Medical Errors and Patient Safety

Issue

Medical errors that injure or cause death in patients have become a significant and costly problem prompting governmental and regulatory agencies, health care organizations, and private industry to seek solutions to reduce errors and minimize their effect on individuals while limiting their cost. The most recognized are hospital errors: approximately 1 in 10 patients in hospitals experience errors that cause harm. However, while they are less well-recognized or documented, errors that harm patients also occur in other environments of care. Nurses play a pivotal role in the identification, prevention, and reduction of medical errors and promotion of patient safety.

Scope & Background of Problem

The Institute of Medicine's (IOM's) 1999 report, *To Err is Human: Building a Safer Health System*[1], about medical errors in the United States, was a catalyst for the creation of a national agenda to address enormous costs in terms of lost life, injury, and the financial burden of medical care necessitated as the result of clinical mistakes. The IOM report cited nearly 100,000 deaths, one million injuries, and up to 17 billion dollars annually attributable to medical errors. These findings galvanized the Federal Government to take action forming the Presidential Commission on Patient Safety and the development of National Patient Safety Goals.

The IOM followed their 1999 report with several others, including a 2001 report titled, *Crossing the Quality Chasm: A New Health System for the 21st Century*[2]. This report from the Committee on the Quality of Health Care in America called for urgent and systemic changes to close the quality gap between what we know to be good quality care and what actually exists in practice. It recommended a fundamental redesign of the American health care system and provides overarching principles for specific direction for policymakers, health care leaders, clinicians, regulators, purchasers, and others.

This was followed by a series of additional IOM activities focused on medical errors. These included:

- A 2003 report addressing workplace issues for nurses that also impact patient safety published by the IOM: *Keeping Patients Safe: Transforming the Work Environment of Nurses*[3].
- On January 6 and 7, 2004, the IOM hosted the *1st Annual Crossing the Quality Chasm Summit*[4], convening national and community health care leaders to pool their knowledge and resources with regard to strategies for improving patient care for five common chronic illnesses: asthma, depression, diabetes, heart failure, and pain control in advanced cancer.
- In 2006, an IOM report focused on preventing medication errors, titled, *Preventing Medication Errors – Quality Chasm Series*[5].

These reports were followed by others in which estimates of harm to patients or staff were cited. Healthcare-associated infections account for an estimated 1.7 million infections and 99,000 associated deaths each year.[6] Up to 10% of hospitalized patients suffer from an infection acquired while they are in the hospital. At least 1.5 million preventable drug events occur each year due to drug mix-ups and unintentional overdoses.

Such harm can also be measured by heavy financial costs. Preventable errors have been estimated to cost the United States $17 - $29 billion per year in healthcare expenses, lost worker productivity, lost income and disability[7]. Meanwhile, healthcare expenditures are growing at more than seven percent per year and patient safety is improving by only one percent. Therefore, this generates a call to action to reduce the cost of medical errors to the healthcare system.

Role of National Organizations in Promoting Patient Safety

INSTITUTE OF MEDICINE (IOM)

A report by the IOM released in October 2010 titled, The Future of Nursing: Leading Change, Advancing Health[8] addresses the role of nurses in improving patient safety. With more than 3 million registered nurses, the nursing profession is the largest segment of the nation's health care workforce. Working on the front lines of patient care, nurses play a vital role in helping realize objectives set forth in the 2010 Affordable Care Act legislation that represents the broadest health care overhaul since the 1965 creation of the Medicare and Medicaid programs. A number of barriers prevent nurses from being able to respond effectively to rapidly changing health care settings and an evolving health care system. These barriers need to be overcome to ensure that nurses are well-positioned to lead change and advance health.

In 2008, The Robert Wood Johnson Foundation (RWJF) and the IOM launched a two-year initiative to respond to the need to assess and transform the nursing profession. The IOM appointed a Committee on the RWJF Initiative on the Future of Nursing for the purpose of producing a report that would make recommendations for an action-oriented blueprint for the future of nursing. Through its deliberations, the committee developed four key messages for nurses:

1. Nurses should practice to the full extent of their education and training.
2. Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.
3. Nurses should be full partners, with physicians and other health care professionals, in redesigning health care in the United States.
4. Effective workforce planning and policy making require better data collection and information infrastructure.[9]

As part of their work, additional recommendations were shared in February, 2010 at a workshop titled, "A Summary of the February 2010 Forum on the Future of Nursing: Education - Workshop Summary"[10]- focused on preparing nurses to be involved as change agents in transforming the health care system.

THE JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS (THE JOINT COMMISSION)

Regulatory agencies have also developed standards and priorities for addressing escalating concerns regarding medical errors in the United States. The Joint Commission on Accreditation of Healthcare Organizations developed Patient Safety Standards that went into effect in 2001. The standards address:

1. The implementation of patient safety programs
2. The responsibility of organizational leadership to create a culture of safety
3. The prevention of medical errors through the prospective analysis and redesign of vulnerable patient systems
4. The hospital's responsibility to tell a patient if he or she has been harmed by the care provided
5. The Joint Commission publishes revised National Patient Safety Goals[11] each year. These goals assist organizations in working towards standardizing documentation, improving communication, and ensuring compliance with care protocols and standards that improve patient safety. In support of its mission to improve the quality of health care provided to the public, The Joint Commission includes the review of organizations' activities in response to sentinel events* in its accreditation process, including all full accreditation surveys and random unannounced surveys.

* A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function. The phrase, "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Such events are called "sentinel" because they signal the need for immediate investigation and response.

Along with this effort, The Joint Commission provides tools for conducting a root cause analysis and development of an action plan to accredited organizations as part of its Sentinel Events website.

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (AHRQ)

AHRQ has a website devoted to the topic of Medical Errors and Patient Safety[12]. This includes patient safety alerts and a number of fact sheets, papers, and other tools and resources for improving patient safety. This covers such topics as Reducing Medical Errors in Healthcare: a Fact Sheet and improving communication and teamwork with evidence based research. They also serve as a national clearinghouse for evidence-based patient care guidelines[13].

NATIONAL QUALITY FORUM (NQF)

The National Quality Forum has set quality standards for healthcare[14] and made recommendations to improve patient safety. They have published National Voluntary Consensus Standards for Serious Reportable Events in Healthcare[15]. This is an ongoing project with the expectations that the list of serious reportable events will be expanded in the future. These recommendations have formed the basis of the Washington State Department of Health work around adverse events.

OTHER ORGANIZATIONS

Numerous other organizations across the country are working to improve patient safety and reduce medical errors. These include such groups as The Leapfrog Group, which encourages public reporting of quality and outcomes and rewards for doctors and hospitals who improve the quality, safety, and affordability of healthcare. The National Patient Safety Foundation has, as its' sole mission, improving the safety of care provided to patients. Their recent efforts have focused on leveraging health Information Technology to support the fulfillment of goals recommended by the National Priorities Partnership (convened by the NQF) and The Joint Commission. The National Committee for Quality Assurance (NCQA) is a not-for-profit organization that focuses on improving health care quality by introducing the concepts of transparency, accountability and value in health care. They are establishing standards for accountable care organizations (see below). The American Society for Quality (ASQ) is an organization focused on quality more broadly and provides education in various quality methodologies and standardization.

National Impacts on Patient Safety

ACCOUNTABLE CARE ORGANIZATIONS (ACO'S)

The Patient Protection and Affordable Care Act (PPACA) of 2010 directed the Centers for Medicare and Medicaid Services (CMS) to create a national voluntary program for ACO's by January 2012[16]. ACOs are provider groups that accept responsibility for the cost and quality of care delivered to a specific population of patients cared for by the groups' clinicians, including nurses.[17] [18] [19] [20] Many ACOs will also include hospitals, home health agencies, nursing homes, and perhaps other delivery organizations. There are at least five different types of practice arrangements that could serve as ACOs. These are the integrated or organized delivery system, multispecialty group practices, physician-hospital organizations, independent practice associations, and "virtual" physician organizations.

PAY FOR PERFORMANCE (P4P) IN HEALTHCARE

Also known as "Value based Purchasing"; this "P4P" payment model rewards physicians, hospitals, medical groups, and other healthcare providers for meeting certain performance measures for quality and efficiency[21]. Disincentives, such as eliminating payments for negative consequences of care (medical errors or adverse events[**]) or increased costs, have also been proposed. In the United States, a rapidly aging population and rising health care costs have recently brought P4P to the forefront of health policy discussions. Nurses can play a role in reducing negative consequences of care by working with others to improve patient safety and decrease medical errors. Pilot projects are still ongoing[22] and there is some debate about the effectiveness of this model in all settings[23] but indications are that it will not "go away" as long as it improves quality of care.

THE CULTURE OF PATIENT SAFETY

Seven key elements have been identified supporting the development of a culture of patient safety[24]:

1. **Leadership** – a key first element in designing, fostering, and nurturing a culture of safety is senior leadership. Engaged senior leaders are critical to the successful development of a culture of safety within an organization.

** A preventable adverse effect of care, whether or not it is evident or harmful to the patient.

2. **Teamwork** – interdisciplinary communication needs to be encouraged with an environment that does not tolerate threats or intimidation or retaliation.
3. **Evidence based health care** – healthcare organizations can demonstrate evidence based best practices through the use of such strategies as standardized processes, protocols, checklists, and guidelines.
4. **Communication** – care of patients is now more complex than ever and clear and structured language is a part of a safe care environment. This includes clarification through "read backs" to ensure accuracy of information and "time outs" to verify correct procedure, correct patient, correct site before a procedure is performed. Hand off communication should be structured to ensure information is transferred between shifts, departments, and next care facility/provider. And, perhaps most importantly, front line staff need to know that communications with managers will be heard and acknowledged.
5. **Learning organization** – learning from mistakes and integrating performance improvement processes into care delivery is also a characteristic of organizations that have a culture of safety. Learning organizations use root cause analyses to investigate errors and near misses with findings shared with staff such that changes in practice can be facilitated where necessary.
6. **Just Culture** – this is a defined set of values, beliefs, and norms about what is important, how to behave, and what behavioral choices and decisions are appropriate related to occurrences of human error or near misses. In a Just Culture, open reporting and participation in prevention and improvement is encouraged. There is recognition that errors are often system failures, not personal failures, and there is a focus on understanding the root of the problem allowing for learning and process improvement to support changes to design strategies and systems to promote prevention. A "Just Culture" is not a "blame-free" culture. Rather, it is a culture that requires full disclosure of mistakes, errors, near misses, patient safety concerns, and sentinel events in order to facilitate learning from such occurrences and identifying opportunities for process and system improvement. It is also a culture of accountability in which individuals will be held responsible for their actions within the context of the system in which they occurred; such accountability may involve system improvement or individual consoling, coaching, education, counseling, or corrective action. A "Just Culture" balances the need to learn from mistakes with the need to take corrective action against an individual if the individual's conduct warrants such action. This concept is now gaining support nationally for use in analyzing adverse patient events and other medical errors.[25 26 27 28 29 30 31]
7. **Patient-centered** – embraces the patient and family as the sole reason for the healthcare organization's existence. Every effort should be made to focus on the patient and offering a care experience marked by compassion.

Washington State: Promoting Patient Safety

WASHINGTON STATE DEPARTMENT OF HEALTH (DOH)

The Washington State DOH Adverse events website provides resources and reports about adverse events in Washington State. These are medical errors that could and should have been avoided by health care facilities. These errors, called Serious Reportable Events as defined by National Quality Forum, may result in patient death or serious disability.

In 2006, Washington State passed a RCW (70.56.020) requiring the reporting of adverse events by healthcare facilities in the state. These facilities, including hospitals, psychiatric hospitals, child birth centers, Department of Corrections' medical facilities, and ambulatory surgery facilities, must report when any of 28 errors occur. The facilities not only report adverse events but then conduct a root cause analysis (step by step guide available on the DOH website) to identify the cause of the events and then develop an action plan to prevent the events from happening again. The DOH publishes an annual report, which summarizes the reported events during the year.

OTHER WASHINGTON STATE GOVERNMENT AGENCIES

Other Washington State government agencies have an impact on patient safety. For example, the Department of Labor and Industries, Division of Occupational Safety and Health, has established guidelines and rules for safety in the workplace. The Washington State Department of Social and Health Services provides services and information for providers in adult family homes, home care agencies, and child care sites. The Washington State Department of Health, Health Systems Quality Assurance Division provides resources for and oversees quality of care for over 350,000 health professionals and over 7,000 health facilities in the state. They license nurses and health professionals in over 70 health professions, helping to ensure safe and competent practice.

WASHINGTON STATE PATIENT SAFETY ORGANIZATIONS

The Washington Patient Safety Coalition is a voluntary organization of diverse stakeholders committed to improving safety and reducing errors. It is hosted and facilitated by the Foundation for Health Care Quality. Qualis Health, the Quality Improvement Organization for the Centers for Medicare and Medicaid for Idaho and Washington, is a not for profit organization that works towards improving health outcomes across the state. The Washington State Hospital Association and the Rural Healthcare Quality Network work to improve patient safety and reduce medical errors in urban, rural, and critical access hospitals across the state. The Washington State Medical Association is committed to improving patient safety and the Puget Sound Health Alliance works to improve the quality or healthcare in a five county region (King, Kitsap, Snohomish, Thurston, and Pierce counties) in Washington State.

Role of Nurses and Nursing Organizations in Promoting Patient Safety

AMERICAN NURSES ASSOCIATION (ANA)

For almost 150 years, nurses have been advocating for patient safety. In 1863, Florence Nightingale stated, "the very first requirement in a Hospital is that it should do the sick no harm."[32] ANA has worked with many of the national and state organizations noted above to promote patient safety. The Code of Ethics for Nurses[33], published by ANA, states in Provision 3 that "The Nurse promotes, advocates for, and strives to protect the health, safety, and rights of the patient." The National Center for Nursing Quality (NCNQ®) has been created by ANA to address patient safety and quality in nursing care and nurses' work lives. The center advocates for nursing quality through quality measurement, novel research, and collaborative learning. The ANA website for Patient Safety and Nursing Quality[34] includes a number of resources for nurses that promote patient safety. Some of these are:

1. The National Database for Nursing Quality Indicators® (NDNQI®) and
2. Safe Staffing Saves Lives.[35] [36]

ANA supports using data to place value on the work that nurses do as they care for patients across the country every day.[37] They also support using standard taxonomies to help clearly define and communicate components of nursing practice.[38] [39]

STATE BOARDS OF NURSING AND TERCAP

In the Executive Summary *Towards a Taxonomy of Nursing Practice Errors*, Woods, et al, reported on a taxonomy of nursing errors[40] developed by The Practice Breakdown Research Advisory Board that identifies factors contributory to nursing mistakes. Using general systems theory as a framework, this research was based on an analysis of 21 completed disciplinary case files from nine (9) State Boards of Nursing in an effort to identify new strategies to reduce dangerous errors.

"In 2003, the following recommendation was made in the third IOM Report on patient safety entitled, *Keeping Patients Safe, Transforming the Work Environments of Nurses* (2003):

> Recommendation 7.2: The National Council of State Boards of Nursing [NCSBN], in consultation with patient safety experts and health care leaders, should undertake an initiative to design uniform processes across states for better distinguishing human errors from willful negligence and intentional misconduct, along with guidelines for their applicability by state boards of nursing and other state regulatory bodies (IOM, 2003)."[41]

The NCSBN effort to develop an instrument to describe and distinguish types and sources of nursing error was underway at the time the IOM report was written. NCSBN continues to assist with the implementation of the instrument (called TERCAP® or Taxonomy of Error, Root Cause Analysis and Practice-responsibility) to track disciplinary cases involving practice breakdown at the State Board level in order to develop a national data base on patient care. The TERCAP® Instrument was developed based on case files drawn from the files of State Boards of Nursing. The goal was to create an "intake instrument" that had the additional advantage of utilizing an online computerized database so that trends in sources and kinds of errors reported to State Boards of Nursing and the impact of State Boards of Nursing actions could be evaluated.[42]

WASHINGTON STATE NURSES ASSOCIATION (WSNA)

The Washington State Nurses Association (WSNA) has worked for over 100 years to improve patient safety. Support for legislation which addresses individual factors contributing to medical errors is another way in which individual nurses and nursing organizations can foster reduction in medical mistakes. WSNA's past support of nurse-sponsored HB 1602 and SB 5598 (Protecting Patient Care through Safe Nurse Staffing Standards) is one example[43]. Another example is WSNA's efforts towards ensuring that nurses get rest breaks[44]. WSNA continues to help organizations work towards a "just culture" [45].

Individual nurses and nursing specialty groups play a key role in the national agenda for error reduction in health care. WSNA coordinates and facilitates this work at the State level. At the bedside, nurses are in a unique position to assess the quality of patient care, prevent, and intervene immediately when potential/actual medical errors arise in order to minimize or eliminate adverse patient outcomes. As individual healthcare providers, educators, administrators, or private citizens, nurses are equipped to effectively influence and develop strategies, policies, and procedures that proactively identify and correct errors while fostering interdisciplinary collaboration and cooperation.

Position

WSNA supports strategies, programs, activities, initiatives, and legislation at the local, state and national levels that promote a comprehensive and collaborative approach to medical error identification, prevention, intervention and reduction, focusing on systems and individual practice improvements and recommendations. WSNA also endorses the implementation and compliance with any current and future patient safety goals as established by governmental and regulatory agencies that are consistent with WSNA health and safety positions. This includes the support of collaborative efforts by healthcare organizations and nurses to develop systems for reporting and analyzing adverse patient events to promote a "just culture" with the goal of preventing future medical errors and adverse events.

WSNA fosters nurse-based research and education that improves nursing practice with regard to medical errors, creating an awareness of patient safety issues and best evidence-based practice.

WSNA promotes education of healthcare students, staff, and recipients of health care in patient safety and prevention of injury or medical error and supports the development of nursing education programs which integrate patient safety content across the nursing curriculum. The association also supports continuing education throughout a nurse's career in order to ensure safe and competent practice.

WSNA also recognizes that improvement in working conditions for nurses and direct care staff through involvement in workplace design and development of heath care processes and staffing systems is key to "protecting patients from preventable errors" and establishing an organizational "culture of safety."

Recommendations / Actions

WSNA recommendations focus on the nurse's pivotal role in the prevention of medical errors and increasing awareness in nurses and healthcare consumers concerning medical errors, patient safety issues, and best practices. The recommendations coincide with the following significant areas of concern on a national, state, and local level:

- **Research**
- **Education**
- **Work design, staffing & work environment**
- **Culture of safety**
- **Legislation**

RESEARCH

WSNA recommends and supports research that focuses on the following:

1. Designing and achieving safer nursing work processes and work environments.
2. Analyzing nursing-related errors and determining appropriate prevention strategies.
3. Developing standardized approaches to both measuring patient acuity and determining safe staffing levels for various types of patient care units/areas.
4. Determining effective methods to help prevent negative consequences of fatigue.
5. Developing successful collaborative models of care.
6. Establishing quantitative and qualitative descriptions of the work nurses perform in different care settings, evaluating safer and more efficient work processes and workspaces, including the application of information technology.
7. Supporting collaborative and interdisciplinary research regarding the reduction of medical errors and patient safety.

EDUCATION

WSNA recommends educational approaches for nurses focusing on:

1. Detection, analysis, and reduction of medical errors and high-risk situations.
2. How caregiver fatigue impacts patient and nurse safety.
3. Acquiring and enhancing clinical knowledge and skills, identifying opportunities to work with experienced nurse precep-

tors, and development of individualized plans for ongoing educational development.

4. Timely education and training in new technologies or changes in the workplace, decision support technology, and appropriate use of social media to support the delivery of patient care.
5. Education, support, and training in interdisciplinary collaboration.
6. Integration of concepts regarding patient safety and prevention of medical errors into basic, as well as graduate level, nursing curriculum.

WORK DESIGN, STAFFING & WORK ENVIRONMENT

WSNA supports work re-design that:

1. Addresses practices that improve patient and staff safety (e.g. hand-washing, safe lifting).
2. Promotes staffing practices that improve patient safety (e.g. direct care staff involved in staffing decisions, prohibition of mandatory overtime, prohibition of voluntary overtime resulting in lengthy shifts/numerous shifts in a row, etc.).
3. Improves communication systems.
4. Follows the patient safety recommendations of national and state patient safety organizations (such as the National Quality Forum).
5. Involves direct care nursing staff in designing physical environments and care processed to reduce error concentrating on:
    - Surveillance of patient health status
    - Patient transfers and hand-offs
    - Complex patient care processes
    - Non-value added activities performed by nurses, such as location and obtaining supplies, looking for personnel, completing redundant and unnecessary documentation, and compensating for poor communication systems
    - Hand-washing and medication administration.[46]

CULTURE OF SAFETY

WSNA endorses the following concepts and actions that promote a culture of safety in health care organizations:

1. Most medical errors are created by organizational or systems problems in work processes, not by individuals.
2. Health care professionals need to be supported and educated regarding medical error prevention and reduction.
3. Boards of Trustees, executive and managerial leadership in collaboration with front-line staff should identify short and long-term safety objectives, continuously review success in meeting objectives, and provide feedback to all healthcare providers
4. Health care organizations need to sustain a commitment to preventing, detecting, reporting, analyzing, and correcting medical errors using the concepts embedded in a "just culture" environment.
5. Organizational goals should include fostering development of trusting relationships among all staff, including developing support systems for decision-making and effective interdisciplinary communication among team members.
6. Professional organizations should assist in designing uniform processes across states to distinguish human errors from willful negligence and intentional misconduct along with guidelines for their application.
7. Professional organizations should assist in the ongoing standardization of patient safety practices and reporting across states and across the country, and should facilitate collaborative efforts by multiple academic and other research-based groups to support health care organizations in the identification and adoption of evidence-based clinical and management practices.

LEGISLATION

WSNA endorses legislation that focuses on:

1. Reduction of medical errors as a way to impact the high cost of healthcare.
2. Collaboration between WSNA Board of Directors, WSNA Legislative and Health Policy Council and nurse practitioner and specialty organizations to produce a united nursing voice in support of legislation that has the potential to reduce medical errors and improve patient safety.
3. Supporting bills that support safe staffing principles and provide sufficient funding for workforce development.
4. Supporting programs that recognize excellence in nursing services that, in turn, fosters safe patient care (e.g. Magnet Recognition, Pathways to Excellence).

5. Promoting increased transparency in data reporting and analysis to support new learning and ongoing process improvement.

Conclusion

Many innovative error-reduction programs are being developed that focus on both health care systems and the individual practitioner. Current strategies and research have concentrated on determining the cause and effect of errors, forming interdisciplinary and multi-system approaches for detection and prevention, and developing appropriate error-reduction protocols.

The United States, with the leadership and engagement of the nursing profession, now has the opportunity to transform its health care system. Nurses can and should play a key fundamental role in this transformation. The power to improve the current regulatory, business, and organizational conditions, however, does not rest solely with nurses. Government, businesses, health care organizations, professional associations, and the insurance industry all must play a role. Working together, these many diverse parties can help ensure that the health care system provides safe, patient-centered, efficient, timely, effective, and equitable quality care that is accessible and affordable to all and leads to improved health outcomes.

Approved by the WSNA Board of Directors: April 21, 2005
Reviewed: April, 2007
Revised: August 1, 2011
Approved by the WSNA Board of Directors: August 3, 2011

References

1 Institute of Medicine (1999). *To Err is Human: Building a Safer Health System.* Washington DC: Author.

2 Institute of Medicine (2001). Crossing the Quality Chasm: A New Health System for the 21st Century. Washington DC: Author.

3 Institute of Medicine (2003). Keeping Patients Safe: Transforming the Work Environment of Nurses. Washington DC: Author.

4 Institute of Medicine (2004). A Focus on Communities. Retrieved from http://iom.edu/Reports/2004/1st-Annual-Crossing-the-Quality-Chasm-Summit-A-Focus-on-Communities.aspx. November 3, 2010.

5 Preventing Medication Errors. (2006). Retrieved from http://iom.edu/Reports/2006/Preventing-Medication-Errors-Quality-Chasm-Series.aspx. November 3, 2010.

6 Yokoe DS et al. (2008). A Compendium of Strategies to Prevent Healthcare-Associated Infections in Acute Care Hospitals. *ICHE.* 28(1) S12-21.

7 Catlin A, Cowan C, Heffler S, et al., (2007). National health spending in 2005: the slowdown continues. *Health Affairs,* 2007;26(1):142-153.

8 Institute of Medicine (2010). Future of Nursing: Leading Change, Advancing Health. Retrieved from http://iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx. November 3, 2010.

9 The Future of Nursing: Leading Change, Advancing Health. Four main issues. Retrieved from http://www.rwjf.org/pr/product.jsp?id=69909. November 3, 2010.

10 A Summary of the February 2010 Forum on the Future of Nursing: Education – Workshop Summary. Retrieved from http://iom.edu/Reports/2010/A-Summary-of-the-February-2010-Forum-on-the-Future-of-Nursing-Education.aspx November 3, 2010.

11 National Patient Safety Goals. The Joint Commission. Retrieved from http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/ November 3, 2010.

12 Medical Errors and Patient Safety. Agency for Healthcare Research and Quality (AHRQ). Retrieved from http://www.ahrq.gov/qual/errorsix.htm November 3, 2010.

13 National Guideline Clearinghouse. Agency for Healthcare Research and Quality (AHRQ). http://guideline.gov/. Retrieved from November 3, 2010.

14 Quality Standards for Healthcare. National Quality Forum. Retrieved from http://www.qualityforum.org/Measures_List.aspx. November 3, 2010.

15 National Voluntary Consensus Standards for Serious Reportable Events in Healthcare. National Quality Forum. Retrieved from http://www.qualityforum.org/projects/hacs_and_sres.aspx. November 3, 2010.

16 Affordable Care Act Update: Implementing Medicare Cost Savings. Retrieved from http://www.cms.gov/apps/docs/ACA-Update-Implementing-Medicare-Costs-Savings.pdf. November 3, 2010.

17 Accountable Care Organizations: A New Idea for Managing Medicare. (Aug. 31, 2009). Retrieved from http://www.ama-assn.org/amednews/2009/08/31/gvsa0831.htm.

18 McCannes D. What is an Accountable Care Organization? Quote of the Day Archive. (July 2010). Physicians for a National Health Program. Retrieved from http://www.pnhp.org/news/quote-of-the-day/archive. November 3, 2010.

19 Shortell S., Caslino L. & Fisher E. How the Center for Medicare and Medicaid Innvotation Should Test Accountable Care Organizations. July 9, 2010. Retrieved from http://content.healthaffairs.org/cgi/content/abstract/29/7/1293. November 3, 2010.

20 A Guide to Accountable Care Organizaitons and their Role in the Senate's Health Reform. Retrieved from http://www.healthreformwatch.com/2010/03/11/a-guide-to-accountable-care-organizations-and-their-role-in-the-senates-health-reform-bill/. November 3, 2010.

21 Baker G., Haughton J. & Mongroo P. (2003). *Leapfrog Pay for Performance Incentive Programs in Healthcare: Market Dynamics and Business Process*.

22 Physicians Saw Success with P4P in 2009. Healthcare Finance News. (December 4, 2009). Retrieved from http://www.healthcarefinancenews.com/news/physicians-saw-success-p4p-2009. November 4, 2010.

23 Friedberg M., Safran D., Coltin K., Dresser M. & Schneider E. Paying for Performance in Primary Care: Potential Impact on Care and Disparities. *Health Affairs*, 29, no. 5 (2010): 926-932.

24 Sammer CE, Lykens K, Singh KP, Mains DA, Lackan NA. (2010). What is Patient Safety Culture: A Review of the Literature. *J Nurs Scholarship*. 42:156-165.

25 Griffith S. (June 2010). Error Prevention in a Just Culture: System Design or Human Behavior. *The Joint Commission Perspectives on Patient Safety*, Volume 10, Issue 6.

26 Rosenstein A, O'Daniel M. (2008). A Survey on the Impact of Disruptive Behaviors and Communication Defects on Patient Safety. *Joint Commission Journal of Quality and Patient Safety*. 34:464-471.

27 Wachter R., Provonost P. (2009). Commentary: Balancing "no blame" with Accountability in Patient Safety. *N Engl J Med.* 361:1401-1406.

28 Marx D. (2001). *Patient Safety and the "Just Culture": A Primer for Health Care Executives*. Columbia University. New York, NY.

29 Sammer CE, Lykens K, Singh KP, Mains DA, Lackan NA. (2010). Ibid. 42:156-165.

30 Pettker CM, Funai EF. (2010). Getting it Right When Things Go Wrong. *JAMA*. 303:977-978.

31 Khatri N., Brown G., Hicks L. (2009). From a "Blame Culture" to a "Just Culture" in Healthcare. *Health Care Manage Rev*. 34:312-322.

32 Watson, D. (2002). First, do no harm. *AORN Journal*, 76, pp. 752-755.

33 American Nurses Association. (2001). *Code of ethics for nurses with interpretive statements*. Silver Springs, MD: Author.

34 Amercan Nurses Association. National Center for Nursing Quality. *Patient Safety and Nursing Quality*. Retrieved from http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/PatientSafetyQuality.aspx. November 3, 2010.

35 American Nurses Association. Safe Staffing Saves Lives. Retrieved from http://www.safestaffingsaveslives.org/WhatisSafeStaffing.aspx. November 4, 2010.

36 Welton, J. (2007). Mandatory Hospital Nurse to Patient Staff Ratios: Time to Take a Different Approach. Retrieved from http://nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No3Sept07/MandatoryNursetoPatientRatios.aspx . November 4, 2010.

37 Dunton, N., Gajewski, B., Klaus, S., Pierson, B., (September 30, 2007). "The Relationship of Nursing Workforce Characteristics to Patient Outcomes" *OJIN: The Online Journal of Issues in Nursing*. Vol. 12 No. 3, Manuscript 3.

38 Benner, P., Sheets, V., Uris, P., Mallock, K., Schwed, K., & Jamison, D. (2002). Individual, practice, and system causes of errors in nursing: A taxonomy. *JONA, 32*, pp. 509-523.

39 Woods, A., Doan-Johnson, S. (October 2002) Executive summary: Towards a taxonomy of nursing practice errors. *Nursing Management*, *Oct*., pp. 45-48.

40 Ibid. pp. 45-48.

41 Keeping Patients Safe: Transforming the Work Environment of Nurses. Retrieved from http://iom.edu/Reports/2003/Keeping-Patients-Safe-Transforming-the-Work-Environment-of-Nurses.aspx. May 12, 2011.

42 TERCAP. NCSBN. Retrieved from https://www.ncsbn.org/441.htm. May 12, 2011.

43 Washington State Nurses Association. Safe Nurse Staffing Legislation. Retrieved from http://www.wsna.org/Topics/Safe-Nurse-Staffing/About-the-Law/. November 4, 2010.

44 Washington State Nurses Association. Fatigue: Implications for Nursing Practice. Retrieved from http://www.wsna.org/Topics/Fatigue/. November 4, 2010.

45 Washington State Nurses Association. Culture of Safety. Retrieved from http://www.wsna.org/Topics/Patient-Safety/Culture/ November 4, 2010.

46 Institute of Medicine (2003). Keeping Patients Safe: Transforming the Work Environment of Nurses. Washington DC: Author.

Washington State Nurses Association
575 Andover Park West, Suite 101
Seattle, WA 98188