

EDITORIAL: PART II

Phantom Menace Prompts Education Reform to Strike Back

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The conflict between education and service is back at center stage drawing national attention. In the August 5 edition of the *New York Times*, pediatric cardiologist Darshak Sanghavi wrote a piece reflecting on the new duty hours regulations that recently went into effect.¹ In the article, Dr. Sanghavi briefly recounts a bit of the early history of medical training at Johns Hopkins, including sleep deprivation, and introduces the Libby Zion case as the impetus for subsequent changes. The 1989 New York State work hours ruling was indeed taken up by the Accreditation Council for Graduate Medical Education (ACGME) as a basis for the 2003 work hours regulations.

Dr. Sanghavi acknowledges that several studies, including Landrigan,² failed to recapitulate the reductions in medical errors seen in the earlier smaller studies. Duty hours regulations have proved insufficient due to system complexity, particularly in the area of handoffs. The mechanisms (often convoluted) put into place to comply with the regulations frequently force more handoffs from one group of physicians to another. Simply put, things get lost in the shuffle—even more so when the night gets busy and crises arise.

Dr. Sanghavi points to anecdotes from Ted Sectish on handoffs. From these anecdotes, Dr. Sectish (a pediatric residency program director) instituted a structured handoff pilot program that incorporated team training, computer-assisted summaries, and structured communication. The program appears to have reduced medical errors. More interestingly, the pilot program recapitulates formal communications principles (e.g. SBAR [Situation-Background-Assessment-Recommendation]) frequently found in patient safety curricula. In an exami-

nation of medical malpractice claims, Singh³ found lack of communication skills to be a key factor in medical errors. Additionally, he identified lack of supervision as a common factor in medical errors. Singh categorizes both of these (communication and supervision) as systems errors mandating change not only in the health care system but also in the medical educational system.

If one considers trainees learning alongside a seasoned mentor, graduate medical education is still a form of apprenticeship. As an apprenticeship, the mentor's responsibilities include ensuring that mentees receive sufficient hands-on experience to fine-tune their craft. In the book *Outliers*, Malcolm Gladwell provides compelling anecdotes indicating that 10,000 hours are required to achieve skill mastery.⁴ If true, the effectiveness of work hours regulation to minimize fatigue in the physician workforce must be balanced against the acquisition of skill among these same physicians. Recognizing that medicine is sea of probabilities, contemporary clinical reasoning and evidence-based medicine education often include a Bayesian approach in decision-making. As trainees advance, they refine their ability to assign probabilities correctly. This process will be weakened if work shifts and lack of patient continuity prevent trainees from observing the outcomes of their initial probability assessments. Furthermore, if one agrees that future skills may be compromised, he/she must acknowledge the threat of the self-perpetuating training cycle: The less skilled mentors of the future will provide guidance to physicians in training with less educational contact time. This phenomenon becomes the "other holes" to which Dr. Sanghavi refers in the article.

To identify the changes necessary in the medical education system, we can begin by working backward from the goal: Physicians who are well trained are able to navigate a complicated health care system, use evidence-based tools and EMRs to optimize health care, and work seamlessly with other providers and families to ensure safe transitions from hospital to medical home to clinic to community. Unfortunately, the knowledge and skills involved in achieving improved safety, efficient teamwork, and better communication are largely marginalized in the medical curriculum, and good traits and behaviors are occasionally undone by the hidden curriculum. Teamwork training, quality improvement, patient safety, and interprofessional training should be seen as the vehicles by which trainees can achieve Sanghavi's end goal.

Without question, communication skills training has come a long way in medical education. Still, by spending hours practicing with standardized patients and preceptors to improve doctor-patient communication, we have lost sight of the significance of communicating well with other physicians, nurses, and health care workers in high-stakes settings such as operating rooms, ICUs, and emergency departments. Currently, training in the areas of patient safety, interprofessional care, and teamwork occurs in add-on components to existing curricula and, sometimes, only in response to a sentinel event. Perhaps what is needed urgently to reform medical education is a new paradigm wherein training in these skills and behaviors takes center stage rather than being marginalized in electives and day-long training sessions.⁵

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