

Preamble

The Agency for Healthcare Research and Quality provided a conference grant to the American Academy of Family Physicians (AAFP) to hold a two-day meeting of primary care patient safety researchers and educators in Chicago, Illinois in September of 2003. The meeting was sponsored by the Primary Care Organizations Consortium, a coalition of the major professional organizations involved with primary care physician education and research;¹ the American Academy of Family Physicians; the National Patient Safety Foundation; and the Department of Family Medicine, Pritzker School of Medicine – the University of Chicago. The Medical Group Management Association assisted in planning the meeting. The planning committee included John Hickner, Perry Pugno, Jack Ende, John Pascoe, Cynthia Weber, and Debbie Graham. Consultants to the Planning Committee included Terry Hammons, Carole Lannon, Craig Keenan, Deborah Cummins, and Susan Dovey.

The planning committee wishes to thank Cynthia Weber, Claudia Caton, Stacy Singleton, and Terri Vokins from the American Academy of Family Physicians for their fine logistical support of the meeting. We thank the plenary speakers, Helen Burstin, Gerald Hickson, David Bates, and Joseph Scherger for their stimulating and challenging presentations and the thirty-two primary care educators and researchers for presenting their patient safety curricula and research findings. We thank Jennifer Kappus and Aaron Bonham for their endless efforts to put together these proceedings. Finally, a special thanks to Debbie Graham, project director of the AAFP Developmental Center for Evaluation and Research in Primary Care Patient Safety for coordinating the planning and the conduct of this outstanding meeting that demonstrated the cutting edge of primary care patient safety education and research.

Introduction

On September 18 to 19, 2003 under the auspices of the Primary Care Organizations Consortium, ninety-three educators and researchers from the primary care specialties of family practice, general internal medicine, and pediatrics gathered in Chicago to present new research findings and curricula regarding patient safety in ambulatory primary care settings. The lively discussions at this historic meeting, the first meeting in the United States devoted solely to ambulatory primary care patient safety education and research, was a manifestation of the commitment of a small but passionate group of educators and researchers to make primary medical care in the United States safe for all.

The Institute of Medicine report To Err is Human focused almost exclusively on hospital errors because so little was known in 1999 about errors and harm in ambulatory settings. Leaders of the Agency for Healthcare Research and Quality (AHRQ), the leading funder of patient safety research in the world, recognized this knowledge gap, and AHRQ has provided grants to a number of primary care researchers to describe errors and harm in ambulatory venues and to discover and disseminate knowledge and systems tools to improve primary care safety. A number of primary care educators around the United States have developed and implemented curricula for medical students and residents.

Plenary Sessions

Four plenary speakers outlined challenges in primary care patient safety and provided inspiration for future research and educational programs. Dr. Helen Burstin, Director of the AHRQ Center for Primary Care, Prevention and Clinical Partnerships, outlined the scope of the problem and the ways AHRQ is seeking to address patient safety in general and primary care patient safety in specific. The Agency for Research and Quality is using the epidemic model to attack medical errors. First we must identify errors, raise awareness and build capacity. Next, we must implement proven practices, develop innovative practices, and develop a culture conducive to safety. Finally, we must sustain improvements. Dr. Burstin reminded the participants that 24% of Americans report that they or an immediate family member have experienced a medical error that resulted in a serious health consequence. She highlighted some findings from AHRQ-funded studies in primary care that suggest ways to improve patient safety now. For example, researchers from Kaiser Permanente in Atlanta, Georgia found that primary care clinicians were less likely to have risky prescribing practices if they were part of a supportive and collaborative practice team. A group from Mississippi developed an online medication errors reporting system for ambulatory care and reduced reporting time for serious errors to their risk management group from three to four weeks to an average of six hours. Dr. Burstin highlighted the need for innovative research methods, as traditional research techniques are not sufficient for improving patient safety. Information technology will be essential to achieve a high level of safety, and by year 2010, most clinical data will be in electronic form. The current United States' healthcare system is on the "first percentile" of information technology innovation, so there is much work to be done. There is great need to link research, education, and clinical training and to track the impact of innovations systematically and deliberately. She closed her talk by outlining things we can implement NOW to improve the quality and safety of primary medical care.

In his research, Dr. Gerald Hickson, Associate Dean for Clinical Affairs and Director, Center for Patient and Physician Advocacy at Vanderbilt University Medical Center, approaches patient safety from the perspective of patients. For nearly 20 years he has researched ways to improve the quality and safety of physicians' care by using malpractice claims data and patient complaints. He posed the question: Can patient complaints serve a role in promoting a culture of safety? He presented convincing data that the answer is a resounding "yes." Adverse events occur in 6% of hospital stays, and negligent injury occurs in 1 to 2%. Valid malpractice claims are filed in about 2% of legitimate injury cases. He outlined the reasons that patients and their families sue their doctors. He then provided his own research data regarding the concentration of malpractice claims in a small group of physicians. His research supports the hypothesis that physicians are sued, in part, because of poor communication skills. It is possible to identify these physicians through patient complaints. Physicians with greater numbers of complaints are much more likely to be sued. Is there a way to identify these physicians and to improve their patient communication skills? Dr. Hickson's PARS program at Vanderbilt University Medical Center demonstrates that it is possible for physicians to improve communication skills by motivating them with non-judgmental peer feedback regarding their patient complaints profile.

Dr. David Bates, Medical Director of Clinical and Quality Analysis for Partners Healthcare and Chief, Division of General Medicine, Brigham and Women's Hospital is a leading researcher in primary care patient safety. He provided an overview of the most important issues in patient safety in primary care practice. He began with a quotation from Paul O'Neil: "Safety is not a top priority. Safety is a pre-condition." He described the special characteristics of primary care that affect patient safety. These include long feedback loops, episodic care from the providers perspective, a low signal to noise ratio, widely distributed services geographically, limited resources, redundancy, and the considerable autonomy of patients and clinicians in primary care settings. He provided empirical evidence of safety problems in primary care practice. For example, for every 100 prescriptions written, nine patients will seek care because of drug complications. Key areas where errors occur are in outpatient follow-up after hospital discharge, medications, follow-up of abnormal test results and ambulatory surgery. He summarized several studies documenting high rates of adverse drug events in ambulatory care, some of which were due to errors in prescribing. Paper prescribing is archaic, Dr. Bates contended. Computerized prescribing and better electronic follow-up tools for lab testing will be essential for reducing primary care errors. He described a computerized test follow-up system called Results Manager that his research group is testing. It has been so popular with clinicians that it has been difficult to complete the randomized design study. Finally, he noted that electronic health records are essential tools for quality and safety. They are available at all times, they can enhance communication, and they provide decision support.

Dr. Joseph Scherger, a member of the *Committee on Quality of Health Care in America* that was responsible for drafting To Err is Human, opened his presentation with two imperatives for primary care practice: to use information technology tools and quality improvement methods to improve patient safety, and to redesign primary care office practice for safety, effectiveness, and satisfaction. He quoted Andy Warhol: "They say time changes things, but really you have to change things yourself." Dr. Scherger summarized some of the radical changes he envisions for the future of primary care delivery. He contended that "the future of primary care depends entirely on the quality of care we deliver." Quality primary care practice for the 21st century will be characterized by freedom from error, consistent best practice, and great service. In keeping with his two imperatives, most of these changes are related to changing the mode of delivery of health services with heavy use of information technology. Because of the complexity of primary care practice and the huge volume of medical knowledge available to physicians, electronic support tools are essential for quality. Clinicians need not only good electronic knowledge management and decision support tools but also electronic patient data systems (electronic health records), and electronic communication tools. These functionalities must all be integrated into one seamless interface, with knowledge management and decision support tools embedded in electronic health records. Dr. Scherger described a new vision for primary care in which physicians and their office staff assume responsibility for a population of patients, manage their needs and demands, and use a team approach. The concept of productivity must change, and there must be

sufficient time for patient encounters. He showed the participants a mock daily physician schedule of the future that accommodates these principles, including home visits!

Interspersed between the plenary sessions, 16 educators and 16 researchers presented their patient safety curricula, research results, and research in progress. We have included presentation abstracts and PowerPoint presentations in these conference proceedings, but budget limitations precluded including transcripts of the presentations.

The meeting closed with brainstorming sessions on future directions for education and research in patient safety in ambulatory primary care settings. Each group was charged with identifying five major issues and action steps.

The major issues participants identified in patient safety education in primary care are:

1. Integrate patient safety principles into education and delivery system redesign and involve all stakeholders.
2. Advocate for patient safety to leaders in education, business, and government. Incentives must be aligned to ensure patient safety.
3. Meaningful, timely and valid evaluation/feedback is important. Link educational outcomes to patient outcomes.
4. National and local collaboration will be necessary.
5. Capture the continuum of learners, from students to residency trainees to practicing physicians.

These are the action steps proposed during the education brainstorming session.

1. Have one organization act as a clearinghouse for patient safety curricula.
2. Develop a core patient safety curriculum and faculty development model.
3. Identify agencies willing to provide grant support for curricular and faculty development.
4. Broaden the audience and participation for the next primary care patient safety meeting, and encourage all participating organizations to advocate for and develop patient safety education and research initiatives.
5. Identify barriers and establish incentives for promoting patient safety in ambulatory care.

The participants recommended we establish an interdisciplinary healthcare steering committee to set an agenda for research and education in primary care patient safety and develop an implementation strategy.

These are the five major issues participants identified for primary care patient safety research:

1. There is insufficient funding for primary care patient safety research.
2. We must focus on systems change, with careful redesign based on human factors and using information technology tools.

3. Error reporting systems should be developed and implemented that will provide feedback loops to reporters to enhance understanding of medical errors to inform quality improvement efforts.
4. There is a need to summarize current research evidence in primary care patient safety and develop priorities for future primary care patient safety research.
5. We need research to better understand the role of patients in preventing errors and harm.

Action steps proposed by the participants in the research brainstorming group were:

1. to create accessibility to information technology;
2. to use mass media as a dissemination vehicle;
3. to focus on cost effectiveness, transforming patient safety research into cost; and effectiveness research
4. to collaborate.

Ambulatory primary care patient safety research and education are in their infancy. With over one billion office visits per year in the United States, and over half of these being to primary care clinicians, safety and quality are clearly as important in ambulatory primary care as they are in specialty and hospital care. This conference provided a forum for thought leaders of primary care physician organizations and primary care educators and researchers to learn about the latest patient safety programs and a mechanism to stimulate dissemination of the latest research and education programs in primary care patient safety. The overwhelming sentiments expressed by the conference participants were to repeat this conference on a regular basis. Our goal is to convene the second National Ambulatory Primary Care Research and Education Conference on Patient Safety in the fall of 2005.

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¹ The PCOC consortium is a unique federation of primary care organizations. The consortium includes four family medicine professional organizations (American Academy of Family Physicians; Association of Departments of Family Medicine; Association of Family Practice Residency Directors; and Society of Teachers of Family Medicine), four internal medicine professional organizations (American College of Physicians/American Society of Internal Medicine; Association of Professors of Medicine; Society of General Internal Medicine; and Association of Program Directors in Internal Medicine), four pediatric professional organizations (Ambulatory Pediatric Association; Association of Medical School Pediatric Department Chairs; Association of Pediatric Program Directors; and American Academy of Pediatrics), four multidisciplinary professional organizations (Medicine Pediatric Program Directors Association; American Association of Colleges of Osteopathic Medicine; American College of Osteopathic Family Physicians; and Student Osteopathic Medical Association), two liaison organizations (Division of Medicine & Dentistry Bureau of Health Professions and Center for Primary Care Research at AHRQ), and two organizations with observer status only (Associate/Assistant Deans of Primary Care and American Medical Student Association).