

Online lectures make teaching informatics easier during COVID-19

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Medical education has been disrupted by the COVID-19 pandemic, but the disruption has opened the door for newly relevant topics to make their way into medical education. A series of lectures on biomedical and health informatics—a long peripheral topic in medical education—is now available as part of a resource from the AMA to help medical educators develop virtual learning opportunities until students return to clinical settings.

“[What is biomedical and health informatics?](#)” is one of dozens of webpages, studies, activities and other online teaching tools collected by the AMA in “[COVID-19 resources for medical educators](#),” which features free and paid content crowdsourced from the medical education community.

More broadly, the AMA and the Centers for Disease Control and Prevention are closely monitoring the COVID-19 pandemic. Learn more at the [AMA COVID-19 resource center](#), and consult the [AMA’s physician guide to COVID-19](#). The AMA’s experts also have created a [medical education COVID-19 resource guide](#).

What it is

Informatics can be thought of as simply the acquisition, storage and use of information in a specific setting, but it has suffered from an “adjective problem” due to its numerous applications in medicine, nursing, public health and other areas, according to the webpage’s author, William Hersh, MD, chair of the Department of Medical Informatics and Clinical Epidemiology at Oregon Health & Science University (OHSU).

Biomedical and health informatics is “the field concerned with the optimal use of information, often aided by technology, to improve individual health, health care, public health and biomedical research,” he said. “It’s truly now part of biomedicine. It’s viewed as a core competency for health care professionals, and it’s an integral part of what some call the ‘learning health care system.’”

Biomedical and health informatics includes many topics germane to clinical practice, including telehealth, epidemiology, electronic health records, quality improvement and even billing.

“We start by formulating a model for what we want to do,” he said in one of the lectures available on the webpage, citing a 2012 [paper](#), “What informatics is and isn’t,” by Charles Friedman, PhD. “We then develop a system. We implement that system, and then we study its effects. That’s what distinguishes informatics from just computer use.”

How to teach it

Despite its outsized influence on modern health care, informatics has long been neglected in medical education because “it’s not really a basic science, nor is it a clinical rotation that you do,” Dr. Hersh said. “It often doesn’t have any real estate in the curriculum.”

So when OHSU—a member of the [AMA Accelerating Change in Medical Education Consortium](#)—recently revised its curriculum, it added “threads” of biomedical and health informatics content that map through multiple courses.

“It doesn’t make sense to have a single course in informatics because it really touches on so many other subjects,” he said. “It makes more sense to teach it longitudinally than to say, ‘We’re going to have a four-week informatics course, and this is all you’re going to get on it.’”

Dr. Hersh’s webpage includes a nine-part lecture outlining the history of biomedical and health informatics, data science and machine learning, information retrieval and resources for the field. Audio files and slide shows are available for all segments.

The AMA’s [“COVID-19 resources for medical educators”](#) page also features links to a roster of remote simulated patients, information on alternative clinical roles for medical students and guidance on improving well-being and mental health.

Dr. Hersh also co-wrote a chapter on clinical informatics in the AMA's *Health Systems Science* textbook. Health systems science is the third pillar of medical education, along with the basic and clinical sciences and is defined as the understanding of how care is delivered, how health care professionals work together to deliver that care, and how the health system can improve patient care and health care delivery.