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1. **A Practical Framework for Patient Care Teams to Prospectively Identify and Mitigate Clinical Hazards.**
Herzer KR, Rodriguez-Paz JM, Doyle PA, et al.
Jt Comm J Qual Patient Saf. 2009(Feb); 35(2):72–81.
This article describes a method for the prospective identification and prevention of clinical risks associated with new therapies or devices. Case examples illustrate how the framework was used to improve the safety of three new surgical procedures introduced at Johns Hopkins Hospital. Two tables and two figures are included.

2. **Adverse Health Events in Minnesota: Fifth Annual Public Report.**
St. Paul, MN: Minnesota Department of Health; January 2009.
Available at http://www.health.state.mn.us/patientsafety/ae/09ahereport.pdf
This report presents data on healthcare adverse events reported to Minnesota's public reporting system between October 2007 and October 2008. Statewide and facility-specific data are included for 28 reportable events in 6 categories. The report highlights key findings and discusses ongoing initiatives related to four specific types of events: wrong site surgery, retained foreign objects, pressure ulcers, and falls.

3. **Chemotherapy Safety and Severe Adverse Events in Cancer Patients: Strategies to Efficiently Avoid Chemotherapy Errors in In- and Outpatient Treatment.**
Markert A, Thierry V, Kleber M, Behrens M, Engelhardt M.
Int J Cancer. 2009(Feb 1); 124(3):722–728.
This article describes the design and evaluation of a system for the surveillance of chemotherapy-related errors and adverse events developed and implemented at University Medical Center Freiburg, Freiburg, Germany. The authors prospectively analyzed chemotherapy treatments administered to in- and outpatients at the university's cancer center during a 2-year period. Results showed that while the system detected several thousand errors during the period examined, only a minute number of these errors (fewer than 1%) reached patients, suggesting that the facility's system provides an effective means of error management in the chemotherapy setting. Five tables and one figure are included.

4. **Clinicians in Quality Improvement: A New Career Pathway in Academic Medicine.**
Shojania KG, LevinsonW.
JAMA. 2009(Feb 18); 301(7):766–768.
This commentary argues that while academic medical centers have both moral and regulatory obligations to contribute to quality improvement efforts, traditional career paths in academic medicine fail to recognize accomplishments in the area of QI. The authors discuss the barriers to recognizing meritorious QI efforts within the existing academic system and propose the development of an alternative career advancement track that would reward excellence in QI research and innovation. One table is included.

5. Data Standards and Improvement of Quality and Safety in Child Health Care.
Spooner SA, Classen DC.
Pediatrics. 2009(Jan); 123(Suppl 2):S74–S79.
Available at: http://www.pediatrics.org/cgi/content/full/123/Supplement_2/S74
Health IT data standards regulate a variety of parameters in the operation of health IT systems and are designed to facilitate system interoperability. This article argues that data standards can also play an important role in improving pediatric healthcare quality and patient safety. The author comments on the current state of data standards in pediatric medicine, describes various types of data standards and their potential impact on quality and safety, and emphasizes the need for pediatric practitioners to participate actively in health IT standards development.

6. Designing Safety into the Minimally Invasive Surgical Revolution: A Commentary Based on the Jacques Perissat Lecture of the International Congress of the European Association for Endoscopic Surgery.
Clarke JR.
Surg Endosc. 2009(Jan); 23(1):216–220.
This article discusses safety issues and improvement opportunities for minimally invasive surgery practitioners. The author summarizes current data concerning complications associated with minimally invasive surgery and highlights the differences between minimally invasive and traditional surgeries with respect to safety. Finally, he illustrates how principles from high reliability theory could be applied to the design of safety-promoting systems in the minimally invasive surgical context. One figure is included.

7. Direct Medical Costs of Adverse Events in Dutch Hospitals.
Hoonhout LHF, De Bruijne MC, Wagner C, et al.
BMC Health Serv Res. 2009(Feb 9); 9(27).
Available at: http://www.biomedcentral.com/1472-6963/9/27
This study applied methods originally used in the Harvard Medical Practice Study (Brennan, Leape, et al., 1991) to ascertain the annual costs associated with adverse events (AEs) at hospitals in the Netherlands in 2004. The authors calculated the incidence and costs of AEs in a sample of nearly 8,000 patient admissions at 21 Dutch hospitals and extrapolated these findings to derive national estimates. Results showed that the direct medical costs associated with all AEs (preventable and nonpreventable) were an estimated €355 million; costs associated with preventable AEs accounted for €161 million of this total. Excess length of stay incurred in treating the consequences of adverse events was a determinant of costs, and certain types of AEs were found to be especially costly to treat. Economic and policy implications of these findings are briefly discussed. Five tables are included.

8. Hospitalists as Emerging Leaders in Patient Safety: Lessons Learned and Future Directions.

Flanders SA, Kaufman SR, Saint S, Parekh VI.
J Patient Saf. 2009(Mar); 5(1):3–8.
This article highlights the work of the Hospitalists as Emerging Leaders in Patient Safety (HELPS) consortium, a hospitalist-focused improvement project undertaken by nine southeastern Michigan healthcare systems. HELPS sought to harness hospitalists' central patient safety role to facilitate implementation of best practices and safety improvement projects at participating organizations. The authors report on consortium members' experiences during the 2-year initiative and comment on successes and challenges encountered, insights learned, and future goals for the program. Multiple tables are included.

9. Incidence of Adverse Drug Events and Medication Errors in Intensive Care Units: A Prospective Multicenter Study.

Benkirane RR, R-Abouqal R, Haimeur CC, et al.
J Patient Saf. 2009(Mar); 5(1):16–22.
This study, part of a WHO and World Alliance for Patient Safety initiative to improve drug safety, sought to measure the incidence of adverse drug events (ADEs) and medication errors in the ICU setting and to use the resulting information to develop medication error prevention strategies. The authors analyzed prospectively collected data from seven ICUs in Rabat, Morocco, for a total of 696 patients over a 3-month period to determine the incidence of all ADEs as well as the frequency of ADEs attributable to medication errors. Results showed that of a total of 108 incidents detected 52 were classified as medication errors, of which 24 were associated with preventable ADEs. The authors note that the approach to event monitoring and reporting used in this study, which involved cooperation between hospital clinicians and the Moroccan national pharmacovigilance center, represents a promising development for further efforts in this area. Multiple tables are included.

10. Methicillin-Resistant *Staphylococcus aureus* Central Line–Associated Bloodstream Infections in US Intensive Care Units, 1997-2007.

Burton DC, Edwards JR, Horan TC, Jernigan JA, Fridkin SK.
JAMA. 2009(Feb 18); 301(7):727–736.
This study analyzed recent trends in the incidence of MRSA central line–associated bloodstream infections (BSIs) among ICU patients in the US. The authors examined national hospital infection surveillance data from the years 1997–2007 to assess changes in infection rates at seven types of ICUs. Results showed that the incidence of MRSA central line–associated BSIs increased during 1997–2001 in several types of ICUs, but decreased significantly during 2001–2007 in six of the seven ICU types, with an overall decrease in incidence of nearly 50% between 1997 and 2007 (in pediatric ICUs alone, rates remained steady during the study period). The authors note that these findings correlate with observed reductions in total central line–associated BSIs in the study sample and may reflect the impact of targeted improvement efforts; however, neither the reasons for the observed trend nor its relationship to MRSA infection rates in other patient populations could be determined in this study. Three tables and three figures are included.

11. Near-Infrared Spectroscopy Monitors: A Novel Tool for Patient Safety in the Intensive Care Unit.

Kane JM.
J Patient Saf. 2009(Mar); 5(1):29–31.
Near-infrared spectroscopy (NIRS) is a noninvasive method of measuring blood oxygen concentration and can be used to monitor the condition of clinically precarious patients. This case report provides a brief introduction to NIRS technology and describes an instance in which NIRS monitoring helped to detect and avert the negative consequences of a potentially serious medication error in a pediatric ICU patient. One figure is included.

12. Nurse Staffing and Medication Errors: Cross-Sectional or Longitudinal Relationships?

Mark BA, Belyea M.
Res Nurs Health. 2009(Feb); 32(1):18–30.
This study explored the relationship between nurse staffing and rates of medication error in several hundred US medical-surgical units. The authors used autoregressive latent trajectory modeling, a recently developed statistical technique, to determine whether changes in nurse staffing predicted changes in medication error rates during a six-month period. While results showed no significant association between nurse staffing patterns and frequency of medication errors, the authors suggest that the statistical methods used in this study may provide a useful approach for further research in this area. Two tables and three figures are included.

13. **Pulse Report 2009: Safety Culture: Staff Perspectives on American Health Care.**
South Bend, IN: Press Ganey Associates, Inc.; 2009.
Available at:
http://www.pressganey.com/galleries/default-file/Safety_Culture_Pulse_Report_2009.pdf
This report presents results from a survey that assessed perceptions of organizational patient safety culture among 42,378 healthcare workers at 75 hospitals across the US. Survey respondents were asked to rate their organization's performance in thirteen dimensions relevant to safety, such as teamwork, management engagement in safety activities, event reporting, and communication. Press Ganey's analysis found that overall ratings of safety culture correlated most strongly with survey items relating to communication and coordination, suggesting that efforts targeting improvement in these areas may be an effective approach to improving an organization's culture of safety.

14. **Reducing Medication Errors and Improving Systems Reliability Using an Electronic Medication Reconciliation System.**
Agrawal A, Wu WY.
Jt Comm J Qual Patient Saf. 2009(Feb); 35(2):106–114.
This article describes the development, implementation, and evaluation of an electronic medication reconciliation system at Kings County Hospital Center, a New York City tertiary care academic hospital. The authors report findings of a 17-month study showing that use of the system was associated with a considerable reduction in the frequency of prescribing errors occurring upon patients' admission to the hospital, suggesting that such a system can be an effective tool for improving the medication reconciliation process and reducing associated errors. Multiple tables and figures are included.

15. **Restricted Duty Hours for Surgeons and Impact on Residents Quality of Life, Education, and Patient Care: A Literature Review.**
Pape H-C, Pfeifer R.
Patient Saf Surg. 2009(Feb 20); 3(3).
Available at: http://www.pssjournal.com/content/3/1/3
This article reviews findings from 21 studies concerning the impact of resident duty-hour limits on surgical residents' wellbeing, surgical education, and safety and quality of patient care. The authors found that most studies showed an association between the implementation of duty-hour restrictions and perceived improvement in residents' personal and work-related quality of life. However, the studies presented conflicting or inconclusive findings concerning the impact of duty-hour restrictions on surgical education and quality of patient care. The authors suggest that further research is needed to address these questions. Four tables are included.

16. Small Patients, Small Errors, Big Impact.
Engleman SG.
Patient Saf Qual Healthcare. 2009(Jan/Feb); 6(1):36–40.
Available at: http://www.psqh.com/janfeb09/six-sigma.html
This article presents a case study of an intervention to improve the care of pediatric patients in a community hospital's emergency department. The problem involved a pattern of inappropriate care orders issued by ED physicians for pediatric patients admitted to the hospital. The author describes how Six Sigma techniques were used to analyze the issue, implement corrective action, and ensure that improvements were sustained. One figure is included.

17. The You CAN Campaign: Teamwork Training for Patients and Families in Ambulatory Oncology.
Weingart SN, Simchowitz B, Eng TK, et al.
Jt Comm J Qual Patient Saf. 2009(Feb); 35(2):63–71.
This article describes the development, implementation, and assessment of a teamwork training program for ambulatory oncology patients and family members at Dana-Farber Cancer Center, Boston, Mass. The initiative encouraged patients to use team communication techniques to assert themselves effectively and promote safer care, for instance, by asking questions about their treatment, notifying staff about potential safety issues, and reminding providers to wash their hands. An assessment of the program's impact at Dana-Farber and its potential application to other clinical settings are discussed. Five tables and one figure are included.

18. Towards an International Classification for Patient Safety: Key Concepts and Terms.
Runciman W, Hibbert P, Thomson R, Van der Schaaf T, Sherman H, Lewalle P.
Int J Qual Health Care. 2009(Feb); 21(1):18–26.
A primary goal of the WHO World Alliance for Patient Safety's International Classification for Patient Safety (ICPS) is the establishment of a standardized lexicon of patient safety concepts. This article, a companion to the paper described in item 19, describes the development of the key concepts and terms that form the taxonomic units in the ICPS taxonomic system. The 48 key concepts are defined and their relationships within the system are discussed. Three tables and one figure are included.

19. Towards an International Classification for Patient Safety: The Conceptual Framework.
The World Alliance for Patient Safety Drafting Group, Sherman H, Castro G, et al.
Int J Qual Health Care. 2009(Feb); 21(1):2–8.
The International Classification for Patient Safety (ICPS), developed by the WHO's World Alliance for Patient Safety, is intended to provide a universal taxonomy of patient safety terms and concepts. This article provides background on the origins and objectives of the initiative, describes the ICPS conceptual framework, and comments on future opportunities and challenges still to be addressed. Three figures are included. [See also item 18.]

20. Towards Safer, Better Healthcare: Harnessing the Natural Properties of Complex Sociotechnical Systems.

Braithwaite J, Runciman WB, Merry AF.
Qual Saf Health Care. 2009(Feb); 18(1):37–41.
Available at: http://qshc.bmj.com/cgi/content/full/18/1/37

This article posits that healthcare can be usefully conceptualized as a complex sociotechnical system, and argues that healthcare improvement efforts that recognize and exploit the tendencies inherent in such a system will have the best chance of success. As a framework for this discussion, the authors review relevant theories from a variety of disciplines including mathematics, social sciences, and marketing and provide examples of their application in the healthcare context. Three figures are included.

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