

# The Dental Professional's Role in the Opioid Crisis



**Course Author(s):** Maria L. Geisinger, DDS, MS; Luis Gerado Suarez Guzman, DMD

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- **Florida Dentists:** This course is classified for "General" credit in CE Broker.
- **Louisiana Dentists:** This course is classified as "Opioid Management for Dentists" credit in CE Broker.
- **Ohio Dentists and Hygienists:** This course fulfills the mandated credit hours in the practices of prescribing or dispensing of opioids.
- **South Carolina Dentists:** This course is classified as "Prescribing (PMP)" credit in CE Broker.
- **Tennessee Dentists:** This course is classified as "Prescribing of Controlled Substances" credit in CE Broker .

**Conflict of Interest Disclosure Statement**

- Dr. Geisinger reports no conflicts of interest associated with this course. She has no relevant financial relationships to disclose.
- Dr. Guzman reports no conflicts of interest associated with this course. He has no relevant financial relationships to disclose.

**Introduction – Opioid Crisis**

The Dental Professional's Role in the Opioid Crisis course seeks to improve understanding of the role dental healthcare providers can play in the prevention of opioid abuse, provides them with tools to critically assess the individualized needs of their patients who may suffer from substance abuse, and resources to allow referral of those patients to resources to help treat their addictions. The course also reviews the current evidence on best practices for analgesic prescribing for acute and post-operative discomfort in a manner that minimizes risks associated with substance misuse for patients.

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## Overview

Opioid overdoses and deaths related to opioid abuse continue to climb. In 2019, 49,860 Americans were reported to have died from opioid overdoses (70.6% of all US drug overdoses).<sup>1</sup> This was a substantial rise from 21,088 in 2010.<sup>1</sup> In 2018, the Surgeon General of the United States, Dr. Jerome Adams, stated that the country's opioid crisis is an "epidemic because people are dying like never before."<sup>2</sup> In February 2018, the American Dental Association (ADA) released updated recommendations for using opioids for dental pain and reaffirmed the use of non-steroidal anti-inflammatory (NSAID) analgesics as first-line therapy for acute pain management.<sup>3</sup> There is also data that sheds light on vulnerable populations, including children and teenagers, for whom exposure to opioids

may be particularly damaging.<sup>4,5</sup> Dentists are responsible for prescribing an estimated 12% of immediate-release opioids annually<sup>6,7</sup> and patients report not using 54% of opioids prescribed during dental surgery.<sup>8</sup> Opioids that are not used in the initial prescription may be stored and diverted for non-prescription usage. Despite the volume of opioid prescriptions written by dentists, research suggests that dentists have not fully adopted recommended risk mitigation strategies, including screening for prescription drug abuse or misuse, verifying current and past prescriptions using state prescription drug monitoring programs, and providing patient education on safe use, storage, and disposal of medications when prescribing opioid medications for pain management.<sup>9,10</sup> This course seeks to improve the dental care provider's understanding of the role of dental healthcare providers in the primary prevention of opioid abuse and provide them with tools to critically assess the individualized needs of their patients. It will review the current evidence on best practices for analgesic prescribing for acute and post-operative discomfort. It will also serve to give dental healthcare providers the tools to identify individuals who may suffer from substance abuse and refer those patients to resources to help treat their addictions.

## Learning Objectives

**Upon completion of this course, the dental professional should be able to:**

- Understand the current evidence-based consensus recommendations about prescribing patterns for acute and post-operative dental pain and the comparative effectiveness of opioid and non-steroidal anti-inflammatory drug analgesics for dental pain.
- Review current dental and medical opioid prescribing patterns in the United States and throughout the world.
- Evaluate patients' risk factors and treatment needs based upon individualized patient needs and overall substance abuse risk.
- Recognize signs of substance abuse disorder in patients.
- Enable better identification of individuals with substance abuse disorders and be aware of referral services for treatment.

- Be an active participant in an interdisciplinary team of health care providers in educating patients and colleagues about changes to prescribing patterns that may decrease exposure and substance abuse.

## Introduction

In the roughly two hours it will take to complete this course, approximately ten Americans will die of an opioid overdose.<sup>11</sup> The annual cost associated with the opioid epidemic to the American economy, including healthcare costs, lost productivity, criminal justice expenses, and treatment costs, is estimated to be \$78.5 Billion.<sup>12</sup> Dentists represent approximately 12% of the opioid prescriptions written<sup>6,7</sup> and approximately one-third of all prescriptions written by dentists are for opioid pain medications.<sup>13</sup> Even short-term prescriptions for acute pain may not be innocuous.<sup>5</sup> Six percent of adults prescribed at least 1 day of opioids will continue to use them 1 year later; 2.9% will continue to use them 3 years later.<sup>14</sup> Early use (before the age of 15 years) of any substance of abuse is associated with a 550% increase in the risk of subsequent substance use disorder (28.1% vs 4.3%),<sup>15</sup> and even the legitimate use of prescription opioids by children before the 12<sup>th</sup> grade (17-18 years of age) increases the risk of future opioid misuse by 33%.<sup>16</sup> Dentists also report low frequency of prescription drug monitoring program (PDMP) queries, risk screening, and patient education for risk mitigation when prescribing opioid analgesic medication,<sup>17</sup> although rates of use of PDMP are on the rise and recommendations from dental organizations and state provider mandates for PDMP use have been shown to improve utilization.<sup>18,19</sup> Given the role dentists play in the prescription of opioid medications, it is critical that dental healthcare professionals understand the critical role that they can play in mitigating the risks associated with opioid medications.

## The Opioid Epidemic as a Public Health Crisis

Opioids are a class of drugs that include the illicit drug heroin and legal prescription analgesics oxycodone, hydrocodone, codeine,

morphine, fentanyl, and others.<sup>20</sup> Opioids interact with opioid receptors in the central nervous system and brain to produce pleasure and reduce pain and have a high rate of misuse and abuse.<sup>20</sup> Substance abuse disorder is a primary, chronic, and relapsing brain disease characterized by the pathologic pursuit of reward and/or relief by substance abuse.<sup>21</sup> Drug misuse is defined as the use of medications for purposes for which they were not prescribed.<sup>22</sup> Roughly 21 to 29% of patients prescribed opioids for chronic pain misuse them<sup>23</sup> and between 8 and 12% develop an opioid use disorder.<sup>24-26</sup> An estimated 4 to 6% who misuse prescription opioids transition to heroin abuse.<sup>24-26</sup> This is a major shift the method of introduction to heroin for abusers. In 1960, 80% patients entering treatment for heroin reported that heroin was the first opioid drug that they had abused, whereas in the 2000s, 75% of individuals seeking treatment for heroin addiction reported that their first opioid was a prescription drug.<sup>25</sup> This has led to an overwhelming epidemic of opioid abuse that resulted in up to 136 overdose deaths each day in 2019.<sup>1</sup> A concomitant increase in neonatal abstinence syndrome due to opioid use during pregnancy<sup>27</sup> and HIV and hepatitis C rates due to intravenous drug abuse,<sup>28,29</sup> are some of the additional public health crises associated with this epidemic.

## The Development of an Opioid Epidemic

Heroin was first marketed in the United States by Bayer Drug in 1898 as a “wonder drug” for pain relief and cough suppression, among cures for other maladies.<sup>30</sup> As it became more widely used, its side effects were also noted with more frequency. In 1914, the Harrison Narcotics Tax Act imposed a tax on those making, importing or selling any derivative of opium or coca leaves.<sup>31</sup> By the 1920s, doctors were aware of the highly addictive nature of opioids and tried to avoid treating patients with them. Heroin became illegal in the United States in 1924.<sup>32</sup>

While some illegal heroin use continued in the United States after it was outlawed, legal synthetic opioids, including Percocet (Endo Pharmaceuticals, Inc.; Malvern, PA) and Vicodin (AbbVie, Inc.; North Chicago,

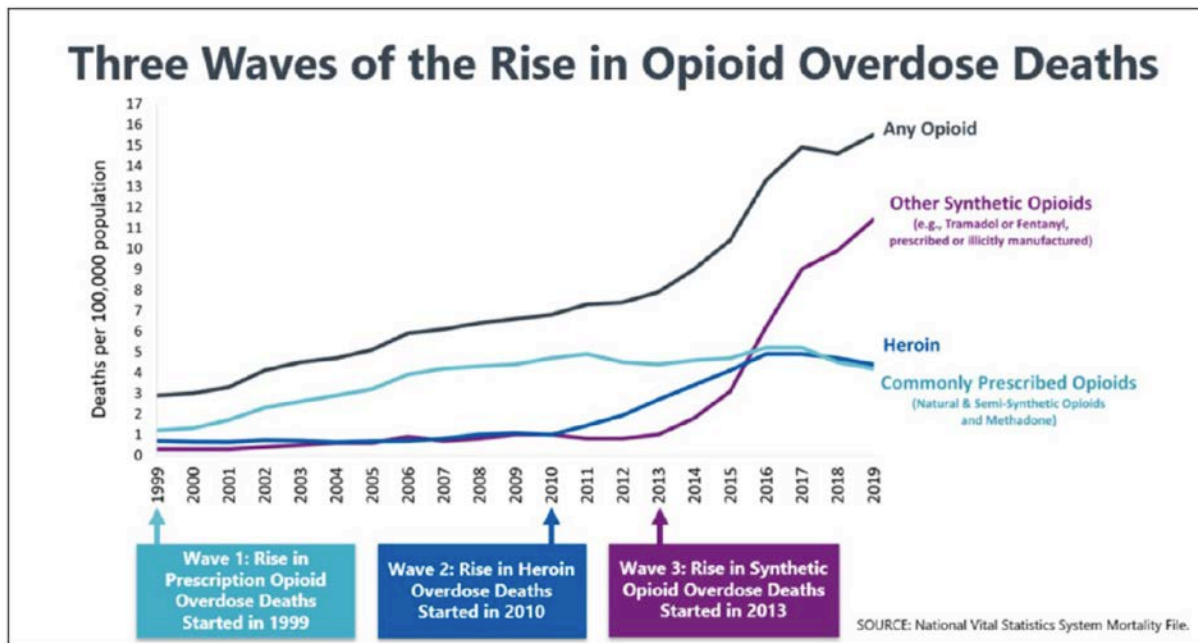


Figure 1. Increase in Opioid Overdose Deaths in the United States.<sup>108</sup>

IL) were both introduced to the market in the 1970s. However, prescribing of these medications was judicious with doctors wary of the addictive nature of opioid medications<sup>33</sup> In January 1980 a letter was printed in the *New England Journal of Medicine* stating that in an analysis of 11,882 patients treated with narcotic medication, “the development of addiction was rare in medical patients with no history of addiction.”<sup>34</sup> In 1986 a study of 38 patients treated with chronic opioid analgesics for non-malignant pain concluded that, “opioid maintenance therapy can be a safe, salutary, and more human alternative to the options of surgery or no treatment in those patients with intractable non-malignant pain and no history of drug abuse.”<sup>35</sup> These and other studies shifted a focus onto pain as the “fifth vital sign” in the 1990s.<sup>36-38</sup> The cited impetus for this change was summarized in November 1996 by James Campbell, MD in his presidential address to the American Pain Society, “...vital signs are taken seriously...if pain were assessed with the same zeal as other vital signs are, it would have a much better chance of being treated properly.”<sup>39</sup> In 2001 the Joint Commission, a medical accrediting and standards body, released a statement requiring pain to be assessed in all patients

receiving care in accredited hospitals.<sup>40</sup> While this requirement was removed in 2009, the focus on identification and elimination of pain saw an accompanying increase in prescriptions for opioid medications.<sup>41</sup>

From 1999 to 2008, overdose death rates, prescription opioid sales, and substance use disorder treatment admissions related to prescription pain relievers increased proportionally. The overdose death rate increased four-fold from 1999 to 2008; sales of prescription opioid analgesics in 2010 were four times those in 1999; admissions for substance abuse disorder treatment increased six-fold from 1999 to 2009.<sup>42</sup> As the addictive potential of many of the synthetic prescription medications became known, doctors began to decrease the number of prescriptions they wrote. In 2007, the manufacturer of OxyContin (Purdue Pharma, Inc.; Stamford, CT) and three senior executives pleaded guilty to federal criminal charges that they misled regulators, doctors, and patients about the risk of addiction associated with the drug.<sup>43</sup> Further, in 2021 the Sackler family who owned Purdue Pharma agreed to pay a \$4.3 billion settlement and forfeit ownership in the company, but were also granted protection from future

liability lawsuits regarding the harm caused by OxyContin and other opioids.<sup>44</sup>

A 2012 letter in the *New England Journal of Medicine* demonstrated that tamper-resistant features added to OxyContin medication to decrease the ability of individuals to crush the medication and circumvent the extended release coating, led to a decrease in abuse of that drug, but nearly two-thirds of respondents switched to other opioids.<sup>45</sup> In 2014, 94% of respondents to a survey of individuals receiving treatment for opioid addiction stated that they chose to use heroin because prescription opioid medications were “far more expensive and harder to obtain.”<sup>46</sup> In fact, four in five new heroin users began misusing prescription opioid analgesics.<sup>47</sup> In 2017, it was noted that the initial 11-line letter to the editor in of the *New England Journal of Medicine* in 1980 had been cited 608 times, 72.2% of which used it as evidence that addiction was rare in patients treated with opioids.<sup>48</sup> The authors conclude, “that a five-sentence letter published in the *Journal* in 1980 was heavily and uncritically cited that addiction was rare with long-term opioid therapy. We believe that this citation pattern contributed to the North American opioid crisis by helping shape a narrative that allayed prescribers’ concerns about the risk of addiction associated with long-term opioid therapy.”<sup>48</sup>

### **Comparative Opioid Abuse Rates in the United States and Abroad**

The Centers for Disease Control and Prevention (CDC) report that opioid prescription rates in the US have been declining from a high in 2012 of approximately 255 million prescriptions to approximately 153 million prescriptions written in 2019.<sup>49</sup> This amounts to an average of 49.5 prescriptions for every 100 US adults.<sup>49</sup> Additionally, while the vast majority of US providers have been found to follow CDC guidelines for prescribing narcotic medication, approximately 1% of prescribers are responsible for over half of the opioid doses prescribed and one-quarter of the opioid prescriptions written, a pattern that has remained stable for a decade.<sup>50</sup> Further, US adults were seven times more likely to receive an opioid prescription after surgery as those in Sweden!<sup>51</sup> And the average dose for individuals in the US was

significantly higher than in other countries; the average initial postoperative dose in the US as measured in morphine milligram equivalent (MME) doses was 247 MME compared to those dispensed in Sweden (197 MME) or Canada (169 MME).<sup>51</sup> Compared to their global counterparts, providers in the US prescribe opioids more frequently, at higher doses, and throughout more stages of post-operative and pain treatment—including as first-line treatment—than their international counterparts. Use of higher-potency opioids is markedly elevated in the US compared with other countries, despite the fact that nearly all published clinical guidelines discourage the use of high-potency opioids, and in fact opioids at all, as first-line non-cancer pain treatment.<sup>52</sup>

Several explanations for these differences in prescribing patterns may be at play. Pain perception and the attitudes of healthcare providers towards pain varies widely between cultures. Americans are more likely than their European or Asian counterparts to view pain as a malady rather than a natural consequence of aging or injury.<sup>53-56</sup> Regulatory controls and healthcare provider oversight also differs greatly between countries. In the U.S. much of the regulation is performed at the state rather than the Federal level, which may afford more variation and less tight control.<sup>57,58</sup> The United States and New Zealand are also the only countries that allow prescription drugs to be advertised on television, which may create a consumer-driven approach to prescribing patterns with patients requesting and, in many cases, receiving drugs that they have seen in advertisements.<sup>59</sup> While opioid prescription advertisements are generally not seen on television, the 2016 Super Bowl featured an ad for a drug designed to combat opioid-induced constipation, which drew ire from Physicians for Responsible Opioid Prescribing and the White House.<sup>60</sup> Finally, differences in how healthcare is delivered and reimbursed lead to differences in how patients are treated when they present with pain, a multifactorial symptom which can relieve many underlying ailments. The average primary care physician or healthcare provider in the U.S. spends around 15 minutes with each patient and covers an average of six topics in that time

frame.<sup>61,62</sup> This may not be enough time to fully assess a patient's condition, underlying contributory factors, and may contribute to a less holistic approach to pain control.

### **Prescribing Patterns for Opioid Pain Relievers**

While healthcare providers in the United States have decreased their opioid prescribing since its peak in 2012, physician-prescribed opioids are still higher in the US than in other countries around the world.<sup>49</sup> Further, opioid prescribing patterns vary widely among states and regions, with greater decreases in opioid prescribing associated with introduction of state laws that mandate prescriber training and use of the PDMP, among other factors.<sup>63,64</sup> The contributions of dental opioid prescriptions to this number is substantial. The number of opioid prescriptions per 1000 dental patients increased from 130.58 in 2010 to 147.<sup>44</sup> in 2015.<sup>6</sup> These prescriptions represented approximately 12% of all immediate-release opioid prescriptions.<sup>5</sup> It has also been estimated that approximately two-thirds of opioid prescriptions written in dental offices were prescribed during/following surgical dental visits and approximately one-third during non-surgical visits, the majority of which were operative procedures.<sup>6</sup> It should be noted that a marked decrease in opioid prescriptions has been noted in dental settings after 2016, when updated prescribing recommendations and guidelines were published by the American Dental Association and other entities.<sup>65-67</sup> This development is encouraging and indicates that education and processes can improve prescribing patterns and reduce high-risk prescribing. It has also been suggested that prompts within the electronic health records may further reduce high-risk prescribing by identifying patients with opioid misuse risk factors and automatically notifying prescribers if they write an opioid prescription.<sup>68</sup>

Focus has been put over the last few years on identifying high-risk populations for future misuse after initial opioid prescriptions. It has been established that adolescents are particularly vulnerable to future risk of opioid misuse and these patients have a high risk to be exposed to opioids as a prescription after

dental care.<sup>14-16</sup> It is estimated that 61% of 14- to 17-year-olds receive opioid prescriptions from dentists following extraction of third molars.<sup>16</sup> This is particularly concerning given the body of literature that associates age of first exposure to opioids to an increased risk of nonmedical use, misuse, and substance abuse of opioids in patients.<sup>4</sup> Among high school seniors, 36.9% of nonmedical users of prescription opioids used the drugs from their previous prescriptions and 27% of those prescriptions were written by dentists.<sup>4,69</sup> Non-medical use of opioids in adolescents and young adults parallels the prescribing rates for these medications, with male non-medical users having higher peer-to-peer diversion rates and rates of non-pain relief (recreational) use.<sup>4</sup> Younger adults (18-25 years) have higher rates of opioid misuse (8.1%) than older adults (2.0%), despite more opioid prescriptions being written for older individuals.<sup>70</sup> Further, in adolescents predictors of prolonged opioid use after surgery and potential misuse included duration of opioid prescriptions, daily MME of opioid prescriptions, as well as indicators of socio-economic status.<sup>5</sup> These factors may indicate that younger people are more vulnerable to opioid misuse and additional care should be given to opioid prescribing in that group.

### **Evidence-based Comparisons of Opioid and NSAID Analgesics for Post-operative Dental Pain**

Safe and effective pain management is an essential goal of compassionate, responsible dental care. While opioid prescriptions to control pain associated with dental visits are common place, studies have shown that non-steroidal, anti-inflammatory drugs (NSAIDs) are effective in managing pain with significantly fewer adverse effects compared with opioid pain medication.<sup>71-73</sup> A recent study demonstrated that the combination of acetaminophen and ibuprofen taken at regular intervals has proven to be more effective than opioids with fewer adverse effects following third-molar extractions.<sup>74</sup> It has also been noted that pre-emptive and preventative NSAIDs can reduce both patient pain perception and post-operative opioid consumption.<sup>75</sup> In particular, minor and outpatient surgical procedures demonstrated more benefit to pre-emptive

NSAID delivery.<sup>75</sup> Given these findings, it has been established that opioid pain medications should not be considered first-line therapy for dental pain.<sup>76</sup> Preprocedural dosing with NSAIDs and utilization of optimal dosages of NSAIDs at regular time intervals has been proven effective for pain management without many of the adverse side effects seen with opioid medications.<sup>75,77</sup> Opioids may be considered if pain persists after optimal NSAID dosages have been achieved.<sup>77,78</sup>

### **The Dental Healthcare Professional's Role in Substance Abuse Prevention**

Managing dental pain associated with dental procedures and/or dentoalveolar conditions is a critical part of proper patient management. As a profession, it is critical that we are addressing patients' discomfort, but also that we are cognizant to reduce harm and risk of substance misuse. Recent reviews have assessed optimal prescribing patterns, including the use of NSAID pain relievers as first-line analgesics.<sup>3</sup>

For acute pain, including that often encountered in the dental office due to infection or trauma following invasive dental procedures, limiting prescription of opioid dosage and duration to no more than seven days is recommended by the Centers for Disease Control and Prevention and the ADA.<sup>79,80</sup>

### **Best Practices for Opioid Prescribing**

While best practices state that the use of opioids as first-line agents for acute pain is not preferable,<sup>3</sup> dentists continue to prescribe considerable amounts of opioids, with dentists who saw patients for single visits and/or patients seeking emergent care being more likely to prescribe opioids than other practitioners.<sup>10</sup> While after state regulations and ADA recommendations for dentists to use the PDMP has resulted in an increase in PDMP utilization by dentists, dentists continue report a lower than optimal rate of accessing the prescription drug monitoring program (PDMP),<sup>9,10,81</sup> despite being available in all states.<sup>82,83</sup> While 49 states require prescriber registration with PDMP, the requirements for use vary state-by-state.<sup>82,83</sup> Interestingly, mandatory use of the PDMP system for controlled substance prescriptions is associated

with a 78% decrease in opioid prescription rates and an increase in the use of non-opioid analgesics.<sup>84</sup> Currently 49 states, the District of Columbia, and one U.S. territory (Guam) have operational PDMP systems (Missouri is the state which does not have a currently operational PDMP).<sup>85</sup> A variety of drug schedules are collected in each state's PDMP and most states allow practitioners and pharmacists to obtain PDMP records for patients under their care.<sup>86</sup> The status of your state's PDMP and access information specific to your area can be found at the [PDMP TTAC website](#).

While federal law does not limit the quantity or duration of opioid prescriptions, the Controlled Substances Act (CSA) does identify the following as indicators of a valid rationale for prescribing a controlled substance:

- A legitimate medical purpose exists for the use of the controlled substance.
- The prescription is issued in the usual course of professional practice.
- The prescriber takes reasonable measures to prevent abuse and diversion as part of daily routine practice.<sup>87,88</sup>

Healthcare providers may also be held accountable by noncriminal sanctions. A review of medical malpractice claims from 2005-2008 indicated that the following forms of inappropriate medication management by physicians were more common:

- Inadequate communication with other prescribing physicians to coordinate the care plan.
- Failure to recognize signs of medication misuse and/or prescribing controlled substances inappropriately to individuals with known pre-existing substance abuse disorders.
- Prescribing inappropriately high doses of opioids.
- Inappropriate sexual relations with patients.<sup>89</sup>

In addition, there is the possibility of criminal liability. 2015 Dr. Hsiu-Ying "Lisa" Tseng became the first doctor convicted of murder for overprescribing opioid analgesics and the US Drug Enforcement Agency took action related

to prescribing patterns against 479 doctors in 2016, up from 88 in 2011.<sup>90,91</sup> While these high-profile cases may make national news, Dr. Andrew Kolodny, executive director of Physician for Responsible Opioid Prescribing has stated, “The well-meaning doctors and dentists are the bigger part of our problem. They are inadvertently getting patients addicted and they are also stocking homes with highly addictive drugs.”<sup>90</sup> It is imperative for dentists to demonstrate sound, ethical clinical judgement and provide adequate procedural and structural safeguards to mitigate risk to patients and liability for prescribers.

### Recognition of At-risk Patients

Identification of patients who may be at-risk for diversion and/or misuse of medications is the responsibility of healthcare providers as part of caring for their patients. A complete history and physical, including assessment of alcohol, tobacco, prescription, history of current or chronic pain, history of mental health treatment, and illicit drug use allows a fuller picture of potential patient-related risk factors.<sup>17,92</sup> The percentage of dentists assessing these conditions varies widely (Table 1) and

may result in dental healthcare providers failing to identify patients at higher risk of opioid misuse.<sup>15</sup> Dentists generally utilize written questionnaire for health screening, but a recent study found that these may be incomplete and not allow for comprehensive risk assessment.<sup>17</sup> Dentists generally utilize written questionnaire for health screening, but a recent study found that these may be incomplete and not allow for comprehensive risk assessment.<sup>17</sup> A verbal review of risk factors and health conditions associated with drug misuse and abuse can be conducted by members of the dental team to allow for individualized approaches to pain management in the dental office. Screening tools for identification of risk of opioid misuse/abuse have been identified, but the validity and predictive value of such screening tools is not yet known.<sup>93-95</sup>

### Pre-procedural Counseling for Opioid Use, Abuse, and Disposal

While approximately half of dentists reported consistently counseling patients regarding the potential side effects of opioid medications, significantly lower percentages consistently discussed nonmedical use (27%), secure storage

**Table 1. Dentist Assessments of Various Health Conditions that can be Associated with Substance Misuse and Abuse Disorders.<sup>17</sup>**

Assessment	n (%)
Current tobacco use	772 (94%)
Current alcohol use	620 (75%)
Current illicit drug use	570 (69%)
History of mental health treatment	592 (72%)
History of Or Current chronic pain	578 (70%)
History of substance abuse	520 (63%)
Current prescription drug abuse	431 (52%)
History of substance abuse treatment	427 (52%)



(18%), and disposal of unused medications (13%).<sup>17</sup> Patients are largely unaware of what may constitute misuse of medications, including sharing medications with friends or family members<sup>96</sup> and may also be unaware of the potential for diversion or misuse by others if they are stored or disposed of improperly.<sup>97,98</sup> Approximately three-quarters of unused opioid prescriptions are stored in an unmonitored, unsecured location within the home, which can be a risk for diversion and misuse.<sup>99</sup> A study of young, urban injection drug users interviewed in 2008 and 2009 found that 89% had used opioid pain medications nonmedically prior to using heroin and that their initiation to nonmedical use came from three main sources of opioids: family, friends, or personal prescriptions.<sup>101</sup> Educating patients with regard to their role in preventing the opioid crisis allows for a reduction in accessibility of prescription medications to vulnerable individuals. The National Institutes on Drug Abuse suggests that patients take these steps to ensure the security and safety of their prescription medications:

- Following the directions as explained on the label or by the pharmacist
- Being aware of potential interactions with other drugs as well as alcohol
- Never stopping or changing a dosing regimen without first discussing it with the doctor
- Never using another person's prescription, and never giving their prescription medications to others
- Storing prescription stimulants, sedatives, and opioids safely<sup>102</sup>

Additionally, patients should properly discard unused or expired medications by following **U.S. Food and Drug Administration (FDA) guidelines** or visiting U.S. Drug Enforcement Administration collection sites.<sup>103</sup>

Standardization of patient education and the production of patient education materials discussing the risks of misuse of opioid prescriptions, once they have been deemed appropriate by the dental healthcare provider, may help alleviate some of the risks associated with failure to properly secure medications by patients. Members of the dental team can

be employed to conduct the screening and/or provide post-prescription education to patients in a verbal and/or written format.

## Recognition and Referral for Individuals with Substance Abuse Disorders

In addition to reducing misuse and abuse of medications they prescribe, dental healthcare providers have the opportunity to screen for substance abuse disorder in their patients. For a screening tool to be used in a dental setting, it must be easy to interpret and not time-consuming or onerous to administer. A commonly used screening tool is the drug abuse screening test 10 (DAST-10). This tool may be used with screening, brief intervention, and referral to treatment (SBIRT) as part of an evidence-based practice to identify, monitor, reduce and prevent problematic use and abuse of alcohol, illicit, and prescription medications (Figures 2-3).<sup>104</sup> The scoring rubric for this screening test also provides recommendations that allow the treating dentist to provide interventions tailored to risk of substance use/abuse. These interventions may range from a brief (3-15 minute), patient-centered discussion employing Motivational Interviewing concepts designed to raise awareness of his/her substance abuse to facilitation of referral to drug treatment experts for in-depth assessment and, if necessary, treatment. Additionally, there are other tools for clinician screening for substance use and training modules available through the National Institute on Drug Abuse (NIDA) that allow for screening and interventions tailored to specific populations.<sup>105</sup>

Prior to instituting a SBIRT program, the dental healthcare providers must identify and/or create a structure for the screening, intervention and referrals. Utilization of skilled dental team members as an integral part of the screening, counseling, and referral process for drug misuse and abuse allows dentists to reach more of their patients with critical screening tools and education. Consider these questions when implementing a program in your practice:<sup>104</sup>

1. What screening and assessment tools will be used?

## DRUG SCREENING QUESTIONNAIRE (DAST)

Using drugs can affect your health and some medications you may take.  
Please help us provide you with the best medical care by answering the questions below.

Patient Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

- |   |  |
|---|--|
| <input type="checkbox"/> methamphetamines (speed, crystal)        | <input type="checkbox"/> cocaine                                       |
| <input type="checkbox"/> cannabis (marijuana, pot)                | <input type="checkbox"/> narcotics (heroin, oxycodone, methadone, etc) |
| <input type="checkbox"/> inhalants (paint thinner, aerosol, glue) | <input type="checkbox"/> hallucinogens (LSD, mushrooms)                |
| <input type="checkbox"/> tranquilizers (valium)                   | <input type="checkbox"/> other _____                                   |

1. Have you used drugs other than those required for medical reasons?	No	Yes
2. Do you abuse more than one drug at a time?	No	Yes
3. Are you unable to stop using drugs when you want to?	No	Yes
4. Have you ever had blackouts or flashbacks as a result of drug use?	No	Yes
5. Do you ever feel bad or guilty about your drug use?	No	Yes
6. Does your spouse (or parents) ever complain about your involvement with drugs?	No	Yes
7. Have you neglected your family because of your use of drugs?	No	Yes
8. Have you engaged in illegal activities in order to obtain drugs?	No	Yes
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	No	Yes
10. Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding)?	No	Yes

- Have you ever injected drugs?       Never       Yes (past 90days)       Yes (over 90 days ago)
- Have you ever been in treatment for substance abuse?       Never       Currently       In the past

Figure 2. DAST-10 Assessment Screening Questions.<sup>104</sup>

2. Will the same person provide screening, brief intervention, and referrals?
3. How will staff be trained, updated, and informed about the SBIRT protocols?
4. Should all patients be screened?
5. How often should patients be screened?
6. Will educational materials be distributed to patients? If so, which ones?
7. Where/how will patients needing further assistance be referred? What referral resources, if any, are currently used?
8. How will SBIRT results be documented?
9. Who will ensure compliance with SBIRT implementation including screening, intervention, and referral?
10. Will we bill for SBIRT screening and/or other services?

### Sample Clinical Scenarios: Potential Pitfalls, Risk Mitigation, and Action for Dental Healthcare Providers

#### Case 1

**Initial Presentation:** A 65-year-old female presents with erosive lichen planus that was initially diagnosed 15 years prior and is associated with remitting and relapsing intraoral pain. She states she is currently having a “flare-up.” She reports a medical history significant for hypertension, insomnia, anxiety, and gastro-esophageal reflux disorder (GERD). She is partially edentulous and reports tooth loss due to decay and tooth fracture. She also reports a history of nocturnal bruxism. When PDMP data are queried, it demonstrates

SCORE	ZONE OF USE	INDICATED ACTION
0	I - Healthy (no risk of related health problems)	None
1-2, plus the following criteria: No daily use of any substance; no weekly use of drugs other than cannabis; no injection drug use in the past 3 months; not currently in treatment.	II - Risky (risk of health problems related to drug use)	<ul style="list-style-type: none"> <li>• Offer advice on the benefits of abstaining from drug use.</li> <li>• Monitor and reassess at next visit.</li> <li>• Provide educational materials</li> </ul>
1-2 (without meeting criteria)		Brief intervention
3-5	III - Harmful (risk of health problems related to drug use and a possible mild or moderate substance use disorder)	Brief intervention or Referral to specialized treatment
6+	IV - Severe (risk of health problems related to drug use and a possible moderate or severe substance use disorder)	Referral to specialized treatment

Figure 3. DAST-10 Score Risk Categories.<sup>104</sup>

that she has had 44 prescriptions for controlled substances in the past year, including 20 opioids and 24 benzodiazepenes. The prescriptions were written by 5 different healthcare providers and filled at 3 pharmacies.

**Action Plan:** Further assess potential for misuse/abuse by identifying prescribers and area of practice and underlying control of her health conditions. Assess the patient for risk of self-harm and utilize motivational interviewing techniques to discuss her plans of action regarding her overall health and opioid use.

**Conclusion:** It was determined that all prescribers were in the same primary care practice and the pharmacies were close to this practice, her work, and her home. During discussion, patient stated that she was using alcohol and opioids to treat underlying anxiety and depression and that she desired improved intervention, including pharmacological and

behavioral therapy. Treatment of intraoral lesions with topical steroid therapy and local anesthetic medication as well as an intake diary to identify triggers was initiated and occlusal analysis and fabrication of an occlusal guard to reduce the incidence and harm from nocturnal bruxism was treatment planned.

## Case 2

**Initial Presentation:** A 37-year-old female presents with a history of orthognathic surgery, temporomandibular joint pain, and high esthetic concerns regarding her anterior teeth. During consultation, she states that she “always needs something strong for pain” and that she cannot take hydrocodone, but has found that oxycodone has worked for previous dental appointments for crowns and veneers. Her PDMP query demonstrates 143 prescriptions within the past year, of which 92 were opioids, 27 benzodiazepines, and 24 anxiolytics. These prescriptions had been written by 42

prescribers, including 8 dentists and she had them filled at 23 pharmacies throughout the metropolitan area.

**Action Plan:** Inform patient of your findings and discuss your concerns about substance abuse as identified by overlapping prescriptions, request of specific medication, and the potential for doctor shopping (which implies a patient is going from one physician or dentist's office to another to acquire multiple prescriptions for controlled substances to treat the same symptom).<sup>88,104</sup> Offer to refer patient to a confidential drug treatment expert for evaluation and treatment in conjunction and consultation with her primary care physician.

**Conclusion:** Patient revealed during the discussion that she had a history of substance abuse disorder and was experiencing a recurrence. She received a referral for assessment and was eventually admitted for in-patient care.

### Case 3

**Initial Presentation:** A 47-year-old man has a history of facial trauma in a motor vehicle accident approximately 10 years ago. He reports seeking care at a pain clinic for back and facial pain and receives physical therapy, steroid and anesthesia injections, along with monitoring and urinalysis at this clinic. He presents for a routine extraction of a tooth with a vertical root fracture and would like to discuss post-operative pain control given the medications he is currently taking. Upon receiving his report from the PDMP, he has received 20 opioid prescriptions in the last year by two prescribers, both physicians at the pain clinic he discussed.

**Action Plan:** Given this patient's history of chronic pain and medication and symptom monitoring by his pain-care physicians, consultation prior to surgical treatment in the dental office is recommended. Preprocedural use of NSAID and scheduled use of NSAID and acetaminophen along with his current medication barring any other contraindications in his medical history should be considered.

**Conclusion:** After consultation with his treating physicians, patient was managed peri-

procedurally with preprocedural NSAID pain control and post-operative use of regular time-interval NSAID and acetaminophen medication. Patient was also seen within 48 hours of extraction by his pain physician to monitor any additional symptoms and stated that he felt that his pain was managed well during this procedure.

### Case 4

**Initial Presentation:** A 52-year-old male presents for emergent care on a Friday at noon prior to a long weekend. He states that he is in town visiting his family and he has an established dentist where he lives. He states that he developed excruciating pain on the upper right quadrant during the previous night that prevented him from sleeping and that he is scheduled for a root canal when he returns home next week. Examination reveals a grossly carious #3 with a buccal cusp fracture. He asks for antibiotics and pain medication to "get him through the weekend" so that he can return home and receive care in his dentist's office. Upon querying the PDMP, it is noted that he has had 58 prescriptions for opioids in the past year written by 46 providers, including 16 emergency room physicians and 20 dentists in 3 states. The prescriptions were filled at 18 pharmacies in all 3 states.

**Action Plan:** This is potentially an instance of doctor/pharmacy shopping and taking advantage of dental practice vulnerabilities, including the likelihood of Friday closure and the limited communication between dental practices and across state lines. In many states, patients have the responsibility of informing their healthcare providers if they are receiving care, including being prescribed medication, by other healthcare providers. The patient should be asked about symptoms and verification with his dentist that he is an established patient with the treatment plan that he described. Prescribers can refuse to write a prescription if they feel that the patient is not being truthful.

**Conclusion:** The dentist was unable to be contacted while the patient was present. This patient refused to stay and receive treatment and no prescription was given. Upon follow up after the holiday, no patient of record with the

name provided had been seen in the dentist office described. This type of behavior was recounted in a recent National Public Radio broadcast where two individuals in recovery for opioid treatment described seeking consultation for broken teeth and received opioid prescriptions without follow-up.<sup>106</sup>

### Case 5

**Initial Presentation:** A 16-year-old female presents for consultation for third molar extraction. She reports no significant medical history and no contraindications for routine dental care. Radiographic assessment reveals that her third molar teeth are fully bony-impacted and it is anticipated that she may experience significant post-operative discomfort upon extraction. She has never had any surgical procedures before and has never taken opioid pain medication.

**Action Plan:** Discuss with patient and guardian the anticipated discomfort levels associated with the proposed procedure and the preferred first-line protocol for pain control. Discuss the risks associated with early exposure to opioid medications, proper storage and disposal and the risks of diversion and misuse. Consider long-acting local anesthetics and use of appropriate steroidal and non-steroidal anti-inflammatory medication to mitigate swelling and discomfort.

**Conclusion:** Patient was given a prescription for ibuprofen, acetaminophen, and was given IV dexamethasone prior to dismissal from the office. Patient was also given a prescription

for a 3-day supply (8 tablets) of an opioid, which she did not fill and reported minimal discomfort after 48 hours at all post-operative visits. Patient and guardian stated that they appreciated the discussion about the risks and benefits of different pain control regimens and understanding normal levels of postoperative discomfort gave them peace of mind that they are receiving ideal care.

### Summary

Dentists and dental healthcare providers are on the front lines of the opioid crisis. We see our patients suffering from substance abuse disorder and we also see our patients struggling with pain. It is critical, therefore, that we are fully aware of the risks and benefits associated with opioid and other analgesics and the best practices for pain control within the dental practice. Further, patient report of dental pain in emergency department results in a significantly higher likelihood of opioid prescriptions than other types of pain.<sup>107</sup> Mitigation of risks associated with opioid prescribing, including thorough screening, patient counseling, PDMP query, and limitation of the number and potency of medications prescribed. Furthermore, identification of particularly vulnerable groups of individuals, for example young people and individuals with a history of substance abuse and judicious use of opioid medications in these groups, can result in adequate pain control with less risk of adverse outcomes. It is critical that dentists are able to better manage pain for patients in ways that reduce individual and societal risk overall.

## Course Test Preview

To receive Continuing Education credit for this course, you must complete the online test. Please go to: [www.dentalcare.com/en-us/professional-education/ce-courses/ce560/test](http://www.dentalcare.com/en-us/professional-education/ce-courses/ce560/test)

- 1. In the latest figures available, the annual costs, including criminal justice, lost wages, medical treatment, etc. associated with the opioid epidemic in America were \_\_\_\_\_.**
  - A. \$52 Billion
  - B. \$65 Billion
  - C. \$78.5 Billion
  - D. \$98 Billion
- 2. Approximately \_\_\_\_ people died due to opioid overdose daily in the United States in 2019.**
  - A. 67
  - B. 95
  - C. 115
  - D. 136
- 3. In what year did heroin become illegal in the United States?**
  - A. 1868
  - B. 1898
  - C. 1915
  - D. 1924
- 4. After concern of undertreatment of pain in the patient population, in 2001 the Joint Commission released a statement requiring pain assessment for \_\_\_\_\_.**
  - A. hospital patients receiving surgical care
  - B. pregnant women in labor
  - C. patients seen in hospital emergency departments
  - D. all patients
- 5. In 2021, the Sackler family (owners of oxycontin makers Purdue Pharma) agreed to pay \_\_\_\_\_ in a settlement with the US government regarding their marketing of oxycontin?**
  - A. \$4.3 Billion
  - B. \$6.8 Billion
  - C. \$8.9 Billion
  - D. \$12.1 Billion
- 6. An 11-line letter to the editor in the New England Journal of Medicine from 1980 was cited 608 times, \_\_\_\_% of which were in support of the statement that opioids are not addictive.**
  - A. 47.2
  - B. 59.1
  - C. 72.2
  - D. 88.6
- 7. Opioid prescription rates have been declining from a high in 2012 of 255 million prescriptions annually to \_\_\_\_\_ prescriptions in 2019.**
  - A. 202 million
  - B. 178 million
  - C. 153 million
  - D. 137 million

8. **What is the only country aside from the United States that allows pharmaceutical companies to advertise on television?**  
A. China  
B. New Zealand  
C. Sierra Leone  
D. Brazil
9. **In 2015 dentists prescribed \_\_\_\_% of all immediate release opioid medications in the United States.**  
A. 7  
B. 12  
C. 21  
D. 50
10. **The younger a patient is when he/she is first exposed to opioid medications, it \_\_\_\_\_ the risk of opioid misuse/abuse in the future.**  
A. increases  
B. decreases  
C. does not change
11. **In a survey of high-school seniors, many nonmedical users of opioid prescriptions get those medications from previous prescriptions. It is estimated that what percentage of 14 to 17 year-olds receive opioid medications after third molar extractions?**  
A. 35%  
B. 50%  
C. 61%  
D. 90%
12. **In a recent study of patients after third molar extraction, which post-operative pain control regimen demonstrated a higher level of efficacy?**  
A. Opioid pain medication  
B. Ibuprofen and Acetaminophen  
C. Both were equally effective, but differed in side effects
13. **Mandatory use of the prescription drug monitoring program caused a \_\_\_\_% reduction in the quantity of opioids prescribed.**  
A. 90  
B. 78  
C. 66  
D. 52
14. **Under the Controlled Substances Act (CSA), which of the following is not a legitimate rationale for prescribing a controlled substance?**  
A. A legitimate medical purpose exists for the use of the controlled substance.  
B. The prescription is issued in the usual course of professional practice.  
C. A prescriber authorizes prescriptions for inappropriately high doses of opioid medications.  
D. The prescriber takes reasonable measures to prevent abuse and diversion as part of daily routine practice.

- 15. Between 2005 and 2008, which of the following was NOT a leading cause of noncriminal sanctions against healthcare providers related to medical mismanagement?**
- A. Inadequate communication with other prescribing physicians to coordinate the care plan.
  - B. Failure to provide a method of drug disposal for unused medications.
  - C. Failure to recognize signs of medication misuse and/or prescribing controlled substances inappropriately to individuals with known pre-existing substance abuse disorders.
  - D. Prescribing inappropriately high doses of opioids.
- 16. In their medical history collection, approximately \_\_\_\_ of dentists assess current alcohol use as part of their medical history and physical.**
- A. 30%
  - B. 45%
  - C. 60%
  - D. 75%
- 17. Approximately half of dentists report consistently counseling patients regarding the potential side effects of opioid medications, but only \_\_\_\_ reports discussing non-medical use of these medications.**
- A. 8%
  - B. 18%
  - C. 27%
  - D. 36%
- 18. Which of the following is NOT a question on the drug abuse screening test (DAST-10)?**
- A. Have you used drugs other than those required for medical reasons?
  - B. Have you neglected your family because of your use of drugs?
  - C. Have you been able to stop using/abusing drugs in the past?
  - D. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
- 19. What is “doctor shopping” in the context of controlled substance misuse/abuse?**
- A. A patient is going from one physician or dentist’s office to another to acquire multiple prescriptions for controlled substances to treat the same symptom.
  - B. A patient is injuring him/herself in order to seek controlled substances from a physician or emergency room.
  - C. A patient is taking one prescription to multiple pharmacies to try to get it filled.
  - D. A patient is seeking care for true acute dental pain.
- 20. Patients who report to the emergency department with a complaint of dental pain were \_\_\_\_\_ to receive opioid prescriptions than those presenting with reports of pain from other sources.**
- A. less likely
  - B. more likely
  - C. equally as likely
- 21. All of the following are mechanisms that dentists can employ to reduce risk to their patients while still providing adequate pain control, EXCEPT:**
- A. Patient counseling for drug misuse, diversion, and risks.
  - B. PDMP query.
  - C. Limitation of the number and potency of medications prescribed.
  - D. Utilization of higher-dose and/or extended release opioid medications.



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### Additional Resources

- [Calculating Daily Dosages of Opioids for Safer Prescribing](#). Accessed October 19, 2021.
- [Safe Disposal of Medications](#). Accessed October 19, 2021.
- [National Prescription Drug Take Back Day](#). Accessed October 19, 2021.
- [DEA Registered Drug Collector Look Up: 1-800-882-9539 \(DEA Office of Diversion Control Registration Center\)](#). Accessed October 19, 2021.
- [Evidence Based Screening Tools for Substance Misuse/Abuse](#). Accessed October 19, 2021.
- [Keith DA, Shannon TA, Kulich R. The prescription monitoring program data: What it can tell you. J Am Dent Assoc. 2018 Apr;149\(4\):266-272. doi: 10.1016/j.adaj.2018.02.015.](#)
- [Prescription Drug Monitoring Frequently Asked Questions \(FAQ\)](#). Accessed October 19, 2021.
- [PDMP State Profiles](#). Accessed October 19, 2021.
- [The Crime of the Century. HBO Original Documentary](#). Accessed October 19, 2021.
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## About the Authors

### **Maria L. Geisinger, DDS, MS**



Mia L. Geisinger, DDS, MS is a Professor and Director of Advanced Education in Periodontology in the Department of Periodontology in the University of Alabama at Birmingham (UAB) School of Dentistry. Dr. Geisinger received her BS in Biology from Duke University, her DDS from Columbia University School of Dental Medicine, and her MS and Certificate in Periodontology and Implantology from the University of Texas Health Science Center at San Antonio. Dr. Geisinger is a Diplomate in the American Board of Periodontology and a Fellow in the International Team for Implantology. She has served as the

President of the American Academy of Periodontology Foundation, as the Chair of the American Dental Association's Council on Scientific Affairs, and on multiple national and regional organized dentistry committees. She currently serves as an AAP District III Trustee, as a Board member for the ADA's Science and Research Institute, and on numerous AAP and ADA committees and task forces. She has authored over 50 peer-reviewed publications and her research interests include periodontal and systemic disease interaction, implant dentistry in the periodontally compromised dentition, and novel treatment strategies for oral soft and hard tissue regeneration. She lectures nationally and internationally on topics in periodontology and oral healthcare.

Email: [miagd@uab.edu](mailto:miagd@uab.edu)

### **Luis Gerado Suarez Guzman, DMD**



Originally from Venezuela, Dr. Guzman graduated from the University of Florida in 2005 with a Bachelor of Science degree in Microbiology, and a Doctor in Dental Sciences degree from Universidad Latina de Costa Rica in 2010. Dr. Guzman continued his training at the University of Alabama at Birmingham, from 2011-2017, where he completed 3-year advanced education in Prosthodontics, 3-year advanced education in Periodontology, and a Master of Clinical Science. He is a Diplomate of the American Board of Periodontology and practices in Auburn, Alabama. He has conducted clinical research focused on

implant treatment planning, CBCT preoperative assessment, bone density, and long and short-term assessments of implant stability. He lectures nationally and internationally on implant treatment planning and interdisciplinary complex oral rehabilitations.

Email: [guzman@uab.edu](mailto:guzman@uab.edu)