

Editorial

Crossing the Quality Chasm in Residency Education: Building a Bridge from Quality Improvement to Health Equity

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Abstract

The principles of quality improvement (QI) are becoming a greater part of healthcare and residency training. Despite enormous racial and socioeconomic disparities of care, the QI movement has traditionally focused on healthcare delivery over health equity. With the Clinical Learning Environment Review (CLER), the ACGME has recognized the importance of teaching residents to confront health disparities. We propose a curricular model for teaching health equity to residents across clinical specialties, based on initiatives at medical centers at the forefront of care for the underserved. The model includes five components: strengthening of existing health equity curricula, interdisciplinary collaboration, hospital-wide QI focused on population health, advocacy skills training, and supporting health equity research. This model, if implemented within academic medical centers has the potential to reach over 100,000 residents and fellows.

Keywords: Population health; Health equity; Social determinants of health; Residency education; Quality improvement; Health disparities

Clinical Vignette

Mr. M is a 65-year-old homeless African-American man who returned to the hospital for the sixth time this year for a COPD exacerbation. He was an all too familiar face to the admitting medical team and, with a skill set that came easily this late in intern year, the admitting intern checked off the order set in the electronic medical records: oxygen, telemetry, steroids, home medications, and antibiotics. After a few days, Mr. M was no longer short of breath or dependent on oxygen and was ready to go back home to the shelter of his choice.

Quality Improvement and Health Equity

Mr. M was admitted to an academic medical center that, like many hospitals nation-wide, is setting institutional goals for quality improvement. We are streamlining electronic medical record order sets, using safety checklists in the operating room, and encouraging honest reporting of adverse events. In our complex and potentially dangerous modern health care system, these Quality Improvement (QI) and Patient Safety goals are critically important. According to the Institute of Medicine's seminal report "To Err is Human," more than half-a-million people in the U.S. are harmed by preventable medical errors each year [1]. The IOM responded to this alarming statistic in their subsequent report, *Crossing the Quality Chasm*. They called for improvement in six key dimensions of health care: (1) safety, (2) effectiveness, (3) patient-centeredness, (4) timeliness, (5) efficiency and (6) equity [2]. As we strive for quality improvement in our health care system, it is this sixth dimension that has proven especially difficult to tackle, both nationally and within medical training. Residency training programs bear a huge responsibility to address health equity. This article will outline how residency programs can

build upon existing QI curricula to teach trainees to define, research, and execute initiatives to improve health equity.

Health equity is defined as the ability of each individual to "attain his or her full health potential" regardless of socioeconomic factors. To achieve health equity for Mr. M is more than simply providing healthcare; first, we need to first recognize his underlying social determinants of health. An African-American male born in the US has a life expectancy that is 4 years less than a white male and homeless adults have a 1.5-fold greater risk of death from pulmonary disease than those with stable housing [3]. The roots of these shocking health disparities are complex and grow from many sources such as income inequality, housing policy, structural racism and poor access to care. As we commit more resources into quality and patient safety on the medical wards these social determinants of health are often overlooked but are central to the care of patients like Mr. M.

Health Equity in Residency Education – A Model for Change

The ACGME has begun to recognize the importance of teaching health care disparities in its new evaluation system, the Clinical Learning Environment Review (CLER) [4]. Though sponsoring institutions are expected to "engage residents in the use of data to improve systems of care and reduce health disparities" they offer no examples of resident-driven QI work that incorporates an equity-driven perspective.

The potential impact of a rigorous quality improvement curriculum emphasizing the social determinants of health is enormous, as it could reach up to 117,000 resident and fellows. In developing such curricula, we recommend residency-training programs:

- (1) Devote existing residency education curricula to highlight health equity.
- (2) Collaborate between residency departments to develop common curricula on advocacy skills and health equity.
- (3) Structure hospital-wide QI initiatives to target the social determinants of health.
- (4) Train residents with advocacy skills to tackle health equity on a systems level.
- (5) Support resident-led research on health equity.

A number of initiatives at our institution highlight each of these recommendations. We created a “Social Determinants of Health Grand Rounds” series that highlights new research and advocacy work. Each department devotes one Grand Rounds per year to the social determinants of health and the lectures are open to all departments. By using a traditional form of continuing medical education, we engage medical students, residents, and faculty across the hospital in a discussion on the social context of our health care system. Pediatrics has been a leader in developing more rigorous formal curricula in the social determinants and their proposed social determinants of health Entrustable Professional Activity should be a model for other residency programs [5].

Hospital-wide QI initiatives should also explicitly target the social determinants of health. Though several groups have outlined principles for linking quality improvement to health care disparities, these interventions limit their scope to disparities in medical services [6]. Bridging the gap from quality improvement to health equity must involve a broader framework that includes key predictors of health outcomes outside hospital walls, like housing, food security and exposure to violence. In addition to tracking race and ethnicity on admission to monitor disparities, hospitals could add universal hunger or housing security questions to the admissions process. Programs to reduce re-admissions and coordinate care could then target these especially high-risk patients.

A healthcare system that advocates for these patients must advocate for their health both inside and outside of the hospital and residents need training in legislative and media advocacy to tackle the social determinants on a systems level. The Partnership for Physician Advocacy Skills and The Writing for Change program at the University of California, San Francisco are models for training residents in the social and political context of our health care system. Residents learn policy and advocacy skills from community partners and participate in a writing workshop. Understanding the systems and policies underlying the social determinants is a key aspect of training residents in population health management.

From Education to Clinical Practice

Mr. M was admitted one week later with a COPD exacerbation. He spent a few nights at a shelter with oral inhalers, then slept on the streets and developed right lower lobe pneumonia. The challenges

to caring for Mr. M transcend the medical. No longer is Mr. M’s case a puzzle only of how to bill properly or make his electronic record more efficient, but a chance to step back and discover the social and political factors that are making him breathless. The process of uncovering and addressing the social determinants in fact incorporates principles of quality improvement. A prime example is a research study performed by Boston University medical students assessing barriers for respiratory care in shelters in Boston. Their data show that only 11% of the surveyed shelter beds could accommodate patients requiring three daily nebulizer treatments and only 30% of the shelter beds could accommodate patients using supplemental oxygen [7]. This type of research is not an end-point, but a starting data point for quality improvement that draws medical residents out of biological model of care to address the social and political factors that keep Mr. M chronically ill. We imagine a committed group of residents interviewing administrators at shelters, communicating with elective officials, and developing strategic, measurable plans to increase the shelter beds accommodating supplemental oxygen.

We expect our five recommendations for residency-programs to be challenging to implement, as it involves an educational paradigm shift. Teaching quality improvement with a focus on health equity involves shifting the way we measure progress: from individual competency to patient outcomes and from hospital-centered data to community health metrics. Such change starts both with residency regulations as well as a change in culture – where attending physicians and residents continuously pay attention to the social dimensions of patient lives and act upon the deep injustices behind the walls of the hospital. The quality chasm outlined by the Institute of Medicine will never be fully bridged without health equity. To fail to take up this challenge is to leave a generation of physicians without these skills, and their patients breathless.

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