the contribution of each other's professional roles and responsibilities for achieving a safe and high quality outcome for the patient.

A complementary paradigm that guides health professionals of all backgrounds is a systems perspective on delivering care. Systems may be described as a set of things working together as parts of a mechanism or an interconnecting network. In traditional education for our professions we have studied most of our knowledge in the silo of our own programs, colleges, or schools. Interprofessional education should be designed to illustrate where our own work fits into the system of care delivery (i.e., how our independent and interdependent work complement each other by working together as parts to fulfill the holistic needs of the patient). We must share a common mental framework in healthcare practice to guide our own actions on behalf of the patient, toward the patient, and toward each other as care providers. Professors must understand this mental framework in healthcare practice and translate it within the classroom setting.

Using these two complementary paradigms—patient-centeredness and a healthcare systems approach to delivery—offers context to the profession-centric cultures and beliefs of each profession. Choosing these paradigms allows each profession to retain its own identity and professional norms, while expanding to include where overlaps and connections are needed to fulfill safe, quality, patient-centered care delivery. Although differing professional cultures and beliefs may exist, these must become minimized and take a secondary position as the professional responsibilities and roles required to meet patient-centered systems of care delivery emerge as primary.

CASE STUDY 1: MOVING TO A COMMON CORE INTERPROFESSIONAL PATIENT SAFETY CURRICULUM

All health professionals and administrators have a duty to prevent avoidable injury and harm to all patients who receive health care in the United States. "Declare the past, diagnose the present, foretell the future; practice these acts. As to diseases, make a habit of two things—to help, or at least to do no harm" (Hippocrates, *Epidemics*, Bk. 1, Sect. XI).

Students of the health professions need to understand the science of safety and the translation of new discoveries for safer care delivery into practice. Patient harm secondary to errors and mishaps results from system problems and failures. Systems have both technical and human components. Understanding this interface necessitates working together as health professionals to achieve systems improvement and reduce harm and injury. Current health professions education rarely delivers common core content about the science and application of safety principles.

Creighton University presently offers one of the most comprehensive interdisciplinary patient safety courses in the country, entitled Interprofessional Education 410: Foundations in Patient Safety. The course has been offered since 2005 and has reached more than 500 students in training (Abbott, Fuji, Galt, & Paschal, 2012; Fuji, Paschal, Galt, & Abbott, 2010; Galt et al., 2006); however, not all students and faculty are being reached through this elective approach. Patient Safety Day was organized to reach all pre-health professions and health professions–related students on campus with a core exposure to the science of safety. The daylong event is built on the elective interprofessional core curriculum course and is offered once in each of the spring and fall semesters. The objective is to provide students and faculty with training in the science of safety simultaneous with an introduction to basic patient safety science principles in an interprofessional educational delivery framework. Content was designed to illustrate how safety impacts both the overall healthcare system and the individual, and to apply lessons learned in a case-based interprofessional set of exercises. Three hundred fifty students participated in the first offering of our Patient Safety Day, including 70 from medicine, 95 from nursing, 35 from occupational therapy, 85 from pharmacy, 57 from physical therapy, and 8 from social work. Speakers, panelists, and faculty facilitators participated from Creighton University, the U.S. Department of Veterans Affairs, state government, and the local community.

"Today you made a difference" was the theme for this Patient Safety Day, and the focus was on the most personal and often tragic

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experiences of harm and injury of passionate leaders who conduct research, teach, implement research findings into practice, or use research findings to affect policy in patient safety. The keynote speaker, Evelyn McKnight, AuD, cofounder of HonorReform, presented the story of the hepatitis C outbreak in Fremont, Nebraska, and what needs to be done in practice and policy to prevent this "never event" from ever happening again. Content areas presented throughout the day included human factors, systems approaches to safety, and **interprofessional teamwork**.

Students were asked to reflect on the content presented during the Patient Safety Day and to complete a postevent questionnaire. This questionnaire solicited information about the value students placed on the day in the context of their professional learning and development. Descriptive analysis was conducted for quantitative responses, and thematic analysis was conducted for qualitative open-ended responses. Most students believed the material taught was essential core knowledge across the professions (78.6 percent). Similarly, students believed that the content should be required for all health professions students (77.4 percent). Students varied on the format they believed was best for learning: 40 percent would have preferred a full interprofessional course, 39 percent preferred the day-long program, and 21 percent indicated they would like to have it integrated with other content in their own disciplinary curriculums.

Students were asked to describe briefly what the most meaningful lessons were from the day. Three themes emerged, as follows, with a brief description and illustrative quote for each:

Theme 1: Errors can and do happen. Students were exposed to a variety of real-life stories shared by speakers. There was surprise and shock about the occurrence of harm-inducing errors. As one participant described, "It is heartbreaking that most of these are preventable and happened because of lapses at many different levels."

Theme 2: Mistakes are normal. Students came to the realization that mistakes and errors will happen regardless of a person's experience. They recognized that it is important to be vigilant and proactive on an individual level, and improve systems on an organizational level. As one student learned, "Being human we are all susceptible to error. It's inescapable."

Theme 3: Preventing errors is the responsibility of both individuals and teams. Students gained an understanding of the different expertise areas and roles of their health professions colleagues related to patient care. They recognized the need to speak up on an individual level and work together with other health professions to provide safe patient care. A few notable quotes from students were:

- "Communication is key! And we really need to check our attitude at the door."
- "We need to have the courage to speak up and advocate for our patient when we have concerns about care."
- "I don't want to get lost in the technical details and forget that I'm helping a real person."

Implications from the findings are that patient safety education is valued by most health professions students when they are exposed to this important content area. More important is the notion that the students had strong beliefs that learning about patient safety in an interprofessional manner, whether as a common day or as coursework, is essential. Students recognize the need for interprofessional dialogue and collaboration while learning about patient safety and prefer to learn the content in an interdisciplinary model. These observations present evidence of the need to develop an interdisciplinary mechanism for delivery of patient safety content to health professions students.

Since the first course implementation in 2005 and the subsequent addition of Patient Safety Days on campus, there have been national policy-level changes in organizations devoted to improving safe, quality health care. The various health professions accrediting bodies have standards for health programs accreditation. Many of these have adopted explicit training standards related to healthcare safety. The Institute for Healthcare Improvement launched the Open School in 2008 to provide students of nursing, medicine, public health, pharmacy, health administration, dentistry, and other allied health

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professions with core content learning online on the topics of patient safety and improvement at no charge to participants (Institute for Healthcare Improvement, n.d.). This powerful approach can facilitate academic institutions in the incorporation of safety content, although it does not offer educational strategy and techniques at the local level to enhance interprofessional learning. Local-level education still must be designed and facilitated through educators within the higher education professional programs.

Discussion Points

1. Why is it important that health professions share a common understanding of patient safety standards and practices?
2. What are the policy implications from accepting that "mistakes are normal and all humans err"?
3. How would you approach healthcare system leaders/employers about changing employment policies related to punitive action when errors occur?

Policy Implications

The university-wide implementation case offers important lessons to others nationally in healthcare education. Although the students in our case description have a strong sentiment toward receiving interprofessional education through shared work, we have not attained required core content across the professional training programs. We have seen growth in adoption of safety content; however, this content has remained relatively specific to each discipline and there is scattered overlap and discipline-specific foci as the prominent offering.

Although we see the advancement of incorporating educational content across health professions programs in the country, we still see disconnection between increasingly educated professionals (former students now in practice) and policy related to safety. Many healthcare organizations still maintain a blame culture that results in loss of employment for some individuals who make human errors despite employing best practices and

genuinely doing their best while functioning in challenging and poorly designed care delivery systems. "Who is to blame?" all too often remains a key question in health care when someone is injured by preventable errors. Nurse professionals are often at the sharp edge of safety, and often are the last point of contact with a patient who ultimately has an upstream error committed in the care delivery system. When negative events occur, our professions often confront one another, rather than ask what we could have done differently to prevent this from occurring. We need to shift policy from blame to advocacy. That is, we must create policies and processes so that healthcare organizations and health professional employees respond to the question, "How can we make it so this never happens again?"

Education has been essential to enlightening health professionals, administrators, researchers, and policymakers. The Institute of Medicine has continued to advance our study of barriers to advancing safety in practice settings. The National Patient Safety Foundation continues to sponsor innovative projects to inform us about reducing harm and injury and to facilitate legislative and federal agendas. A key federal agency, the Agency for Healthcare Research and Quality (AHRQ), places improving the quality and safety of healthcare delivery systems as its primary focus for research and innovation and is a primary source of funding for research advances. These national and public initiatives are critical to the attainment of safe, quality health care. However, this goal will only be realized if health professionals advance patient-centered systems approaches to delivering care and own the responsibility of reducing the risk of harm and injury through proactive interprofessional problem solving.

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