

The Hidden Curriculum of the COVID-19 Pandemic

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The COVID-19 pandemic has changed the world, in ways big and small. In just a few months we have seen morbidity and mortality on an unprecedented scale,¹ health care systems stretched to and beyond their limits,² and whole economies frozen in place.³ Our own movements have become severely restricted as we socially distance, scramble to homeschool children, and acclimate to a life of separation from others.

Medical education has, of course, not been immune to these changes. International conferences were cancelled or postponed. The Accreditation Council for Graduate Medical Education loosened reporting requirements and implemented a tiered system, allowing training programs to rapidly adapt to changing clinical circumstances.⁴ Online lectures, Zoom check-ins with trainees, and outpatient telehealth quickly became the norm.⁵ Despite that, we as clinician educators continue to work with and teach individual trainees on a daily basis. They too have had to adapt their personal and professional lives to a pandemic. For many, their experience as a resident or fellow may ultimately be defined by this time in history.

Wilma Rudolph, the great Olympic sprinter and civil rights pioneer who overcame childhood polio, once said, "...the reward is not so great without the struggle."⁶ The frightening, catastrophic COVID-19 pandemic has also been a rich educational opportunity, full of teachable moments, with its own hidden curriculum.

Learning How to Deliver Optimal Care in Suboptimal Conditions

Most American medical trainees have never had to practice in truly resource-limited situations, and if so, usually only for brief periods of time (eg, on global health rotations). The experiences of residents and fellows in places like New York City have been harrowing, but they found a way to continue to care for their patients.⁷ In other cities and health systems not hit as hard, residents and fellows have still had to adjust to new practice environments and restrictions,

including limited availability of certain diagnostics and therapeutics, and transitioning to outpatient telehealth. Such experiences build resiliency and engender a growth mindset.

Practicing, and Teaching Others to Practice, in Unfamiliar Domains

One of the many legacies of this pandemic will likely be how trainees (and attending physicians) from different specialties were asked to practice in areas entirely outside of their discipline. Orthopedics residents rounded in intensive care units (ICUs), cardiology fellows became medical ICU attendings, radiology residents triaged in emergency departments. The medical workforce had to adapt to a changed health care landscape in an unprecedented way, and essentially without warning. To help ensure non-internists could practice in unfamiliar environments, on-the-fly curricula were developed. For example, fellows from our own division created didactic content for mechanical ventilation and other critical care issues. Similar examples have occurred across the United States.⁸

Lifelong Learning, Accelerated

As medical educators we have always sought to cultivate in trainees the skills of self-education, critical appraisal of medical literature, and adjusting clinical practice to evolving expert-level guidance in real-time. With the COVID-19 pandemic, residents and fellows have had to assess and absorb changing practice patterns, often on a daily basis. This is not easy or comfortable. Looking ahead to the post-pandemic practice climate, we hope that the crash course in appraisal that trainees have had to experience will make them more discerning lifelong learners.

The Importance of Humility

We have found it humbling to provide care during this pandemic, especially in the early stages when so little was known about the effects of the virus and how to treat it. In the specialty of critical care, in particular, we are accustomed to a broad evidence base and robust guidelines to direct our practice. That has not

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been an option during the COVID-19 pandemic. Working with residents in the ICU, we have attempted to impart how humbling this experience was for us, what it's like to not necessarily know the "right" thing to do. Though medicine has always been an uncertain science, sometimes crises can magnify that uncertainty so that it is universally recognized and acknowledged.

Affirmation of Self-Worth

Citywide salutes during shift changes at hospitals and ubiquitous expressions of gratitude and support became the norm in some US cities during the beginning of the pandemic.⁹ For the first time in recent memory, and perhaps ever, current residents and fellows have been hailed as heroes. We hope that this generation of trainees carries this affirmation of the value of their work with them for years to come.

Our Own Vulnerability

The COVID-19 pandemic has demonstrated the fragility of the medical workforce as a whole, and that individual practitioners are susceptible to the same diseases that affect our patients. Residents and fellows are often relatively young and healthy, and a sense of personal vulnerability in delivering medical care is usually only sensed after isolated incidents such as needle stick exposures. The frightening reality is that many trainees have been sickened, and some have died from COVID-19, pulling back what once was a veneer of invincibility.¹⁰

Medicine Is a Calling

The nature of the practice of medicine has become clearer than ever. With the personal sacrifices made by clinicians, particularly trainees, we see that medicine is certainly not just a job but a calling, working toward a greater good. The parable of the 3 bricklayers comes to mind. When each bricklayer was asked what they were doing, one answered, "I'm laying bricks to feed my family," the second answered, "I'm building a wall," and the third answered, "I'm building a cathedral."¹¹ Many of us feel like the third bricklayer right now, working for a purpose larger than ourselves and our own situation. How else could we place ourselves at risk when caring for COVID-19-positive patients? However, the nature of medicine has not changed from this pandemic. It has always been a calling.

A Curriculum, Unhidden

Reflecting on these past weeks and months, there are many lessons we can learn, and the final analysis of

this pandemic's educational significance has yet to be written. But COVID-19 has had its own "hidden" curriculum. Like in Plato's allegory of the cave, as we all emerge from this dark time, we hope that trainees and the graduate medical education community recognize what was learned and what was always in plain sight.

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