

Nurses' Perspectives on the Geriatric Nursing Practice Environment and the Quality of Older People's Care in Ontario Acute Care Hospitals

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Abstract

Background: Cultivating hospital environments that support older people's care is a national priority. Evidence on geriatric nursing practice environments, obtained from studies of registered nurses (RNs) in American teaching hospitals, may have limited applicability to Canada, where RNs and registered practical nurses (RPNs) care for older people in predominantly nonteaching hospitals.

Purpose: This study describes nurses' perceptions of the overall quality of care for older people and the geriatric nursing practice environment (geriatric resources, interprofessional collaboration, and organizational value of older people's care) and examines if these perceptions differ by professional designation and hospital teaching status.

Methods: A cross-sectional survey, using Dillman's tailored design, that included Geriatric Institutional Assessment Profile subscales, was completed by 2005 Ontario RNs and registered practical nurses to assess their perceptions of the quality of care and geriatric nursing practice environment.

Results: Scores on the Geriatric Institutional Assessment Profile subscales averaged slightly above the midpoint except for geriatric resources which was slightly below. Registered practical nurses rated the quality of care and geriatric nursing practice environment higher than RNs; no significant differences were found by hospital teaching status.

Conclusions: Nurses' perceptions of older people's care and the geriatric nursing practice environment differ by professional designation but not hospital teaching status. Teaching and nonteaching hospitals should both be targeted for geriatric nursing practice environment improvement initiatives.

Keywords

geriatric care environment, hospital nurses, older people, quality of care

Background and Purpose

Canadians aged 65 and older represent only 14% of the population (Statistics Canada, 2011), but account for 40% of in-patient hospital days (Canadian Institute for Health Information [CIHI], 2011a). In addition to their acute illnesses or injuries, most (55%–98%) older people who are admitted to hospital have multiple concurrent chronic conditions, such as dementia, and heart and respiratory diseases that require complex health-care management (CIHI, 2011b). This population is at risk of experiencing adverse complications, including

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functional decline (Gill, Camacho, & Poss, 2011), falls, pressure ulcers, and delirium, which prolong hospital stays and increase the cost of care (Bail et al., 2015). Consequently, the care of older people with complex health needs represents the “core business” of hospitals (Mezey, Boltz, Esterson, & Mitty, 2005). This trend is likely to continue given the rising prevalence of chronic conditions in an aging Canadian population (CIHI, 2011b).

Cultivating hospital environments that support older people's care has become a national priority in Canada, evidenced by the evolution of Senior- or Elder-Friendly Hospital initiatives in many regions (Born, Yiu, & Tierney, 2014). Because nurses represent the largest health-care group providing 24-h bedside care to older hospitalized people (Institute of Medicine of the National Academies, 2008), nurses' perspectives on what they need to provide care to this patient population has gained considerable attention.

Kim, Capezuti, Boltz, and Fairchild (2009) identified that nurses need specific environmental supports to provide care to older hospitalized people and their families. These environmental supports, which include geriatric resources, interprofessional collaboration, and organizational value of older people's care, predicted the overall quality of care for older hospitalized people and their families in several studies (de Almeida Tavares & da Silva, 2013; Kim et al., 2009). Because all of these studies were conducted in the United States using convenience samples of registered nurses (RNs), their results may not be generalizable to Canadian hospitals, where registered or licensed practical nurses (RPNs) also provide bedside care to older people. Given that RPNs are prepared to provide care to stable patients with predictable conditions (College of Nurses of Ontario, 2014), they may not have the same perspectives as RNs on their practice environments.

Furthermore, prior studies on the geriatric nursing practice environment (GNPE) were all conducted in NICHE (Nurses Improving Care for Healthsystem Elders) affiliated hospitals. NICHE is a consortium of health-care sites that receive comprehensive geriatric practice supports and resources from the national NICHE office at the College of Nursing at New York University (Capezuti et al., 2013). Affiliated sites require “the financial resources and infrastructure to participate in NICHE” and, thus, tend to be large, teaching hospitals (Capezuti et al., 2013, p. 205). Compared with teaching hospitals, nonteaching hospitals have fewer resources, including less equipment and specialized health-care services (Bornstein, 2015; Frize, 2013). Consequently, the results of these studies may have limited applicability to the Canadian context, where nurses provide care to older people admitted predominantly to nonteaching hospitals (Canadian Institute for Health Information, 2014).

Although hospital characteristics, such as type of hospital unit, payer mix, and hospital teaching status were not associated with nurses' perceptions of the GNPE in studies conducted in U.S. NICHE hospitals (Capezuti et al., 2013; de Almeida Tavares & da Silva, 2013), there is some evidence to suggest that hospital teaching status may be associated with the GNPE in Canadian NICHE hospitals. In the only Canadian study conducted on the topic, McKenzie, Blandford, Menec, Boltz, and Capezuti (2011) found nurses' perspectives on the GNPE to be significantly more positive in two large teaching hospitals than in four small nonteaching, NICHE hospitals in Manitoba. It is difficult to interpret the clinical significance or utility of these results because the study did not include nurses working in large, nonteaching hospitals, where the majority of Canadian nurses practice (Canadian Institute for Health Information, 2014), nor did it report effect sizes that quantify the magnitude of these differences in perspective.

To build on and expand this body of knowledge, we surveyed a randomly selected sample of nurses (RNs and RPNs) working in Ontario hospitals on their perspectives on the quality of the older people's care in their hospitals. The specific aims were to (a) describe nurses' perceptions of the overall quality care provided to older people and their families, and the three geriatric nursing practice environmental supports (geriatric resources, interprofessional collaboration, and organizational value of older people's care) and (b) examine if these perceptions differ by nurses' professional designation and hospital teaching status.

Methods and Procedures

Design

The data were obtained from a large cross-sectional survey that used Dillman's tailored design (Dillman, Smith, & Christian, 2009). The survey was approved by the research ethics board of York University and distributed in 2012. The survey invited nurses to complete subscales of the Geriatric Institutional Assessment Profile (GIAP) to measure their perceptions of the quality of care and their practice environments as well as provide their employment and demographic information.

Nurses whose names were randomly selected from the College of Nurses of Ontario (CNO) database were mailed information describing the study as well as a prenotification letter indicating that they would receive a survey. We then mailed the survey containing the GIAP subscales, accompanied by a cover letter explaining the importance of nurses' perspectives and their rights as research participants. We sent a postcard within 1 week thanking nurses who had already responded and reminding nonresponders about

completing the survey. Nonresponders received up to two reminders by way of a cover letter and a replacement survey that contained a prestamped return envelope, 2 to 4 weeks later.

Sample

RNs and RPNs who work on the in-patient units or emergency departments of acute care hospitals were eligible to participate in the study. The sample was randomly selected from the CNO database, using a proportional stratified random sampling strategy. In collaboration with CNO, potentially eligible RNs and RPNs were identified and stratified to form the sampling frame. The stratum was defined by the distribution of RNs (72%) and RPNs (28%) who met the study's eligibility criteria, as calculated by CNO's statistical service department for this study. The eligibility criteria were operationalized by the CNO practice employment definitions in the categories of status, practice location, sector, subsector, primary area of practice, position in nursing, and consent to release home address for research purposes. Nurses were eligible to participate if they were registered in the CNO as active status; their practice location was Ontario; they worked in the hospital sector and acute subsector; their primary practice area was medicine, surgery, geriatrics, emergency, or critical care; their position was staff nurse; and they had consented to release their names for research purposes.

Applying Cohen's (1992) criteria, a sample of 1,172 was needed to uncover small differences between the two groups representing professional designation (RNs vs. RPNs) and hospital status (teaching vs. nonteaching), setting β at .80 and $p \leq .01$ (Cohen, 1992). The accrued sample of 2,005 provided statistical power to detect a significant professional designation-by-hospital status interaction effect.

Measures

The GIAP subscales used in this study have been content validated and used extensively in previous studies; they demonstrated factorial validity, internal consistency reliability, and test-retest reliability (de Almeida Tavares & da Silva, 2013). In the study sample, all of the subscales had Cronbach alphas greater than .80. The subscales require the selection of one of five response options, with high scores reflecting high levels on the respective variable (i.e., high overall quality care, geriatric resources, interprofessional collaboration, and organizational value of older people's care).

Overall quality of care was measured by the aging-sensitive service delivery subscale of the GIAP (Capezuti et al., 2013). It consists of 10 items (e.g.,

individualization of care, continuity of care across units and settings) assessing nurses' perceptions of the care that older people and families receive at the primary hospital in which the responding nurses work. Scores range from 10 to 50.

Geriatric resources were measured by the GIAP's geriatric resource availability subscale. The subscale contains eight items on the extent to which the lack of human and material resources (e.g., specialized services and equipment for older people, economic pressures to limit treatment or length of stay, staff shortage or time constraints), interfere with nurses' ability to provide care to older people (Capezuti et al., 2013). Subscale scores can range from 10 to 40.

Interprofessional collaboration was measured by the GIAP's capacity for collaboration subscale. It contains three items assessing nurses' perceptions of the interprofessional team's "knowledge of geriatric care, use of geriatric protocols, and the degree of conflict" (Capezuti et al., 2013, p. 201).

Organizational value of older people's care was measured by the GIAP's institutional values regarding older adults and staff subscale. The seven items assess nurses' perceptions of "respect for the rights of older adults, involvement of older adults and families in decision-making, support of nurses' autonomy and professional growth" in providing care to older people as well the extent to which administrators work with clinicians in solving older people's problems (Capezuti et al., 2013, p. 201). Scores range from 7 to 35.

Demographic variables included professional designation (RN vs. RPN), age, sex, highest level of education obtained in nursing, total years of nursing experience, years of nursing experience at their primary hospital, primary area of practice (e.g., medical unit), hospital teaching status (nonteaching vs. teaching based on membership in the Council of Academic Hospitals of Ontario), size (<100 beds or ≥ 100 beds), and Local Health Integrated Network region (LHIN) of the primary hospitals in which nurses worked.

Analysis

Descriptive statistics were used to characterize the sample in terms of average standing on all variables. Preliminary analyses included tests of the assumptions of the planned inferential statistical tests and contingency analyses to examine if the distributions of RNs and RPNs differed by hospital teaching status. In situations where the distributions of RNs and RPNs differed by hospital teaching status, we conducted either one- or two-way ANOVAs to compare the variables by nurses' professional designation (RN vs. RPN) and hospital teaching status (teaching vs. nonteaching) and their interactions.

Results

Descriptive Results

The survey response rate was 55%, with a total sample size of 2,005 nurses working in 148 hospitals in Ontario. In addition to characteristics reported in Table 1, the average survey respondent was female ($n = 1,884$;

Table 1. Personal and Professional Characteristics of Survey Respondents ($n = 2,005$).

Characteristic	n^a	%
Professional designation		
RN	1,439	71.9
RPN	561	28.1
Total years of experience in nursing		
Less than 2 years	151	7.7
2 to 5 years	287	14.7
6 to 10 years	307	15.7
11 to 15 years	220	11.3
16 to 20 years	254	13
21 to 25 years	255	13.1
Greater than 25 years	480	24.6
Primary area of practice		
Emergency department	362	18.5
Medical unit	643	32.9
Intensive care, critical care, or coronary care unit	432	22.1
Surgical unit	402	20.5
Other	118	6.0
Highest level of education in nursing		
RPN Diploma	561	28.1
RN Diploma	985	49.3
Baccalaureate degree	445	22.3
Master's degree	8	0.4

Note. n = sample size; RN = registered nurse; RPN = registered practical nurse.

^aTotals for each variable do not add to 2,005 because missing values were excluded from calculations.

94.9%), aged 45.6 ($SD = 10.8$) years and had worked at their hospital for a median of 11 years (range 1–44 years). Respondents worked predominantly on the medical ($n = 643$, 32.9%) and intensive, critical, or coronary care units ($n = 432$, 22.1%) units of large ($n = 1,704$, 87.4%) nonteaching ($n = 1,345$, 69%) hospitals. Most participants worked in hospitals located in the Toronto Central LHIN ($n = 252$, 12.9%) followed by the Hamilton Niagara Haldimand Brant ($n = 205$, 10.5%), South West ($n = 197$, 10.1%), Central East ($n = 194$, 9.9%), and Champlain ($n = 194$, 9.9%) LHINs. Mean scores on the GIAP subscales clustered slightly above the midpoint, with the exception of those on the geriatric resource availability subscale which averaged slightly below the subscale midpoint (Table 2).

Preliminary Results

Preliminary analyses identified significant differences in the distribution of RNs and RPNs by hospital teaching status (χ^2 (1, $N = 1,946$) = 119.45, $p = .00$); 61.8% of RNs and 87.3% of RPNs worked in nonteaching hospitals.

The assumption of homogeneity of variances required for two-way ANOVA was met for the quality of care, $F(3, 1936) = .81$, $p = .49$, and two of the three GNPE variables, including capacity for collaboration, $F(3, 1931) = .54$, $p = .66$, and organizational value of older people's care, $F(3, 1937) = .26$, $p = .86$. The assumption of homogeneity was not met for geriatric resource availability, $F(3, 1934) = 3.22$, $p = .02$; however, it was met for one-way ANOVAs to test the main effects of professional status, $F(1, 1990) = .63$, $p = .43$, and hospital teaching status, $F(1, 1940) = 3.73$, $p = .054$, separately. Accordingly, one-way ANOVA was used to compare geriatric resource availability by professional status and hospital teaching status.

Inferential Results

For overall quality of care, only the main effect of professional status was significant, $F(1, 1936) = 19.94$, $p = .00$,

Table 2. Mean Scores on Relevant GIAP Subscales by Professional Designation and for Total Sample.

Subscale	RNs		RPNs		RNs and RPNs	
	M	SD	M	SD	M	SD
Age-sensitive service delivery	33.9	8.9	36.2	21.4	34.4	7.3
Institutional values	24.2	6.3	25.3	14.7	24.4	5.1
Geriatric resource availability	22.0	6.2	22.6	6.4	22.2	6.3
Capacity for collaboration	9.6	3.4	10.2	8.1	9.7	2.8

Note. GIAP = geriatric institutional assessment profile; RN = registered nurse; RPN = registered practical nurse.

$\eta^2 = .01$. RPNs rated overall quality of care higher than RNs; however, the effect size, quantified by η^2 , was small. Similar results were found for capacity for collaboration, $F(1, 1931) = 11.07, p = .001, \eta^2 = .006$, and organizational value of older people's care, $F(1, 1937) = 9.84, p = .002, \eta^2 = .005$. Geriatric resource availability did not differ significantly at the .05 level by professional designation, $F(1, 1990) = 3.79, p = .052, \eta^2 = .002$, or hospital teaching status, $F(1, 1940) = 2.84, p = .09$.

Discussion

This is the first known study of a random sample of Canadian nurses, not restricted to NICHE hospitals, to examine their perspectives on the overall quality of care for older people and families, as well as the GNPE. With a representative sample of RNs and RPNs working in teaching and nonteaching hospitals, findings have high relevance or ecological validity in the Canadian hospital context.

Nurses' scores on the geriatric resource availability subscale, which averaged slightly below the subscale midpoint, are similar to McKenzie et al.'s (2011) study of 891 Manitoba nurses. The low rating may be reflective of the current Canadian health-care context of rising costs for an aging population. Containing costs and resources is a primary concern for policymakers in Canada, which ranked tenth out of 11 industrialized countries in overall health-care system efficiency (Davis, Stremikis, Squires, & Schoen, 2014).

Our study did not find nurses' perspectives on overall quality of care to differ by the teaching status of their hospital; this concurs with prior research (de Almeida Tavares & da Silva, 2013; Kim et al., 2009). Similar to other studies, such as Capezuti et al., 2013, but unlike McKenzie et al.'s (2011) study, we did not find nurses' perspectives on the GNPE to differ by their hospitals' teaching status. Rather, we found differences, of small magnitude, in overall quality of care and the GNPE, according to nurses' professional status. RPNs rated overall quality of care and two of the three GNPE variables, capacity for collaboration and organizational value of older people's care, significantly higher than RNs; the higher ratings that RPNs gave on the third GNPE variable, geriatric resource availability, approached statistical significance.

As we seek to understand why RPNs reported higher ratings on the variables than RNs, we consider two possible explanations. First, it is possible that because RPNs have a slightly lower level of geriatric nursing knowledge than RNs (Fox et al., 2015), they may have received less training in assessing the overall quality of care and the GNPE, leading to more positive estimates.

The other explanation we consider is related to the different scopes of practice of RNs and RPNs.

RPNs are only permitted to provide care to unstable patients when an RN is nearby for consultation (College of Nurses of Ontario, 2014). Accordingly, the findings may reflect differences in the way RNs and RPNs experience their respective geriatric practice environments. For instance, because they care for stable patients with predictable conditions and consult RNs when patients become unstable, RPNs may not experience the same challenges as RNs in relation to accessing human resources and collaborating with interprofessional team members in providing care to unstable, more precarious, acutely ill, or injured older people.

These practice differences may also help to explain why RNs reported their hospital organizations as having lower value of the care of older people than RPNs. In the context of caring for more unstable, seriously or critically ill and injured patients than RPNs, RNs have more opportunity to observe resentment on the part of health-care providers and administrators over older people's use of scarce health-care resources (Reese, King, & Schmitz, 2009). For example, older people, who are increasingly admitted to hospital for the treatment of life threatening conditions, represent 45% of admissions to intensive care units but have poor survival rates which worsen with increasing age (Fuchs et al., 2012). The focus on cure that clinicians, particularly physicians, and hospital administrators have in the care of critically ill or injured people may engender views of older people's care as futile and, therefore, of lower priority than younger people's care (Reese et al., 2009), to which RNs, by virtue of their scope of practice, may be more exposed than RPNs.

Implications for Policy

The difference between RN and RPN perceptions of their practice environment, although small, has implications for policy- and decision-makers. To cultivate the most supportive GNPEs, policy- and decision-makers need to have a clear understanding of the different scopes of practice of RNs and RPNs to maximize their respective contributions to the care of acutely ill or injured older people admitted to hospital.

Findings suggest that both teaching and nonteaching hospitals should be targeted for GNPE improvement initiatives. We call on policy- and decision-makers to foster environments in which older people's care is highly valued and interprofessional collaboration around this care is supported with adequate geriatric resources so that older people and their families receive high quality care. For instance, items in the institutional value of older people's care subscale tapped nurses' perspectives on the extent to which hospital administrators and clinicians work together to solve problems around older people's care. In our prior work, we highlighted several

strategies to help hospital administrators create better opportunities for nurses and administrators to work together in solving problems that older people face in hospital, such as seeking nurses' input in operational decisions that impact older people's care and facilitating nurses' collaboration with the interprofessional team by enabling their participation at interprofessional team rounds (Fox & Butler, 2016).

Implications for Research

This study lays the foundation for future comparative studies on the overall quality of care and the GNPE of different Canadian provinces and territories which may differ given that these regions differ in the age distributions of their populations (Statistics Canada, 2011), and health care is provincially or territorially legislated (Health Canada, 2011). Such studies should incorporate the different perspectives of RNs and RPNs. Regardless of their size, these differences may point to future interventions that may be clinically meaningful in promoting the GPNE of RNs and RPNs. Because of differences in the scope of practice of RNs and RPNs, future comparative studies may also examine differences in primary areas of practice. Future research should consider the perspectives on overall quality of care, of other stakeholder groups such as older people, their families, and health-care professionals involved in the provision of hospital care.

Limitations

This study was limited to one Canadian province. The study relied on nurses' subjective reports of the overall quality of care and GNPE and did not include the perspectives of other health professionals and administrators. These perspectives may generate a more comprehensive and accurate understanding of quality of care and the practice environment as well as develop initiatives to enhance the interprofessional capacity to care for older people in hospitals.

Conclusion

Nurses perceive that older people receive average quality of care. In terms of the specific geriatric nursing practice environmental supports, nurses perceive that they have mid-range interprofessional collaboration and organizational value of older people's care and slightly below average geriatric resources. Nurses' perceptions of the quality of older people's care and the GNPE differ by nurses' professional designation but not by hospital teaching status. Teaching and nonteaching hospitals should both be targeted for GNPE improvement initiatives. Policy- and decision-makers are called

upon to implement strategies to foster practice environments that prioritize the care of older people. Future comparative studies on the overall quality of care and GNPE of different Canadian provinces and territories should incorporate the different perspectives of RNs and RPNs.

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Authors Contribution

Each author has contributed to the conception and design of the study and/or analysis and interpretation of the data. Each author has drafted or revised the manuscript for intellectual content and has given final approval of this version of the manuscript being submitted for publication to *Canadian Journal of Nursing Research*. The authors certify that this article contains original work. This manuscript has not been published and is not under consideration for publication in any other journal.

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