Regulating Patient Staffing: A Complex Issue

Robin Hertel

Nurse staffing has always been a complex issue, but recently it has taken on renewed importance. There are currently four legislative proposals in the U.S. House and Senate addressing staffing, with multiple states also taking on this issue. Research into increased staffing levels is mixed. While increases in staffing increase job satisfaction among nurses, research fails to demonstrate a decrease in either patient falls or the development of pressure ulcers. Multiple staffing models and terminology also complicate this issue. This article presents the proposed legislation, looks at pros and cons of staffing legislation, evaluates different staffing models, and discusses implications for practice.

The issue of nursing care and patient staffing ratios is not new to medical-surgical nurses. It took on national importance in 1996 with the release of an Institute of Medicine (IOM) report that evaluated nurse staffing and patient safety (Wunderlich, Sloan, & Davis, 1996). Patient staffing ratios have recently taken on renewed importance due to patients being better informed, higher acuity levels, budgetary concerns which are resulting in cutbacks at every level of health care, and the aging of the nursing workforce (Bolton et al., 2007; Jennings, 2005; Kane, Shamliyan, Mueller, Duval, & Wilt, 2007b; Needleman, Buerhaus, Stewart, Zelevinsky, & Mattke, 2006). There is a lively debate at every level of health care about the appropriate way to manage the patient load that registered nurses (RNs) can and should take on. Nurses are dedicated to the safety of their patients, working diligently toward positive patient outcomes. In order to succeed, patient-staff ratios must be reasonable. Financial aspects of health care look to the bottom numbers, with payment tied to diagnosis related groups (DRGs) and hospital-acquired problems such as falls, pressure ulcers, and urinary tract infections (Kane et al., 2007b). Health care leaders seek to ensure care is delivered that will meet patient needs while securing a profit for the hospital. Hospital administrators must make certain the continued financial viability of the institution, adequate staffing, and positive patient outcomes, as well as keep up with improving technological advances.

The varied agendas and the inability of nurses, hospital administrators, and financial experts to communicate toward a single purpose, as well as the complexity of meeting staffing needs, have moved the issue into the political arena (Douglas, 2010; Needleman et al., 2006). Legislators at the state and national level are attempting to resolve the issue. California implemented state mandated nurse-patient staffing levels in 2003. Twenty-three other states (including Illinois, Maine, Nevada, Ohio, and Oregon) are now considering or have passed staffing legislation (Douglas, 2010) to implement mandated staffing ratios, use acuity levels to determine staffing needs, or to develop staffing committees with staff nurses as members.

Support for Regulating Nurse-Patient Staffing Ratios

Patient safety is at the core of all proposed national and state legislation. In support of patient safety, research studies demonstrate a decrease in patient mortality (1.24% reduction) with an increase in RN staffing (Pearson et al., 2004). Higher RN-patient staffing ratios are also associated with fewer incidents of failure-to-rescue, cardiac arrest, hospital-acquired pneumonia, and other adverse events (Kane et al., 2007b). Understaffing and overtime hours have been associated with increases in patient mortality, hospital-acquired infections, shock, and bloodstream infections (Kane et al., 2007b). While research shows a link between nurse-patient staffing ratios and patient outcomes, other factors to be considered include “occupational health issues (back injuries and needlestick injuries) and psychological states and experiences (like burnout) that may represent precursors for nurse turnover from specific jobs as well as the profession” (Clark & Donaldson, 2008, p. 124). A survey by Buerhaus (2009) revealed 60% of nurses felt minimum nurse-patient staffing ratios should be mandated.

A study completed by Aiken and colleagues (2010) found 74% of California staff nurses thought the quality of care had improved as a result of mandated staffing legislation. This study also reported a significantly lower percentage of burnout and increased levels of job satisfaction among California nurses following implementation of the mandated staffing legislation. Other findings in this study include decreases in patient and family complaints and a decrease in workplace (horizontal) violence.

Support for NOT Regulating Nurse-Patient Staffing Ratios

Conversely, a number of studies demonstrate that improved nurse-patient ratios do not positively impact quality of care, safety, or length of stay (Bolton et al., 2007; Clark, 2005; Greenberg, 2006). A report published by the California Nursing Outcomes Coalition (2005) evaluated the impact of the mandated nurse-patient ratio and found “no statistically significant changes in the patient safety and quality outcomes studies, the incidence of patient falls, and the prevalence of pressure ulcers” (Bolton et al., 2007, p. 239). Similar results were obtained by Bolton and colleagues (2007) and Lake and Cheung (2006) in follow-up studies that found no statistically significant decrease in the number of patient falls or the development of hospital-acquired pressure ulcers with the implementation of mandated nurse-patient ratios.

Although designed to ensure full and constant coverage of patients by professional nurses, current California legislation and United States Senate bill S.992, National Nursing Shortage Reform and Patient Advocacy Act (Boxer, 2011), state the ratios must be

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### Table 1.
**Proposed Nurse-Patient Staffing Ratio Legislation**

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Sponsor</th>
<th>Summary</th>
<th>Status</th>
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<tbody>
<tr>
<td>H.R. 876 Registered Nurse Safe Staffing Act of 2011</td>
<td>Capps (CA) 6 co-sponsors</td>
<td>Requires all Medicare participating hospitals to establish <strong>nurse staffing committees</strong> to implement and oversee hospital-wide staffing plan for nursing services. Plan requires an appropriate number of registered nurses provide direct patient care in each unit and on each shift to ensure staffing levels that address the unique characteristics of the patients and hospital units and results in the delivery of safe, quality patient care.</td>
<td>Referred to Subcommittee on Health</td>
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<tr>
<td>H.R. 2187 To amend the Public Health Service Act to establish direct care registered nurse-to-patient staffing ratio requirements in hospitals and for other purposes</td>
<td>Shakowsky (IL) 12 co-sponsors</td>
<td>This legislation was introduced June 15, 2011. The text is not yet available, but will be a reflection of S.992.</td>
<td>Referred to Committees on Ways and Means and Commerce</td>
</tr>
<tr>
<td>S.58 Registered Nurse Safe Staffing Act of 2011</td>
<td>Inouye (HI) No co-sponsors</td>
<td>Requires all Medicare participating hospitals to establish <strong>nurse staffing committees</strong> to implement and oversee hospital-wide staffing plan for nursing services. Plan requires an appropriate number of registered nurses provide direct patient care in each unit and on each shift to ensure staffing levels that address the unique characteristics of the patients and hospital units and results in the delivery of safe, quality patient care.</td>
<td>Referred to Committee on Finance</td>
</tr>
<tr>
<td>S.992 National Nursing Shortage Reform and Patient Advocacy Act</td>
<td>Boxer (CA) No co-sponsors</td>
<td>Requires all hospitals to implement <strong>nurse-patient ratios</strong> as follows: 1:1 – trauma emergency units 1:1 – OR units, providing at least one additional person to serve as scrub assistant 1:2 – critical care units 1:3 – emergency room, step-down, pediatrics, telemetry, ante-partum, labor and delivery 1:4 – medical-surgical, intermediate care nursery, psychiatric and other specialty care 1:5 – rehabilitation and skilled nursing units 1:6 – well baby nursery, postpartum (3 couples) Hospitals may NOT average the number of patients and total number of direct care nurses on any unit, may NOT impose mandatory overtime requirements, and MUST provide direct care registered nurse coverage for another direct care registered nurse during breaks, meals, and other routine, expected absences from the unit.</td>
<td>Referred to Committee on Health, Education, Labor, and Pensions</td>
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**Source:** Adapted from Library of Congress, 2011.
Patient Staffing Ratios

com petencies, [and] variations in continuity” (D ouglas, 20 1 0 , p. 1 21 ).

m ay pose a safety issue related to “increased handover com m unica -

units should reflect differences in patient populations and illness severity.Various types of staffing measures add to the complexity of the issue: patient-to-nurse ratio, hours of nursing care provided per patient day (HPPD), and full-time equivalent (FTE) positions worked in relation to average patient census (ADC) (C offm an, Seago, & Spetz, 20 0 2; Douglas, 20 1 0 ).While the ratio of unlicensed personnel and licensed practical (or vocational) nurses to RNs is often accounted for, additional staffing-related characteristics include the qualifications of the staff members, years of experience, professional certification of the staff, the use of contract or agency staff, and whether or not the charge nurse, nurse educators, and other nurses not assigned a patient load are included in the staffing measure.

There may be differences in measuring acuity in different states (Aiken et al., 2010). Additionally, some facilities may staff with ratios of FTEs of RNs per patient day or occupied bed, while another may utilize a patient-to-nurse ratio per shift (Kane et al., 2007b). The ability to develop a comprehensive staffing plan and legislation is further limited by the inconsistency in operational definitions of nursing staff patterns and methods to measure patient acuity (Kane et al., 2007a).

The inability to measure the “work” of the nurse contributes to the complexity of this issue. For example, the patient flow (admissions, discharges, patients returning from surgeries, and transfers to and from other units) can result in nurses providing care for many more patients in a day than what is reflected in the RN hours per patient day or nurse-patient staffing ratio (Needleman et al., 2011).

There are financial factors to consider when establishing a set nurse-to-patient staffing ratio. Hospitals are paid a fixed rate under the DRGs system that does not reflect the quality of care the patient has received. In addition, there are a number of hospital-acquired conditions (e.g., infections, pressure ulcers) that are not covered by Medicare/Medicaid and many privately held insurance groups (Department of Health and Human Services, 2010). Regulating staffing ratios would place an increased financial burden on the hospital. To meet this increase in cost, hospitals may consider reducing support staff positions, which may increase the overall burden on the RN (Spetz, 2005). In a study completed by Aiken and colleagues (2010), there was a substantial decrease in the use of unlicensed assistive personnel (34%) and non-nursing support services such as clerical help and housekeeping services (27%) when staffing ratios were regulated. The fact remains that the work done by these entities does not go away, but is instead picked up as additional nursing responsibilities.

A second financial factor associated with mandated nurse staffing ratios would be a facility’s ability to invest in medical technology and equipment to improve the quality of care. “Some of these investments, such as electronic medical records and medical equipment with state-of-the-art safety features, can greatly reduce human errors in care delivery. They can also ease the demands placed on nurses, perhaps even more so than increases in nurse-to-patient ratios can” (C offman et al., 2002, p. 61).

The nursing shortage must also be considered when discussing mandated staffing levels. While regulating the number of patients a nurse cares for may make returning to inpatient nursing more attractive to professionals and may increase the interest of the young adult in nursing as a profession, increasing the amount of non-nursing work performed by the RNs could reduce this potential work pool. In addition, increased interest in nursing does not automatically result in increased numbers of nurses due to the multiple issues faced by nursing programs such as the aging nurse faculty, insufficient salaries for nursing faculty, and limitations on clinical space. Hospitals located in areas of the country where nurses are in short supply may be forced to divert patients or close their doors if a strict nurse-patient ratio is mandated.

Nurse-Patient Staffing Ratio Methods

The patient acuity-based staffing commonly used across the United States is a method that utilizes a patient classification system (PCS) to predict patient requirements for care and is used to manage nurse staffing, costs, and quality of care (Jennings, 2008). The PCS, which requires adjustments to staffing based on patient diagnosis and co-morbidities, is not an ideal system. Douglas (2010) lists no fewer than 36 variables that must be considered on each unit for staffing decisions (see Table 2). In addition, validity and reliability of PCSs are infrequently monitored and as a result, often lack credibility among staff nurses and administrators (Jennings, 2008). The usefulness of a PCS is further compromised because it does not account for shift-to-shift fluctuations in nurse staffing that have an important influence on quality of care.

Terminology also varies between hospitals and states with regard to the patient classification system. Some facilities may base staffing on DRGs while others assess and classify “patients according to their need of care as well as the activities that are necessary to fulfill the needs of the care process during a certain time period” (Rainio & Ohinmaa, 2005, p. 675). Yet another system involves analysis of six subsections of care provided by nurses: planning and coordination of care, symptoms of disease, nutrition and medication, personal hygiene, activity and movement, and teaching (Rainio & Ohinmaa, 2005).

The use of a standardized staffing method does not produce accurate results. For instance, the Medicare’s Case Mix Index (CMI) is often used to make comparisons of quality across hospitals (Mark & Harless, 2011). However, the end result is often dependent upon which angle one is looking at. “Administrators tend to view a higher CMI as a reflection that the patients require more resources, resulting in higher costs” (Mark & Harless, 2011, p. 107). In reality, this is not always the case. Mark and Harless (2011) illustrated the disparity involved with the CMI system by comparing two patient scenar-
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A study evaluating California’s mandated staffing and the implications for other states found that while 88% of California nurses on medical-surgical units met the mandated benchmarks for staffing (1:5 ratio), the results are not so positive for those states in which no regulation exists (Aiken et al., 2010). In the study, which also evaluated hospitals and nurse staffing in New Jersey and Pennsylvania, benchmarks for staffing on medical-surgical units were met only 19% and 33% of the time, respectively.

A method of staffing that incorporates unit nurses’ input to develop nurse staffing plans based on nurse-sensitive patient outcomes may be warranted. This method would address staffing needs without the rigid mandates and provide increased opportunities for nurses to play a direct role in staffing decisions. “Whatever solution we stand behind must give the nurse the power to make staffing decisions and to override models, including ratios, when they don’t make sense and to have the authority to use their expertise in the best interest of patients, the care team, and the hospital” (Douglas, 2010, p. 122).

Table 2.
Staffing Decision Variables

<table>
<thead>
<tr>
<th>1. Number of patients</th>
<th>13. Number of RNs</th>
<th>25. Individual nurse (staff dynamics)</th>
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<tbody>
<tr>
<td>3. Intensity of situation</td>
<td>15. Experience level of staff</td>
<td>27. Nurse satisfaction</td>
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<tr>
<td>4. Severity of illness</td>
<td>16. Special credential requirements</td>
<td>28. Ancillary and support staff availability</td>
</tr>
<tr>
<td>6. Family situation/needs</td>
<td>18. Role and skill competencies</td>
<td>30. Variations in technology</td>
</tr>
<tr>
<td>8. Quality</td>
<td>20. Setting/environment</td>
<td>32. Legislative and regulatory requirements</td>
</tr>
<tr>
<td>10. Treatment requirements</td>
<td>22. Working conditions</td>
<td>34. Quality considerations</td>
</tr>
<tr>
<td>11. Observation and intervention requirements</td>
<td>23. Culture influences</td>
<td>35. Budget considerations</td>
</tr>
</tbody>
</table>


Implications for Nursing Practice

The literature review has not yielded any evidence-based minimum staffing ratios (Bolton et al., 2007; Jennings, 2008; Needelman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002). Currently, clinicians and managers set nurse-patient staffing ratios based on their experience and extrapolations of research findings and the bottom financial line. In the absence of any legal mandate to regulate staffing, it appears the best practice is to benchmark staffing and outcomes against peers along with avoiding extremes in low staffing and high adverse events.

Even this approach does not guarantee positive results. A method of staffing that incorporates unit nurses’ input to develop nurse staffing plans based on nurse-sensitive patient outcomes may be warranted. This method would address staffing needs without the rigid mandates and provide increased opportunities for nurses to play a direct role in staffing decisions. “Whatever solution we stand behind must give the nurse the power to make staffing decisions and to override models, including ratios, when they don’t make sense and to have the authority to use their expertise in the best interest of patients, the care team, and the hospital” (Douglas, 2010, p. 122).

Conclusion

The debate over nurse-patient staffing ratios is complex and introducing politicians into the mix increases the complexity. The primary issue remains the delivery of safe, quality, and cost-effective patient care; this can only be accomplished if when nurses, administrators, financial leaders, and politicians work together and respect one another’s point of view to bring resolution to this complex problem. It is vital that nurses take an active role in being informed and participate in developing a nurse-patient system to determine a staffing ratio that promotes patient safety and positive patient outcomes.
References


Douglas, K. (2010). Ratios – If only it were that easy. Nursing Economic$, 28(2), 119-125.


