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Nurse Reports from the Frontlines: Analysis of a Statewide Nurse Survey

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Abstract

BACKGROUND—Registered nurses on the frontlines of care are increasingly burdened by changes in staffing, increased turnover, demands on their time and the continual need for advanced knowledge and training. We identify employment and environmental characteristics that may ultimately affect the quality of care

METHODS—Surveys were mailed to a random sample of all registered nurses licensed and residing in large southeastern US State. Responses from 10, 951 nurses providing direct patient care were compared to national findings. Descriptive statistics were used to examine demographics, the practice environment, nurse outcomes and the quality of care.

RESULTS—Nurses in this state are more racially diverse and less educated than nurses nationally. These nurses report high levels of burnout and job dissatisfaction, and almost one-quarter intend to leave their jobs within the next year. The majority of nurses report good working relationships with physicians, but perceive problems with workplace management.

CONCLUSION—Nurses report inadequate resources and the administrative support necessary to provide quality care. The proportion of nurses with baccalaureate and graduate education qualifications is less than is needed now and certainly insufficient for the future. Policy efforts must address these issues to retain our nurse workforce and improve the quality of patient care.

Search terms

nurse work environment; nurse education; job satisfaction; burnout; intent to leave

Despite wide-spread efforts to address serious gaps in the delivery of safe, efficient and quality patient health care (Institute of Medicine, 2001; Institute of Medicine, 2000); suboptimal and preventable adverse patient outcomes occur too often in the US (Institute of Medicine, 2004). Between 2004 and 2006 alone, patient safety incidents in hospital systems resulted in an estimated 238,337 potentially preventable deaths (HealthGrades, 2008). The nation's nursing shortage has exacerbated the problem, and projections indicate a deficit of

260,000 nurses by 2025 (Buerhaus, Donelan, Desroches, & Hess, 2009). Consistent with other states in the US, one large southeastern state is experiencing a progressive nursing shortage, with approximately 18,000 vacancies reported in 2009. However, by 2020, this number is projected to escalate to 52,000 - nearly 20% of the entire forecasted US shortage (Florida Center for Nurses, 2008). Several factors specific to this state have fueled this effect: a significant population growth in the mid-2000s, a large proportion of adults over the age of 65 (19%), and a racially and ethnically diverse population. Additionally, consistent with other US states, this specific state is experiencing an aging nurse workforce (Florida Center for Nurses, 2008; Florida Center for Nursing, 2009).

This dwindling workforce is also experiencing challenges in the workplace associated with providing care to this state's uniquely diverse racial and ethnic population. While the current majority of residents are of white non-Hispanic origin (60%), the percentage of African Americans (15.9%) and Hispanic and Latinos (21%) exceeds those nationally (US Census Bureau, 2008), and over 3.5 million foreign born immigrant residents account for 19.4% of this state's total population (Federation for American Immigration Reform, 2008). The percentage of foreign born persons (e.g., legal permanent residents, temporary migrants, refugees and illegal immigrants) in this state already exceeds 16.7% (overall US, 11.1%) (Florida Agency for Health Care Administration, 2005).

Registered nurses at the frontlines of care are thus increasingly burdened by escalating patient volume (including older adults and those for whom English is a second language or not spoken at all) and a significant dearth created by retiring nurses. Add to this burden changes in the staffing mix, frequent turnover, too-long work hours, increased interruptions/demands on nurses' time, and the continual need for advanced knowledge and training in new technologies, and quality of care and patient outcomes are inevitably affected (Institute of Medicine, 2004).

The purpose of this descriptive study is to present findings from the largest survey of registered nurses ever conducted in this large southeastern state. Identified are employment and environmental characteristics that may be precursors to trends elsewhere in the nation and ultimately affect the quality of patient care.

Methods

Nurse Survey

In 2008 a mail survey was distributed to a large random sample of licensed registered nurses residing in this southeastern state. Using a modified Dillman's methodology, nurses were mailed the survey and a cover letter explaining the survey's purpose, its voluntary nature, and the strict protection of confidentiality (Dillman, 1978). A postcard reminder was sent out one week later to further encourage participation. A follow-up mailing was sent to non-respondents, and a message was sent simultaneously via telephone to all nurses two days after initial mailing and to non-respondents two days after the second mailing. The study was approved by the institutional review board.

Sample—The State Board of Nursing reported that more than 213,112 registered nurses were licensed to practice in 2007. Using a publicly available mailing list provided by the Board of Nursing, a 25% random sample of registered nurses (49,385) licensed and residing in the state were surveyed. This sampling strategy, employed successfully by other researchers (Aiken, Clarke, Cheung, Sloane, Silber, 2003; Aiken, Clarke, Sloane, Sochalski, Silber, 2002) yielded a response rate of 39% (N = 19,657 nurses), a substantial sample for a single-state study. Of these nurse respondents, 8% were retired and another 8% were not

working. For these analyses, the sample was restricted to nurses who identified themselves as direct care providers, thus the final sample consisted of 10,832 nurses.

Survey Measures

Nurse characteristics—Data were collected on demographic characteristics that included age, race/ethnicity, highest level of education in nursing, country where basic nursing education was received, and if they planned to be with their current employer next year. Nurses were also questioned on the number of patients they cared for on their last shift.

Nurse Work Environment—Nurse respondents were asked to respond to the Practice Environment Scale of the Nursing Work Index (PES-NWI), which measures nurses' perceptions of the practice environment at their employing hospital (Lake, 2002). The 31-item Likert-type scale indicates the degree (1=strongly disagree to 4=strongly agree) to which various organizational features are present in the practice setting. Published internal consistency coefficients (Cronbach's alphas) for these subscales ranged from .71 to .84. Intraclass correlation coefficients, reflecting reliability of nurses' assessments of their hospitals, ranged from .86 to .96 for the last 2 subscales (Lake, 2002) well within the range of generally accepted values.

Nurse Outcomes

Burnout, job dissatisfaction, intent to leave—The Maslach Burnout Inventory - Human Services Survey (Maslach, 1986) was used to measure three related components of work-related burnout: emotional exhaustion, depersonalization, and personal accomplishment. The primary interest in this study was the emotional exhaustion subscale because it has well-established sensitivity to staffing and practice environment features (Aiken, Clarke, Sloane, Lake, Cheney, 2008) and poor staffing and other organizational stressors have been found to lead to frustration, strain, and a sense of being drained and beleaguered (Aiken & Sloane, 1997). Previous work (Aiken, et al., 2003; Aiken, et al., 2002) revealed high internal consistency of the emotional exhaustion subscale (Cronbach's alpha of 0.91). High emotional exhaustion was defined as a score ≥ 27 , the published norm for health care providers (Maslach & Jackson, 1986).

Two items were used to assess nurses' satisfaction with their present job and their intention to leave. Given that global constructs can be reliably measured using single items (Youngblut & Casper, 1993), a single question about overall job satisfaction was included in the nurse survey. A 4-point Likert-type scale indicates the degree of nurse satisfaction (1 = very dissatisfied to 4 = very satisfied) with their primary job. Published reliability coefficients for single-item overall job satisfaction are in the range of .70 (Wanous, Reichers, & Hudy, 1997). Nurses were also asked to indicate (yes/no) if they planned to be with their current employer one year from now.

Quality of Care—Three 4-point Likert-type items ranging from 1 to 4 (poor to excellent) were used to assess the quality of care. Nurses were asked to assess the overall quality of nursing care on their units, their confidence that their patients are able to manage their own care upon discharge, and their confidence that management will act to resolve nurse-reported problems in patient care (1 = not at all confident to 4 = very confident). One item was used to assess an overall grade on patient safety (rated on a 5-point scale from failing to excellent).

Data Analyses

Using National Sample Survey of Registered Nurses (NSSRN) data on nurses from this state were compared to the national sample of nurses on demographics and work setting. Descriptive analyses included means and standard deviations for continuous variables; number and percentages for binary variables. All computations were performed using SPSS version 16 (SPSS Inc., Chicago, IL).

Results

A summary that compares data on nurses from this specific state to data from the 2008 NSSRN (US Department of Health and Human Services, 2010), a national probability sample of over 33,000 nurses, is found in Table 1. In this state and nationally, the majority of nurses worked in hospital settings (69.8% and 62.2%, respectively). The average age of nurse who provide direct care in the state was 47 years old ($SD = 11.4$), and the majority of nurses were in the 50–54 year age group in both the state and nationally. The majority of nurses in state were self-identified as female and white, but in this state twice as many nurses identified themselves as Latino when compared to the NSSRN.

Significantly more nurses in this state have the associate degree as their highest qualification than nurses nationally at (48% versus 36%, respectively). Also, this state has a lower percentage of nurses with baccalaureate and graduate degrees than the nation as a whole. While a large majority of nurses in the state were educated in the US, a significant percentage received their education abroad, more than twice that reported in the national survey. Most nurses educated abroad were from the Philippines and reported a baccalaureate degree as their highest level of education.

Nurse reports of staffing, burnout, job dissatisfaction and intention to leave were significantly different when compared by setting (see Table 2). Hospital nurses and those working in home health reported caring for on average 5 patients; those nurses working in nursing homes reported caring for 13 patients. Hospitals nurses were among those with the highest proportion reporting burnout, and both hospital (24.4%) and nursing home (27.8%) nurses were more dissatisfied with their jobs when compared to home health nurses (16.2%). The largest percentages of direct care providers who intend to leave their current employer in one year were those nurses employed in nursing homes. However, nearly 20% from hospital or home health settings reported intent to leave as well.

Nurses' perceptions of the practice environment are summarized in Table 3. An overwhelming majority of nurses reported that collaboration exists between nurses and physicians and that nurses and physicians have good working relationships (72% and 80%, respectively). Less than half of the nurses reported that there were enough registered nurses on staff to provide quality care and that there was enough staff to get the work done, and 57% of these nurses reported that there adequate support services to allow them to spend time with their patients. Only 45% of nurses agreed that administration listens and responds to their concerns, and that there is a chief nursing officer who is highly visible and assessable. Slightly more than half of the nurses surveyed reported their nurse manager as a good manager or leader, and that their supervisory staff is supportive.

Table 4 presents nurse ratings of the quality of patient care on the units where they work. Approximately one in 5 nurses rated the quality of care on their units as fair or poor. Nearly 50% of nurses were not confident at all that, patients would be able to manage their own care at discharge, and nurse managers would follow-up on their reports of problems in patient care. A small percent rated their unit as poor or failing in patient safety.

Discussion

In this paper findings are presented from the first large survey of registered nurses in a large southeastern state. These findings suggest that registered nurses licensed and employed in this state are demographically similar to nurses across the US, however, they are slightly more racially diverse and twice as many of these nurses are foreign educated. Indeed, data from recent years has shown that this state is ranked in the top five US states that employ foreign-educated nurses (Berg, Rodriguez, Kading, & Guzman, 2004; Institute of Medicine, 2004).

When compared to the national average, a significantly higher proportion of nurses in this state have an associate degree as their highest level of education. Additionally, a smaller proportion of these nurses hold baccalaureate and graduate degrees. This is concerning since there is evidence to suggest that a patient outcomes are associated with the educational attainment of nurses. Aiken et al. (2003) found that the odds of patient mortality and failure to rescue were significantly reduced in hospitals with a higher proportion of nurses who had attained a baccalaureate degree or higher. Similar finding were reported by Estabrooks et al. (2005) where higher levels of nurse education were associated with a decrease in 30-day mortality (Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005). The lower proportion of nurses with graduate degrees is also concerning because of the shortage of faculty which will hamper this state's ability to increase nursing school graduations to respond to the large projected shortage. Indeed, the National League of Nursing has reported that nursing faculty are less well-credentialed than their counterparts in other disciplines, where only a third of nurse educators have earned a doctorate, compared to 60% of all post-secondary faculty (Kaufman, 2007). Additionally, the greater proportion of elderly residents in this state suggests a need for advanced practice nurses who are required to have graduate education. This study provides evidence that the educational mix of nurses in this state in terms of baccalaureate and graduate education is falling behind national trends and may present problems in quality and access in the future.

Nurses in this study reported high level of burnout, job dissatisfaction, and intent to leave. Evidence from this study suggests that in practice settings across the state over a third of nurses report high levels of job-related burnout and over 20% report being dissatisfied with their jobs. These findings are similar to those recently reported by Aiken et al. (2010), where New Jersey and Pennsylvania nurses (34% and 36%, respectively) report high levels of burnout. Parallel trends in other states may affect the quality of patient care nationally. Findings also suggest that high levels of burnout reported by nurses exceed those reported by hospital-based physicians (Halbesleben & Rather, 2008).

Additionally, almost a quarter of all the nurses in this study report that they intend to leave their job, which is higher than reported in previous work (Aiken et al., 2001; Stone et al., 2007; Stone et al., 2006). These findings also cast doubt upon whether this state will have a sufficient nurse workforce to meet the unique challenges in the years to come.

In addition to high levels of burnout and job dissatisfaction, nurses perceive problems in responsiveness to problem solving by hospital management. Only half of this state's nurses report having a chief nursing officer who is visible or that administration listens and responds to their concerns. Of these nurses on the front line of care, only a little more than half report that their nurse manager is a good leader, backs up the nursing staff, and is supportive of nurses. This is concerning since there is evidence to suggest that these and other organizational factors present in the work environment of nurses are associated with both nurse and patient outcomes (Aiken et al., 2008; Aiken et al., 2002; Kutney-Lee et al., 2009; Tourangeau et al., 2007; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004).

Despite previous reports and policies aimed at improving the quality of care, over half of nurses' surveyed reported that they are not confident that management will help resolve problems in patient care, and 40% of nurses are not confident that patients can manage their care upon discharge, which is higher than previously reported (Aiken et al., 2001). Furthermore, almost half of the nurses report that there are not enough registered nurses working on their units to provide quality patient care and not enough staff to get the work done. Again, these findings are higher than previously reported (Aiken et al., 2001).

In conclusion, registered nurses in this large southeastern state report inadequate resources and the administrative support that are necessary to provide quality care. These same nurses report high levels of job-related burnout, job dissatisfaction, and intention to leave their job. Additionally, the proportion of nurses with baccalaureate and graduate education qualifications is less than is needed now and certainly insufficient for the future. Based on these findings and those from previous work one can conclude that nurse workforce issues such as burnout and job dissatisfaction plague healthcare facilities nationwide. Hospital administrators and those involved in policy decisions must address these issues if we are to retain our nurse workforce and improve the quality of patient care.

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Table 1

Demographic Characteristics of Registered Nurses: Comparison of Florida Survey findings and 2008 National Sample Survey of Registered Nurses (N=10,951)

	Florida Survey	2008 National Survey
Age: Mean(SD)	47 (11.4)	45.5
Gender		
Male	8.7%	6.6%
Race/Ethnicity		
White	75.2%	83.2%
Black	7.1	5.4
Asian	7.7	5.8
Latino	7.6	3.6
Other	2.4	2.0
Highest degree in nursing		
Diploma	11.4%	13.9%
Associate degree	47.6	36.1
Baccalaureate degree	32.4	36.8
Graduate degree	8.6	13.2
International nurse graduate	12.0	5.6
Work Setting		
Hospital	69.8%	62.2%
Home healthcare	5.8	6.4
Nursing home	2.4	5.3
Other	22.0	26.1

Nursing Staffing, Intent to Leave, Emotional Exhaustion and Job Dissatisfaction by Work Setting

Table 2

	Hospital	Home Health	Nursing Home	Other	p
Mean patient to nurse ratio	5.1	5.4	12.8	7.9	<0.0001
Burnout %	33.8	24.0	27.7	20.8	<0.0001
Job dissatisfaction %	24.4	16.2	27.8	12.4	<0.0001
Intent to leave %	18.0	19.4	31.7	14.4	<0.0001

Other includes ambulatory care, occupational health, outpatient and residential psychiatric care, long term care (excluding nursing home), and student health.

Table 3

Items from the Practice Environment Scale of the Nursing Work Index

	<i>% agreeing</i>
Professional relationships	
Collaboration exists between nurses and physicians	71.5%
Nurses and physicians have good working relationships	80.3
Staffing and resources	
Enough registered nurses on staff to provide quality patient care	48.3
Enough staff to get the work done	45.9
Adequate support services allow time with patients	57.3
Workplace management	
Administration that listens and responds to employee concerns	45.2
A chief nursing officer who is highly visible and accessible to staff	44.9
A nurse manager who is a good manager and leader	61.6
A head nurse who backs nursing staff in decision making, even if the conflict is with a physician	62.2
A supervisory staff that is supportive of nurses	62.7

Table 4

Percentage of Nurse Ratings of Quality of Patient Care in Their Work Environments

Survey Question	%
Rated quality of care on unit as fair to poor	18.0%
Not confident patients can manage their care after discharge	40.0
Not confident management will act to resolve problems in patient care that they report.	51.5
Graded their unit/practice area as poor or failing in patient safety	6.8