

Running Head: Narrowing the Health Education Chasm

Narrowing the Health Education Chasm

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The Institute for Healthcare Improvement (IHI) has stated that the United States remains the best country in the world for patients seeking an advanced medical intervention or technology; however, many leading health outcome measures suggest that the care in the United States is sub-optimal (Commonwealth Fund, 2008). Evidence of sub-optimal outcomes was highlighted when the Institute of Medicine (IOM), through the report *To Err is Human: Building a Safer Health System*, asserted that each year as many as 98,000 people die and thousands more are injured as a result of medical errors (Kohn, Corrigan, & Donaldson, 1999). The human toll cited in the report *To Err is Human* was not a new phenomenon. More than 100 years earlier, Florence Nightingale reported the relationship between safe institutions and positive patient outcomes (Wakefield, 2008). The healthcare system in the United States is broken. IHI asserts every system is perfectly designed to achieve exactly the results it gets. Many sub-optimal outcomes can be traced directly back to the deficiencies in health professionals' educational curriculum, specifically in the areas of understanding quality improvement (QI) concepts, communication skills, and teamwork.

In another report, *Crossing the Quality Chasm*, the IOM identified six characteristics of an ideal health system: safe, effective, patient-centered, timely, efficient and equitable. The IOM stated that the biggest barrier to improving the current state of patient safety (PS) was ignorance about what was occurring each day in healthcare settings and organizations (Wakefield, 2008). Overcoming this ignorance was the subject of yet another IOM report, *Health Professions Education: A Bridge to Quality (2003)*. In this report the IOM stated that most current medical education programs are in need of major renovation to bridge communication breakdowns that occur between healthcare providers. Accordingly, each discipline involved in patient care is unaware of the action

and interests of the other disciplines. The report urged changes in healthcare systems to coordinate PS, informatics, QI and evidenced-based practice and to incorporate them into an interdisciplinary academic environment (Wakefield, 2008).

Sadly, the majority of healthcare facilities and educational programs continue to function without regard for changes called for in the IOM report. Medical education programs operate in individual silos and forego interdisciplinary interaction and coordination, resulting in professionals who are trained to work in a silo environment and who are ill prepared for the necessary interdisciplinary discussions and coordination of care to improve quality. A solid understanding of quality and a constant focus on QI must be inherent in every medical education program to ensure that quality is a focus in every healthcare facility.

Health professionals now bear the responsibility of direct involvement in the development and incorporation of quality measurement tools into practice to improve patient outcomes. QI concepts are often overlooked as a component of professional medical education. Therefore, to improve health outcomes, there is an imminent need to transform the way quality is taught to healthcare students in the United States. Furthermore, Blumenthal (1996) articulates in a *New England Journal of Medicine* essay that political and economic groups will call the expertise of physicians into question until the physicians can truly lead the industry in QI. All members of the healthcare team must thoroughly understand the state of the science of QI activities and adopt evidenced-based practice as the standard of care. Furthermore, healthcare professionals must play an active role in the implementation of quality management practices.

Sustained quality in the healthcare system will not be possible until properly formulated interdisciplinary teams openly communicate and work together. Learning how

to work in a team is not part of the curriculum in medical and nursing schools. As a result, many graduates are not taught how to foster teamwork, communication, cooperation and leadership (Kyrkjebo, Brattebo, & Smith-Strom, 2006). Until clinicians are taught these skills, they will not be able to participate in, much less lead, QI teams. The siloed approach to medical education is problematic for many reasons, but most notably because round table discussion and open communication should be the basis of healthcare professional education. Interdisciplinary communication that is required in QI should be introduced early in clinical education; this will build a solid framework of the underlying principles of teamwork and communication from which quality and patient safety can be improved (Silver, 2000).

Challenges

In the past, quality improvement (QI) and patient safety (PS) lessons have received only ‘honorary’ mention in medical and nursing education. The reasons for this practice were two fold: 1) it was assumed that by learning the medical knowledge and developing excellent clinical skills, young professionals would automatically deliver the highest quality and safest care, and 2) the science of QI and PS had been rather ill-defined. Today, it is apparent that the former assumption was false, given that expert clinicians do not always obtain expert results. Also, the science of QI and PS are now better understood. Nevertheless, proposals to implement these changes into the educational pathways continue to face numerous challenges, including practical limitations of an already full curriculum, unfamiliarity with or resistance to interdisciplinary learning, and cultural challenges of executing QI and PS principles in the live hospital environment.

Medical students are expected to learn more information now than at any point in the history of medical education (Institute of Medicine, 2003). Furthermore, in the last decade, the Liaison Committee on Medical Education (LCME) has imposed new curricula on medical schools, such as ED-10, that require teaching of communication and other “soft skills” (Liaison Committee, 2009). Simultaneously, many medical schools are reducing the length of their preclinical training in order to accommodate more research or elective experiences. Top ranked schools like Duke University, the University of Pennsylvania, and Stanford University follow condensed preclinical curriculum, completing all traditional coursework and the new LCME requirements in about 11 to 18 months. The curriculum crunch is not unique to medical schools; in recent years, the number of accelerated Bachelor of Science in nursing programs in the United States has increased by more than 600% (American Association of Colleges of Nursing, 2007).

Despite the aforementioned limitations, the application of QI and PS principles in daily medical practice must become a distinct part of the health professions’ required core curricula. Some have suggested that while the volume of factual information covered in undergraduate medical education is indeed burdensome, much of it is only marginally relevant to clinical practice and perhaps can be culled to make room for more clinically-relevant subjects such as QI and PS (D’Eon, Kosmas, & MacMillan, 2007). Quality and safety are not electives.

For too long, siloed educational programs have prepared health professionals to enter a siloed healthcare system (Institute of Medicine, 2003). However, the status-quo of the latter is slowly changing, and the formation of evidence-based highly functioning, patient-centered, collaborative “care teams” is contingent on collaborative efforts early on in training (Schall, Sevin, & Wasson, 2009). Despite some promising endeavors,

interprofessional medical education is neither universally accepted nor widely implemented in a substantive manner (Mayer, Klamen, Gunderson, & Barach, 2009).

Coordinating interprofessional educational opportunities can be an operational nightmare, compounding the curriculum limitations mentioned previously. Overcoming these difficulties will require cultural buy-in – learning about QI and PS is as important as learning about the Krebs Cycle or differential diagnosis. The basic science professors must see themselves as true stakeholders in the QI and PS education process and believe in it – a difficult task because they seldom have the opportunity to experience the workflow of clinical care. Curriculum should address this deficiency. Designing new assessment paradigms for these interdisciplinary courses will also require time and financial resources (Mayer, Klamen, Gunderson, & Barach, 2009).

The practice of QI and PS principles in everyday clinical workflow remains a formidable challenge due to cultural resistance and workload. It is not the case that people do not want to do an excellent job; rather it is because they lack skills to overcome systemic barriers that prevent them from doing an excellent job. Fear of ‘blame’ remains a significant impediment to reporting near misses and having open fruitful discussions (Institute of Medicine, 2001). Therefore, the curriculum should have provisions to include the practice of these principles during clinical clerkships. Medicine remains a hierarchical profession whereby students might be easily swayed by a preceptor or supervisor who does not recognize the importance of quality or patient safety. Students must be empowered to practice safe, quality medical care in systems lacking a culture of quality and safety. This can be achieved through early practical application of newly acquired knowledge in an interprofessional environment.

Specific Aims

Aim 1: To identify an approach to interprofessional education of healthcare quality and patient safety.

Hypothesis: An interprofessional approach to educating health professions students on quality and patient safety will lead to positive effects on the healthcare system.

Aim 2: To identify a mechanism to integrate quality and safety into health professions education to achieve educational reform.

Hypothesis: Integrating quality and patient safety into health professions education will lead to better population health management and inclusion of the patient as a member of the team.

Vision for the Future

Our vision for the future includes an integrated curricular approach to healthcare professions education that prepares students to create and participate in a healthcare delivery system that facilitates a team-based approach and engages patients in the care delivery process. In an effort to meet this need, we propose a 26-week interprofessional course, *Quality and Safety-Foundations and Applications*, integrating didactic education, team-based case reviews, and practical real world assignments. The health professions students of today are the healthcare leaders of tomorrow. Engaging them in conversations about quality and patient safety now will drive improvement in the future. The course will provide an overview of QI and PS, basic tools to measure and analyze, and information about the organization of the healthcare system. Small group discussions about assigned cases will supplement the didactic lectures. A mix of students from

different disciplines, such as medicine, nursing, pharmacy, administration and allied health will comprise the small groups. The goal of this exercise will be to improve communication and encourage students to view the healthcare system through each discipline's lens. Each group will submit a weekly report identifying the case's errors and system breakdowns and offer recommendations for corrective action.

Quality and Safety-Foundations and Applications is designed to be completed over two terms. A commonly cited challenge to integrating quality and safety education into health professions curricula is finding the time. While this course would be mandatory for all health professions students, when it is taken will depend on the discipline. The first 13 weeks and the second 13 weeks do not need to be taken in succession. The second half of the course is designed to be completed during the student's residency, internship or other experiential component of training. Three modules will expand on information presented during the first 13 weeks of the course. Each module will be followed by a web-based discussion facilitated by an expert in the field. The students will be challenged to reflect on their thoughts during the first 13 weeks of the course and how their thinking has changed as a result of their experiences in training. In week 26, the students will engage in a conversation about the healthcare system of the future based on their experiences. Comparisons will be made to the commentary of the students during the first 13 weeks of the course. Medical students, nursing students, and pharmacy students will be encouraged to share their clinical experiences and QI suggestions. Public health and health administration students may suggest areas for process improvement. The students will be expected to reflect on their experience and how the course has helped them understand the importance of interprofessional collaboration to deliver safe, quality healthcare.

Despite the challenges associated with health education reform, a growing number of students recognize the importance of learning QI and PS in an interprofessional environment and believe that shared learning activities will lead to better working relationships (Horsburgh, Lamdin, & Williamson, 2001). Students are seeking programs like the IHI Open School for Health Professions to learn about healthcare improvement in an interprofessional educational community. Through this program, students from around the globe are collaborating and looking at the healthcare system through multiple lenses.

Our [the authors] collaboration on this essay is a direct reflection of the power of organizations such as the IHI to bring students together. While we may live in different states across the country, and study different disciplines, we shared our opinions and experiences, and then collaborated to define our vision for the future. It is the collective teamwork of a group of interdisciplinary health professionals that will help us decrease inefficiencies and better manage the health of populations leading to better management of chronic conditions and outcomes of care.

APPENDIX A:

Sample Syllabus

Course Name: Quality and Safety-Foundations and Applications

Course Instructor: Dr. Qualityandsafetyguru

Hours per week: 1.5 hours

Term: Fall semester supplemented by modules

Credit: Three semester credit hours.

Prerequisites: There are no prerequisites for this course.

Objectives/Goals: To provide students with an understanding of defining and measuring healthcare quality and patient safety, the importance of a team-based approach and the need to include the patient in the care team.

Text: Course materials will be provided. Supplemental texts will be recommended for reference.

Grading:

Weeks 1-13	Case studies (weekly assignment)	- 30%
	Team Presentation	- 20%
	Class participation and attendance	- 5%
Weeks 14-26:	Web discussions	- 15%
	Final discussion	- 30%

Syllabus:

First Term	
Class	Topic
1	Overview of Quality and Patient Safety in our Current Healthcare System <ul style="list-style-type: none"> • How quality and safety are defined

	<ul style="list-style-type: none"> • Where it started - history • What it is and what it is not • What has led us to where we are today
2	<p>Quality and Patient Safety: Is there a difference?</p> <ul style="list-style-type: none"> • Differences • Similarities • Key Players (e.g., the Joint Commission, NCQA, CMS, AHRQ, IHI etc.)
3	<p>Measurement and Analysis</p> <ul style="list-style-type: none"> • Study design (e.g., retrospective, prospective, case study etc.)
4	<p>Quality and Safety Improvement Toolbox</p> <ul style="list-style-type: none"> • PDSA • Fishbone • Flowchart • Impact/Effort Matrix
5	<p>Healthcare Delivery</p> <ul style="list-style-type: none"> • The differences between inpatient and outpatient settings, acute care, assisted living and nursing facilities • Pharmacy
6	<p>Stakeholder's Part I: The Healthcare Team's Role in Quality and Safety</p> <ul style="list-style-type: none"> • Interprofessional collaboration • The benefits of a team-based approach • Communication • Health information technology
7	<p>Stakeholders Part II: The Consumer's Role in Quality and Safety</p> <ul style="list-style-type: none"> • The patient as a member of the care team • Patient education • Patient satisfaction
8	<p>A Culture of Safety</p> <ul style="list-style-type: none"> • Errors and disclosure • Communication • Human factors
9	<p>The Business Case for Quality and Safety</p> <ul style="list-style-type: none"> • Employers – Value-based Purchasing • Wellness • Prevention/Screening
10	<p>Lessons Learned from Other Industries</p> <ul style="list-style-type: none"> • Automotive • Airlines
11	<p>The Healthcare Payment System</p> <ul style="list-style-type: none"> • Overview of Medicare and Medicaid Payment • The difference between HMOs, PPOs, and other insurance mechanisms • Pay for performance – what it means and how it is administered
12	<p>Team Presentations</p> <ul style="list-style-type: none"> • A team of students with representation from medicine, nursing, pharmacy, health administration and public health will present the results of their case study. The student presentations will generate discussion that will set the stage

	for the last class which focuses on how the healthcare system can better support a team-based approach to healthcare delivery.
13	Designing the Healthcare System of the Future
Second Term	
14-17	Module 1: Quality and Safety Improvement Tools <ul style="list-style-type: none"> • Tools that are available • Practical applications
18-21	Module 2: Paving a Path to a Culture of Safety <ul style="list-style-type: none"> • Human factors • The power of communication
22-25	Module 3: Leadership for a Quality and Safety <ul style="list-style-type: none"> • Organizational infrastructure • Governance
26	Designing the Healthcare System of the Future (In person or audio conference) <ul style="list-style-type: none"> • Revisit the discussion had on week 13 • How has the practical application of the information learned in weeks 1-13 changed your view of the healthcare system of the future? <ul style="list-style-type: none"> ○ What is realistic to expect of healthcare professionals?

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