



**CONNECTICUT NURSES'
ASSOCIATION**

377 Research Parkway, Suite 2-D
Meriden, CT 06450-7160
203-238-1207

377 Research Parkway
Meriden, CT 06450-7160
203-238-1207

***TESTIMONY RE: RAISED H.B BILL 5322 AN ACT CONCERNING NURSING
HOME MINIMUM STAFFING LEVELS.***

Human Services Committee
March 4, 2014

Good morning Senator Slossberg, Representative Abercrombie and esteemed members of the Human Services Committee. Thank-you for the opportunity to provide testimony on behalf of the Connecticut Nurses' Association (CNA), I am Mary Jane Williams PhD RN, current chairperson of its Government Relations Committee. I have practiced nursing for 49 years in Connecticut in both public and private sector. I am providing testimony in strong support of ***RAISED H.B BILL 5322 AN ACT CONCERNING NURSING HOME MINIMUM STAFFING LEVELS.***

The present requirements for nursing home staffing were established decades ago at a time when the acuity level and number of co-morbidities of residents were less and the care needs very different then they are today. Through additional home care programs and more care being delivered either in the home or assisted living facilities, the residents of long term care facilities presents with multisystem issues. Connecticut's regulations in this area have not kept up and resident classification systems developed through the Centers for Medicare and Medicaid and others who have offered methodologies to determine the number, experience and qualifications of nursing personnel needed to meet the resident's needs. Connecticut's regulations determine staffing by a static number of licensed and unlicensed nursing personnel and do not incorporate acuity levels of the patient with multi system failure and dementia.

Although we are supportive of this bill we have one other recommendation regarding nurse staffing in long term care facilities. The number of registered nurses (RNs) now required and the number potentially being required through this bill are still inadequate for the responsibilities that the RN carries. The RN is ultimately responsible for all care that is delivered – including the assessments, changes in care plans (including receiving any verbal order with changes), licensed practical nurses, certified nursing assistants and feeding assistants to mention a few. Workplace and working conditions are part of how nurses make decisions where they will practice. The long term care facilities offer tremendous opportunities for registered nurses but their choices will be limited to other health care situations that offer better working conditions, mentoring, better salaries and less risk for their license. Just adding additional licensed personnel to the staffing equation will not reduce the responsibilities of the registered nurse.

I receive many communications from nurses who work in long term care. They are frustrated by the working conditions lack of mentoring and ratio of provider to patient.

Recently I received this email

I spoke to you earlier in regards to my concern with redistribution of staff according to Connecticut laws. It is a mandatory that we have more staff available in long-term care during the day then at night. I believe we should have the same 24 hour staff ratios due to the fact patients tend to be more so called "needy" at night; such of those with dementia and other diagnosis that require more direct supervision. Currently, state regulations mandate 1 LPN per 25 patients on the day shift and in the evening 1 LPN for every 45. This is almost double the load. I don't believe this is safe for any facility whether it be rehab, long-term care, or hospice. As discussed earlier I would like to petition that we extend state ratios during evening/night shift and keep it an even distribution of staff throughout care 24-7. I don't think it is safe to in any acute care setting or labor intensive setting staffing should be determined by time of day.
(Personal Communication)

We urge the committee to have assurance that nurse staffing is not just a greater number

of less qualified individuals and that the proposed staffing ratios are appropriate for complex multisystem failure patients during the 24 hours they need care.

Thank you for considering our support of this bill and our concerns. We strongly urge the committee's support ***RAISED H.B BILL 5322 AN ACT CONCERNING NURSING HOME MINIMUM STAFFING LEVELS.*** If you have any further questions do not hesitate to contact me directly.

Thank you

ANA's Principles for Practice

ANA's
Principles
for Nurse Staffing

Second Edition



Silver Spring, Maryland
2012

Summary

The 2012 ANA Principles for Nurse Staffing identify the major elements needed to achieve optimal staffing, which enhances the delivery of safe, quality care. These principles apply to all types of nurse staffing at every practice level and in any healthcare or practice setting. They are grounded in the substantive and growing body of evidence that demonstrates the link between adequate nurse staffing and better patient outcomes. Focused on addressing the complexities of nurse staffing decisions, the principles and supporting material in this publication will guide nurses and other decision-makers in identifying and developing the processes and policies needed to improve nurse staffing.

American Nurses Association
8515 Georgia Avenue, Suite 400
Silver Spring, MD 20910-3492
1-800-274-4ANA

www.Nursingworld.org

 Published by:
nurses THE
books.org PUBLISHING
PROGRAM
OF ANA

www.Nursesbooks.org

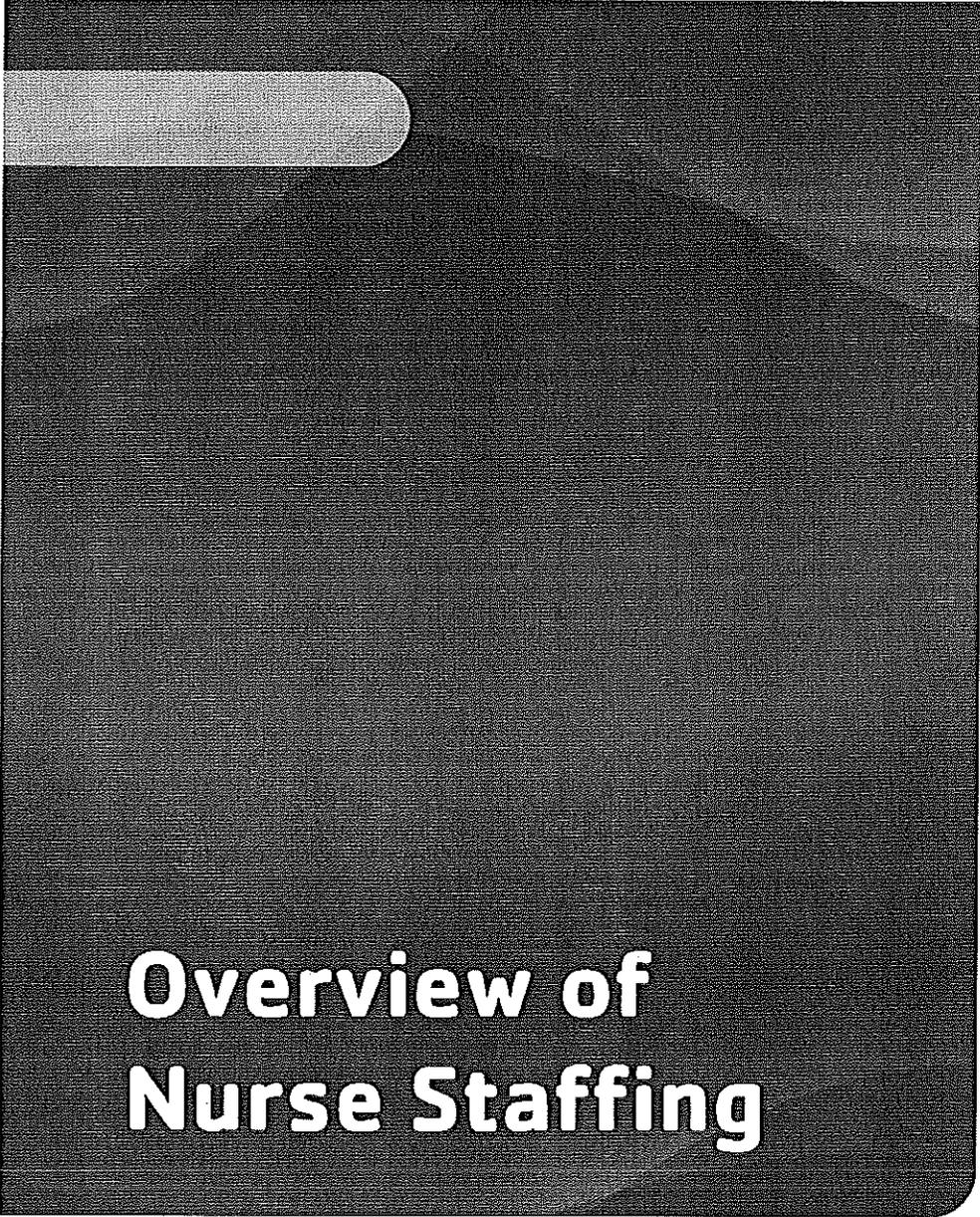
© 2012 American Nurses Association. All rights reserved. No part of this book may be reproduced or utilized in any form or any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval system, without permission in writing from the publisher.

ISBN-13: 978-1-55810-443-2

Published June 2012

Contents

- 2 Overview of Nurse Staffing
- 5 Principles for Nurse Staffing
 - Definition of Appropriate Nurse Staffing
 - Core Components of Nurse Staffing
 - Principles Related to the Healthcare Consumer
 - Principles Related to Registered Nurses and Other Staff
 - Principles Related to Organization and Workplace Culture
 - Principles Related to the Practice Environment
 - Principles Related to Staffing Evaluation
 - Conclusion
- 12 Bibliography
- 22 Contributors



Overview of Nurse Staffing

Overview of Nurse Staffing

Appropriate nurse staffing is critical to the delivery of safe, quality care that impacts patient care outcomes. Nursing is an essential component of comprehensive healthcare. Staffing impacts the ability of a nurse to deliver safe, quality care at every practice level and in all practice settings. Because the delivery of nursing care is a multifaceted process, the determination of appropriate nurse staffing is complex. The solution is not as simple as increasing the number of nurses beyond what is minimally necessary.

While the issue of staffing is complex, it is not unsolvable. It challenges the profession to create dynamic solutions that are adaptable to the ever-evolving nature of health care. Many types of staffing solutions have been developed, which are in turn tested and evaluated through quality measurement and research. In turn, this evidence drives the nursing profession to support principles that are needed to guide registered nurses and others in determining their individual solutions to this enigmatic issue.

Using this evidence, the American Nurses Association (ANA) develops and disseminates principles that served as the guidelines for determining registered nurse staffing solutions. Since the initial publication of *Principles for Nurse Staffing* (ANA, 1999), the evidence supporting the link between adequate nurse staffing and better patient outcomes has grown. ANA's advocacy for nurse staffing includes developing data collection methods, principles, and policy solutions for nurse staffing. Among these are the National Database for Nursing Quality Indicators® (NDNQI®), ongoing lobbying at the federal and state levels, and facilitation of ANA expert panels and research synthesis.

Another culmination of the growth of the body of evidence and ANA's advocacy is this document, *Principles for Nurse Staffing, Second Edition*. After conducting a thorough review of the available literature, those original staffing principles were assessed systematically and scientifically for relevance, applicability, and gaps. The original edition had been supported by twelve publications (which are denoted in this document by asterisks in the Bibliography). The support documentation for this revision was expanded to include the increasing published literature currently available on the topic of nurse staffing. These revised staffing principles set forth in this edition apply to any level or setting of nursing, and form the basis of the activity or policy of specialty nursing associations around staffing.

The ANA Principles for Nurse Staffing as delineated in this document reflect the intricate nature of how decisions are made toward ensuring appropriate nurse staffing. Supporting these principles are foundational statements regarding key aspects of nurse staffing that are enduring and core beliefs of ANA's approach, and are described on page 6.

An overarching characteristic of these principles are the different dynamics of given healthcare settings and situations and what elements of these dynamics must be considered when developing staffing plans. Accordingly, the ANA Principles for Nurse Staffing are organized into five sets according to these topics:

- The characteristics and considerations of the healthcare consumer
- The characteristics and considerations of the registered nurses and other interprofessional team members and staff
- The context of the entire organization in which the nursing services are delivered
- The overall practice environment that influences delivery of care
- The evaluation of staffing plans

¹A healthcare consumer is “the person, client, family, group, community, or population who is the focus of attention and to whom the registered nurse is providing services as sanctioned by the state regulatory bodies.” (ANA, 2012; pg. 65)

© 2012 American Nurses Association. All rights reserved. No part of this book may be reproduced or utilized in any form or any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Principles for Nurse Staffing

Definition of Appropriate Nurse Staffing

Core Components of Nurse Staffing

Principles Related to the Healthcare Consumer

Principles Related to Registered Nurses and Other Staff

Principles Related to Organization and Workplace Culture

Principles Related to the Practice Environment

Principles Related to Staffing Evaluation

Principles for Nurse Staffing

Definition of Appropriate Nurse Staffing

Appropriate nurse staffing is a match of registered nurse expertise with the needs of the recipient of nursing care services in the context of the practice setting and situation. The provision of appropriate nurse staffing is necessary to reach safe, quality outcomes; it is achieved by dynamic, multifaceted decision-making processes that must take into account a wide range of variables.

Core Components of Nurse Staffing

- Appropriate nurse staffing is critical to the delivery of quality, cost-effective health care.
- All settings should have well-developed staffing guidelines with measurable nurse sensitive outcomes specific to that setting and *healthcare consumer* population that are used as evidence to guide daily staffing.
- Registered nurses are full partners working with other healthcare professionals in collaborative, interdisciplinary partnerships.
- Registered nurses, including direct care nurses, must have a substantive and active role in staffing decisions to assure the necessary time with patients to meet care needs and overall nursing responsibilities.
- Staffing needs must be determined based on an analysis of healthcare consumer status (e.g., degree of stability, intensity, and acuity), and the environment in which the care is provided. Other considerations to be included are: professional characteristics, skill set, and mix of the staff, and previous staffing patterns that have been shown to improve outcomes.
- Appropriate nurse staffing should be based on allocating the appropriate number of competent practitioners to a care situation; pursuing quality of care indices; meeting consumer-centered and organizational outcomes; meeting federal and state laws and regulations; and attending to a safe, quality work environment.
- Cost effectiveness is an important consideration in delivery of safe, quality care.
- Reimbursement structure should not influence nurse staffing patterns or the level of care provided.

Principles Related to the Healthcare Consumer

Staffing decisions should be based on the number and needs of the individual healthcare consumer, families and population served. These include:

- Age and functional ability
- Communication skills
- Cultural and linguistic diversities
- Severity, intensity, acuity, complexity, and stability of condition
- Existence and severity of multi-morbid conditions
- Scheduled procedure(s)
- Ability to meet healthcare requisites
- Availability of social supports
- Transitional care, within or beyond the healthcare setting
- Continuity of care
- Complexity of care needs
- Environmental turbulence (i.e., rapid admissions, turnovers, and/or discharges)
- Other specific needs identified by the healthcare consumer, the family and the registered nurse

In any approach used to determine staffing consideration must be given to the elements affecting care at the individual setting level. No single method, model or assessment tool (e.g., nursing hours per patient day [NHPPD], nursing intensity weights, strict nurse-to-patient ratios) has provided sufficient evidence to be considered optimal in all settings and all situations. Each setting should have staffing guidelines based on safety indicators and outcomes specific to that area.

The following elements are to be considered when making the determination:

- Governance within the setting (i.e., shared governance)
- Involvement in quality measurement activities
- Quality of work environment of nurses
- Development of comprehensive plans of care
- Practice environment
- Architectural geography of unit and institution

- Evaluation of practice outcomes that include both quality and safety
- Available technology
- Evolving evidence

Principles Related to Registered Nurses and Other Staff

The specific needs of the population served should determine the appropriate clinical competencies required of the registered nurse practicing in that area.

The organization must specify the appropriate credentials and qualifications of registered nurse staff, while ensuring registered nurses are permitted to practice to the full extent of their education, training, and licensure.

The following nurse characteristics should be taken into account when determining staffing:

- Licensure
- Experience with the population being served
- Level of experience (i.e., novice to expert)
- Competency with technology and clinical interventions
- Professional certification
- Educational preparation
- Language capabilities
- Organizational experience

Staffing plans should accommodate for experienced registered nurses who can offer clinical support to other staff. Adjustments in staffing should be considered to incorporate mentoring and skill development needs of nurses, including novice nurses.

Factors such as nurse satisfaction, burnout, turnover, retention, precepting students or new staff, acting as a mentor, care coordination, skill with technology, use of agency or contractual staff, competency requirements, and staff development should be monitored regularly to ensure that staffing outcomes are measured and adjusted. Nursing students and precepted students are not staff and cannot be treated as such.

Registered nurses must have the decision-making authority to alter staffing to accommodate changing and anticipated healthcare consumer needs, registered nurse competency and skill levels, in order to assure appropriate staffing in rapidly changing situations.

Principles Related to Organization and Workplace Culture

Organizations must create a work environment that values registered nurses and other employees as strategic assets and fills budgeted positions in a timely manner.

Policies should support the ability of registered nurses to practice to the full extent of their education, documented competencies, and scope of practice.

To maximize safe patient care and quality outcomes, organizations should recognize that in addition to appropriate registered nurse staffing, they must provide interprofessional support and ancillary services. These include at a minimum:

- Effective and efficient support services (e.g., transport, clerical, housekeeping, and laboratory)
- Timely coordination, supervision, and delegation as needed to maximize safety
- Access to timely, accurate, relevant information provided by communication technology that links clinical, administrative, and outcome data
- Sufficient orientation and preparation, including nurse preceptors and nurse experts to ensure registered nurse competency
- Preparation and ongoing training for competency in technology or other tools
- Sufficient time for patient documentation
- Necessary time to collaborate with and supervise other staff
- Necessary time to accommodate increased documentation demands created by integration of technology, electronic records, surveillance systems, and regulatory requirements
- Support in ethical decision-making
- Resources and pathways for care coordination and healthcare consumer/client and/or family education

- Adequate time for coordination and supervision of nursing assistive personnel by registered nurses
- Processes to facilitate transitions during work redesign, mergers, and other major changes in work life
- Supporting the registered nurse's professional responsibility to maintain continuing education and engagement in lifelong learning

Successful staffing requires organizational and administrative support from all levels. In addition, registered nurses, including direct care nurses, must be engaged and participatory in decision-making.

Nurse administrators are responsible for facilitating the provision of appropriate nurse staffing and to collaborate with others in the organization to assure the best use of resources.

Principles Related to the Practice Environment

Staffing is a structure and process that affects the safety of patients, as well as nurses themselves, and others in the environment. Institutions employing a culture of safety must recognize appropriate nurse staffing as integral to achieving goals for patient safety and quality.

Registered nurses have a professional obligation to report unsafe conditions or inappropriate staffing that adversely impacts safe, quality care, and the right to do so without reprisal.

Registered nurses should be provided a professional nursing practice environment in which they have control over nursing practice and autonomy in their workplace. Appropriate preparation, resources and information should be provided for those involved at all levels of decision-making. Opportunities must be provided for individuals to be involved in decision-making related to nursing practice.

Routine mandatory overtime is an unacceptable solution to achieve appropriate nurse staffing. Policies on length of shifts; management of meal and rest periods; and overtime should be in place to ensure the health and stamina of nurses and prevent fatigue-related errors.

Principles Related to Staffing Evaluation

Organizations must have registered nurse staffing plans that demonstrate a logical method for determining staffing levels and skill mix, and are conducive to change based on analysis of evaluation data.

Organizations should evaluate staffing plans based on factors including, but not limited to:

- Outcomes, especially as measured by nurse-sensitive indicators
- Time needed for direct and indirect patient care
- Work-related staff illness and injury rates
- Turnover/vacancy rates
- Overtime rates
- Rate of use of supplemental staffing
- Flexibility of human resource policies and benefit packages
- Evidence of compliance with applicable federal, state, and local regulations
- Levels of healthcare consumer satisfaction and nurse satisfaction.

Staffing plans must be conducive to adjustment to reflect changes in evidence and outcomes, care scenarios, and the needs of the population served, all of which can vary from hour to hour, day to day, and shift to shift.

Evaluation of any staffing system should include factors associated with the environment with an understanding of how that particular environment affects healthcare consumer safety and outcomes.

When evaluating cost of nursing staffing, the organization should take into account the cost of adverse outcomes when staffing is inappropriate.

Conclusion

Despite the efforts at all levels of the nursing profession, heightened and more immediate attention is needed to assure the provision of safe, quality nursing care. Appropriate nurse staffing must be considered an asset to ever-evolving health care systems, rather than simply a cost factor. Evidence demonstrates that nursing care has a direct impact on the overall quality of services received, and that when registered nurse staffing is adequate, adverse events decline and overall outcomes improve. It is imperative that the healthcare paradigm shift towards better health at lower costs includes an increased emphasis on the importance of appropriate nurse staffing. Nurses make a tremendous contribution to quality care: the value of registered nurse staffing cannot be underestimated.

Bibliography

(*=included in original 1999 *Principles for Nurse Staffing* document)

- Aaronson, L. S., & Sochalski, J. (1986). Re: Institutional sources of articles published in 13 nursing journals, 1978–1982. *Nursing Research*, 35(1), 59–60.
- Aiken, L. H. (2010a). The California nurse staffing mandate: Implications for other states. *LDI Issue Brief*, 15(4), 1–4.
- Aiken, L. H. (2010b). The jury's in: Staffing laws work. Interview by Carol Potera. *American Journal of Nursing*, 110(7), 15.
- Aiken, L. H., Buchan, J., Sochalski, J., Nichols, B., & Powell, M. (2004). Trends in international nurse migration. *Health Affairs*, 23(3), 69–77.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., & Sochalski, J. (2001). Cause for concern: Nurses' reports of hospital care in five countries. *LDI Issue Brief*, 6(8), 1–4.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *Journal of the American Medical Association*, 287, 1987–1993.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J. A., Busse, R., Clarke, H., ... Shamian, J. (2001). Nurses' reports on hospital care in five countries. *Health Affairs*, 20(3), 43–53.
- Aiken, L. H., Patrician, P.A. (2000). Measuring organizational traits of hospitals: The revised Nursing Work Index. *Nursing Research*, 49(3), 146–153.
- Aiken, L. H., Sloane, D. M., Cimiotti, J. P., Clarke, S. P., Flynn, L., Seago, J. A., ... Smith, H. L. (2010). Implications of the California nurse staffing mandate for other states. *Health Services Research*, 45(4), 904–921.
- Aiken, L. H., Sloane, D. M., & Sochalski, J. (1998). Hospital organisation and outcomes. *Quality Health Care*, 7(4), 222–226.
- *Aiken, L. H., Smith, H. L. & Lake, E. T. (1994). Lower Medicare mortality among a set of hospitals known for good nursing care. *Medical Care*. 32(8), 771–787.
- Aiken, L. H., Sochalski, J., & Anderson, G. F. (1996). Downsizing the hospital nursing workforce. *Health Affairs* 15(4), 88–92.
- Aiken, L. H., Sochalski, J., & Lake, E. T. (1997). Studying outcomes of organizational change in health services. *Medical Care*, 35(11 Suppl), NS6–18.
- *American Nurses Association (1997). *Implementing Nursing's Report Card: A study of RN Staffing, length of stay and patient outcomes*. Washington, DC: American Nurses Publishing.
- American Nurses Association (1999). *Principles for nurse staffing*. Washington, DC: Author.

- American Nurses Association (2010). *Nursing: Scope and standards of practice, 2nd Ed.* Silver Spring, MD: Nursesbooks.org.
- Bae, S. H., Mark, B., & Fried, B. (2010). Impact of nursing unit turnover on patient outcomes in hospitals. *Journal of Nursing Scholarship, 42*(1), 40–49.
- Baernholdt, M., & Mark, B. A. (2009). The nurse work environment, job satisfaction and turnover rates in rural and urban nursing units. *Journal of Nursing Management 17*(8), 994–1001.
- Birmingham, S. E. (2010). Evidence-based staffing: The next step. *Nurse Leader, (June)*, 24–35.
- Black, L., Spetz, J., & Harrington, C. (2008). Nurses working outside of nursing: Societal trend or workplace crisis? *Policy, Politics, & Nursing Practice, 9*(3), 143–157.
- *Bridges, W. (1991). *Managing transitions: Making the most of change.* Reading, MA: Addison-Wesley Publishing Company.
- Brush, B. L., & Sochalski, J. (2007). International nurse migration: Lessons from the Philippines. *Policy, Politics, & Nursing Practice, 8*(1), 37–46.
- Brush, B. L., Sochalski, J., & Berger, A. M. (2004). Imported care: Recruiting foreign nurses to U.S. health care facilities. *Health Affairs, 23*(3), 78–87.
- Buchan, J., & Sochalski, J. (2004). The migration of nurses: Trends and policies. *Bulletin of the World Health Organization, 82*(8), 587–594.
- Buerhaus, P. I., Needleman, J., Mattke, S., & Stewart, M. (2002). Strengthening hospital nursing. *Health Affairs, 21*(5), 123–132.
- Burnes Bolton, L., Aydin, C. E., Donaldson, N., Brown, D. S., Sandhu, M., Fridman, M., & Aronow, H. U. (2007). Mandated nurse staffing ratios in California: A comparison of staffing and nursing-sensitive outcomes pre- and post-regulation. *Policy, Politics & Nursing Practice, 8*(4), 238–250.
- Cain, C., & Haque, S. (2008). *Organizational workflow and its impact on work quality.* Rockville, MD: Agency for Healthcare Research and Quality, U.S. Dept. of Health and Human Services.
- California Healthcare Foundation. (2009 Feb.). *Assessing the impact of California's nurse staffing ratios on hospitals and patient care.* San Francisco, CA: Center for Health Workforce, University of California San Francisco.
- Chang, Y. K., & Mark, B. A. (2009). Antecedents of severe and nonsevere medication errors. *Journal of Nursing Scholarship, 41*(1), 70–78.
- Chapman, S. A., Spetz, J., Seago, J. A., Kaiser, J., Dower, C., & Herrera, C. (2009). How have mandated nurse staffing ratios affected hospitals? Perspectives from California hospital leaders. *Journal of Healthcare Management, 54*(5), 321–333

- Chapman, S. A., Wides, C. D., & Spetz, J. (2010). Payment regulations for advanced practice nurses: implications for primary care. *Policy, Politics, & Nursing Practice, 11*(2), 89–98.
- Cho, S. H., Ketefian, S., Barkauskas, V. H., & Smith, D. G. (2003). The effects of nurse staffing on adverse events, morbidity, mortality, and medical costs. *Nursing Research, 52*(2), 71–79.
- Clarke, S. P., & Donaldson, N. E. (2008). Nurse staffing and patient care quality and safety. In R. Hughes & United States. Agency for Healthcare Research and Quality. (Eds.), *Patient safety and quality: An evidence-based handbook for nurses* (pp. 2.111–112.135). Rockville, MD: Agency for Healthcare Research and Quality, U.S. Dept. of Health and Human Services.
- Coffman, J., & Spetz, J. (1999). Maintaining an adequate supply of RNs in California. *Image—The Journal of Nursing Scholarship, 31*(4), 389–393.
- Coffman, J. M., Seago, J. A., & Spetz, J. (2002). Minimum nurse-to-patient ratios in acute care hospitals in California. *Health Affairs, 21*(5), 53–64.
- Cohen, S. S., Mason, D. J., Kovner, C., Leavitt, J. K., Pulcini, J., & Sochalski, J. (1996). Stages of nursing's political development: Where we've been and where we ought to go. *Nursing Outlook, 44*(6), 259–266.
- Conway, P. H., Tamara Konetzka, R., Zhu, J., Volpp, K. G., & Sochalski, J. (2008). Nurse staffing ratios: Trends and policy implications for hospitalists and the safety net. *Journal of Hospital Medicine, 3*(3), 193–199.
- Davis, C. K., Oakley, D., & Sochalski, J. A. (1982). Leadership for expanding nursing influence on health policy. *Journal of Nursing Administration, 12*(1), 15–21.
- Disch, J., Sochalski, J., & Seamon, J. (2004). From Nightingale to the new millennium: Charting the research and policy agenda for the nursing workforce. *Nursing Outlook, 52*(3), 155–157.
- Donaldson, N., Bolton, L. B., Aydin, C., Brown, D., Elashoff, J. D., & Sandhu, M. (2005). Impact of California's licensed nurse–patient ratios on unit-level nurse staffing and patient outcomes. *Policy, Politics, & Nursing Practice, 6*(3), 198–210.
- Douglas, K. (2009). National collaboration explores excellence in staffing. *Nurse Leader, (April 2010)*, 47–51.
- Douglas, K. (2010). Ratios: If it were only that easy. *Nursing Economic\$, 28*(2), 119–125.
- Feudtner, C., Hexem, K. R., Shabbout, M., Feinstein, J. A., Sochalski, J., & Silber, J. H. (2009). Prediction of pediatric death in the year after hospitalization: A population-level retrospective cohort study. *Journal of Palliative Medicine, 12*(2), 160–169.

- Flynn, L., Liang, Y., Dickson, G. L., & Aiken, L. H. (2010). Effects of nursing practice environments on quality outcomes in Nursing Homes. *Journal of the American Geriatric Society*, 58(12), 2401–2406.
- Friese, C. R., Earle, C. C., Silber, J. H., & Aiken, L. H. (2010). Hospital characteristics, clinical severity, and outcomes for surgical oncology patients. *Surgery*, 147(5), 602–609.
- Grumbach, K., Ash, M., Seago, J. A., Spetz, J., & Coffman, J. (2001). Measuring shortages of hospital nurses: how do you know a hospital with a nursing shortage when you see one? *Medical Care Research and Review*, 58(4), 387–403.
- Harless, D. W., & Mark, B. A. (2010). Nurse staffing and quality of care with direct measurement of inpatient staffing. *Medical Care*, 48(7), 659–663.
- Hughes, L. C., Chang, Y., & Mark, B. A. (2009). Quality and strength of patient safety climate on medical–surgical units. *Health Care Management Review*, 34(1), 19–28.
- Hughes, R., & United States Agency for Healthcare Research and Quality. (2008). *Patient safety and quality: An evidence-based handbook for nurses*. Rockville, MD: Agency for Healthcare Research and Quality, U.S. Dept. of Health and Human Services.
- Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Washington, DC: National Academies Press.
- Jennings, B. M. (2008). Patient Acuity. In R. Hughes & United States. Agency for Healthcare Research and Quality. (Eds.), *Patient safety and quality: An evidence-based handbook for nurses* (Vol. 2, pp. 2.85–82.92). Rockville, MD: Agency for Healthcare Research and Quality, U.S. Dept. of Health and Human Services.
- *The Joint Commission on the Accreditation of Healthcare Organizations. (1998, January). *Comprehensive accreditation manual for hospitals: The official handbook*. Oakbrook Terrace: The Joint Commission on the Accreditation of Healthcare Organizations.
- The Joint Commission on the Accreditation of Healthcare Organizations. (2011). *Comprehensive accreditation manual for hospitals*. Oakbrook Terrace: Joint Commission Resources.
- Kalisch, B. J., & Lee, K. H. (2011). Nurse staffing levels and teamwork: A cross-sectional study of patient care units in acute care hospitals. *Journal of Nursing Scholarship*, 43(1), 82–88.
- Kalisch, B. J., Friese, C. R., Choi, S. H., & Rochman, M. (2011). Hospital nurse staffing: Choice of measure matters. *Medical Care*, 49(8), 775–779.

- Kalisch, B. J., Tschannen, D., & Lee, K. H. (2011). Missed nursing care, staffing, and patient falls. *Journal of Nursing Care Quality*, 2011 (July-PrePrint-Publication), 1–7.
- Kane, R. L., Shamliyan, T. A., Mueller, C., Duval, S., & Wilt, T. J. (2007). The association of registered nurse staffing levels and patient outcomes: Systematic review and meta-analysis. *Medical Care*, 45(12), 1195–1204.
- Kirby, P. B., Spetz, J., Maiuro, L., & Scheffler, R. M. (2006). Changes in service availability in California hospitals, 1995 to 2002. *Journal of Healthcare Management*, 51(1), 26–38.
- Konetzka, R. T., Zhu, J., Sochalski, J., & Volpp, K. G. (2008). Managed care and hospital cost containment. *Inquiry*, 45(1), 98–111.
- Lankshear, A. J., Sheldon, T. A., & Maynard, A. (2005). Nurse staffing and healthcare outcomes: A systematic review of the international research evidence. *ANS: Advances in Nursing Science*, 28(2), 163–174.
- *Leape, L. (1994) Error in medicine. *Journal of the American Medical Association*, 272(23), 1851–1857.
- Li, Y. F., Lake, E. T., Sales, A. E., Sharp, N. D., Greiner, G. T., Lowy, E., ... Sochalski, J. A. (2007). Measuring nurses' practice environments with the revised nursing work index: Evidence from registered nurses in the Veterans Health Administration. *Research in Nursing and Health*, 30(1), 31–44.
- Lucero, R. J., Lake, E. T., & Aiken, L. H. (2010). Nursing care quality and adverse events in U.S. hospitals. *Journal of Clinical Nursing*, 19(15–16), 2185–2195.
- Mark, B. A., & Belyea, M. (2009). Nurse staffing and medication errors: Cross-sectional or longitudinal relationships? *Research in Nursing and Health*, 32(1), 18–30.
- Mark, B. A., & Harless, D. W. (2007). Nurse staffing, mortality, and length of stay in for-profit and not-for-profit hospitals. *Inquiry*, 44(2), 167–186.
- Mark, B. A., & Harless, D. W. (2010). Nurse staffing and post-surgical complications using the present on admission indicator. *Research in Nursing and Health*, 33(1), 35–47.
- Mark, B. A., Harless, D. W., & Berman, W. F. (2007). Nurse staffing and adverse events in hospitalized children. *Policy, Politics, & Nursing Practice*, 8(2), 83–92.
- Mark, B. A., Jones, C. B., Lindley, L., & Ozcan, Y. A. (2009). An examination of technical efficiency, quality, and patient safety in acute care nursing units. *Policy, Politics, & Nursing Practice*, 10(3), 180–186.
- Mark, B. A., Lindley, L., & Jones, C. B. (2009). Nurse working conditions and nursing unit costs. *Policy, Politics, & Nursing Practice*, 10(2), 120–128.

- *McClure, M.L., Poulin, M.A., Sovie, M.D., & Wandelt, M.A. (1983). *Magnet hospitals: Attraction and retention of professional nurses*. Kansas City, MO: American Nurses Association.
- *McHugh, M., West, P., Assatly, C., Duprat, L., Howard, L., Niloff, J., Waldo, K., Wandel, J., Clifford, J. (April 1996). Establishing an interdisciplinary patient care team. *Journal of Nursing Administration*, 26(4), 21–27.
- McHugh, M., Shang, J., Sloane, D.M., & Aiken, L.H. (2010). Risk factors for hospital acquired 'poor glycemic control': A case control study. *International Journal for Quality in Health Care*.
- McKee, M., Aiken, L., Rafferty, A. M., & Sochalski, J. (1998). Organisational change and quality of health care: An evolving international agenda. *Quality Health Care*, 7(1), 37–41.
- *Mitchell, P. H., Heinrich, J., Moritz, P. & Hinshaw, A. S. (1997). Outcome measures and care delivery systems: Introduction and purposes of conference. *Medical Care Supplement*, 35(11) NS1–NS5.
- Mitchell, S., Spetz, J., & Seago, J. A. (2001). Errors in data on hospital ownership. *Inquiry*, 38(4), 432–439.
- Naylor, M. D., & Sochalski, J. A. (2010). Scaling up: Bringing the transitional care model into the mainstream. *Issue Brief (Commonwealth Fund)*, 103, 1–12.
- Needleman, J., Buerhaus, P., Pankratz, V. S., Leibson, C. L., Stevens, S. R., & Harris, M. (2011). Nurse staffing and inpatient hospital mortality. *New England Journal of Medicine*, (364)11, 1037–1045.
- Patrician, P. A., Loan, L., McCarthy, M., Fridman, M., Donaldson, N., Bingham, M., & Brosch, L. R. (2011). The association of shift-level nurse staffing with adverse patient events. *Journal of Nursing Administration*, 41(2), 64–70.
- Patrician, P. A., Pryor, E., Fridman, M., & Loan, L. (2011). Needlestick injuries among nursing staff: Association with shift-level staffing. *American Journal of Infection Control*, 39(6), 477–482.
- Poghosyan, L., Clarke, S. P., Finlayson, M., & Aiken, L. H. (2010). Nurse burnout and quality of care: Cross-national investigation in six countries. *Research in Nursing and Health*, 33(4), 288–298.
- Polsky, D., Ross, S. J., Brush, B. L., & Sochalski, J. (2007). Trends in characteristics and country of origin among foreign-trained nurses in the United States, 1990 and 2000. *American Journal of Public Health*, 97(5), 895–899.
- *Prescott, P., Ryan, J.W., Soeken, K. L., Castorr, A. H., Thompson, K. O. & Phillips, C. Y. (1991). The patient intensity for nursing index: A validity assessment. *Research in Nursing and Health*, 14, 213–21.

- Ross, S. J., Polsky, D., & Sochalski, J. (2005). Nursing shortages and international nurse migration. *International Nursing Review*, 52(4), 253–262.
- Sales, A. E., Sharp, N. D., Li, Y. F., Greiner, G. T., Lowy, E., Mitchell, P., ... Cournoyer, P. (2005). Nurse staffing and patient outcomes in Veterans Affairs hospitals. *Journal of Nursing Administration*, 35(10), 459–466.
- Sales, A., Sharp, N., Li, Y. F., Lowy, E., Greiner, G., Liu, C. F., ... Needleman, J. (2008). The association between nursing factors and patient mortality in the Veterans Health Administration: The view from the nursing unit level. *Medical Care*, 46(9), 938–945.
- Scott, J. G., Sochalski, J., & Aiken, L. (1999). Review of Magnet hospital research: Findings and implications for professional nursing practice. *Journal of Nursing Administration*, 29(1), 9–19.
- Seago, J. A., Ash, M., Spetz, J., Coffman, J., & Grumbach, K. (2001). Hospital registered nurse shortages: Environmental, patient, and institutional predictors. *Health Services Research*, 36(5), 831–852.
- Seago, J. A., Spetz, J., Chapman, S., & Dyer, W. (2006). Can the use of LPNs alleviate the nursing shortage? Yes, the authors say, but the issues—involving recruitment, education, and scope of practice—are complex. *American Journal of Nursing*, 106(7), 40–49.
- Seago, J. A., Spetz, J., Chapman, S., Dyer, W., & Grumbach, K. (2004). NAPNES board of directors position paper regarding supply, demand, and use of licensed practical nurses. *Journal of Practical Nursing*, 54(2), 4.
- Seago, J. A., Spetz, J., & Mitchell, S. (2004). Nurse staffing and hospital ownership in California. *Journal of Nursing Administration*, 34(5), 228–237.
- Seago, J. A., Spetz, J., Coffman, J., Rosenoff, E., & O'Neil, E. (2003). Minimum staffing ratios: The California workforce initiative survey. *Nursing Economic\$,* 21(2), 65–70.
- *Shogren, B., & Calkins, A. (1995). *Minnesota Nurses Association Research Project on Occupational Injury/Illness in Minnesota between 1990–1994*. St. Paul, MN: The Minnesota Nurses Association.
- Sochalski, J. (2001). Nursing's valued resources: Critical issues in economics and nursing care. *Canadian Journal of Nursing Research*, 33(1), 11–18.
- Sochalski, J. (2002). Nursing shortage redux: Turning the corner on an enduring problem. *Health Affairs*, 21(5), 157–164.
- Sochalski, J. (2003). Investing in the Nurse Reinvestment Act. *Journal of Professional Nursing*, 19(4), 182–183.
- Sochalski, J. (2004a). Building a home healthcare workforce to meet the quality imperative. *Journal of Healthcare Quality*, 26(3), 19–23.

- Sochalski, J. (2004b). Is more better? The relationship between nurse staffing and the quality of nursing care in hospitals. *Medical Care*, 42(2 Suppl), I167–73.
- Sochalski, J., & Aiken, L. H. (1999). Accounting for variation in hospital outcomes: A cross-national study. *Health Affairs*, 18(3), 256–259.
- Sochalski, J., Aiken, L. H., & Fagin, C. M. (1997). Hospital restructuring in the United States, Canada, and Western Europe: an outcomes research agenda. *Medical Care*, 35(10 Suppl), OS13–25.
- Sochalski, J., Aiken, L. H., Rafferty, A. M., Shamian, J., Muller-Mundt, G., Hunt, J. M., ... Clarke, H. F. (1998). Building multinational research. *Reflections*, 24(3), 20–23.
- Sochalski, J., Estabrooks, C. A., & Humphrey, C. K. (1999). Nurse staffing and patient outcomes: Evolution of an international study. *Canadian Journal of Nursing Research*, 31(3), 69–88.
- Sochalski, J., Estabrooks, C. A., & Humphrey, C. K. (2009). Nurse staffing and patient outcomes: Evolution of an international study. *Canadian Journal of Nursing Research*, 41(1), 320–339.
- Sochalski, J., Jaarsma, T., Krumholz, H. M., Laramée, A., McMurray, J. J., Naylor, M. D., ... Stewart, S. (2009). What works in chronic care management: The case of heart failure. *Health Affairs*, 28(1), 179–189.
- Sochalski, J., Konetzka, R. T., Zhu, J., & Volpp, K. (2008). Will mandated minimum nurse staffing ratios lead to better patient outcomes? *Medical Care*, 46(6), 606–613.
- Spetz, J. (1998). Hospital employment of nursing personnel. Has there really been a decline? *Journal of Nursing Administration*, 28(3), 20–27.
- Spetz, J. (1999). The effects of managed care and prospective payment on the demand for hospital nurses: Evidence from California. *Health Services Research*, 34(5 Pt 1), 993–1010.
- Spetz, J. (2000). Hospital use of nursing personnel: Holding steady through the 1990s. *Journal of Nursing Administration*, 30(7–8), 344–346.
- Spetz, J. (2001). What should we expect from California's minimum nurse staffing legislation? *Journal of Nursing Administration*, 31(3), 132–140.
- Spetz, J. (2004a). California's minimum nurse-to-patient ratios: The first few months. *Journal of Nursing Administration*, 34(12), 571–578.
- Spetz, J. (2004b). Hospital nurse wages and staffing, 1977 to 2002: Cycles of shortage and surplus. *Journal of Nursing Administration*, 34(9), 415–422.
- Spetz, J. (2005a). The cost and cost-effectiveness of nursing services in health care. *Nursing Outlook*, 53(6), 305–309.

- Spetz, J. (2005b). Public policy and nurse staffing: What approach is best? *Journal of Nursing Administration*, 35(1), 14–16.
- Spetz, J. (2008). Nurse satisfaction and the implementation of minimum nurse staffing regulations. *Policy, Politics, & Nursing Practice*, 9(1), 15–21.
- Spetz, J. (2009). An interview with health economist and labor expert Joanne Spetz, PhD. Interview by Peter I. Buerhaus. *Nursing Economics*, 27(6), 412–415.
- Spetz, J., & Adams, S. (2006). How can employment-based benefits help the nurse shortage? *Health Affairs*, 25(1), 212–218.
- Spetz, J., & Keane, D. (2009). Evaluating success. Strategies and challenges for understanding IT implementation in a rural hospital. *Journal of Healthcare Information Management*, 23(1), 62–67.
- Spetz, J., Chapman, S., Herrera, C., Kaiser, J., Seago, J. A., Dower, C., & Center for California Health Workforce Studies, University of California, San Francisco. (2009). *Assessing the impact of California's nurse staffing ratios on hospitals and patient care*. San Francisco, CA: California Healthcare Foundation.
- Spetz, J., Donaldson, N., Aydin, C., & Brown, D. S. (2008). How many nurses per patient? Measurements of nurse staffing in health services research. *Health Services Research*, 43.5(Oct), 1674–1692.
- Spetz, J., Rickles, J., Chapman, S., & Ong, P. M. (2008). Job and industry turnover for registered and licensed vocational nurses. *Journal of Nursing Administration*, 38(9), 372–378.
- Spetz, J., & Herrera, C. (2010). Changes in nurse satisfaction in California, 2004 to 2008. *Journal of Nursing Management*, 18(5), 564–572.
- Tellez, M., Spetz, J., Seago, J. A., Harrington, C. M., & Kitchener, M. (2009). Do wages matter? A backward bend in the 2004 California RN labor supply. *Policy, Politics, & Nursing Practice*, 10(3), 195–203.
- Waneka, R., & Spetz, J. (2010). Hospital information technology systems' impact on nurses and nursing care. *Journal of Nursing Administration*, 40(12), 509–514.
- William D. Ruckelshaus Center. (2008). *Nurse staffing: A summary of current research, opinion and policy*. Seattle, WA: University of Washington and Washington State University.
- *Williams, T. & Howe, R. (1994). W. Edwards Deming and total quality management: An interpretation for nursing practice. *Journal for Healthcare Quality*, 14(2), 36–39.
- *Wunderlich, G. S., Sloan, F. A. & Davis, C. K. (1996). *Nursing staff in hospitals and nursing homes: Is it adequate?* Washington, DC: National Academy Press.

Contributors

Contributors

Expert Panel: Principles of Nurse Staffing Workgroup, 2011–12

Rosemary Mortimer, MS, MEd, RN, CCBE – Co-chair

Patricia Pearce, PhD, MSN, MPH, RN, FNP-BC, FAANP– Co-chair

Robin Bissinger, PhD, APRN, NNP-BC • National Association Neonatal Nurses (NANN)

Sharon Canariato, MSN, MBA, RN

Linda Rose Frank, MSN, PhD, ACRN, CS • Association of Nurses in AIDS Care (ANAC)

Lesly Kelly, PhD, RN

Eileen Kohlenberg, PhD, RN, NEA-BC

Eileen Letzeiser, MPH, RN

Debra Maust Martin, MSN, MBA, RN, NE-BC, FACHE

Mary Moller, DNP, APRN, PMHCNS-BC, CPRP, FAAN • American Psychiatric Nurses Association (APNA)

Karen Tomajan, MS, RN, NEA-BC

Rebecca Wheeler, MA, BSN, RN

Cinda Zimmer, MSN, BSN, RN

ANA Staff

Katherine Brewer, MSN, RN – Content editor

Eric Wurzbacher – Project editor

About ANA

The American Nurses Association (ANA) is the only full-service professional organization representing the interests of the nation's 3.1 million registered nurses through its constituent/state member nurses associations and its organizational affiliates. The ANA advances the nursing profession by fostering high standards of nursing practice, promoting the rights of nurses in the workplace, projecting a positive and realistic view of nursing, and by lobbying the Congress and regulatory agencies on health care issues affecting nurses and the public.

This ANA publication—*ANA's Principles for Nurse Staffing, 2nd Edition*—reflects the thinking of the nursing profession on various issues and should be reviewed in conjunction with state board of nursing policies and practices. State law, rules, and regulations govern the practice of nursing, while this publication guides nurses in the application of their professional skills and responsibilities. This publication is one of three that comprise the Principles for Practice package, which can be ordered as product# PPP2010 by calling 1-800/637-0323 or from www.Nursesbooks.com.