Mix Decisions* (2005) can provide direction regarding evaluation metrics and processes. Studies that track these outcomes prior to and following staff mix changes, and comparisons of units with similar patient needs and unit environments but different staff mixes, need to be undertaken.

Conclusions

In today's economic environment, provincial governments are facing record deficits and healthcare funding reductions. Nursing resources have historically been viewed as a source of potential savings by healthcare organizations in times of budget constraints. Nursing resources have historically been viewed as a source of potential savings in times of budget constraints. As a result, pressure is placed on nursing administration and managers to reduce nursing care hours per patient day and to consider various staff mix changes, including different RN/RPN ratios as well as the addition of unregulated workers. Although there is a difference in compensation levels between RNs

and RPNs, staff mix should be driven by patient care requirements rather than the potential gain in financial savings.

Staff mix decisions must be made with empirical evidence that aligns the knowledge and skills of different workers with patient stability, complexity, predictability and risk for negative outcomes, as well as characteristics of the work environment. Time-based parameters such as hours per patient day and workload data are inadequate for measuring these factors. The PCNA and UEP tools and the consensus-based review process, when used together, can help to improve decision-making in matching patient needs to nursing human resources, focusing on the patient's needs, the nurse caring for the patient and the unit environment. In addition, utilization of a consistent framework for assessing patient needs and nursing environments will enable meaningful comparisons across organizations and over time.

Another positive outcome of the work to develop this toolkit is that it provides nurse leaders with a mechanism previously not available in the literature to apply the CNO (2005) standard for utilization of RNs and RPNs. The basis of the framework requires consideration of the patient, nurse and environmental characteristics. The four components of the toolkit in this study provide the mechanisms to comprehensively assess the patient (PCNA), nurse and environment characteristics (UEP). Although other factors, such as knowledge of the scope of practice of RNs and RPNs, dynamics of the healthcare environment, labour relations, workforce demographics, attrition and regulatory changes also represent components to consider in decision-making, the toolkit provides a thorough and user-friendly mechanism to assess the fundamental considerations of patient, environment and nurse factors.

Overall, the results of this study support the use of these tools and processes to guide managers in deciding the appropriate nursing staff mix on adult medical/surgical units. Further understanding of the application of the toolkit itself, such as frequency of application and review of nursing staff mix, will be important. Additional research is also now required to evaluate the quality of decisions resulting from application of the toolkit, and to illuminate the processes through which nursing leaders can best translate the information generated through the tools into staff mix decisions. Modification and further testing of these tools and process for application in other sectors, such as long-term care, mental health and community settings, is also being

explored. The RN/RPN Utilization Toolkit is an important advancement toward facilitating the determination of the right staff mix for each clinical context and maximizing the use of nursing health human resources.

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Endnotes

[1] In Ontario, practical nurses are registered through the College of Nurses of Ontario and are referred to as registered practical nurses (RPNs). In other jurisdictions the term licensed practical nurse (LPN) is more common.

[2] This article references the 2005 CNO standard that was in place at the time of the study. The standard was revised in 2009 but retains the emphasis on patient, environment and nurse factors.

[3] A detailed report of the quantitative and qualitative analyses and results is available on the Sunnybrook website at http://sunnybrook.ca/content/?page=Nursing_Practice.

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The Nursing Human Resource Planning Best Practice Toolkit: Creating a Best Practice Resource for Nursing Managers

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Abstract

Evidence of acute nursing shortages in urban hospitals has been surfacing since 2000. Further, new graduate nurses account for more than 50% of total nurse turnover in some hospitals and between 35% and 60% of new graduates change workplace during the first year. Critical to organizational success, first line nurse managers must have the knowledge and skills to ensure the accurate projection of nursing resource requirements and to develop proactive recruitment and retention programs that are effective, promote positive nursing socialization, and provide early exposure to the clinical setting.

The Nursing Human Resource Planning Best Practice Toolkit project supported the creation of a network of teaching and community hospitals to develop a best practice toolkit in nursing human resource planning targeted at first line nursing managers. The toolkit includes the development of a framework including the conceptual building blocks of planning tools, manager interventions, retention and recruitment and professional practice models. The development of the toolkit involved conducting

a review of the literature for best practices in nursing human resource planning, using a mixed method approach to data collection including a survey and extensive interviews of managers and completing a comprehensive scan of human resource practices in the participating organizations. This paper will provide an overview of the process used to develop the toolkit, a description of the toolkit contents and a reflection on the outcomes of the project.

Introduction

In 2008 the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care funded 17 demonstration projects aimed at developing and implementing best practice for nursing human resource planning. Nursing leaders at Mount Sinai Hospital, North York General Hospital, SickKids, St. Joseph's Hospital, St. Michael's Hospital, Sunnybrook Health Sciences Centre, Toronto East General Hospital and the Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto created a partnership network and became one of the demonstration site projects. This paper describes and reflects on the development and dissemination of the Nursing Human Resource Best Practice Toolkit (NHRBPT).

Within the context of jurisdictional and national health human resources (HR) planning efforts, the NHRBPT project was designed to help organizations and first-line managers conduct effective nursing HR planning at the level of a patient care unit. The NHRBPT had three main objectives: (1) to create a partnership network that facilitated the sharing of knowledge regarding nursing HR planning practices among the hospitals, and ultimately with other jurisdictions, (2) to develop an HR best practice toolkit that focused on five identified building blocks: planning tools, manager interventions, recruitment, retention and professional practice, and (3) to develop and pilot a workshop format to disseminate the toolkit content. The partnership members' vision was to build nursing HR planning capability among nursing managers that would help attain optimal numbers of nursing staff with complementary skills, working in a healthy workplace environment to achieve the best patient outcomes (Beduz et al. 2009).

Developing a Toolkit for First-Line Nursing Managers

Health human resources are critical to meeting the health needs of Ontarians. Policy makers and healthcare managers are challenged to ensure that the right number of people, with the right skills, are available at the right time to deliver health services at an affordable cost. Nurses make up the largest group of healthcare providers in Ontario's healthcare system, and evidence of acute nursing shortages in large urban hospitals has been surfacing since 2000 (Baumann et al. 2006). While the nursing community agrees on the important aspects of nursing HR planning,

there is little coordination in the application of evidence-based planning to practice (McGillis Hall et al. 2006). One reason for this has been a lack of readily available evidence-based planning tools that support organizations and nursing managers in effective planning, recruitment, integration and retention. As a result, front-line nursing managers are still challenged with effective nursing HR planning.

The NHRBPT is an attempt to bridge the gap between what we know about nursing HR planning and what we can do to improve the planning process and outcomes at the level of first-line nursing managers. Toolkits are collections of versatile, adaptable educational resources that are particularly useful for addressing complex issues. These issues change from one organization to another and require a high degree of local adaptation (Monroe 2000). When used by local champions, toolkits have been found effective in implementing selected best practice guidelines in a variety of healthcare organizations (Dobbins et al. 2005). More than a collection of information, the most useful toolkits have structured interactive content to facilitate users' learning. The decision to develop the NHRBPT resulted from senior nursing leaders recognizing a need to develop an evidence-informed, practice-ready resource for first-line nursing managers, coupled with a targeted dissemination strategy to maximize the resource's adoption.

Lessons Learned

- Strategies that seek to consolidate information in regular reports would improve the planning and evaluation cycle of nursing HR management for first-line managers.
- A variety of strategies are used by first-line managers to meet the goal of having enough staff, with sufficient experience to provide cost-effective quality patient care.
- First-line managers identify peer mentoring and access to, and support from, their direct supervisor as the most common mechanisms for attaining competency in nursing HR planning and other leadership and management skills.

Methodology for NHRBPT Development

The NHRBPT was conceptualized using a guiding framework developed by an expert panel of representatives from the partnership network (Appendix 1). The framework reflects the network's vision, which is achieved when best practices in each of the five building blocks (planning tools, manager interventions, recruitment, retention and professional practice) are integrated into an overall plan. The plan is founded on the principles that HR planning is population based, comprehensive and long-term, uses a systems-based collaborative approach and is informed by evidence.

The building blocks selected for inclusion in the framework were developed following a literature review of human resources management concepts. They consisted of key strategies to consider in developing a comprehensive

organizational HR plan (MOHLTC 2007). The rationale for selection of the building blocks is reported elsewhere (Burkoski and Tepper 2010). A number of steps were involved in developing the NHRBPT: An extensive review of the literature, research and published practices from other jurisdictions on HR practices was launched. An organizational survey was developed, along with a nurse manager survey and key informant interviews. Tools, templates and resources were collected from each of the partner organizations and analyzed. Details of the methods are described in the published toolkit, which can be downloaded from www.mountsinai.on.ca/nursing.

NHRBPT Format and Contents

The NHRBPT attempts to link the best available research evidence with local experience in order to inform decision-making for operational-level nursing HR planning. It is organized in discrete chapters based on each of the framework's five building blocks. The first chapter describes the framework in greater detail. Each subsequent chapter, summarized below, synthesizes evidence and findings from the published literature combined with data from the partner organizations and key informant interviews. The final chapter provides important information about implementing and sustaining the HR planning strategies. The NHRBPT is designed to be practical; the reader follows a series of steps to achieve nursing HR planning. Each chapter follows a similar outline:

- Introduction and definition of the building block
- Review of the literature and a comparative analysis with findings from our data collection activities
- Common steps to achieve the chapter's goals
- A case study to facilitate interpretation and application of the content
- Sample tools and resources to help in the planning activities

NHRBPT Chapters Summarized

Planning Tools for Nursing Human Resource Needs

This chapter focuses on the process for assessing and determining nursing HR needs at the nursing unit level through use of structured tools such as nursing unit staffing projections and forecasting tools. Needs-based HR planning tools help nursing managers and other decision-makers determine workforce needs in both the short and long term. A number of tools are available to aid in decision-making processes, and they require access to appropriate data sources. Use of data such as utilization of nurses in full-time equivalents (FTEs), budgeted positions and workload measurement information is integrated with the forecasting process. An extensive case study demonstrates the utility of the data and planning tools.

Nursing Managers' Human Resource Interventions
Effective allocation of human resources is integral to the first-line nursing manager's role. The nursing manager's success in creating effective work teams and implanting flexible strategies has a positive impact on the quality of work life for staff and quality of care for patients. Planning for adequate deployment of nursing human resources is an essential skill. However, nursing managers receive little or no formal training in deployment strategies and scheduling practices. The focus of this section is on scheduling practices and tools.

Recruitment
Creating an integrated short- and long-term recruitment plan for a unit or organization is essential. This chapter focuses on recruitment strategies at the organizational and unit level. It identifies target groups for recruitment and explores target-specific recruitment strategies such as clinical placements, recruitment campaigns and mentorship/preceptorship programs that attract nurses to an organization.

Retention
Organizations that are better able to recruit and retain staff have better evaluations of the quality of care that is provided. For example, hospitals with turnover rates under 12% have lower risk-adjusted mortality scores and low severity-adjusted lengths of stay when compared to hospitals with turnover rates of 22% or more (Cantrell and Browne 2006). The ability to retain staff members and reduce the turnover rate is an essential characteristic of a successful long-term HR planning process. This chapter focuses on emerging trends among new graduate nurses, mid-career and late career nurses and identifies age cohort-specific retention strategies. These strategies include intergenerational strategies, rewards, recognition, innovative scheduling and flexible work hours.

Professional Practice
Over the past two decades, the term "professional nursing practice" has become increasingly integrated and recognized within the nursing community. Professional practice, as an entity, is a system of strategic processes, including both intraprofessional and interprofessional factors that underpin the delivery of skilled, responsive nursing care and the control of a high-quality work environment. Organizational professional practice frameworks have been advocated as resources to help organizations guide the development, advancement and effectiveness of nursing performance standards, and to attract, retain and reward nurses (Robinson et al. 2003). This chapter focuses on an extensive review of the literature on best practices in professional nursing and steps for implementation at the unit and/or organizational level. Actions to develop nursing professionals, steps toward interprofessional collaboration and issues in policy-making and education are addressed.

Building Capability among Nursing Managers

We hosted an expert-facilitated workshop to disseminate the toolkit content to nurse managers. We used a unique knowledge translation strategy to build capability for HR planning among participants, using open space learning methodology. The full-day workshop was designed specifically to support first-line nurse managers in testing the applicability and usefulness of the HR planning toolkit. Each organization identified nursing managers to attend, and 52 participated. They represented all partner organizations and had a variety of managerial experience, ranging from one to 10+ years. Eighty-three percent of participants submitted an evaluation of the workshop. The majority claimed that the workshop was relevant to their work (95%), that it enabled them to achieve the stated objectives (79%) and that it would alter their practice (76%). Key areas identified for practice change related to the use of forecasting tools, scheduling and retention strategies. In total, 96% of respondents said that the workshop met their expectations. Many commented on the networking opportunities the workshop offered. One participant suggested that "it was an excellent session as it gave the opportunity to engage with other managers across the GTA."

Potential barriers to implementing new nursing HR best practices identified by workshop respondents included:

- Budget constraints and concerns about buy-in from other leaders within their organizations;
- Challenges with time management to implement professional practice recommendations, especially for those managers with large spans of control;
- Negotiating creative nursing HR planning;
- The need for strong nursing leadership structure and involvement; and
- Competing priorities within teams and organizations.

Creating the partnership network and the subsequent NHRBPT project arose from a recognized immediate need for evidence-informed planning tools that support organizations and nursing managers in effective HR planning, recruitment, integration and retention of nurses. Beyond this project, organizations must continue to provide other forms of support, guidance and training to their nursing managers for creating a successful health HR plan. Feedback from the workshop indicates that nursing managers are most attuned to the subjects of retention, nursing manager interventions and HR planning. Workshop participants specifically highlighted the importance of strong leadership (at a variety of levels) and higher-level buy-in to implement new nursing HR best practices. Nursing managers may need to consider how they will approach the implementation of these best practices, and whom they will address to achieve this buy-in.

NHRBPT Project Recommendations

Individual organizations in the partnership network have gained considerable expertise in HR planning. All partner organizations have benefited from the comprehensive review of nursing HR planning practices. From the process used to develop the toolkit contents – including the literature review, nursing manager and organizational surveys and interviews, and feedback from the workshop – the expert panel developed a set of recommendations. These recommendations, described below, should inform future action in nursing HR decision-making and planning.

Funding

Funding for future initiatives should be aimed at supporting the uptake and implementation of initiatives identified in the evidence and NHRBPT to advance the capacity of nursing HR planning at the organization and unit level.

Professional Development and Support for Nursing Managers

Role expectations, educational preparation and opportunities for professional development for first-line managers vary among organizations. Evidence suggests that there are specific leadership and management competencies for first-line nursing managers that are tied to outcomes for nurses, patients and organizations. Future initiatives should be aimed at defining core competencies and providing formal mechanisms to assist nursing managers in achieving them. Organizations should ensure that adequate training is provided to first-line nursing managers to ensure they are developing skills in effective HR management, including planning and forecasting; and recruitment, including interviewing, bias-free hiring, and use of different types of recruitment and retention strategies. In our interviews with experts, all nursing managers stated that in learning about staffing and scheduling, most had relied on their colleagues for support or taught themselves. Formal mechanisms for learning staffing and scheduling techniques would have been very helpful to them as new nursing managers.

Internal and External Networking

Organizations should provide structures for internal and external networking for first-line managers. First-line managers identify peer mentoring and access to, and support from, their direct supervisor as the most common mechanisms for attaining competency in nursing HR planning and other leadership and management skills. Organizations should consider developing formal mentorship and support programs for first-line managers.

Consolidating Human Resource Information in Regular Reports

Organizations should provide nursing managers with consolidated and consistent

reports of HR information in order to assist them to effectively manage and plan for nursing human resources. Currently, information tends to come from disparate sources and information systems at different time intervals. Strategies that seek to consolidate information in regular reports would improve the planning and evaluation cycle of nursing HR management. Integrated reports should include data on:

- Budgeted FTEs and utilization in FTEs for full-time, part-time, casual and agency staff;
- Utilization in FTEs for sick time, overtime, education, orientation and benefit hours such as vacation; and
- Retirement trends in past years and future projections based on age of staff.

Reviewing Scheduling and Staffing Procedures

Nursing managers should be provided with guidance in the understanding, analysis and utilization of reports on HR planning and encouraged to review their planning regularly. Regular reviews of staffing and scheduling procedures are recommended (minimum yearly) in order to be responsive to recruitment and retention issues. In addition, triggers such as staff complaints, increased sick time or overtime may warrant a review and further action.

Understanding the Link between Recruitment and Retention

Creating healthy workplace environments and providing adequate training opportunities for new nurses, as well as supporting professional development, are important steps in both the recruitment and retention process.

Conclusion

The NHRBPT is based on the results of the review of hospitals' and nursing managers' practices and an extensive review of the literature. The coordinated approach for the collection and interpretation of data was conducted so that the information can be widely adopted by other healthcare organizations to support nursing HR planning. Using this approach makes the toolkit relevant and accessible to specific sectors (the development of tools was at the grassroots level) and fosters collaboration between organizations and mangers within the network. In this sense, the project served as a vehicle for ongoing sector and Local Health Integration Network engagement and collaboration. It promotes sector- and system-wide solutions, and it encompasses and aggregates knowledge across the nursing profession. The NHRBPT also addresses a significant gap in the current nursing health HR landscape. It provides a comprehensive, evidence-informed resource for first-line nursing

managers in nursing HR planning. It is an integrated approach to dissemination through the provision of practice-ready tools, case studies and implementation strategies for an immediate knowledge-to-action process.

Download the toolkit *Building Capacity in Nursing Human Resource Planning – a Best Practice Resource for Nursing Managers* at www.mountsinai.on.ca/nursing.

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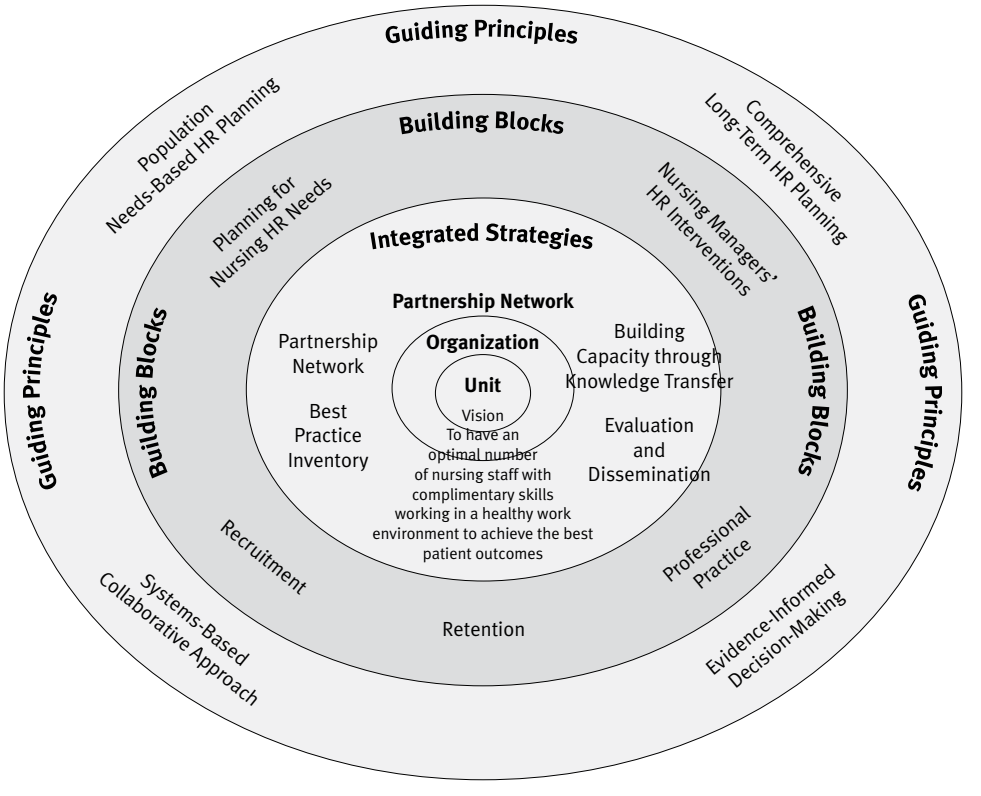
Appendix A. Building capacity in nursing human resource planning: best practice resource for nursing managers – a framework



The ALIVE Program: Developing a Web-Based Professional Development Program for Nursing Leaders in the Home Healthcare Sector

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Abstract

Home healthcare nurses often work in isolation and rarely have the opportunity to meet or congregate in one location. As a result, nurse leaders must possess unique leadership skills to supervise and manage a dispersed employee base from a distance. The nature of this dispersed workforce creates an additional challenge in the ability to identify future leaders, facilitate leadership capacity, and enhance skill development to prepare them for future leadership positions. The ALIVE (Actively Leading In Virtual Environments) web-based program was developed to meet the needs of leaders working in virtual environments such as the home healthcare sector. The program, developed through a partnership of three home healthcare agencies,

used nursing leaders as content experts to guide program development and as participants in the pilot. Evaluation findings include the identification of key competencies for nursing leaders in the home healthcare sector, development of program learning objectives and participant feedback regarding program content and delivery.

Background

Recruiting and retaining nursing staff in the home healthcare sector is a challenge shared by all community-based organizations, particularly with regard to current and future leaders. Due to the nature of the care provided, the diverse practice settings and scheduling challenges, home healthcare nurses work in a high degree of isolation and rarely have the opportunity to meet or congregate in one location. To supervise and manage such a dispersed employee base from a distance, nursing leaders must possess unique leadership skills. Hood and Smith (1994) describe nursing leaders as the role most influential in affecting areas such as productivity, staff satisfaction and patient outcomes. Despite the limited face-to-face interaction with staff, nursing leaders have the ability (and responsibility) to make an impact on staff satisfaction (Smith 1997). Strong and accessible nursing leadership is included in the characteristics of "magnet" hospitals – those with the ability to recruit and retain nurses (Kramer and Schmalenberg 1988a, 1988b). Fraser (2003) describes the importance of magnet characteristics to the home healthcare sector as due to the projected increases in provision of care in the community and the need to recruit and retain nurses to meet those client needs. Home healthcare sector literature also describes the importance of competent and supportive managers who are knowledgeable about the community, enable autonomous practice, and provide feedback and coaching (Armstrong-Stassen and Cameron 2005; Flynn and Deatrick 2003; Smith-Stoner 2004).

When considering the relatively short tenure of those in leadership positions, retaining current nursing leaders is vital to ongoing organizational success. Mackoff and Triolo (2008) suggest that focusing on a model of engagement of current nurse managers, rather than on retention, will potentially increase the tenure of those in leadership positions.

A variety of factors make recruiting and retaining nurse leaders in the home healthcare sector particularly challenging. They include the workforce shortages and wage disparity between sectors (i.e., acute care and community sectors). A qualitative study of hospital nurses transitioning to the community sector reported feelings of being alone and not being sure of what to do (Zurmehly 2007). Although the focus of this study was nurses in clinical practice, these comments are often expressed by nurse leaders who are new to the community sector.

Insufficient investment in ongoing professional development of nursing leaders can lead to feelings of being ill-prepared to meet the diverse areas of accountability associated with their role, ultimately having an impact on organizational effectiveness (O'Neil et al. 2008). By investing in nursing leaders and enabling them to provide strong, accessible leadership to their staff, we not only improve the retention of our current nursing leaders, but we also enhance the development of a cohort of future nursing leaders (Mackoff and Triolo 2008).

The goal of the ALIVE Nursing Leadership Model (Actively Leading In Virtual Environments) is to create a transformational leadership model that addresses the unique needs of nursing leaders in the home healthcare sector. For the purposes of this project, *nursing leaders* were defined as nurses in formal leadership or management positions, at the point of care, with direct accountability for clinical nurses providing direct client care. The project objectives are to assess educational gaps of current and future home healthcare nurse managers and develop evidence-based resources to assist them in becoming more effective in leadership roles in working with an extremely mobile, dispersed and often isolated nursing workforce.

A Unique Partnership

The ALIVE Nursing Leadership Model was created through an innovative partnership between VON Canada, Saint Elizabeth Healthcare and VHA Home HealthCare, all not-for-profit home healthcare providers in Ontario. The Ontario Community Support Association, a non-service organization, provided additional support. In a situation unique to Ontario, home healthcare providers are required to compete for a market share of healthcare (managed competition). Despite the fact that these organizations are in true "competition" with one another for the ability to provide home healthcare services, the common desire to invest in the development and retention of nursing leadership enabled a creative and collaborative approach to program design, implementation, sharing resources and engaging staff from across the province. The ALIVE program development process involved three distinct phases: (1) consulting with content experts, (2) developing the program, pilot testing and evaluation and (3) implementing the web-based ALIVE program modules.

Phase 1: Tapping into Our Own Experts

A content expert panel of four nursing leaders from each of the partner organizations was brought together to discuss enablers and barriers to being a nursing leader in the home healthcare sector and to identify core competencies for successful leadership. To ensure diversity of experience, selection criteria for the panel included one nurse from each of the following categories:

- New to community nursing, new to a formal leadership role

- New to community nursing, experience in a formal leadership role(s)
- Experience in community nursing, new to a formal leadership role
- Experience in community nursing, experience in a formal leadership role(s)

Members of the ALIVE advisory group identified and approached nurse leaders in their organization and invited them to participate. Participation was voluntary, and all expenses (time and travel) were covered by the organization.

Activities such as brainstorming, visual imagery and nominal group techniques were used to determine the final list of competencies for nursing leaders. For example, participants were asked to give a visual response to the question, "what is it like to be a nursing leader in the home healthcare sector?" Figures 1a and b are examples of the visual representations created. Key messages from the responses included the vast areas of responsibility as well as feelings of being on your own yet realizing there are resources available – but sometimes just out of reach.

Lessons Learned

- *Draw from your leaders.* The three participating home care provider organizations have acknowledged the benefit of their front-line nurse managers participating together in the pilot project. The project has forged new relationships, shared learning across organizations and facilitated a collaborative environment that can be problematic in the Ontario home care sector because of the competitive bidding process.
- *Focus on sustainability right from the beginning.* With the understanding that funding is one-time in nature, it is important to determine your internal capacity to maintain the program and ensure that plans for sustainability are developed early on in the process.
- *The value of partnering.* When resources and costs are shared across the partners involved, the individual impact on each organization is relatively small (e.g., costs shared, internal resources tapped into), thereby creating synergies for sustainability.

The 21 competencies generated were then compared to elements in the literature that describe community nursing job satisfaction and characteristics of manager support, as well as the standards of practice documents from the College of Nurses of Ontario (2002) and the Community Health Nurses Association of Canada (2003). (See Table 1 for the list of competencies identified.) The competencies listed within the categories of skills (e.g., communication, leadership and time management) and attributes (e.g., caring, honest and engaged) are consistent with those described in the literature and professional standards. Participants described the competencies listed under the knowledge category as key to success in the role, based on personal experience in their current nursing leadership role.

Figure 1a. 1b.

Examples of participants visual depiction of "what it is like to be a nursing leader in the home healthcare sector?"

Table 1.

Key competencies for nursing leaders in home healthcare

Knowledge	Skills	Attributes
1. Nursing practice: understanding best practices, scope of practice issues; working with unregulated care providers and implications for nurses 2. Understanding of the unique issues within the home healthcare sector: RFP processes; defining measures of quality and determining indicators to monitor; sound understanding of the human resource issues 3. Managing human resources: inclusion of collective agreements; dealing with performance issues (i.e., supervising peers)	1. Technology: computer skills 2. Conflict management/ negotiation 3. Root cause analysis 4. Time management: managing multiple priorities 5. Communication skills: especially when communication is "virtual" (i.e., email and/or phone) 6. Providing constructive feedback 7. Leadership skills: ability to lead, motivate	1. Enthusiasm 2. Emotional intelligence 3. Sense of humour 4. Caring 5. Follow-up/follow-through 6. Honesty 7. Engaged: being genuinely present 8. Consistency, fairness 9. Adaptable 10. Takes initiative, is innovative 11. Courageous; willing to challenge the status quo

RFP = request for proposal.

Validating the Competencies with Others

To ensure that the content experts had identified competencies that were relevant to their colleagues, we used the competencies to develop a web-based questionnaire. The questionnaire consisting of 26 items and was distributed to all nursing leaders within the three partner organizations ($N = 136$). A modified tailored design method (Dillman 2007) was used for the design and electronic distribution of the invitation to participate, the link to the questionnaire and the reminder notices for study participants. Part 1 of the questionnaire asked participants to rate the *relevance* of each item to their role as a nursing leader, (not at all relevant to very relevant), with higher scores indicating higher degrees of relevance. Part 2 asked participants to rate their current level of *confidence* in their ability with each item. This provided information on nursing leaders' individual self-assessment and identified areas for professional development.

In total, 44 questionnaires (a 32% response rate) were completed including representation from each of the three partner organizations. Survey results were analyzed using SPSS Version 16.0. Descriptive statistics were conducted for the items, as well as further analysis based on number of years of leadership experience. Demographics of the survey respondents revealed that the majority (59%) had over 20 years' nursing experience and 50% had over 10 years' home healthcare sector experience. However, in their current leadership role, the majority (72%) had five or less years' experience. This finding reinforces the need to provide supports for experienced nurses as they enter formal leadership roles and to not assume that years of clinical experience reflect the confidence and ability to assume leadership roles and accountabilities.

A content validity index (CVI) for the questionnaire was determined by calculating the proportion of responses where the rating for the item was scored as either quite relevant or very relevant (scores 3 or 4 on a 4-point Likert scale). The resulting CVI of 0.97 was higher than the minimum CVI of 0.80 described in the literature (Lynn 1986; Polit and Beck 2006). This finding confirmed that the items included in the questionnaire were relevant to the role of nursing leaders in the home healthcare sector.

Results of the self-assessment indicated that nursing leaders with less than five years' experience were the least confident in many of the competencies identified (e.g., managed care, human resources, quality indicators) when compared with responses from those with 10 years' experience or more in the sector (see Table 2). Although there were difference in the mean scores based on years of experience as a nursing leader, they were statistically significant in only three areas: understanding the managed care/request for proposal process [$t(42) = -2.07$; $p = .045$],

knowledge of ethical standards of practice [$t(42) = -2.11$; $p = .040$] and knowledge regarding scope of practice issues in working with unregulated care providers [$t(42) = -2.18$; $p = .034$]. This information provided the foundation for the development of the ALIVE modules.

Table 2. Comparison of mean scores based on number of years of leadership experience, using a 4-point Likert scale: 1 (not at all confident) to 4 (very confident)

Competency	Less than 5 years of leadership experience *N* = 32	Greater than 5 years of leadership experience *N* = 12
Knowledge of community health nursing standards	2.75	2.92
Understanding of the collective agreement process and implications for practice	2.45	2.58
Understanding of the managed care process (i.e., request for proposal process)*	2.47	3.17
Defining measures of quality and quality indicators	2.59	3.00
Root cause analysis (i.e., differentiating problems and the underlying causes of issues)	2.81	3.08
The use of empowering strategies (i.e., consultation, visioning, mutual problem solving) to build capacity in others	2.90	3.08
Courage (i.e., willing to challenge the status quo)	2.91	2.83
Knowledge of best practices (i.e., evidence to support client care)	2.91	3.27
Time management skills; ability to manage multiple priorities	2.94	3.17
Use of technology (i.e., computer skills)	2.94	2.92
Conflict management skills	3.00	3.17
Knowledge of ethical standards of practice*	3.03	3.50
Knowledge regarding scope of practice issues (i.e., working with unregulated care providers)*	3.06	3.58
Negotiation skills (i.e., resolving conflicts, reaching consensus)	3.06	3.08

Competency	Less than 5 years of leadership experience *N* = 32	Greater than 5 years of leadership experience *N* = 12
Dealing with performance issues (i.e., supervising others; supervising "peers")	3.09	3.50
Leadership skills (i.e., the ability to lead, motivate others, achieve desired outcomes)	3.12	3.17
Providing constructive feedback to others (i.e., staff and peers)	3.13	3.25
Ability to adapt to external environment (i.e., takes initiative, innovative)	3.16	3.08
Consistency (i.e., transparent in decision-making, follow-through)	3.16	3.25
Emotional intelligence (i.e., awareness of personal emotions and impact on others)	3.22	3.33
Sense of engagement (i.e., being genuinely present, enthusiasm)	3.30	3.17
Effective listening communication skills (i.e., when communicating with others primarily via email/phone)	3.31	3.42
Being accessible (face-to-face and/or "virtually")	3.34	3.50
Knowledge regarding confidentiality (i.e., relevant legislation regarding communication of client information via email/fax/phone)	3.37	3.58
Establishing the agency's good reputation within the professional and lay community	3.45	3.67
Ability to demonstrate caring for others	3.47	3.67

* Differences are statistically significant, $p = <.05$.

Phase 2: Development of the ALIVE Pilot Program

The top 10 areas identified for development through the self-assessment results included:

1. Understanding labour management practices
2. Understanding the managed competition process
3. Defining measures of quality and quality indicators
4. Knowledge of community health nursing standards
5. Root cause analysis

6. Use of technology
7. Conflict management
8. Time management
9. Courage
10. Knowledge of best practices

Based on needs revealed in the self-assessment results, four modules were identified for inclusion in the pilot offering of the ALIVE Community Nursing Leadership program. Specific to the home healthcare sector and the role of nursing leaders in that sector, these initial modules were (1) managed competition, (2) quality indicators: development and use (incorporating content for defining measures of quality and quality indicators with root cause analysis), (3) dealing with performance practices, and (4) managing multiple stakeholders (incorporating principles of conflict management into dealing with multiple stakeholders).

The pilot program was designed to be delivered in two sessions. Session 1 spanned two consecutive days (November 2008); Session 2 was a one-day follow-up held two months later (January 2009). The modules were initially designed in a face-to-face format in order to effectively test the content and obtain feedback from participants. Sixteen nursing leaders from the three partner organizations were chosen to participate in the pilot offering. Twelve of these had also been involved in the content-expert panel exercise in May 2008. To obtain a totally fresh perspective on the module content, four additional nurse leaders representing the three partner organizations were invited to participate and provide feedback.

To reinforce the value of inter-organizational collaboration, internal content experts, from each of the partner organizations were identified and invited to participate in the design, content development and actual delivery of the program modules. This resulted in collaboration between departments, organizations and roles (e.g., business development, quality, education and human resources), internally within the organizations and across the partners, thus contributing to the richness of the information presented.

Pilot Program Evaluation Results

Upon completion of Phase 1 of the pilot program, participants were asked to complete a web-based survey. The survey consisted of open-ended questions aimed at obtaining feedback on which aspects of the module content were most or least helpful, how applicable the content was to their role and suggestions for improvement. Results indicated a high level of satisfaction with the content and application to their role as nursing leaders.

Feedback included comments such as:

> The overall presentation was very informative and complete. Even though I have been involved with a number of RFPs, there were things I picked up.
>
> All of it was helpful. It's just a matter of accessing the information when needed. I also like the idea of collaborating with other "agency mates" who may have experience in dealing with similar situations.
>
> … suggest that all new managers have this training within a few months of hire.

Additional feedback was obtained through roundtable discussions to gain the pilot program participants' perspectives on the benefits of the program as it relates to retention of nursing leaders and suggestions for sustainability.

Two themes emerged from the discussions:

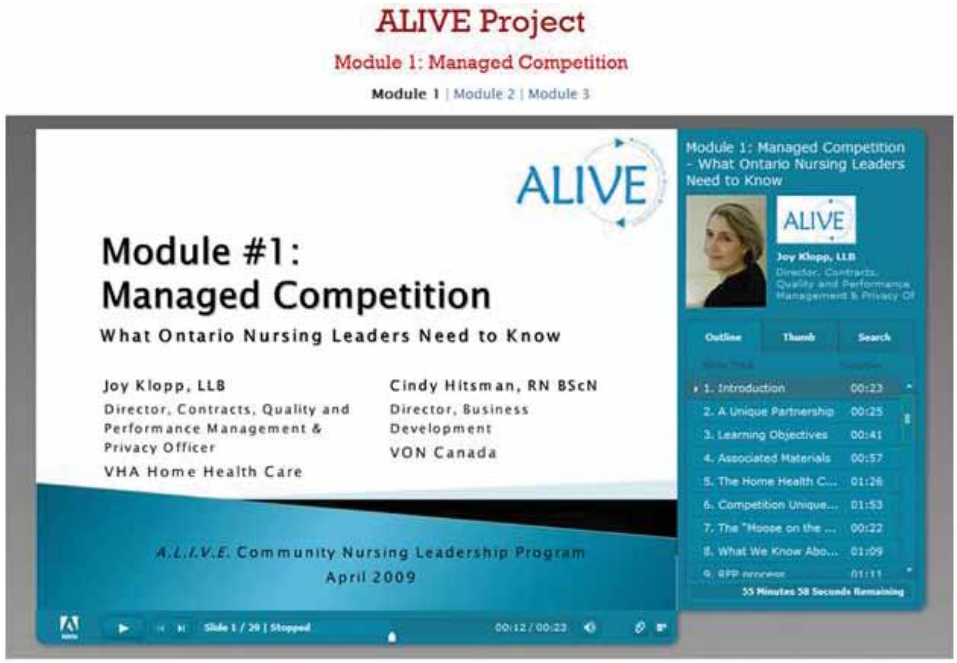
- *The importance of networking.* The value of coming together as a group of nursing leaders was consistently described as a positive aspect of the program and a contributing factor to participants' renewed energy for their leadership role. In comparison with the acute care sector, nursing leaders in home healthcare often function in isolation, with the additional barrier to collaboration and networking of being in competition with others. The ability to convene for a common purpose (e.g., participants' learning and development) was described as being very energizing and beneficial. A specific comment about the impact on retention was the realization that "… all of us that have been involved with this program from the beginning are still here seven months later ... without losing anyone ... that says something about the benefit of the program."
- *Knowledge to support the role.* Participants identified information shared in the modules as beneficial to their role as nursing leaders. Although all received some type of initial orientation, most found it quite limited. By having access to information that was specifically geared to their role and their sector, participants' ability to apply the knowledge in their day-to-day practice was greatly enhanced. This in turn had a positive impact on self-confidence in their role, as evidenced by the following comments:

  > The information we discussed in the program gave me the confidence to go back and find out more.
  >
  > There is no one to mentor you on a regular basis, so this information is vital to any new leader.

Phase 3: Implementation of the Web-Based Program

To build on the success of the pilot program and to enable wider access to the content by all nursing leaders, the modules were developed into web-based content, complete with audio and visual components. The original presenters again volunteered their time to audiotape their presentations as separate modules that would be hosted on the Ontario Community Support Association (OCSA) website, within the members-only section, and available to all OCSA member organizations. Module design allows access to the materials at any time and from any location. Participants can pause the audio/video and restart or go back to specific content areas without having to view the entire module. Slide presentation materials and other documents are posted with each module to accompany the audio presentation. (See Figure 2 for a screen shot of the module.)

Figure 2. Screen shot of the web-based ALIVE module



Participants who view the modules are asked to complete a short quiz to demonstrate their understanding of the content. They can then print a "certificate of completion" that may be used toward organizational performance reviews and/or reflective practice requirements for the College of Nurses of Ontario. Initial feedback has been very positive regarding areas such as: ease of access, relevant content and clear audio, all contributing to a valuable learning resource.

Plans for Sustainability

Despite the challenge of procuring ongoing funding, steps have been taken to ensure sustainability of the program. They include:

- The OCSA Nursing Committee will oversee the ALIVE web-based modules. Four members of the ALIVE advisory group sit on OCSA committee, allowing for continuity and follow-through. This group will be responsible for identifying changes required to existing modules and for addition of new modules and content, as well as for monitoring overall utilization, evaluation results and feedback.
- Future educational offerings via conference calls will link nursing leaders together from the three partner organizations, allowing for optimal participation across the province. OCSA Nursing Committee members will assume the lead in organizing these sessions, as well as determine content and facilitation. Formats may include presenting challenging cases, sharing best practices and strategies for keeping self and staff "engaged" when working in a virtual environment.
- Webinar presentations will share information about the project with other home healthcare organizations, including results from the pilot program, and will market the ability to access the modules online.
- The ALIVE web-based modules will be part of orientation for all new leaders – nursing and other leadership roles.

Results

As demonstrated by the results described above, the ALIVE Community Nursing Leadership program was a huge success. The benefits have extended beyond the nursing leaders who participated in the program to others who are aware of the investment their organization has made in the program. Comments from pilot participants indicate that their colleagues are looking forward to the outcomes of the pilot project and the opportunity to benefit from the content. The ability to access the web-based resource, whenever and wherever convenient for the user, will help to facilitate learning needs and professional development of nursing leaders across the organizations.

The partnership between Saint Elizabeth Health Care, VON Canada and VHA Home HealthCare has demonstrated the benefits of inter-organizational collaboration toward a common goal. It has forged new relationships and shared learning across these organizations, despite their being in competition with one another for the ability to provide home healthcare services. The common desire to invest in development and retention of nursing lead-

ership enabled a creative approach to program design, implementation and sharing of resources.

Evaluation results provide insight into not only the learning needs of home healthcare sector nursing leaders, but also on the importance of opportunities for shared dialogue, networking and "communities of practice" for leaders who often work in isolation.

Although the results of the pilot program can be applied only to the nursing leaders from the three participating organizations, the processes utilized to create the ALIVE program can easily be applied to other sectors and professional roles or interprofessional groups.

Acknowledgements

Despite the success of the partnerships and the enthusiasm of the ALIVE pilot participants, this program would not have been possible without the funding support from the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care, and HealthForceOntario. The ability to bring together representatives from the various organizations, tap into our content experts and enable the time and space for the nursing leaders to come together has been invaluable to the overall success of this program.

We would also like to acknowledge the Ontario Community Support Association (OCSA) for their support throughout the project and for providing a "home" for the ALIVE web-based modules on the OCSA website.

Lastly, we would like to acknowledge the 16 nursing leaders who were not only our content experts and our pilot participants, but also our source of inspiration throughout the entire project! Their dedication to providing excellent patient care and a quality work environment for staff is truly remarkable.

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Advancing Nursing Leadership in Long-Term Care

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Abstract

Nurses working in the long-term care (LTC) sector face unique workplace stresses, demands and circumstances. Designing approaches to leadership training and other supportive human-resource strategies that reflect the demands of the LTC setting fosters a positive work life for nurses by providing them with the skills and knowledge necessary to lead the care team and to address resident and family issues.

Through the St. Joseph's Health Centre Guelph demonstration site project, funded by the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care, the Excelling as a Nurse Leader in Long Term Care training program and the Mentor Team program were developed to address these needs.

Evaluation results show that not only have individual nurses benefitted from taking part in these programs, but also that the positive effects were felt in other parts of the LTC home (as reported by Directors of Care). By creating a generally healthier work environment, it is anticipated that these programs will also have a positive effect on recruitment and retention.

A. Background

In the autumn of 2007, a coalition of eight not-for-profit long-term care (LTC) homes in Ontario received funding to develop programs and tools that would address barriers to recruitment and retention of registered nurses (RNs) and registered practical nurses (RPNs) in the LTC sector. The coalition was led by St. Joseph's Health Centre Guelph, along with the LTC homes' provincial association, the Ontario Association of Non-Profit Homes and Services for Seniors (OANHSS). HealthForceOntario funded the project.

The partner homes represented a broad cross-section of facilities. Four were urban and four were rural. They ranged in size from 78 beds to 241 and included both municipal and charitable organizations. Geographically, they stretched from Kingston in the east to St. Thomas in the west and south to the Niagara Peninsula. (See Acknowledgements below for the list of partner homes.)

OANHSS represents not-for-profit providers of long-term care, community services and housing for seniors operated by municipalities, charities and not-for-profit corporations. Member organizations operate over 27,000 long-term care beds and over 5,000 seniors housing units across the province.

Rationale

OANHSS had been hearing from its members for some time about the difficulty of recruiting and retaining nursing staff, resulting in problems in maintaining full staff complements. Chronically working short has obvious implications for quality of care; the implications of staff turnover for quality of care are less obvious.

Continuity of nursing staff has been identified as a central factor in LTC resident satisfaction and the quality of care they perceive (Sharkey 2008). Relationships between staff and residents can last much longer in LTC than in other areas of healthcare – sometimes decades, rather than days or weeks – and these extended relationships form an important part of residents' quality of life and quality of care. Residents like their routines and gain comfort and peace of mind from having people around them who know their routines.

But a number of realities in LTC nursing make the ideals of maintaining a full staff complement and of providing continuity of nursing staff difficult to achieve. Here are a few of them:

- Nursing training at colleges and universities provides nurses with excellent clinical and leadership skills. However, the specific leadership skills LTC nurses need (such as how to work effectively with families and with cognitively impaired individuals, geriatric care, time management and conflict management) are

difficult to incorporate into generic leadership programs for nurses. When nurses (and others) do not have these personal leadership skills, tensions can escalate and create an emotionally unhealthy work environment.

- Nurse leaders are working with staff for whose results they are responsible, but over whom they have no disciplinary authority, a situation that is further complicated by often being members of different unions. Knowing how to get co-operation without direct authority depends on having high-level interpersonal skills that nurses may never have been taught.
- Nurses need to interact effectively with residents (the majority of whom have some degree of cognitive impairment) and their families. It is fair to say that the quality of life of residents depends just as much on how well nurses perform their non-clinical leadership roles as it does on how well they employ their clinical skills.
- Outside of normal business hours (that is, nearly three-quarters of the time in the 24/7 world of long-term care), the person in charge of an LTC home is an RN – and may be the only RN in the home on a shift. Although a senior manager is always on call, that RN is responsible for everything from organizing the emergency transfer of a resident to an acute care hospital, to co-ordinating the institutional response to a fire alarm, to dealing with an overflowing toilet. These additional responsibilities only add to the stress of an already high-pressure job.
- When nurses, especially new graduates, join the staff of an LTC home, they naturally have many questions about all aspects of the facility, from their own jobs to the functioning of other departments in relation to their jobs. To help new staff find their feet, LTC homes have orientation programs, and many have a "buddy" system as well. But when that orientation and buddy period ends, the new nurse may feel responsible for knowing "everything" and be reluctant to ask more questions. Long-term staff may also have questions about, for example, procedures in other departments, but not be sure whom to ask. These sorts of situations can impair everything from interpersonal staff relations to resident care and are certainly detrimental to a person's comfort in her or his job.
- There are more nurses seeking full-time positions in LTC homes than there are full-time positions available. On the other hand, the homes have part-time positions going begging. So nurses who need full-time work cobble together a full-time income by taking two (or more) part-time jobs at two (or more) homes. But when they have a chance at a full-time job elsewhere, they are gone – and the homes where they were working are faced yet again with part-time vacancies.

These factors are among the barriers to recruitment and retention of nurses in LTC because they contribute to burnout, stress leaves and high turnover. They also result, at times, in nurses leaving the profession altogether. Accordingly, these particular barriers were chosen as the focus of this project. The project was divided into the following phases: research, design, delivery, implementation, evaluation, modification and dissemination.

Research

In order to determine whether their experiences and anecdotal evidence were borne out by academic research, the steering committee (comprising a representative from each of the nine partners) directed that a literature review be undertaken. This review also pointed in the direction of strategies, programs and tools that would assist in addressing the identified barriers to recruitment and retention. The resulting report on the research and literature review (Gilmer and English 2008) confirmed that the academic research does indeed support the anecdotal evidence.

Lessons Learned

- Many nurses are willing – even eager – to step into leadership if they are given (a) the tools and concomitant training, and (b) the active support and encouragement of their managers.
- Because nurses constitute the second largest cohort in long-term care homes (after PSWs), providing them with the tools and concomitant training to step into leadership can make a significant difference throughout the facility, providing they receive the active support and encouragement of their managers.
- Nurses by themselves cannot improve the culture of their work environment, regardless of the training they receive or the depth of their own commitment. Lasting cultural and behavioural change entails consistent commitment, leadership and guidance from all senior management.

While this was being done, the project consultants held two sets of focus groups with nurses and their managers from the partners' homes and from a few non-partner homes. The first set was designed to determine what nurses and managers felt the issues were regarding recruitment and retention of nurses in LTC. On these occasions, nurses and managers met separately. For the second set, held six weeks later, nurses and managers were brought together to discuss possible solutions to the issues they had previously identified. Once these two steps were complete, a Researchers' Symposium[1] was held, at which nine academic researchers in the field of nursing shared the results of their work with the consultants. It was gratifying that the academics once again corroborated the day-to-day experience of LTC nurses and their managers in all areas.

Project Areas

Based on this combination of research and experience, the steering committee chose the following three initiatives for development and testing:

1. Leadership training

The Excelling as a Nurse Leader in Long Term Care program provides nurses with experiential training in the leadership knowledge and skills they need to be nurse leaders specifically in long-term care settings.

2. Mentor Team
A permanent, facility-wide team of trained mentors is available to answer questions about their departments from all staff, both new and longer-term. Once the program is up and running, the team becomes self-directed.

3. Two Jobs in One
A management–union agreement melds two part-time nursing positions at two homes into one full-time position (with guaranteed hours and benefits).

The rest of this article will deal in depth with only the first two of these programs, as the third does not address nursing leadership directly. (Free resource guides that describe each of the three programs in detail are available on the OANHSS website: www.oanhss.org. Click on Education & Resources, then on OANHSS Publications/Resources, then on Free Resources.)

B. Leadership Training

Objectives

The overall objective of the Excelling as a Nurse Leader in Long Term Care training program is to enhance and develop nurses' leadership skills in verbal communication, human relations, abstraction, reflection, question-framing and time management. Thus the program helps them develop the insights and skills that enable them to maximize their "use of self" in their encounters with their colleagues. The learning objectives include:

- Understanding how the LTC homes' mission, vision and values guide the role of a nurse leader
- Recognizing the need to respond to different situations with different leadership approaches
- Understanding and demonstrating when and how to use different leadership approaches
- Empowering others by encouraging them to self-discover core issues through effective probing skills
- Using professional and procedural knowledge to guide ethical decision-making
- Enhancing staff relationships through collaborative problem-solving
- Developing effective and assertive interpersonal skills
- Learning how to confront and manage interpersonal conflicts

Methodology and Content

The program has been designed expressly to address the day-to-day challenges LTC nurses face and to reflect the uniqueness of the long-term care setting, which is home for the residents and in which families and others of importance to the residents play an integral role. In addition, nurses in this setting work primarily

with unregulated caregivers who make up over 80% of the staff providing direct resident care.

The program provides participants with a supportive environment in which to build on their existing strengths, to experiment with different leadership styles, and to acquire and practise new skills. The principles of adult learning are incorporated into the teaching strategies and approaches. They include presentation of material by the instructors, small-group and large-group discussions and exercises, spontaneous large-group discussions, and practicums to be undertaken by participants between sessions as well as post-program.

The test was conducted in the autumn of 2008. Eighty nurses from 20 homes – 37 RNs (including one Assistant Director of Care and one unit manager) and 43 RPNs – attended three full days of training. Training days were held three weeks apart to give participants time to practise and integrate the material and to complete the practicums assigned at the end of each day. The first two practicums were to be submitted at the subsequent class; the third was to be worked on for two months post-course and reviewed with the nurse's manager. Submission of all three practicums to the instructors was required for the participant to receive a certificate of completion.

OANHSS had been hearing from its members for some time about the difficulty of recruiting and retaining nursing staff, resulting in problems in maintaining full staff complements.

Before the course, both participants and their managers completed an online assessment to provide baseline data about the nurses' leadership skills and styles. After the course, participants and managers completed the same assessments again so that change as a result of the course could be measured. (The striking results are presented in Figure 1.) The course was also preceded by a Managers' Education Day so that those to whom the nurses reported would have an understanding of what their staff were being taught and what changes in leadership style were being sought. Managers were also advised on how to support their nurses in using their new skills and how to provide assistance with their practicum work. The overarching themes of team-building, time management and conflict resolution were woven throughout the curriculum, which focused on the following leadership skills: human relations, communication, perception, effective questioning, reflection and abstraction. The program was structured to achieve the learning objectives (Table 1).

Table 1. Learning objectives of the Excelling as a Nurse Leader in Long Term Care' training program

Day One	1. Understand how the home's mission, vision and values guide the role of a nurse leader. 2. Realize the impact of motivation and empowerment on nurse leader/ staff relationships. 3. Recognize the need to respond to different situations with different leadership approaches. 4. Demonstrate effective relationship-building strategies.
Day Two	1. Understand and demonstrate when and how to use different leadership approaches/styles. 2. Empower others by encouraging them to self-discover core issues through effective probing skills. 3. Use professional and procedural knowledge to guide ethical decision-making.
Day Three	1. Develop effective and assertive interpersonal skills. 2. Enhance staff relationships through collaborative problem-solving. 3. Confront and manage interpersonal conflicts.

Evaluation Methodology

Evaluation consisted of four steps and involved both participants and their managers. At the end of each training day, each participant completed an evaluation form that included rankings of the instructors' abilities and of the accomplishment of the learning objectives; the form also offered the opportunity for personal comments. This evaluation was anonymous; however, participants were offered the option of signing the form and indicating which LTC home they worked for. Written surveys of practicums were completed by both participants and managers; there were different questions for each of these two groups.

At the conclusion of the program, day-long focus groups were held. These were attended by 71% of participating nurses and 85% of managers. The two groups met both separately and together to provide their opinions on what they liked about the program, what they would modify and whether the program addressed the issues identified in the research-phase focus groups. Pre-program and post-program online assessments by both participants and managers were designed to measure change in knowledge and skills as a result of the course. While the assessments posed different questions for each of these two groups, each group was asked the same set of questions both pre-program and post-program.

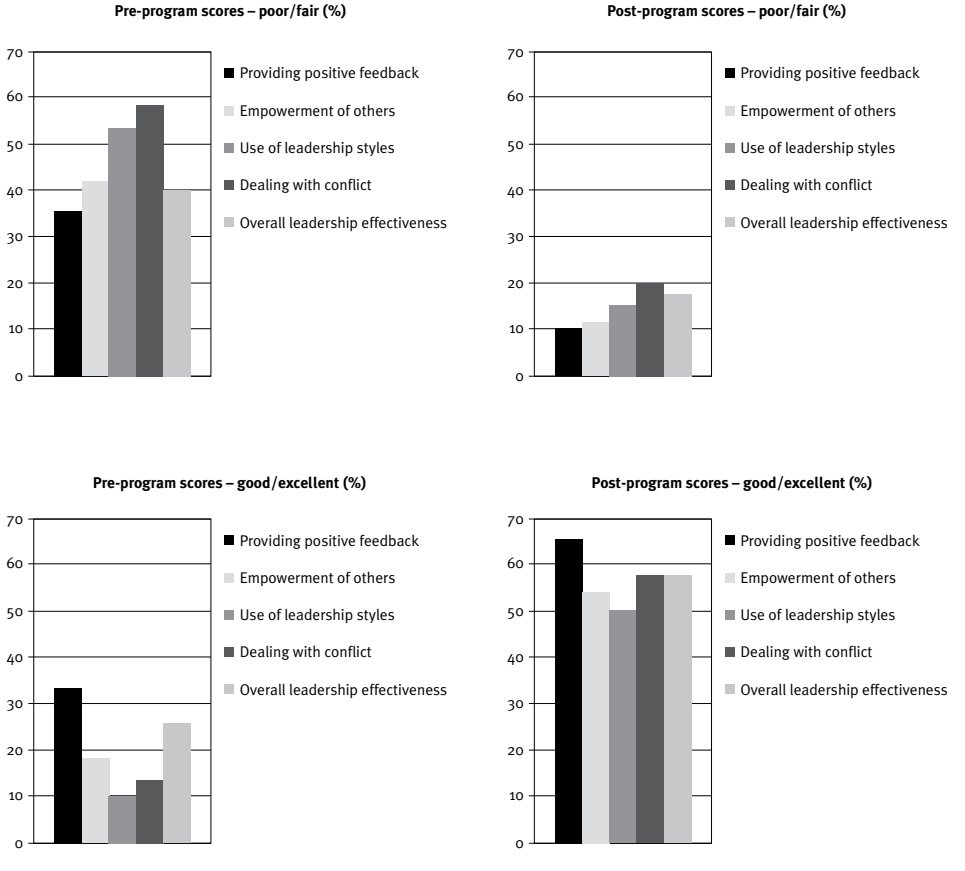
Key Evaluation Findings

Managers' assessments of behavioural changes among participants clearly indicated that real changes in the nurses' leadership skills were evident. While 46.6% of the participants had low scores before the program, only 14.8% had low scores

afterwards. Similarly, while only 20.3% of the participants had high scores before the program, 57.4% had high scores afterwards. The average participant score was 62.98% pre-program; this increased to 75.37% post-program.

These results are elaborated in the Figure 1 charts, which show the specific areas in which managers reported that they saw behavioural changes in their staff.

Figure 1. Results of managers' assessment of their participating staff



The first pair of charts shows the dramatic drop in the percentage of participants who were scored as "poor" or "fair" before taking the course versus afterwards. The second pair shows the equally dramatic rise in those who were scored as "good" or "excellent." It is significant that these were not self-assessments, but were done by participants' managers.

Additional Findings

While the RN group scored better than the RPN group on a question-by-question and overall-assessment basis, the variance in averages and the overall participant success in correct responses suggest that the program was effective in serving the training needs of both groups. Only one of the five RPN low-average scores was more than 8.3% lower than the RN group. Similarly, the RPN group average for the overall correct responses was 72.75%, while the RN group scored 79.99%. In addition, there were no discernable differences in knowledge improvement or implementation success between participants from urban and rural settings.

Participants reported clear outcome benefits – for example, using the skills learned and knowledge acquired, and engaging in self-reflection both during and after various kinds of interactions. They found the new knowledge and skills very appropriate and relevant to their work.

It was clear that managers' understanding of the program and their ongoing support of participants during the program and afterwards were crucial to fostering change in the participants' behaviour and practices at work. It was also evident that the more participants who attended per home, the more positive the response was among participants and the more positive their interactions at work were with their colleagues who did not attend. Overall, participants emerged from the program with a renewed sense of commitment to their changing role as nurse leaders in long-term care.

Feedback from Directors of Care

One of the clearest indications that this program makes a significant difference on the floor is the change that Directors of Care (DOCs) see in both their staff and their own workload. The assistant DOC at a 140-bed home in downtown Toronto said,

> Half a dozen of our nurses took the program. I can see that they have more confidence now in working issues through. They're using their new skills, especially the four leadership styles, and so they're meeting each colleague's needs in a way that's appropriate for that person. There's greater peace on the floor because the nurses are able to solve problems as they arise, rather than putting off finding a solution, which only allows things to fester. Now they're thinking things through for themselves on the spot. As a result, I'm not getting as many calls for minor things as I used to, which makes my own job less stressful. So from my perspective, this program is well worth the time and the cost, which are both minimal – especially compared to the benefits.

The newly appointed DOC at a 96-bed facility in a rural community in southern Ontario reported,

> We were fortunate to be able to send three RNs and six RPNs to the program. At the time, I was MDS-RAI coordinator here and was one of the RNs who attended. I've only been DOC here for a few months, but even before being promoted to this position, I was able to be more assertive and more effective in communicating. So what I learned in the course has helped me in my new position. I'm also seeing that what our nursing staff are doing now, in terms of communication, is more effective than what they were doing before. There's more credence being given now to what they're saying. The RNs and RPNs are more listened to and respected. As a result, the Personal Support Workers (PSWs) are following directions better because the message, which hasn't changed, is being given more effectively.

Next Steps

These outstanding results, and the enthusiasm of participants and managers alike for the Excelling as a Nurse Leader in Long Term Care program, encouraged OANHSS to enter into a contract with Silver Meridian (the Ontario company that had designed and delivered the training during the test) to deliver the program. During the autumn of 2009, it was presented at three sites in southern Ontario: Cambridge, Kingston and Toronto. In the spring of 2010, it is being presented at four sites: Cornwall, Ottawa, Sarnia (Petrolia) and London (Dutton). It is anticipated that the program will continue to be offered twice a year (spring and autumn) in three or four centres each time.

In addition, the project received supplementary funding for the development of a distance-learning version of the program. This online course became available through Silver Meridian in October 2009.

C. Mentor Team

Concept

The Mentor Team program is based on a concept developed and implemented at Gilmore Lodge, a Regional Municipality of Niagara LTC home in Fort Erie, Ontario, with the involvement of regional staff. It offers unique features that extend its reach far beyond that of the usual orientation and short-term buddy programs to encompass the whole facility. Like many orientation-and-buddy programs, each new employee is paired with a trusted, knowledgeable co-worker who has been specially trained for the task. In addition, however, the Mentor Team offers all staff ongoing informal access to a well-informed group of colleagues. Thus information flows better within the organization, the work environment

becomes more collegial and the commitment of all employees to the organization is strengthened.

In this model, the Mentor Team is facility-wide, interdepartmental, multidisciplinary and permanent. Members volunteer their participation because they are committed to promoting a positive and healthy work environment. Team membership per department is in proportion to the size of each department. Thus larger cohorts, such as nursing and personal support workers (PSWs) are likely to have more representatives on the Mentor Team, whereas smaller departments may have only one or two representatives. Staff selected for the team are trained to provide help to anyone in the facility who comes to them with a question. Once the program is up and running, the mentors evolve into a self-directed team working with the guidance of management.

The uniqueness of the Mentor Team program was recognized at Health Innovations Expo, part of the OHA's HealthAchieve Conference in November 2009. One of the teams created through the test of the Mentor Team program in the fall of 2008 won the People's Choice Award, which included a substantial cash prize. Unlike the other Health Care 2009 Innovation Awards, which were chosen from within each category, the People's Choice Award is selected by conference attendees from all finalists in all categories.

> Relationships between staff and residents can last much longer in LTC than in other areas of healthcare – sometimes decades, rather than days or weeks – and these extended relationships form an important part of residents' quality of life and quality of care.

Implementing the Mentor Team Program

The project consultants provided managers with a checklist (based on the Gilmore Lodge experience) to use in introducing the program. It included developing a communications plan, determining the criteria for and process of selecting mentors, educating supporting managers, connecting the program to staff orientation, selecting the mentors, providing mentor training, setting up regular team meetings and ensuring official recognition of mentors' contributions.

Once the mentors were selected, an external trainer provided them with half a day of training, which incorporated the principles of adult learning described above. Content included the goals, objectives and underlying assumptions of the program, the criteria for selecting mentors (both prescriptive and descriptive) and the role of mentors, staff and managers in the context of the program. Following these discussions, mentors practised role-playing as mentors and staff members

in order to give them a taste of the mentor experience. Following a discussion of conflict resolution in a mentor–staff situation, participants undertook additional role-plays to give them practice in potentially difficult situations. The methods for evaluating the program were then described. The training concluded with a discussion of future plans for the team, including regular meetings and quarterly training related to being an effective mentor.

Evaluation Methodology

During the test, written surveys were completed by mentors and staff, with different questions for each group. After the test, written surveys were completed by mentors, staff and supporting managers (again, with different questions for each group). After reviewing the surveys, the consultants met with each Mentor Team and subsequently interviewed the supporting managers.

Key Evaluation Findings

Both mentors and staff rated the Mentor Team program as "excellent" or "good." Both groups felt that the impact it had made on their job satisfaction and their ability to cope with work was "very positive" or "somewhat positive." The training was very well received. However, over half of the mentors felt that they needed more training in dealing with "challenging" situations, that is, communication and conflict. (This aspect of the training has since been strengthened.) It was noted that it is important to have one person responsible for spearheading the organization of the program and that each home must modify the design and implementation of the program to suit its own culture and circumstances. All three LTC homes at which the Mentor Team program was tested chose to continue the program and build on the foundation laid during the test.

Benefits

When people join a new organization, they come with a positive and committed attitude. Their experiences in the first three to six months of employment are crucial. If these experiences are generally positive, they will demonstrate superior performance in their jobs and develop a long-term commitment to the facility. On the other hand, if an employer does no more than introduce new employees to their co-workers and provide them with a short orientation period, the risk is high that the employee will feel unsupported, lost and anxious. These are all conditions that lead to loss of commitment and eventually to attrition. On the other side of the coin, people who have been with an organization for a few years – or, indeed, many years – can get used to relying on informal communication channels that may not always have the most up-to-date or reliable information. Because of shift work, some staff may go for long periods without being at work at the same time as managers, who are most often the ones designated to respond to staff inqui-

ries. Thus, simple questions can fester, leading to frustration and misinformation. All staff benefit from having a trusted, trained team of colleagues to turn to when they have questions.

The Mentor Team ensures that new employees learn how the particular LTC home functions according to its policies and procedures, as well as the highest intentions of its mission, vision and values. It enables new employees to feel at home and develop good relationships in their new jobs and work environment more quickly. (For example, all members of the Mentor Team know who the newest employees are and can introduce them to others.) As a result, the stress of starting a new job is reduced and everyone's comfort level is enhanced. In addition, a well-informed and well-trained Mentor Team provides a valuable, reliable resource for all staff members, regardless of their length of service. Thus, through its interdisciplinary, interprofessional nature and structure, the Mentor Team helps to knit all the departments of the home into a cohesive whole.

Connection to Leadership

In long-term care, nurses make up the second-largest cohort in the home; their numbers are exceeded only by PSWs. The Mentor Team program develops leadership among the nurses by providing those who are showing leadership informally with a more formal, recognized opportunity to do so. As the administrator of a 241-bed home in a medium-sized city noted, "Inviting certain staff members to join the Mentor Team gave us a way to foster the leadership skills that we were already seeing in these individuals." In addition, the leadership abilities of all mentors are encouraged and strengthened as the team becomes more self-directed and undertakes more training.

Next Steps

The Mentor Team program is available to anyone with access to the Internet (via the OANHSS website, as noted above). The free resource guide is designed to provide managers of LTC homes and other healthcare facilities with all the information and tools they need to create an effective, enthusiastic Mentor Team. Consultants are also available to assist with the process, for those who so wish.

D. Conclusion

The impacts of both the Excelling as a Nurse Leader in Long Term Care training program and the Mentor Team program on the recruitment and retention of nurses at participating LTC homes are not yet known. It takes time for any new program to have a measurable impact on the degree to

which a particular work environment is a healthy one that encourages current staff to stay and new staff to join. As with any organization, turnover in LTC homes depends on a broad range of factors, many of them related either to individual circumstances or to fluctuations in capacity within the job market. Therefore it will be another year or two before the participating LTC homes can review the relevant statistics and evaluate what impact these two programs have had on their success in recruitment and retention.

That said, these two programs, as developed and refined through this project, have already been shown to be effective – over the short term, at least – in improving the work environment of nurses at the participating homes. While further evaluation is necessary to determine their long-range effectiveness, it is anticipated that the improvements already noted will lead to increased commitment on the part of staff, resulting in measurable improvements in recruitment and retention.

Acknowledgements

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Additional Homes Participating in Leadership Training
Bobier Villa, Dutton
Deer Park Villa, Grimsby
Elgin Manor, St. Thomas
Gilmore Lodge, Fort Erie
Greenwood Court, Stratford
Heidehof, St. Catharines
Linhaven, St. Catharines
Meadows of Dorchester, Niagara Falls
Newmarket Health Centre, York Region
St. Joseph's Villa, Dundas
Spruce Lodge, Stratford
Upper Canada Lodge, Niagara-on-the-Lake
Woodlands of Sunset, Welland

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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 Ahtuskaywin (WHA) and James Bay General Hospital (JBGH), the project proactively addressed retention, recruitment, professional practice development, HHR and succession planning.

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.

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-

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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Growing Practice Specialists in Mental Health: Addressing Stigma and Recruitment with a Nursing Residency Program

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Abstract

Despite the growing prevalence and healthcare needs of people living with mental illness, the stigma associated with mental health nursing continues to present challenges to recruiting new nurses to this sector. As a key recruitment strategy, five mental health hospitals and three educational institutions collaborated to develop and pilot an innovative nursing residency program. The purpose of the Mental Health Nursing Residency Program was to dispel myths associated with practising in the sector by promoting mental health as a vibrant speciality and offering a unique opportunity to gain specialized competencies. The program curriculum combines protected clinical time, collaborative learning and mentored clinical practice. Evaluation results show significant benefits to clinical practice and an improved ability to recruit and retain nurses. Nursing leadership was crucial at multiple levels for success. In this paper, we describe our journey in designing and implementing a nursing residency program for other nurse leaders interested in providing a similar program to build on our experience.

Background

To meet the increased demand for mental health services that are integrated and recovery oriented, an effective healthcare professional workforce is required (The Standing Senate Committee on Social Affairs, Science and Technology 2006). The psychiatric and mental health nurse is a healthcare professional who is an essential part of this workforce. Psychiatric and mental health nursing is a specialized field that requires unique competencies to provide care for those living with mental health issues. It is one of the most complex and demanding areas of nursing practice. Establishing therapeutic relationships with persons living with mental illness and their families requires psychiatric and mental health nurses to enact specialized assessment and communication competencies to address this vulnerable population's mental health, cognitive and behavioural issues.

Despite the demand, significant challenges exist in recruiting and retaining a skilled and sustainable supply of psychiatric and mental health nurses in Ontario and beyond. The shortage of nurses in mental health is evident in national and provincial data indicating that only 5.3% (12,976) of Canadian nurses reported their primary area of responsibility as psychiatry/mental (Canadian Institute of Health Information 2007). Moreover, in 2007 the addictions and mental health sector had the third highest vacancy rate for nursing (7.75%) after the community sector (8.74%) and complex continuing care and rehabilitation sectors (8.24%) (Ontario Hospital Association 2007). In the last decade, there have been concerted efforts to recruit and retain nurses through initiatives such as the Nursing

Graduate Guarantee program funded by the Ontario Ministry of Health and Long-Term Care (MOHLTC). However, this initiative is not being fully utilized by the mental health sector, as new graduates are not applying to work at tertiary mental health facilities upon graduation.

A key challenge to recruiting and retaining nurses in the mental health sector is attributed to the stigma associated with society's view of mental illness. "Courtesy stigma," or stigma by association (Goffman 1963), affects everything and everyone surrounding persons living with mental illness (Falk 2001; Smith 2002). Courtesy stigma results in family members of persons living with mental illness experiencing fear, loss, lowered self-esteem, shame, secrecy, distrust, anger, inability to cope, hopelessness and helplessness (Gullekson 1992).

Lessons Learned

- Enhancing nursing practice requires nurse leadership at all levels of the organization. A common vision and unwavering commitment to residency program success are essential.
- Residency program curricula should strike a balance between knowledge and application. Mentors are critical for support the application of knowledge into practice.
- Developing and operating a residency program requires a substantial investment of time and resources, but the results make it worthwhile. Positive, tangible impacts are possible.

Mental health professionals are also negatively affected by courtesy stigma and are often viewed as being mentally abnormal, corrupt or evil (Kendell 2004). Psychiatric treatments are often viewed with suspicion and overly scrutinized (Sartorius 2004). Psychiatric and mental health nursing is viewed as a less desirable career choice in comparison with other sectors, due to misconceptions about the nature of the skills required to practice in the sector and the lack of appreciation for career opportunities. Challenges to recruiting into other specialty nursing areas (e.g., long-term care) have also resulted from perceived stereotypes and myths related to both the population (elderly residents) and the type of competencies required to provide nursing care (Dumas et al. 2009).

While there is a dearth of empirical research on stigma within the psychiatric and mental health nursing profession, it is widely acknowledged across this and other nursing sectors that mental health is not seen as a specialty with a complex knowledge and skill base. In conversations with several nursing students over the years, the authors of this article have heard that many view this area as one where the requisite nursing knowledge and skills are "soft," with little opportunity for future professional growth. Too often there is a lack of expert mental health faculty to champion the care needs of those who suffer with a mental illness and demonstrate the complex interpersonal capacity essential to caring for this population.

It is no surprise that students interested in mental health report being advised to consider medical–surgical specialties as an initial career choice to consolidate their nursing skills prior to considering the mental health sector as an option. However, supporting patients to return to a state of mental health and well-being is profoundly valuable and just as satisfying as caring for those with a physical illness.

Among practising nurses, a frequently heard sentiment is that mental health should be left to the end of a nurse's career after one has gained specialized skills and rewarding experiences in other sectors. Mid-career nurses are reluctant to transfer to psychiatric and mental health nursing as they fear losing their existing competencies. In reality, working in psychiatric and mental health nursing requires multiple competencies, given the rate of concurrent disorders as well as complex issues such as workplace violence (Happell and Gough 2007; Valente and Wright 2007). It is critical for the current psychiatric and mental health nursing workforce to have the opportunity to enhance their knowledge and skills to current best practices.

Recognizing the stigma associated with mental health nursing practice and the need to develop specialized psychiatric and mental health nursing competencies, a residency program was designed and piloted. The Mental Health Nursing Residency Program brought together five tertiary psychiatric hospitals and three educational institutions. The mental health facilities involved were the Centre for Addiction and Mental Health; the Mental Health Centre Penetanguishene; Ontario Shores Centre for Mental Health Sciences; Providence Care Mental Health Services, Kingston; and the Royal Ottawa Health Care Group. The academic partners were Algonquin College, the University of Ontario Institute of Technology and the University of Ottawa. Funding for the program was provided by the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care, as part of Ontario's Comprehensive Nursing Strategy. The purpose of this paper is to describe the journey taken in creating and piloting an innovative Mental Health Nursing Residency Program. We discuss the successes and challenges we encountered during this journey, the positive impacts that were made and what the road ahead offers.

The Mental Health Nursing Residency Program

A 12-week mental health residency program was designed and piloted from January to November 2008. The goals of the residency program were twofold: (1) support nurses new to the mental health sector by providing them with an opportunity to develop the competencies required to provide exceptional patient care, and (2) dispel myths and highlight opportunities associated with mental health as a career choice, thereby helping to address the stigma associated with working in the mental health sector. Although targeted to the new nurse graduate, the residency program also supported nurses new to the mental health system,

while providing an opportunity for professional development and career enhancement for experienced nurses working in the sector.

Program Planning

The planning and design of the residency program took place from January to August 2008 and involved several activities, including developing a shared vision, goals and objectives for the program; identifying key activities and associated timelines; establishing a project structure; and defining the terms of the collaboration using a memorandum of understanding. The structure of the collaboration consisted of a steering committee composed of the chief nurse executive of each of the five hospitals and key representatives from the academic partners, as well as five teams, each focusing on a specific area of the program – marketing/recruitment, curriculum development, residency implementation, evaluation and knowledge transfer.

Marketing/Recruitment

The marketing team was responsible for developing a strategy to raise the profile of mental health nursing in order to recruit new nurse graduates to the participating mental health organizations. Each organization set a goal of recruiting five nurse graduates. Senior students as well as faculty who would potentially be advising students in their career selection were targeted. The marketing strategy was multi-faceted and included:

- Developing a homepage (www.beamentalhealthnurse.ca) that described the benefits of joining the mental health sector and provided information on how to apply to the residency program;
- Posting job descriptions on each facility's website;
- Profiling the position at the MOHLTC HealthForceOntario Nursing Graduate Guarantee portal;
- Distributing posters and bookmarks at universities and colleges;
- Liaising with the deans of nursing and other academia at Ontario educational institutions; and
- Marketing by word of mouth.

Each organization was responsible for interviewing and selecting their nursing residents.

Curriculum

The curriculum team developed the educational material and delivery approach for the residency program. Curriculum development involved an extensive literature review, including best practices in psychiatric and mental health nursing and education and learning models to support knowledge transfer. The curriculum was

based on Canadian and international core mental health nursing standards, competencies, knowledge and skills. It was circulated to a panel of eight key informants who were known as mental health practice leaders in Canada. With feedback from this group, and with content from the Canadian Standards of Psychiatric and Mental Health Nursing Framework (Canadian Federation of Mental Health Nurses 2006), the curriculum was refined. Educational materials were developed utilizing the knowledge, practices and experiences of the project partners. The program was 12 weeks in length, or 450 hours. Of these, 40 hours consisted of core centralized education provided by subject matter experts to all partner organizations at the same time through videoconference; 90 consisted of decentralized learning, provided separately at each partner organization; 218 (approximately 50%) consisted of direct clinical practice; and the remaining 102 focused on mentor/resident collaboration, online learning activities and journalling.

Implementation

The implementation team was charged with implementing activities to prepare the residents, mentors and their host organizations for the residency program, as well as providing oversight for the duration of the program. A joint orientation session was held for the mentors from all of the organizations. A program "kick-off day" introduced the residents to the program and to each other, and site-specific orientations were provided thereafter. Each week, residents completed readings, met over videoconference for centralized education and discussion and completed clinical activities and journalling. Program implementation was managed at each site by a site coordinator. The implementation team stayed connected by email and teleconferences to discuss and resolve issues. At the conclusion of the residency program, the implementation team held a "graduation day" to showcase the accomplishments of the residents and to acknowledge the mentors' contribution.

Evaluation

The evaluation team developed an evaluation framework that included the key questions, methodology and tools that would be used to gather, analyze and report findings. To ensure a comprehensive and objective evaluation, an external third-party was engaged. The evaluation framework consisted of five questions: (1) Of the mental health nursing core competencies, which competencies are critical to teach new graduates? (2) What should the format for developing these competencies be? (3) What is the effect of the residency program on the competencies of new graduates? (4) What is the effect of the residency program on the ability of the mental health sector to attract and retain new graduates? and (5) What are the lessons learned by the demonstration project team about the development and implementation of a residency program for new graduates? The evaluation methodology included the following components: a pre–post survey, interviews and

focus groups with residency participants and a formative evaluation involving all program sites. Table 1 provides an overview of the evaluation components.

Table 1. Mental health nursing residency program evaluation methodology

Evaluation component	Description
Residents pre–post survey	Program expectations, Clinical Confidence Scale (Bell et al. 1998) and Mental Health Recovery Attitudes (RAQ-16) HCRI-RT (Steffen et al. 1999)
Project mid-term focus group	All-site videoconference with residents, mentors and site leads
Resident focus groups post-residency	Focus groups with the residents
Site interviews post-residency	In-person visits to each project site to interview the chief nurses, site coordinators and mentors

Knowledge Transfer (KT) and Sustainability

The KT team's overall objectives were to develop a sustainability strategy and develop and disseminate the "deliverables" associated with this initiative. These included a toolkit, a nursing leadership conference/symposium, presentations and publications, and transforming the program into a format that would be widely accessible. In addition, the team was responsible for making recommendations for sustaining the initiative within and external to the participating organizations.

Results and Discussion

Twenty nurses participated in the Mental Health Nursing Residency Program; 60% (12) were new graduates and 40% (8) were mid- and late-career nurses. This group represents 76% of the goal for number of residents. The nursing residents' demographics are provided in Table 2.

Sixteen of the residents (80%) and 18 mentors (90%) participated in the focus groups; 48 people participated in the mid-term formative evaluation. Post-residency interviews were completed with all five site leads.

As further described below, the impact of the Mental Health Nursing Residency Program included an improved ability to attract new nurse graduates to the mental health sector, enhanced nursing competencies of new and mid-career nurses and improved nurse retention.

Table 2. Mental health nursing residency program resident demographics

Characteristics	Percentage (*N* = 20)
Age	
21–30 years 30–50 years 51+ years	60% (12) 30% (6) 10% (2)
Gender	
Female Male	80% (16) 20% (4)
Education	
Diploma Undergraduate Other/not reported	20% (4) 70% (14) 10% (2)

Residency Program Content

Overall, 89% of the 20 residents who participated in the post-residency survey stated that the program met all or many of their expectations. Qualitative data from residents and mentors validated the need for a post-graduate program to support psychiatric and mental health nurses with clinical practice. The data suggest that there is benefit to basing the program on the conceptual model of recovery: the belief that the patient is ever-changing, desiring to move toward health, and that recovery is about the patient's efforts to change. Other specific models of mental healthcare, such as the "tidal model" (Barker and Buchanan-Barker 2005) and "solution-focused nursing" (McAllister 2007), were helpful as examples to support this philosophy. All seven standards of the *Canadian Standards for Psychiatric Mental Health Nursing* (CFMHN 2006) were critical to include in the program. Residents felt that the program should focus less on readings and theory and more on practical knowledge and activities. Content for further emphasis included an overview of major mental illnesses, therapies/medications, and tools and strategies for mental health status assessment.

Residency Program Format

Overall, residents, mentors and demonstration project partners felt that the format of the demonstration project was appropriate. Residents stated that at least a 50% allocation of the program to direct clinical practice was critical.

Time spent with mentors was also cited as valuable for understanding and applying the information learned during the program. Instead of having time allocated to clinical practice each day, residents preferred blocked clinical time that was uninterrupted by other learning activities. Residents found that the learning and interaction with other residents at other sites through video-conferencing was innovative and effective when there was active discussion.

Impact on Nursing Competency

The evaluation indicates that the residency program supports nurses in developing the competencies, knowledge and skills required to adapt to the changing specialty of recovery-based, consumer-focused mental healthcare. Quantitative data from administration of the Mental Health Nursing Clinical Confidence Scale (Bell et al. 1998) showed an improvement in all 20 items, and 75% of these improvements were statistically significant. Similarly, there were improvements in 12 of the 16 items, or 75%, of the Recovery Attitudes Questionnaire (RAQ-16) HCRI-RT (Steffen et al. 1999). Residents stated that they gained a substantial level of confidence in their abilities to provide patient-focused care, including in empathizing and communicating with patients. Knowledge about diagnoses and the effects of medication were enhanced, as were psychosocial assessment and care planning.

Impact on Other Nurses and Health Professionals

Nursing competence and capacity have also been developed in the nurse mentors who participated in the program, as they had the opportunity to update their own skills while supporting their residents. The residency program positively influenced other nurses and healthcare professionals in the practice setting as well, as many were intrigued and had questions about the program, the role of the residents and the curriculum.

Dispelling the Myths: Impact on Recruitment and Retention

While the residency program and marketing approaches previously described were effective at generating interest, the participating organizations still faced serious challenges in recruiting new nurse graduates due to the myths and stigma associating with psychiatric and mental health nursing. Of the 20 residents, only 12 (60%) were new graduates, and the remainder were mid- and late-career nurses new to mental health. Nevertheless, the majority of participants stated that the program provided them an invaluable opportunity for fine-tuning their skills and validated their interest in practising in the field. Despite the recruitment challenges, the residency program dispelled myths and highlighted opportunities associated with

mental health as a career choice. This is evident in the following results: 75% of residents surveyed after the program said that they were highly interested, and 22% were interested, in mental health nursing as a career after having participated. All residents indicated that they would recommend practising in the mental health sector as a career choice to other nurses.

Spreading the Innovation and Sustainability

Much has been gained from this initiative through several organizations collaborating to address the stigma against nursing in mental health. The knowledge gained by the participating organizations has been made available through several external knowledge transfer activities. These include presentations at ministry-led forums, nursing conferences and meetings with nurse leaders and educators at other tertiary mental health and acute care facilities. In addition, a toolkit that provides step-by-step guidelines, tips and techniques to any organization interested in developing a nursing residency program was developed. The toolkit, *Growing Practice Specialists: Developing and Operating Your Own Nursing Residency Program: A Toolkit for Health Care Organizations*, is in keeping with the foundational message of "growing" and reflects the developmental nature of the residency.

Since the initial cohort of residents completed the program, the residency curriculum and format have been refined to reflect the evaluation results. The program has been made available online at www.mhnursingresidency.com in a modular "pick-and-choose" format, making it easily accessed by mental health nurses at any time and in any setting. The toolkit, which is applicable to any health sector, is also available for download from the site.

All collaborating organizations remain committed to the transferability and sustainability of the outcomes. Each organization has developed its own sustainability strategy to ensure that the knowledge residents gained during the program is maintained and spread to other staff. A key sustainability strategy that many of the organizations adopted was the operation of ongoing site-specific residency programs. These are being offered not only to new nurse graduates, but also to nurses new to the mental health sector and to late-career nurses. Previous program participants have been particularly effective as mentors to new residents and current staff. Ongoing communication to obtain buy-in from senior management, nurse managers and other professions has also been instrumental in sustaining knowledge. Partners continue to identify new opportunities to work together to further advance psychiatric and mental health nursing.

Conclusion and Future Directions

The Mental Health Nursing Residency Program has enhanced nursing competence, highlighted the need for greater mental health nursing capacity in Ontario and dispelled myths associated with this speciality. The ongoing implementation of the Mental Health Nursing Residency Program in the pilot sites for both new and mid-career nurses, as well as in other mental health facilities, will continue to contribute to the ability of the sector and Ontario to attract and retain nurses in the mental health field. The participating organizations have experienced a substantial increase in new graduate applicants, and these individuals all cite the residency program as something that drew them to the organization.

Given the nature of the demonstration project funding source, the mental health nursing residency program focused primarily on addressing health human resource needs, including recruitment, retention and competency development. As such, these aspects were the primary evaluation dimensions. In offering and evaluating future residency programs, it would be vital to assess their impact on patient care. In addition, examining in detail the extent to which and how such mental health residency programs contribute to addressing stigma within the profession would offer invaluable lessons.

The Mental Health Nursing Residency Program was a successful pilot project made possible with the support of government funding. However, as with other educational interventions, building a sustainable approach to capacity development across the entire mental health sector remains crucial. The residency program was founded on adult learning principles that emphasize experiential knowledge gained through the application of knowledge in practice. Advocating for more content in undergraduate programs would also contribute to strengthening mental health nursing capacity.

As many clients with mental health disorders are in acute, long-term and community care, there is great potential for extending the residency program through existing or alternate approaches to these areas. Additional linkages and partnerships with nurse leaders in other mental health organizations and healthcare sectors are required to build on the residency program, exchange knowledge and continue advancing the nursing profession as a whole.

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Developing an Orientation Toolkit for New Public Health Nurse Hires for Ontario's Changing Landscape of Public Health Practice

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Abstract

In 2008/2009, the *Orientation: Transition to Public Health Nursing Toolkit* was developed to enhance the integration of new hires into public health nursing practice in Ontario and to increase retention of these hires. The changing landscape of public health in Canada, such as the introduction of new standards and competencies, presents challenges to leaders orienting staff to public health nursing. The toolkit was designed to provide a standardized general orientation, involving a broad range of public health knowledge and issues. Through the use of technology, a virtual network of public health nurses, educators, managers, senior nurse leaders and nursing professors from various areas of Ontario designed, implemented and evaluated the toolkit. Three modules were developed: foundations of practice (e.g., core competencies, national and provincial standards, public health legislation), the role of the public health nurse, and developing partnerships and relationships.

Evaluations demonstrated that the toolkit was useful to new hires adjusting to public health nursing. It has had significant uptake within Canada and is well accepted by public health nursing leaders for use in Ontario's health units.

Introduction

The relationship between job satisfaction and retention of public health nurses (PHNs) has been explored in two Canadian studies (Armstrong-Stassen and Cameron 2005; Best and Thurston 2006). Work environments that provide access to information, resources, support and the opportunity to learn create more satisfied employees (Kanter, as cited in Haugh and Spence Laschinger 2007). Job dissatisfaction is related to job stress and intent to leave a job (Armstrong and Cameron; Kluska et al. 2004). Few new hires make a smooth transition to fully functional new graduates without significant orientation requirements (Regan et al. 2009). Preparing new hires not only for their current job but also for other positions within their workplace assists in retention (Saxe-Braithwaite et al. 2009). Articles pertaining to orientation of public health nurses in Canada were not identified in the literature scan for the project. However, policy makers and manager groups have noted in a pan-Canadian consultation about public health nursing services the need for strong orientation programs for new staff and for organizations to invest in orientation to strengthen public health nursing (Meagher-Stewart et al. 2009).

The changing landscape of public health in Canada, such as the introduction of new standards and competencies, presents challenges to leaders orienting staff to public health nursing. The toolkit was designed to provide a standardized general orientation, involving a broad range of public health knowledge and issues.

In 2009, the *Orientation: Transition to Public Health Nursing Toolkit* (Algoma Public Health 2008) was developed to increase retention of new hires in Ontario's 36 public health units. The toolkit was designed to provide a broad range of public health knowledge beyond each health unit's program-specific orientation and to offer elements of social support. The project was funded by the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care. Its main objectives were successful integration of new hires into practice and promotion and assessment of clinical competence. For the purpose of the project, new hires included both new graduates and experienced registered nurses from other

healthcare sectors. A virtual network of mid-to-late career PHNs, educators, managers, senior nurse leaders (SNLs) and nursing professors from various geographical areas of the province was formed. This virtual network selected and developed the orientation content by teleconference. An advisory group composed of representatives from national and provincial nursing associations and agencies guided the network's progress. This article outlines the development, implementation, evaluation, dissemination and uptake of the toolkit and suggests avenues for future development.

Project Conception and Initial Planning

At the 2007 annual general meeting of ANDSOOHA (Public Health Nursing Management in Ontario), educators, managers, supervisors and directors spoke about orienting new staff. The changing landscape of public health – for example, the introduction of the Canadian Community Health Nursing Standards (CCHN standards) (Community Health Nurses Association of Canada 2008) to the Core Competencies for Public Health: Release 1.0 (core competencies) (Public Health Agency of Canada 2006) – posed challenges for orientation to the role of PHN. New hires required information about health promotion approaches and new agencies dedicated to the promotion and protection of health and the prevention of disease. ANDSOOHA sought funding to develop a common general orientation for use in all health units across Ontario to address the current environment of public health.

Lessons Learned

- The extensive development and review process (see Figure 1) involving many PHNs, educators and managers may have influenced the uptake of this resource for new hires in Ontario.
- With sufficient support, PHNs from different geographical areas can develop a resource for improving public health practice, such as funding, technology, face-to-face meetings, in-kind contributions, a project lead and SNLs' championing of the project.
- Technological supports to assist with file sharing and version control would make it easier for teams spread across separate sites to develop content.
- An orientation package for new hires can also be beneficial for existing practitioners, providing them with a fresh look at their field of practice.

Algoma Public Health and ANDSOOHA obtained funding in January 2008 from the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care to develop, implement and evaluate the toolkit. Three nurse leaders became the administrative team: a project lead, the Algoma lead and an ANDSOOHA association lead. Partnerships were an essential part of the project. Partners included the Community Health Nurses of Canada (CHNC); Canadian Association of Schools of Nursing (CASN); Registered Nurses Association of Ontario through its Community Health Nurses Initiatives Group (CHNIG); Ottawa Public Health; the Leeds, Grenville and Lanark District Health Unit; and

Niagara Public Health. Nursing professors from St. Lawrence College and the universities of Ottawa, McMaster, York and Brock also became members of the project. Partners supported the funding proposal, shared their perspectives and advised the Algoma and ANDSOOHA administrative team.

Key informant interviews were held with nurse leaders in other provinces to collect their experiences in developing orientation packages geared to public health. A literature scan was undertaken to identify promising practices. It suggested that orientation should be based on competencies, that orientation is a stressful time for new hires and that planned orientation is key to successful integration. Two models of orientation influenced project planning. Connelly and Hoffart (1998) described a two-foci orientation: an effective element of welcoming newcomers and the assessment of clinical competency. Schoessler and Waldo's (2006) developmental process model highlighted skill acquisition, adapting to life changes and experiential learning styles as essential. These models became early influencers on the tone, format and content of the toolkit.

A survey of nurse leaders indicated that they required a product to assist them in implementing the core competencies and CCHN standards. They supported development of a standardized general orientation for PHNs in Ontario. As one leader noted, "the learning curve is longer for a PHN; this orientation will help."

A designated support person from the from the Nursing Secretariat of Ontario's Ministry of Health and Long-Term Care provided advice to the administrative team, shared other demonstration project teams' experiences and reviewed financial reports. An evaluation consultant hired by the MOHLTC established parameters for evaluation and directed evaluation processes.

Upon receiving notification of funding from the Nursing Secretariat, the administrative team distributed a letter of understanding to SNLs in health units, seeking partners at the health unit level. Commitment to evidence-based practice was an expectation. The administrative team requested that 0.15 FTE (full-time equivalent) of a PHN educator be designated for coordinating the project at the health unit level.

Five health units were selected by blind review to receive funding ($10,000 each) to become a pilot site. One health unit was not funded through the project but found internal funding to participate in the design and development stage. Other health units not among the five formally participating attended meetings and workshops and reviewed minutes.

In total, over 20 public health nursing professionals recruited from within the five funded units and the internally funded unit participated in the working group (the "developers"). They were linked by the project lead to a 10-member advisory group composed of representatives from national and provincial nursing associations, agencies and universities.

Content Development

The advisory group determined that developers would use a modular approach to presenting the orientation information. A self-learning module is a self-contained unit or package of study materials used by an individual (DeYoung 2008). This format is adaptable for migration to an electronic platform for online learning, a future plan for the toolkit. At a meeting in March 2008, developers presented their health unit's current orientation practices and ideas for improvement. Common elements included the following:

In total, over 20 public health nursing professionals recruited from within the five funded units and the internally funded unit participated in the working group (the "developers"). They were linked by the project lead to a 10-member advisory group composed of representatives from national and provincial nursing associations, agencies and universities.

- Online learning represents challenges in many health units.
- Content must appeal to learners of diverse ages and backgrounds.
- Learning should take place over an extended timeline, respecting new hires' adjustment within the organization.
- Learning should be prioritized to what is most critical for a new hire.

It was agreed that each module would include:

- A common theme and format
- An adult-learning perspective, including integration exercises such as case studies and scenarios, role playing, personal reflection and inclusion of advance organizers

- Strategies to address diverse learning styles
- Online resources available at the "click" of a mouse
- A list of references

Developers were encouraged to access their university links to understand the current curriculum and determine the gaps that needed to be filled for new hires in transition to public health nursing.

One respondent identified that having a standardized general orientation curriculum across Ontario was the real strength of this project.

Developers noted that an individual was needed at each pilot site to "drive the information from the pages of the toolkit to its application in the *real world* of nursing practice." This individual would become an interpreter of the organization and its practices, recognizing that the toolkit's information would need customization to each health unit. The title of "guide" was selected as most appropriate to the transition "journey" of each new hire.

The developers identified 21 topics relevant to new hires. From these, they prioritized the following three for module development:

- Foundations of practice (e.g., core competencies, CCHN standards, professional standards, public health legislation)
- The role of the PHN
- Developing partnerships and relationships

The budget for the project was based on teleconferences as the main vehicle for module development. However, developers preferred a combination of teleconferences and face-to-face meetings. To decrease the costs of meeting face-to-face, they decided to split along geographical lines. A western team or "hub" took responsibility for developing the foundations-of-practice module, the central hub developed the partnerships/relationships topic and an eastern hub developed the role-of-the-PHN module.

File sharing between and within hubs was problematic. Some members of the working group were unable to open large documents. This problem was particularly acute in the rural health units and satellite offices. Version control was also difficult due to the problems in accessing the documents.

The modules were developed between April and September 2008. Although content was quickly identified, developers experienced difficulty developing

integration exercises and learning activities. The objective of addressing different learning styles by providing a variety of learning activities for each topic proved challenging. Developers indicated that their educator skills were challenged by developing adjunct learning opportunities to help new hires integrate the content. Developers found capturing and cataloguing references from evidence-based articles time-consuming as they worked to meet project deadlines.

"Next steps" for new hires were highlighted in the final pages of the toolkit. The toolkit identified the Canadian Nurses Association certification program for community health nurses and the Public Health Agency of Canada's skills enhancement program for public health providers as vehicles for continuing professional development to further enhance public health nursing knowledge.

Revisions and Initial Evaluation

Developers shared module content with experienced PHNs in their own health units. Developers in the other hubs then reviewed modules, and revisions were completed (see Figure 1). After learning objectives and activities and online resources were added, educators at two large urban health units reviewed the modules.

Two processes were used to evaluate and improve the toolkit before dissemination. One involved a product review: in September 2008, fourteen new hires, including new graduates and RNs from other health sectors, reviewed the modules during their orientation period and provided feedback. Final revisions were based on the new hires' feedback. The analysis of the survey from new hires assured toolkit developers that "they got it right." The second process involved group interviews with module developers to determine their experiences (discussed below).

> Another noted that the toolkit went beyond its original intent and was useful in defining job descriptions and job interview questions.

Dissemination and Further Evaluation

Hard copies of the final version, entitled *Orientation: Transition to Public Health Nursing Toolkit* (Algoma Public Health 2008), were circulated in January 2009 to SNLs in Ontario's public health units. Two more sections were added to the toolkit at this time to "broker" it into public health units. A section on *implementation information* presented strategies for managers, such as tools to assess an organization's readiness to support orientation and its learning climate, as well as to communicate the change. This section outlined reasons for adopting the toolkit, including improved retention of new hires, meeting accreditation standards and

Figure 1. Orientation toolkit development project timeline, 2008/2009

Activities	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Mar.
Project Planning														
Funding received	◆													
Project lead selected	■													
Advisory group formed	■													
SNLs surveyed		■												
Call for applications sent to health units		■												
Pilot sites selected		■												
Working group formed			■											
Module Development														
Module development workshop			◆											
Hubs formed for module development			■											
Topics and content developed			■	■	■	■								
Internal and external review					■	■	■	■						
Piloted toolkit content with new hires in pilot sites									■					
Revisions and toolkit preparation										■	■			
Toolkits ready for distribution and posted on website												◆		
Dissemination														
Toolkit sent to SNLs													■	
Follow-up survey of SNLs completed														■

◆ = Milestone
SNL = Senior Nurse Leaders

easing transition to public health nursing practice. A checklist was included to help managers select guides for the new hires. An *information for guides* section was created from the experiences of module developers in implementing the toolkit in September and October 2008 within their health units. This section outlined communication requirements, learning strategies, technological assistance to be provided and an estimation of time spent with new hires. Guides were expected to be advocates for new hires during the orientation period.

The process evaluation, which involved group interviews with developers, explored issues such as knowledge transfer, partnership development and project challenges and successes. Most hubs identified their university links as sources of support for developing content. One developer noted that "universities gave a critical academic perspective when reviewing the module." Developers commented that they had exchanged knowledge and information with other hubs, often for the first time. One member noted that the teleconferences "enhanced knowledge transfer across the hubs." Developers reported that the geographical proximity within a hub enhanced module development: "hubs were a success to develop the modules."

There has been much interest in the toolkit from public health practitioners, agencies, associations and organizations across Canada.

Time was the most significant challenge for participants. Developers and managers negotiated time on the project, resulting in a reorganization of their existing responsibilities. In larger health units, four or five staff participated in module development and continued as guides for new hires, although smaller health units could not assign this number. Module development was a greater challenge for smaller units than for large ones. Both smaller and larger units provided significant in-kind contributions of staff time and resources.

A second round of funding was sought from and awarded by HealthForceOntario through the Nursing Secretariat in 2009 to determine SNLs' intent to implement the toolkit. It was hoped that the extensive development and review process involving many PHNs, educators and managers would increase adoption. Thirty-one of 36 SNLs (86%) returned a self-administered survey. Findings indicated that sending a hard copy was effective in getting the toolkit on SNLs' desks in all but one of the 31 responding health units. Within six to seven weeks of receiving a hard copy, most SNLs had discussed the orientation toolkit with others in their health units and at various meetings throughout the province. A considerable number (64%) were discussing implementation in their units, while another 25% were in the

process of implementation. Most respondents noted that the section on *implementation information for managers* was very helpful. One respondent identified that having a standardized general orientation curriculum across Ontario was the real strength of this project. Another noted that the toolkit went beyond its original intent and was useful in defining job descriptions and job interview questions.

New hires to public health nursing were the targets of this educational innovation; however, experienced nurses and managers also examined the modules. As one PHN stated:

> I have been working in public health for almost nine years and this would have been an excellent package for orientation. I am learning a lot by reading the supporting documents. The learning activities help get me thinking about how the CCHN standards and core competencies are used in daily practice.

Currently, the orientation toolkit is posted on the Ontario Public Health Association, Community Health Nurses of Alberta and ANDSOOHA websites. Presentations were given at three national conferences in 2009: CASN, CHNC and the Canadian Public Health Association. As interactive workshops have a positive effect on uptake of innovations (Dobbins et al. 2002), a workshop was provided at the Ontario Public Health Association conference in November 2009. Community health associations in other provinces and territories have expressed interest in the toolkit.

This project was an unprecedented opportunity for mid-to-late career PHNs to assist new hires transition to public health nursing throughout Ontario.

Direction for Future Work

Feedback from SNLs indicated that modules addressing specific issues common to all health units should be developed centrally, for example, basics of case management for infectious diseases and position descriptions and performance management based on the orientation. From an evaluation perspective, future surveys could determine why some health units did not adopt the toolkit. The effect of the orientation on retention remains to be measured. The toolkit will be reviewed according to ANDSOOHA's work plan, and PHNs, educators and managers will be called on to refresh the content.

Conclusion

There has been much interest in the toolkit from public health practitioners, agencies, associations and organizations across Canada. This project was an unprecedented opportunity for mid-to-late career PHNs to assist new hires transition to public health nursing throughout Ontario. The developers and reviewers enjoyed the experience of shaping public health nursing practice at a time when the educational background and/or experience of new PHNs may not sufficiently prepare them for practice. As Thorne (2009: 52) notes, "it is the patient care setting that is the authority on artful practice, clinical imagination and learning synthesis." The commitment and energy demonstrated by project participants were critical to the development of the toolkit, as was the support given by SNLs in their health units.

In a recent publication about building public health nursing capacity, Meagher-Stewart et al. (2009) noted that focus groups of PHNs stressed the importance of learning opportunities for effective practice and the need for structures to facilitate knowledge exchange. The *Orientation: Transition to Public Health Nursing Toolkit* (Algoma Public Health 2008) provides an essential learning opportunity for new hires to public health nursing, providing a structure for knowledge exchange. ANDSOOHA's undertaking to develop a general orientation for new hires to public health in Ontario has been an innovative development in the nursing community.

Acknowledgements

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The Demonstration Projects
Summaries

Utilizing a Best Practice Staffing Framework to Promote Interprofessional Collaborative Practice at the Niagara Health System

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The human health resources demonstration site project was initiated based on the need to build capacity within the Niagara Health System (NHS) to resolve the nursing shortage in the emergency program and to further the work of the baseline staffing project established in the fall of 2007. Fluctuating vacancy rates and high turnover, in combination with the building of a new healthcare complex, highlighted the need to develop strategies to attract, recruit and retain professionals skilled to deliver specialized and complex care in the emergency program.

The project's overall goal was to promote and demonstrate the benefits of utilizing a baseline staffing framework, tools and processes to enhance interprofessional collaboration and teamwork. The shift to advance interprofessional collaboration in the practice setting was also about developing and sustaining partnerships with other internal and external healthcare professionals to achieve these common goals. Specific and measurable objectives were developed to define project priorities and targets for progress and accountabilities. These objectives were:

- Development of a baseline staffing framework, associated tools and processes
- Utilization of the baseline staffing framework to assess staffing needs in the emergency program
- Investigation of the US Emergency Nurses Association staffing tool
- Development of interprofessional care core competencies
- Implementation of educational workshops for emergency department (ED) staff and other professionals
- Development of a Champions Network
- Development of job descriptions for other professionals working in the ED
- Testing of the Advisory Board, Human Resources Investment Centre Workforce Demand Forecasting Toolkit

Lessons Learned

- The NHS demonstration site project has been successful at not only introducing new principles in best practice staffing; it has also been instrumental in launching interprofessional practice.
- Our success was due to collaboration with both key internal and external stakeholders who shared responsibility for interprofessional collaboration and practice.
- Systematic best practice staffing approaches and changes to our models of care delivery are cultural changes that require ongoing commitment, collaboration and dedicated financial and human resources.

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Workforce Demand Forecaster Tool: Health Human Resources' Recruitment Crystal Ball?

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As the growing human resource (HR) shortage continues to affect healthcare organizations, new approaches are explored to shift traditionally reactive hiring practices into proactive gear. To help quantitative forecasting data drive recruitment planning, six Ontario healthcare organizations and one academic partner teamed up to investigate the applicability of an Excel-based forecasting tool, the Workforce Demand Forecaster developed by the Advisory Board Company (the Tool). The Tool is a data collection spreadsheet that stores historical HR data, consolidates multiple quantitative variables that impact future workforce needs (e.g., budgeted full-time equivalent (FTE/headcounts), turnover, transfers etc.), and enables one- to five-year forecasts to inform recruitment strategies.

This project was the first in Ontario to implement the Tool and evaluate its applicability across multiple settings. It involved assessing the Tool's interface potential with existing HR processes, assessing the Tool's ability to increase interaction and collaboration between hospital operations and human resources, making recom-

mendations for system adoption in Ontario healthcare environment, and sharing learning/promoting knowledge transfer.

Project Learnings

Working through the forecasting process together has been an invaluable opportunity to learn about primary HR data collection, understand each organization's different employee data collection resources and approach, and trial, learn and improve the process.

Key project findings are:

1. Strengths of the Tool include:
   - A comprehensive data collection spreadsheet that capture all required data elements to develop forecasts
   - A straightforward, step-by-step forecasting process (not necessarily the data gathering process)

2. Prerequisites to use the Tool include:
   - Advisory board membership (annual fee) arranged through the Ontario Hospital Association
   - Human Resources Information System
   - Designated HR analyst for data collection, input, analysis and maintenance; level of support required varies by sophistication of the HR system
   - Availability of all required data elements and validated workforce growth/reduction assumptions
   - Tool learning and implementation time

3. HHR workforce planning at a regional or provincial level requires consistent data definitions, common data elements captured and reported in a consistent way using a common HR information system (HRIS) platform or compatible HRIS systems.

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Collaborative Health Human Resource Planning: A Retention and Recruitment Initiative – Full time, Shared and Unionized Positions

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Kemptville District Hospital entered into a partnership with the Queensway Carleton Hospital, a larger urban centre, to develop a framework for a shared, full-time, unionized nursing position. Both hospitals were experiencing nursing shortages in their emergency departments, but Kemptville, a small rural hospital, had an added recruitment challenge in that the ER nurses must be highly skilled and comfortable assuming responsibility when working alone. A new and shared full-time position would help alleviate the staffing crises for both hospitals. It would create a full-time position for a nurse who might otherwise be getting only part-time hours, and it would enhance interorganizational professional practice through the exposure to and sharing of best practices.

The Kemptville District Hospital and Queensway Carleton Hospital worked with their respective Ontario Nurses Association (ONA) bargaining units and the labour relations officer to develop the tools required to implement a shared position spanning two employers and two bargaining units. The nurse managers from each hospital, the directors of human resources, staffing clerks, ER nurses, union representatives from each ONA Local and the labour relations officer worked together, and through their collaboration and commitment developed an innovative employment framework. Resources developed included a memorandum of agreement, job description, job posting and an innovative full-time ER schedule.

The interorganizational collaboration and framework have significant relevance for future healthcare planning in a unionized environment.

Lessons Learned

- Involve nurses and unions from the start. Stakeholders must be included to ensure all concerns are addressed and to foster a successful working relationship.
- Successful partnerships require a win–win relationship. All parties had something to gain in this endeavour. Filling staff vacancies would help both the hospitals and the nurses.
- Commitment to any project is crucial. Both organizations remained committed to this initiative and committed time and resources as needed to ensure success.

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Internationally Educated Nurses: Building Capacity for Clinical/Nurse Managers

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The purpose of this demonstration project was to provide clinical nurse managers with resources to increase their knowledge and confidence in hiring, managing and retaining internationally educated nurses (IENs). Two teaching hospitals, two organizations providing educational and other support programs for IENs, a community settlement organization and a nursing research unit collaborated in the project.

A questionnaire (response rate 37%; $N = 33$) was administered to explore managers' needs for information on hiring and retaining IENs. Two focus groups were also held at each hospital, with a total of 17 managers. Based on these inputs, information resources were selected, evaluated and posted on the hospitals' Sharepoint websites, platforms used for information sharing and team processes.

Approximately 20 managers attended a half-day workshop on hiring and retaining IENs. Participant satisfaction was assessed through an electronic post-workshop quiz and a post-intervention survey.

The needs assessment indicated that managers required additional knowledge and resources to improve recruitment and management of IENs. The half-day workshop was evaluated as moderately successful. Delays associated with implementing metrics on the Sharepoint website and low response rate to the post-implementation questionnaire limited the utility of the two evaluation procedures.

This demonstration project indicated that ongoing commitment is required to improve the integration of IENs into Ontario healthcare organizations. We need to expand our work on meeting the needs of clinical nurse managers to include educators, mentors and all nurses in the organization. Future directions will include further development and sustainability of IEN Sharepoint sites.

Lessons Learned

- Cultural diversity needs to be set as a priority by governing boards, CEOs and senior management to achieve system-wide change.
- Clinical educators, mentors and all nurses should be included in future interventions to better integrate IENs into the workplace.
- Formalization of collaborative relations among community organizations and academic and healthcare organizations is essential to facilitate knowledge exchange and innovative interventions.

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A Collaborative Approach in the Waterloo Region Supporting Health Human Resources Planning

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Introduction

Organizations in the Waterloo Wellington Local Health Integration Network (WWLHIN)will require an additional 926 Registered Nurses (RNs) and 413 Registered Practical Nurses (RPNs) in the hospital sector alone by 2017 (Smith 2008). This distressing finding emphasizes the immediate need for a community-wide approach to developing sustainable nursing retention strategies. As a result, nine healthcare organizations and one community college collaborated, communicated and committed to working on three health human resources planning demonstration projects.

Aim of Projects

The first project was to support the development of mid-career point-of-care nurses through the implementation of a leadership development program. This program included educational sessions, being part of a mentoring relationship and participating in project work. The aim of the project was to explore leadership practices and the experience of program participants. The second project was to identify preferred scheduling options for nurses currently in the workforce and new graduates about to enter the workforce. The aim of the project was to identify flexible and innovative scheduling options that contribute to work–life balance and the recruitment and retention of nurses. Lastly, the managerial span of control project was to modify and test an existing span of control tool across the WWLHIN. The aim of this project was to make recommendations for an optimal span of control for participating organizations.

Lessons Learned

- *Collaboration:* It is essential for healthcare organizations to prepare for nursing shortages by collaborating on health human resources planning with other organizations from their LHINs.
- *Communication:* Every organization has its own methods of communication and systems. It becomes crucial for members from working groups to communicate on health human resources plans.
- *Commitment:* Effective health human resources planning requires time and commitment. Organizations and group members need to commit time to attend meetings and to work on projects.

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Christie Gardens Apartments and Care Inc. and the Ontario Long Term Care Association: Long Term Care Recruitment and Retention Project

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In 2008, the Ontario Long Term Care Association was awarded funding from HealthForceOntario to assist with its nursing recruitment strategy based on research it had initiated in 2007. The research goal was to understand the career motivations and perceptions of students enrolled in registered nursing (RN) and registered practical nursing (RPN) programs in Ontario to develop and test a message to support recruitment.

Focus groups and surveys were conducted among RN and RPN students at Ontario universities and colleges and among nursing staff employed in nine long-term care (LTC) homes. The goal was to understand the converging and diverging perceptions and attitudes among nurses and nursing students. This would inform a communication plan piloted among nursing students, directing them to an interactive website to connect with LTC nursing staff and information about preparation for and application to a career in the sector.

Research with the students revealed many misconceptions about the LTC work environment. To discern misconceptions from "truths," we collected attitudes and perceptions of nursing staff already working in LTC homes. These misconceptions and "truths" were examined to identify common elements among nursing students and LTC home staff. From these, a single primary message was created: "There's more to LTC than you think." The message was kept general to allow nurses to decide what "more" meant, depending on their career journey and aspirations.

This research was able to inform a primary message for a recruitment campaign piloted among nursing students. Between October 6, 2008 and July 27, 2009, the pilot website recorded over 2,500 unique visitors. OLTCA demonstrated it was possible to research and create a single message to bolster enthusiasm about nursing in LTC among nursing students in Ontario.

Lessons Learned

- Researching convergent perceptions and attitudes between nursing staff and students provides evidence for successful recruitment messaging.
- The level of satisfaction among nurses working in LTC can dispel nursing student myths about the sector.
- RNs and RPNs working in LTC homes are the best ambassadors for recruitment.

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Innovative Approaches to Staffing and Scheduling

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Nurse staffing and scheduling is a major health human resource issue currently facing healthcare organizations. To increase the capacity of healthcare organizations to address a variety of issues related to nurse staffing and scheduling, a multisite collaborative project was undertaken. The primary focus of this project was

to develop evaluative strategies and tools for identifying and optimizing promising nurse staffing and scheduling practices.

To develop these strategies and tools, evaluability assessments of the nurse staffing and scheduling models used at four healthcare organizations (a pediatric hospital, a continuing care health centre, a pediatric rehabilitation hospital and a community-based hospital) were conducted. As part of these assessments, nurses, key informants and individuals responsible for nurse staffing and scheduling participated in either one-on-one interviews or focus groups. The data generated from these interviews and focus groups were analyzed to create logic models and evaluation frameworks for each site's nurse staffing and scheduling model, as well as answer five critical evaluability questions that focused on the design, implementation and evaluation of each model.

The outcome of this project provided the participating healthcare organizations, as well as other healthcare organizations, with the tools, resources and knowledge to conduct timely, justified and feasible evaluations of nurse staffing and scheduling models.

Lessons Learned

- Evaluability assessments can be catalysts for change and improvement in nurse staffing and scheduling models.
- Evaluability assessments can be effective tools for stakeholder collaboration to develop timely and meaningful evaluations of nurse staffing and scheduling models.
- Evaluation is an essential tool and should be integrated in the development and improvement of nurse staffing and scheduling models.

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Investing in Tomorrow's Nursing Leaders: The Top 30 Rising Stars Project

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The Top 30 Rising Stars project was established as a unique partnership between Saint Elizabeth Health Care, Toronto Public Health and Women's College Hospital to support nursing leadership succession planning in the community, public health and ambulatory care sectors. The project also addressed the shortage of emerging leadership talent and an aging nursing workforce. It brought together 10 high-potential nurses from each organization for a customized leadership development program.

The project included a six-day customized learning program with the Schulich School of Business, a variety of "stretch opportunities" within participating organizations, a mentorship program that provided candidates with access to nursing leaders and also a web-based community that provided access colleagues across settings and areas of practice. Additional components included a talent management and succession planning workshop that provided practical techniques and best practices for developing staff.

A participant said of the program:

> [It] has really helped me to move forward in my career by giving me the tools I need to be an effective leader. I am excited about my future and have gained a lot of confidence, knowledge and supports from everyone I've met to continue to push myself – to have a greater impact, and to go further and beyond my own expectations.

The project has the potential to be applicable to other professions and roles, as well as benefitting the community at large.

Lessons Learned

- *Individual:* Participants reported increased skills and confidence in dealing with challenges in their professional and personal lives, as well as a renewed passion for healthcare and nursing.
- *Organizational:* Executive sponsors emphasized the value of a dedicated project manager, as well as the benefits of a comprehensive and planned approach for leadership development and nursing HR planning.
- *Systems:* Partners highlighted the value of cross-sectoral collaboration and credited courses in developing a pool of qualified candidates with required "systems" knowledge and competencies for leadership positions within the organization, sector and profession.

For video profiles and interviews with Rising Stars, visit http://www.youtube.com/user/SaintElizabethSEHC

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Rural Routes: Recruitment and Retention in Rural Areas for Health Human Resources

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In order to respond to the great needs for healthcare providers in the Quinte area the health human resources (HHR) demonstration project created a number of initiatives. Our group focused on two parts: a nursing internship program and human resources planning across our rural communities. Components of this project included developing useful tools as well as a partnership within our communities to build and foster collaboration between multidisciplinary organizations.

The nursing internship project focused on the practice of rural inpatient medicine by identifying strategies to meet the learning needs of nurses working in or relocating to the area. We developed a competency self-assessment tool for nurses,

along with a program curriculum and evaluation criteria to measure skill acquisition, critical decision-making in patient scenarios and current knowledge base. This portion of the project was developed through partnering with Victoria Order of Nurses, ParaMed, Loyalist College and Quinte Health Care. Knowledge gained will be utilized to implement similar internships in other specialty and hard-to-recruit areas, including critical care, emergency and intraoperative nursing.

The HR planning component included development of a number of surveys and questionnaires. We also developed a healthcare recruitment website for healthcare providers seeking employment in the Quinte area. By evaluating information collected using these tools, we could more accurately identify the current healthcare situation in our area and prepare ourselves to better recruit and retain qualified healthcare professionals.

Lessons Learned

- *Nurse clinician:* Implementation of the clinician's role was the most successful component of our project. Its downside was that the clinician was funded for only one shift and the role was split between two units.
- *Competency skills self-assessment tool:* This was useful when organizing educational sessions. It provided nurses with an opportunity to reflect on and verbalize their learning needs.
- *HR website:* Development of this website gives healthcare providers the opportunity to access employment options and information from all healthcare Quinte area organizations. Ongoing maintenance of the site is challenging

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Development and Evaluation of an RN/RPN Utilization Toolkit

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Appendix A – Patient Care Needs Assessment

CARE REQUIREMENTS			
1. What issue(s) are important to this patient's care that currently need(s) to be addressed?	Comments:		
2. Vital Signs: a. Have the patient's vital signs been within the following criteria[1] over the last 24 hour period? - Respiratory Rate is between 8 and 30 breaths per minute. - O_2 Saturations are greater than 90% on less than 50% O_2 or 6L/min. - Systolic Blood Pressure is between 90 and 200 mmHg with no more than 40 mmHg decrease. - Heart Rate is between 40 and 130 beats per minute.	Yes ☐	No ☐	Comments:
b. Are the patient's vital signs within the expected range for this patient's condition?	Yes ☐	No ☐	Comments:
c. How often does the patient need to have his/her vital signs checked?	Q2H ☐ Q4H ☐ Q6H ☐ Q8H ☐ OTHER:		
3. Level of consciousness: a. Is the patient's current level of consciousness within expected range for her/his condition?	Yes ☐	No ☐	Comments:
b. Is the patient currently experiencing fluctuations in level of consciousness?	Yes ☐	No ☐	Comments:
4. Does the patient require increased monitoring for development of complications? (For example, you are worried about the health of this patient and are keeping a close eye on him/her)	Yes ☐	No ☐	Comments:
5. Has the patient been experiencing acute confusion/agitation requiring ongoing assessment and treatment?	Yes ☐	No ☐	Comments:
6. Does the patient's condition require increased assessment and adjustment in the plan of care? (For example, due to pain, fluctuating lab results, persistent fever, loss & grief, fluctuating mood, blood glucose is not well controlled)	Yes ☐	No ☐	Comments:

7. Does the patient require interventions/ treatments that will have an immediate systemic effect, which may create an urgent or emergent situation? (For example, new IV treatment, Heparin infusion therapy, chemo therapy, high alert drug treatment, first-time blood transfusion)	Yes ☐	No ☐	Comments:
8. In the last 48 hours, has the patient had an unexpected health event or crisis? (For example, severe or acute episode requiring immediate intervention such as a sudden drop in blood pressure, O2 saturation level, blood glucose, fall)	Yes ☐	No ☐	Comments:
9. Do the patient and/or family have complex support needs?	Yes ☐	No ☐	Comments:
10. Are the patient and/or family facing complex decisions that require coordination/collaboration with multiple team members?	Yes ☐	No ☐	Comments:
11. Overall, how stable is this patient?	Very Stable 1 2 3 4 5 6 Very Unstable		
12. Overall, how complex is this patient?	Less Complex 1 2 3 4 5 6 Highly Complex		
13. Overall, how predictable is this patient?	Highly Predictable 1 2 3 4 5 6 Less Predictable		
14. Overall, how at risk is this patient for negative outcomes?	Less Risk 1 2 3 4 5 6 High Risk		

[1] Critical Care Secretariat, Ontario Ministry of Health and Long-Term Care [MOHLTC]. (2007). *Ontario's critical care strategy: Implementation of critical care response teams (CCRTs) in Ontario hospitals – Year one.* Retrieved April 7, 2008 from http://www.health.gov.on.ca/english/providers/program/critical_care/docs/ccs_ccrt_rp_01_20070101.pdf

Appendix B – Unit Environment Profile

RN/RPN UTILIZATION TOOL-KIT PROJECT: UNIT ENVIRONMENT PROFILE TOOL			
	VARIABLE	**DESCRIPTION**	**DATA**
PERSONNEL CHARACTERISTICS	Nursing Staff	How many RNs (total FTE's) work on this unit?	
		How many RPNs (total FTE's) work on this unit?	
		Number of Full-Time/Part-Time/Casual Nursing Staff (total number of individuals, not FTE's)	
	Budgeted Skill Mix	Number of Unregulated Patient Care Providers (total FTE's)	
	Experience of Staff Nurses	Number of Staff Nurses registered with College of Nurses Ontario for less than 3 years	
		Number of RNs with less than 1 year experience working on the unit	
		Number of RPNs with less than 1 year experience working on the unit	
		Number of unit Staff Nurses 55 and over	
	Educational Preparation of Nurses	Number of Certificate RPNs	
		Number of Diploma RNs/RPNs	
		Number of Degree RNs	
		Number of Masters Prepared RNs	
		Number of Nurses with Specialty Certificates (e.g. CNA certification, gerontology certificate, critical care certificate, etc)	
UNIT CHARACTERISTICS	Characteristics of Unit	Average Length of stay	
	Description of Support on Unit	Manager	Yes ☐ No ☐
		Other unit-based nursing leader support (e.g. Educator, APN)	Yes ☐ No ☐
		Other nursing leader support on consultative basis	Yes ☐ No ☐
		Access to Rapid Response Team	Yes ☐ No ☐
		Access to other allied health support (Specify roles)	
		In-charge/Team leader without assignment (day shift)	Yes ☐ No ☐
		Number of medical teams on the unit	

		Any clinical associate, or Physician assistant role?	Yes ☐ No ☐
		Do you have nursing students on the unit? If so, what times of the year and what year of nursing?	
		Other nursing roles on the unit	
	Occupancy	Average occupancy year to date	
		Number of budgeted beds	
	Nurse-patient ratio	Average # of patients per nurse on each shift 7 days a week	
	Policies, Procedures, and Guidelines	Access to policies and procedures relevant to practice area	Yes ☐ No ☐
		Care pathways/protocols/plans of care specific to patient population(s) on unit (includes medical directives if appropriate)	Yes ☐ No ☐
		Standardized assessment tools specific to patient population(s) on unit	None ☐
			Some Policies/ Protocols Exist ☐
			Policies/Protocols available for most situations/ populations ☐
	Unanticipated events	Number of infectious disease outbreaks in past 3 months	
		Number of Code Blue calls in past 3 months	
		Number of calls to Rapid Response Team in last 3 months	
		Total number of transfers to ICU in the last 12 months	
	Sick Time	Average sick rate (sick hours as percentage of productive hours)	
	Overtime	Average OT hours as percentage of productive hours	
	Agency Use	Average Agency hours as percentage of productive hours	
	Staff Turnover	Percentage of unit staff nurse turnover over the past year (internal and external)	

	Admissions	Average number of admissions and transfers in (per day, evening, night)	
	Composition of Patients	How many different CMGs are cared for on this unit?	1 to 5 ☐
			5 to 10 ☐
			Greater than 10 ☐
			Please Explain:
	Other Unit Factors	Are there other events that are not specifically related to the complexity of an individual patient that would impact unit environmental complexity?	
	Drawn upon work of Linda O'Brien-Pallas (University of Toronto) on environmental complexity		

Appendix C – Guidelines for Review Facilitator

Guidelines for Review Facilitators:
Prior to the data collection please review the following guidelines and discuss relevant aspects with the nursing leaders from each unit in order to facilitate collaboration and minimize any feelings of discomfort for the staff nurse.

- Arrange seating to minimize segregation of the staff nurse – helpful if the leaders sit on either side
- Pose questions to the unit staff as a group
- The staff nurse may find it helpful to have the medical record
- Put away distractions such as blackberries and minimize the use of pagers
- Do not engage in side conversations or note writing in front of unit staff
- Provide a copy of the definitions and the PCNA tool for unit staff to refer to
- Throughout the review reinforce the consensus approach. Allow time for discussion and encourage input from all participants
- Include all staff working that day – agency and relief staff may require more input from the nursing leaders
- Where possible include the Team Leader/charge nurse who will know about patient/family history/issues