Model of Care Initiative in Nova Scotia

Phase I Implementation Status Report

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Model of Care Initiative in Nova Scotia

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A partnership of the Department of Health,
District Health Authorities and the IWK Health Centre

Table of Contents

EXECUTIVE SUMMARY

The Model of Care Initiative in Nova Scotia (MOCINS) was launched in March 2008. It arose out of the recommendations of the Provincial Health Services Operational Review (PHSOR)[1] and was one of the first health transformation initiatives made possible through a partnership of the Nova Scotia Department of Health, District Health Authorities (DHAs) and the IWK. The Model of Care Initiative was viewed as an essential building block to achieve future sustainability surrounding the growing Health Human Resource challenge being experienced in Nova Scotia, as well as across Canada. Strategies like the Model of Care Initiative are aimed at optimizing the utilization of the health care workforce to ensure patients have access to the right providers at the right time, and are critical to overcoming the current and future workforce shortages and improving quality of care[2].

Together all nine District Health Authorities and the IWK are currently implementing a new Collaborative Care Model in 14 selected acute care inpatient units, referred to as showcase units. The Collaborative Care Model is an innovative, evidence informed model that was developed early in the initiative by a provincial design team of over 55 people to enable healthcare providers to make the best use of their talents by enabling them to work to their full potential, using efficient processes, information and modern technology to provide patient-centered, high quality, safe, and cost effective care.

The first phase of implementation of the new Collaborative Care Model was a foundational phase which took place from October 2008 – June 2009. During this time, a Provincial Implementation Team facilitated local implementation efforts. Standardized role descriptions at full scope of practice, combined with an evidence-informed method of using patient population data, enabled the showcase units to implement new staffing models that were responsive to the care needs of patients and their families. To date, eleven of the fourteen showcase units have implemented new staffing models; three are pending. Individual showcase units redesigned a number of processes to eliminate waste, prevent duplication of effort and enable patient and family self care.

Early anecdotal data suggest that positive results are emerging. Some units are reporting being able to operate at full staffing complement after not having done so for several years, others are seeing an initial reduction in overtime, improvement in nursing retention, and reduction in patient complaints, while another unit reported improving access by bringing their length of stay closer in line with national benchmarks. At the same time system–wide change of this magnitude, which involves substantial

[1] Provincial Health Services Operational Review 2008

[2] Besner, J. et al. (2005). A Systematic Approach to Maximizing Nursing Scopes of Practice

cultural change, requires ongoing leadership and support to ensure these preliminary outcomes are realized by all showcase units.

Approaching system redesign and workforce optimization as an entire province is the first methodology of its kind in Canada. A rigorous evaluation is in place to determine the impact of this work on patients and their families, health care providers, and the health care system. Planning for a second phase of implementation is underway.

INTRODUCTION

This document is intended to provide an overview of the background, purpose, and methodology of the Model of Care Initiative, a status report on the first phase of implementation of the Collaborative Care Model, and a description of the evaluation framework. While outcome data is not currently available, early observations have been reported. Additionally, recommendations by the Steering Committee for the second phase of implementation are described.

BACKGROUND

The Model of Care Initiative in Nova Scotia arose out of the recommendations of the Provincial Health Services Operational Review and was one of the first health transformation initiatives made possible through a partnership of the Department of Health, District Health Authorities (DHA) and the IWK. This initiative was viewed as essential to help address the growing health human resource challenge being experienced in Nova Scotia, as well as across Canada. In less than three years, 20% of health care providers in the province will be eligible for retirement. By 2015, that number increases to 44%. The Canadian nursing labour market, once characterized by cyclical periods of shortage and surplus, has progressed to a stage where there now exists a pervasive shortage of nursing human resources. [3] In spite of this, PHSOR found that health care professionals everywhere in Nova Scotia were performing non-professional work as a result of the elimination of support staff, including clerical, housekeeping, unit aides, and porters from previous efficiency exercises.

"If we maintain current delivery models and levels of demand, then the shortages of nurses, physicians and other professionals being experienced in 2006, are irresolvable"
Villeneuve & MacDonald, 2006

The model of how we deliver acute care in Nova Scotia has not changed significantly in decades. A reduced population of healthcare professionals is working hard to deliver care, and as a result some are performing work that does not require their expertise. Nurses, in particular are taking on extra duties, especially during evening and night shifts when other staff go

[3] Maddalena, V. & Crupi, A. (2008) A Renewed Call for Action: A Synthesis Report on the Nursing Shortage in Canada. The Canadian Federation of Nurses Unions

home. Registered Nurses and Licensed Practical Nurses are transferring patients, delivering food trays, typing and filing, answering phones, washing beds, and more- tasks that do not require nursing expertise.

The situation is only compounded by outdated, inefficient and non-existent processes. Manual documentation that often involves writing the same thing in multiple places, cumbersome communication processes with very little use of technology, no real proactive discharge planning, searching out supplies and equipment, and inefficient medication administration systems are some of the ways professionals are losing time every day – time that could be spent on direct patient care.

New roles, processes, and technology are necessary to meet the changing needs of patients, reduce inefficiencies, improve the health status of the population and address the health human resource issues of today and those of the future. They will also go a long way toward boosting the morale of a dedicated group of professionals who wish to find career and personal satisfaction by working to their full potential.

The Model of Care Initiative was launched in March 2008 when an inter-professional group of more than 55 individuals from all District Health Authorities and the IWK came together to design a new provincial model of care for acute inpatient care that is patient-centered, of high quality, safe, and cost-effective. The resulting Collaborative Care Model is consistent with the recommendations outlined in Phase II of Nova Scotia's Nursing Strategy.

The Collaborative Care Model (Figure 1) is an innovative patient-centered model that aims to transform care through four change levers:
People – enabling our providers to make the best use of their talents to ensure the highest standards of care delivery;
Processes – clear, efficient, and well-understood processes that will enable clinicians to work effectively as a team;
Information – ensuring access to information that supports care delivery, research, and academic mandates; and
Technology – utilizing modern technology to provide safe and timely care.

These four change levers will be upheld through supportive leadership, collaboration across the continuum of care, effective communication, and ongoing staff education, development and mentorship. .

In June 2008, The Council of CEOs and Deputy Minister of Health approved the Collaborative Care Model and endorsed the recommendation to move to implementation.

In October 2008, a Provincial Implementation Team, made up of nursing, allied health and physician leaders from the showcase units, along with project leaders from the Nova Scotia Department of Health began to facilitate the first phase of implementation of the Collaborative Care Model in 14 showcase

units across all District Health Authorities and the IWK. A steering committee provided provincial oversight. A rigorous evaluation is in place to determine the impact of this work on patients and their families, health care providers, and the health care system. Planning for a second phase of implementation is underway.

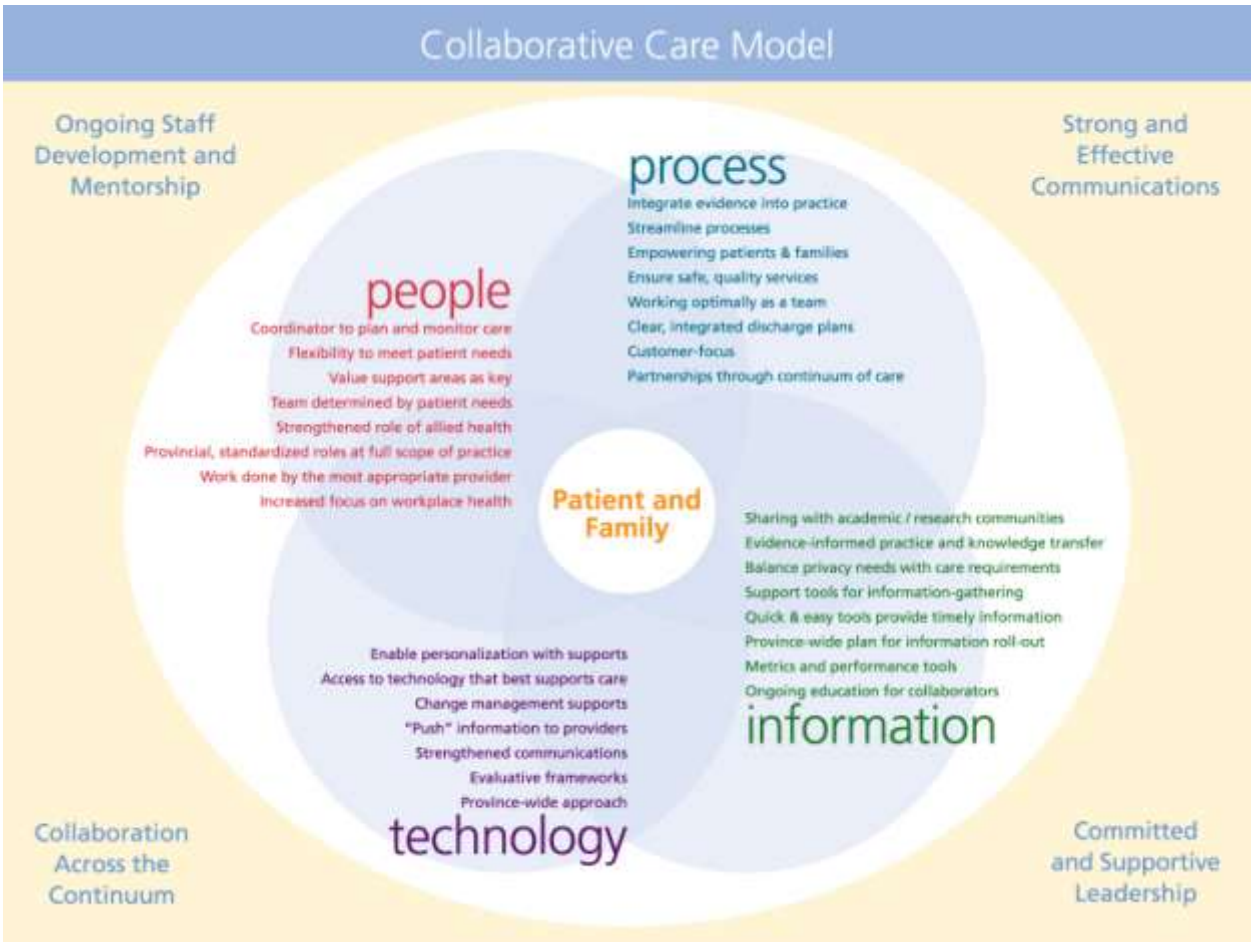


Figure 1. Collaborative Care Model

PURPOSE OF MOCINS

The purpose of the Model of Care Initiative in Nova Scotia is to design, implement and evaluate a viable provincial model of care for Acute Care in-patient care delivery that is patient-centered, high quality, safe, and cost-effective.

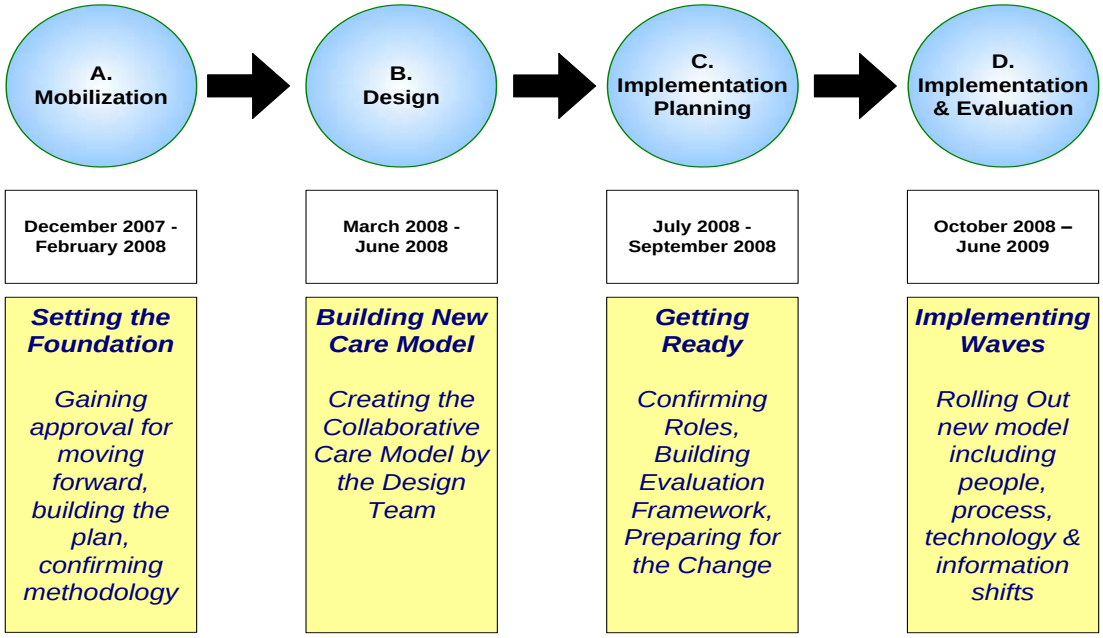
GOALS OF MOCINS

Goals of the overall Model of Care Initiative include:

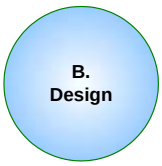
- Enhance the patient care experience;
- Improve the work environment for nurses, other health professionals, and support staff, supporting them to work to their full potential;
- Reduce occupational health and safety issues through increased supports of both people and technology;
- Better support patient flow through improved discharge planning, helping patients return home in a timely manner with the support they need; and
- As a result, reduce the cost of delivering care while improving patient care.

METHODOLOGY OF MOCINS

While the focus of this report is on the first phase of implementation of the Collaborative Care Model, a brief review of the methodology used in the entire initiative is provided. The Model of Care Initiative in Nova Scotia has four key phases: mobilization (December 2007 - February 2008), design (March-June 2008), implementation planning (June-September 2008), and implementation and evaluation (September 2008- 3 – 18 months). A phased approach to implementation was planned and the first phase of implementation took place from October 2008- June 2009. An overview of these phases is described below.



During the mobilization phase, agreement was secured from DOH, DHA/IWK leadership to initiate the Model of Care Initiative. A Provincial Design Team and Steering Committee was established. A rapid action design methodology was confirmed. Guiding principles were developed and a project charter approved.



During the design phase, a provincial inter-professional design team worked through a highly consultative methodology to define a future vision for care delivery, build the foundation for a new model of care, redesign current roles, and establish new roles and team models. The result was the Collaborative Care Model described briefly in the background section of this report, and more fully in the document *Nova Scotia's New Collaborative Care Model: What it Means for You.*

The focus of the implementation planning phase was to ready the initiative to move the new model from a conceptual stage to an implementation phase. Some of the activities included initiating the completion of all role designs, developing general human resource principles, identifying selection criteria for the showcase units, establishing an evaluation framework, developing a project charter with timelines and deliverables and leadership structure, selecting the showcase units, and developing a rollout methodology.

During the implementation & evaluation phase, a Provincial Implementation Team, made up of nursing, allied health and physician leaders from the showcase units, along with project leaders from the Department of Health, facilitated the first phase of implementation of the Collaborative Care Model on the 14 showcase units. The focus of the first phase of implementation was to move the model from concept to reality by creating the functional elements (roles, education, processes, information, etc). The evaluation framework was fully developed during this phase.

DELIVERABLES/ACTIVITIES OF THE FIRST PHASE OF IMPLMENTATION

Due to the large scale provincial approach to implementation of the newly designed Collaborative Care Model, a phased approach was used with deliverables and activities identified for the first phase. Accomplishments and learning of the first phase will inform second and subsequent phases of implementation.

DELIVERABLES OF PHASE I

1. The Collaborative Care Model is operational in the showcase units with activities in all four quadrants of the model: people, process, information and technology.
    - The first wave of implementation is focused on development of foundations (eg: roles, processes, supporting technologies and information infrastructure) at each of the showcase units.
2. Evaluation of the model is underway with long term monitoring by the Health Transformation office
3. Capacity is built in the DHAs and IWK in this initial implementation phase for future independent implementation in other acute inpatient units.

ACTIVITIES OF PHASE I

1. Confirmation of core team based on patient population needs.
2. Confirmation of first roles to be implemented –bedside RN as coordinator; LPN at full scope, allied health professional roles on core team.
3. Identification of, and beginning implementation of other roles that will need to be adapted / designed to enable priority changes – e.g. aide, unit clerk, housekeeping; etc.
4. Confirmation of and beginning implementation of educational strategies such as Change Management, Inter-professional and Contributor education, RN and LPN Scope of Practice, and RN Role Optimization.
5. Identification of, and beginning action on priority process issues, such as inter-professional care planning, to enable roles.
6. Development of an initial listing of priority technology and information issues and beginning action.

STATUS OF THE FIRST PHASE OF IMPLEMENTATION

The Collaborative Care Model is a conceptual framework that was designed provincially to guide the local implementation of new service delivery models for acute care. Using a needs based approach to health system and workforce optimization[4], an informed understanding of the patient population on the showcase units and population health data in the districts directed the implementation activities to optimize the roles of health care providers and to streamline processes that were wasteful, prevented patient and family involvement in their own care, limited role optimization, and no longer added value to the patient and family experience. Instead new processes were introduced to meet the changing needs of patients, enable staff to work to their full potential, and improve efficiency.

In October 2008, implementation activities began in all showcase units and in some cases, prior to this. Examples of these activities are described in the following pages, categorized under the four change levers of the Collaborative Care Model – people, process, information, and technology. The majority of activity and accomplishments of the first phase of implementation occurred within the people and process change levers of the model with limited activity in the information and technology levers.

PEOPLE

STANDARIZED ROLE DESCRIPTIONS

The establishment of province-wide standardized roles to enable more consistent work practices at full scope of practice is a critical enabler for the successful implementation of the newly designed Collaborative Care Model. During the first phase of implementation, draft role descriptions for the following health care professionals were created using current standards and scopes of practice and endorsed by the respective regulatory bodies:

1. Registered Nurses
2. Licensed Practical Nurses
3. Physiotherapists
4. Physiotherapy Assistants
5. Social Worker
6. Dietitian

[4] Besner, J. et al. (2005). A Systematic Approach to Maximizing Nursing Scopes of Practice

7. Dietetic Technician

Currently the Human Resource Working Group is defining a process to enable review and approval of these draft role descriptions with the goal of integrating them into formal position descriptions within the DHAs and IWK.

Additional role descriptions were developed for Occupational Therapists, Occupational Therapist Assistants, Respiratory Therapists, Pharmacists and Pharmacy Technicians but require additional work prior to standardization.

STAFFING MODELS

The development of the standardized role descriptions at full scope of practice, combined with an evidence-informed method of using patient population data, enabled the showcase units to begin to create new staffing models that are responsive to the care needs of patients.

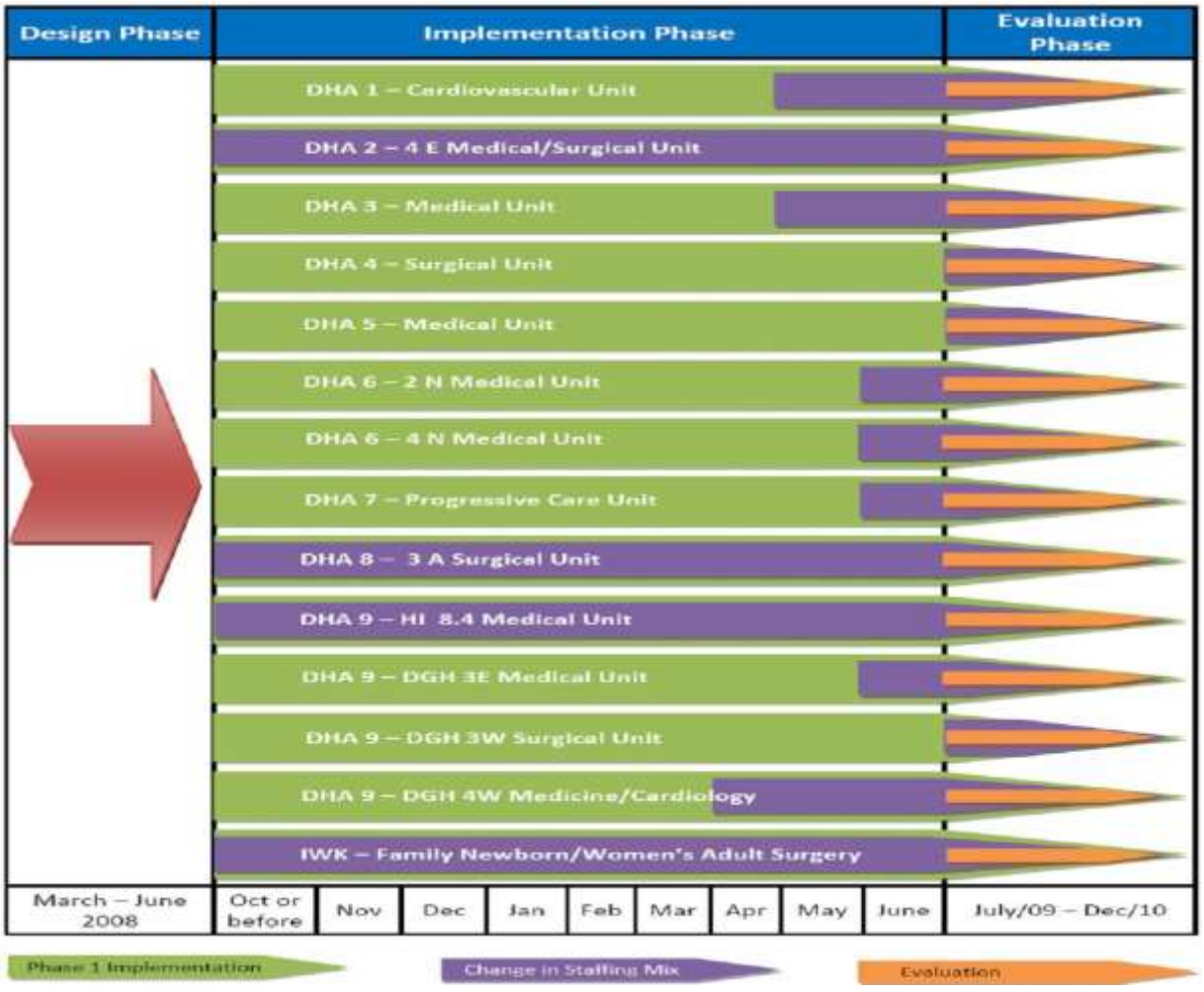


Figure 2. Go Live Dates of the new staffing models for the nine DHAs and IWK within the first phase of the provincial implementation of the Collaborative Care Model.

Eleven of the fourteen showcase units have implemented their new staffing models at different times within the first phase of implementation. The remaining three showcase units have plans to do so as well but further foundational work (i.e. education, costing analysis, hiring of staff, and in one instance, recruitment of a new manager) is required. The change in staffing model is one of several activities in the implementation of the overall Collaborative Care Model. Figure 2 above demonstrates the variability in "Go Live" dates of the new staffing models for the nine DHAs and IWK within the first phase of the provincial implementation of the Collaborative Care Model.

Preliminary Observations

While it is too early to draw any generalized conclusions, early observations indicate that changes to the staffing models, which were based on patient population needs, have yielded the following preliminary results in some of showcase units:

- enabled units to fill vacancies within existing resources and operate at full staffing complement thereby reducing routine reliance on overtime as a staffing strategy;
- improved access in at least two of the showcase units by planning to re-open beds , within existing resources, that were previously closed due to staffing shortages;
- introduction of assistive personnel including rehabilitation assistants have led to an increase in patient mobility, and in at least one showcase unit this is believed to have positively impacted the classification of some patients post discharge (patients returned home or to a community care facility instead of a nursing home);
- addition of a 0.5 pharmacy technician position to a care team on one showcase unit resulted in the return of unused drugs to the main inventory at an estimated cost of $3,000 during the first week;
- positive impacts on coordination of care, MRSA rates, staff satisfaction, and sitter costs reported on two showcase units;
- improvement in staff retention reported on one showcase unit;
- reduction in length of stay by one day in one showcase unit;
- significant reduction in number of patient and family complaints on one unit;
- positive patient satisfaction scores reported on two units;

- physician satisfaction with being able to access knowledgeable staff who could respond to their questions about patients and conduct inter-professional rounds more efficiently ; and
- improved communication across the continuum of care as viewed by a family physician on one showcase unit.

At the same time these initial positive results are being seen in some of the showcase units, continued support is required across all showcase units as they transition from a model of care that has been in place for decades but that is no longer sustainable in today's health care environment.

Staffing Analysis

During the early part of the implementation phase, a staffing analysis tool was developed to ensure consistency in planning, measurement, and comparison of data across all showcase units. Consensus was achieved on the use of the new staffing analysis tool that enabled showcase units in all DHAs and the IWK to look at their baseline staffing model with associated costs, and to plan future staffing models consistent with the criteria of the Collaborative Care Model – patient-centered, high quality, safe and cost effective. While there were no cost savings targets identified during the first phase of implementation, the parameter of cost neutral or better was used in the development of the new staffing models.

An analysis of these new staffing models was completed at a point in time, however, it is important to note that not all staffing models are confirmed and that they are subject to change with the operational realities of the DHAs (i.e. one showcase unit began with 8 IMCU beds but in the fall, the designation of these beds will change). Variability in HPPD and cost per patient day exists across the 14 showcase units. While some variability is expected given the constraints of the different care delivery realities (i.e. facility constraints, obstacles of infrastructure, unit size, requirement for minimum staffing levels regardless of patient numbers, local availability of health human resources), the long term goal is to establish acceptable ranges of performance for HPPD and Cost per Patient Day. Additionally, the evaluation is expected to report on factors that directly impact on cost avoidance such overtime, use of sitters and agency staff, absenteeism, and turnover. The average cost of nursing turnover in Canada for one registered nurse is estimated at $25,000 US[5].

LICENSED PRACTICAL NURSES (LPN)

In the original findings of the PHSOR report, there were significant inconsistencies between what a licensed practical nurse could do by licensure and what he or she was allowed to do in the employment

[5] O'Brien-Pallas, L., Tomblin Murphy, G., Shamian, J. (2008) Understanding the Costs and Outcomes of Nurses' Turnover in Canadian Hospitals. Canadian Institutes of Health Research

setting (i.e. medication administration). This trend is well described in the literature and can be found in other jurisdictions across Canada. The first phase of implementation of the Collaborative Care Model saw a reversal in this trend in Nova Scotia as can be seen in the Figure 3 below.

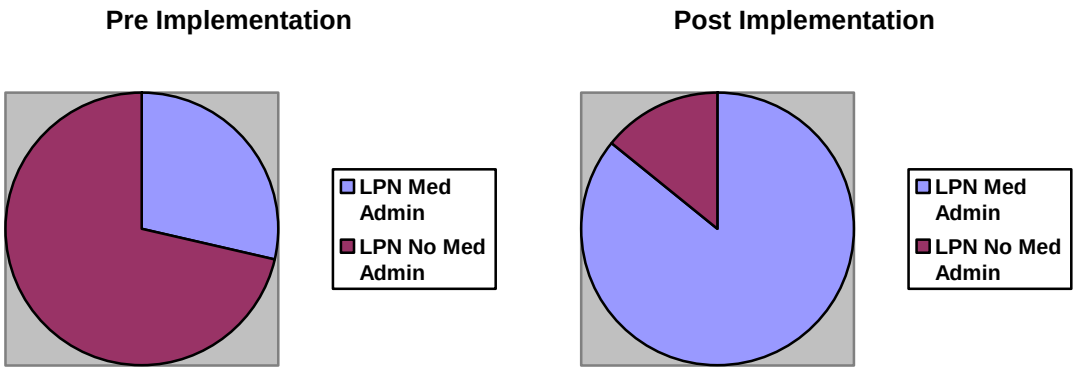


Figure 3. LPN Medication Administration Pre and Post Implementation of the Collaborative Care Model

This work is consistent with the new Licensed Practical Nurses Act that became effective on May 1, 2009. According to a press release from the College of Licensed Practical Nurses "The new Licensed Practical Nurses Act will provide the profession with a modern, current piece of legislation that better supports the model of care initiative in Nova Scotia and assists LPNs as they work to improve the health of Nova Scotians."[6]

PROCESS

Evidence in the health care literature suggests that there are many opportunities to streamline work processes and increase the time front-line nurses spend in value-added care, thereby improving workforce and patient outcomes. [7] Stakeholder feedback from patients, families, staff, and physicians during the design phase identified many opportunities for the inter-professional team in Nova Scotia as well.

During the first phase of implementation, individual showcase units redesigned a number of processes to eliminate waste, prevent duplication of effort and enable patient and family self care. The structure of the Provincial Implementation Team served as a network for the DHA/IWK Model of Care Leads and

[6] http://www.clpnns.ca/whatsnew/currentnews.html

[7] Upenieks, V, Akhavan, & Kotlerman, J. (2008) Value-Added Care: A Paradigm Shift in Patient Care Delivery. Nursing Economics, Vol 26, No. 5.

Showcase Unit Managers to share ideas, expertise, experiences and practical approaches as they redesigned key work processes. Examples include:

- Addition of "primary care cupboards" in patient rooms that enabled all medication preparation, delivery, education, and documentation to be done at the bedside;
- New construction of a patient and family lounge that is intended to enable group education, exercise, and dining for the stroke patient population;
- Relocation of supplies closer to the point of care to reduce unnecessary travel;
- Establishment of preadmission classes for groups of patients and families to assist them to prepare for orthopedic surgery and plan in advance for post discharge recovery. One DHA is reporting a reduction in length of stay as a result of this and other related model of care related changes;
- Establishment of pre-birth classes to inform expectant mothers about their stay post partum;
- Use of white boards for efficient communication of "patient status at a glance"[8] This is a visual display of relevant patient information that makes shift handovers quicker and safer for the patient, improves patient flow – avoiding delays in discharge, and saves time looking for patient information. One of the fourteen showcase units had an electronic version of the dry erase white board although this was in place prior to implementation of the Collaborative Care Model;
- Changes in shift report that improve efficiency through the use of SBAR [9] and organizing shift report around groups of patients (as opposed to the whole unit). One DHA is reporting an initial reduction in overtime as a result; and
- Creation of an inter-professional Kardex to enable integrated team communication around patient care that replaced multiple single discipline communication tools.

Just as the Collaborative Care Model evolved under a provincial approach for design and planning, opportunities exist to leverage this same approach to achieve common process improvements across the DHAs and IWK. One such example was a provincial discharge management design approach. Other opportunities exist for common care map development where the top Medical Case Mix Groups are similar across showcase units by using best practice standards and guidelines provided by the Provincial

[8] NHS Institute for Innovation and Improvement

[9] http://www.ihi.org/IHI/Topics/PatientSafety/SafetyGeneral/Tools/SBARTechniqueforCommunicationASituationalBriefingModel.htm

Programs (i.e. Acute Coronary Syndromes best practice guidelines from Cardiovascular Health Nova Scotia). This later example is a matter of ensuring linkages are made across the health system which is easier to do within the established partnership model of health transformation

INFORMATION

PATIENT PROFILE

In the new Collaborative Care Model staffing decisions (i.e. determining right number and mix of providers) are based on the patient population health needs[10]. While all district health authorities collect and report patient data (i.e. length of stay, readmissions, average age, most responsible diagnoses, etc), very few used this information at the point of care to make staffing model decisions prior to the implementation of the Collaborative Care Model. A reversal in this practice was seen during the first phase of implementation in which decision support personnel reported increased usage of data on the showcase units.

During the first phase of implementation, a consistent patient profile template was prepared for use across all showcase units. Additionally population health data was made available through the DHA/IWK and Nova Scotia Community Counts. Results of this activity informed the creation of new core care teams on the showcase units (i.e. number of Registered Nurses, Licensed Practical Nurses, Physiotherapists, Assistive Personnel, Housekeepers, etc), enabled better planning of care in response to the known needs and risk factors of certain patient populations. For example, on one showcase unit it was identified that the length of stay was affected by a work process that delayed weaning from pain pumps. This practice was corrected.

Nova Scotia has an aging population and this demographic is reflected in the showcase units. Sixty-six percent (66%) of the patients on the showcase units (exclusive of the IWK) were 60 years of age and over. Of that number, 47% were 70 years of age and over. Understanding the average age of the patients on the showcase units enabled better planning of care in response to the known needs and risk factors of the elderly. For example, in a number of showcase units equipment was purchased and staff were assigned to enhance patient mobility as a means of reducing the known complications of immobility and de-conditioning of the elderly population. Increasingly, elder friendly environments are being created.

[10] Besner, J. et al. (2005). A Systematic Approach to Maximizing Nursing Scopes of Practice

TECHNOLOGY

Clinical technology is an important enabler for increasing patient safety and reducing risk, enhancing patient, family and provider satisfaction, and ensuring that staff resources are effectively and efficiently utilized. Provincially, the activity related to technology in the first phase of implementation of the Collaborative Care Model was to develop an initial listing of priority technology needs and where feasible, begin action.

The Provincial Implementation Team composed of key leaders and managers from all DHAs and the IWK prioritized a list of technology needs that they felt were essential to the success of the new model of care. Clearly the number one need expressed by the group was for a fully functional electronic medical record. The group believed that in order to plan, deliver, and evaluate collaborative care there needs to be a comprehensive record that can support safe and effective care both in the acute care as well as in the community. For the ease of managing information and ensuring that patients would have their records available wherever they received care in the province, it was felt that a common system across the province was the ideal.

"Rapidly changing technology and a different health care delivery system may mean that the dire shortages predicted, which are based on current delivery models, could be less problematic in 2020 than they seem now."
Villeneuve & MacDonald, 2006

With the need for an electronic medical record established, the Provincial Implementation Team was asked to establish a list of basic technology needs based on their experience with implementing the model. Their responses included the following:

- Bedside equipment
- Communication devices
- Medication administration enablers
- Electronic support
- Electronic infrastructure/ physical equipment

Where possible, individual districts purchased equipment such as ceiling lifts, bed alarms, etc to improve patient and staff safety and achieve efficiency in care process during the first phase of implementation. Some districts are more advantaged than others with technology and as such, examples of mobile communication devices, electronic bed maps, and tracking technology can be seen in isolated instances.

CRITICAL ENABLERS OF THE MODEL

EDUCATION

One of the critical enablers of the new model of care is ongoing education, training, and mentorship. During the first phase of implementation a number of educational sessions were offered to support the leaders to effectively manage change and the health care providers to optimize their roles. These included:

1. Health System & Workforce Optimization with Dr. Jeanne Besner for all DHA/IWK leads – October 2008
2. Change Management Boot Camp for all DHA/IWK leads - February 2009
3. Scope of Practice (RN & LPN) workshops offered by the nursing regulatory bodies upon request to the showcase units
4. Inter-professional Education provincially organized and offered to all staff on the showcase units – April – June 2009. Attendance 531

Further to this, individual showcase units created specific educational plans to support the implementation of the new model (i.e. Civility and Respect in the Workplace, education specific to the patient population).

To support ongoing learning, the Education ad hoc working group compiled an inventory of relevant education programs in response to a learning needs assessment during the first phase of implementation of the Collaborative Care Model. Additionally, work has begun at the Registered Nurse-Professional Development Centre to develop a train-the- trainer program on nursing role optimization. This work is being done in partnership with The College of Licensed Practical Nurses of Nova Scotia and The College of Registered Nurses of Nova Scotia, and Capital Health. An initial program delivery date is expected in September 2009.

LEADERSHIP

System-level change of this magnitude requires system-level planning, leadership and commitment. This was accomplished during the design phase as well as the first phase of implementation of the Collaborative Care Model. The partnership model inherent in health transformation enabled the engagement of clinicians, managers, Vice Presidents, CEOs, Deputy Minister and Department of Health staff to lead the Model of Care Initiative provincially; the first of its kind in Canada.

With regard to point of care leadership, this initiative highlighted the value of the role of front line managers to successfully guide the process of designing and implementing a new model of care. Span of

control for these roles is expected to take on greater attention in the next phase. Other support roles, including educators, clinical leaders, and practice leaders were seen as essential to the change process. It should be noted, however, that their availably varied across the showcase units making the process easier in some areas and more difficult in others.

COMMUNICATION / CHANGE MANAGEMENT

People support what they create. The Model of Care Initiative used a collaborative change management approach to design and implement the new Collaborative Care Model provincially. Perhaps one of the greatest accomplishments was the establishment of a provincial network of staff, managers, and physicians who shared and continues to share ideas, expertise, and experiences. This approach enabled provincial planning and collaborative implementation; all the while minimizing duplication and maximizing productivity.

A great deal of communication with stakeholders occurred during the design and implementation phase. Locally, DHA/IWK Leaders engaged their districts in the change process. Provincially, the project leaders made multiple presentations to a wide variety of stakeholders including the regulatory bodies, unions, academic institutions, and others.

Regular written communiqués were useful to update stakeholders on the initiative in the districts. The Health Transformation newsletters, in which the Model of Care Initiative was regularly featured, served as provincial correspondence with stakeholders.

EVALUATION

The Evaluation Framework for MOCINS consists of three methods of performance measurement: Outcomes Mapping and Simulation Modeling, Financial Reporting and a Minimum Dataset of Indicators.

1. OUTCOMES MAPPING AND SIMULATION MODELING

The objective of the evaluation is to determine the effectiveness of MOCINS in arriving at the envisioned care model by investigating its impacts (if any) on patient, system, and provider outcomes. The key questions guiding the evaluation are as follows:

a. To what degree is implementation of the new model of care associated with changes in patient, provider and system outcomes?
b. Will observed improvements in these outcomes assist in reducing provincial health human resources (HHR) shortages?

The first question is being addressed using outcomes mapping through the identification of 'target' stakeholders to be affected by the new model of care, process indicators to measure its implementation, and outcome indicators to measure its effects. The second question is being addressed

using simulation modeling; more specifically, the potential for certain outcomes of the new model of care to reduce provincial HHR shortages will be tested by simulating the effects of those improved outcomes on either increasing HHR supply or reducing HHR requirements.

Four data collection tools are being administered as part of the outcomes mapping evaluation:

a. Provider Survey: To be administered twice, initially in July /August 2009 and then 12 months later.
b. Patient and Family Survey: To be administered at two time-points, July 2009 and 12 months later.
c. Administrative Process Record (APR): To be maintained by each Showcase Unit Manager with assistance from the team. During July 2009, the Evaluation Team will visit each site to provide orientation and support to start data collection. The initial APR collection is to be completed by August 2009 and then again in January/February 2010 and July/August 2010.
d. Focus Groups of providers, employers, decision makers and unions will take place three times over the period of the evaluation: July 2009, January/February 2010 and July/August 2010.

A report on baseline outcomes mapping data is planned for August 31, 2009 and a report on focus group findings is scheduled for September 30, 2009. Timelines for the administration of the above data collection tools and subsequent baseline reporting are dependent upon Research Ethics Board approvals, Privacy Impact Assessments approval and Ministerial Authorization as well as arranging visits to the various Showcase Units and Focus Groups.

Data collection for simulation modeling is ongoing. A report on initial simulation modeling data is expected September 30, 2009

2. FINANCIAL REPORTING

The Provincial Health Services Operational Review included an analytical model that assessed efficiency in nursing care delivery across the various sites in Nova Scotia. This methodology was grounded in an analysis of staffing ratios and conversion of those ratios to targeted ranges expressed in terms of Hours of Care per Patient Day (HPPD). As the Model of Care Redesign progressed, it became clear that HPPD only measured one small component of the work of the overall care team. Other key staff roles, such as managers, allied health professionals, ward clerks and unit-based support staff are not typically tracked using HPPD, but rather through a series of other productivity measures. The Model of Care Initiative required an ability to view the team as a whole and consider how resources could be deployed differently to enable the model. In other words, a framework that measured more than just HPPD was required: Three conclusions were reached:

1. HPPD could continue to be used as a valid measure to look at direct care hours for nursing.
2. The HPPD methodology could be expanded to include other key roles and compare HPPD for the transitional MOS and UPP roles as well as the allied professions and unit-based support staff; and

3. An overall financial measure (e.g., cost per patient day) could be used to determine the impact that changes to the team composition and skill mix would have on overall resource use.

The first phase of implementation is a time of learning. There was a recognition that savings may occur as a result of other measures such as overtime, use of sitters and agency staff, absenteeism, and orientation costs.

3. MINUMUM DATASET OF INDICATORS

A Minimum Dataset of Indicators has been developed and distributed for use by each Showcase Unit for monitoring performance on an ongoing basis. The intent is for each Showcase Unit to monitor and compare its own results over time as the Collaborative Care Model is implemented, not for comparison with other Districts/IWK. The Canadian Nursing Association's *Evaluation Framework to Determine the Impact of Nursing Staff Mix Decisions*[11], a well established tool that is evidence based, was used as the framework for developing the indicators for the Minimum Dataset. The indicators in the Minimum Dataset are separate from the Outcomes Mapping Evaluation and Financial Reporting although some indicators may be the same. This Minimum Dataset of Indicators can be used by other units for ongoing monitoring as they implement the Collaborative Care Model.

WORK REMAINING

Transitioning from the first to second phase of implementation, a number of key activities require completion. They include:

1. Completion of a tool kit to provide guidance to subsequent phases of implementation
2. Best practice review of technology priorities
3. Ongoing evaluation

Additionally the work of the Human Resource ad hoc working group is required to continue until such time as it completes its mandate. A critical component of the Collaborative Care Model is ensuring that work is done by the most appropriate provider and as such, standardization of the assistive personnel role description in acute care will need to continue into the second phase.

[11] http://www.cna-aiic.ca/CNA/documents/pdf/publications/Evaluation_Framework_2005_e.pdf

PLANNING FOR PHASE 2

During the first phase of implementation, there was a strong focus on the people component of the model with some focus on the process, information, and technology components. The full impact of the new model of care will only be realized when all four components are leveraged and people, process, information and technology work together to support the patient and family healthcare experience. A continued focus on the development of people to practice at an optimal scope of practice/employment as well as a concerted focus on the process, information, and technology components of the model during the second phase of implementation is required.

To sustain the momentum, embed the learning, and hold the gains already achieved in the Model of Care Initiative as well as move forward with implementation of the Collaborative Care Model in other areas, a focused plan for the second phase of implementation was prepared. This plan was developed in consultation with the DHA/IWK Leads, VPs Acute Care/Patient Services, and endorsed by the Steering Committee – partners in this health transformation initiative. The goal for the second phase of implementation of the Collaborative Care Model provincially is described below. The proposed time frame for the second phase is September 2009 –March 2010.

GOAL OF PHASE 2

The proposed goal of the second phase of implementation is to: sustain the momentum, embed the learning, and hold the gains already achieved in the Model of Care Initiative; support the continued implementation efforts (people, process, information & technology) in the 14 showcase units; move forward with implementation of the Collaborative Care Model in other areas; continue and refine the evaluation; and define strategies to achieve progress in the process, information, and technology change levers of the model

CONCLUSION

The first phase of implementation of the Collaborative Care Model has been a time of great opportunity, learning, and partnerships. Through the leadership of the Steering Committee and Provincial Implementation Team, a solid foundation was created to enable all 9 district health authorities and the IWK to systematically plan, creatively implement and carefully evaluate the new Collaborative Care Model. This foundation will enable future phases of implementation.

There are many stories from people across the provinces who are implementing the new Collaborative Care Model on the front lines. Through their stories, we hope to document the challenges, opportunities and triumphs of working differently to provide patient-centered, high quality, safe and cost effective care.

Here is Sharon Fairbanks' story...

Sharon Fairbanks is an RN with more than 40 years' experience working in healthcare. She is eligible to retire, but now definitely isn't the time.

"For the first time in many years, I'm excited about the work being done to identify appropriate roles for the healthcare team (especially the RN role as coordinator of care), the changes we're making on our unit and the results we're seeing so far," says Sharon. "I'm also encouraged by the level of commitment from my counterparts in other districts and the changes I see happening across the province."

Sharon joined the team as Patient Care Manager on the Medical Unit at the Cumberland Regional Health Care Centre about two years ago. Amid a long-standing RN shortage and faced with mounting frustration as a result, the team provided the best possible care to patients. "Was it sustainable though?" The question begged to be asked. Sharon's conclusion was "no." She felt the team knew it too.

Not long after, the design of a new model of care for the province had been completed and would be rolled out in showcase units across the province. The Medical Unit was destined to be the first unit to implement the new collaborative care model in the Cumberland Health Authority.

"Initially, I was skeptical but then, as I learned more, I came to see the model of care as a great opportunity to make changes on our unit that would improve patient care and the work environment for staff," says Sharon. She and her team have done just that, little by little.

"Drawing from the main premise of the collaborative care model, which is organizing care around the needs of patients, we first took stock of our patients' needs. Some of our patients who had very similar needs were spread out around the unit. From a practical standpoint, this didn't make sense. We grouped the patients together, 16 of 32 on the unit, in the B wing. I then assigned a team of LPNs, working to their present full scope of practice, as the Primary Care Team for the 16 patients. The result is more efficient care and a team that has become intimately familiar with the patients' needs and more comfortable working together to meet those needs."

Sharon notes this wouldn't have been possible unless team members had been supported to work to their full scope of practice, as they continue to be.

Encouraged by the success of the first significant change on the unit, and beginning to see the staff's doubt waning, Sharon identified the next issues to be resolved and momentum soon grew.

In the last year, the team on the Medical Unit has switched to a patient alarm system that is helping to reduce falls on the unit, is more efficient and is cost-effective, and ordered new walker chairs which have enabled more patients to move independently throughout the unit. "Purchasing the walker chairs has resulted in more restful nights for patients and fewer challenging nights for staff," notes Sharon.

The team has also ordered more supply carts to lessen the time nurses spend in travel and away from patients. Another small planned change is the purchase and assessment of crescent tables.

"Staff recognized that patients were not eating as well as they would like and some were skipping meals," says Sharon. The team identified that enabling patients to eat together in small groups may indeed help. They were willing to try crescent tables in the hopes that patients would find meal times more of a social experience and thus improve their nutrition. Research shows the tables allow small groups of patients to sit together in a way that encourages conversation and enables one staff person to feed more patients more easily. The Medical Unit will evaluate the tables once they are in place.

Sharon says the tide has changed on the unit. The team is identifying issues to be resolved, proposing solutions and sharing their ideas for ways to work differently. "I don't see myself as imposing change now which was the case when I first joined the team," notes Sharon. "When I think about the changes we have made which seemed so small at each turn, I realize we've implemented more aspects of the model of care than I thought."

Though the Medical Unit remains down five RNs despite intense recruitment efforts, Sharon has her sights set on opening more beds on the unit in the future. "Continuing to look at things differently, to implement strategies from the Model of Care Initiative and to look at different staffing mixes to meet our patients' needs will all play a role. We still have a way to go, but at least now with some of the changes we've made and as we continue to work as collaborative care teams, it's more of a possibility than ever."