Nurse-patient Ratios in the Canadian Context

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Overview

Nurses in Canadian health care agencies are struggling to provide safe patient care and quality nursing services to the public in professional practice environments where there are no standards that define minimum staffing levels. This situation persists despite research that documents the impact of inadequate nurse staffing levels on patient outcomes, quality of care and patient safety, as well as the health of nurses. A 2004 report from CNA on staff mix reports that “research studies in Canada and the United States have demonstrated that a higher proportion of RN staffing levels is consistently associated with higher quality care, lower morbidity and mortality rates, better client outcomes and reduced adverse occurrences in acute, long-term care and community care.”

The nursing shortage in Canada has multiplied the circumstances where nurses are working with inadequate staffing. The nursing shortage is intensifying in part because some nurses are leaving the profession, frustrated with chronic short-staffing. Despite the existence of formal staffing plans and staff mix frameworks developed by collaboration between researchers and regulatory bodies to assist nurse managers to develop formal staffing plans, research indicates that staffing decisions at the unit level in Canadian healthcare agencies are primarily made on an ad-hoc basis.

As the Canadian Nurses Association (CNA)’s 2006 research summary on nurse staffing concluded: “While solid empirical evidence shows nursing staff mix has an impact on patient outcomes in acute care settings, this evidence has rarely been applied in practice settings.” The CNA summary also concluded that little is known about the effectiveness of nursing staff mix models, and nursing workload measurement systems often do not reflect true workload, staffing is not adjusted accordingly, and the process takes too much time to complete.

While staffing standards and regulatory requirements exist in other industries to protect the public, nursing services in acute, mental health, long-term care and community settings are

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4 Ibid.
delivered in an environment where there are no minimum standards established and enforced by employers, government, or other regulatory bodies. If a busy emergency department, critical care unit, or a long-term care facility is normally staffed with eight registered nurses, no regulations exist to protect the public to ensure adequate staffing is maintained at a safe level. Is that unit or facility providing safe care with staffing levels falling to six, four, or even two registered nurses? How and how often should that staffing decision be made, reviewed, and adjusted?

Professional standards only protect the public where an individual nurses’ competence or ethics is at issue, and can’t be relied on to ensure a minimum standard of patient care in circumstances where all nurses are competent, but simply overloaded. In the absence of regulation or enforceable professional standards, where can nurses and the public turn to ensure that the public receives a minimum standard of care, and that patient and public safety is maintained? Formal, mandated nurse-patient ratios are the answer to that question in several jurisdictions outside Canada. Could formal mandated nurse-patient ratios be the answer in Canada, and if so, how would they work, and how could they be implemented?

The dominant commentary regarding formal nurse-patient ratios from Canadian researchers and policy analysts either dismisses or cautions against formal nurse-patient ratios, but this commentary relies heavily on opinion rather than evidence. There are sound arguments regarding the limitations and shortcomings of mandated nurse-patient ratios which have been implemented in other jurisdictions, just as there are strong arguments and evidence about the positive impact of improved ratios on patient outcomes and nursing retention and recruitment in these jurisdictions. But, the debate about the pros and cons of mandated ratios in Japan, Australia and California (each with healthcare systems that are vastly different than Canada’s) will remain an “academic” one, until mandated nurse-patient ratios are tested in the Canadian context.

Of course, we must learn what we can from the experience of other jurisdictions. However, Canadian evidence and experience will provide the most powerful and persuasive arguments for Canadian nurses, employers and policy makers. Accordingly, there is an urgent need for more informed dialogue and applied research projects that implement and test minimum nurse-patient ratios in various Canadian nursing practice settings.

Towards a Better Workplace

A fictional case study

Jane Doe is a Registered Nurse on a 32-bed pediatric unit at Utopian General Hospital. She graduated two years ago. She applied to this unit specifically because her nursing professor told her that this agency was planning to institute formal nurse-patient ratios on a pediatric unit as a pilot project to solve a problem with high turnover and recurring patient safety issues. One year ago, she and other nurses on the unit, assisted by nursing practice staff from the provincial nurses’ union, held joint discussions with nursing management. They reviewed current staffing, including nursing support staff, acuity, occupancy rates, predictable absences, sick leave and overtime rates, and best-practice research evidence. Together with senior nursing leadership, they reached a consensus that baseline staffing on the unit should be increased by adding three full-time positions, producing a ratio of one Registered Nurse for six patients.
Six months of experience with the one to six ratio soon revealed improved patient outcomes, reduced turnover, overtime and sick leave. The one to six ratio was formalized in a letter of understanding between the nurses’ union and the employer. What Jane most appreciated was that the letter of understanding regarding the formal ratios specified that, when she was in charge on the unit, she had the authority to call in additional staff to replace someone who was absent or if acuity or admissions on the unit suddenly spiked. If no additional staff were available, she could contact her supervisor who would either provide additional staffing or authorize an immediate transfer of patients to another care area or facility to ensure the proper ratio was maintained.

The nurse manager was able to report to senior management that the cost of adding three full-time positions was largely offset by reduced turnover, orientation costs, reduced overtime and sick leave. As well, because the unit was fully staffed, in circumstances where discharges produced nurse-patient ratios that exceeded the formal ratio, nurses agreed to float by rotation to other units where they had both orientation and previous experience. In other circumstances where the unit was “over-ratio” but floating to other units was not required, nurses on the unit continued to work on an ongoing professional development project that focused on incorporating best practices related to medications and better discharge planning for patients and families.

A formal evaluation of the nurse-patient ratio project on pediatrics confirmed positive outcomes for the organization, patients and nurses, formal discussions have begun between Jane’s union and the Utopian General Hospital in order to implement formal nurse-patient ratios throughout the facility. Jane’s union has also commenced discussions with the Utopian Regional Health Authority about implementation of formal ratios in home care, mental health, public health and long-term care practice settings. Jane and her nurse manager have been asked to serve as resource persons during those discussions.

Several jurisdictions outside Canada have implemented formal minimum nurse-patient ratios. Formal, mandated nurse-patient ratio legislation was passed in California in 1999. To date, fourteen U.S. states have proposed some form of legislative action on nurse-patient ratios. In 2000, the Victorian Branch of the Australian Nursing Federation won mandated staffing ratios in all public sector hospitals. In 2006, the Japanese Nursing Association succeeded in implementation of formal nurse-patient ratios in Japanese Hospitals.\(^5\)

However, within Canadian healthcare agencies, nurse-patient ratios are primarily determined on an ad-hoc basis, rather than being guided by mandatory nurse-patient ratios, staff mix tools, or even the formal nurse staffing plans developed by collaboration between researchers and the Canadian Nurses Association. In Canada, in 2003, the Canadian Nurses Association developed principles to facilitate decision-making with respect to staffing and safe nursing care,\(^6\) which they describe to be applicable to any practice setting but not mandatory.\(^7\)

In 2004, the CNA surveyed senior nurse executives and reported that 83% did not use a staff-mix decision-making tool.\(^8\) (Note: staff mix refers to the number as well as the mix of regulated and unregulated nursing staff.) As well, in 2005, Dr. Gail Tomblin Murphy asked the question, “what mechanism of control over workload exists or can be developed that both respects nurses’ professional judgment and enables them to meet their professional standards of practice?” She concluded that it “is important to note that in most jurisdictions in Canada nurse staffing has historically been, and continues to be, determined in an ad-hoc manner.”\(^9\)

Heightened awareness of the link between patient safety and nursing staffing has led to continuing debate regarding the desirability of formal nurse-patient ratios, and at least one recommendation to implement minimum nurse-patient ratios:\(^10\)

“Nurse staffing is an important determinant of patient safety. There is evidence that registered nurse staffing is directly correlated with patient, nurse, and system outcomes. Registered nurse staffing has been measured in numerous ways. We believe that one operational term for nurse staffing, “patient:nurse ratio,” is easiest to translate into policy and practice. We realize that there are disadvantages to using this operational term. Ratios, for instance, do not reflect the changes in acuity level of patients or the varying skill levels and experience of nursing staff. We plan to address these limitations in our other recommendations.

We also realize that research evidence is lacking with regards to patient:nurse ratios in different practice settings, such as community practice, home care, and mental health. We believe, however, that it is important to recommend some baseline patient:nurse ratios where there is evidence to do so. We believe this is important as it establishes a professional standard and ideal of what research demonstrates is “best practice.”

Recommendation 1: Hospital inpatient units should strive for a minimum patient:nurse ratio of 4:1.

Where patient acuity is higher, such as critical care units, the patient:nurse ratio should not exceed 2:1.\(^11\)

“Nurse staffing is one of the few areas in health care in Canada where evidence is ignored in decision making.”\(^12\)

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\(^8\) CNA, CPNA, RPNC. (2004). Joint Evaluation Framework to Determine the Impact of Staff Mix Decisions, p. 3
A number of research syntheses (Baumann et al., 2001; Nursing Sector Study, 2005) and a systematic review (Lankshear, Sheldon, & Maynard, 2005) have identified the need for implementation of effective mechanisms for nurse staffing. Numerous think tanks and meetings have been held on the topic where participants have agreed on the important aspects of nurse staffing, considering research evidence and knowledge translation plans. Yet despite this activity, little or no policy or practice action has occurred. Although strong empirical evidence exists that the mix of nursing staff has an impact on patient outcomes in acute care settings, this evidence does not seem to be accepted into practice settings and be implemented by healthcare leaders and administrators. Nurse staffing is one of the few areas in health care in Canada where evidence is ignored in decision making.13

The Canadian Federation of Nurses Unions published a thorough examination of the issue of nurse-patient ratio in Canada in 2005, “Enhancement of Patient Safety through Formal Nurse-Patient Ratios: A Discussion Paper.” It recommended that the CFNU lead a collaborative process with stakeholders to set up pilot projects across the provinces and territories, that would test the establishment of formal nurse-patient ratios in all sectors of nursing service delivery.

The Canadian Federation of Nurses Unions, Health Canada, The Saskatoon Health Region, the Saskatchewan Union of Nurses and the Saskatchewan Ministry of Health are collaborating on a pilot project to test establishment of formal nurse-patient ratios in a Saskatoon acute care unit setting.

Moving Forward

Two dominant themes emerge in the published analysis and commentary in Canada regarding formal nurse-patient ratios. Both themes oppose or caution against ratios, but tend to rely on opinion rather than evidence.

“Blunt instrument”

The first theme echoed in various commentaries opposes the introduction of mandated nurse-patient ratios on the grounds that they are a “blunt instrument.” For example, the Canadian Nurses Association 2006 Research Summary “Nurse Staffing: How Effective are Nursing Staff Mix and Nurse-to-Patient Ratio Mechanisms in Improving Nurses’ Workloads?”14 reports the following Principle Finding:

“One potential negative effect is that nurses would be prevented from making independent decisions about nursing staffing.”

This conclusion is presented as evidence, although there are two questionable underlying premises here. The first premise is that nurses across Canada presently enjoy and exercise the right to make independent decisions about nursing staffing. Whether one is the nurse at the point of care, or the nurse manager, there is little reported evidence that Canadian nurses are currently exercising the right to make independent decisions about nursing staffing, which are improving nurse-patient ratios.

The second premise is that nurse-patient ratios would restrict decision-making ability and can’t be adjusted. This premise is presented in the CHSRF series Stories for Safety: *Sharing the evidence about nursing and patient safety*.\(^{15}\)

> “Mandatory ratios can’t be fine-tuned.”

Nurse staffing plans consider the type of unit and the needs of its constantly changing patients, the experience levels of nurses and other staff who work there, and which other professionals and support services the organization can provide.

In contrast, nurse-patient ratios assign staff based on how many beds are occupied. They don’t allow for important variations that affect care, workloads and safety, such as how sick the patients are, what other health professionals are on the care team, or what support there is, whether it’s technological or human resources, for that unit’s work in the organization overall.\(^{16}\)

This statement that “mandatory ratios can’t be fine-tuned” misrepresents the application of ratios in other jurisdictions, and is factually incorrect. It ignores the fact that legislated ratios in California, Australia and Japan are *minimum* ratios. Nothing prevents nurses or nurse managers from assessing acuity, experience and qualifications of staff, and other shifting factors to advocate for immediate allocation of additional staff. In fact, the California legislation also has a Patient Classification System (PCS) in place since 1996, which requires hospitals to have systems in place that determine what nurse staffing levels are necessary based upon the severity of illness for each patient. The PCS is to remain in effect under the current legislation and must be adhered to even if the ratios required by the PCS are more stringent than those specified in the current legislation (emphasis added).

In 2000, after the concept of mandated nurse-patient ratios stalled negotiations between the Victorian branch of the Australian Nursing Federation and employers, the issue was referred to binding arbitration. The Commission heard extensive evidence from nurses and their union about the merits of the proposed nurse-patient ratio system. They also heard extensive evidence from hospital executives about how staffing decisions were being made, and how effective those processes were in terms of patient safety and retention and recruitment. After a lengthy hearing, the decision of the national Australian Industrial Relations Commission resulted in mandated


\(^{16}\) Ibid.
staffing ratios in all public sector hospitals. While the ratios require an average of five nurses to twenty patients on medical/surgical units, “managers have the flexibility to assign some nurses more patients who are less intensely ill and some nurses fewer patients who have more intensive nursing needs” (emphasis added). The minimum ratios vary to meet the needs of different units and shifts. Healthcare institutions are categorized into different levels according to acuity of care, size and location. (The state government immediately made money available to cover the cost of the ratio requirements).17

“No evidence of effectiveness – more research is required”

The second dominant theme indicates the “no evidence – more research required” theme, as outlined by the Canadian Nurses Association Research Summary, “Nurse Staffing, How effective are Nursing Staff Mix and Nurse-to-patient Ratio Mechanisms in improving nurses’ workloads?”

“There is currently no evidence of the effectiveness of legislated nurse-patient ratios.”

“The pros and cons of standardizing nurse-to-patient ratios must be further examined before introducing such standards in Canada.”

These two conclusions present a daunting threshold to meet prior to the introduction and testing of nurse-patient ratios in Canada. There is evidence cited in this article that improved nurse-patient ratios enhance both patient outcomes and nursing outcomes. However, it is highly unlikely that we will be offered evidence regarding legislated nurse-patient ratios that would be relevant to the Canadian setting. As the authors of “Safety in Numbers: Nurse-to-Patient Ratios and the Future of Health Care” note, because of the nursing shortage and ever-increasing challenges in the volume and complexity of patient demands, “the ratio experiment in Victoria could not be conducted under what scientists describe as controlled conditions.”18

Research which attempts to document the impact of nursing staffing on nursing and patient outcomes must already control for a huge number of variables, including patient/unit/hospital/staff/ characteristics. Imagine trying to design a nurse-patient ratio research project which also adds the complexity of nurse and employer outcomes and attempts to contrast legislated ratios with non-legislated ratios or nurse staffing plans. It would also have to rely on the cooperation of a privately owned California hospital industry that has vigorously opposed the legislated ratios.

In any case, the debate in Canada is not about implementing legislated nurse-patient ratios. We are aware of no nursing union or nursing organization in Canada that is advocating legislated nurse-patient ratios. In fact, both Australia and California followed very different paths to formal nurse-patient ratios – although both relied on third parties (arbitrators or legislators) to hear

18 Ibid, p.148
extensive evidence from employers and nurses before mandating ratios. In Canada, given that most health services are primarily within the realm of the provinces and territories to deliver, we would expect to see some form of negotiated or arbitrated formal nurse-patient ratios, with legislation being an option of last resort to resolve the issue if negotiation or arbitration regarding formal ratios failed.

The Canadian Federation of Nurses Unions, as noted earlier, is advocating collaborative pilot projects to test formal nurse-patient ratios, in order to provide the evidence to inform the debate about whether or not formal nurse-patient ratios are practical, desirable and effective, compared to the “ad-hoc” staffing decisions that currently dictate nurse-patient ratios across Canada.

While we are debating whether there is credible evidence about the effectiveness of formal nurse-patient ratios in other jurisdictions, we must bear in mind that there is also no evidence to support either the effectiveness of current nursing staffing decision making in Canada, or for the effectiveness of nurse staffing plans, which are frequently proposed as an alternative to formal or mandated nurse-patient ratios.

Concerns about liability may be a powerful factor which underlies some of the negative commentaries about ratios. The article “Decision Making for Nurse Staffing: Canadian Perspectives” notes that “liability concerns would force some organizations to rely on the use of overtime, which can lead to higher costs and other repercussions.”

An institution’s failure to maintain a formal nurse-patient ratio that resulted in harm to a patient could indeed increase the risk of liability for the institution. However, a sound public policy argument could be made that such accountability is entirely appropriate, since having no minimum staffing standards improperly shifts the liability to individual nurses and patients. In an era where Canadian health care institutions are striving to improve patient safety and the quality of care, establishing minimum standards of staffing should be fundamental to establishing institutional accountability to patients and the public.

There is a third and more promising emerging theme in the Canadian commentary regarding nurse-patient ratios, which could be summarized as an openness to considering and testing a variety of potential solutions to determine appropriate workload for nursing in Canada. This position is summarized in the study and subsequent report “Decision-Making for Nurse Staffing: Canadian Perspectives” published in Volume 7 of Policy, Politics and Nursing Practice. The authors concluded that “A number of key themes emerged from the study that can form the basis for policy and practice changes related to determining appropriate workload for nursing in Canada. These include the use of (a) staffing principles and frameworks, (b) nursing workload measurement systems, (c) nurse-to-patient ratios, and (d) the need for uptake of evidence related to nurse staffing.”

The recently published book Safety in Numbers: Nurse-to-Patient Ratios and the Future of Health Care” by Suzanne Gordon, John Buchanan, and Tanya Bretherton (Cornell University

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20 Ibid. p. 261
Press) should be considered compulsory reading for those who wish to examine the impact of formal nurse-patient ratios in other jurisdictions. The book also contains an exhaustive record of the arguments and evidence regarding nurse-patient ratios, their impact on nursing retention and recruitment, and records the perspectives of nurse executives, nurse leaders and nurses at the point of care regarding life before and after implementation of nurse-patient ratios.

While it may seem counter-intuitive to be examining formal nurse-patient ratios as one of several potential solutions to determining nurse staffing in the current context (a deepening nursing shortage in Canada), perhaps the most persuasive argument in favour of the urgency of such examination is the following: “When nurses stop trusting hospital managers to make practical, concrete changes that allow them to do their work without risk of harm to patients or themselves, they either use their voices to change things for the better, or choose to exit from the hospital and even the profession.” 21

The authors of Safety in Numbers: Nurse-to-Patient Ratios and the Future of Health Care make another critical point about ratios, namely that the discussion of ratios can play a critical role in solving the broader nursing crisis by providing a new reference point for thinking about healthcare reform. The great power of ratios is that they put the issues of quality of service and quality of working life at centre stage.

Indeed, while nurses and their unions are offering the hand of collaboration and cooperation to implement and test and perhaps to negotiate formal nurse-patient ratios, progressive employers, researchers and policy makers would do well to consider and embrace that offer. Current evidence demonstrates that current staffing decisions are “ad-hoc”, and Canadian healthcare agencies essentially have no minimum staffing standards. Would we knowingly fly on an airline that did not have minimum standards of maintenance or staffing to ensure our safety?

Canadian citizens are depending on policy makers, government, employers and nurses to make responsible decisions that protect public and patient safety. Collectively, we may have to admit that the risks of not acting far outweigh the risks of acting to protect the interests of patients, the public, nurses and employers.