



The role of addiction-medicine specialists in the global fight against addiction

The opioid epidemic in the USA has brought many to examine their antiquated understanding of addiction, which has led to the professionalization of addiction medicine. How can translational researchers learn from these cross-cutting specialists to open new avenues for discovery?

Given the enormous impact of substance use and addiction on humanity, it is striking how poorly we understand the problem and what to do about it. Substance use is arguably the single costliest human health-risk behavior. Annually, across the globe, alcohol and tobacco use alone result in 250 million years of life lost.

Today we realize that the compulsive substance use of addiction is associated with neurological changes in the brain, and that genetics, biology and environmental influences make some people more vulnerable and others relatively resilient. But for most of human history, people prone to 'drunkenness' were simply thought to be immoral. In the mid-19th century, Benjamin Rush was among the first to write about alcohol addiction as a medical disorder, describing it as a 'palsy of the will' to explain the loss of control. Centuries after the recognition of addiction as a disorder, access to effective medical treatment remains severely limited.

Addiction is a chronic disease, and as such, it responds to treatment. In the same way that hypertension and type 2 diabetes are optimally treated with a combination of medication, diet and exercise, the optimal treatment for opioid-use disorder is a combination of medication and behavioral support. In addition to opioids, medications are also available for treating alcohol- and nicotine-use disorders, and although no medications are specifically indicated for the treatment of other substance-use disorders, medications can be used to palliate withdrawal symptoms and treat co-occurring disorders, such as anxiety, that can trigger relapse. This is most effective in combination with counseling to help

patients regain control over their behavior, and peer mentorship to help patients safely navigate their communities.

Even when medical treatments are available, the field of medicine has been slow to embrace them. Medical schools and post-graduate medical training have historically provided minimal instruction on the treatment of substance-use disorders.

The ferocious opioid epidemic that, in the USA, has centered in the heartland, has forced reconsideration of addiction treatment and has incited desperate attempts to increase access. Investments in science dedicated to the opioid epidemic in recent years have led to new medications and treatment models, although they remain underutilized. To bridge the historic divide between 'medical care' and 'addiction treatment', in 2016, addiction medicine joined addiction psychiatry as an official medical specialty of the American Board of Medical Specialties.

Professionalizing the addiction workforce by recognizing addiction medicine as a legitimate medical specialty has been an important step in the global fight against addiction. Specialists define standards of care in their field and promote the dissemination of best practices. Addictive disorders have their onset in youth, when the brain is developmentally vulnerable to substance-use disorders; a strategy that attends to antecedent substance use in this group has the potential for meaningful impact. Just as cardiologists promote heart-healthy lifestyles, addiction specialists are optimally positioned to promote prevention paradigms across the lifespan.

Translational research could greatly benefit from close interaction with clinical

specialists in this newly recognized field. Clinical experience is an important source of insight that can spark new research ideas. Conversely, specialist clinicians can enable the dissemination of research-tested treatments. Specialists can also serve as sentinels to warn of new problems in the community and help to set a research agenda. For instance, the recent surge in 'vaping' has shined a light on the revolving-door nature of substance-use epidemics and serves a reminder of the need for constant attention to this field.

Efforts to advance addiction training for medical professionals are underway in many areas, and the World Health Organization–United Nations collaboration on substance use is a welcome step. However, so far, few other countries have recognized addiction medicine as a formal specialty. In the USA, the number of addiction-medicine specialists is growing, but it will take years to create a workforce large enough to adequately address the burden of substance-use disorders. Specialists in addiction medicine could ultimately drive a durable cultural shift in our conception of addiction, from moral failing to treatable condition to entirely preventable disorder. □

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