

Canadian Nurses' Perceptions of Patient Safety in Hospitals

Canadian Nurses Describe Their Perceptions of Patient Safety in Teaching Hospitals---A Wake Up Call!

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Abstract

The topic of patient safety within the health care system is receiving increasing attention. The Academy of Canadian Executive Nurses conducted a national survey on nurses' perceptions of patient safety, using focus groups from Academic Health Science Centres. Over a three month time frame, 22 organizations, and 33 focus groups comprised of 503 nurses provided responses to six questions regarding patient safety in hospitals. The study was designed as a preliminary fact finding initiative resulting in this descriptive report of the concerns as identified within the focus groups. With each issue identification, they were coded and grouped into 23 themes. Nurses overwhelmingly responded that the health care environment, in which they provide care, presents escalating risk to their patients. In particular, Workload/Pace of Work, Human Resources, Nursing Shortage/Staffing, Restructuring/Bed Closures, Patients/Clients, Systems Issues, Physical Environment and Technology/Specialization were themes emphasized as contributing to increased risk in patient care. Health care leaders must play a key role in developing strategies to address the issues nurses have identified and demonstrate a commitment to controlling the situation. This study encourages research into a more explicit understanding of the issues and identification of strategies to address patient safety in health care.

Do these comments sound familiar?

- "There is decreased/unavailable services to us such as housekeeping, maintenance, information services."
- "We don't know where to turn if there is a problem. Will anyone take us seriously and deal with it?"
- "The physical space is not large enough. The overcrowding leads to noise, breach of confidentiality and lack of privacy."

- "We adopt new technology into facilities not designed for it."
- "There is insufficient orientation of newly hired nurses and insufficient continuing education for ourselves."
- "Nurses feel their tolerance for change is 'maxed out' and that the pace is out of control."

Introduction

The topic of patient safety is receiving escalating attention. The Institute of Medicine (IOM) publication titled To Err is Human (1999) startled health care insiders and the general public by stating that 44,000 to 98,000 deaths occurred in one year in the United States due to errors. The IOM recommendations call for health care organizations to establish patient safety programs which are focused on patient safety.

Nurses comprise the largest health care professional group in the ongoing provision of health care. It is estimated that 75% of actual service delivery in hospitals is delivered by nurses (Lemire, 2002). As a majority provider of health services, these professionals have significant understanding of multiple risks patients face while hospitalized. Addressing the risks that this group identifies is paramount in order to put a "dent" in the adverse event/near miss situation. The better the understanding of the circumstances contributing to this high-risk reality within the health care clinical environment, the better appropriate solutions can be developed and implemented. Patient safety is a multi-pronged challenge. Many health care team members and the public will quickly point to problems with the system that contribute to increasing risk. A comprehensive analysis and strategic approach is essential to effectively address the situation. Dealing with our system and organization inadequacies one piece at a time, outside of an overall strategy, will be less than effective.

What is the perception of Canadian nurses about patient safety? Do Canadian nurses of teaching hospitals perceive that patient safety is an issue? Is the risk escalating? What are some of the factors contributing to this patient safety concern?

Listening to the perceptions of nurses about this important topic will contribute to our understanding of the extent of the patient safety problem and contribute to the identification of some of the next steps that are required.

Nursing leaders in Canadian teaching hospitals were interested in understanding the patient safety perceptions of nurses and what they might identify as some of the root causes contributing to the situation. Patient safety focus groups were conducted and nurses were asked whether there is escalating risk within the patient care environment. The response of the nurses was unequivocal. Nurses described the work environment as "chaotic" and "unsafe". The risk reality was seen as increasing.

Background

In April 2002, the annual national meeting of ACEN* (Academy of Canadian Executive Nurses) was being held in conjunction with ACAHO (Association of Canadian Academic Healthcare Organizations), CAME (Canadian Association for Medical Education) and other associated academic healthcare groups. The plenary theme was Patient Safety. To prepare for this national meeting nursing leaders from Canadian Academic Health Science Centres undertook focus group meetings with nurses from their centres. The results of the focus groups would provide descriptive data from Canadian nurses regarding their perception of patient safety.

Methodology

At 22 teaching hospitals, the nurse executive organized several focus groups with representation of nurses from various clinical units. The majority of the participants were Registered Nurses however a small number of Registered Practical Nurses also participated. The focus groups were conducted in the same three-month time frame. The interviews followed a structured question format to glean information on the nurses' perceptions. The questions were formatted to elicit information about the reality and scope of risk and safety concerns, the contributing factors and to obtain suggestions about some initiatives that could be taken to diminish risk. Table 1 summarizes the survey questions.

Table 1. Patient Safety Survey Questions

1. *Do you believe that our health care environment, the environment within which you provide care, presents greater risk to your patients?*
2. *If the answer to Question #1 is 'yes', please provide one example of this 'greater risk'.*
3. *What factors are contributing to that escalation of risk? Why is the situation worse today than a year ago?*
4. *What improvements have occurred within your area and hospital that have proved to decrease risk and enhance patient safety?*
5. *What steps should be taken in order to stop the escalation of the risk and control the situation?*
6. *Do you have any other relevant comments you would like to make?*

Of the 22 participating organizations, three organizations were located in the eastern region of Canada (Newfoundland, Nova Scotia and New Brunswick), 13 organizations were located in the central region (Ontario and Manitoba) and six organizations were located in the western region (Alberta, Saskatchewan and British Columbia). No focus groups were conducted in Quebec although a provincial report on this topic was submitted but not included in the analysis. A total of 503 nurses participated in these 33 focus groups. The nurses were assured about the anonymity of their comments.

If the nursing leader conducted several focus groups within her organization, these responses were combined such that one report was submitted on behalf of all the focus groups. The report of these question responses was subjected to a combination of coding via manifest and latent content. Initially two coders separately analyzed the content of two documents in order to interpret responses and determine the issue of focus. Two coders were used to establish the reliability of the coding scheme. Each issue or concern that was identified was coded after which it was grouped into a theme. While 23 themes evolved from the responses that were obtained, this article will highlight those with heaviest emphasis.

Results

Nurses overwhelmingly responded that the health care environment in which they provide care presents escalating risk to their patients. Nurses indicated that the risks were multifactorial. Figures 1 and 2 (see next page) summarize the 23 themes found in the study.

The analysis of the data revealed the number of organizations that cited each theme as contributing to patient risk. The percentages identified in graph and text with each theme explain the percentage of organization focus groups that identified that particular theme within their discussions, the frequency of that theme as being identified. The theme frequency is displayed within each graph.

In response to Question 1, Do you believe that our health care environment, the environment within which you provide care, presents greater risk to your patients? Canadian nurses responded in the affirmative.

Question 2 asked: If the answer to Question #1 is 'yes', please provide one example of this 'greater risk'. Question 3 followed: What factors are contributing to that escalation of risk? Why is the situation worse today than a year ago? The responses to both Question 2 and Question 3 had considerable overlap. Consequently, the frequency of the themes arising within each group, as outlined in Figure 3, include the responses to both of these questions.

Figure 1. Themes Identified by Organizations as Contributing to Risk

Themes

Physical Environment

The facility, physical issues, space issues, unsafe conditions, air quality, mobilization issues related to restricted/inadequate physical space.

Equipment

Any equipment used in patient care, beds, transportation equipment, condition of equipment, equipment for specific patient populations, availability of equipment, age of equipment, new equipment/technology compatibility within existing physical space.

Supplies

Any supplies used for patient care— availability, quality, sterilization, dressings, linen etc.

Systems Issues

Issues that were broader at the organization level, such as other departments, SPD, pharmacy, maintenance, housekeeping, information technology (computerized data bases), hospital policies such as smoke free environment, workload measurement systems.

Technology/Specialization

Issues regarding clinical knowledge and expertise needed in many areas of organizations. Issues regarding computerization.

Infection Control

Issues regarding hospital cross contamination, MRSA, infection rates, nosocomial infections and infectious disease in populations.

Restructuring/Funding/Bed Closures

Funding from government for health care, resources in the community.

Patients/Clients

Acuity, demographics of the aging population, level of needs, education needs, discussions regarding quality of life, coding decisions.

Communication

Communication between professionals, between professionals and client/family, between departments, between facilities and community organizations.

Early Discharge

Length of stay issues, time management of discharge planning and teaching, community resources and re-admissions.

Community Support

Issues regarding community health resources particularly those available post discharge.

Risk Management Issues

Issues identified within the steps to be taken to increase patient safety and decrease risk, which were specifically of a Risk Management nature.

Figure 2. Themes Identified by Organizations as Contributing to Risk

Themes

Workload/Pace of Work

Primarily staff: patient ratios, adequacy of staffing levels, turnover of patients, response times to clients, pace of work, contribution to nursing workload by allied/support staff.

Human Resources (excluding nursing human resource issues)

Issues regarding availability/hiring for the organization. Included support staff, physicians and allied health staff. Availability of staff for shift work/weekends.

Nursing Shortage/Staffing

Human resource issues specific to the nursing population. Proportions of inexperienced to experienced staff, turnover, changes in the nursing population, staffing issues.

Nursing Programs/Education of New Staff (basic nursing education and orientation)

Issues regarding university and college programs, length of clinical time for students, preparation time for the high acuity and specialization. Orientation and mentoring/preceptorship issues.

Education of Nursing Staff (continuing education of graduate nurses in the workplace)

Education opportunities, issues regarding increased technology and associated learning needs. Keeping knowledge current.

Management/Administration

Issues regarding leadership at the management, administration and senior management levels. Amount of support received, clarity of management structures and management turnover.

Practice Issues

Issues that were practice/routine of units/departments in the way they transferred patients, specific standards of practice, RN practice, LPN practice, physician practice, non-regulated health care worker practice.

Changes in Healthcare Culture

Primarily issues of a negative nature, affecting morale and the climate of dissatisfaction within healthcare.

Committees/Focus Groups/Pilot Projects

The formation of groups to examine issues contributing to risk, and to facilitate implementation plans.

Professional Development

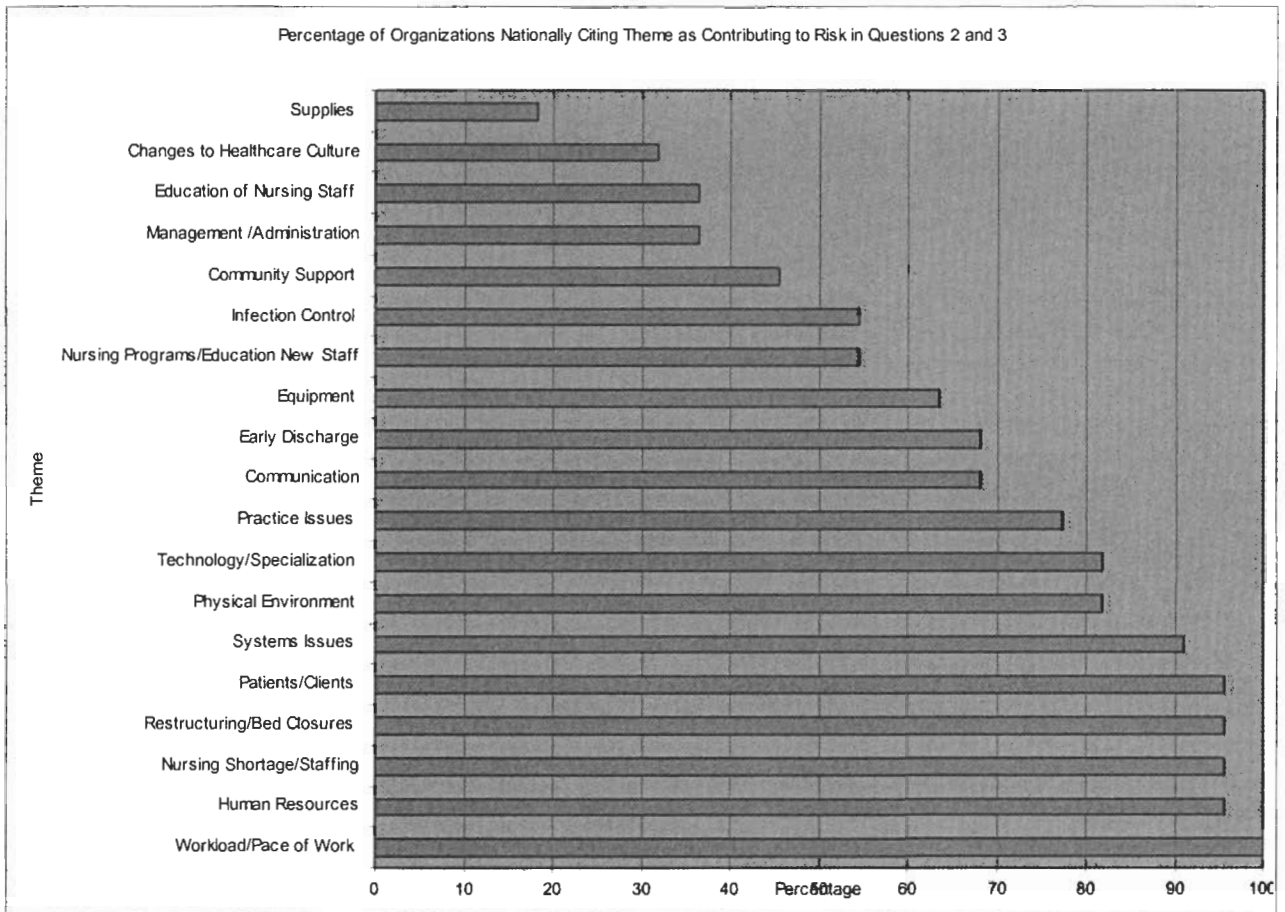
Issues that extended beyond standard education and competence based issues.

Quest for specialty knowledge, increased professionalism, leadership, and participation in nursing practice committees.

New Positions

New positions that were created within the organization to address elements contributing to risk.

Figure 3



This bar graph demonstrates that 100% of the focus groups identified that Workload/Pace of Work is contributing to increased risk within the patient care environment. Some of the comments included:

Workload/Pace of Work

- There are inappropriate staff to patient ratios resulting in high workload.
- We are stretched to the limit.
- There is an increased pace of work. Consequently we are less vigilant and cannot perform thorough assessments.
- The increased pace is resulting in more needle-stick injuries.
- The turnover of patients is too fast.
- We perform crisis management daily. The environment is chaotic.

The themes of Human Resources, Nursing Shortage/Staffing, Restructuring/Bed Closures, and Patients/Clients were referred to with consistent frequency (95.5%).

Human Resources:

- Staff shortages across multiple health care disciplines contribute to the risk situation.
- The inability to fill staff vacancies in nursing, allied health and support staff is impacting on availability of staff and overall fewer hands to provide the care.
- The health care workers are aging contributing to their declining capacity to continue with current workload and expectations.

Nursing Shortage/Staffing:

- We are losing experienced nurses and thereby there is a higher proportion of inexperienced nurses in hospitals.
- Inexperienced nurses are placed in inappropriate situations such as charge. These inexperienced nurses are less able to advise their colleagues (including the new medical students/residents).
- Nurses are overworked, exhausted, burned out, work too much overtime, and have difficulty getting vacation due to staffing problems.

Restructuring/Bed Closures

- Restructuring and bed closures have contributed to enforcing a decreased length of stay resulting in assembly-line care.
- There are more off-service patients due to an insufficient number of beds resulting in staff caring for patients for whom they are not accustomed. Frequent patient transfers between units have resulted.
- With the realignment of staff and programs which has occurred, the education needs of nursing staff continue to escalate yet the needs are not being thoroughly addressed.

Patients/Clients

- There is increased patient acuity and increased complexity of care needs.
- The client population is aging and the number of patients requiring care is increasing.
- Our clients/families have increased expectations of support and assistance.
- We experience an increase in violent behaviour of patients/families towards us.
- Families are assisting patients beyond their scope, putting themselves and the patient at risk.

Systems issues were referred to 90.9%. The themes of Physical Environment and Technology/Specialization attained a frequency of 81.8%. Comments offered by the nurses referring to issues within these themes included:

Systems Issues

- There are too many different drug suppliers, different packaging and labeling for the same drug.
- There has been a lack of response to previously identified ongoing risks. Our concerns are ignored.
- Hospital-wide policies such as a 'smoke free environment' results in patients leaving the hospital walls in order to smoke.... with a morphine pump in situ.
- Changes are implemented without adequate input of the users.

Physical Environment

- There is physical deterioration of our facility.
- The physical space does not accommodate new equipment/technology (lack of electrical outlets), inadequate storage room.
- Overcrowding in Emergency leads to noise; breach of confidentiality, lack of privacy and mobilization of patients and staff is compromised.

Technology/Specialization

- Use of technology and computers takes nurses away from the bedside, from direct patient care.
- The increased pace of change of technology escalates our education needs however these needs are not adequately being addressed
- Aggressive diagnostic and treatment protocols and invasive procedures are increasingly performed on a day-surgery basis.

One interesting theme identified was labeled 'Changes in Health Care Culture'. Thirty-one point eight percent (31.8%) of the organizational focus groups made comments that categorized into this theme. In response to why the situation is worse than a year ago and the factors contributing to the escalating risk, nurses said:

Changes in Health Care Culture

- There is great uncertainty, insecurity and lowered morale felt by nurses within organizations.
- If I can't get ahead, why bother?
- The negative perception of nursing is fueled by both media and nurses themselves.
- We are trying to cope with our sense of loss during downsizing and layoffs.
- We feel our tolerance for change is 'maxed out' and that the pace is out of control.
- Quality of life for patients is being viewed as a 'frill' instead of essential to quality health care.

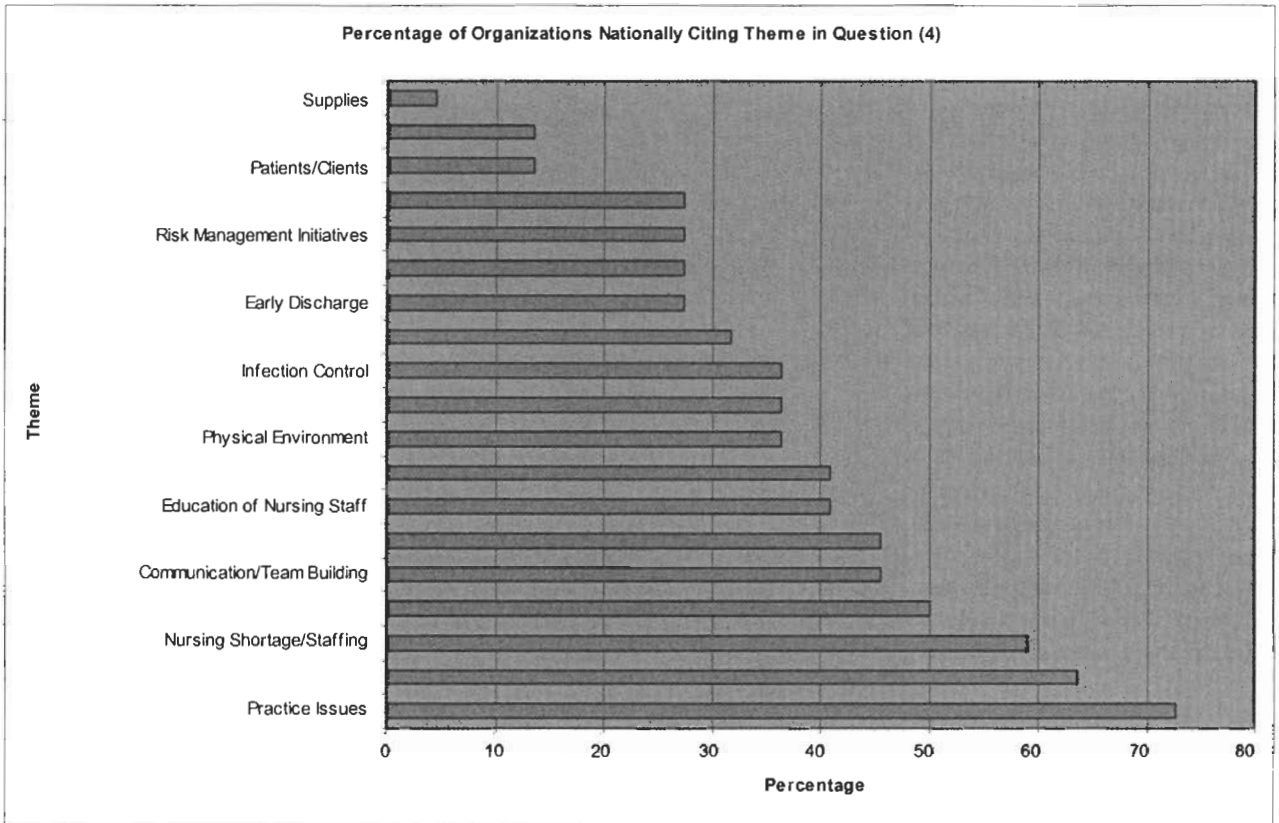
The fourth question posed was: What improvements have occurred within your area and hospital that have proved to decrease risk and enhance patient safety?

In response to this question the themes of Practice Issues (72.7%), Equipment (63.6%) and Nursing Shortage/Staffing (59.1%) (figure 4), In many of the focus groups, some nurses were unable to identify improvements that had been implemented. While a number of comments were made, the overall quantity of statements in response to this question was exceedingly low compared to the other questions. Comments related to improvements included:

Improvements:

1. Promotion of best practice guidelines, through organizations such as RNAO" is positive.
2. Temporary closure of beds if acuity is unmanageable is helpful.
3. Care maps contribute to control of risk.
4. Improved communication among care teams has been an improvement.

Figure 4



5. Some of our equipment is more safely designed. For example, the IV pumps have locking mechanisms.
6. Use of electric beds which position low enough for patients to easily get out of bed is a good safety feature; these beds are also better for patients who tend to climb out of the bed.
7. Increasing use of sitters and security personnel for patients at risk of falls/injury and with unattended children has been important.
8. There is a decreased number of agency staff being utilized.

Question 5 asked: What steps should be taken in order to stop the escalation of the risk and control the situation?

As illustrated in the bar graph (figure 5), steps that nurses suggest should be taken in order to control the escalation of the risk were predominantly aligned with the themes of Nursing Shortage/staffing (72.7%), Practice issues (68.2%) and Education of Nursing Staff (59.1%).

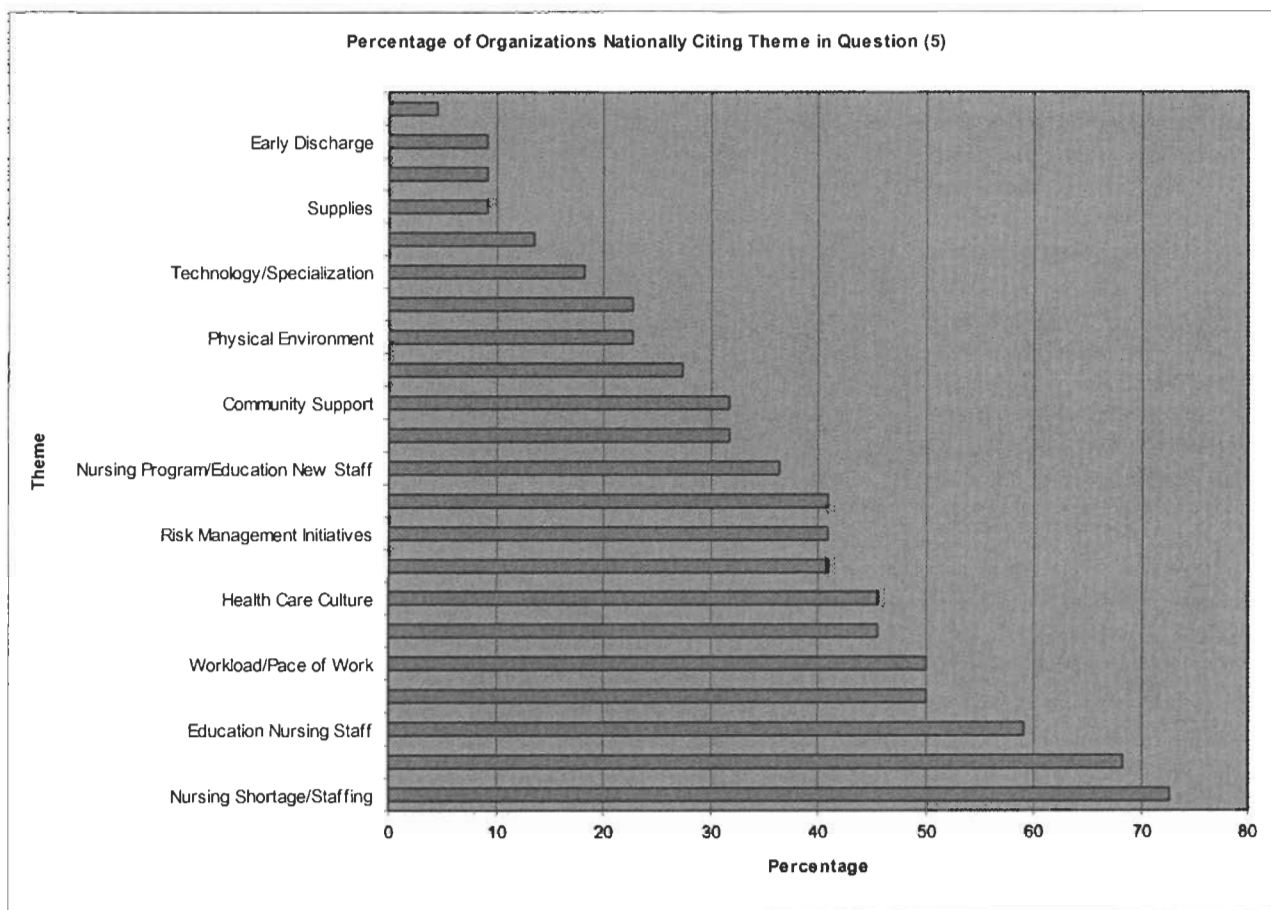
Comments of suggested improvements to control the risk included:

- Increase the ratio of RN staff per client population through hiring.
- The retention of experienced nursing staff is key to stabilizing the workforce. If this is addressed staff turnover will reduce.
- Double shifts/overtime should be stopped.
- Ensure process is put in place to educate staff when new technology, equipment and practice changes are introduced.

Limitations of the study

This study was designed as a preliminary fact finding initiative that is a descriptive report of the concerns as identified within the focus groups. The manner in which the focus groups were led, or the background of the facilitator, may have influenced the response to the questions causing discussion to center on one particular theme more than others. Although one focus group may not have repeated an issue raised by another focus group, it does not mean it is any less salient. The repetition of issues does not necessarily indicate the importance of the topic.

Figure 5



Discussion

From the themes and quotations extracted from the rich descriptive material that emerged from the focus group interviews it is clear that nurses make links between staffing levels and patient outcomes. Many studies and some recent reports (Reed, Blegen & Goode, 1998; Rowell & Miholland, 1998; Kovner & Gergen, 1998; Lichtig, Knauf, & Miholland, 1999; Aiken, Clarke & Sloane, 2000; Steinbrook, 2002) suggest a relationship between staffing levels and the quality of care and/or patient outcomes.

Although additional research is required to establish a strong empirical link between nurse staffing and differential mortality (Reed et al., 1998), there is some compelling evidence linking the quality of nursing care and mortality rates (Aiken, Sochalski & Lake, 1994). A yet unpublished systematic review of the magnet hospital research notes definitively that mortality rates in hospitals with work environments that retain nurses have lower mortality rates (Langford & Moher, 2001).

There is increasing research noting the impact of workload, staffing levels and working conditions on quality of care and adverse events. In a recent publication titled

‘Nurse-Staffing Levels and the Quality of Care in Hospitals’ (Needleman, Buerhaus, Mattke, Stewart & Zelevinsky, 2002), the authors conclude that a higher proportion of hours of nursing care provided by registered nurses and a greater number of hours of care by registered nurses per day are associated with better care for hospitalized patients. A recent study in *The American Journal of Infection Control* (Clarke, Rockett, Sloane & Aiken, 2002), noted that 22 U.S. Hospitals, all with reputations for excellence, found that poor working conditions and high workloads were associated with 50-200% increases in needle stick injuries and ‘near-misses’.

The many complex environmental factors are in fact broad systems in which identification of the precise structural and process variables becomes difficult as noted by Pierce (1997). In our survey nurses’ descriptions mirrored the complexity of the work environments in which they practice. In reviewing the themes of this complexity it follows that it is critical to identify solutions that consider the entire situation and cautiously apply single solutions.

Quality Practice Environment

Everyone in the health care industry from accreditors to insurers is catapulting towards systematic reviews and systematic solutions for risk aversion and a zero threshold for sentinel events. It is increasingly clear within the literature and now the expression of nurses themselves that the pillars of hospital infrastructure (human and physical) continue to weaken. Repair or replacement of the system is required. Despite definition of quality practice environments, for example those described by the College of Nurses of Ontario or the magnet hospital work, the system decision-makers are slow to respond, or respond with one small change at a time which results in minimal impact.

The CNA recently coordinated a session with 12 national nursing organizations and identified six attributes of a healthy workplace: control over workload, leadership, control over practice, support and recognition in the workplace, professional development system, innovation and creativity. (Background paper prepared by Norma Freeman, Workshop on Worklife Indicators for Nurses in Canada, CNA, April 2002.) These patient safety nurses' focus group results support the importance of these elements.

Many health care leaders philosophically agree about the importance of a healthy work environment and know the strategies to address the situation. Nevertheless, change is slow, too slow, to improve this work environment. Political decision-making around health care resources in Canada, the distribution of internal resources and an unstable demographic shift in nursing has put nurses in an untenable position. Mitchell and Ferguson-Pare (2002) describe this as "moral distress" in their work in which nurses also describe the gap between the care that they know and want to do and the available resources. The CNA states that nurses have an obligation to their clients to "demand practice environments that have the organizational and human supports necessary for safe, competent and ethical nursing care." Demanding is one thing, achieving another. The current environment is fertile ground for cultivating risk.

Restructuring and reinvestment, impact on support

Throughout the past decade, massive restructuring has been underway in order to find a more cost-effective way to deliver health care. At the point of care, there was an attempt to minimally reduce service. However, funds were removed from support departments (such as housekeeping), there were reductions in funds to replace and repair capital equipment and fewer funds available to maintain the physical infrastructure of the facilities. The result? Nurses found, and continue to find, themselves in a situation with less and less support to enable them to provide quality patient care and less and less well functioning equipment with which to perform their work. Comments about escalating workload and insufficient support have echoed throughout the country.

Solutions/Improvement Identified by Nurses

When the focus group nurses were asked to provide examples of some improvements that have occurred to decrease risk and improve patient safety, in many groups there was a lengthy pause before any response. Although some improvements were identified, they were few in numbers. This could mean several things. It may be that since the focus of the questioning was on risk and problems, perhaps 'switching gears' to ask about improvements was an awkward 'switch'. It may indicate that staff is unaware of improvements being made and communication within the organization should be improved. It may indicate that there are an insufficient number of improvements to make a difference and therefore they are not noticed at all. Nevertheless, organizations should ensure communication is effective as improvement strategies are identified and implemented.

Definitive strategies to address the nursing shortage/staffing situation must be critically addressed, internally and externally. Nurses are gravely concerned about this reality and the impact on quality of patient care. While the ACEN members are involved in many of the strategies, our nurses are seeing minimal positive impact in their practice environment.

The heavy workload and fast pace within hospitals is a concern of nurses across Canada. Factors perceived to be contributing to this reality include staffing levels, shortened length of stay of patients resulting in more care provided in shorter length of time as well as resulting in a fast turnover of patients, and inappropriate staff to patient ratios. Workload must be monitored and controlled. Many of the workload measurement systems currently in use do not adequately reflect the reality of the nursing workforce environment. If workload is such that the standard of care is compromised resulting in increased risk to the patients, then staffing levels must be reevaluated, new models of care provision designed, as well as control of patient volume (close beds or control throughput such that occupancy levels drop) must be considered.

Restructuring of the health care system and within organizations is seen by these nurses as a factor that has contributed to risk escalation. Reductions in budgets has led to fewer resources, insufficient number of inpatient beds resulting in bottlenecks in emergency departments, cancelled surgery and delayed admission for tests and, frequent bed moves/transfers of patients. Nurses identify these concerns yet feel powerless to improve the system. The best they feel they can do is cope within the existing reality and tolerate the inadequacies. The instability created by restructuring must be acknowledged as contributing to patient risk. Attempts must be made to control further restructuring. Every change has the potential to increase risk. Some stability is essential.

Control of placing patients on off-service wards must be corrected. Within our hospital environments (from which the majority of focus group participants worked) the high occupancy rates have led to this off-service problem. Can we tolerate this any longer...the risk to the patients and also risk to the health care team? This is only one minute improvement identified but an example of a tangible strategy to control risk.

The nurses identified the need to improve support services including clerical staff, housekeeping support, preventive maintenance of equipment and equipment replacement, as well as physical environment improvements. These will have a major impact on easing the stress on nurses and decreasing patient risk. Review of the adequacy of staffing within the entire professional and support team—physicians, social workers, physiotherapists and so on is necessary. Over the past decade support has been stripped away from both human and physical resources. The current barometer is telling us that we have gone too far.

For discussion purposes in this article, the focus has been on the themes most frequently cited. However, there is a wealth of information within all themes including the themes of management/administration and health care culture. The themes with less frequent responses may provide identification of impact factors less obvious yet equally or more important.

Conclusion

Developing a coordinated national strategy to further understand and address the patient safety risks in healthcare is paramount. The current hospital environment within which nurses provide care is perceived as one of increasing risk to patient safety. The stress and frustration that professional nurses display and their sincere concern about the impact on the quality of patient care is an issue we must all acknowledge. It will be difficult to recruit and retain nurses unless the situation is improved through a comprehensive national strategy complemented by strategies within every health care organization. While this study focused on nurses' perceptions of patient safety, other health care professionals and support staff may echo some of the identified concerns. In addition, an environment, which places our patients/clients at increased risk, is, in turn, placing our staff at increased risk. We have a duty and responsibility as health care leaders to address this situation in a coordinated fashion. Some strategies will be organization specific. Others must be developed and coordinated nationally in order to have optimal impact.

Within the coordinated strategy, development of a patient safety culture within our health care system and within our organizations is fundamental. The National Steering Committee on Patient Safety will be issuing its report September 2002. The recommendations of this committee will be complementary and enabling as patient

safety initiatives progress.

Investing in infrastructure is critical. The current reality of near misses and escalating risk is very expensive to our system and organizations in ways that are difficult to measure. Government and boards must look beyond the short-term investment. Once strategies to decrease risk are identified and additional funding provided, in a few years the impact of increasing safety will be demonstrated. The saving of costs related to errors and near misses, a more satisfied staff resulting in improved retention and recruitment and other outcomes will result in more responsible use of the health care dollar.

With great consistency, the nurses who participated in these focus groups were grateful to have been asked to participate in this initiative and to be heard. Some nurses said 'thank goodness someone is interested in our concerns and is listening'. It is now the responsibility of administration/boards/governments and health care associations to demonstrate they have heard this reality. Combining this feedback with other patient safety information that is evolving from other sources including research, will lead to definitive strategies to address the escalating risk in our patient care environment.

The authors acknowledge that there are many excellent initiatives occurring within 'pockets' throughout the country. Building on these while developing a comprehensive coordinated strategy will ensure optimum impact.

The health care environment within which our health care team provides care is not sustainable in its current situation. Definitive short term, medium term and long-term solutions to control risk are essential.

Ongoing Research Implications

This study focused on nurses' perceptions of risk and patient safety. Using a more rigorous methodology nurse focus groups might be conducted yielding results of even greater value. In addition, expansion of the focus group approach to other health care professionals in understanding the problem and identifying solutions would be valuable.

A corollary to that of patient safety is safety of our nurses and safety of all health care team members. If there is escalating risk for the patients, in turn there is also increasing risk to the health care team. If poor equipment increases risk to patients, this same poor equipment places our staff at risk. If staffing is inadequate, that risk to patients also imposes risk on nurses by putting them into a situation of providing care when their standards may become compromised. Fatigue, stress and burnout of the nurses is an outcome. The broader topic of patient and health care team safety go hand in hand as the situation is assessed and strategies developed.

It is hoped that this study triggers research into more explicit understanding of the issues and identification

of strategies to address the patient safety issues.

The teaching hospital nurses of Canada who participated in these patient safety focus groups have provided us with a very loud and clear Wake-Up call about the status of our patient care environments. The first step to addressing any problem is awareness of its existence. It is critical that the nursing leaders of Canada play a key role in participating in developing strategies to address the issues that nurses within their organizations are identifying; that health care leadership seriously acknowledge and demonstrate their commitment to addressing the situation.

On behalf of the nursing leadership of the Academic Health Science Centres in Canada, we thank all Canadian nurses for your ongoing commitment and care to your patients, clients and their families. Specifically to those nurses who participated in these focus groups, thank you for your openness and honesty.

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