

ADEA Policy Brief

The Role of Dental Education in the Prevention of Opioid Prescription Drug Misuse

ADEA Office of Policy, Research and Diversity

ADEA | THE VOICE OF
DENTAL EDUCATION

Executive Summary

The impact of the opioid epidemic has been felt in communities in all 50 U.S. states. Curbing the epidemic's exponential trajectory requires special attention from dental educators. Academic dental institutions are using a variety of methods to mitigate substance misuse, including curriculum and clinical protocol changes. Dental educators are key to teaching best practices in prescribing to the next generation of practicing dentists. This policy brief highlights strategies that demonstrate academic dentistry's contributions to combating the opioid epidemic.

Context of the Problem

The opioid epidemic is a major public health concern. In 2016, more than 42,000 deaths were attributed to substance overdose related to opioids.¹ More than 11.5 million Americans misused prescription pain relievers, such as hydrocodone, oxycodone, heroin, and fentanyl,² and opioid overdose-related deaths continue to soar (Figure 1). On Oct. 26, 2017, President Trump declared the opioid epidemic a national public health emergency under federal law.

According to the President's Council of Economic Advisers, the opioid epidemic has resulted in an economic burden of \$504 billion, or 2.8% of the U.S. gross domestic product.³ The [President's Commission on Combating Drug Addiction and the Opioid Crisis](#)⁴ outlined a comprehensive set of recommendations that will help dental educators, clinicians, addiction treatment providers, researchers and other allied community members combat opioid abuse. While these recommendations are important, the increase in opioid misuse stemming from dental settings has also prompted dentists and dental educators to take a stand against this epidemic.

Dentists have been identified as among the leading prescribers of opioids.⁵ Used to alleviate pain, dental practitioners have commonly prescribed opioids after tooth extractions or surgical procedures. In particular, the removal of third molars, most routinely performed during the teen years, has received significant focus since dentists were reported to be the highest prescribers of opioids for this vulnerable age group.^{6,7} In 2009, dentists wrote 12% of the opioid prescriptions in the United States, and family physicians accounted for 15% of opioid prescriptions.⁸ Similar patterns were observed in South Carolina (Figure 2), where dentists are among the most frequent opioid prescribers.

To address this trend, dental schools have reassessed and updated pain management curricula and clinical protocols to further ensure their graduates are competent and safe prescribers. Changes include using alternative methods for pain management, such as nonsteroidal anti-inflammatory drugs (NSAIDs), and recognizing the symptoms of addiction and substance misuse problems. For example, the University of Minnesota School of Dentistry established a mandatory protocol to teach dental students to prescribe NSAIDs as the first-line pain treatment for dental procedures.⁹ Dental schools play a pivotal role in shaping the future of dental practice and preparing faculty and dental students to effectively address pain management and respond to the opioid public health emergency.

Current Setting and Rationale for Policy

In 2015, Massachusetts Governor Charles D. Baker and his Working Group on Dental Education on Prescription Drug Misuse challenged the three dental schools in the Commonwealth to develop an evidence-based curriculum with a set of core competencies to prepare and train the next generation of practicing dentists in three realms:¹⁰

Authored by: Omar A. Contreras, M.P.H.; Denice Stewart, D.D.S., M.H.S.A.; Richard W. Valachovic, D.M.D., M.P.H.

1. **Primary prevention domain:** Preventing opioid prescription misuse, screening at-risk patients and performing evaluative measures to assess a patient's pain to determine pharmacological and non-pharmacological treatment.
2. **Secondary prevention domain:** Identifying patients at risk for substance abuse and systematically referring them to evidence-based pain management centers, and developing treatment plans for people with acute and chronic pain.
3. **Tertiary prevention domain:** Managing substance use disorders as a chronic disease.

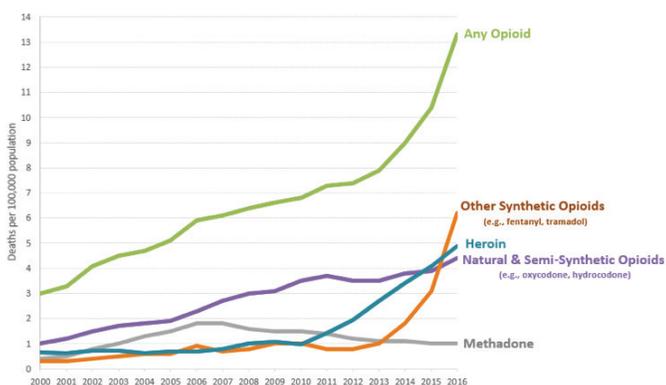
As the first of their kind, the Massachusetts cross-institutional core competencies can serve as a model for other academic dental institutions that are revising their curricula. The Commission on Dental Accreditation (CODA) amended its [Standard 2-23e \(now Standard 2-24e\) for Dental Education Programs](#)¹¹ during winter 2017 to emphasize dental students' competency in local anesthesia, pain and anxiety control in the prescription practices on substance use disorders. CODA's initiative ensures that dental schools enforce these newly established accrediting standards to promote education on opioid abuse and dependence.

In addition to the competencies, dental schools are collaborating with community and grassroots organizations; other health professions schools; and local, state and federal governments to develop and implement interventions and propose [state-level policies](#) to limit opioid prescription by supply and length of the prescription.⁵ For instance, the American Dental Association's (ADA) [Statement on the Use of Opioids in the Treatment of Dental Pain](#) and the Centers for Disease Control and Prevention's [Guideline for Prescribing Opioids for Chronic Pain](#) encourage practicing dentists and other clinicians to obtain continuing education that promotes safe prescription practices and ensures that patients with substance use disorders limit their opioid intake.⁶

Moreover, dental students are being taught to use electronic health records and prescription drug monitoring programs (PDMPs) to assess and treat patients at risk for substance misuse. PDMPs are state-level electronic databases that provide health authorities with real-time data on behavior and prescription patterns for patients who are vulnerable to substance abuse. Although each state regulates its own PDMP (except for Missouri), a number of dental schools across the country have integrated training on PDMPs into their curricula and clinics to improve opioid prescribing. For example, dental students are taught during their pharmacology courses and clinical rotations to assess and consider the patient's history by using PDMPs in patient evaluations. However, despite the value of the PDMPs, there is no standardization across the 50 states, which presents a challenge for health authorities to monitor patients who may shop for opioids across state lines.

Curtailing the opioid epidemic requires a multifaceted and collective approach. On Aug. 30, 2017, ADEA and the Substance Abuse and Mental Health Services Administration (SAMHSA) co-hosted the [Dental Schools Addiction Education Summit on the Opioid Epidemic](#) to discuss opioid epidemic trends and share strategies for preventing prescription drug misuse and addiction. Seventeen dental schools and stakeholders from 11 states and the District of Columbia, alongside agencies such as the Health Resources and Services Administration, Uniformed Services University of the Health Sciences, ADA, and the Association of American Medical Colleges, identified opportunities to improve addiction awareness in academic dental institutions. Examples include:

Figure 1: Overdose Deaths Involving Opioids, by Type of Opioid, United States, 2000-2016



www.cdc.gov
Your Source for Credible Health Information

Source: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2016. <https://wonder.cdc.gov/>.

- Collaborate with other or neighboring dental schools in the state to generate plans/modules to enhance students' educational training about opioid prescription and addiction.
- Form an opioid task force as a subgroup of the school's curriculum committee charged with revising dental school pedagogy on substance abuse.
- Establish baseline information concerning prescription patterns, including all dental and advanced dental education programs, with an emphasis on pain and anxiety control.
- Create toolkits for prescribing dentists that include patient education materials on opioid addiction.

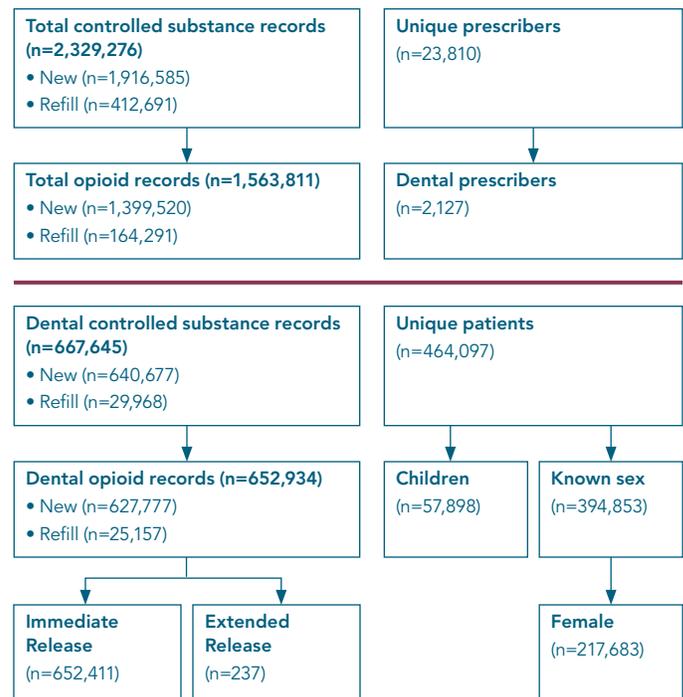
Policy Considerations

Minimizing and controlling substance prescription misuse is critically important to dental educators, who can play a pivotal role in decreasing deaths from opioid overdose. Although great strides have been accomplished in addressing the opioid epidemic, the following set of policy considerations seek to augment the work of dental educators in preparing future dentists.

- Enhance collaboration between dental schools and local, state and federally funded programs to support dental students and practicing dentists with opioid and substance abuse continuing education.
- Educate dental students about alternative pharmacological interventions for pain management, such as administering NSAIDs instead of opioids.
- Develop policies within the dental clinics for referring patients at risk of substance misuse to evidence-based pain management programs.
- Develop integration methods of surveillance systems, such as PDMPs, into dental clinical protocols to monitor patients with opioid dependence.
- Monitor data from PDMPs and electronic health records to ascertain opioid prescription patterns and the impact of new protocols.

ADEA will continue to provide information, resources and [programs](#) to share how dental school curricula and clinical protocols are addressing this challenge. By sharing best practices and supporting collaborative efforts, dental educators can optimize the impact on dental practice now and in the future. Visit adea.org/OpioidEpidemic for resources and more information.

Figure 2:



Opioid prescribing volumes, provider type, and patient characteristics of the delivered prescription drug monitoring program data set (2012-2013) in South Carolina. Dentists represented a minority of unique prescribers (8.9%), yet they prescribed a substantial proportion (44.8%) of initial prescription opioids dispensed to their patients.

Source: McCauley JL, Hyer JM, Ramakrishnan VR, et al. Dental opioid prescribing and multiple opioid prescriptions among dental patients: administrative data from the South Carolina prescription drug monitoring program. *JADA* 2016;147(7):537-44.

References

1. Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999–2016. NCHS Data Brief, no. 294. Hyattsville, MD: National Center for Health Statistics, 2017. CDC, National Center for Health Statistics. Wide-ranging online data for epidemiologic research (WONDER), 2016. At: <http://wonder.cdc.gov>. Accessed: Jan. 16, 2018.
2. Substance Abuse and Mental Health Services Administration. SAMHSA shares latest behavioral health data, including opioid misuse. SAMHSA News, Oct. 12, 2017. At: <https://newsletter.samhsa.gov/2017/10/12/samhsa-new-data-mental-health-substance-use-including-opioids/>. Accessed: Jan. 17, 2018.
3. The Council of Economic Advisers. The underestimated cost of the opioid crisis. Washington, DC: Executive Office of the President of the United States, November 2017. At: <https://www.whitehouse.gov/sites/whitehouse.gov/files/images/The%20Underestimated%20Cost%20of%20the%20Opioid%20Crisis.pdf>. Accessed: Jan. 16, 2018.
4. The President's Commission on Combating Drug Addiction and the Opioid Crisis. Roster of commissioners. Washington, DC: Executive Office of the President of the United States, n.d. At: https://www.whitehouse.gov/sites/whitehouse.gov/files/images/Final_Report_Draft_11-1-2017.pdf. Accessed: Jan. 5, 2018.
5. Baker JA, Avorn J, Levin R, Bateman BT. Opioid prescribing after surgical extraction of teeth in Medicaid patients, 2000–2010. JAMA 2016;315(15):1653–54.
6. Sudders M. Confronting the opioid epidemic: how dental schools can lead. J Dent Educ 2018;81(12):1387–87.
7. Volkow ND, McLellan TA, Cotto JH, Karithanom M, Weiss SR. Characteristics of opioid prescriptions in 2009. JAMA 2011;305(13):1299–1301.
8. Denisco RC, Kenna GA, O'Neil M.G, et al. Prevention of prescription opioid abuse: the role of the dentist. JADA 2011;142(7):800–10.
9. Rosenberg T. Breaking the opioid habit in dentists' office. The New York Times, July 10, 2017.
10. Keith DA, Kulich RJ, Bharel M, et al. Massachusetts dental schools respond to the prescription opioid crisis: a state-wide collaboration. J Dent Educ 2017;81(12):1388–94.
11. Commission on Dental Accreditation. Accreditation standards for dental education programs—amendment. Chicago: American Dental Association, Winter 2017. At: http://www.ada.org/~media/CODA/Files/2017%20Meeting%20Appendices/appdx3_proposed_predoc_2_23e.pdf?la=en. Accessed: Jan. 18, 2018.

Additional Resources

- Dental Education on the Opioid Epidemic: adea.org/OpioidEpidemic
- ADEA Summary of State Legislation and Regulations Addressing Prescription Drug and Opioid Abuse: cqrcengage.com/adea/opioids
- American Dental Association, Prescription Opioid Use: ada.org/en/advocacy/advocacy-issues/prescription-opioid-abuse
- SAMHSA Opioid Overdose Prevention Toolkit: store.samhsa.gov/shin/content/SMA16-4742/SMA16-4742.pdf
- SAMHSA Behavioral Health Treatment Services Locator: findtreatment.samhsa.gov
- TIP 54: Managing Chronic Pain in Adults With or In Recovery From Substance Use Disorders: store.samhsa.gov/shin/content/SMA12-4671/TIP54.pdf
- American Dental Association, Prescription Opioid Use: ada.org/en/advocacy/advocacy-issues/prescription-opioid-abuse
- Dental Schools Add an Urgent Lesson: Think Twice About Prescribing Opioids: npr.org/sections/health-shots/2017/09/08/549218604/dental-schools-add-an-urgent-lesson-think-twice-about-prescribing-opioids

Editor's note: The week of Feb. 26 saw a great deal of activity related to the opioid epidemic on Capitol Hill and in the Executive Branch. The Senate Committee on Health, Education, Labor, and Pensions held a hearing on the role of technology and data in treating and preventing addiction; the House Committee on Energy and Commerce held a hearing on eight bills dealing with pain management treatment, fentanyl importation, and rural access to mental health and addiction treatment. Later in the week the White House held a summit on the subject and Attorney General Jeff Sessions announced a Department of Justice task force to look into the role of drug manufacturers and distributors.