

Decisional involvement of senior nurse leaders in Canadian acute care hospitals

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Aim The aim of the present study was to describe the scope and degree of involvement of senior nurse leaders (SNLs) in executive level decisions in acute care organizations across Canada.

Background Significant changes in SNL roles including expansion of decision-making responsibilities have occurred but little is known about the patterns of SNL decision-making.

Methods Data were collected by mailed survey from 63 SNLs and 49 chief executive officers (CEOs) in 66 healthcare organizations in 10 Canadian provinces. Regression analyses were used to examine whether timing, breadth of content expertise and the number of decision activities predicted SNL decision-making influence and quality of decisions.

Results Breadth of content expertise and number of decision activities with which the SNL was involved were significant predictors of decision influence explaining 22% of the variance in influence. Overall, CEOs rated SNL involvement in decision-making higher than the SNL.

Conclusions Senior nurse leaders contribute to organizational processes in health-care organizations that are important for nurses and patients, through their participation in decision-making at the senior team level.

Implications for nursing management Findings may be useful to current and future SNLs learning to shape the nature and content of information shared with CEOs particularly in the area of professional practice issues.

Keywords: acute care, decision-making, hospitals, influence, leadership, nurse executive

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Introduction

Healthcare restructuring in the 1990s in Canada and the United States contributed to significant changes in

senior nurse leader (SNL) roles including expansion of their decision-making responsibilities (Murray *et al.* 1998, Mass *et al.* 2006, Smith *et al.* 2006). In some organizations nurse executives were added to senior

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executive teams and in others, their scope of participation in organizational decisions related to budget, strategic planning, quality of care and a host of challenging organizational issues greatly increased. Similarly, healthcare reform in the United Kingdom and other European countries created role changes and new opportunities for nurse leaders in health care organizations (Fedoruk 2000, Filkins 2003, Kirk 2008).

New governance structures and organizational models radically changed disciplinary leadership structures, particularly in nursing (Havens 1998, 2001, Baumann *et al.* 2001, Shannon & French 2005, Sharp *et al.* 2006). Specifically, the programme management structure and regionalized healthcare systems were implemented across Canada (Leatt *et al.* 1994, Smith *et al.* 2006). In regionalization, responsibility for a wide span of health services, frequently spanning community, long-term care and acute care services, were organized under one governing body with consolidation of authority which was previously distributed among many organizations. A goal of this restructuring was greater integration of services with reduced duplication and overlap. Within programme management structures in hospitals, distinct professional departments were eliminated, services were organized around populations of patients and care was provided by multidisciplinary teams. Some claim that these changes provided opportunities for nurse leaders to demonstrate their leadership skills and play a greater role in decision-making within new interdisciplinary and more broad-based programme structures. Others argued that these changes diminished authority and communication links between senior nurse leaders and other nursing personnel and deprived nurses of disciplinary leadership representation at the policy making level (Shamian & Lightstone 1997, Clifford 1998, Canadian Nursing Advisory Committee 2002). Several sources attest to the dissatisfaction that nurses experienced with the reduction in nurse leaders at all levels of organizations with restructuring (Baumann *et al.* 2001, Canadian Nursing Advisory Committee 2002). However, surprisingly little is actually known about the patterns of SNL participation in decision-making (PDM) at the senior executive level of healthcare organizations and in particular, the consequences of organizational changes on nurse executive decision-making. The present study was part of a national survey to describe the profile of nursing leadership structures in Canada and to assess relationships among personal and structural factors, processes and outcomes pertaining to nurse leaders' work post restructuring (Laschinger *et al.* 2008).

Our aim was to describe SNL decision-making processes in terms of the scope and degree of their involvement in strategic and tactical decisions at the executive management level in organizations across Canada. We define the SNL as the nurse who holds the most senior nursing leadership position in the organization with direct responsibility for nursing. While titles such as chief nurse executive, nurse executive or senior nurse leader are often used interchangeably, for clarity we use the SNL term throughout this paper. Specifically, we examined whether timing, breadth of content expertise and the number of decision activities predicted SNL perceptions of their decision-making influence and the quality of management decisions made by the senior team. We also included a description of how chief executive officers (CEOs) perceive SNL decision-making.

Literature review

SNL role changes with restructuring

Substantial changes in the healthcare system have contributed to new role expectations, higher knowledge requirements and increased responsibility and accountability for nurse leaders including: quality and effective coordination of patient services; managing many clinical areas with a broadened span of control; operating merged facilities and decentralized structures; and decision-making in finance, human resources and quality and safety of patient services across the continuum of care (Duffield *et al.* 2001, Kleinman 2003, Upenieks 2003, Anthony *et al.* 2005, Arnold *et al.* 2006). In many cases restructuring changes provided opportunities for nurse leaders to demonstrate their leadership skills and play a greater role in decision-making within the new multidisciplinary programme structures (Clancy 2003, Thorman 2004, Kirk 2008). As an integrated member of the senior leadership team, the SNL has the opportunity to influence team members by ensuring that patient care and nursing practice perspectives are voiced when decisions are being made that affect organizational directions, quality management and resource use. The recent Sharp *et al.* (2006) findings on the effects of service line (similar to programme) management implementation in U.S. Veterans Health Administration hospitals supported many of the positive aspects of SNL role changes described previously. However, SNLs in pure service line organizations without a discipline-based nursing service reported decreased direct supervision of nurses and challenges in achieving consistency in quality of nursing care.

SNL role in organizational decision-making

Decision-making research in nursing has focused primarily on the study of clinical nurses (Oroviogioichea 1996, Thompson 1999, Lauri *et al.* 2001). Of the published literature on nurse leader decision-making, there is little coherence in topics such as, risk propensity (Smith & Friedland 1998), ethical decision-making (Fonville 2002, Berggren & Severinsson 2003), manager role in facilitating staff participation in decision-making (Krairiksh 2000), middle manager involvement in organizational strategic decision-making (Ashmos *et al.* 1998) and personality type and decision-making styles (Freund 1988). Only a small body of research focused on SNLs' organizational decision-making influence (Wangness 1991, Havens 1998, Banaszak-Holl *et al.* 1999, Dwore *et al.* 2000).

The importance of SNLs participation in organizational decision-making is acknowledged in the literature (Fedoruk 2000, Clancy 2003). However, most of the empirical evidence in this area has focused on participation of physicians and registered nurses (RNs) in strategic decision-making (Ashmos & McDaniel 1991, Havens & Laschinger 1997, Ashmos *et al.* 1998, Anderson & McDaniel 1999). Ashmos and McDaniel (1991) determined that the greater the intensity (number and type of decision activities) of participation in decision-making (PDM) by professionals, the more likely that they will be perceived as having an influence on decisions. Utilizing a survey method that included questions on the timing, breadth and intensity of participation in decision-making to capture overall decision involvement, they examined the effect of clinical, professional and middle manager participation on hospital performance (Ashmos *et al.* 1998). The participation of medical and other clinical professionals (e.g. nurses) in organizational strategic decisions was associated with reduced hospital costs while there was no such effect for middle manager participation. Adding decision influence to the Ashmos *et al.* (1998) measure, Anderson and McDaniel (1998) showed that administrators in nursing homes perceived greater influence of RNs in decisions when RNs were more involved in decision activities. They also showed that increased RN participation in decision-making was associated with improved resident outcomes in nursing homes (Anderson & McDaniel 1999). Thus, these studies suggest that decision-making involvement can be measured and that there is a connection between involvement in decision activities, perceived influence over decisions and organizational outcomes.

A few studies focused on the integration of nurse leaders in executive level organizational decision-making during the healthcare restructuring era of the 1990s. In a survey of 115 SNLs in Pennsylvania acute care hospitals, Wangness (1991) determined that most participants had considerable decision-making authority at the departmental but very little at the organizational level. Havens (1998) studied the involvement of the nurse executive in US hospital governance and policy making in 1990 and again in 1996, reporting little change in SNL involvement at senior executive levels over that time. Another study documenting the integration of SNLs into executive-level administration of 53 acute care hospitals in Utah, found that 80% of the SNLs perceived they were more involved in hospital activities and decisions (Dwore *et al.* 2000).

There is evidence that the scope and intensity of SNL involvement in strategic decision-making is related to their perceptions of influence in the organization (Banaszak-Holl *et al.* 1999, Wells *et al.* 1999). Banaszak-Holl *et al.* (1999) examined the role of SNLs in organizational decision-making within Veteran's Affairs Medical Centres (VAMCs) in the United States during the mid-1990s. Restructuring led to the inclusion of SNLs on the executive management team as an equal collaborator with the medical chief of staff and other senior directors. All SNLs and their management team colleagues were surveyed in 84 VAMCs using an adapted form of the Ashmos and McDaniel (1991) decision-making instrument. Senior nurse leaders perceived they brought greater breadth of expertise to decisions and participated in more decision activities than non-nurse colleagues' perceptions of the SNL role. There were no significant differences in how SNLs and their colleagues rated SNL influence over decisions or quality of decisions made by management teams, except that SNLs consistently ranked decision quality lower than their non-nurse colleagues. Banaszak-Holl *et al.* (1999) did not analyse the effect of decision timing, breadth or number of activities on influence or perceived quality of decisions.

Theoretical framework

Simply stated, a decision is defined as a choice made from two or more alternatives (Robbins & Langton 2003). More specifically, Mintzberg *et al.* (1976) emphasized that a decision in organizations is 'a specific commitment to action (usually a commitment of resources)' (p. 246). Decision-making has been described as a complex cognitive process that involves critical thinking, judgement, evaluation and memory

(Oetjen *et al.* 2008). Generally, decision-making occurs as a response to problems or opportunities and thus, decision-makers must address a gap between the current state and some desired future state.

The theoretical framework (Figure 1) for this study was adapted from the work of Ashmos and McDaniel (1991) and Anderson and McDaniel (1998) who developed an approach to examining health professionals' participation in strategic decision-making in healthcare organizations using information processing and complexity science theories (Anderson & McDaniel 1998, Ashmos *et al.* 1998). According to information processing theory, increased participation of multiple stakeholders increases both the amount of information and the ability to deal with it (Ashmos *et al.* 1998). 'Participation is a mechanism for the exchange of information' in decision-making processes (Ashmos & McDaniel 1991, p. 386) and this capacity can be altered by changing the participants but also by changing the '...timing, scope, and formalization of the process' (p. 388). Bringing participants into a decision process early expands the capacity of the organization to process information as does widening the scope of participation in various decision activities such as raising issues, clarifying problems and generating alternatives. From the complexity perspective, diversity and expansion of those involved in organizational decision-making increases internal complexity and also enhances an 'organization's ability to create meaning through increased use of connections' among stakeholders (Anderson & McDaniel 1999, p. 8). Such connections also enable interactions among people that may broaden and deepen interpretations of events and actions. Leaders can increase the speed or degree of information flow by increasing the number of people involved and by expanding the number of decision activities in which they are involved using both formal and informal mechanisms for interaction.

In our framework, PDM by SNLs in executive management teams is viewed as creating new organizational connections and mechanisms for exchanging information and enriching interpretation of issues that ultimately influence the quality of management decisions. The scope of decision-making is enhanced by involving SNLs at the beginning of decision-making stages (timing) and the breadth of content expertise is expanded by their clinical and professional knowledge. The intensity of PDM is a function of the number and range of decision-making activities involving SNLs. Any decision-making process entails several different fundamental information processing actions from raising issues, clarifying problems, generating and evaluating solutions to making a final choice (Anderson & McDaniel 1999). The greater the scope and intensity of SNL PDM, the greater the likelihood that they and others perceive them as having an influence on decisions. Last, we propose that decision-making influence is related to the quality of final management decisions reached.

Hypotheses

- The scope (timing and breadth) and intensity (number of decision activities) of SNL participation in executive decision-making processes positively predicts the degree of SNL decision influence.
- SNL decision influence positively predicts perceived quality of operational management decisions.

Methods

Sample and data collection procedures

To obtain a comprehensive description of nursing management structures in Canada, Academic Health Centres (AHC) and community hospitals (CH) in 10

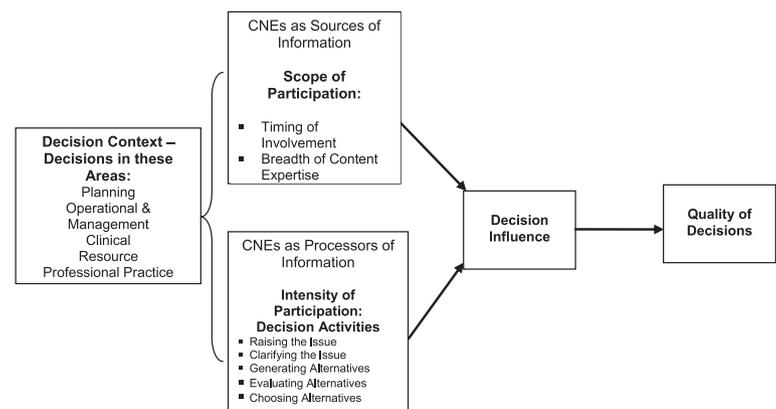


Figure 1
Participation in organizational
decision making.

provinces were selected as data sources. An AHC is a health care facility that participates in medical research and in teaching undergraduate and graduate medical students. All of the AHCs that focused on acute care in each province were selected to participate in this study. For each of the AHCs, a CH with more than 100 beds was randomly selected from a complete list of CHs in the Health Authority/geographic region of each AHC. Ethics approvals were obtained from a university ethics review board as well as from specific organizations in the study. Data were collected from SNLs and CEOs in 28 academic health centres and 38 community hospitals in 10 Canadian provinces. All SNLs ($n = 66$) and CEOs ($n = 66$) were surveyed by mail. Of the original 132 surveys to SNLs and CEOs, 112 surveys were returned, for an overall response rate of 84.8% (Table 1).

Instrument

We used the Participation in Strategic Decision-Making Scale (Banaszak-Holl *et al.* 1999) to measure SNL decision-making processes. This Likert-type instrument was adapted from a survey developed by Ashmos *et al.*

Table 1
Comparison of response rates

	Total		AHC		CH	
	n	%	n	%	n	%
SNL	63	95.5	30	100.0	33	91.7
CEO	49	74.2	23	82.1	26	68.4

AHC, academic health centre; CEO, chief executive officer; CH, community hospital; SNL, senior nurse leader.

(1998). The SNLs' participation in decision-making processes was evaluated according to five different types of strategic decisions commonly considered by the executive level of the organization:

- planning decisions defined as the formal process of developing organizational goals and strategies;
- operational management decisions that deal with the day-to-day operation of the organization (excluding direct patient care);
- clinical care decisions are policy or administrative issues related to the provision of direct patient care;
- resource decisions address fiscal issues (including budgeting, revenues and spending) and human resources; and
- professional practice decisions relate to standards of nursing practice, discipline, education and research issues (Figure 2).

The last decisional area, professional practice, was added to the Banaszak-Holl *et al.* (1999) scale because the clinical decision type did not fully represent the range of decisions relevant to nursing as we believe that many organizational decisions made at the top management level affect the professional practice of nurses. For each of these five areas of decision-making, we asked survey participants to rate the SNL's involvement in senior organizational level decision-making over the past 6 months according to the scope of participation (consists of **timing** and the **breadth** of content expertise), intensity of participation (the **number of decision activities** and the **mechanisms** used), the SNL's **influence** over decision and the **quality** of management decisions made.

Section 3: Please respond to the questions below in reference to each of the following types of decisions

PLANNING DECISIONS – The formal process of developing organizational goals and methodologies for achieving those goals. Activities may include addressing critical issues, significant events and major trends, both internal and external, that will impact the overall direction of the hospital. *Examples* development of a 5 year plan, addition of a cardiac surgery program, conversion from inpatient to outpatient surgery.

OPERATIONAL MANAGEMENT DECISIONS – Significant decisions dealing with the day-to-day operational management of the hospital; excludes items involving direct patient care. *Examples* Review/approval of major projects (e.g. interior design renovations), communications deficits/morale issues, review/approval of space for program expansion within the existing facility.

CLINICAL DECISIONS – Policy or administrative issues related to the provision of direct patient care. *Examples* Plans for addressing a backlog of surgical cases, individual patient care problems not solvable at the unit/service level, clinic waiting time.

RESOURCE DECISIONS – Administrative and policy issues dealing with fiscal (e.g. income, budgeting, expenditure of monies) and human (e.g. employee management) resources. *Examples* Review/approval of hospital and service-wide budgets, total number and distribution of FTEs, nurse shortage in the ICU.

PROFESSIONAL PRACTICE DECISIONS – Policy or administrative issues relating to decisions about standards of nursing practice, disciplinary issues, quality of patient care, staffing, evidence-based practice, education, and research.

Figure 2
Excerpt from SNL decision-making survey.

Timing of decisional involvement was defined as the time point a SNL most often became involved in the decision-making process (1 = beginning of process; 5 = end of the process). No precise timeframes (e.g. days, weeks or months) for decisions are included in the instruments as there is considerable variation in the timeframes for organizational level decisions. For example, strategic planning decisions may take months whereas some clinical decisions may be required within days. **Breadth** was defined as the scope of expertise the SNL most often offered in the decision-making process (1 = narrow/single area of expertise; 5 = broad/many different areas of expertise). Number of decision activities was defined as the total count of decision activities in which the SNL was involved including raising issues, clarifying problems, generating alternatives, evaluating alternatives and choosing options. In addition, SNLs were asked to identify the most frequently used **mechanisms** through which the SNL is involved in the decision-making process [1 = meeting with top management; 2 = established standing committees; 3 = task forces/ad hoc committees; 4 = informal meetings with top management team members (excluding CEO); 5 = informal meetings with CEO]. Decision **mechanisms** were used for descriptive purposes only and not included in the regression analysis. Perceptions of SNL **influence** over final decisions in the five decision areas were measured according to: 1 = no influence and 5 = great deal of influence. Perceived **quality** of operational management decisions was measured by rating their level of agreement (1 = do not agree; 5 = strongly agree) with six items pertaining to: compatibility of decisions with existing constraints and policy, advantageous timing of decisions, appropriate use of information, balance of risks and rewards and whether decisions created conflict of interest (reverse coded item). We evaluated quality of management decisions for all decision areas rather than by each of the five decision areas.

Banaszak-Holl *et al.* (1999) reported Cronbach alphas only for quality of decisions across the original four decisions areas and these ranged from 0.74 to 0.81. In our study, the Cronbach alpha for the six quality scale items was 0.68. The alphas for **timing**, **breadth**, **number of decision activities**, **mechanisms** and **influence** subscales ranged from 0.83 to 0.90 (Table 5).

Data analyses

Quantitative survey data were analysed using SPSS 16.0 for Windows (SPSS Inc., Chicago, IL, USA 2005).

Descriptive statistics were analysed by level of management (SNL and CEO) and correlation analyses were used to examine relationships among the decision-making variables in our model. Paired *t*-tests were applied to assess differences in mean scores for SNLs and CEOs. Finally, hierarchical multiple regression was used to test study hypotheses using SNL mean scale scores of the decision-making variables.

Results

Demographics

Demographics of the sample are illustrated in Table 2. A notable finding was the high average age (50.4 years) of SNLs, suggesting the urgent need for succession planning to ensure the future of nursing leadership. Overall, current SNLs were very experienced individuals as over 80% of senior nurse leaders had at least 15 years of management experience and all had at least 5 years. All SNLs had a nursing background with university degrees in nursing primarily at master's level (57.6%). In addition, a large percentage of SNLs had earned non-nursing degrees (42%). Twenty-one per cent of SNLs had obtained general or business-related masters degrees whereas others had obtained Masters in Health Administration (MHA) (14%), PhD (8%) and Masters in Education (6%). Thirty-one per cent of SNLs completed the annual 3-week nurse executive development programme sponsored by the Wharton School of Business (University of Pennsylvania) and the Johnson & Johnson Family of companies. Graduates of this programme receive the designation as a Wharton Fellow.

Table 2
Demographics

	Senior Nurse Leader		CEO	
	M	SD	M	SD
Age	50.4	4.8	51.97	6.01
Years management experience	20.8	6.7		
Years in Role	3.7	3.3	5.32	4.10
	<i>n</i>	%	<i>n</i>	%
Gender				
Male	0	0	37	75.5
Female	63	100	11	22.4
Highest level				2.1
Diploma	2	3.4	1	10.4
Baccalaureate	19	32.2	5	8
Masters	34	57.6	40	3.3
PhD	4	6.8		
Other			2	4.2

Most CEOs surveyed ($n = 49$) were male (75.5%). The average age of these senior executives was 52 years and on average had been in their present position for 5.3 years. The CEOs most commonly reported their highest education as a masters degree: MHA (36.7%) and Masters in Business Administration (MBA) (20.4%). Other common responses were a combination of an MD and an MBA (18.2%), other Masters degrees (6.1%) and a combination of an MBA and an MHA (4.1%). One respondent reported having a Masters of Science in Nursing (MScN) as the highest earned degree and one reported an MD as their highest earned degree.

Descriptive results

SNL perceptions of decisional involvement

Means and standard deviations for SNL and CEO ratings of the items and subscales of the decision-making instrument are included in Table 3. SNLs were involved near the beginning of the decision-making process for all decision areas. The earliest involvement was reported for planning decisions whereas the latest involvement of the SNL was reported for operational and clinical decisions. SNLs reported offering a broad range of expertise in executive decisions with professional practice decisions rated the broadest range of expertise and operational decisions received the lowest mean for range of expertise offered. The highest mean **number of decision activities** was for professional practice and the lowest was reported for clinical decisions.

Not surprisingly, the types of decision domains (planning, operational, clinical, resources or professional practice issues) require different decision mechanisms (Table 4). Both CEOs and SNLs rated these forums quite similarly. Planning, operational and resource matters were primarily dealt with in meetings with the top management team (as the decision mechanism), with clinical and professional practice matters included to lesser degrees in these forums. Standing committees were used most frequently for professional practice, operational and clinical decisions and task forces were used most often for clinical decisions. In terms of **influence** (Table 3), SNLs reported having a large amount of influence over final decisions across all types of decisions. The highest level of influence was reported for decisions regarding professional practice and the lowest influence was reported for operational decisions. Overall quality of decisions was rated as moderate and the highest agreement was for 'decisions compatible with existing constraints, policies, etc.' and the lowest agreement was for 'implementing decisions caused a conflict of interest'.

Table 3

Means and standard deviations of decisional involvement subscales

<i>Decisional Involvement</i>	SNL ($n = 63$) <i>M(SD)</i>	CEO ($n = 49$) <i>M(SD)</i>
Timing*		
Planning	1.49 (1.10)	1.43 (0.89)
Operational	2.25 (1.34)	1.70 (1.13)
Clinical	2.23 (1.33)	1.74 (1.16)
Resource	1.85 (1.17)	1.52 (0.86)
Prof Practice	1.83 (1.95)	1.52 (1.17)
Average all decision types	1.93 (0.95)	1.58 (0.85)
Breadth of content expertise		
Planning	4.16 (1.16)	4.11 (0.89)
Operational	3.89 (1.17)	4.21 (0.88)
Clinical	4.03 (1.15)	4.19 (0.92)
Resource	4.15 (1.08)	4.17 (0.79)
Prof Practice	4.46 (1.03)	4.28 (1.06)
Average all decision types	4.08 (0.98)	4.19 (0.76)
Number of decision activities		
Planning	4.25 (1.36)	3.96 (1.56)
Operational	3.62 (1.50)	3.98 (1.55)
Clinical	3.40 (1.56)	3.83 (1.66)
Resource	4.07 (1.37)	3.91 (1.64)
Prof practice	4.15 (1.41)	4.00 (1.62)
Average all decision types	3.88 (1.19)	3.94 (1.54)
Decision influence		
Planning	4.15 (1.08)	4.26 (0.74)
Operational	4.03 (1.14)	4.36 (0.71)
Clinical	4.05 (1.06)	4.66 (0.60)
Resource	4.21 (0.91)	4.28 (0.65)
Prof practice	4.69 (0.83)	4.72 (0.54)
Average all decision types	4.23 (0.76)	4.46 (0.52)
Quality of decisions		
Compatible with constraints	4.11 (0.87)	
Timing for max coverage	3.89 (0.98)	
Optimal information	3.54 (0.85)	
Conflict of interest	3.48 (1.25)	
balance risk and reward	3.70 (0.76)	
Basis for implementation	3.97 (0.71)	
Average all decision types	3.80 (0.59)	

*Note: Low score = early involvement.

CEO perceptions of the SNL decisional involvement

CEOs described the SNLs as being involved near the beginning of the decision-making process for all decision areas. The earliest involvement was reported for planning decisions whereas the latest involvement of the SNL was reported for clinical decisions. CEOs reported that SNLs offered a broad range of expertise in top-level decisions. Professional practice decisions rated the broadest range of expertise and planning decisions received the lowest mean for range of expertise offered. The highest mean for **number of decision activities** was for professional practice decisions and the lowest was reported for clinical decisions. As for **decision mechanisms**, CEOs reported the SNLs in their organization were more likely to utilize meetings with top management, especially for planning, operational and resource decisions. SNLs were more likely to use

Table 4

Frequencies, means and standard deviations of decision mechanisms

Decision areas and mechanisms	SNL		CEO	
	M(SD)	n (%)	M(SD)	n (%)
Planning	1.61 (1.35)		1.37 (1.0)	
Meeting with top management		47 (74.6)		39 (79.6)
Standing committees		3 (4.8)		2 (4.1)
Task forces		1 (1.6)		2 (4.1)
Informal meetings with management		3 (4.8)		1 (2.0)
Informal meetings with CEO		6 (9.5)		2 (4.1)
Operational	1.77 (1.11)		1.74 (1.16)	
Meeting with top management		32 (50.)		27 (55.1)
Standing committees		15 (23.0)		12 (24.5)
task forces		6 (9.5)		2 (4.1)
informal meetings with management		4 (6.3)		2 (4.1)
Informal meetings with CEO		2 (3.2)		3 (6.1)
Clinical	2.33 (1.23)		2.07 (1.06)	
Meeting with top management		18 (28.6)		16 (32.7)
Standing committees		16 (25.4)		17 (34.7)
Task forces		16 (25.4)		9 (18.4)
Informal meetings with management		6 (9.5)		2 (4.1)
Informal meetings with CEO		4 (6.3)		2 (4.1)
Resource	1.90 (1/42)		1.57 (1.11)	
Meeting with top management		39 (61.9)		33 (67.3)
Standing committees		7 (11.1)		7 (14.3)
Task forces		4 (6.3)		1 (2.0)
Informal meetings with management		4 (6.3)		3 (6.1)
Informal meetings with CEO		7 (11.1)		2 (4.1)
Professional practice	2.15 (1.67)		1.91 (0.99)	
Meeting with top management		18 (28.6)		16 (32.7)
Standing committees		30 (47.6)		24 (49.0)
Task forces		4 (6.3)		2 (4.1)
Informal meetings with management		4 (6.3)		2 (4.1)
Informal meetings with CEO		5 (7.9)		2 (4.1)
Overall Mean	1.95 (0.98)		1.73 (0.89)	

Table 5

Means, standard deviations and correlations among snl timing, breadth of content expertise, number of decision activities, decision influence and quality of decisions

Variable	n	M(SD)	α	1	2	3	4
Timing of involvement	63	1.93 (0.95)	0.84	–			
Breadth of content expertise	63	4.08 (0.98)	0.89	0.133	–		
Number of decision activities	57	3.88 (1.19)	0.90	0.064	–0.022	–	
Decision-making influence	63	4.23 (0.76)	0.83	0.022	0.324**	0.356**	–
Quality of decisions	62	3.80 (0.59)	0.68	0.133	0.219*	0.242*	0.195

* $P < 0.05$, one-tailed. ** $P < 0.01$, one-tailed.

standing committees for professional practice decisions and were least likely to utilize informal meetings with management or CEO and task forces. In terms of **influence over final decisions**, CEOs reported that SNLs had a large amount of influence over final decisions that were reached across all types of decisions. The highest level of influence was reported for decisions regarding professional practice and the lowest level of influence for planning decisions. Ratings of overall quality of management decisions were not included in the CEO

survey. Results of paired t -tests to compare SNL and CEO means of the four decision variables (**timing, breadth of involvement, activities and influence**) showed no statistically significant differences.

Correlations among major study variables

Only SNL **breadth of content expertise** ($r = 0.324$, $P < 0.01$) and **number of decision-making activities** ($r = 0.356$, $P < 0.01$) were significantly correlated with

decision-making **influence** and also with quality of management decisions ($r = 0.219$, $P < 0.05$ for **breadth**; $r = 0.242$, $P < 0.05$ for **number of activities**) (Table 5).

Test of hypotheses

For hypothesis one, the predictor variables, SNL mean scale scores for **timing** of involvement, **breadth** of expertise and **number of decision activities**, were entered hierarchically with SNL mean scale decision-making **influence** as the dependent variable. Twenty-two per cent of the variance in SNL decision-making **influence** was explained by **timing** of involvement, **breadth** of content expertise and **number of decision activities** ($R^2 = 0.223$, $F_{(3, 53)} = 5.06$, $P = 0.004$). However, only breadth of content expertise ($\beta = 0.312$, $t = 2.524$, $P = 0.015$) and **number of decision activities** ($\beta = 0.364$, $t = 2.997$, $P = 0.004$) were significant predictors of **influence** and thus, the first hypothesis was partially supported. The second hypothesis was tested by entering mean decision-making **influence** as the predictor with mean **quality** of management decisions as the dependent variable. Decision-making **influence** was not a significant predictor of the **quality** of management decisions, thus the second hypothesis was not supported.

Discussion

In the present study, we developed a model of SNL participation in organizational decision-making based on the work of Ashmos *et al.* (1998), Anderson and McDaniel (1998) and Banaszak-Holl *et al.* (1999). We found partial support for our hypothesis that SNL **timing** of involvement, **breadth** of content expertise and **number of decision activities** in which they are involved predicted their perception of **influence** in organizational decisions. Timing was not a significant predictor whereas SNLs reported early involvement in most decision types. Although there is some indication in the healthcare literature that increased involvement in organizational decision-making by physicians and registered nurses was associated with outcomes such as lower costs in hospitals (Ashmos *et al.* 1998) and improved resident outcomes in nursing homes (Anderson & McDaniel 1999), we found that SNL decision involvement (**timing**, **breadth** and **number of activities**) and **influence** in decision-making did not predict their perceived **quality** of organizational decisions.

There were significant positive, albeit small, correlations between **breadth** of expertise and **number of activities** and **quality** of decisions. Small sample size

may have been an issue in why we did not find a significant relationship between **influence** and **quality**. Post hoc power analysis showed power was only 0.33. Even although SNLs perceived a significant influence over decisions, there were likely many other factors outside of the control of the SNLs and even the senior leadership team such as government directives, economic constraints or community reactions that ultimately influenced the quality of decisions. The measure of decision **quality** was a subjective measure and included only SNL ratings. Interestingly, Banaszak-Holl *et al.* (1999) reported that SNLs rated decision quality significantly lower than did non-nurse members of the senior leadership team in all decision categories but no means were reported so we could not compare them with our decision quality findings. Unfortunately, we could not compare our results to their findings as they did not report quality item or scale means.

In general, CEO ratings of SNL involvement in decision-making were higher than the SNL self ratings. In all decision areas, CEOs rated SNL involvement earlier in the decision process than SNLs reported. CEOs ratings of SNLs **breadth** of content expertise also were higher than SNL self-ratings in four out of the five decision areas; SNLs rated themselves somewhat higher in professional practice decision-making than did the CEOs. It is possible that the depth of SNL involvement in professional practice decision-making was not readily apparent to the CEO. This could be related to two possible factors:

- professional practice decision-making occurs more frequently within committees, which may not include the CEO, or
- CEOs do not differentiate professional practice decisions from operational ones to the same degree as SNLs.

Some differences in perceptions between CEOs and SNLs were related to number of decision activities: CEOs reported more SNL activities for clinical and operational decisions whereas the SNLs reported a higher number of activities than the CEO for resource, planning and professional practice decisions. CEOs also rated SNL decision influence consistently higher than the SNL did for all decision types. These positive comparative findings may indicate that CEOs have considerable confidence in the decision-making role of their respective SNLs. Wells *et al.* (1999) reported a similar finding in the Banaszak-Holl *et al.* (1999) study: directors' (equivalent to the CEO role) perceptions of SNL involvement were similar to SNLs' self-ratings and often were more positive than SNLs were about their

participation in decision-making. CEO perceptions of SNL decision-making may provide some insights for current and future SNLs learning to shape the nature and content of information shared with CEOs, particularly in the area of professional practice issues and decision-making.

Concurrence between CEOs and SNLs about the SNL role in executive decision-making is both reassuring and critical to ensuring his/her effectiveness. An essential responsibility of the SNL is to effectively assess, plan, forecast and execute decisions based on the needs within nursing, clinical departments and the patient populations served. But to be successful at this requires that the SNL is able to influence other decision-makers, particularly at the executive and governing board levels. These findings suggest that despite the significant restructuring within Canadian healthcare organizations, CEOs have considerable trust in the leadership competencies of the SNL and view these persons as having a very high degree of influence. This augers well for members of the nursing workforce, with regard to knowing that frontline clinical issues and concerns will be heard when conveyed by SNLs to the executive team.

Overall, SNLs reported having a large span of influence; the breadth of knowledge and skills the SNL brings to the executive table, allows them to significantly influence not only clinical care, but also organizational policy and strategic directions. In fact, SNLs are in an ideal position to show the linkages between different types of decisions and ensure that there is alignment between the clinical and business decision spheres in organizations. There is likely an overlap among the different decision types. Decisions in organizations are rarely totally independent of other decisions (Mintzberg *et al.* 1976, Oetjen *et al.* 2008). For example, strategic planning decisions determine organizational priorities and ultimately affect most other decision types. Resource decisions are also central to most other decision types and set the boundaries for what is possible within the clinical, human resources and professional practice areas.

When we compared our findings with those of Banaszak-Holl *et al.* (1999), we found substantial similarity in overall decision-making across decision types. Some caution is required with these comparisons given that a new decision-type domain, professional practice, was added in our study. In the earlier study, means for clinical decisions in all the decision variables were generally higher where professional practice decisions were often rated higher than clinical for all decision variables. Some aspects of the clinical domain may be incorporated in SNLs responses to the professional

practice domain although we construed these two decision areas to be different. Both the current study and VA results were similar overall for **timing** of involvement ($M = 1.93$ vs. 1.92, respectively) and **breadth of content expertise** ($M = 4.08$ vs. 3.90, respectively). Areas of greatest difference were for **number of decision activities** ($M = 3.88$ vs. 4.31, respectively) where VA mean was higher, and **decision influence** ($M = 4.23$ vs. 3.83) where our overall mean was higher.

Our findings suggest that concerns about the impact of restructuring (i.e. regionalization of care services, programme management model and elimination of traditional distinct nursing departments) on SNL decision influence may not be warranted. In the present study, the predominant SNL role configuration was operational/line authority for clinical programmes with a direct report to the CEO in 84% of organizations so concern about direct line responsibility for nursing was not an issue. Traditional distinct nursing departments were rare (20%) and were found primarily in Quebec and in community hospitals. Our sample was an experienced group of SNLs suggesting their decision influence skills were well developed. The need for leader succession planning, that is, identifying and developing the next generation of nurse leaders is critical given the average age of SNLs in Canada. Conscious efforts to prepare future nurse leaders in mentored decision-making activities such as learning about organizational decision processes, role shadowing, guided project work and leader development programmes are important to augment their decision-making confidence and expertise.

The demands of 21st century healthcare environments are increasingly characterized as complex, dynamic, unpredictable and somewhat resistant to traditional management solutions to problems (Huston 2008). Strong nursing leadership is required to create cultures of safety and healthier work environments that promote patient safety, excellence in care and recruit and retain staff. To meet these challenges SNLs need expert decision-making skills guided by sound empirical evidence, innovative thinking and effective communication strategies to involve executive team members and other stakeholders in creating new responses to these challenges. SNL decision influence for change is now required on many levels beyond the executive team: at the staff level by creating alignment for organizational decisions, at the board level by providing interpretation of quality concerns, at the community level by raising awareness of health service issues and, at the government level by advocating for policy change.

Study limitations include small sample size for testing the second hypothesis and potential measurement issues with regard to the instrument which may fail to adequately address overlap among decision types and lack of specificity for timing of decisions. Also, the unique aspects of the Canadian healthcare system may limit generalizability to nurse leaders in acute care settings in other countries. While this study shows very positive perceptions of SNLs as executive decision-makers, what is not known are the perceptions of the frontline clinicians and managers about SNL effectiveness in presenting nursing issues. Future studies are needed to examine perceptions at various levels within the organization as a means of validating the overall coherence and confidence in SNL effectiveness.

Conclusions

Senior nurse leaders play an influential role in the future of healthcare organizations through their participation in decision-making at the senior team level and their ability to influence how nursing is practiced and valued in the organization. Despite variations in how health system restructuring has occurred across Canada, it is clear that SNL involvement is critical and highly valued by CEOs. As a member of the senior leadership team, the SNL has the opportunity to influence team members by ensuring that patient care and nursing practice perspectives are voiced when decisions affect organizational directions, quality management and resource use. In general, we found that SNLs perceived they had early involvement in decision-making processes, contributed breadth of content expertise to most decision types, engaged in a variety of decision activities and had considerable decision-making influence. Moreover, CEOs validated these findings, rating SNL involvement in decision-making even higher than SNLs. We found support for our contention that involvement in decision-making predicted degree of perceived influence over decisions. In particular, breadth of content expertise and number of decision activities involving SNLs were significant predictors of decision influence, explaining 22% of the variance in influence.

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