Academic Medicine’s Response to the Opioid Epidemic

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Opioid dependence has devastated communities across the country, and a collective effort across multiple sectors is needed to stem the tide of opioid misuse and substance abuse. Through their missions of education, research, and clinical care, medical schools and teaching hospitals are actively responding to this public health crisis and preparing the next generation of health care professionals to address the epidemic. By working with their communities and enhancing content on substance abuse and pain management in both classroom and hands-on experiences, these institutions are integrating learning opportunities throughout medical education. Additionally, as leaders in groundbreaking medical research and lifesaving clinical care, medical schools and teaching hospitals are advancing efforts to prevent, identify, and treat substance abuse and to manage pain.

Integrating Content Throughout Medical Education

Each medical school tailors its curriculum within the framework required by the Liaison Committee on Medical Education (LCME), the accrediting body for medical education programs. This dynamic structure ensures consistent baseline standards among all medical schools, while allowing programs to adapt education to the individual needs of the communities and the populations the schools serve. Medical school faculty introduce substance abuse or pain management subjects in preclinical coursework, then reinforce content through multiple instructional methods as students advance through medical school. According to the LCME’s 2015–2016 Annual Medical School Questionnaire:

- 139 of 142 medical schools with students enrolled reported that content on “substance abuse” was included in a required course, with 140 teaching the content in pre-clerkship courses and 132 teaching it in one or more required clerkships
- 140 schools reported including content on “pain management,” with 130 teaching it in preclinical courses and 136 in clerkships

In response to the crisis in their communities, institutions are enhancing existing coursework in innovative ways. While students are exposed to this material through multiple modalities in medical school, to be maximally effective, such experiences must also be reinforced throughout the continuum of medical education. As illustrated in the following examples, training programs are also emphasizing this issue in clinical experiences and throughout graduate medical education (residency training).

Integrating content throughout undergraduate medical education

- The four Massachusetts medical schools—University of Massachusetts, Boston University, Harvard University, and Tufts University—recognized the toll of substance abuse in their communities and identified 10 core competencies to further educate their students in the prevention, identification, and treatment of substance use disorders. These competencies have been worked into each school’s curriculum, with the University of Massachusetts mandating the Opioid and Safe Prescribing Training Immersion (OSTI) program for second-year medical students, graduating medical students, and graduating nursing students. The program involves interactions with simulated patients in a variety of care settings, engagement with actual patients in recovery and their families, and instruction in administering naloxone.
Students from the Warren Alpert Medical School of Brown University, along with those from the University of Rhode Island Colleges of Nursing, Pharmacy, and Health Sciences and Rhode Island College Schools of Nursing and Social Work, participated in a series of interprofessional workshops involving standardized patient encounters and panel discussions with patients in recovery. The program was funded by a three-year grant from the Substance Abuse and Mental Health Services Administration.

Duke University School of Medicine incorporates substance use disorder (SUD) education into its curriculum with clinical cases in the first and second years, online simulations, and standardized patients. During their second-year psychiatry clerkships, students take a formal, interprofessional SUD course that incorporates elements of neurobiology, pharmacology, motivational interviewing, and cultural competency. Students are also required to attend an Alcoholics Anonymous or Narcotics Anonymous meeting and reflect on their experiences and to counsel one patient with an SUD, using motivational interviewing skills.

The University of Minnesota Medical School, in partnership with the Minnesota Medical Association and the Steve Rummler Hope Foundation, developed and recorded a series of lectures for medical students, residents, and practicing doctors. The lectures qualify for continuing education credit and include topics such as pain psychology, pain management in the emergency department, opioid addiction in pregnancy, and prescribing guidelines for opioids, benzodiazepines, and other controlled substances.

All New York University School of Medicine students take a full week of pain management instruction within their first 18 months and receive education on nonpharmacological pain treatment. As they transition into residency, students participate in pain assessment and management training that deals directly with opioids.

**Reinforcing content in residency training and clinical education**

- Programs train residents in the Screening, Brief Intervention, and Referral to Treatment (SBIRT) approach.
  - Family medicine and internal medicine residents at the University of Wisconsin School of Medicine and Public Health are trained in a SBIRT program, learning how to spot patients with substance use disorders and intervene. The training is being expanded to include medical, nursing, pharmacy, psychology, and social work students.
  - Indiana University requires residents training in medicine, pediatrics, family medicine, emergency medicine, and psychiatry to participate in SBIRT training, develop motivational interviewing and communication skills, and create integrative approaches to pain management.

- The University of Louisville (U of L) requires its internal medicine residents to use a controlled substance guideline when they discuss opiate prescriptions with patients in the continuity clinic. The Pain Medicine Fellowship added a required rotation in addiction. U of L is also working with its VA affiliate on the Opioid Safety Initiative that offers both practicing primary care physicians and trainees instruction for small group discussions, difficult conversations with patients, and motivational interviewing.

- The family medicine residency program at Michigan State University (MSU) College of Human Medicine engages a systemized approach that involves informed consent for opioid treatment, mandatory periodic visits, an initial screening for risk, and a screening for depression at each visit. It has also introduced a multidisciplinary team to assist in treatment and has started a process—in which residents are involved—of internal peer review for all patients above a predefined daily threshold of morphine equivalents.
All residents at Beaumont Health in Michigan participate in a year-long education program that covers varied perspectives on the assessment and treatment of acute and chronic pain through monthly presentations in various formats such as lectures, experiential exercises, and faculty-resident discussions. The Beaumont Health Chronic Pain Consortium (BHCPC) is sponsoring development of an addiction medicine program to be integrated into all chronic pain care algorithms. Medical students, residents, fellows, and practicing physicians participate in the measurement, planning, and educational phases of this program.

Providing Clinical Care to Patients Experiencing Pain and/or Substance Abuse Issues

By bringing together teams of health care professionals and partnering with community facilities, medical schools and teaching hospitals, which help with a disproportionate percentage of overdoses, are working to provide care for patients experiencing both chronic and acute pain and for patients who face substance abuse issues or are in recovery. Physicians and residents, along with other health professionals, at these institutions are advancing comprehensive approaches that recognize pain management’s risks and benefits. Their goal is to achieve a balance that ensures patient access to pain medications when clinically appropriate while minimizing the potential for misuse.

- The University of Tennessee College of Medicine Center for Addiction Science, recognized as a Center for Excellence in Addiction Medicine by the Addiction Medicine Foundation, provides clinical treatment services such as cognitive behavioral therapy, medication-assisted treatment, motivational enhancement therapy, and 12-step program facilitation across all demographics. It also trains physicians in alternate forms of pain therapy as a means to avoid overprescription of opioids and offers an addiction medicine fellowship.

- To deliver care to those with substance abuse issues, the University of Cincinnati College of Medicine established the Cincinnati Exchange Program (CEP) with grant funding and a donated van. The program now has five sites that, in addition to exchanging needles, screen for HIV, hepatitis C, and syphilis and refer clients to addiction treatment providers.

- The Michigan Opioid Prescribing Engagement Network (Michigan-OPEN) uses existing networks of doctors, nurses, and hospitals throughout Michigan to share best practices for pain management. The program, an initiative of the University of Michigan Medical School and Institute for Healthcare Policy and Innovation, also teaches hospitals how to hold drug take-back programs.

- St. Joseph’s Regional Medical Center in New Jersey developed the Alternatives to Opioids (ALTO) program, which uses non opioid medications, trigger-point injections, nitrous oxide, and ultrasound-guided nerve blocks to assist patients with pain management and avoid opioids whenever possible.

- Comprehensive Opioid Addiction Treatment (COAT), an outpatient program managed by West Virginia University Medicine, uses telepsychiatry, medication management services via telemedicine, and support groups to provide a comprehensive treatment approach to opioid addiction, especially for patients in rural areas. Narcotics Anonymous meetings take place at COAT sites for patients who have limited means of transportation.
The University of Colorado Hospital (UCH) and University Physicians, Inc., partnered to improve how UCH primary care clinics manage chronic pain. The effort has standardized guidelines relating to screening and management of, and care for, patients. The University of Colorado Anschutz Medical Campus Department of Family Medicine also launched the Chronic Pain Resource Center website, which offers resources to patients, families, and providers. For providers, the site has a risk calculator; pain management guidelines; assessment tools for chronic pain, anxiety, depression, substance use, and other conditions; and policies and procedures for controlled substances.

Research Into New Methods of Treating Pain and Substance Abuse

Medical schools and teaching hospitals also conduct cutting-edge research to find new methods of pain management, study the effects of opioids and addiction on the body, and discover ways to manage and treat substance use disorders and addiction. The results of this research benefit the education and training of future physicians and the care of patients currently being treated.

• Stanford University School of Medicine researchers are working to develop a pain-relieving compound, unrelated to opioids, that does not cause dopamine-driven addiction and does not interfere with breathing, which can lead to respiratory depression, the main cause of prescription opioid overdose fatalities. The research is funded by the National Institutes of Health (NIH).

• Yale School of Medicine studied the effects of intervention and treatment policies in emergency departments and found a marked reduction in opioid use among patients who were referred to treatment. The NIH’s National Institute on Drug Abuse is now attempting to replicate the results of this study at sites throughout the country.

• Researchers from the University of Massachusetts Medical School in Worcester studied the use of wearable technology that measures temperature, heartbeat, motion, and skin electrical conductance to track patients in recovery. The technology could identify when patients relapsed and be used to contact a sponsor or physician who could then intervene. In a previous study, the technology was able to detect with complete accuracy when a patient used cocaine.

Partnerships With the Public and Private Sectors

Medical schools and teaching hospitals, however, cannot combat the opioid epidemic alone. Accomplishing this goal requires a multifaceted response across multiple sectors.

AAMC member institutions have partnered with local public health and community organizations.

• Partnerships help to increase the number of certified naloxone administrators.
  o New York Medical College has partnered with the Westchester County Department of Health to certify medical students in the administration of naloxone and train them to recognize the signs and symptoms of an opioid or heroin overdose.
  o Boston Medical Center partnered with Rhode Island Hospital and CVS Health to study and analyze data from pharmacies throughout Massachusetts and Rhode Island to develop best practices for a national pharmacy-based naloxone rescue kit program.

• The University of California, San Francisco, Osher Center for Integrative Medicine is working with the San Francisco Department of Public Health’s Tom Waddell Urban Health Center on the Integrative Pain Management Program (IPMP), a pilot study of treatment plans for chronic pain that include acupuncture, massage therapy, physical therapy, meditation, yoga, and Qi Gong.
- The University at Buffalo Jacobs School of Medicine and Biomedical Sciences, along with the Schools of Dental Medicine, Nursing, Pharmacy and Pharmaceutical Sciences, Public Health and Health Professions, and Social Work, formed a local partnership with Erie County to develop guidelines for health care providers on safe prescribing practices, as well as training in safe pain management and how to screen and manage people who are addicted to opioids.

- In collaboration with nonprofit organizations, community members, state and local government, and many others, the University of Vermont Medical Center recently launched CommunityStat, a data-driven approach to solving the local opioid epidemic. The program seeks to provide coordination of efforts among the police, public health and safety professionals, and social service providers to more effectively reduce the impact of opioid addiction in Burlington.

Eduating the Public

As anchors of their communities, medical schools and teaching hospitals make it a priority to inform the public about critical public health issues. For the opioid epidemic, they are engaged in many efforts to combat it.

- The Heroin and Opioid Prevention and Education (HOPE) Initiative, a joint effort of the University of New Mexico Health Sciences Center and the District of New Mexico U.S. Attorney’s Office in Albuquerque, is running a public awareness campaign—including a website, billboards, social media outreach, and student education programs—built around the messages of prevention, treatment, and public safety.

- The University of Pittsburgh Medical Center, in coordination with the University of Pittsburgh Schools of the Health Sciences, ran The Opioid Epidemic blog series that highlighted the doctors, researchers, and nurses making significant efforts to reduce diversion and misuse of prescription opioids.

- The University of Texas Rio Grande Valley hosted the two-day Healthy Communities: Mental Health, Substance Abuse, and HIV Prevention conference that brought together professional health care providers, indigenous healers, community health workers, and residents to discuss the delivery of prevention and treatment services within a cultural, holistic, and interdisciplinary framework.

- The Nebraska Attorney General’s Office, the University of Nebraska Medical Center, the District of Nebraska U.S. Attorney’s Office, and the Nebraska Department of Health and Human Services sponsored a daylong conference to find a collaborative, multidisciplinary approach to prevent and treat opioid abuse in Nebraska. The summit, Charting the Road to Recovery: Nebraska’s Response to Opioid Abuse, focused on prevention, treatment, and law enforcement through direct collaboration with Nebraska’s public health, medical, and law enforcement communities.

Promoting Sharing of Practices, Approaches, and Responses

To assist in the sharing of these approaches, the Association of American Medical Colleges (AAMC), hosted a series of webinars with presenters from various member institutions discussing their responses to the epidemic. Each webinar focused on a different aspect of the response from patient care to research and medical education.

- The Opioid Epidemic: Addressing the Patient Care Continuum through Academic Medicine focused on approaches in patient care
- Parallel Crises: The Over and Under Prescription of Opioids covered the epidemiology of the epidemic and research into addiction, pain management, and substance abuse
- Innovative Educational Approaches to Safe Opiate Prescribing and Pain Management concentrated on approaches to stemming the rise in substance abuse and opioid addiction throughout the medical education continuum.

The AAMC also created a central repository for examples of member responses and AAMC actions and publications, which can be accessed by members, other health care professionals, and interested members of the public. More information about the webinars mentioned above can also be found there.