

## **Safety**

### **Annotated Bibliography**

#### **New Citations – June 2008**

Ebright, P. R., Kooken, W. S., Moody, R. C., & Latif Hassan AL-Ishaq, M.A. (2006). Mindful attention to complexity: Implications for teaching and learning patient safety in nursing. *Annual Review of Nursing Education, 4*, 339-359.

This chapter describes: (a) new evidence of factors in clinical care situations that influence nurses' decision making in clinical situations, particularly novices; (b) principles and strategies for teaching content related to nurse watchfulness or vigilance in the context of patient care; and (c) implications for assessing nursing students' motivation and competence in the context of caring, with the ultimate goal of the nursing student supporting optimal patient safety and patient health outcomes. (Source: Publisher)

Force, M. V., Deering, L., Hubbe, J., Andersen, M., Hagemann, B., Cooper-Hahn, M., et al. (2006). Effective strategies to increase reporting of medication errors in hospitals. *Journal of Nursing Administration, 36*(1), 34-41.

A major concern for patient safety in hospitals is accurate medication administration. To improve the medication administration process, nurses and pharmacists must report system problems. Although staff supported the concept of medication error reporting, they did not report errors. Inherent fear of retribution, punitive actions, and professional humiliation prevented self-reporting of medication errors. Our hospital's quality improvement department developed, implemented, and evaluated a program called LifeSavers. Its purpose was to build a nonpunitive culture and to increase medication error reporting by staff. In one year, the LifeSavers program increased medication error disclosures from 14 to 72 reports per month. The successful development of a nonblame culture of medication error reporting led to identified sources of problems and improvement of the medication administration system. (Source: PubMed)

Harding, L., & Petrick, T. (2008). Nursing student medication errors: A retrospective review. *Journal of Nursing Education, 47*(1), 43-47.

This article presents the findings of a retrospective review of medication errors made and reported by nursing students in a 4-year baccalaureate program. Data were examined in relation to the semester of the program, kind of error according to the rights of medication administration, and contributing factors. Three categories of contributing factors were identified: rights violations, system factors, and knowledge and understanding. It became apparent that system factors, or the context in which

medication administration takes place, are not fully considered when students are taught about medication administration. Teaching strategies need to account for the dynamic complexity of this process and incorporate experiential knowledge. This review raised several important questions about how this information guides our practice as educators in the clinical and classroom settings and how we can work collaboratively with practice partners to influence change and increase patient safety. (Source: PubMed)

Henneman, E. A., Cunningham, H., Roche, J. P., & Curnin, M. E. (2007). Human patient simulation: Teaching students to provide safe care. *Nurse Educator, 32*(5), 212-217. The use of human patient simulation as a teaching methodology for nursing students has become popular. Using human patient simulation effectively demands paying careful attention to the details of the simulation, debriefing, and evaluation processes. Our experience in designing simulation experiences and evaluating student behaviors confirms the resource-intensive nature of human patient simulation and the need for clear, measurable objectives. When used properly, human patient simulation offers a unique opportunity to teach nursing students important patient safety principles. (Source: PubMed)

Jarzemsky, P. A., & McGrath, J. (2008). Look before you leap: Lessons learned when introducing clinical simulation. *Nurse Educator, 33*(2), 90-95. Before investing in a human patient simulator, we designed a preliminary study that examined student responses to a laboratory exercise that used lower-fidelity simulation. Our purpose was to compare beginning-level, baccalaureate nursing students' self-reported assessment in the domains of confidence, ability, stress, and critical thinking before and after they participated in the simulation. Results showed statistically significant improvement in all domains for skills in urinary catheterization, intravenous and nasogastric medication administration, and sterile dressing change. (Source: PubMed)

Joint Commission on the Accreditation of Healthcare Organizations. (2007). *Front line of defense: The role of nurses in preventing sentinel events* (2nd ed.). Oakbrook Terrace, IL: Joint Commission on the Accreditation of Healthcare Organizations. Written especially for nurses in all disciplines and health care settings, this book focuses on the hands-on role nurses play in the delivery of care and their unique opportunity and responsibility to identify potential sentinel events. Topics include preventing medication and transfusion errors, as well as preventing suicide, falls, and treatment delays. New chapters address wrong-site surgery perinatal injuries or death, and injuries or death due to criminal events. Learn how to: better recognize the root causes of specific sentinel events; identify strategies to prevent sentinel events from occurring; and overcome

obstacles in the areas of staffing, training, culture of safety, and communication among the health care team. (Source: Publisher)

Kneafsey, R., & Haigh, C. (2007). Learning safe patient handling skills: Student nurse experiences of university and practice based education. *Nurse Education Today*, 27(8), 832-839.

INTRODUCTION: Poor patient handling practices increase nurse injuries and reduce patients' safety and comfort. BACKGROUND: UK Universities have a duty to prepare student nurses for patient handling activities occurring during clinical placements. This study examines students' experiences of moving and handling education in academic and clinical settings. METHODS: A 34 item questionnaire was distributed to student nurses at one School of Nursing (n=432, response rate of 75%). RESULTS: Many students undertook unsafe patient handling practices and provided reasons for this. There was a medium statistically significant correlation between the variables 'provision of supervision' and 'awareness of patient handling needs' ( $r(s)=.390$ ,  $p=.000$ ). 40% of students stated that their M&H competency was assessed through direct observation. Twenty six percent of the total sample (n=110), said they had begun to develop musculo-skeletal pain since becoming a student nurse. Forty-eight stated that this was caused by an incident whilst on placement. DISCUSSION: Inadequate patient handling practices threaten student nurse safety in clinical settings. Although some students may be overly confident, they should be supervised when undertaking M&H activities. CONCLUSIONS: Though important, University based M&H education will only be beneficial if students learn in clinical settings that take safe patient handling seriously. (Source: PubMed)

Marck, P., Coleman-Miller, G., Hoffman, C., Horsburgh, B., Woolsey, S., Dina, A., et al. (2007). Thinking ecologically for safer healthcare: A summer research student partnership. *Canadian Journal of Nursing Leadership*, 20(3), 42-51.

As leaders for nursing education, nursing research, healthcare administration and patient safety, we asked one another: How do we use our collective resources to build health system capacity for clinically based research training and safer healthcare? Drawing on knowledge from the field of ecological restoration, which is the study and repair of damaged ecosystems, we partnered the Safer Systems research program of the Faculty of Nursing, University of Alberta, with Capital Health's Royal Alexandra Hospital (RAH), the Caritas Health Group, the Canadian Patient Safety Institute (CPSI) and several funding agencies to provide hands-on training in clinical research, infection control and patient safety policy development for nursing students during the summer months. As we plan ahead, our student and staff evaluations show that together, we can make concrete, vital contributions to student education, nursing research, evidence-informed practice, clinical quality improvement and national policy. We are using what we have learned to continually expand the range of undergraduate, graduate and post-doctoral clinical

learning opportunities in healthcare safety that are available year round. Our shared goal is to support current and future nurses in leading the way for safer healthcare systems and the safest possible healthcare. (Source: PubMed)

Mick, J. M., Wood, G. L., & Massey, R. L. (2007). The Good Catch Pilot Program: Increasing potential error reporting. *Journal of Nursing Administration, 37*(11), 499-503.

With only 175 reports submitted into an available close call reporting system during 2.5 years, the Good Catch Program was implemented to promote 3 strategies: (1) changing terminology from "close call" to "good catch," (2) implementing an "end-of-shift safety report," and (3) executive leadership sponsored incentives. The authors discuss the program and its positive outcomes in increasing potential error reporting. (Source: PubMed)

Nehring, W. M. (2008). U.S. boards of nursing and the use of high-fidelity patient simulators in nursing education. *Journal of Professional Nursing: Official Journal of the American Association of Colleges of Nursing, 24*(2), 109-117.

High-fidelity patient simulation is becoming an essential component of prelicensure nursing education. A survey was mailed to the boards of nursing in all states, the District of Columbia, and Puerto Rico to ascertain the use of high-fidelity patient simulators for clinical time in current regulations. Participants were asked if high-fidelity patient simulation could be substituted for clinical time in the regulations and, if so, for what percentage. If not, they were asked whether they gave approval to nursing programs to substitute clinical time with high-fidelity patient simulators and, if so, for what percentage. Finally, the participants were asked whether they felt that the regulations would be changed in the future to allow the use of high-fidelity patient simulators to substitute for clinical time. Five states and Puerto Rico have made regulation changes to allow for such substitution, but only Florida has indicated a percentage of time. Sixteen states currently give approval for simulation substitution, and 17 states may consider regulation changes concerning high-fidelity patient simulation in the future. Such findings have implications for alterations in the prelicensure nursing curriculum that could examine patient safety and quality concerns addressed by the public and leading health and nursing organizations. (Source: PubMed)

Nelson, A. L., Waters, T. R., & Menzel, N. N. e. a. (2007). Effectiveness of an evidence-based curriculum module in nursing schools targeting safe patient handling and movement. *International Journal of Nursing Education Scholarship, 4*(1), 1-19.

Nursing schools in the United States have not been teaching evidence-based practices for safe patient handling, putting their graduates at risk for musculoskeletal disorders (MSDs). The specific aim of this study was to translate research related to safe patient handling into the curricula of nursing schools and evaluate the impact on nurse educators

and students' intentions to use safe patient handling techniques. Nurse educators at 26 nursing schools received curricular materials and training; nursing students received the evidence-based curriculum module. There were three control sites. Questionnaires were used to collect data on knowledge, attitudes, and beliefs about safe patient handling for both nurse educators and students, pre- and post-training. In this study, we found that nurse educator and student knowledge improved significantly at intervention schools, as did intention to use mechanical lifting devices in the near future. We concluded that the curriculum module is ready for wide dissemination across nursing schools to reduce the risk of MSDs among nurses. (Source: PubMed)

Patey, R., Flin, R., Cuthbertson, B. H., MacDonald, L., Mearns, K., Cleland, J., et al. (2007). Patient safety: Helping medical students understand error in healthcare. *Quality & Safety in Health Care*, 16(4), 256-259.

OBJECTIVE: To change the culture of healthcare organisations and improve patient safety, new professionals need to be taught about adverse events and how to trap and mitigate against errors. A literature review did not reveal any patient safety courses in the core undergraduate medical curriculum. Therefore a new module was designed and piloted. DESIGN: A 5-h evidence-based module on understanding error in healthcare was designed with a preliminary evaluation using self-report questionnaires. SETTING: A UK medical school. PARTICIPANTS: 110 final year students. MEASUREMENTS AND MAIN RESULTS: Participants completed two questionnaires: the first questionnaire was designed to measure students' self-ratings of knowledge, attitudes and behaviour in relation to patient safety and medical error, and was administered before and approximately 1 year after the module; the second formative questionnaire on the teaching process and how it could be improved was administered after completion of the module. CONCLUSIONS: Before attending the module, the students reported they had little understanding of patient safety matters. One year later, only knowledge and the perceived personal control over safety had improved. The students rated the teaching process highly and found the module valuable. Longitudinal follow-up is required to provide more information on the lasting impact of the module. (Source: PubMed)

*Patient safety and quality: An evidence-based handbook for nurses* (2008). Hughes R., Ed. Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from <http://www.ahrq.gov/qual/nursesfdbk>

This handbook prepared by the Agency for Healthcare Research and Quality (AHRQ) and the Robert Wood Johnson Foundation provides a comprehensive summary of important patient safety and quality improvement concepts for frontline nurses. Experts in each topic area reviewed the latest published evidence to assemble sections on providing patient-centered care, nurses' working conditions and work environment, critical

opportunities for improving quality and safety, and practical tools for implementing patient safety interventions for practicing nurses. (Source: Publisher)

Radhakrishnan, K., Roche, J. P., & Cunningham, H. (2007). Measuring clinical practice parameters with human patient simulation: A pilot study. *International Journal of Nursing Education Scholarship*, 4(1), 1-11.

Human Patient Simulators (HPS), electronically controlled mannequins as patient models, are increasingly being used in nursing education. However, no studies have validated the influence of systematic practice with HPS on clinical performance of nursing students. This pilot study attempted to identify the nursing clinical practice parameters influenced by HPS by evaluating the clinical performance of 12 senior second degree BSN students in five categories: safety, basic assessment skills, prioritization, problem-focused assessment, ensuing interventions, delegation and communication in a complex two-patient, simulated assignment. Students who practiced with the HPS in addition to their usual clinical training had significantly higher scores than the control group (usual clinical training alone) on Patient Identification (a subcategory of the safety category;  $p = 0.001$ ), and on Assessing Vital Signs (a subcategory of the basic assessment category;  $p = 0.009$ ). The control and intervention groups' performances were similar in every other category. Replication of this pilot with a larger sample is recommended. (Source: PubMed)

Rathert, C., & May, D. R. (2007). Health care work environments, employee satisfaction, and patient safety: Care provider perspectives. *Health Care Management Review*, 32(1), 2-11.

**BACKGROUND:** Experts continue to decry the lack of progress made in decreasing the alarming frequency of medical errors in health care organizations. At the same time, other experts are concerned about the lack of job satisfaction and turnover among nurses. Research and theory suggest that a work environment that facilitates patient-centered care should increase patient safety and nurse satisfaction. **PURPOSES:** The present study began with a conceptual model that specifies how work environment variables should be related to both nurse and patient outcomes. Specifically, we proposed that health care work units with climates for patient-centered care should have nurses who are more satisfied with their jobs. Such units should also have higher levels of patient safety, with fewer medication errors. **METHODOLOGY/APPROACH:** We examined perceptions of nurses from three acute care hospitals in the eastern United States. **FINDINGS:** Nurses who perceived their work units as more patient centered were significantly more satisfied with their jobs than were those whose units were perceived as less patient centered. Those whose work units were more patient centered reported that medication errors occurred less frequently in their units and said that they felt more comfortable reporting errors and near-misses than those in less patient-centered units.

PRACTICE IMPLICATIONS: Patients and quality leaders continue to call for delivery of patient-centered care. If climates that facilitate such care are also related to improved patient safety and nurse satisfaction, proactive, patient-centered management of the work environment could result in improved patient, employee, and organizational outcomes. (Source: PubMed)

Salyers, V. L. (2007). Teaching psychomotor skills to beginning nursing students using a web-enhanced approach: A quasi-experimental study. *International Journal of Nursing Education Scholarship, 4*(1), 1-12.

To begin to address the problem of psychomotor skills deficiencies observed in many new graduate nurses, a skills laboratory course was developed using a web-enhanced approach. In this quasi-experimental study, the control group attended weekly lectures, observed skill demonstrations by faculty, practiced skills, and were evaluated on skill performance. The experimental group learned course content using a web-enhanced approach. This allowed students to learn course material outside of class at times convenient for them, thus they had more time during class to perfect psychomotor skills. The experimental group performed better on the final cognitive examination. Students in the traditional sections were more satisfied with the course, however. It was concluded that a web-enhanced approach for teaching psychomotor skills can provide a valid alternative to traditional skills laboratory formats. (Source: PubMed)

Scherer, Y. K., Bruce, S. A., & Runkawatt, V. (2007). A comparison of clinical simulation and case study presentation on nurse practitioner students' knowledge and confidence in managing a cardiac event. *International Journal of Nursing Education Scholarship, 4*(1), 1-14.

The study was designed to compare the efficacy of controlled simulation mannequin (SM) assisted learning and case study presentation on knowledge and confidence of nurse practitioner (NP) students in managing a cardiac event. Twenty-three volunteer students were randomly assigned to the experimental (simulation) or control (case study presentation) group. All participants were instructed on atrial arrhythmias, were pre- and post-tested on knowledge and confidence, and completed an evaluation of the experience. There were no statistically significant differences in knowledge test scores, although the control group scored significantly higher on post- test confidence ( $p=.040$ ). Both groups rated their experience as valuable. The simulation and case study presentation had similar outcomes. Additional research is needed to determine the effectiveness of this teaching modality. (Source: PubMed)

Shorthall, R. (2007). Preventing adverse events. *Emergency Nurse, 15*(3), 26-28.

Roseanne Shorthall reflects on a potentially adverse event that occurred when she was a

nursing student to demonstrate how communication failures can hamper patient care.  
(Source: Publisher)

Throckmorton, T., & Etchegaray, J. (2007). *Journal of Perianesthesia Nursing*, 22(6), 400-412.

Patient safety has assumed an international focus. In the past, the focus on detecting and preventing errors was up to the individual clinician, often the registered nurse. With impetus from the Institute of Medicine and other national agencies, a shift to emphasis on systems and processes and near miss and error reporting has occurred. Information from caregiver reporting has taken on new importance. This study was conducted to explore nurses' willingness to report errors of varying degrees of severity and the factors that impacted that intent. Registered nurses were selected randomly from the Texas Board of Nurse Examiners' roster and surveyed regarding perceptions of the environment for reporting, perceptions of reasons for not reporting, knowledge of the nursing practice act, and demographic variables. A majority of nurses were willing to report all levels of errors. Primary position, reasons for not reporting, and years since initial licensure were predictors of intent to report incidents with no injury and those with minimal injury. All but four nurses (99%) indicated that they would report incidents resulting in moderate to severe injury or death. (Source: PubMed).

Wakefield, A. B., Carlisle, C., Hall, A. G., & Attree, M. J. (2008). The expectations and experiences of blended learning approaches to patient safety education. *Nurse Education in Practice*, 8(1), 54-61.

E-learning facilitates access to educational programmes via electronic asynchronous or real time communication without the constraints of time or place. However, not all skills can be acquired via e-learning, thus blended approaches have emerged, where traditional academic processes have been combined with e-learning systems. This paper presents qualitative findings from a study evaluating a blended approach to patient safety education. The 3-day face-to-face training in Root Cause Analysis supported by e-learning resources was designed by the National Patient Safety Agency. The study evaluated the efficacy of the blended learning approach, and explored how operational practices in NHS organisations supported staffs' skill in using electronic resources. Data collection techniques included pre and post-course Confidence Logs, Individual Interviews, Focus Groups and Evaluation Questionnaires. Students' views on blended learning varied. Some were positive, while others felt e-learning did not suit their preferred learning style, or the subject matter. Many students did not engage with the e-learning resources. Lack of awareness regarding the e-learning component, combined with inconsistent access to computing facilities may have contributed to this. For this reason a series of recommendations are outlined to guide those wishing to adopt blended learning approaches in the future. (Source: PubMed)

Waldner, M. H., & Olson, J. K. (2007). Taking the patient to the classroom: Applying theoretical frameworks to simulation in nursing education. *International Journal of Nursing Education Scholarship*, 4(1), 1-14.

Upon completion of their education, nursing students are expected to practice safely and competently. Societal changes and revisions to nursing education have altered the way nursing students learn to competently care for patients. Increasingly, simulation experiences are used to assist students to integrate theoretical knowledge into practice. Reasons for and the variety of simulation activities used in nursing education in light of learning theory are discussed. By combining Benner's nursing skill acquisition theory with Kolb's experiential learning theory, theoretical underpinnings for examining the use of simulations in the context of nursing education are provided. (Source: PubMed)

Wayman, K. I., Yaeger, K. A., Sharek, P. J., Trotter, S., Wise, L., Flora, J. A., et al. (2007). Simulation-based medical error disclosure training for pediatric healthcare professionals. *Journal for Healthcare Quality: Official Publication of the National Association for Healthcare Quality*, 29(4), 12-19.

Ethical and regulatory guidelines recommend disclosure of medical errors to patients and families. Yet few studies examine how to effectively train healthcare professionals to deliver communications about adverse events to family members of affected pediatric patients. This pilot study uses a preintervention-postintervention study design to investigate the effects of medical error disclosure training in a simulated setting for pediatric oncology nurses (N=16). The results of a paired t test showed statistically significant increases in nurses' communication self-efficacy to carry out medical disclosure ( $t = 6.68, p < .001$ ). Ratings of setting "realism" and simulation effectiveness were high (21 out of 25 composite score). Findings provide preliminary support for further research on simulation-based disclosure training for healthcare professionals. (Source: PubMed)