All Health Is Global Health, All Medicine Is Social Medicine: Integrating the Social Sciences Into the Preclinical Curriculum

Jennifer Kasper, MD, MPH, Jeremy A. Greene, MD, PhD, Paul E. Farmer, MD, PhD, and David S. Jones, MD, PhD

Abstract

As physicians work to achieve optimal health outcomes for their patients, they often struggle to address the issues that arise outside the clinic. Social, economic, and political factors influence patients’ burden of disease, access to treatment, and health outcomes. This challenge has motivated recent calls for increased attention to the social determinants of health. At the same time, advocates have called for increased attention to global health. Each year, more U.S. medical students participate in global health experiences. Yet, the global health training that is available varies widely. The discipline of social medicine, which attends to the social determinants of disease, social meanings of disease, and social responses to disease, offers a solution to both challenges. The analyses and techniques of social medicine provide an invaluable toolkit for providing health care in the United States and abroad.

In 2007, Harvard Medical School implemented a new course, required for all first-year students, that teaches social medicine in a way that integrates global health. In this article, the authors argue for the importance of including social medicine and global health in the preclinical curriculum; describe Harvard Medical School’s innovative, integrated approach to teaching these disciplines, which can be used at other medical schools; and explore the barriers that educators may face in implementing such a curriculum, including resistance from students. Such a course can equip medical students with the knowledge and tools that they will need to address complex health problems in the United States and abroad.

Fifty years ago, medical students seeking a broader foundation in the social sciences would have been told to enroll in a public health school. Public health schools traditionally emphasized the population over the individual, taught disease prevention, and focused on epidemiology and biostatistics. Medical schools, on the other hand, emphasized the care of individual patients by individual physicians and focused on translating the powerful reductionism of biomedical science into bedside practice. In recent decades, however, the line between public health and medicine has blurred. Recognition of the impact of noncommunicable diseases on population health globally has refocused attention in medicine on the social determinants of disease. Pharmaceuticals and medical devices increasingly promise prevention instead of treatment. And, as behavioral interventions become more central to primary care, clinicians are engaging more often with social factors, including income, education, environment, and personal behavior, and their effect on the clinical encounter and health outcomes.

Increased awareness of these developments has led the Association of American Medical Colleges and the Liaison Committee on Medical Education (LCME) to recommend that the social sciences play a larger role in medical education. In 2015, the Medical College Admission Test began to assess applicants’ understanding of the social and behavioral sciences. In addition, provisions of the Patient Protection and Affordable Care Act encourage physicians to collaborate with community members and organizations (e.g., schools, businesses) outside the traditional clinic setting to address the complex factors that contribute to poor health. Finally, advocates have called on physicians to consider patients’ social history not just as questions about sex and substance use but also as a window into essential aspects of their health and health care.

To help patients achieve optimal health, whether in the United States or abroad, physicians must synthesize the micro- and macro-perspectives of biomedical research with the macro-perspectives of public health. To create the necessary link between these seemingly disparate worlds, Wasterhaus and colleagues called for a “comprehensive transformation” of medical education that takes social medicine perspectives seriously. Social medicine is the systematic study of the relationships between society, disease, and medicine, incorporating the quantitative (e.g., economics, demography, epidemiology) and qualitative social sciences (e.g., anthropology, history, political science) to understand how micro- and macroscopic social factors influence human disease and its distribution worldwide. Social medicine recognizes that physicians must engage with social realities outside the clinic or hospital to optimize human health.

Social medicine is not a new field. Physican Rudolf Virchow wrote in 1848 that “medicine is a social science, and politics is nothing else but medicine on a large scale.” In the 20th century, social medicine found traction in continental Europe, South Africa, Chile, and England, where physician—demographer Thomas McKeown developed the study of the “social determinants of health.” Now, social medicine is incorporated into
the architecture of many domestic and international health organizations, but it has yet to find a broad foothold in U.S. medical school curricula. Less than 10% of LCME-accredited medical schools teach social medicine.21,22

The burgeoning interest in global health among medical students also has increased the need for social medicine curricula in medical schools. The number of graduating U.S. medical students who participated in a global health experience during medical school has increased fivefold in the last 30 years.Yet 40% of these students reported that global health was inadequately covered during their training.24 Similarly, depending on the specialty, 45% to 71% of residency programs offer global health electives. Although guidelines for global health work have been developed, we do not know whether residency programs explicitly discuss how social factors affect the populations with whom residents work.29 Global perspectives also shed light on the challenges facing the health care system in the United States—when compared with the 29 developed nations in the Organization for Economic Cooperation and Development, the United States ranks low for many health measures.30 Social medicine can help physicians identify the potential causes of suboptimal health outcomes, the lessons learned from successful programs, and the opportunities for sharing best health care practices. It can enhance our awareness of, and sensitivity to, the diversity of cultures, languages, and health beliefs of patients in the United States and abroad.

In this article, we share our experience teaching the Introduction to Social Medicine and Global Health (ISM) course, which has been required for first-year students at Harvard Medical School (HMS) since 2007. We argue for the importance of including social medicine and global health in the preclinical curriculum; describe our innovative, integrated approach to teaching these disciplines, which can be used at other medical schools in the United States and abroad; and explore the barriers that medical educators may face in implementing such a curriculum.

About the ISM Course

Like other medical schools, HMS regularly updates its curriculum to incorporate the changing realities of inpatient and outpatient care.31 As part of such a reform in 2007, HMS substantially increased the amount of curriculum time devoted to the social sciences, requiring students to complete a four-course sequence: ISM; health policy; clinical epidemiology and population health; and medical ethics and professionalism. With this change, HMS aimed to stress the importance of physicians attending to the social determinants of disease, treatment access, and health outcomes.

Informed most directly by the disciplines of the history of medicine and medical anthropology, the ISM course begins with a basic premise: Medicine is inextricably embedded in social contexts. Physicians need to understand the social determinants of disease, the changing social meanings of disease, the diversity of health care behaviors and practices, and the social factors that influence treatment effectiveness. The goal of the course is to make social medicine concepts tangible and applicable to real-world clinical settings. To achieve this goal, the ISM course presents students with concrete questions: Who is most likely to get sick? Why? How can physicians intervene upstream to prevent disease? Once a person is sick and seeks health care, what can be done to harness our knowledge of biological and social forces to improve the delivery of that care and, ultimately, to optimize population health and well-being? The course teaches that physicians have a responsibility not just to provide care but also to work creatively to achieve desired health outcomes. This tenet is a fundamental reconceptualization of the task—and obligation—of physicians.

The ISM course maintains consistent learning objectives: Students should be able to (1) recognize the potential contributions of the social sciences, including history, anthropology, sociology, epidemiology, demography, economics, and geography, to clinical care; (2) appreciate the major obstacles to achieving optimal health outcomes for patients; (3) understand the importance of considering patients’ social worlds, both when thinking about the causes and distribution of disease and when designing solutions to health care problems; and (4) develop a toolkit of possible solutions, with their strengths and limitations, to serve as models for the challenges medical students encounter in clinical practice.

The course follows a basic template. It begins with a clinical case that illustrates how social, economic, and structural factors impede the provision of optimal medical care. The case describes a child who presented repeatedly to an emergency room with asthma flares. We challenge students to think beyond the explanations that readily come to mind (e.g., the family lacked access to primary care or the parents did not understand the importance of adhering to the treatment plan). Students explore how housing conditions contribute to the pathogenesis of asthma, how immigration status affects access to insurance and health care, how language and literacy barriers create misunderstandings, how mistrust between patients and physicians disrupts medical care, how poverty exacerbates morbidity and mortality, and even how new environmental regulations, implemented to decrease ozone depletion, increased the cost of asthma medications.32,33 We also ask students to examine the relationships between domestic and global health by exploring how asthma prevalence, diagnosis, and management might differ in a resource-poor setting abroad. By introducing programs such as the medical–legal partnership, we demonstrate how physicians can team up with other professionals to improve housing conditions and health outcomes.34,35 All too often, treatment fails even when patients have access to conventional primary care, so physicians must think outside the box to develop the innovative solutions that often are required to achieve optimal health outcomes.36

After presenting students with a broad vision of the necessary scope of medical knowledge and practice and with the challenge of taking responsibility for treatment outcomes, the ISM course proceeds through weekly lectures, readings, and case-based tutorials to introduce the concrete methods and analytic tools of social medicine. The course is divided into three major sections. The first introduces foundational concepts in social medicine, including burden of disease, social determinants of health, health inequalities, and the intricacies of race and poverty. Students examine data on health inequalities in Boston and explore the city’s neighborhoods on foot in search of possible explanations.37 The second section explores the social meanings...
of disease, including responsibility for disease, causes of noncompliance, dynamics of knowledge production, and explanations for the disparities in treatment access and health outcomes. Specific topics in this section include strategies for increasing value in health care; how conflicts of interest impact the design, conduct, and interpretation of clinical trials; and the use of medical research to generate the data needed to direct global health policy.89 The final section investigates what we call “translational social medicine,” which includes both an analysis of the institutional, economic, and cultural dynamics that shape social and medical responses to disease and an exploration of how physicians can use this knowledge to advocate for their patients, improve health care delivery, and shape local, national, and global health policy. Case studies, chosen to reflect current events and to serve as models for the challenges that students will inevitably encounter in their own clinical work in the United States and abroad, have explored Hurricane Katrina, gun violence, emerging global campaigns for cancer treatment, and the Ebola epidemic. Students hear firsthand from physicians, community health workers, and patients who have used social medicine to improve health outcomes. They acquire a toolkit of possible solutions to such problems. In their writing assignments, students reflect on the patients they have met and the home visits they have made during their doctor—patient course (which runs concurrently with the ISM course), further strengthening the links between social medicine and clinical care. Our multidisciplinary faculty of clinicians, researchers, and epidemiologists, many with joint expertise in history, anthropology, and global health, serve as lecturers and tutors.

Challenges to Introducing the Social Sciences Into the Preclinical Curriculum

Expanding the HMS curriculum to include a required course on social medicine and global health provoked resistance from students. Although an increasing number of first-year medical students have an interest in global health and social medicine, many remain focused on acquiring the basic knowledge and skills needed to be a competent physician in the United States. Others want to develop careers as laboratory scientists. Neither group initially sees the relevance of either social medicine or global health to their future careers. In their annual course evaluations, in focus groups, and in informal conversations, students critiqued the ISM course. We have grouped their critiques into three themes—pragmatic, antisocial, and local.

As educational reformers have noted, students learn to attend to the “hidden curriculum” in medical education.90 Faced with too much knowledge to master completely, they look to board exams, senior students, and attending physicians for clues to decipher which types of knowledge are more important, then they triage their priorities accordingly. This practice fuels students’ pragmatic critique of the ISM course—because these sources emphasize the technical knowledge and skills of reductionist biomedicine, students conclude that anatomy, physiology, and genetics are what really matter rather than the social determinants of disease or patient advocacy. In other courses and clerkships, students are repeatedly exposed to the power of medical science and technology—medicine can diagnose and cure disease. Some students conclude that, as long as they gain technical proficiency with diagnosis and therapeutics, they will be able to help their patients, regardless of their patients’ social and economic conditions. Others rush to delegate the messiness of their patients’ lives to social workers, economists, and politicians. This is the antisocial critique. Finally, skeptics of the value of global health in medical education levy the local critique—some students who plan to work only in the United States see little reason to explore the diseases or delivery problems of remote, impoverished countries. If one hopes to practice cardiology in Boston, why learn about AIDS and tuberculosis in Lesotho?

We have two responses to the pragmatic critique. First, as is evident from the most recent revision of the LCME standards, social medicine and global health increasingly are being included on exams used to evaluate students’ progress during medical education.91 Second, and more important, technical competence is the minimum that physicians must offer their patients. If a physician remains oblivious to the lived realities that prevent a patient from following through with a treatment plan (e.g., poor housing, unsafe neighborhoods, intermittent work, food insecurity), then no amount of expertise in pharmacology or pathophysiology will result in better clinical outcomes. The advent of accountable care organizations, which hold physicians responsible for outcomes actually achieved, increases the stakes—physicians need to do everything possible to improve patient outcomes, which requires engaging in their patients’ social worlds.

As for the antisocial critique, medical science and technology can only live up to their potential if we develop delivery systems that reach those patients who will actually benefit from them. While new scientific discoveries are needed to treat many diseases, for countless others, effective interventions already exist but are not fully deployed. Respiratory and diarrheal diseases persist as leading causes of child mortality, even though they can be treated with existing interventions.40,41 Even when biomedical interventions are the best option, patients’ ability to benefit from them are embedded in social, economic, and political systems that impact the outcomes of medical care.42 This is not simply a political question about health care access and reform. Instead, understanding how social forces shape disease patterns and treatment outcomes involves sophisticated questions about home and work environments, local availability of medical resources, details of insurance and health care costs, and the demands that patients’ social and economic lives make on them.9 Any of these factors can transform a seemingly straightforward technical fix into a complicated biosocial problem.43 A social medicine course, like our ISM course, hones the judgment, analysis, and creativity that students will need to solve these problems.

The local medicine critique is best addressed by dismantling the false dichotomy of international and domestic medicine. Both global and local perspectives are relevant for understanding medical practice anywhere. Many believe that global health refers to health as it exists somewhere else, like the resource-poor nations of the global South. Global health should not be defined by any particular geographic zone but, rather, by the economic,
cultural, intellectual, and material interconnectedness of the health of global populations in the 21st century. As bankers cannot disregard the economies of other nations as having no impact on their domestic fortunes, American physicians—and medical schools—cannot focus only on the patients in front of them. The 2014–2015 Ebola epidemic made this tragically clear.

Finally, global health is not just a problem for infectious disease or maternal and child health specialists who travel abroad. All physicians will encounter patients who have emigrated from abroad. Throughout the world, patients, rich and poor, struggle with heart disease, diabetes, and cancer. They struggle to access care, pay for it, and structure their lives to follow through with complex treatment regimens. Moreover, the delivery challenges in seemingly disparate settings share much in common. Lessons learned in one place can often be applied elsewhere. For instance, techniques designed to improve antiretroviral outcomes in Haiti were adapted in an innovative program that improved treatment outcomes in Boston.

Impact of the ISM Course

The first, formal evaluation of the ISM course demonstrated that students benefited from the required social medicine curriculum. In the fall of 2013, students completed a pretest to gauge their knowledge of social medicine prior to taking the ISM course, as well as to identify any relevant prior employment. Even though 25% had completed relevant course work as undergraduates and 35% reported experiential learning in social medicine (e.g., having worked for a community-based organization), only 31% of students felt confident that they knew what was meant by the social determinants of health, and only 14% felt confident that they could distinguish between a difference and a disparity in health outcomes. At the end of the semester, students completed a similar posttest survey to gauge the impact of the course. Sixty-four percent reported a deeper understanding of social medicine concepts and their relevance for clinical practice in the United States and abroad, 81% felt better equipped to conduct a social history and understand its significance, and 80% stated that social medicine was very important to their overall education. Students also shared the following comments:

- This course is actually extremely important to the development of socially aware and culturally humble physicians.
- Every medical school ought to offer a course like this to all students. Social medicine concepts need to be mandatory, not elective.

ESSENTIAL part of my education thus far.

Establishing Social Medicine and Global Health in the Preclinical Curriculum: Moving Forward

Courses in social medicine and global health must balance the demands of students who seek to become competent physicians and practice in the United States and those who also want to innovate outside traditional clinical settings, contribute to global health programs, or respond to humanitarian disasters. Such courses must accommodate students who already hold advanced social science degrees and those whose only engagement with the social sciences was a general education requirement in college. This task is daunting, but it is possible. Medical schools that provide interested faculty with curriculum time and support can develop valuable courses. All students must be exposed to social medicine so that they can come to recognize and act on the underappreciated power of the individual clinician to address the social determinants of health and health outcomes, and to intervene on behalf of patients and their communities. This work can take the form of advocacy, systematic inquiry, innovation, and sometimes asking a single question (e.g., “Do you have difficulty making ends meet until the end of the month?”). Social medicine can move medical school curricula beyond the old divides between medicine and public health, prevention and treatment, local and global. It can equip students with the knowledge and tools that they will need to address complex health problems in the United States and around the world.

Acknowledgments: The authors would like to acknowledge the faculty, students, and staff of the Introduction to Social Medicine and Global Health course, as well as Allan Brandt, Jules Dienstag, and Jeffrey Flier, for contributing to conversations that led to the production of this article.

Funding/Support: Jennifer Kasper received a Harvard Global Health Institute Burke Global Health Fellowship to support the evaluation of the Introduction to Social Medicine and Global Health course.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

J. Kasper is assistant professor and chair, Faculty Advisory Committee on Global Health, Harvard Medical School, and faculty member, Division of Global Health, Massachusetts General Hospital for Children, Boston, Massachusetts.

J.A. Greene is associate professor of medicine and of the history of medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland.

P.E. Farmer is Kolokotrones University Professor of Global Health and Social Medicine, Harvard Medical School, Boston, Massachusetts.

D.S. Jones is A. Bernard Ackerman Professor of the Culture of Medicine, Faculty of Medicine, Harvard Medical School, Boston, Massachusetts, and Faculty of Arts and Sciences, Harvard University, Cambridge, Massachusetts.

References


35 Berwick DM. A primer on leading the improvement of systems. BMJ. 1996;312:619–622.


