Evaluation Framework
to Determine the Impact
of Nursing Staff Mix Decisions
A. Introduction

In 2004, representatives from the Canadian Nurses Association (CNA), the Canadian Practical Nurses Association (CPNA), the Canadian Council for Practical Nurse Regulators (CCPNR) and the Registered Psychiatric Nurses of Canada (RPNC) developed an evaluation framework to determine the impact of nursing staff mix decisions. The framework was based upon a literature review and was finalized after incorporating feedback from a national consultation (CNA, 2005). It will evolve with additional experience and research.

It is anticipated that this framework will enable employers to determine how effectively they are using their nursing resources. This project is one component of a larger initiative, funded by Health Canada, to further develop selected recommendations from the Canadian Nursing Advisory Committee’s final report, Our Health, Our Future: Creating Quality Workplaces for Canadian Nurses (2002).

B. Purpose

The purpose of this evaluation framework is to enable employers to determine how effectively they are using their nursing resources.
C. Basis for Evaluation Framework

1. Employers are accountable to make the best use of regulated nursing professionals, and to appropriately assign unregulated care providers, in the public interest.
2. Client\(^1\), nurse\(^2\) and system outcomes are affected by other health professionals and by unregulated care providers.
3. Effective use of nursing resources will typically be evidence-based.
4. Some processes are already in place to make nursing staff mix decisions.
5. Some tools for nursing staff mix decisions exist\(^3\), but are not widely used.
6. Using an evaluation framework is one part of a nursing staff mix decision-making process.
7. This evaluation framework will enhance the effective use of nursing staff mix decision-making tools.
8. Refinement of this evaluation framework will be ongoing, based on experience and research.

D. Principles

The following principles guide this framework for evaluating the impact of nursing staff mix decisions:

1. Client, nurse and system outcomes are central to the evaluation of nursing staff mix decisions.
2. Evaluation of the impact of nursing staff mix decisions is complex and requires a systematic and comprehensive approach using all of the components of this framework.
3. This evaluation framework recognizes and respects the value and contribution of each regulated nursing group.
4. This evaluation framework applies to all sectors and client populations.

E. Framework and Questions

The evaluation framework, developed as outlined in the following figure, is based on relevant literature pertaining to nursing staff mix decisions and their outcomes.

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1 In this document, the term client refers to the recipient of nursing care (individuals, families, groups, populations or entire communities) in all settings.
2 In this document, the term nurse refers to a registrant from a regulated nursing group. These comprise registered nurses, licensed/registered practical nurses and registered psychiatric nurses. This document refers to all practical nurses as LPNs.
3 Two such tools are Registered Nurses Association of British Columbia’s Decision-Making Tool for the Delivery of Nursing Services (2003) and Vancouver Island Health Authority’s Professional Staff Mix – Acute Care Data Collection Tool (2004). Others can be found in the literature.
Evaluation Framework to Determine the Impact of Nursing Staff Mix Decisions

**Structure and Processes Related to System/Environment**
- Technological, material, physical, human resources
- Clerical and support services
- Legislation
- Geography
- Physical environment
- Organizational culture
- Organizational policies
- Models of care delivery
- Nursing leadership
  - Policy influence
- Managers’ span of control

**Structure and Processes Related to Nursing Staff**
- RNs, LPNs, RPNs
  - Numbers
  - Availability
  - Productivity
  - Workload
  - FT/PT/Casual
  - Unregulated Care Providers
- Competencies
- Nursing leadership
  - Clinical
  - Managerial
  - Mentoring
- Education
  - Continuing competence
- Experience
  - Years of practice
  - Specialization

**Structure and Processes Related to Clients**
- Acuity
- Variability
- Complexity
- Number
- Identity
  - Individual
  - Family
  - Group
  - Community

**Nurse Outcomes**
(Including, but not limited to, the following)
- Improved quality of nursing work life, as indicated by, for example:
  - Reduced overtime
  - Reduced absenteeism
  - Reduced injury/illness
  - Reduced turnover
- Increased satisfaction
- Improved work life balance
- Optimal use of competencies
- Practices according to standards and code of ethics
- Improved use of evidence-based practice
- Improved participation in continuing professional development

**System Outcomes**
(Including, but not limited to, the following)
- Stable nursing workforce, as indicated by, for example:
  - Reduced overtime
  - Reduced absenteeism
  - Reduced injury/illness
  - Reduced turnover
  - Increased nurse recruitment and retention
- Sustainable costs
- Improved use of nursing and other human resources
- Appropriate use of nursing tools and technology
- Healthy work environment, as indicated by, for example:
  - Increased health of the population
  - Increased collaborative practice
  - Improved client access

**Client Outcomes**
(Including, but not limited to, the following)
- Timely access to nursing care
- Appropriate length of stay/service
- Increased independence
- Improved quality of life
- Improved quality of care, as indicated by, for example:
  - Decreased mortality
  - Decreased morbidity
  - Decreased adverse events
  - Decreased errors
  - Decreased readmissions
- Increased client safety
- Increased client satisfaction
- Continuity of care
Elements of the Framework

The following questions will assist in the application of this evaluation framework. Users may add other questions specific to their practice settings. Note that the evaluation framework also includes unregulated care providers.

Structure
1. Are client needs (acuity, complexity, variability and number) central to all nursing staff mix decisions?
2. Are nursing staff mix decisions consistent with legislative and regulatory requirements?
3. Are nursing staff mix decisions made by a nurse leader?
4. Is there a policy in place for ongoing evaluation of nursing staff mix decisions?
5. Are the roles and responsibilities of regulated nursing staff and other care providers articulated in policies and job descriptions?
6. Does a policy exist that provides for staffing contingency plans that anticipate crises and enable the management of required alterations?
7. Are there sufficient resources (i.e., time, administrative and technical support, etc.) to make nursing staff mix decisions?
8. Are there sufficient resources to support the implementation of the selected nursing staff mix (e.g., orientation, mentoring, continuing education)?
9. Are client and nurse safety considered in nursing staff mix decisions?
10. Is the physical environment considered in nursing staff mix decisions?
11. Do nursing staff mix decisions support the best use of all nursing resources?

Process
1. Do nursing staff mix decisions consider client outcomes relative to the model of care delivery?
2. Are the nursing staff mix decisions made, and the evaluation conducted, in consultation with other members of the nursing team?
3. Does the process used to make nursing staff mix decisions measure client acuity, complexity and variability?
4. Do nursing staff mix decisions allow flexibility in response to changes in client acuity, complexity, variability and number?
5. Does evidence support nursing staff mix decisions regarding workload, productivity, availability, number and employment status (full time, part time, casual)?
6. Do nursing staff mix decisions recognize the competencies and experiences of nursing staff (as individuals and as a group)?
7. Does staff have ongoing input into nursing staff mix decisions and the evaluation of those decisions?
8. Is the process used to make nursing staff mix decisions open, transparent and accountable?
9. Are the results from the ongoing evaluation used to continuously improve nursing staff mix decisions?
10. Do nursing staff mix decisions support the best use of all nursing resources?
11. Does the organization systematically monitor nursing-sensitive outcomes?
12. Do nursing staff mix decisions consider the skills and abilities of unregulated care providers?

**Outcomes**

**Clients**
1. Does the nursing staff mix help meet the identified nursing care needs of the client?
2. Does the nursing staff mix help clients reach their potential for recovery?
3. Does the nursing staff mix optimize nursing-sensitive outcomes?
4. Do clients express satisfaction with their nursing care?

**Nurses**
1. Are regulated nursing groups practising by their standards?
2. Are regulated nursing groups satisfied that their competencies are used appropriately?
3. Do regulated nursing groups express an understanding of individual and team roles?
4. Do regulated nursing groups express the ability to recognize and manage issues related to role and nursing staff mix?
5. Do regulated nursing groups express satisfaction that they are able to meet the clients’ nursing care needs?
6. Do regulated nursing groups function cooperatively and productively to meet client needs?

**System**
1. Do nursing staff mix decisions contribute to the recognition of the health care organization as a quality care provider?
2. Do nursing staff mix decisions contribute to the recognition of the health care organization as a healthy work environment?
3. Has there been a change in adverse events, including errors, linked to nursing staff mix decisions?
4. Do nursing staff mix decisions make the best use of resources?

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4 In this document, an *adverse event* refers to an unexpected and undesirable incident resulting in injury or death, that is directly associated with the process of providing health care to the client (Hébert, Hoffman, & Davies, 2003).
5. Are there cost savings related to reduced turnover, reduced absenteeism and reduced overtime that can be linked to nursing staff mix decisions?

6. Are there cost savings related to improved nursing-sensitive outcomes that can be linked to nursing staff mix decisions?

7. Does the nursing staff mix support alignment with overall nursing and system goals (e.g., improved population health, sustainable costs)?

8. Do nursing staff mix decisions allow timely access to appropriate health services?

9. Do nursing staff mix decisions increase the stability of the nursing workforce?

F. Definition of Terms

**Acuity**: “the degree of severity of a client’s condition and/or situation” (Registered Nurses Association of British Columbia [RNABC], 2003, 7).

**Complexity**: “the degree to which a client’s condition and/or situation is characterized or influenced by a range of variables (e.g., multiple medical diagnoses, impaired decision-making ability, challenging family dynamics)” (RNABC, 2003, 7).

**Nursing Intensity/Nursing Workload**: the amount of time, and mental and physical energy that nurses devote to various work-related activities and to direct patient care (Aiken, Sochalski, & Anderson, 1996; Blegen, Goode, & Reed, 1998; Blegen & Vaughn, 1998; O’Brien-Pallas, Irvine, Peereboom & Murray, 1997; Shamian, Hagan, Hu, & Fogarty, 1994; Sochalski, Aiken, & Fagin, 1997).

**Nursing Staff Mix**: the combination and number of regulated and unregulated persons providing direct and indirect nursing care to clients in all settings where regulated nursing groups (RNs, LPNs, RPNs) practice (CNA, 2003).

**Patient [Client] Outcomes**: the observable effects/results of nursing interventions or the care environment on patients. The focus is on attempting to determine whether the level of nursing staff was related to the number and/or frequency of adverse events (Blegen, et al., 1998; Blegen & Vaughn, 1998; Sochalski, et al., 1997).

**Satisfaction**: the perception that the expected care that is being given is at least adequate and safe. Satisfaction is looked at in terms of the patient and the nursing staff. (Blegen, et al., 1998; Sochalski, et al., 1997).

**Scope of Practice**: the range of services that a professional group is authorized to provide. Both legislation and education determine the scope of practice of a professional group, and they are obliged to practice in accordance with their professional code of ethics and set of professional standards (College of Registered Nurses of Manitoba, 2002).

**Variability**: “the degree to which a client’s condition or situation changes or is likely to change. Considerations include predictability, stability and patterns of change” (RNABC, 2003, 7).
References


