VIEWPOINT

Addiction Medicine
The Birth of a New Discipline

Patrick G. O'Connor, MD, MPH
Department of Internal Medicine, Yale University School of Medicine, New Haven, Connecticut.

Robert J. Sokol, MD
Department of Obstetrics and Gynecology, Wayne State University School of Medicine, Detroit, Michigan.

Gail D'Onofrio, MD, MS
Department of Emergency Medicine, Yale University School of Medicine, New Haven, Connecticut.

CME Quiz at jamanetworkcme.com

Corresponding Author: Patrick G. O'Connor, MD, MPH, Yale University School of Medicine, Harkness A, Suite 402A, 367 Cedar St, New Haven, CT 06510 (patrick.oconnor@yale.edu).

Substance use is highly prevalent, a substantial cause of morbidity and mortality and accounts for over $500 billion in economic costs in the United States annually. The 2012 National Survey on Drug Use and Health (NSDUH),[1] which surveyed Americans 12 years or older, reported that 32% binge drink and nearly 7% reported heavy drinking over the past 30 days. In addition, 9% of those surveyed reported illicit drug use during the past 30 days, and heroin use increased by 79% since 2007. Opioid overdoses are on the rise, now exceeding deaths from motor vehicle crashes. Similarly, the global impact on disability and mortality of substance use and the phenomenon of addiction that often follows is enormous.[2]

Individuals with specific substance use disorders and addiction interact frequently with the health care system, offering opportunities to intervene. The evidence base of research supporting the effectiveness of prevention and treatment of addiction is growing. For example, randomized clinical trials have demonstrated the effectiveness of Screening, Brief Intervention, and Referral to Treatment (SBIRT) in decreasing alcohol consumption while data on the effectiveness of brief interventions for decreasing other drug use have been less compelling[3-5] and additional research is warranted. The effectiveness of pharmacotherapies such as naltrexone in treating alcohol use disorder[6] and methadone and buprenorphine in treating opioid use disorder has also been demonstrated in numerous clinical trials.[7,8] Despite these advances, treatment is often only modestly effective and may be ineffective for many individuals. In addition, evidence-based therapies for specific substances, such as methamphetamine, remain elusive. Thus, much work remains to be done to assure even more successful intervention strategies for patients in need.

The Addiction Treatment Gap

Despite this increasing evidence base, according to the 2012 NSDUH[1] 23.1 million Americans needed specialized addiction treatment, but only 2.5 million (11%) received treatment. The reasons for this treatment gap are numerous and included addiction-related stigma, a poorly educated health care workforce that neglects addiction,[9] and health care insurance that has traditionally provided severely limited benefit packages.

The concept that addiction is a chronic medical condition like heart disease and diabetes mellitus has gained acceptance.[10] Addiction has a pathophysiologic basis, is genetically and environmentally influenced, occurs throughout the lifespan, is characterized by exacerbations and remissions and substantial morbidity and mortality, and can be effectively treated. As a result, the National Institutes of Health and the Institute of Medicine have asked organized medicine to make addiction a high priority. Like other chronic diseases, there is a role for both primary care physicians and referral to specialists when their expertise is needed.

Addiction specialists can play a critical role in addressing the treatment gap for substance use disorders and improving patient care. For example, primary care physicians may be reluctant to screen for substance use because of uncertainty about what to do once a patient is identified. The availability of addiction specialists can give confidence to primary care physicians that they can access expert consultation and follow up, when needed, such as with complex withdrawal or repeated relapse. In addition, specialists can help to decrease practice variation and ensure evidence-based care. The availability of addiction specialists who are broadly integrated into the medical community can also provide a bridge to substance abuse treatment programs, which many physicians are either unfamiliar with or reluctant to use. Once assessed by an addiction specialist, program referral can be done in a more informed manner, if indicated. Finally, addiction specialists can provide expert guidance to patients and nonspecialists concerning the use of self-help (eg, Alcoholics Anonymous) and social model programs and potentially lend their expertise and collaborate with these programs, in the context of the array of treatment options available in their communities. Each of these contributions represents value added to our health care system by addiction specialists.

The History of Addiction as a Medical Discipline

While physician involvement in addiction dates back to Hippocrates, the modern era began in the 1700s when Benjamin Rush promoted the "disease concept" of alcoholism. Subsequently, addiction-related physician organizations came into existence, including the American Association for the Cure of Inebriety (1870), The College on Problems of Drug Dependence (1929), the American Society of Addiction Medicine (ASAM) (1951), and the American Academy of Addiction Psychiatry (1985). Mainstream medicine got involved when the American Medical Association recognized alcoholism and drug dependence as diseases in 1966 and in 1987, respectively. The National Institute of Drug Abuse (NIDA) and the National Institute of Alcoholism and Alcohol Abuse (NIAAA) were founded in the 1970s with a subsequent explosion of new knowledge through research published in both general medical and addiction specialty journals.

Addiction specialty status was first established when psychiatrists had the foresight to develop the subspecialty of addiction psychiatry under the American Board of Psychiatry and Neurology, which was recognized by

the American Board of Medical Specialties (ABMS) in 1991. Presently, there are 46 Accreditation Council for Graduate Medical Education (ACGME)–accredited 1-year addiction psychiatry fellowships, and 1139 diplomates in addiction psychiatry. Despite this groundbreaking progress, fellowship slots often go unfilled, and the number of diplomates has not met the country's overwhelming need for addiction specialists.

The Development of Addiction Medicine

Addiction medicine began as a multidisciplinary specialty in the 1980s when ASAM initiated a credentialing examination in conjunction with the National Board of Medical Examiners. In 2007 the American Board of Addiction Medicine (ABAM) was incorporated as an independent board and assumed this examination in support of its mission to promote physician training and certification in addiction. The ABAM board of directors reflects the multidisciplinary nature of addiction medicine and includes 8 specialties: emergency medicine, family medicine, internal medicine, obstetrics and gynecology, pediatrics, preventive medicine, psychiatry, and surgery. The examination was first offered in 2008 and has been offered every 2 years since. In addition to holding an unrestricted medical license, candidates must be certified by an ABMS board (or be board eligible), document 1 year of addiction practice or complete a 1-year ABAM-accredited fellowship, and complete 50 hours of continuing medical education in addiction over 2 years. Presently, there are 3094 ABAM diplomates.

The ABAM Foundation convened a national consensus conference in 2010 to define the field of addiction medicine, document its required competencies, and establish fellowships designed to meet ACGME standards. In 2011 the first 10 fellowships were established; 9 were added in 2013 and 4 in 2014. These 23 programs are sited at leading institutions across the country, and ABAM has set a goal of having 50 programs by 2020. Both the NIAAA and NIDA have supported the establishment of these fellowships, and the National Center for Physician Training in Addiction Medicine was established in 2013 with major foundation support to further their development. Because of limited federal support for physician training, alternative sources for fellowship training has been needed; unfortunately, funding has been insufficient to meet the demand.

Future Directions in Addiction Medicine

Recognition by the ABMS of addiction medicine is a major goal. An ABMS-compliant Maintenance of Certification (MOC) program has been implemented, and ABAM leadership has had meaningful conversations with several primary ABMS boards in order to support the field as a new subspecialty in the "family of medicine." The opportunity that addiction medicine offers to provide state-of-the art addiction treatment through a multidisciplinary cadre of specialty physicians who are integrated into the fiber of the health care system is one that can greatly benefit our patients.

Addiction specialty leaders and practitioners are committed to a vision that the addiction treatment gap will be closed and that the health of the public will be improved by ready access to high-quality care. Addiction medicine offers the opportunity to promote this vision by greatly expanding addiction physician specialists to include physicians from internal medicine and other specialties who can bring their unique perspectives and skills to bear in treating patients in need of their expertise. Beyond bringing their expertise to more diverse patients in a broader array of clinical settings, addiction medicine also offers the opportunity to expand research on addiction in order to promote the development of more and better treatment approaches for patients seen in a broad array of health care settings who are suffering from addiction. Finally, the integration of addiction specialty physicians throughout the health care system will serve to raise the level of education and understanding of approaches to identifying and treating patients with addiction throughout the medical community.

ARTICLE INFORMATION

Published Online: September 8, 2014. doi:10.1001/jamainternmed.2014.4211.

Conflict of Interest Disclosures: All of the authors have served as uncompensated members of the American Board of Addiction Medicine (ABAM) since 2008. Dr O'Connor is currently the President of ABAM.

Additional Contributions: The authors thank David A. Fiellin, MD, Kevin Kunz, MD, and Edward Nunes, MD, for their thoughtful review of earlier versions of this paper.

REFERENCES

1. *Substance Abuse and Mental Health Services Administration, Results from the 2012 National Survey on Drug Use and Health.* Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013.

2. Whiteford HA, Degenhardt L, Rehm J, et al. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet*. 2013;382 (9904):1575-1586.

3. Madras BK, Compton WM, Avula D, Stegbauer T, Stein JB, Clark HW. Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: comparison at intake and 6 months later. *Drug Alcohol Depend*. 2009;99(1-3):280-295.

4. Roy-Byrne P, Bumgardner K, Krupski A, et al. Brief intervention for problem drug use in safety-net primary care settings: a randomized clinical trial. *JAMA*. 2014;312(5):491-501. doi:10 .1001/jama.2014.786.

5. Saitz R, Palfai TP, Cheng DM, et al. Screening and brief intervention for drug use in primary care: the ASPIRE randomized clinical trial. *JAMA*. 2014;312 (5):502-513.

6. Kaner EFS, Beyer F, Dickinson HO, et al. Effectiveness of brief alcohol interventions in primary care populations. *Cochrane Database Syst Rev*. 2007;(2):CD004148.

7. Jupp B, Lawrence AJ. New horizons for therapeutics in drug and alcohol abuse. *Pharmacol Ther*. 2010;125(1):138-168.

8. Mason BJ, Quello S, Goodell V, Shadan F, Kyle M, Begovic A. Gabapentin treatment for alcohol dependence: a randomized clinical trial. *JAMA Intern Med*. 2014;174(1):70-77.

9. O'Connor PG, Nyquist JG, McLellan AT. Integrating addiction medicine into graduate medical education in primary care: the time has come. *Ann Intern Med*. 2011;154(1):56-59.

10. McLellan AT, Lewis DC, O'Brien CP, Kleber HD. Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. *JAMA*. 2000;284(13):1689-1695.