

# Journal

CALIFORNIA DENTAL ASSOCIATION



March 2019

Practical Prescribing  
Considerations

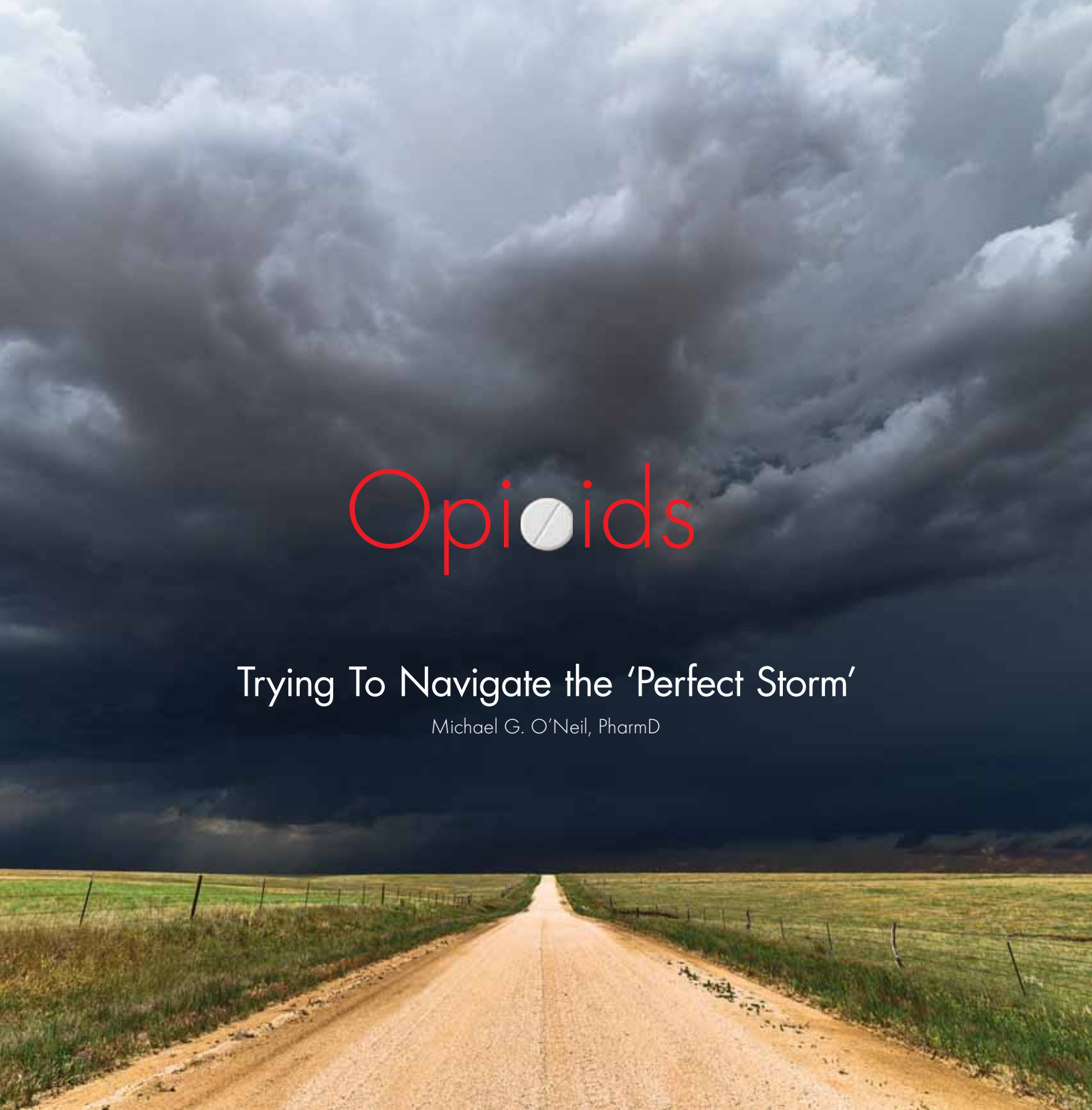
Common Interactions and  
Special Considerations

Medication Diversions

## Opioids

Trying To Navigate the 'Perfect Storm'

Michael G. O'Neil, PharmD



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## This Is Mommy's Angry Face

Kerry K. Carney, DDS, CDE

That was the punchline of a joke a speaker told at a continuing-education meeting I attended. The speaker was explaining that she had received enough Botox injections that it was necessary to give her daughter a verbal clue to her emotional state because her facial muscles were no longer responding appropriately for that communication.

The joke got a big laugh and the speaker did look very wrinkle-free but the premise stuck in the back of my mind. What are the ramifications of losing one avenue of emotional communication?

But first, a little Botox 101. Botox is the trademarked name of the purified version of botulinum toxin Type A. "Botulinum toxin is one of the most poisonous substances known to man. Scientists have estimated that a single gram could kill as many as 1 million people and a couple of kilograms could kill every human on earth."<sup>1</sup> Despite the toxicity of the exotoxin, Botox (and other versions with various names) has become integrated into our contemporary culture. Botox was licensed by Allergan in 1989.<sup>2</sup>

Before Botox became "a thing," the public heard of the deadly paralyzing effects of botulism related to the consumption of improperly prepared foods. Recounts of sickness and death following potluck gatherings put the fear of death into me at every church dinner. The common story was that just sharing the same serving spoon could transmit enough of the *Clostridium botulinum* exotoxin to kill an adult. Even that natural sweetener honey, if unpasteurized, can contain enough *Clostridium botulinum* spores to harm an infant.

The exotoxin works by inhibiting the release of the neurotransmitter, acetylcholine. The lack of the



In reducing the function of those facial muscles that produce wrinkles, we are also affecting the same muscles that are involved in expressing our emotional states.

neurotransmitter means that the muscle does not get the message to contract. After three to four months, the effect appears to wear off and another injection is necessary to paralyze the muscle again. Over time, the lack of the transmitter may produce permanent muscle weakening or atrophy.

In the 1970s, the paralyzing effects of the toxin drew the attention of those studying ways to treat strabismus (a condition sometimes referred to as cross-eyed). Weakening the opposing muscle could help correct the misalignment of the eyes.

The toxin's paralyzing property was recruited for the treatment of vocal-cord dysfunction, facial tics, migraines and excessive sweating among other conditions that resulted from hypertonic muscular activity.

The paralyzing effect had secondary side effects that became well known and popular in the 90s. When certain facial muscles were paralyzed, the wrinkles that were the lasting product of the contraction of these muscles became less noticeable. And voilà, a new cosmetic procedure was introduced that, in comparison with a surgical facelift, was faster, less expensive and less invasive.

The American Society of Plastic Surgeons reported 7.23 million Botox procedures in 2017. That was up 2 percent from the previous year and almost three times the number of soft-tissue filler procedures.<sup>3</sup> The Botox trend is still on the rise and its concomitant "still face"

may become more common. The goal of Botox injections is not to create a facial mask; but in reducing the function of those facial muscles that produce wrinkles, we are also affecting the same muscles that are involved in expressing our emotional states.

The reduced facial expression of internal emotional states that result from Botox therapy will be a matter of degree, but that reduced facial expression poses an interesting question: Do relaxed expression lines (read: "wrinkles") undermine our ability to understand other people's emotional state?

This is a twofold question. First, as the joke pointed out, the speaker's daughter needed a verbal clue to help her understand her mother's emotional state because she could not recognize any traditional facial clues. The corrugator muscles were not being activated so there was no furrowed brow to warn the daughter of mommy's displeasure.

There is a theory (embodiment cognition) that describes our tendency to mirror the facial expression of an emotion as a way to help us understand or empathize with other people. It is described as a proprioceptive feedback process.

If you have ever been in a family gathering with a new baby, you have probably seen or participated in this feedback process. The new baby is presented and everyone smiles and leans in close to the baby, possibly even tickling the baby's cheek to elicit a smile back

from the baby. There is general shared happiness when the child mirrors the smiling faces she sees with a sweet baby smile. No one doubts the sincerity of that baby's smile, but in fact she is learning to experience the emotions of others by mirroring their facial-muscle activation.

According to this theory, not only do we read an emotional state based on physical facial clues, we also mirror the appropriate physical clues when we try to understand an emotional state.

A recent experiment examined how facial-muscle paralysis might make mirroring impossible and thereby interfere with the ability to recognize or understand

an emotion. The researchers tested how Botox treatments may affect perceptions of emotions. In the experiment, subjects carried "out a series of different tests assessing their understanding of emotions, immediately before and two weeks after they had a Botox-based aesthetic procedure, and compared the measurement with a similar sample of subjects who had no treatment. Regardless of the types of measurement (judgment or reaction times), the effect of the paralysis was obvious ... The negative effect is very clear when the expressions observed are subtle ... for 'equivocal' stimuli that are more difficult to pick up, the effect of the

paralysis was very strong."<sup>4</sup> In other words, though a big smile was easy to understand, the more subtle, slight activation of facial muscles that convey emotion was more difficult to mirror and recognize.

Both the ability to read facial-muscle activity and the ability to mirror facial activity seem to have a role to play in understanding emotional states.


Botox is an increasingly popular therapeutic agent. The fact that it can effect changes in and around the mouth makes it seem to fit squarely within the dentist's tool kit. The smile is where function and beauty combine to symbolize health and happiness.

When our world changes, we may need to adapt. When our means of communication changes, we may need to adapt. When the lush literary environment of the traditional letter is replaced by text messaging, we may need to use emojis to indicate the emotional envelope of that text. As the original joke illustrated, Botox treatments required that verbal communication between mother and daughter become more specific and meaningful in order to clearly transmit the mother's heightened emotional state.

This is just another example of how a technology that appears to have a discrete impact on an organ system may have subtle influences on other aspects of our lives. Just to let you know, this is my quizzical face. ■

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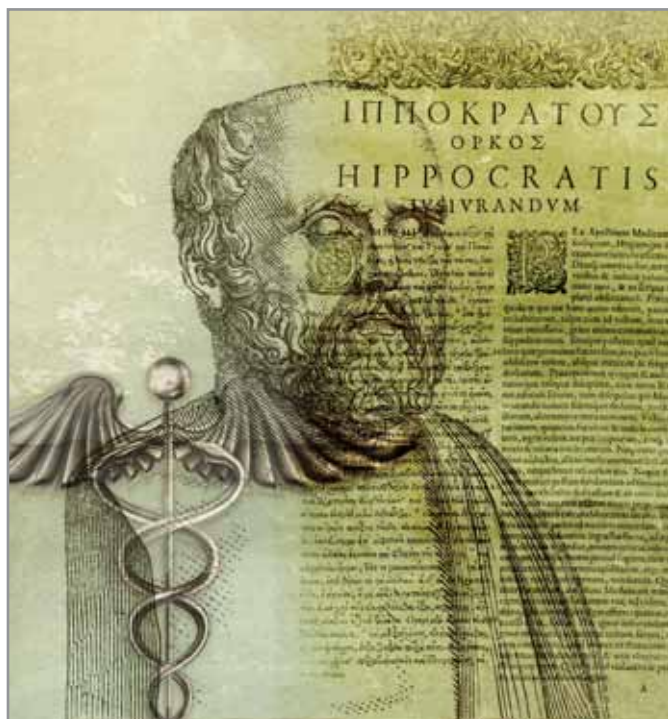
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## Quacks, Charlatans and the Hippocratic Oath

David W. Chambers, EdM, MBA, PhD

Once while lecturing, I mentioned that “first, do no harm” is not found in the Hippocratic Oath. This caused a bit of a distraction when a group in the back huddled around a laptop. Finally, it was exclaimed, quite audibly, “[Expletive deleted], he’s right.”

Primum non nocere is Latin and those at the Hippocratic School spoke Greek. It appears that “first, do not harm” was introduced by lawyers in the late Middle Ages. The current fashion of connecting the slogan and the Hippocratic Corpus is pseudointellectualism. There is small harm in that.

A reasonable translation of the phrase in question is “I will use my art to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing.” The paragraph goes on to give examples of not poisoning people or inducing abortions. The point is essentially that a healer will not use the power of his or her profession for *evil* ends.

The difference between “harm” and “evil” is intent. The difference between manslaughter and murder is intent. “Bad outcomes” (a politically correct term for harms) happen in dentistry, but that is harm without intent.

Quacks are healers who use techniques disapproved of by the established community. Generally, they believe in what they are doing. The Hippocratic School felt all who cut tissue, as for example for relief of gall stones, were outside the profession. All dentists would have been regarded as quacks.

Charlatans, on the other hand, know they are causing harm. That makes them evil. Dentists who overtreat or fraudulently bill are charlatans.

It is evil to persist in a practice when expected harm has been pointed out, to avoid reasonable investigation to determining whether harm is likely or to pass silently by as others are causing harm.

Quacks advertise the practices they believe (but the rest of us doubt) will be of benefit to patients. Charlatans hide their harmful work. So information plays a different role in these two cases. Confronting bad actors with the evidence that their behavior is damaging should help in the former case but not the latter.

Failure to take corrective action in the face of valid evidence of harm is an ethical shortcoming. It is called negligence. An unrepentant quack is negligent. Failure to provide that evidence when we know what quacks are doing to patients is also negligence. It is unethical to ignore quacks.

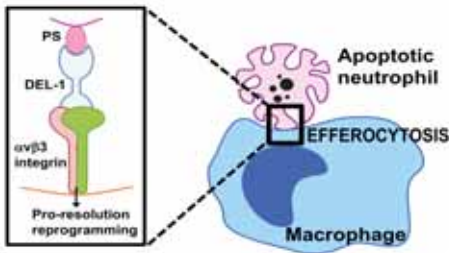
Confronting charlatans is another matter. The most predictable effect is to drive the bad acting underground. Communication is cut off by denial; corrective action is avoided as being less in the charlatan’s interest than continuing to misbehave. Information is not the answer here. The system of rewards and punishments must be altered to favor doing what is right. And it is negligent for the profession not to do so. ■

The nub:

1. “First, do not harm” is a pseudo-ethical principle.
2. Quacks cause harm; charlatans are evil.
3. It is negligent to overlook others causing harm.

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**David W. Chambers, EdM, MBA, PhD**, is a professor of dental education at the University of the Pacific, Arthur A. Dugoni School of Dentistry in San Francisco and the editor of the American College of Dentists.



Researchers found that the protein Del-1 takes on different functions depending on the cell that secretes it. (Credit: University of Pennsylvania)

## Research Finds To Resolve Inflammation, Location Matters

A new study of periodontitis led by George Hajishengallis, DDS, PhD, of the University of Pennsylvania, the Thomas W. Evans Centennial Professor in Penn's School of Dental Medicine, and Triantafyllos Chavakis, PhD, of the Technical University of Dresden, has illuminated the protein Del-1 as a key player in preventing inflammation caused by a variety of health conditions, such as multiple sclerosis, lupus, arthritis, diabetes and cancer. The study was published in the journal *Nature Immunology* in November 2018.

While inflammation can serve as a normal response to help the body deal with injury or infection, problems arise when it persists, potentially harming surrounding tissues.

To prevent or ameliorate this damage, the body relies on a strategy to actively clear inflammation.

"It's not just extinguishing the fire of inflammation," Dr. Hajishengallis said. "You also have to return things to the way they were before the inflammatory destruction."

While prior research had underscored Del-1's role in curbing the initiation of inflammation, this new study finds that it can serve a very different function: actively working to clear inflammation. The research team found that which function the protein performs depends

## Continuing Education Improves Primary Care Physicians' Oral Health Knowledge

A study published in the journal *BMC Oral Health* in December 2018 finds that the oral health care (OHC) knowledge of primary care physicians improved considerably after attending education seminars on the subject.

Researchers from the School of Dentistry, Tehran University of Medical Sciences, in Iran conducted an educational trial for primary care physicians working in public health centers in Tehran. The trial included a self-administered questionnaire about pediatric dentistry, general dental and dentistry-related medical knowledge and backgrounds. Physicians in intervention group A received an educational intervention and those in group B received only an OHC pamphlet. Group C served as the control. A postintervention survey followed four months later to measure the difference in the physicians' knowledge, while the Chi-square test, ANOVA and linear regression analysis served for statistical analysis.

Study results showed the intervention significantly increased the physicians' scores on oral health knowledge in all three domains and their total knowledge score. Those physicians who had lower knowledge scores at the baseline showed a higher increase in their postintervention knowledge.

These findings suggest that OHC topics should be included in physicians' C.M.E. programs or in their curriculum to promote oral health, especially among nonprivileged populations, according to the study.

"Deepening physicians' understanding of the relationship between the oral cavity and the rest of the body and training them to perform oral examinations, counsel patients and refer them to dentists when needed can help primary care physicians reduce oral health disparities," the authors wrote.

Read more of this study in *BMC Oral Health* (2018); doi.org/10.1186/s12903-018-0676-2.



on the cell type that expresses it.

"Our findings prompted us to propose the 'location principle' in the spatial regulation of the immune response," Dr. Chavakis said. "In other words, homeostatic molecules — those responsible for maintaining equilibrium in the body — may perform different regulatory functions depending on their location. Tissues are not a sack of molecules; the

geography is very important."

As a pro-resolution protein, Del-1 is probably acting downstream of therapeutics that promote periodontal health, according to the study. For instance, the complement inhibitor AMY-101, which can cause a rise in Del-1 levels, may depend on Del-1 to accelerate the resolution of inflammation.

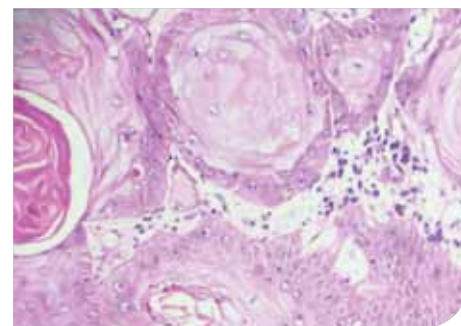
Read more of this study in *Nature Immunology* (2018); doi.org/10.1038/s41590-018-0249-1.



## Study Identifies Prognostic Signature of Oral Cancer

Researchers in Brazil have identified a correlation between oral cancer progression and the abundance of certain proteins present in tumor tissue and saliva. The discovery offers a parameter for predicting the disease's progression and points to a strategy for overcoming the limitations of clinical and imaging exams. It could also help guide the ideal treatment for each patient.

The study, published in *Nature Communications* in late 2018, began in the discovery phase with a proteomic analysis of tissue from different tumor areas using 120 microdissected samples. In the verification phase, prognostic signatures were confirmed in approximately 800 tissue samples by immunohistochemistry and in 120 samples by targeted proteomics.



Proteomics focuses on the identification, localization and functional analysis of the proteins in a sample, which may consist of tissue or cells. The proteins are quantified, posttranslational modifications are detected and their activity and interactions are assessed.

“One strategy consisted of gauging the abundance of the selected proteins in independent tissue samples using immunohistochemistry with antibodies. The other consisted of monitoring the same preselected targets in patients’ saliva,” said Adriana Franco Paes Leme, PhD, a researcher at the National Energy and Materials Research Center’s National Bioscience Laboratory.

Saliva was chosen because of the location of mouth cancer: In the mouth, proteins can be secreted by neoplastic cells. Researchers verified the proteins in saliva from 40 patients and technical triplicates were analyzed to achieve the highest possible confidence level for the results in that phase of the study.

After analyzing the saliva samples, bioinformatics and machine-learning techniques were used to arrive at prognostic signatures, verifying which of the proteins or peptides selected in the first phase could distinguish between patients with and without cervical lymph node metastasis.

“The data led to robust results that are highly promising as guides to defining the severity of the disease,” Dr. Paes Leme said.

Learn more about this study in *Nature Communications* (2018); doi.org/10.1038/s41467-018-05696-2.

## Study Finds Juneau’s Lack of Fluoride Worsened Children’s Oral Health

Juneau, Alaska’s capital, is seeing an increase in dental costs for families with young children and the lack of fluoride in its tap water could be to blame, according to a study published in *BMC Oral Health* in December 2018.

Twelve years ago, Juneau stopped fluoridating tap water. Public health researcher Jennifer Meyer, PhD, MPH, assistant professor of allied health at the University of Alaska Anchorage, studied Medicaid dental claims for two years that were filed for children in Juneau’s main ZIP code. She reviewed the records for about 1,900 children before and after fluoride was removed. Her results showed additional treatment for caries and the decay or crumbling of teeth. Older children saw a less dramatic increase, according to research.

“By taking fluoride out of the water supply, the trade-off for that is children are going to experience one additional caries procedure per year, at a ballpark (cost) of \$300 more per child,” said Dr. Meyer.

When the water was fluoridated, children under age 6 years averaged about 1 1/2 cavity-related procedures per year. After fluoride was gone, that went up to about 2 1/2 procedures a year, according to the study.

“Parents can get prescriptions for fluoride tablets, but it can be a headache,” Dr. Meyers said. “They have to remember to fill the prescription, administer the fluoride and make sure children do not take too much.”

The U.S. Centers for Disease Control and Prevention say low levels of fluoride in drinking water are safe.

Learn more about this study in *BMC Oral Health* (2018); doi.org/10.1186/s12903-018-0684-2.





A hand with a skin disease on the palm and wrist. (Credit: Colored lithograph by W. Bagg, 1847. Wikimedia Commons)

## Psoriasis Linked to Periodontal Disease

New research out of Germany has linked psoriasis with increased risk of periodontal disease. The study was published in the *Journal of Investigative Dermatology* in January 2019 and reported on in an article on drbiscupid.com.

Researchers from the Clinic of Conservative Dentistry and Periodontology at the University Medical Center Schleswig-Holstein in Germany and the Psoriasis Center at the university's department of dermatology enrolled 100 patients with psoriasis and 101 patients without psoriasis in the study. A dentist evaluated the oral health of all patients by performing bleeding on probing, community periodontal index (CPI) and assessments of decayed, missing and filled teeth.

Two statistical analyses were then performed. In the first, patients with psoriasis who had similar demographic and health factors were matched to those without psoriasis. This matched analysis resulted in 53 pairs of patients with similar ages, oral health care habits, food intake, body mass indexes and education levels.

The second statistical analysis, a logistic regression, included all 201 patients. From this analysis, the researchers were able to identify whether psoriasis may be an independent risk factor for periodontal disease.

The study found that patients with psoriasis had significantly worse periodontal health than those without psoriasis. In the matched analysis,

patients with psoriasis had worse bleeding on probing and CPI scores than their peers without psoriasis. They also reported significantly more bleeding when brushing their teeth.

The logistic regression analysis confirmed that the presence of psoriasis was a significant risk factor for worse bleeding on probing and CPI scores, even after adjusting for other potential confounding factors.

Overall, the study findings suggest that psoriasis and periodontal disease may be

linked. "Psoriasis patients showed significantly higher values for parameters addressing periodontal inflammation," the authors wrote. "Psoriasis management should, therefore, include regular dental checks on periodontal status and respective treatment where required."

The authors recommended that patients with psoriasis include dental care as part of their treatment routine.

Read the study in the *Journal of Investigative Dermatology* (2019); doi.org/10.1016/j.jid.2018.12.014.

## Teeth of Ancient Nun Unveils Clues About Medieval Manuscripts

A recent study examining the dental remains of an ancient nun is shedding light on the role of women in the creation of medieval manuscripts. The study, published in *Science Advances*, was conducted by an international team of researchers led by the Max Planck Institute for the Science of Human History and the University of York in England.

Researchers analyzed the dental calculus of a middle-aged woman buried at a women's monastery in Germany around 1100 AD. Their examination showed several flecks of blue particles embedded within her dental calculus. Careful analysis revealed the blue pigment to be made from lapis lazuli – suggesting the woman was likely a painter of richly illuminated religious texts.

"Based on the distribution of the pigment in her mouth, we concluded that the most likely scenario was that she was herself painting with the pigment and licking the end of the brush while painting," said Monica Tromp, co-author and microbiology archaeologist at the Max Planck Institute for the Science of Human History.

The findings of this study challenge long-held beliefs in the field. The discovery came as a surprise to researchers who believed women played a very little role in the production of manuscripts. While Germany is known to have been an active center of book production during this period, identifying female scribes has been difficult due to many medieval scribes and painters not signing their work – a practice that especially applied to women.

Read more about this study in *Science Advances* (2019); doi:10.1126/sciadv.aau7126.

Archaeological tooth. (Credit: C. Warinner)

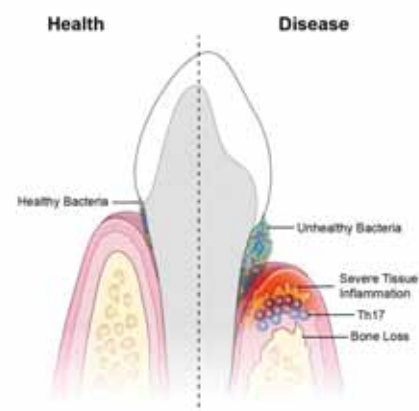


## Unhealthy Microbes Tied to Inflammation, Bone Loss in Periodontitis

An unhealthy population of microbes in the mouth triggers specialized immune cells that inflame and destroy tissues, leading to the type of bone loss associated with a severe form of gum disease, according to a new study from the National Institute of Dental and Craniofacial Research at the National Institutes of Health and the University of Pennsylvania School

of Dental Medicine, Philadelphia. The study was published in the journal *Science Translational Medicine* in October 2018.

Researchers observed that T helper (Th) 17 cells were much more prevalent in the gum tissue of humans with periodontitis than in the gums of their healthy counterparts and that the amount of Th17 cells correlated with disease severity.



(Credit: National Institute of Dental and Craniofacial Research, NIH)

Th17 cells normally live in so-called barrier sites — such as the mouth, skin and digestive tract — where germs make first contact with the body and are known to protect against oral thrush. But they are also linked to inflammatory diseases such as psoriasis and colitis, suggesting that they play dual roles in health and disease.

Researchers found that, similar to humans, more Th17 cells accumulated in the gums of mice with periodontitis compared to healthy mice, which served as a control group. To see if the oral microbiome might be the trigger for Th17 cell accumulation, the researchers placed mice on a broad-spectrum antibiotic cocktail.

They found that eliminating oral microbes prevented expansion of Th17 cells in the gums of mice with periodontitis while leaving other immune cells unaffected, suggesting that an unhealthy bacterial population triggers Th17 cell accumulation.

When the scientists genetically engineered mice to lack Th17 cells or gave the animals a small-molecule drug that prevents Th17 cell development, they saw similar outcomes: reduced bone loss from periodontitis.

RNA analysis showed the Th17-blocking drug led to reduced expression of genes involved in inflammation, tissue destruction and bone loss, suggesting that Th17 cells may mediate these processes in periodontitis.

Read more of this study in *Science Translational Medicine* (2018); doi:10.1126/scitranslmed.aat0797.

## Dental Treatment Adherence of Teens Impacted by Socioeconomic Factors

A study published in *BMC Oral Health* in January 2019 finds that family, friends and drug use could have an impact on the oral health of teens.

Researchers from the community dentistry department at the State University of Campinas Piracicaba Dental School in Brazil set out to determine if young adults stuck with recommended dental treatments during their transition from adolescence to adulthood.

Participants completed a questionnaire about socioeconomic factors as well as alcohol and drug use. Researchers then used that information to analyze the relationship between these issues and the participants' willingness to seek the use of a medical service and complete the recommended treatment.

The study included boys and girls between the ages of 15 and 19 who lived in a city in Brazil and received care in 2015 through the government-run primary health care unit for their geographic location. Almost 1,200 teens underwent an evaluation, and of these, 474 received referrals for dental treatment.

After 18 months, 325 of the participants underwent an evaluation to determine an absence of caries and periodontal disease that would indicate treatment adherence. Of the 325 teens, 164 (51 percent) stuck to treatment.

Researchers found that housing and social influences had a significant impact on treatment adherence. Treatment decreased among those whose families did not own their home, according to the study. Additionally, the results showed that participants with friends who used drugs were less likely to stick to treatment.

"The study's results emphasized the importance of the interaction between adolescent dental patients and their environment, including relationships with friends and family," stated the authors, led by Sílvia Letícia Freddo, PhD, MPH, of the community dentistry department at the State University of Campinas Piracicaba Dental School.

Learn more about this study in *BMC Oral Health* (2019); doi.org/10.1186/s12903-018-0674-4.









# Trying To Navigate the 'Perfect Storm'

Michael G. O'Neil, PharmD

## GUEST EDITOR

**Michael G. O'Neil, PharmD**, received his Doctor of Pharmacy from the University of North Carolina at Chapel Hill, N.C., and has been a practicing pharmacist for more than 30 years. Dr. O'Neil has also served as a consultant and expert on prescription drug misuse and diversion for several entities for more than 25 years including the Drug Enforcement Administration, the bureau of criminal investigation, the U.S. Attorney's Office and the American Association of Dental Boards. He is a professor and chair of the department of pharmacy practice at the South College School of Pharmacy in Knoxville, Tenn., specializing in pain management, drug diversion and substance use disorders.

*Conflict of Interest*

*Disclosure: None reported.*

The current opioid epidemic in the United States has evolved to such a point that nearly every man, woman and child has been impacted either directly or indirectly. A series of multiple, unpredictable forces have collided to create one of the largest man-made catastrophes ever known. At the beginning of the epidemic lies a trail of opioid prescriptions. At the end of the trail are graveyards full of opioid-associated deaths. For surviving patients with the diagnosis of an opioid use disorder (OUD), receiving "normal" or "fair" treatment from health care professionals due to the stigmas associated with an OUD can be difficult. Dentists deal with demanding patients undergoing painful dental procedures who expect to be "pain-free" postoperatively as well as individuals targeting them to obtain controlled substances for inappropriate use or sale. Treating patients who have an OUD becomes even more complex when patients are receiving medication-assisted treatment such as methadone or buprenorphine. As dentistry, medicine and pharmacy have evolved so has the use and misuse of substances used to alleviate all types of pain. The evolution of "misuse" has progressed much faster than the recognition of the dangers as well as the true efficacy of medications such as opioids. Current treatment guidelines recognize opioids only

as a backup to acetaminophen (APAP) and nonsteroidal anti-inflammatory agents (NSAIDs) for moderate to severe pain, yet opioid prescriptions in many practices remain first-line therapy for all patients. Nearly all practitioners are now mandated by professional boards and law enforcement agencies to utilize controlled substance monitoring program databases (CURES 2.0 in California) prior to prescribing controlled substances. The complex mix of patients, behaviors and circumstances presents a variety of challenges in pain management, OUD and prescription drug diversion that require dentists to also be skilled interviewers, psychologists and policemen should controlled substances be truly warranted.

As a pharmacist with a practice based in trauma, surgery, emergency medicine and pain management beginning in 1988, the potent opioids were part of everyday pharmaceutical armamentarium to treat moderate to severe pain. In 1995, I began reviewing records for the United States Drug Enforcement Administration (DEA) evaluating appropriateness of treatment, prescribing practices and record-keeping. In 2005, I collaborated with the West Virginia Board of Dental Examiners on developing a course for dentists who had signed consent agreements with the dental board and who had violations surrounding opioid prescribing. Completion of a

30-hour continuing education program involving topics such as pharmacotherapy, prescription medication diversion and drug misuse was a mandate of the dental consent agreement. For the next few years, I met one-on-one with dentists to complete this training. Every dentist was quite skilled. None of them were an overt pill mill. They all were excessive in their opioids prescribing. A major requirement of the consent order included temporary cessation of prescribing any controlled substances until the course was completed. All of the dentists involved in these agreements performed a large amount of extractions. At the completion of their coursework, I asked each dentist two simple questions: “While under the consent order, did you perform fewer surgical extractions because you could not prescribe opioids?” and “How many more complaints regarding inadequate analgesia did you receive following these procedures compared to when you did prescribe opioids?”

All of these dentists answered both questions exactly the same. They didn’t do any fewer in number or less-complicated surgeries and there was no increase in complaints for inadequate analgesia utilizing first-line NSAIDS and APAP.

Another major observation regarding dental prescribing came when dental colleagues would annually volunteer their time and skills at a three-day free dental clinic for indigent patients. During these clinics, dentists would literally extract thousands of teeth. Many patients would have 10 to 15 teeth extracted at one time. Never were patients prescribed one dose of an opioid ... and patients seemed to do just fine. These observations were perplexing.

In March 2010, I participated in a steering committee of the Tufts Health Care Institute (TCHI) program on opioid risk management in Boston. This was a panel of experts on opioid misuse and diversion from academia, professional

organizations, industry, law enforcement and governmental agencies. This initiative was the first well-documented attempt to assess and address opioid use in dentistry. The panel operated as a workgroup that participated in meetings and discussions regarding the role of dentists in preventing opioid misuse. This created an opportunity to collaborate with the best practitioners and educators in the dental community, such as Drs. Paul Moore, Elliot Hersh and Richard Smith.

For me, these unique experiences culminated in two major thoughts:

The overt disparity in prescribing opioids versus NSAIDS/APAP as first-line agents is so great that patients are being put at risk unnecessarily.

The overt disparity in prescribing opioids versus NSAIDS/APAP as first-line agents is so great that patients are being put at risk unnecessarily and the topics of pain management, substance use disorders (SUDs) and prescription medication diversion cannot be taught in a vacuum and must be taught to all health care practitioners ... immediately.

The January 2018 issue of the *Journal of the California Dental Association* had a very insightful and clever editorial written by Dr. Kerry K. Carney, editor-in-chief, entitled “Why We Change: Kirk vs. Spock.”<sup>1</sup> Her explanations of intellect versus emotions that drive dentist decision-making serve as the perfect prelude for this issue of the *Journal*. A key point made by Dr. Carney was the impact of “one bad outcome” regardless of the statistical likelihood for it

to even occur. The feelings and emotions around the “negative” event were more likely to drive decisions than the science supporting that the event is not even likely to occur. When the adverse event or outcome is really bad, then emotional attachment to decision-making becomes even greater. If the dentist or the mom of a “deceased child” knew the initial trigger for that child started with an unnecessary opioid prescription, how emotional and impactful would that one event be? Dr. Carney also pointed out that perceived barriers by dentists may be equally influential. If patients aren’t happy due to the perception of substandard treatment — for any reason — then patients may not return for future treatments. This fact alone likely creates the greatest dilemma for dentists. Observationally, dental patients anticipate extreme pain well before a dental procedure. I can think of only a few reasons not to return to a practitioner that are greater than inadequate treatment of pain. Equal, if not greater than, a patient’s anticipation for pain from a dental procedure is their expectation to be “pain-free” postprocedure. If personal clinical experience is the major driver for decision-making and opioids have always worked with minimal complaints from patients, why change? The answer to that is slowly becoming clearer. The study “Prescription Opioid Exposures Among Children and Adolescents in the United States: 2000–2015,” reported by Jakob et al. in the April 2017 issue of *Pediatrics*, is beginning to make appropriate waves regarding the effects of prescribing of opioids to adolescents and the future misuse of these patient-preferred agents.<sup>2</sup> Because problems with opioid misuse do not usually materialize until years later, how would the dentists ever make the connection that their opioid prescribing lit the fuse for a particular patient? So back to the question, “Why change?” or consider the harder question, “How do we

change?" The prevalence of opioid misuse is currently so great that every dentist should be screening every patient, whether they know the patient or not, for potential SUDs. Should opioids be prescribed, and rarely should they be considered first-line agents, counseling should be given to the patient or the adolescent's adult guardian about the potential for opioid misuse later in life. My suspect is that when mothers are told about this potential risk for later-in-life opioid misuse more caution will be given or at least they will be less cavalier in their willingness to dole out opioids to the family.

The following four articles were written to provide practical considerations for everyday dentists regarding important concepts surrounding SUDs, pain management and prescription medication diversion. Readers are encouraged to utilize more-detailed references cited in the articles should a more comprehensive review of the literature be desired. The first article by O'Neil and Melton outlines new terminologies used for diagnosing and classifying patients with SUDs. A dentist's understanding of these terminologies is necessary to interpret notes from medical colleagues and accurately make referrals. A brief overview of the components of SUDs including anatomy and physiology are presented. Rationales are introduced for prescription medication misuse, newer prescription medications commonly misused, prevention and treatment strategies for misuse. The second article by Kane and O'Neil outlines how we got here in regard to the opioid epidemic, the evolution of the role of dentists, analgesic considerations and new screening and counseling components surround SUDs and opioid prescribing. The third article by DeFalco and O'Neil discusses a variety of "tricky" patient scenarios such as medical/recreational use of cannabis, use of alcohol, patients receiving methadone or buprenorphine for medication-assisted treatment and

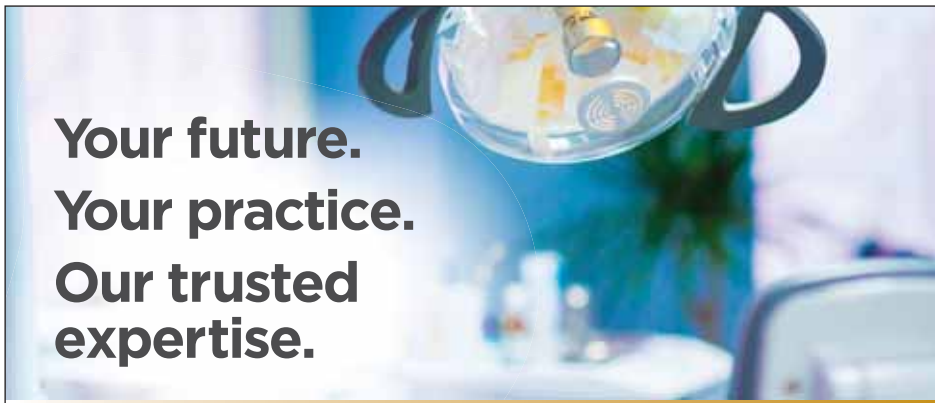
naltrexone. Each of these special groups requires different analysis and prescribing considerations that are outlined for each clinical challenge. The fourth article by O'Neil, Winbigler and Sowards provides an overview of the various behaviors and tactics commonly seen with attempts to acquire controlled substances. The article further details "red flags" that warrant further questioning prior to prescribing controlled substances. With new state regulations mandating use of the CURES 2.0 program, guidance is provided to help dentists make expedient and safe decisions.

Finally, I am very appreciative for all the exciting learning and teaching opportunities offered to me by the dental community

including, but not limited to, the West Virginia Dental Board, the California Dental Association, the American Dental Association and individual colleagues. I am forever in debt to Dr. Richard "Duff" Smith. His leadership, clinical skills, vision, persistence for patient safety in dentistry and friendship provided an opportunity for me to hopefully make a difference. ■

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# Practicing Dentistry in a World of Pain, Prescription-Drug Misuse and Medication Diversion: Introduction and Overview

Michael G. O'Neil, PharmD, and Sarah T. Melton, PharmD, BCPP, BCACP

**ABSTRACT** The increase in opioid-related deaths as well as an increase in the number of prescriptions written by dentists for analgesia and the evidence of risk associated with first exposure to opioids indicate the need for immediate response. Dentists may be targeted by individuals whose intent is to misuse or divert prescription medications. Thus, dentists must understand the fundamental issues associated with substance use disorders, dental analgesia and prescription medication diversion to optimize patient care.

## AUTHORS

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In October 2017, the Department of Health and Human Services declared a national state of emergency because of escalating opioid-related overdoses and deaths.<sup>1,2</sup> In 2016, there were 2,012 opioid-related overdose deaths in California, a rate of 4.9 deaths per 100,000 persons compared with the national rate of 13.3 deaths per 100,000 persons.<sup>3</sup> The need for immediate action is necessitated by the high incidence of opioid-related deaths, the association of the large number of opioid prescriptions written by dentists and recent evidence surrounding risks of first exposure to opioids in adolescents.<sup>4</sup> Data reported in 2009 indicate that dentists may be responsible for nearly 31 percent of adolescent first-exposure to opioids.<sup>5</sup> Additionally, dentists are frequently targeted by individuals whose intent is to misuse or divert prescription medications.

To further complicate matters, patients who receive dental procedures often have unrealistic expectations for analgesia following procedures. The complexity of the need to treat pain, minimize the risk of substance misuse and prevent medication diversion requires dentists to have a sound understanding of substance use disorders (SUDs), dental analgesia and prescription medication diversion.

**Terminology**

The stigma associated with individuals suffering from “addiction,” regardless of the substance misused, has been shown to have a major impact on the treatment of patients not only in the medical community but in society at large.<sup>6,7</sup> The need to remove this stigma and to update diagnostic considerations for addiction has led to significant changes in the terminology used in *The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5).<sup>8</sup> Dentists must be knowledgeable in this terminology for several reasons, including interpreting patient records from other health care providers, understanding current literature, communicating with other health professionals and ICD-10 coding and billing purposes. The following are key terms requiring understanding in order to optimize patient care:

**Addiction:** The terms “addiction” and “substance abuse” have been replaced with the term “substance use disorder.” SUDs encompass a spectrum of behaviors from unintentional, excessive use of a substance to the inability to stop substance misuse. Eleven criteria are considered when diagnosing an SUD (TABLE 1).<sup>9,10</sup> Individuals with an SUD diagnosis may be further classified as mild, moderate or severe to indicate the severity of the disorder. This is determined based on the number of criteria met. A severe classification

**TABLE 1**

**Criteria for Substance Use Disorders<sup>8</sup>**

1	Taking the substance in larger amounts or for longer than you’re meant to.
2	Wanting to cut down or stop using the substance but not managing to.
3	Spending a lot of time getting, using or recovering from use of the substance.
4	Cravings and urges to use the substance.
5	Not managing to do what you should at work, home or school because of substance use.
6	Continuing to use, even when it causes problems in relationships.
7	Giving up important social, occupational or recreational activities because of substance use.
8	Using substances again and again even when it puts you in danger.
9	Continuing to use even when you know you have a physical or psychological problem that could have been caused or made worse by the substance.
10	Needing more of the substance to get the effect you want (tolerance).
11	Development of withdrawal symptoms, which can be relieved by taking more of the substance.

would imply the SUD is characterized by craving, compulsion, loss of control and continued use despite negative consequences. A variety of acronyms are now used to better define a specific SUD or substances misused. For example, OUD refers to opioid use disorder, which may include opioids such as heroin or oxycodone. TABLE 2 lists common acronyms used for a variety of SUDs.<sup>8-10</sup>

**Substance abuse:** The term “substance abuse” has been replaced with “substance misuse.” Substance misuse refers to using a substance, including prescription medications, with the intent of changing mood, perception, sensorium or behavior outside the prescribed intent of a prescription. An example of substance misuse includes taking a controlled substance to intentionally obtain the euphoric effect or dissociate from a current mood or environment.<sup>8,9</sup> Taking a substance outside the bounds of a prescription with intent to treat a symptom other than for which it is prescribed may also be considered misuse. This includes taking larger doses than prescribed, taking the medication more frequently than prescribed or taking it for a different indication.

**Addict or abuser:** The stigmas associated with SUDs may negatively impact patient medical care as well as limit various opportunities, such as work and general

**TABLE 2**

**Specific SUD Acronyms<sup>7</sup>**

OUD	opioid use disorder
AUD	alcohol use disorder
TUD	tobacco use disorder
CUD	cannabis use disorder

acceptance in the community. Dentists should refer to a patient with an SUD or an OUD using person-first language, such as “a person with a substance/opioid use disorder” instead of “a substance/opioid abuser” or “an addict.”<sup>11</sup>

**Dependence:** Historically, the term “dependence” has frequently been confused or interchanged with substance abuse or addiction terminology. The term “dependence” is also often used to define the physiologic withdrawal phenomenon commonly seen with the discontinuation of many medications as well as the increased tolerance to a substance requiring more to achieve a desired pharmacological effect.<sup>12</sup> For simplicity, “physical dependence” or the term “physiologic withdrawal” should be used when symptoms of withdrawal are anticipated upon discontinuation of prescription medications or other misused substances. For example, a patient chronically taking a beta blocker for high blood pressure would exhibit some symptoms of physiologic withdrawal,

such as rebound tachycardia, sweating or anxiousness, if the beta blocker were to be abruptly discontinued. However, symptoms such as a craving or compulsion to use the beta blocker are not likely to occur. A patient with a severe OUD who is actively misusing high-dose opioids daily would likely experience physiologic withdrawal as well as cravings or compulsions to misuse the opioid if the opioid was denied.

*Recovery:* Recovery from alcohol and medication problems is a process of change through which an individual achieves abstinence and improved health, wellness and quality of life.<sup>13</sup>

*Relapse:* For simplicity, relapse may be defined as the return to substance or medication misuse.<sup>14</sup>

*Morphine milligram equivalent (MME):* The MME is defined as a value assigned to opioids to represent their relative potencies compared to oral morphine.<sup>15,16</sup> The purpose of the MME standardization is to create a tool that gives prescribers and pharmacists insight into the total amount of opioids a patient may be taking at any given time. Traditionally, morphine has been the standard opiate that all opioids are compared to regarding relative potency. Also, most prescribers generally have significant experience and comfort with morphine products because of the longevity of morphine use in clinical practice. MME is determined by using an equivalency factor to calculate a dose of morphine that is an estimated equivalent to the prescribed opioid.

*Morphine equivalent daily dosage (MEDD):* MEDD is the sum of the MME of all opioids a patient is prescribed and allowed to take within 24 hours, and the total is used to determine if the patient is nearing a potentially dangerous threshold.<sup>10,11,17</sup> As MEDD increases, the risk for unintentional opioid overdose increases considerably as well.<sup>2,10-12</sup>

*Controlled substance utilization review and evaluation system (CURES):* Prescription drug monitoring programs (PDMPs) are highly effective tools used by prescribers, pharmacists and regulatory officials for reducing prescription drug misuse and diversion. PDMPs collect, monitor and report electronically transmitted prescribing and dispensing data submitted by outpatient pharmacies and dispensing practitioners.<sup>18</sup> The CURES 2.0 program is California's state PDMP.

*Medication diversion:* Medication diversion may be defined as the movement of a prescription medication in any direction, regardless of intent, outside the boundaries as defined by federal, state or professional board laws and regulations. This also includes intentionally falsifying any information to obtain a prescription medication.

Note: Due to changes in terminology, the traditional use of the term "addiction" will be referred to as severe SUD or severe OUD in the current and following articles.

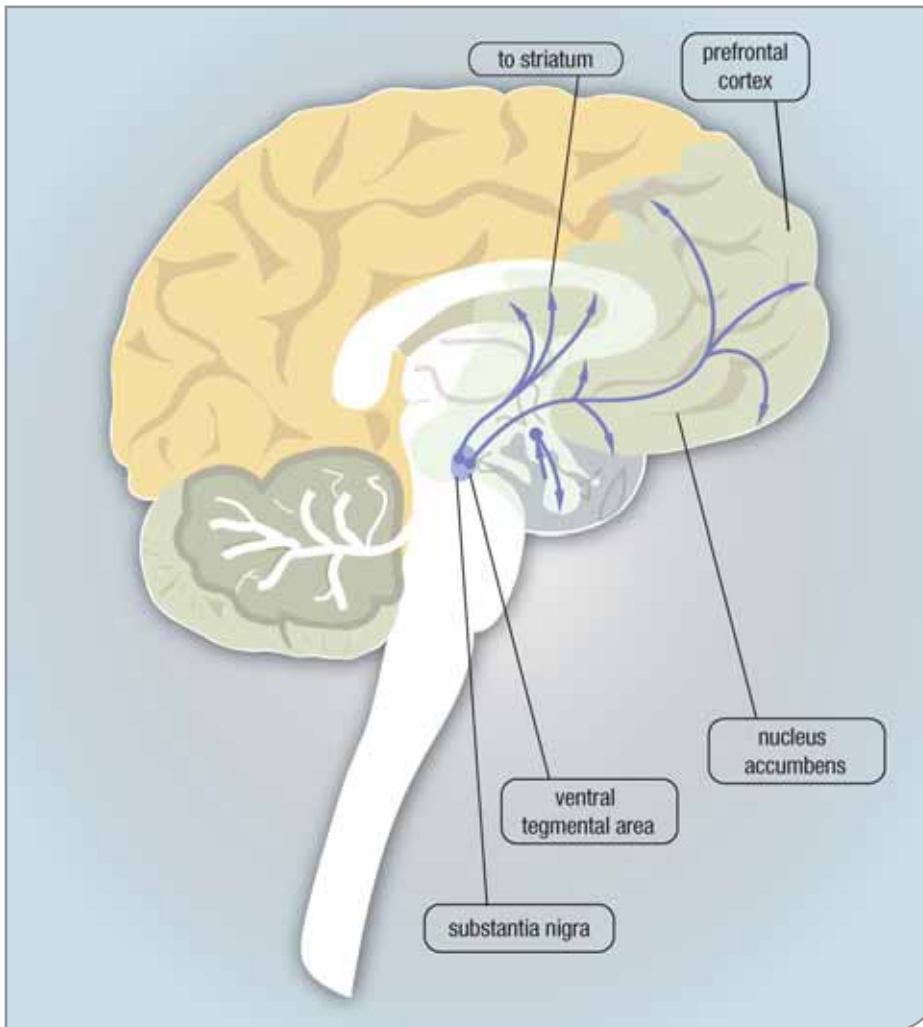
## Overview of the Anatomy and Physiology of SUDs

The anatomy and physiology of SUDs is quite complex. Equally complex are the factors that contribute to its onset, including but not limited to genetic predisposition, quantities and types of substances misused, social factors and environmental influences.<sup>19</sup> Using the most simplistic definition, the wiring in the brain used to create, judge, remember and reinforce behaviors associated with pleasure and survival have been hijacked. The areas of the brain or pathways associated with these changes are known as the reward pathway.<sup>20</sup> Three of the major components of the reward pathway include the ventral tegmental area (VTA), the nucleus accumbens (NA) and the prefrontal cortex (PFC) (**FIGURE**).<sup>21</sup>

The VTA, located in the midbrain, is activated when a stimulus associated with reward, pleasure or necessity for survival, such as food, water or sex, is received. The function of the VTA is multifactorial but has been associated with cognitive and emotional processes.<sup>22</sup> Impulses are then transmitted through projections from the VTA to the NA. The NA is commonly referred to as the pleasure center of the brain. Stimulus of the NA from the VTA is characterized by increases in dopamine. Research suggests that the NA responds to both positive and negative stimuli.<sup>23</sup> The NA is then highly integrated into other parts of the brain associated with memory. The need to remember what behaviors lead to "good" or "bad" feelings or outcomes is essential for survival. Projections from the NA then innervate the PFC, referred to as the judgment center of the brain. The role of the PFC is to perform higher executive functions involving integration of memory from past events with current social and environmental stimuli. Any pleasure-provoking substance that can significantly increase dopamine activity in the VTA or NA, directly or indirectly, may significantly impact judgement and memory to the point that normal or logical thinking may be impaired.<sup>23</sup> For many individuals, substances such as cocaine or opioids dramatically enhance dopamine release in the VTA and NA eliciting extreme pleasure. Essentially, the brain recognizes these substance to be equally as vital, if not more so, than other essentials for life such as food or water. How and when this transition occurs is not well understood. Equally perplexing is how to restore it to normal functioning.

## Risk of First Exposure

Recent studies suggest that patients may begin to misuse medications associated with SUDs following their first pharmacologic treatment regimen



**FIGURE.** Dopamine pathways in the brain. Dopamine plays an important role in the regulation of reward and movement. Three of the major components of the reward pathway include the ventral tegmental area (VTA), the nucleus accumbens (NA) and the prefrontal cortex (PFC). (Credit: National Institute on Drug Abuse)

of opioids.<sup>24,25</sup> Many individuals are genetically predisposed to severe SUD prior to the encounter with a medication or substance.<sup>26</sup> Multiple animal studies confirm the existence of genetic disposition for severe SUD. Animal studies confirm the biological and genetic relationship for severe SUD when compared to humans who have many more social or environmental influences. This is not surprising because mammals and humans have a similar reward pathway as described above.<sup>27</sup> In 2015, research published in the journal

*Pediatrics* reported that “legitimate opioid use prior to high school graduation in individuals with minimal previous history of substance misuse and who disapproved of illegal drug use was associated with a 33 percent increase of opioid use following graduation.”<sup>24</sup> This hallmark study demonstrated the association of routine pharmacological treatment with opioids in adolescents and the likely contribution of developing an OUD in the future. Of the adolescents who were more likely to misuse opioids later in life, the risk was found to be most concentrated among

teens who would be expected to be at low risk of drug misuse, those with no illicit drug experience and those who reported that they disapproved of regular marijuana use.<sup>24</sup> The rationale for the later-in-life misuse is unclear. Considerations such as a perceived sense of safety with prescribed opioids, availability in the home or from friends, types of response from the opioid and route of administration (oral versus inhalation) should be considered. Studies have indicated that the adolescent brain experiences extremely time-sensitive periods when the brain is more vulnerable to influences such as substance misuse.<sup>28</sup> Previous studies evaluating substance misuse have indicated that exposure to substances of misuse prior to age 14 carries greater risk for SUDs later in life. Teens who initiate substance use before age 14 are at greatest risk for substance dependence.<sup>29</sup> Research in adolescents being prescribed other controlled medications, such as the C-II methylphenidate (Ritalin, Concerta), has not been associated with the same outcomes as prescribed opioids.<sup>30,31</sup> Research data demonstrating early prescribing of other types of controlled prescription medications such as benzodiazepines and the risk of increased misuse of the medications later in life are limited.

A small, exploratory survey in 59 adult emergency room (ER) admissions with a history of heroin and prescription opioid misuse suggested that 59 percent of adult opioid misusers were first exposed to opioids in the ER via legitimate opioid prescriptions.<sup>25</sup> Most medically exposed subjects, 80 percent, reported non-opioid substance misuse or treatment for non-opioid SUDs preceding the initial opioid exposure, which raises the concern for potential increased risk of opioid misuse in adult patients with a prior SUD diagnosis.<sup>25</sup> While no



definitive conclusion should be made from this study, prescribing of opioids should be limited to minimize unnecessary exposures to both adolescents and adults.

Previous research indicates that dentists are one of the top prescribers of opioids to patients aged 10 to 19.<sup>32</sup> This large amount of opioid prescribing to adolescents by dentists combined with newer information highlighting early opioid use and later risk of opioid misuse warrants a high level of scrutiny because opioids are not routine first-line analgesics for most dental procedures. The role of dentists in this arena is clear; extreme caution should be practiced and the prescribing of opioids should be limited to true contraindications to first-line analgesics.

### Rationales for Prescription Drug Misuse

Prescription medication misuse has been a leading contributor to the opioid epidemic. There are several rationales to misuse prescription medications that seem to cross all demographic and socioeconomic boundaries. How an individual will respond to a prescription medication is not always predictable. Anecdotally, after ingestion of the common opioid hydrocodone, many individuals will report unpleasant symptoms such as nausea, sedation, disorientation or dissociation. Others will report a “boost of energy” with increased focus and euphoria. A third group may report feeling “normal” for the first time in their lives. Prescription medication misuse can generally be divided into two categories based on intent. These include intent to treat or self-medicate or intent to obtain euphoria, dissociation or enhanced sensorium.

*Intent to treat (self-medication):* Research suggests that an estimated 50 percent of patients with SUDs also have co-occurring psychiatric disorders.<sup>33</sup> Many

of these patients may self-medicate these conditions with prescription medications shared by friends or family members.<sup>34</sup> Anecdotally, this also may be due, in part, to lack of access to health care, lack of funds or lack of transportation to treatment facilities. For individuals achieving a sense of normalcy and with continued unauthorized access to these medications, misuse may continue and without appropriate oversight by a health care provider may result in unintended consequences. Other types of self-medication involve taking a prescription medication outside the bounds of the prescription. An example of misuse includes when a patient who is prescribed an opioid analgesic with instructions to take one tablet every six hours for moderate to severe pain takes two tablets instead or may take the medication every four hours instead of six hours without permission from the prescriber.

*Intent to obtain euphoria, dissociation or other enhanced sensorium:* Much of prescription medication misuse can be attributed to an individual’s intent to get high or escape from reality. Recreational misuse of prescription medications may escalate to a severe SUD.<sup>35</sup> An inaccurate perception of safety surrounding prescription medications combined with excessive availability has likely contributed to misuse.

### Noncontrolled Prescription Medication Misuse

Most dentists are familiar with common substances of misuse such as cocaine, heroin, methamphetamine, alcohol and nicotine. The plethora of media reports surrounding misuse of controlled prescription medications such as opioids, benzodiazepines and stimulants has also created awareness of controlled prescription medication misuse. A lesser-known and increasing

problem involves prescription medication misuse with noncontrolled prescription medications. A variety of prescription medications are being misused, including anticonvulsants, muscle relaxants and antipsychotics. Rationales for misuse of these medications include, but are not limited to, enhancing the effects of other misused controlled substances, self-medicating undiagnosed or inadequately treated medical conditions, minimizing symptoms of physiologic withdrawal or hangover-like effects and acquiring euphoria or other significant changes in sensorium.<sup>36</sup>

*Anticonvulsants:* Pharmacotherapy with anticonvulsants includes a wide variety of indications, including acute and chronic neuropathic pain, mood disorders, seizures and anxiety.<sup>37</sup> As a class, anticonvulsants’ common side effects include sedation, dizziness, dyscoordination, slurred speech, dissociation or confusion.<sup>38</sup> The anticonvulsant that has been reported to be misused the most is gabapentin (Neurontin). When gabapentin is intentionally misused, the drug’s effects vary with the user, dosage, past experience, psychiatric history and expectations. Individuals describe varying experiences with gabapentin misuse that include euphoria, improved sociability, a marijuana-like high, relaxation and sense of calm.<sup>39</sup> The high incidence of prescribing for multiple indications combined with a reasonable efficacy and safety profile has made gabapentin one of the most accessible prescription medications. Some states have now included gabapentin in their controlled prescription medication schedules to tighten access or to evaluate current prescribing patterns within the state. The major impetus for the scheduling in most states was attributed to the significant number of autopsy results with opioids that also involved concomitant ingestion of gabapentin.<sup>40-42</sup>

*Muscle relaxants:* Muscle relaxants such as cyclobenzaprine (Flexeril) are commonly prescribed for a variety of spasticity disorders, acute pain and chronic pain disorders. The side-effect profile of muscle relaxants includes sedation, dyscoordination, confusion and dizziness. Long-term use may lead to physiological withdrawal if abruptly discontinued. Cyclobenzaprine has been reported to be misused in several ways including enhancing the effects of other misused substances or causing euphoria in higher than normal doses.<sup>43</sup>

*Antipsychotics:* Antipsychotic medications include a large group of medications that are used to treat multiple psychiatric disorders including posttraumatic stress disorder (PTSD), schizophrenia and mood disorders.<sup>44</sup> In general, the side-effect profile of these medications is similar to anticonvulsants and muscle relaxants. These include sedation, dizziness, confusion, dyscoordination and disorientation. Increasing data indicate a rising prevalence of misuse of antipsychotics.<sup>45</sup> Quetiapine (Seroquel) is the most commonly reported misused antipsychotic. Patients may misuse quetiapine to enhance euphoria of other medications or to self-medicate unpleasant effects of other misused medications such as opioids.<sup>46</sup>

#### Prevention and Treatment

Previous research has shown that substance misuse was common in adults seeking dental treatment.<sup>47</sup> A 2008 survey of U.S. dentists indicated an estimated 42 percent of adults in the U.S. visited a dentist and 23 percent of those adults saw no other health care provider during the year.<sup>48,49</sup> These statistics suggest that dentists are positioned to frequently interface patients with SUDs and may create awareness or the need for treatment for an SUD.

*Prevention:* Substance misuse is a preventable behavior. The research involving adolescent exposure to substances or medications of misuse is convincing enough that prevention of misuse by patients and deterrence of casual prescribing of medications such as opioids should be a primary focus for all dentists. Prevention of medication misuse begins with routine screening. Although tobacco-use screening is being performed more routinely in dental practices, rates of tobacco-use cessation assistance remain relatively low and

Opioid prescribing should be based on evidence-based guidelines and rationales for opioid use should be documented in the patient's chart.

dentists have cited multiple barriers to providing tobacco-use cessation assistance, including limited time and knowledge, a lack of reimbursement and a concern that patients will not be receptive to addressing tobacco use in the dental setting.<sup>2,50-53</sup> The National Institute on Drug Abuse (NIDA) Quick Screen and NIDA-modified ASSIST are screening tools that also provide dialogues that dentists can use to introduce the sensitive topic of substance misuse to patients and provide clinical screenings and referrals accordingly.<sup>2,54,55</sup> The Substance Abuse and Mental Health Services Administration (SAMHSA) website also provides comprehensive screening tools such as the DAST-10 or CAGE that are reliable indicators of SUDs and the possible need for further referral.<sup>2,56</sup>

*Prior to prescribing:* Opioid analgesics are not first- or second-line agents for most routine dental surgeries or procedures. They should only be prescribed when first- or second-line agents, such as nonsteroidal anti-inflammatory agents (NSAIDs) and/or acetaminophen, are truly contraindicated due to coexisting diseases, such as renal dysfunction, a history of gastrointestinal bleeding or potentially significant drug interactions. First opioid exposure to adolescents should always be considered. Opioid prescribing should be based on evidence-based guidelines and rationales for opioid use should be documented in the patient's chart. Prescribing should include the lowest effective dose for the minimum amount of time necessary. Prescribing extra doses should be avoided (see the article on page 163).

*Prior to prescribing opioids:*

- Prescribing of opioids should only be considered for moderate or severe pain.
- Screen for SUDs through chart reviews, patient interviews and patient surveys.
- Review the patient's CURES profile.
- Communicate analgesic rationales and expectations with the patient.
- Respect a patient's request to not be prescribed an opioid.
- Refer patients identified with a potential SUD to treatment.<sup>2</sup>

*When an opioid is prescribed:*

- Educate about potential side effects.
- Educate about risks of SUDs.
- Counsel against misuse.
- Educate about safe storage.
- Educate about disposal of leftover medications.

*Treatment:* Effective treatment of patients with severe SUD requires, at a minimum, abstinence of the substances misused to end the cycle of reinforcement in the brain and behavior modification. Treatment is complicated by environmental factors, social

influences or triggers that commonly work against achieving recovery to the point where a near-normal life can be maintained. It is impossible to remove individuals with severe SUD from all environmental or social triggers other than by strict residential or inpatient treatment. Successful treatment of severe SUD generally involves behavior modifications, counseling, medication-assisted treatment programs, the use of peer-support groups or a combination of the following treatments:<sup>57</sup>

- Individual and group counseling.
- Inpatient and residential treatment.
- Intensive outpatient treatment.
- Partial hospital programs.
- Case or care management.
- Medication.
- Recovery support services.<sup>58</sup>
- 12-step program fellowship.
- Peer support.
- Court-mandated treatment.
- County and church coalition support systems.

Frequently, medications such as methadone, buprenorphine or naltrexone are prescribed as tools in treating severe OUD. Prescribing opioids for dental analgesia to patients with histories of SUD creates several clinical challenges for the dentist (see the article on page 171). An individual's long-term treatment outcome for severe SUD varies secondary to duration of treatment, type of treatment, individual financial resources, motivation, availability of treatment services and impact of other environmental and social influences.<sup>59</sup> Relapse statistics indicate more than 85 percent of individuals relapse and return to substance or medication misuse within the year following treatment and researchers estimate that more than two-thirds of individuals in recovery relapse within weeks to months of beginning addiction treatment.<sup>60</sup> When relapse does occur, immediate support is necessary to

prevent further negative consequences. As a means of support, when individuals report to be in recovery, they should be congratulated for their success.

### Emergency Treatment

The medication naloxone, also known as Narcan, has become a household name due to the severity of the opioid epidemic. Naloxone is a pure opioid antagonist administered by nasal, intravenous or intramuscular routes to reverse excess effects of opioids such as respiratory depression. Naloxone should

Individuals may target dentists to acquire controlled prescription medications for misuse or to sell or trade for money or services.

always be part of a dentist's emergency kit as anecdotal reports indicate that patients presenting to dental offices may have misused substances before procedures or patients may wander into dental offices and become unresponsive after misusing substances. These occurrences require emergency treatment with naloxone.

### Prescription Medication Diversion

Individuals may target dentists to acquire controlled prescription medications for misuse or to sell or trade for money or services. A variety of schemes are commonly utilized. These may include simple strategies such as faking of symptoms, intentional self-injury or theft of prescription pads from the dental office to very complex schemes involving falsification of information

at the dental office, falsifying phoned-in prescriptions and doctor/pharmacy shopping. Detecting and preventing these illegal efforts are critical for dentists to protect their practices. Utilization of tools such as the CURES system to evaluate previously dispensed controlled substances, integrating SUD screening tools to detect SUDs and referring to treatment are necessary practices for all dentists prescribing controlled substances. The article on page 179 reviews necessary considerations to deter and detect prescription medication diversion.

### Summary

Terminology surrounding the traditional nomenclature of addiction and substance abuse have been significantly changed, in part, to help remove the stigmas associated with SUDs. Factors such as genetic risk, impact of potent misused medications on the reward system in the brain, evidence of first exposure of prescribed opioids, an individual's misuse of prescription medications and targeting of dentists to obtain controlled prescription medications have complicated what has been historically viewed as a simple, compassionate treatment for painful dental procedures. Dentists are positioned to potentially intervene in a large portion of the SUD population through simple screening and referral if necessary. A fundamental understanding of analgesia, SUDs and diversion is necessary for dentists to safely treat patients and protect their practices. ■

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# Practical Considerations for Prescribing Opioids in Carefully Screened Patients

William Kane, DDS, MBA, and Michael G. O'Neil, PharmD

**ABSTRACT** Various guidelines and pharmacotherapy reviews have outlined best practices and important considerations when utilizing analgesics for dental pain. Although not first-line agents, opioids are sometimes necessary for moderate to severe pain. Skilled patient interviewing and screening techniques as well as effective medication goal setting and counseling are required by all dentists prescribing analgesics including opioids. Understanding and utilizing screening techniques, such as screening, brief intervention and referral to treatment, are important considerations for dentists.

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*Conflict of Interest*  
*Disclosure: None reported.*

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The U. S. opioid epidemic is mentioned in the media almost daily in essentially every state in the country. A combination of factors has contributed to this epidemic, including but not limited to overzealous prescribing of opioids for analgesia, unsubstantiated marketing claims by the pharmaceutical industry, limited clinical trials defining best medications and duration of treatment for pain management and a public perception that opioids are “relatively safe.”<sup>1</sup> More recent data indicate a significant risk to adolescents who are prescribed opioids<sup>2</sup> (see the article on page 153). Current analgesic practices for mild, moderate and severe dental pain indicate nonsteroidal anti-inflammatory agents (NSAIDs) alone or in combination with acetaminophen (APAP) as first-line agents. A variety of studies and reviews now provide better direction for dentists to prescribe analgesics and dentists are referred to these resources for more

specific dosing guidelines.<sup>3-8</sup> In some cases, prescribing of opioids may be warranted due to disease contraindications such as renal dysfunction or patients with histories of overt gastrointestinal bleeding. Drug-drug interactions and anticipated severe pain may also pose significant clinical challenges that may warrant opioids. In the few cases where opioids are considered for moderate to severe pain, additional screening is necessary prior to prescribing to minimize prescription medication misuse. This article reviews key concepts, tools and practices that should be utilized when prescribing opioids when traditional first-line agents are contraindicated or inadequate.

## Origin of the Epidemic

A variety of factors aligned to create the “perfect storm” for the current opioid epidemic. These range from simple financial incentives from the pharmaceutical industry, prescribers and pharmacists to unrealistic expectations

by patients and prescribers to alleviate all pain.<sup>9</sup> Several contributing factors creating the opioid epidemic include but are not limited to:

- Increased awareness and need to improve “quality of life” at “end of life” due to cancer and other painful, terminal conditions (late 1980s and early 1990s).
- Patient perception that simple over-the-counter medications are not effective for moderate to severe pain.
- Lack of education surrounding pain management in professional health programs.
- Development and aggressive marketing of potent long-acting analgesics such as OxyContin.
- Implementation of pain as the fifth vital sign.
- Unrealistic patient expectations surrounding control of acute and chronic pain.
- Lack of clinical trials supporting safety and efficacy of opioids for chronic pain.
- Socioeconomic distress especially in rural mountain areas.
- Financial incentives of prescribers and pharmacists leading to pill mills.
- Lack of reimbursement from insurance providers for alternative pain treatments.
- Lack of evidence-based treatments for alternative pain management.
- Lack of familiarity by prescribers with dangerous, long-acting opioids such as methadone.
- Hospital administrators incentivizing providers to optimize pain management by placing a high value on patient satisfaction scores that potentially impacted prescriber bonuses that further led to increased opioid prescriptions.
- Increased availability of black tar heroin.

- Surge of synthetic fentanyl and fentanyl derivatives into the U.S.<sup>9,10</sup>

No single factor can take full credit for the opioid epidemic. Regardless, patients must have access to opioids in order to misuse them. Limiting opioid prescriptions and quantities of opioids should be a primary consideration for all dentists.

#### Dentists’ Response to the Opioid Crisis

Dentists and all prescribers have a responsibility to minimize the potential for drug misuse and diversion while maintaining legitimate access to opioids

Limiting opioid prescriptions and quantities of opioids should be a primary consideration for all dentists.

for patients in need of such analgesic treatment. Dentists began aggressively addressing opioid risk-management issues in March 2010.<sup>11,12</sup> To address and explore these issues, a steering committee of the Tufts Health Care Institute (THCI) program on opioid risk management in Boston formed a panel of experts on opioid misuse and diversion from academia, professional organizations, industry, law enforcement and governmental agencies.<sup>11,12</sup> The panel operated as a workgroup that participated in meetings and discussions regarding the role of dentists in preventing opioid misuse. The THCI program on opioid risk management was cohosted by the School of Dental Medicine at Tufts University. In addition, this group conducted a statewide survey of dentists’ prescribing

practices in West Virginia. “Prevention of prescription opioid abuse: The role of the dentist” was published in *The Journal of the American Dental Association* in July 2011. This article reported the findings of the THCI meeting as well as a great deal of information regarding opioid prescribing in dental practices. Findings included but were not limited to:<sup>11,12</sup>

- Opportunities for dentists to screen their patient populations for substance misuse.
- The need for patient education that focuses on the dangers of sharing prescription medications with family or friends.
- Properly storing and disposing unused medication once the need for taking the medication has passed.<sup>11,12</sup>

Survey results also generated by this team indicated:

- Nearly 11 percent of dentists dispensed opioids from their practices.
- Nearly 12 percent of dentists prescribed five days of opioid analgesics following complex procedures.
- Seven percent of dentists who prescribed opioids suspected that patients had at least five leftover doses.
- Fifty-eight percent of dentists believed they were targeted to achieve prescription opioids.<sup>11,12</sup>

In retrospect, the snapshot of information gleaned from the West Virginia survey provides significant insight into the brewing opioid epidemic. Nearly 11 percent of dentists dispensed opioids directly to patients from their offices, which would likely bypass required reporting to state-regulated prescription drug monitoring databases. Fundamental education to patients for potential misuse of opioids by their patients appeared



minimal. All this compounded with the dentists' perception or experience of being targeted by individuals for controlled substances to misuse or divert with limited guidance from local, state and federal regulatory agencies to address these issues likely fueled the current epidemic not only in West Virginia but in the rest of the country.

Researchers have estimated that 5–23 percent of all prescription opioid doses dispensed are used nonmedically.<sup>13</sup> Although the misuse of controlled-release opioids (opioids formulated with delayed release to provide analgesia over eight to 24 hours) is problematic, the most frequently misused opioids are immediate-release (IR) or short-acting opioids, particularly hydrocodone and oxycodone, that provide analgesia for only three to four hours. Various studies indicate that dentists prescribe between 6 and 12 percent of IR opioids in the U.S., only behind family-practice physicians who prescribe 15 percent of IR opioids.<sup>14</sup> The information from the TCHI summit and the article have become the groundwork for current policies and practices regarding how dentists may address pain control in their practices.<sup>11,12</sup>

The American Dental Association announced a new policy in 2018 to combat the opioid epidemic that supports mandates on opioid prescribing and continuing education. The policy states:<sup>15</sup>

- The ADA supports mandatory education in prescribing opioids and other controlled substances.
- The ADA supports mandatory limits on opioid dosage and duration of no more than seven days for the treatment of acute pain, consistent with the Centers for Disease Control and Prevention's evidence-based guidelines.
- The ADA supports dentists registering with and utilizing

prescription drug monitoring programs (PDMPs) to promote the appropriate use of opioids and deter misuse.<sup>15</sup>

In California, the Dental Board of California recognizes that the widespread use and abuse of opioids in the country has risen to an epidemic level. The board believes that educating both licensees and consumers on this important issue coincides with its mission of public protection. The board therefore encourages its licensees to learn more about this epidemic and its tragic effects

Researchers have estimated that 5–23 percent of all prescription opioid doses dispensed are used nonmedically.

on individuals and their families and to understand best prescribing practices and patient education methods that can be used when prescribing opioids.<sup>16</sup>

These are two examples of policies that have some similar comments regarding education about prescribing practices.

#### What's Missing in the Policies

What is missing from the policies is how to address the condition of the person or patient taking the opioid medications (or any misused substance or medication) who is either physically dependent, misusing or who has a substance use disorder (SUD). How do dentists and other health care providers prevent, properly prescribe or direct them for professional help if they have an SUD? Traditionally, dentists are not adequately

trained in this area and significant efforts must address these issues in dental education as well as continuing education for all dental health professionals.

Madden reported, "The prevalence of substance abuse is so high that every health care provider in the United States sees patients either at risk themselves or experiencing negative effects of substance use by a friend, family member or co-worker."<sup>6,17</sup> Practicing dentists and dental health care providers should know and recognize the risk factors and the signs of an SUD and other impairments in order to adequately treat patients who are suffering from or in recovery from an SUD.<sup>17</sup> Dental patients with a history of an SUD include those who are in drug-free recovery and medically assisted treatment (MAT) and those who have active disease. These groups each have unique challenges (e.g., how to manage acute pain in a patient on buprenorphine or methadone maintenance therapy)<sup>18</sup> (see the article on page 171). Dental practitioners, dental team members and their family members may also be at risk for an SUD and other impairments. Dental professionals should take a proactive stance in recognizing, intervening and referring patients, co-workers and colleagues for appropriate evaluation and treatment.<sup>19</sup>

#### Screening for an SUD

It is difficult to predict if a patient has or is at risk of developing an SUD. Good analgesia decision-making begins with a detailed and accurate medical, dental and psychosocial history. This includes asking for information about any recent use of all prescription medications including opioids. Reports indicate that 31 percent of physicians did not ask about recent alcohol or drug use before prescribing a course of opioids.<sup>20</sup> The literature is unclear on how many dentists ask this question;

some studies indicate up to 67 percent do ask while other studies indicate less.<sup>6</sup> A medical history should always include medications, tobacco (nicotine) and specifically opioids, if prescribed. Current prescription medications, other types of substances misused (such as alcohol), dose, frequency and routes of administration should be asked.<sup>18</sup> Legalization of medical and recreational marijuana adds a whole new challenge when interviewing patients and screening for potential SUDs (see the article on page 171). The history can provide clues indicating or suggesting the patient's substance misuse habits and risks of other health concerns. An example indicating risk factors for opioid misuse include an age younger than 45, personal or family history of an SUD, mental health issues and criminal history. The most common comorbidities related to an SUD are acute and chronic pain, anxiety disorders and attention deficit/hyperactivity disorder.<sup>18</sup> Patients reporting any intravenous drug misuse should be referred for hepatitis and HIV screenings. Utilization of the CURES database to detect prescription medication is also necessary (see the article on page 179).

### Screening, Brief Intervention and Referral to Treatment

In order to have the skills and the comfort level to address patients with an SUD, the technique of motivational interviewing is needed. Screening, brief intervention and referral to treatment (SBIRT) is a tool used to screen and refer at-risk individuals for SUD treatment. This is defined by the Substance Abuse and Mental Health Services Administration as a comprehensive, integrated public health approach to the delivery of early intervention and

treatment services for individuals with an SUD as well as those who are at risk for developing an SUD.<sup>21</sup> The SBIRT technique is comprised of three states:

- Quick screening assesses the severity of substance misuse and identifies the suitable level of treatment.
- Brief intervention focuses on increasing insight and awareness regarding substance misuse and motivation toward behavioral change.
- Referral for treatment provides access to care for patients identified

When an SUD is understood as a medical disorder, it becomes easier to address it in the same manner as any other medical condition.

as needing more extensive counseling and treatment.<sup>21</sup>

SBIRT incorporates motivational interviewing (MI) in the dental and primary care setting and is intended to fill the gap between primary prevention efforts and more intensive treatment for those with a serious SUD.<sup>21</sup> The objective is to establish a relationship that motivates a patient to express their desire to seek further professional help and have the provider recognize this desire and act appropriately. Telling the patient what to do or arguing may only make the patient more resistant. If resistance is met, ask whether he or she is willing to talk about their substance misuse at a future appointment. The foundation and technique of MI is presented in the SBIRT training. SBIRT

training is available at no cost online at sbirt.care and would be appropriate training for all dental team members.<sup>21</sup>

A variety of other screening tools for alcohol or substance misuse are readily available at samhsa.gov. Some of these include the AUDIT-C, DAST-10 or CAGE-AID.<sup>22</sup> These screening tools allow another quick assessment to help direct health care professionals in their decisions to recommend further treatment. Many of these are quickly adapted into routine office intake forms.

When a patient exhibits characteristics of an SUD, managing his or her acute pain versus enabling the SUD can be confusing.<sup>18,23</sup> The dental practitioner should not hesitate nor be afraid to have a frank discussion with the patient. An open, gentle and nonjudgmental approach to the discussion of substance misuse concerns may help to facilitate information exchange with patients regarding their misuse. When an SUD is understood as a medical disorder, it becomes easier to address it in the same manner as any other medical condition, with respectful but matter-of-fact concern. Patients with an SUD often justifiably fear that awareness of their problems will negatively affect the manner in which their dentists, physicians and other providers approach their care. Therefore, they may not be immediately forthcoming about their disease. It is helpful to allay the anxiety by reassuring the patient that their SUD will not impede efforts to adequately treat their pain. For patients in recovery, reassurance that effective acute-pain management usually does not lead to relapse when specific boundaries and instructions are followed is also helpful, although relapse is certainly possible<sup>14,20</sup> (see the article on page 171).

Dental professionals should build a

referral base in their communities that includes primary care providers, SUD specialists, pain management physicians, psychiatrists and other mental health professionals.<sup>18,20</sup> It is certainly helpful to consult with these providers when a patient presents with a history of misuse or is in recovery from an SUD.

### Pharmacotherapy for Dental Pain

A number of excellent guidelines, comprehensive reviews and policies are available regarding analgesic pharmacotherapy management of dental procedures. Dentists are encouraged to refer to those resources for more detailed explanations of evidence-based approaches to dental analgesia. A few include:

- *Dental Guideline on Prescribing Opioids for Acute Pain Management*, September 2017.<sup>24</sup>
- *Policy on Acute Pediatric Dental Pain Management*.<sup>25</sup>
- Benefits and harms associated with analgesic medications used in the management of acute dental pain.<sup>3</sup>
- *Pain Management in Dentistry: A Review and Update*.<sup>26</sup>
- *American Association of Oral and Maxillofacial Surgeons White Paper on Opioid Prescribing*.<sup>27</sup>
- Evidence-based recommendations for analgesic efficacy to treat pain of endodontic origin: A systematic review of randomized controlled trials.<sup>28</sup>
- Prescribing opioid analgesics for acute dental pain: Time to change clinical practices in response to evidence and misperceptions.<sup>29</sup>
- Prescribing recommendations for the treatment of acute pain in dentistry.<sup>6</sup>

### Nonopioid Treatment Considerations

The resources listed previously provide insight, direction and support in regard to

the management of acute postoperative pain. The following recommendations extracted in part from these resources are appropriate in either a general practice or in specialty dental practices.

*Clarifying prescribed medication expectations:* Postoperative pain from dental procedures, such as third molar extractions, is usually anticipated by patients to be severe. Many patients also expect severe pain to be treated with potent opioids to achieve the “best analgesia.” Data do not support that opioids are superior to the combination

Providers should prescribe NSAIDs as first-line analgesic therapy unless contraindicated.

of traditional NSAID/APAP for moderate to severe dental pain, but patients may perceive them to be inferior to opioids because these medications are purchased over the counter. An opioid’s mechanism of action does not impact the causes or proliferation of pain but only how the stimulus is received or translated by the brain and nerve pathways. Patients should be educated regarding the importance of medications such as NSAIDs and their effectiveness in minimizing not only the pain but the inflammatory mediators provoking pain. Explaining that doses are usually greater than traditional over-the-counter dosing recommendations also helps ensure a better understanding of analgesia efficacy with these medications.

Key considerations for management

of acute postoperative pain include the following:

- A nonsteroidal anti-inflammatory drug administered preemptively may decrease the severity of postoperative pain. Studies have demonstrated that these delay the onset of pain compared with a placebo and lessen the severity of the dental pain as the effect of the local anesthetic dissipates without increased side effects.
- A perioperative corticosteroid, such as dexamethasone, may limit swelling and decrease postoperative discomfort after third molar extractions.
- A long-acting local anesthetic (e.g., bupivacaine, etidocaine, liposomal bupivacaine) may delay the onset and severity of postoperative pain.
- Providers should prescribe NSAIDs as first-line analgesic therapy unless contraindicated. If NSAIDs are contraindicated, providers should prescribe APAP as first-line analgesic therapy.
- NSAIDs and APAP, taken simultaneously, work synergistically in their analgesic effect, but dosage levels and times of administration should be carefully documented to prevent overdose. In dentistry, the additive effects of an ibuprofen-APAP combination have been studied most often using the third molar extraction pain model. This procedure is frequently performed in young adults who have no preexisting or ongoing pain. This is an important consideration considering the risk of opioid use in adolescents.
- When indicated for acute moderate to severe breakthrough pain, short-acting opioid analgesics

may be considered only after alternatives have been eliminated and careful screening for potential misuse has been performed. Caution is advised anytime opioids are prescribed to adolescents (see the article on page 153). If opioid analgesics are considered, start with the lowest effective dose for the shortest duration possible. Short-acting opioids are generally prescribed every four to six hours and should be limited to a 72-hour supply unless special circumstances warrant prolonged treatment.

- When prescribing opioids, state law may require prescribers to access the state prescription drug monitoring program (PDMP). If there is any suspicion of patient medication misuse or an SUD, the provider should access the PDMP. To assess for opioid misuse or an SUD, use targeted history or validated screening tools.
- All instructions for patient analgesia and analgesic prescriptions should be carefully documented in the patient chart.
- When deviating from standard prescribing recommendations, the dentist should document the justification for doing so.
- Limit the prescriptions of opioid analgesics to patients currently taking benzodiazepines and/or other opioids due to the risk factors for respiratory depression.
- Inform patients that the maximum recommended daily dose of acetaminophen should not exceed 3,000 mg.
- Inform patients that the maximum recommended daily dose of ibuprofen is 3,200 mg.
- Educate patients on the expectations of postoperative

pain management and the anticipated levels of relief.<sup>6,26-29</sup>

### Changing the Narrative of Pain Management and Opioid Prescribing: Patient Counseling

The goal of any good counseling session is to ensure that patients know how to properly use their medication. Proper counseling will help optimize use of opioids for the treatment of acute pain and help minimize the potential for misuse. Clear analgesic expectations should always be established.

Dentists should instruct patients that the goal of oral analgesics is to minimize pain and not necessarily eliminate all pain.

### Establishing Goals of Pain Management

Prior to prescribing or dispensing pain medications for dental-related analgesia, dentists should outline very specific analgesic goals. A mismatch between dentist and patient expectations regarding analgesic treatment may lead to frustration for both. For example, patients may expect to maintain a zero or near-zero pain score following surgical tooth extraction or other painful procedures. Although patients are pain-free or have limited pain during the procedure, patients may expect to continue to have very limited pain after they leave the office. Dentists should instruct patients that the goal of oral analgesics is to minimize pain and not necessarily eliminate all pain. Barring any complications, most dental

pain resolves quickly over the following days regardless of the use of analgesic medications. Although not ideal, for many patients, giving specific pain scores such as less than 4 or 5 on a 0 to 10 pain scale, where a score of 10 is the worst pain ever or “only take the medication when your pain is greater than a 4 to 5” can optimize consistency in analgesic goals between the dentist and patient.

### Opioid Counseling Tips

- Use immediate-release opioids only for breakthrough moderate to severe pain.
- Start the counseling session by discussing the name of the medication, dose and how it should be taken. This should include discussing not taking extra doses or doses prior to the approved dosing interval.
- Inform the parents of adolescents being prescribed opioids of the new findings associating early opioid use (even when appropriate) with later misuse and to urge caution in dispensing the medication to their child.
- Suggest taking with food to help decrease unwanted side effects such as nausea and/or vomiting.
- Discuss what the patient should expect, such as analgesic goals and what severity of pain requires opioid use. Confirm that you and the patient have the same expectations for analgesia. This should also include reasonable healing time.
- Instruct the patient to take the lowest effective dose to treat their pain and that only a limited quantity of medications is being prescribed until the acute moderate to severe pain subsides.
- Inform patients that opioids



commonly cause drowsiness and discoordination and that patients should avoid driving and using machinery and should relinquish child care responsibilities.

- Avoid alcohol or use with other recreational substances such as marijuana.
- Suggest a laxative for patients who are at risk of opioid-induced constipation. Stimulants such as senna or bisacodyl should be considered because opioids decrease gastrointestinal motility. Generally, it is reasonable to assume patients taking opioids longer than 48 hours might exhibit signs or symptoms of decreased gastrointestinal mobility.
- Store medication out of sight and away from common areas or common walkways frequented by family, friends and visitors. This includes kitchens, family rooms or bathrooms.
- Destroy leftover medications. This may be accomplished by dropping them off at a local prescription medication take-back event or drop station. If this is not possible, leftover medications may be destroyed by mixing leftover pills with any unpalatable substance, such as coffee grounds, sand/dirt or cat litter, in a sealed plastic bag with one-half cup of water and then discarding in the trash. Dentists should emphasize to the patient that unused medications pose potentially significant risks to family members and are commonly diverted.

## Summary

Because the opioid epidemic was declared a public health emergency, more awareness to the problem and

its solutions is evident. The dental profession must continue to become knowledgeable of the prevalence and consequences of substance misuse by incorporating substance misuse screening (such as SBIRT) into routine practice, being aware of signs and symptoms of an SUD and developing a network of community services for the evaluation and treatment of substance misuse. Knowledge regarding the appropriate treatment for dental-related acute pain is essential for all practicing dentists. NSAIDs and acetaminophen,

Knowledge regarding the appropriate treatment for dental-related acute pain is essential for all practicing dentists.

alone or in combination, remain first-line agents for dental analgesia. Thus, the appropriate use of opioids requires dentists to follow responsible and tailored prescribing practices to provide adequate pain control while limiting opportunities for misuse and diversion. Currently, dentists can and should take steps to observe and use suggested guidelines, regulations and laws to minimize medication misuse and provide adequate pain control to their patients. Equally important is appropriate counseling by dentists to set appropriate pain management goals and patient expectations. Counseling should include adherence to prescribed doses, dosing intervals, storage, analgesic expectations, possible adverse effects and destruction of leftover medications. ■

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# Prescribing Controlled Prescription Medications: Special Considerations

Alicia Potter DeFalco, PharmD, BCPS, and Michael G. O'Neil, PharmD

**ABSTRACT** Opioids are prescribed for moderate to severe dental pain following a variety of procedures in patients with contraindications to nonsteroidal anti-inflammatory agents (NSAIDs) and acetaminophen (APAP). Many of these patients are prescribed additional medications that significantly interact with opioids, such as methadone, buprenorphine or naltrexone. Recreational use of alcohol and medicinal or recreational use of cannabis further complicate opioid prescribing. This article reviews special considerations should opioids be warranted in a variety of circumstances.

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*Conflict of Interest*  
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*Conflict of Interest*  
*Disclosure: None reported.*

The current opioid epidemic has brought to light the significant dangers and complexities of prescription opioids. These include unintentional overdoses and significant drug-drug interactions between opioids and medications used to manage opioid use disorders (OUDs), such as methadone, buprenorphine and naltrexone. Combined use of opioids with cannabis due to legislation legalizing medicinal and recreational cannabis creates additional challenges.

Pharmacological treatment of OUDs with methadone, buprenorphine or naltrexone products complicates dental analgesia. Lack of understanding of the pharmacokinetics, pharmacodynamics and mechanisms of action of these agents may lead to undertreatment or overtreatment with opioid analgesics.<sup>1,2</sup> Many states now have legitimized medicinal or recreational cannabis and a significant number of

patients consume alcohol socially.<sup>3</sup> The potential dangers that may be encountered when opioids are combined with a variety of medications or substances such as alcohol are numerous. Dentists must be knowledgeable about a variety of potential interactions to optimize analgesic pharmacotherapy, appropriately counsel their patients and minimize adverse consequences. This article reviews several common interactions and special considerations when opioids are prescribed.

## Opioid-Assisted Treatment (OAT)

The opioid epidemic has led to a surge in the prescribing of medications utilized to control cravings for opioids and minimize severe physiologic withdrawal in patients with OUDs. These include methadone and buprenorphine. Because of the dual actions of these medications (analgesia and stabilizing physiologic withdrawal/cravings), prescribing

additional opioids for acute pain creates the potential for suboptimal or dangerous treatment. Additionally, prescribing opioids to patients in OAT programs potentially puts the patient in violation of their “treatment agreements” if the OAT provider has not been notified of the opioid prescribing and a patient’s drug screen (as part of their normal treatment agreement) indicates a “positive” response to a nonapproved opioid.

Both methadone and buprenorphine are potent opioid analgesics that have proven safety and efficacy in treating patients with OUDs. When used to treat severe OUDs (historically referred to as addiction), these agents aim to minimize physiological withdrawal and decrease cravings/compulsions to misuse opioids (see the article on page 153).<sup>2,4</sup>

The pharmacokinetics and pharmacodynamics of buprenorphine and methadone require different dosing regimens to achieve diverse therapeutic goals, such as analgesia or minimizing physiological withdrawal. It is worth noting that patients with OUDs have been shown to respond or perceive common painful stimuli differently than individuals without OUDs.<sup>1,2</sup>

Patients in methadone or buprenorphine treatment programs for OUDs, patients with OUDs in abstinence programs and patients with active OUDs still misusing opioids should all be considered high-risk patients for prescribing opioids. There is a plethora of analgesic modalities that should be considered and/or implemented prior to prescribing opioids (see the article on page 163). Due to contraindications with traditional analgesics, drug interactions or history of adverse effects, prescription opioids may be warranted. Opioid regimens should be limited to only the number of pills necessary. Any treatment modalities requiring controlled substances (e.g.,

opioids, benzodiazepines) ideally require consultation with the patient’s OAT provider whenever possible. When opioids are prescribed, friends or family members should maintain control and dispense the opioids to the patient and patients should be encouraged to immediately use all support means necessary, such as their counselor, OAT provider or peer group, should cravings reoccur or increase. Any adjustments in buprenorphine or methadone dosing regimens should only be made in consultation with the OAT treatment provider.

Opioid regimens should be limited to only the number of pills necessary.

## Pharmacological Treatment for OUDs

### *Methadone*

The analgesic effects of methadone are predominately due to both mu-receptor agonist effects and antagonistic effects of the N-methyl-D-aspartate receptors (NMDA).<sup>4</sup> The analgesic pharmacodynamic effects associated with methadone are reported to last approximately four to 12 hours, while the pharmacodynamic effects associated with decreasing cravings, compulsion to use opioids and/or physiological withdrawal last approximately 24 hours.<sup>5</sup> Methadone’s significant pharmacokinetic variability between patients further complicates its use. It is common for patients to receive a single dose of methadone daily when treated for a severe OUD.

Although these daily dosages can be quite large (approximately 80–120 mg/day orally), single doses still only provide analgesia for a few hours.<sup>1,2,4,5</sup>

For patients receiving daily methadone for OUDs, two common strategies may be utilized in patients who require additional opioid therapy for acute pain. Those strategies are:

*Method 1.* Patients requiring acute analgesia while receiving methadone for an OUD should receive the full, once-daily methadone single dose normally utilized to prevent physiological withdrawal and decrease cravings at their normal dosing time. Additional opioids for acute pain may be administered utilizing standard dosing regimens the same as for patients not receiving treatment for OUDs.

Example: A patient receiving methadone 70 mg orally daily every morning should receive the same 70 mg oral methadone dose at the same normal dosing time. An additional opioid, such as a hydrocodone or oxycodone product combined with acetaminophen (e.g., Lortab, Percocet) may be prescribed every four to six hours for moderate to severe pain. Dosing should be limited in quantity and duration of treatment (usually less than 72 hours). Prescribers are encouraged to initiate the lowest dosage of the standard dosing regimen.

*Method 2.* Under the direction of the methadone provider, the daily methadone dose may be divided in three or four doses at equal intervals. This will only be possible for methadone patients who can take home their methadone medication from the methadone treatment sites.

Example: A patient receiving oral methadone 60 mg/day taken every morning may have the same daily oral dose divided into 15 mg every six hours or 20 mg every eight hours.

Patients should be prescribed only a



one- to two-day supply, if possible, and medications should be stored with a family member or friend to eliminate temptations of misuse. As mentioned, patients should also be instructed to utilize all support systems, such as counselors or peer groups, should cravings return or worsen.

The use of opioids that have partial agonist or antagonistic effects such as buprenorphine (Subutex, Suboxone), butorphanol (Stadol), nalbuphine (Nubain) or pentazocine (Talwin) should be completely avoided in patients receiving methadone as physiological withdrawal symptoms may result from this combination.<sup>6</sup>

### *Buprenorphine*

Buprenorphine is a partial mu-receptor agonist and a kappa-receptor antagonist with a potency approximately 50–100X that of morphine on a milligram-per-milligram basis.<sup>7–9</sup> Buprenorphine may also partially antagonize mu-receptors in patients receiving pure opioid agonists and provoke physiological withdrawal.<sup>1,2,7,9</sup> According to the package insert, buprenorphine, when used for acute analgesia, may be dosed 0.3 mg intramuscular (IM)/intravenously every six hours.<sup>9</sup> Buprenorphine is dosed daily or twice daily and most commonly administered sublingually for treatment of OUDs. Buprenorphine may be implanted subdermally, providing six months of continuous treatment.<sup>9,10</sup> Due to its partial agonist/antagonist properties, as well as the difference in dosing regimens required to treat analgesia versus an OUD, patients receiving buprenorphine in dosing regimens utilized to treat an OUD may not receive adequate analgesic effects from pure opioid agonists. Also, the partial-agonist effects of buprenorphine make addition of an opioid agonist less predictable.<sup>8,10,11</sup>

Two common options may be considered for patients who receive buprenorphine for severe OUDs that require additional acute opioid analgesia. Those options are:

*Method 1.* If opioids are necessary for surgery or a procedure, ideally the buprenorphine should be tapered over two to four weeks and traditional opioids utilizing the lowest doses and quantities necessary may be prescribed.<sup>9,11</sup> If the dental surgery is more urgent, hold the buprenorphine therapy for 24 to 36 hours and then prescribe traditional opioid

Oral naltrexone products should be discontinued 72 hours before a procedure whenever possible.

doses for the shortest time possible.<sup>12</sup> Because buprenorphine may still be present, potentially higher opioid doses may be necessary for adequate pain control.<sup>12</sup> Patients should be monitored for potential respiratory depression, hypotension and inadequate analgesia. In cases where buprenorphine is not able to be discontinued in a reasonable time to allow elimination, opioids with a higher receptor affinity, such as hydromorphone (Dilaudid) or fentanyl (Sublimaze), may be necessary intraprocedurally.<sup>11</sup> Doses should be adjusted on an individual basis.

*Example:* A patient receives 1 1/2 8 mg film strips of buprenorphine product (12 mg buprenorphine total) sublingually daily for an OUD. Ideally, the patient's dose should have been tapered over the previous two to four weeks. Traditional

opioid analgesic doses may be administered. However, higher opioid doses (within the normal dosing range for the particular opioid) may be prescribed for the shortest possible time.

*Method 2.* In coordination with the OAT buprenorphine prescriber, have the patient change their buprenorphine dosing interval to two to three times per day. The OAT provider may prescribe an “additional” buprenorphine dose based on pain severity.

*Example:* The same patient taking 12 mg daily of a sublingual buprenorphine product may divide their film strips into 4 mg increments and take 4 mg sublingually every eight hours.

### *Naltrexone*

Naltrexone is an antagonist at the opioid mu-receptor with no intrinsic agonist effects and totally blocks the effect of opioid analgesics.<sup>13</sup> Naltrexone is available in tablet form, a monthly IM depot injection and an implant that lasts six months. Common indications for naltrexone include alcohol use disorder (AUD) and OUDs.<sup>14</sup> Naltrexone is helpful for many patients with AUD and OUDs by reducing the reward or pleasure associated with drinking, and it helps to maintain abstinence by reducing cravings induced by environmental stimuli.<sup>13,14</sup> More recently, low-dose naltrexone (LDN) has been found to be effective in a wide variety of chronic medical conditions such as chronic pain, autoimmune disorders and inflammatory disorders.<sup>15–17</sup> It should be expected that patients actively receiving naltrexone will not achieve optimal analgesia with routine opioid medications. Oral naltrexone products should be discontinued 72 hours before a procedure whenever possible.<sup>13,18</sup> In some cases, such as during oral surgeries, some analgesia may be achieved with

higher fentanyl doses. Patients should be carefully monitored. For patients receiving LDN, the amount of opioid blockade in these lower doses is not predictable. Anecdotally, IM or implantable naltrexone may not be reported to the dentist during a patient's medication review due to subsequent forgetfulness, being too embarrassed to report or fear of being stigmatized.

Example: A patient is taking naltrexone 50 mg orally (Revia) every day for an OUD. He requires multiple extractions due to a traumatic injury. Ideally, the naltrexone should be discontinued 72 hours prior to the procedure and standard opioid doses should be utilized starting at the lowest dose.

#### Patients Receiving Opioids for Chronic Pain Presenting With Acute Pain

Although many patients may receive opioids for chronic, nonmalignant pain, there is limited evidence supporting their use. Nonetheless, patients receiving opioids for chronic pain may present to dental offices for necessary procedures. Multiple modalities of treatment are available to minimize pain in these patients (see examples on page 172). In these patients, the daily opioid prescribed may help minimize some of the new acute pain but in some cases it may not. For patients receiving chronic pure opioid agonists, a two-day additional supply of pure opioid agonist/APAP combinations (e.g., Percocet, Lortab) may be considered. If additional opioids are warranted, the pain specialist prescribing the opioids should be consulted prior to administering or prescribing additional opioids whenever possible. Caution is also advised to account for the total acetaminophen dosage to prevent potential toxicity.

Example: A patient applying a

fentanyl 50 mcg/hr patch every 72 hours for cancer pain now requires major extractions. NSAIDs are contraindicated. Traditional doses of opioids may be utilized in addition to the current fentanyl regimen. The use of opioids that have partial agonist or antagonistic effects such as buprenorphine (Subutex, Suboxone), butorphanol (Stadol), nalbuphine (Nubain) or pentazocine (Talwin) should be completely avoided as physiological withdrawal symptoms will likely result from this combination.<sup>6</sup>

Although many patients may receive opioids for chronic, nonmalignant pain, there is limited evidence supporting their use.

#### Alcohol and/or Cannabis

There are currently 30 states that have legalized medicinal cannabis. Nine of these states, including California and Washington, D.C., have legalized both medicinal and recreational cannabis use. In addition to cannabis use, consumption of alcohol is common in the U.S., with a reported 86.4 percent of individuals aged 18 or older reporting alcohol consumption at some point during their lifetime and 56 percent of these individuals reporting alcohol consumption within the past month.<sup>16</sup> With the growing usage of both cannabis and alcohol, it is important to consider the implications of prescribing opioids to patients concurrently using these substances.<sup>3,19</sup>

#### Cannabis

Cannabis is utilized both medicinally and recreationally. However, the lack of randomized controlled trials evaluating for potential drug interactions as well as the existence of various cannabis types, concentrations and routes of administration make concurrently prescribing additional therapies, such as opioids, less clear. There are thousands of different cannabis types, including hybrid strains, each with its own varying concentration of cannabinoids, terpenes and pharmacologic properties.<sup>20,21</sup> Examples of cannabinoids include cannabidiol (CBD), cannabidiolic acid (CBDA), delta-9-tetrahydrocannabinol (THC) and tetrahydrocannabinolic acid (THCA). Cannabinoids are responsible for activity on the endogenous cannabinoid receptors leading to analgesia, anti-inflammatory properties and psychoactive effects. Terpenes are phytochemicals that work synergistically with cannabinoids to produce anti-inflammatory and analgesic effects as well as providing the flavors and aromas that allow for differentiation of the various cannabis strains.<sup>20,21</sup> The absorption, distribution and metabolism of each cannabis product dictates the onset and duration of action. When using topical or oral cannabis preparations, the presence of fat, oils or polar solvents, such as ethanol, may lead to increased absorption.<sup>21</sup> When using inhaled cannabis preparations, recent food ingestion, inhalation depth and duration of breath holding can affect absorption. With these inconsistencies affecting the pharmacologic properties of cannabis, it is difficult to identify when a patient will achieve a peak concentration and exact duration of activity.<sup>20,21</sup>

#### Alcohol

Patients using opioids with alcohol are at an increased risk of experiencing

adverse events, overdose and death. Data suggest that even when medications are taken as prescribed, there is a risk of side effects, drug-drug interactions and drug-alcohol interactions that may lead to emergency department visits.<sup>22</sup>

### *Risk of Alcohol and Cannabis Interactions With Opioids*

Using alcohol with opioids can increase and prolong the respiratory depressant effects of opioids. Patients who use alcohol should not be prescribed long-acting or extended-release opioid formulations due to the risk of “dose dumping.” Dose dumping is the potentially fatal rapid release of an extended-release formulation over a short period time. The mechanism by which alcohol causes this dose dumping effect is not well understood.<sup>22</sup>

According to a meta-analysis by Nielsen et al. (2017), when opioids are coadministered with THC, patients required lower doses of opioids to produce analgesia.<sup>23</sup> Animal studies have shown that enhanced analgesic effects may result from the concurrent use of cannabinoids and opioids in the management of acute and chronic pain.<sup>24</sup> This phenomenon has likewise been observed in a human study evaluating concurrent cannabinoid and opioid usage for the management of chronic pain. During this human study, patients receiving either morphine or oxycodone inhaled vaporized cannabis.<sup>25</sup> There were no significant pharmacokinetic alterations observed for either morphine or oxycodone after cannabis usage and pain was significantly decreased after the addition of vaporized cannabis to the opioid regimen. While the authors concluded that combination therapy with opioids and cannabis may allow for lower doses of opioids with fewer side effects, this study was not a controlled study. Further investigation is needed to

definitively assess this conclusion.<sup>23,24</sup> A double-blind, placebo-controlled, within-subject study conducted by Copper et al. (2018) evaluated the use of cannabis with oxycodone. This study found that when cannabis and oxycodone were used concurrently, patients experienced an increased pain threshold and tolerance. The study also found that when using cannabis and oxycodone together, patients were more likely to have an increase in oxycodone abuse liability. There was no increase in cannabis abuse liability when cannabis and oxycodone

Patients who use alcohol should not be prescribed long-acting or extended release opioid formulations due to the risk of “dose dumping.”

were given concomitantly. The purpose of this study was to evaluate the effect of combined oxycodone and smoked cannabis on analgesia and abuse liability. Further testing is needed to evaluate adverse effects such as respiratory depression associated with combined cannabis and opioid usage.<sup>26</sup> Lastly, in a study conducted by Weed et al. (2018) to evaluate the respiratory depressant effects of morphine and fentanyl when used with cannabinoids in rhesus monkeys, the findings demonstrated that cannabinoid receptor agonists have minimal effects on respirations when used alone and do not affect the respiratory depressant effects of opioid receptor agonists when used in combination with either morphine or fentanyl.<sup>27</sup>

There have been no reported deaths

associated with sole cannabis overdose, and there have been no drug interactions identified that warrant withholding therapy. While data are lacking, most drug interactions with cannabis are associated with the concurrent use of central nervous system (CNS) depressants.<sup>21</sup> Observational studies have confirmed additive analgesic effects are experienced when cannabis is added to opioid therapy, however, opioid serum levels do not seem to be influenced by the addition of cannabis.<sup>21</sup>

### **Patient Counseling**

It is important to educate patients about the risks of operating heavy machinery, driving a motor vehicle, participating in child care or performing other daily activities while taking an opioid (see the article on page 163). Patients who are opioid naïve or patients who are concomitantly consuming other CNS depressants, such as cannabis or alcohol, may be more sensitive to the addition of an opioid, even if the prescription is for short-term pain management.<sup>24</sup>

Patients often underreport their consumption of substances and may miscalculate the dangers of using alcohol while on opioids and the amount of alcohol they ingest. Counseling patients about the risks of combining opioids with alcohol is an important step to take when prescribing opioids for pain management.<sup>23</sup>

Patients using opioids should avoid consuming alcohol due to the risks of overdose, drug-alcohol interactions and death. Based on current data, it can be postulated that for most patients cannabis and opioids can be used together safely. When prescribing opioids to patients who use cannabis, a lower opioid dose should be considered due to the synergistic and opioid-sparing effects of cannabinoids. Care should be taken to properly educate patients when

prescribing opioids about the risks of impairment and inability to perform daily activities when simultaneously using opioids with cannabis and/or alcohol.

## Summary

Although opioids are not first-line analgesic agents for most dental procedures, they may be warranted due to drug-drug or drug-disease interactions for moderate to severe pain. Dentists are faced with a large variety of patients receiving medications that complicate opioid prescribing. Patients with OUDs frequently are prescribed methadone, buprenorphine or naltrexone and new evidence now supports use of LDN for a variety of conditions. Each of these requires unique analgesic approaches when opioids are considered for pain management. Patients receiving chronic opioids who present with acute pain create different challenges. Additionally, legalization of medicinal or recreational cannabis and social use of alcohol may increase the risk of untoward events when patients ingest these concomitantly with opioids. Definitive knowledge and counseling are necessary to protect the patient and dentist when these situations are encountered in dental practice. ■

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**SONOMA COUNTY:** *New Listing!* GP: 1,890 sq. ft. office w/4 Ops. 2017 GR \$529K on 3 days/week w/3.5 days of hygiene. Dexis, Dentrax, Intra-Oral, and laser. Real Estate available for purchase. Doctor retiring. #CA563

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**FRESNO PERIO/IMPLANT PRACTICE:** 6 Ops, large conference room for teaching/meetings, 20 yrs. goodwill, 2017 GR \$649K, works 2 day/wk., cash only office. #CA518

**GREATER MODESTO:** 4 Ops in practice. 1,400 sq. ft. 2017 GR \$366K on a 3 Dr. days/wk. Bldg. must be purchased w/ practice. #CA546

**MADERA:** *New Listing!* Modern 4 Operatory (room for 5th) PPO and Denti-Cal practice with newer equipment, approx. 1,800 sq. ft. 2017 GR \$233K on 2 Dr. days/wk. Bldg. facility also available for purchase. #CA542

**NORTH FRESNO/MADERA:** 2017 & 2016 avg. gross \$809K w/ 52% overhead. Office has been in same location for 30 yrs. Dexis and Dentrax software. 7 Ops. 10 days/hyg. #CA541

**VISALIA:** 2,700 sq. ft., Bldg + Practice for sale, located near hospital. 4 yr. old equipment, Dentrax, Digital X-ray and Pano. PPO/Cash (no HMO or Denti-Cal), 2017 GR \$585K. Great opportunity to own bldg. and practice. Illness forces sale - make offer! #CA536

**VISALIA:** Very efficiently run practice with 4 fully equipped Ops, Practice Web software, I/O Camera, Digital X-ray. 2017 GR \$1M w/ very low overhead. #CA512

**SOUTHERN CALIFORNIA**

**APPLE VALLEY:** *New Listing!* 3 Ops, 38 yrs. goodwill, EagleSoft, digital X-rays, I/O cameras, laser, and a Digital Pan/Ceph. Doctor and Hygienist work 3 days/wk. 2017 GR \$381K with \$113K Adj. Net. #CA557

**BAKERSFIELD:** *Price Reduced!* 6 Ops, 5 Equipped, Duplex bldg. with signage. 2017 GR \$544K w/ \$147K Adj. Net. Most specialty work is referred out. PPO/Denti-Cal. #CA459

**BREA:** 5 Ops, 4 Equipped, paperless w/ Dentrax and Dexis Digital X-rays. 40+ yr. history in Brea with 43 yrs. hyg. program and most specialty referred out. 2017 GR \$724K w/ \$253K Adj. Net. #CA548

**CENTRAL ORANGE COUNTY:** *New Listing!* 3 Ops, paperless and digital, retail center location on busy corner. 2017 GR \$415K w/ \$148K Adj. Net. #CA554

**GLENDALE:** 4 Ops, Dentrax, Dexis, I/O Camera, and a Laser. Practice has 3 days of hyg./wk. 3/2 doctor days/wk. 2017 GR \$872K w/ \$393K Adj. Net. #CA492

**GREATER LOS ANGELES PERIO PRACTICE:** *Price reduced!* 5 Ops, 34 yrs. goodwill, Dentrax, Digital, Laser, great referral base. 2017 GR \$694K Adj. Net \$276K #CA173

**LAGUNA BEACH:** 4 Ops, 3 Equipped, beautiful location. Dentrax G4, Dexis Digital X-rays, paperless. 2017 GR \$442K w/ \$211K Adj. Net. #CA443

**LAKE ARROWHEAD/SAN BERNARDINO MTNS:** *New Listing!* PPO/FFS practice. 6 Ops w/ SoftDent, Dexis Digital X-rays, I/O camera, Pano, and laser. Strong hyg. program. 7 days of hyg./wk. 2017 GR \$1.14M. \$368K Adj. Net. Bldg. also for sale. #CA517

**LOS ANGELES, BRENTWOOD PROS PRACTICE:** 6 Ops in professional bldg., Eaglesoft, CERi, and Intra-oral lab with experienced technician. Pano. Priced for quick sale. 2017 GR \$680K. #CA539

**LOS ANGELES, HANCOCK PARK:** *New Listing!* 4 Ops, street frontage and signage. Office has been a Dental practice since 1928. Doctor retiring due to illness. 2017 GR of \$365K, older office equipment in a great location. #CA565

**LOS ANGELES, WEST SIDE:** 4 Ops, Est. 54 yrs., SoftDent, Laser, Strong hyg. Program, refers out most Specialty work. 2017 GR \$600K w/ \$171K Adj. Net. #CA531

**NORTH ORANGE COUNTY:** *New Listing!* 5 Op practice has been open since 1965. Dentrax, digital Pano. Retiring seller will assist with a smooth transition. Single-story prof. bldg. 2017 GR \$249K. Room to grow as most specialty procedures are referred out. #CA558

**ORANGE COUNTY ENDO PRACTICE:** 5 Ops, 3 equipped, in professional bldg. 42 yrs. goodwill. 2 mic. 2017 GR \$670K w/ very low overhead. #CA532

**ORANGE COUNTY PERIO PRACTICE:** 5 Ops, 9+ days hyg./wk. The retiring seller has approx. 18 NP/mo w/ strong referral base. Long history of collecting \$1M+/yr., 2017 Adj. Net \$498K on a 4 day/wk. #CA520

**RANCHO CUCAMONGA:** 7 Ops, free-standing bldg. on busy corner, Dentrax, Dexis, Digital Pano, separate 4 chair Ortho bay. 2017 GR \$838K w/ \$158K Adj. Net. #CA514

**RIVERSIDE COUNTY:** Turn-key 4 Op practice in single story Prof. Bldg. w/ signage. Dentrax, Digital, Paperless. 2017 GR \$816K w/ \$330K Adj. Net. #CA471

**SOUTH BAY, LOS ANGELES AREA:** *New Listing!* 7 Ops in a sought-after neighborhood. Dentrax, Dexis, Laser, and 6 days/hyg. Prof. bldg. location, fantastic opportunity to own a thriving practice in the South Bay. 2017 GR \$769K with \$266K Adj. Net. #CA560

**SOUTH BAY, LOS ANGELES AREA:** *New Listing!* 6 Ops, Dentrax, Digital X-rays, and laser and 6 days/hyg. 40+ yrs. goodwill in a very desired area of the South Bay. 2017 GR of \$913K with \$287K Adj. Net on 4 1/2 day week. #CA562

**SOUTH BAY, LOS ANGELES AREA-IMPLANT/ORAL SURGERY:** 3 Ops, 1,700 sq. ft., in a retail/prof. center. Paperless and computerized with WinDent OMS Software, Dexis Digital X-rays, Digital Pano, and CBCT. 2017 GR \$475K. #CA498

**SOUTH ORANGE COUNTY:** *New Listing!* 4 Ops, 3 Equipped, Dentrax, 3 1/2 day/wk. with PT RDH. 50 yrs. goodwill. 2017 GR \$446K with \$94K Adj. Net. #CA553

**SOUTH ORANGE COUNTY:** 4 Ops, 3 Equip., utilizes an I/O Camera, Digital X-rays, Laser, and CariVu. Practice has 18 yrs. goodwill w/ retiring seller. 2017 GR \$331K working 20-24 hrs./wk. w/ the seller referring out most specialty work. #CA509

**TUSTIN:** 6 Ops, Pano, 5 yr. new equipment, PracticeWorks, and 7 yr. goodwill. GR \$525K #CA486

**VAN NUYS:** 4 Ops, SoftDent, Kodak sensors and Digital Pano. Easy access and is convenient to all of Van Nuys. PPO/HMO/Cash w/ 10% of patients having Denti-Cal. 2017 GR \$366K w/ \$95K Adj. Net. #CA538

**WESTERN SAN FERNANDO VALLEY PEDO PRACTICE:** *Very motivated seller!* Great opportunity to purchase a Pedito practice in the SF Valley. Upscale location, 4 Ops, Eaglesoft, I/O Camera. 10+ yrs. Goodwill. 2017 GR \$266K on 3 day/wk. #CA399

**SAN DIEGO**

**NORTH COUNTY INLAND PROS PRACTICE:** 4 Ops, Dentrax & Digital X-rays in a beautiful facility. Curbside visibility and loyal referral sources nearby. Seller relocating. 2017 GR \$737K w/ \$182K Adj. Net. #CA524

**SAN DIEGO PERIO:** *New Listing!* 5 Ops, 4 equipped, in an excellent, bright location, with digital X-Rays and Dentrax. Seller is retiring. 2017 GR of \$379K with room to grow! #CA559

**SAN DIEGO:** 3 Ops, EZ 2000, Digital, PPO/FFS, Sm. amount of Medi-Cal, Seller Retiring. Excellent Opportunity for a new Dr. or a 2nd office. GR \$253K w/ \$129K Adj. Net. #CA523

**OUT OF CALIFORNIA**

**CENTRAL OAHU, HAWAII:** *New Listing!* Family-oriented GP practice located in a busy shopping area. Newly refurbished, 3 Ops with new equipment, Digital X-Rays, Upgradeable 2D Panorex, Dentrax. Excellent opportunity. Seller is relocating. #H112

**CENTRAL OAHU, HAWAII:** Convenient, family-oriented practice, 3 Ops, 2 Eq., PPO/FFS, Seller retiring, Digital, Innova. 2017 GR \$357K w/ \$153K Adj. Net. #H110

**HONOLULU, HAWAII:** Well-designed, 3 Ops, Innova, All specialty services sent out, PPO/FFS, Seller retiring. #H111



# Prescription Medication Diversion: Detection and Deterrence

Michael G. O'Neil, PharmD; Brian Winbigler, PharmD, MBA; and Nikki Sowards, PharmD

**ABSTRACT** The prevention of patient attempts to misuse and divert prescription medications from dental practices is a challenging task for dentists. Understanding behaviors and methods commonly associated with diversion is key in these situations. Effective utilization of the Controlled Substance Utilization Review and Evaluation System (CURES 2.0) database is necessary for dentists to detect and deter prescription medication misuse and diversion.

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## AUTHORS

**Michael G. O'Neil, PharmD**, received his Doctor of Pharmacy from the University of North Carolina at Chapel Hill, N.C., and has been a practicing pharmacist for more than 30 years. Dr. O'Neil has also served as a consultant and expert on prescription drug misuse and diversion for several entities for more than 25 years including the Drug Enforcement Administration, the bureau of criminal investigation, the U.S. Attorney's Office and the American Association of Dental Boards. He is a professor and chair of the department of pharmacy practice at the South College School of Pharmacy in Knoxville, Tenn., specializing in pain management, drug diversion and substance use disorders.  
*Conflict of Interest*  
*Disclosure: None reported.*

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*Conflict of Interest*  
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*Conflict of Interest*  
*Disclosure: None reported.*

Attempts to obtain prescription medications by diversion is a challenge for all prescribers. While the exact percent of medication diversion associated with the practice of dentistry is unknown, ample reports indicate that it is problematic.<sup>1,2</sup> A statewide survey conducted by the steering committee of the Tufts Health Care Institute (TCHI) program on opioid risk management, cohosted by the School of Dental Medicine at Tufts University, indicated in 2010 that nearly 60 percent of dentists believed they were victims of prescription fraud or theft.<sup>1</sup> Methods of diversion suspected by dentists included altering prescriptions, faking phone-ins for prescriptions, faking symptoms and falsifying reports of lost or stolen medications. Regardless of the methodologies used, dentists must be vigilant in their daily practices to minimize potential prescription medication misuse and diversion.



## Rationales for Diversion

Medication diversion may be defined as the movement of a prescription medication in any direction, regardless of intent, outside the boundaries as defined by federal or state laws or professional board regulations. This also includes intentionally falsifying any information to obtain a prescription medication. Rationales to obtain prescription medications illegally generally involve one of three intents:

- Medicate an illness for self, friend or family member.
- Obtain euphoria or significantly alter one's sensorium.
- Sell or trade for money, goods or other services.

Frequently, multiple intents are involved in prescription medication diversion.

## Patient Diversion Tactics and Prevention

*Written forgeries:* Writing fraudulent prescriptions has historically been one of the most common methods used to illegally obtain medications. Handwritten prescriptions by prescribers may be altered in a variety of ways to increase the quantities of medication prescribed. This includes changing the quantity dispensed or the number of refills. For example, the quantity of hydrocodone 5 mg/acetaminophen 325 mg tablets to be dispensed may be written for 10 tablets, but the 1 in the 10 is altered to be a 4, making the quantity to be dispensed 40. A refill marked as 1 is easily changed to a 2 or 4. These types of forgeries are easily preventable through a variety of means including writing out the quantity to be dispensed, such as ten instead of 10, or having a list of quantities to be dispensed, such as 10, 20 or 30 and circling/checking the exact quantity to be dispensed. The same

methodology can be applied to refills, such as writing one refill instead of a 1.

*Photocopied forgeries:* Photocopying of prescriptions has been another common method used to forge prescriptions. Fortunately, the requirement by federal and state agencies to use tamper-proof prescription pads has been effective and has limited this type of diversion. Tamper-proof prescription pads incorporate a variety of deterrents built into the prescription, such as watermarks, photocopy-resistant paper, erasure-proof paper, numbered or serial

All prescribers should use tamper-proof pads as defined by federal and state laws whenever controlled prescription medications are written.

prescription requirements, barcoding, circled-number requirements or check boxes for medication quantities or refills allowed.<sup>3,4</sup> All prescribers should use tamper-proof pads as defined by federal and state laws whenever controlled prescription medications are written.

*Falsified phoned-in prescriptions:* Frequently, office staff are designated to phone in prescriptions to pharmacies for dentists as part of normal workflow. In many cases, pharmacists are familiar with common prescribing practices of dentists. It is not uncommon for pharmacists to notify dentists of possible prescription anomalies. However, diversion tactics may include phoning in a fraudulent prescription. This information frequently includes a return phone number if there were to be a concern from the pharmacist.

Perpetrators anticipate these calls and are prepared to “verify” the phoned-in prescription. In most cases, dentists are unaware that their name or Drug Enforcement Administration (DEA) number are being used. Dentists should periodically review their prescribing history in the Controlled Substance Utilization Review and Evaluation System (CURES 2.0) database to identify potential problems (See more information on CURES 2.0 on the following page).

*Prescription pad theft:* Overt theft of prescription pads from dental offices can be problematic. When prescription pads are stolen, the complete prescription is forged including signatures and DEA numbers of prescribers. Prescriber DEA numbers may be found on prescription bottles or on the internet. Dentists should always keep prescription pads locked up to prevent theft by patients, staff and other office personnel.

*Medication theft:* Medication is rarely stolen by patients at dental offices nor are dental offices targets of burglaries or robberies. However, one statewide survey in 2010 indicated nearly 11 percent of dentists dispensed opioids from their offices.<sup>1</sup> Possession of controlled substances within the dental practice creates the potential for theft or misuse by prescribers as well as office employees. Strict storage and record-keeping of controlled medications is mandatory to prevent diversion by office personnel. Less commonly recognized is theft of medications that are not controlled substances, such as antibiotics or analgesics. Penalties for theft of noncontrolled prescription medications by employees carry minimal consequences compared to controlled prescription medications. Employees may self-medicate with prescription-medication samples commonly supplied by pharmaceutical companies for patients without



authorization from a prescriber. Samples provided to dentists should be controlled with appropriate record-keeping and limited access to all employees.

*Identification fraud:* Theft of patient personal identification information or health care records may lead to other fraudulent activities including impersonation of patients to receive treatment. All dental records should have limited authorized access and must be kept away from patient care areas. Employees should request a picture identification such as a state driver's license for patients unknown to the dental practice at their office visit to deter being targeted.

*Doctor shopping:* Doctor shopping is a diversion technique that involves an individual seeking controlled prescription medications from multiple prescribers without the prescribers' knowledge of previous prescriptions. Symptoms may be exaggerated or falsified completely.<sup>5</sup> Frequently targeted practice sites include general practitioner offices, emergency rooms, urgent care clinics and dental practices. All 50 states and the District of Columbia have a general fraud statute that deem fraudulent behaviors to obtain controlled substances as illegal. Some states have specific doctor-shopping laws in effect.<sup>5</sup> Use of prescription drug monitoring programs (PDMPs) such as CURES 2.0 is one of the best tools to minimize doctor shopping.

*Pharmacy shopping:* Pharmacy shopping is the practice of targeting a specific pharmacist or pharmacy with a fraudulent prescription. Pharmacies or pharmacists may be targeted due to the perception that the fraudulent prescription is more likely to be dispensed without significant questions because a pharmacy may be extremely busy or a pharmacist is perceived to perform less than due diligence when dispensing prescriptions.

### Potential Red-Flag Patient Behaviors

Red-flag behaviors are activities or observances that indicate the need for further questioning or investigation prior to writing or dispensing a prescription medication. Patients may present to dental offices with multiple red flags yet be legitimate patients. At a minimum, patient records should be reviewed for a previous history of a substance use disorder (SUD), attempts to acquire medications, medication theft or loss reports and an interview surrounding SUDs should be completed (see the article on page 163).

Use of prescription drug monitoring programs (PDMPs) such as CURES 2.0 is one of the best tools to minimize doctor shopping.

The CURES 2.0 database *must* be utilized:

- The first time a patient is prescribed, ordered, administered or furnished a controlled substance unless one of the exemptions apply.
- Within the 24-hour period or the previous business day before prescribing, ordering, administering or furnishing a controlled substance unless one of the exemptions apply.
- Before subsequently prescribing a controlled substance if previously exempt.
- At least once every four months if the controlled substance remains a part of the patient's treatment plan.<sup>6</sup>

The CURES 2.0 database *should* be utilized when the following are recognized:

- *Patient travels long distances from*

*home, dentist's office and pharmacy when multiple dentist offices are passed.* Although in many rural areas the availability of dentists may be limited, passing multiple dentists or traveling unusually long distances should lead to further questioning.

- *Patient arrives unannounced or at the end of the business day.* Prescribers are often targeted at busy times of the day or near closing to limit the time prescribers have to detect unusual behaviors or to limit questioning of the patient.
- *Patient is rude or demanding to other patients or office personnel.* The patient may be experiencing physiological withdrawal or may be impaired from previous medication misuse and is attempting to acquire more medications.
- *Significant other is not willing to leave.* A patient who shows up with a significant other such as spouse or boyfriend/girlfriend may be coerced by their partner to aid in acquiring controlled medications. Any adult patient office visit when a significant other refuses to leave their partner during the examination or interview should be evaluated cautiously.
- *Frequent visits/repeated injuries.* The patient may appear to have unusually frequent injuries or complaints that could potentially require prescribing of controlled prescription medications. Further screening may be required.
- *Requests for specific medications, quantities or reporting multiple allergies.* A patient who requests specific brand-name controlled prescription medications, specifies quantities and/or reports a large number of allergies to routine medications, such as

nonsteroidal anti-inflammatory agents, acetaminophen or less-potent opioids, could be misusing medications.

- *Use of specific medical jargon or terminology.* The internet provides patients with a vast amount of information surrounding any medical topic, so it is not uncommon for patients to be well-versed on some fundamental information regarding a possible diagnosis. However, persistent use of buzzwords or terms that are not consistent with the patient's education and/or clinical presentation should raise a red flag.
- *Aberrant physical exam observations.* Several key findings suggestive of substance misuse include the smell of odors such as alcohol during early hours of the day, white powder around or in the nares, multiple skin picks on the arms or face, needle tracks in the antecubital space or signs of oversedation.
- *Frequent reports of lost, stolen, accidentally destroyed or extra dosing of prescription medications.* Patients utilize a variety of excuses to receive extra medications from a recent prescriber, including losing or misplacing medications, reporting medications as stolen or accidentally destroying medications by dropping them in the sink or toilet. Unfortunately, in the face of the current opioid epidemic, many prescriptions are stolen. Due to the overwhelming number of reports to law enforcement, theft reports may not be filed or made available to the patient. Dentists should document these occurrences in the patient chart for future reference.
- *Refusal to have coprescribed antibiotics dispensed with controlled*

*prescription medications.* The patient may present to the pharmacy with prescriptions for both antibiotics and controlled prescription medications but request to not have the antibiotic prescription dispensed due to lack of money or state an intent to pick up the antibiotic later.

- *Offers to pay cash or refuses to use their insurance to pay for services.* Frequently, patients are intentionally trying to hide use of additional medications

Persistent use of buzzwords or terms that are not consistent with the patient's education and/or clinical presentation should raise a red flag.

such as opioids from their insurance provider.

### Team Approach To Prevention of Diversion – Collaborating With the Pharmacist

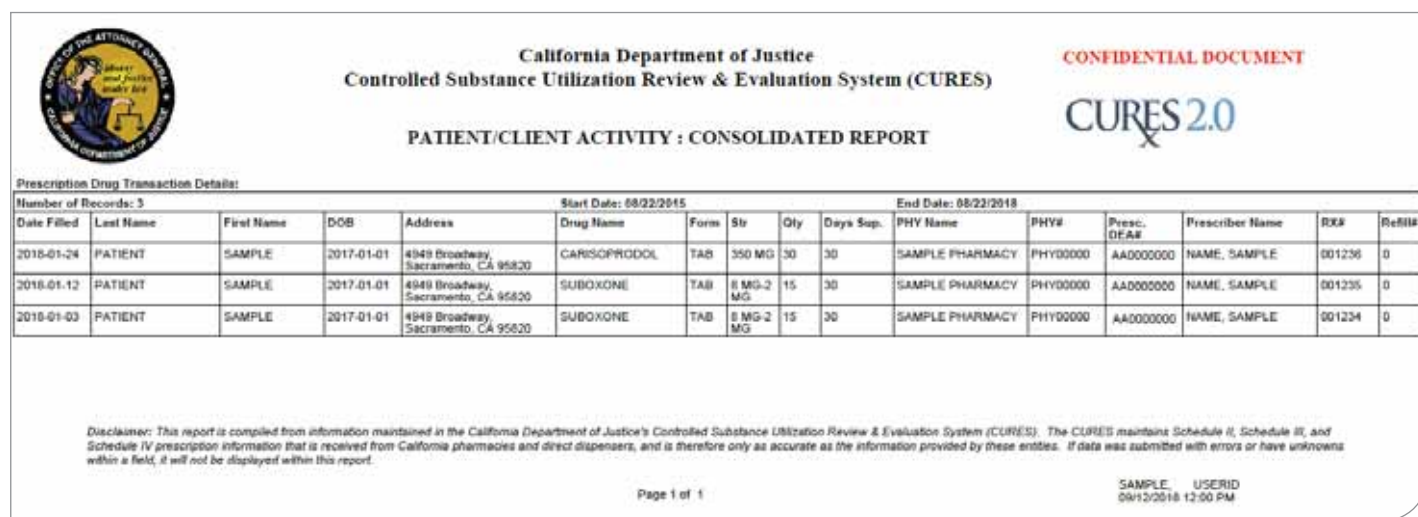
The busy day of a dentist makes it difficult for any single office personnel to detect a potential patient trying to divert prescription medications. Educating office personnel about red flags is key. Equally important is the utilization of pharmacists in the dentist's community. Pharmacists frequently call dentists to report concerns of potential drug interactions, dosing concerns, allergies or patient behaviors associated with prescription medication misuse or diversion. Patients may call the dentist who just prescribed medications for them and complain that

the pharmacist refused to dispense the medication. Pharmacists usually notify the prescriber of why the prescription was refused. Rarely does a pharmacist refuse to dispense a medication based on a dentist's diagnosis or judgement. More commonly, a pharmacist may have knowledge regarding previously dispensed medications, a history of misuse or other concerning behaviors that make it in the best interest of the dentist, pharmacist and patient not to dispense. Ultimately, the pharmacist is protecting the dentist. The pharmacist should always discuss these concerns with the prescriber.

*Pharmacist's refusal to dispense a prescription:* Most prescribers, including dentists, may not be aware that the pharmacist dispensing the prescription for a controlled medication has a corresponding responsibility equal to that of the prescriber authorizing the prescription. Title 21 of the Code of Federal Regulations states:

“The responsibility for the proper prescribing and dispensing of controlled substances is upon the prescribing practitioner, but a corresponding responsibility rests with the pharmacist who fills the prescription. An order purporting to be a prescription issued not in the usual course of professional treatment or in legitimate and authorized research is not a prescription within the meaning and intent of section 309 of the Act (21 U.S.C. 829) and the person knowingly filling such a purported prescription as well as the person issuing it shall be subject to the penalties provided for violations of the provisions of law relating to controlled substances.”<sup>7</sup>

Law enforcement agencies, state professional boards and pharmacy owners expect pharmacists to be judicious



**FIGURE.** CURES 2.0 sample patient activity report.

in their dispensing of controlled prescription medications. A pharmacist may refuse to dispense controlled prescription medications if the patient is suspected of misuse or diversion. This is often a reasonable and a necessary course of action to protect the public, dentist, pharmacist and patient.

#### Utilizing PDMPs, CURES 2.0

PDMPs are state-regulated databases that collect, monitor and analyze electronically transmitted prescribing and dispensing data submitted by pharmacies and dispensing practitioners. PDMPs are highly effective tools utilized by prescribers, pharmacists and government/law enforcement agencies for reducing prescription drug misuse and diversion.<sup>8,9</sup> The California state PDMP is CURES 2.0., an internet-based, password-protected database.<sup>10</sup> CURES 2.0 contains controlled prescription medications in Schedules II–IV.<sup>11</sup> California law (Health and Safety Code Section 11165.1) “requires all California licensed prescribers authorized to prescribe scheduled drugs to register for access to CURES 2.0 by July 1, 2016, or upon issuance of a Drug Enforcement Administration controlled substance registration certificate. California licensed pharmacists must

register for access to CURES 2.0 by July 1, 2016, or upon issuance of a Board of Pharmacy pharmacist license.”<sup>9</sup>

Dentists may register for the CURES 2.0 at [oag.ca.gov/cures](http://oag.ca.gov/cures).

*Purpose of PDMPs:* The purpose of PDMPs is threefold:

- To create a centralized controlled prescription medication dispensing record that allows easy access and review of current dispensed controlled prescription medications by prescribers and pharmacists.
- To allow authorized law enforcement and administrators access to monitor or investigate prescribing or dispensing patterns.
- To provide a database for research and monitoring of quality indicators.

*Requirements for accessing CURES 2.0:*

“Effective Oct. 2, 2018, with specified exceptions, health care practitioners authorized to prescribe, order, administer or furnish a controlled substance shall consult the CURES 2.0 database to review a patient’s controlled prescription medication history no earlier than 24 hours or the previous business day before prescribing a Schedule II, Schedule III or Schedule IV controlled prescription medication to the patient for the first time and at least once

every four months thereafter if the substance remains part of the treatment of the patient. (Health and Safety Code section 11165.4(a)(1)(A)(i))”<sup>9-11</sup>

Strict confidentiality and protection of information observed in the PDMP must always be maintained. The word “shall” indicates a mandatory requirement for prescribers and dispensers of controlled prescription medications in Schedules II, III and IV. Failure to comply usually leads to possible punitive actions. Once the site is accessed through the online portal, a patient’s controlled prescription medication history record may be reviewed after entering the patient’s name, date of birth and time frame to be evaluated.

*Display:* The following information is displayed once CURES 2.0 is accessed: patient name, patient date of birth, patient address, prescriber name, prescriber DEA number, pharmacy name, pharmacy license number, date prescription was filled, prescription number, drug name, form, quantity and strength, refill number and number of days supplied. The **FIGURE** shows the common display seen on CURES 2.0 when accessing patient information.<sup>11</sup>

*Red-flag alerts:* CURES 2.0 provides special red flags, which are alerts that require further investigation. One key

TABLE

**Opioid Prescribing: Estimated Daily Oral Morphine Milligram Equivalents<sup>14</sup>**

(Opioid overdoses increase with > 90 MME/day.)

Opioid day supply	One day total MMEs
<b>Hydrocodone</b>	
<b>5 mg tab</b>	
5 mg PO Q 4 hours	30
<b>7.5 mg tab</b>	
7.5 mg Q 4 hours	45
<b>10 mg tab</b>	
10 mg Q 4 hours	60
<b>7.5 mg/15 mL</b>	
7.5 mg Q 4 hours	45
<b>10 mg/5 mL</b>	
10 mg Q 4 hours	60
<b>Oxycodone</b>	
<b>5 mg tab</b>	
5 mg PO Q 4 hours	45
<b>7.5 mg tab</b>	
7.5 mg Q 4 hours	67.5
<b>10 mg tab</b>	
10 mg Q 4 hours	90
<b>Codeine</b>	
<b>Acetaminophen/codeine #3 tab</b>	
1 tab Q 4 hours	27
<b>Acetaminophen/codeine #4 tab</b>	
1 tab Q 4 hours	54
<b>Tapentadol</b>	
<b>50 mg tab</b>	
50 mg Q 4 hours	120

This table is for the sole purpose of estimating MMEs only. Information provided has been formulated utilizing the CDC app for estimating MMEs.

feature is the notification that appears when a patient is currently prescribed more than 90 morphine milligram equivalents (MME) per day.<sup>11</sup> (See the article on page 153 for more information on MMEs). The MME is defined as a value assigned to opioids to represent

their relative potencies compared to oral morphine.<sup>12-14</sup> The MME is determined by using an equivalency factor to calculate a dose of morphine that is equivalent to the prescribed opioid. The morphine equivalent daily dosage (MEDD) is the sum of the MME of all opioids a patient is prescribed and allowed to take within 24 hours and the total is used to determine if the patient is nearing a potentially dangerous threshold.<sup>12-14</sup> As the MEDD begins to exceed 90 mg/day, the risk for unintentional opioid overdoses may increase.<sup>14-16</sup> The TABLE lists MME conversions for commonly prescribed opioids by dentists. This TABLE is adapted utilizing the Centers for Disease Control and Prevention’s (CDC) MME mobile app.<sup>17</sup> This tool should only be used as an estimator for MMEs and not for prescribing opioid dosing regimens. The following are a series of red-flag alerts that can be found on the CURES 2.0 website and training information:<sup>11,12</sup>

- Patient has obtained prescriptions from six or more prescribers or pharmacies during the last six months.
- Patient is currently prescribed more than 40 MME of methadone daily.
- Patient is currently prescribed opioids more than 90 consecutive days.
- Patient is currently prescribed both benzodiazepines and opioids.<sup>11</sup>

Searching the database: Dentists are referred to [cda.org](http://cda.org) for a free online tutorial regarding utilization of the CURES 2.0 program.<sup>12</sup> When searching for a patient in CURES 2.0, using only the patient’s first initial of their first legal name and complete last name is recommended. Ideally, this information should be gathered from government-issued identification whenever possible. Using only the first initial of the first name helps eliminate the potential to

exclude records of patients who may be called multiple names such as “Michael” or “Mike.” Nicknames and abbreviations should always be avoided. Dentists should use caution when interpreting data especially with common last names such as “Smith” or “Jones” because individual unique identifiers, such as Social Security numbers, are not utilized in the CURES 2.0 program and findings from patients with the exact name and date of birth are possible. It is not recommended to enter a patient’s address because patients frequently move and unintentional exclusion of prescriptions may occur. Dentists are using the PDMP to make real-time prescribing decisions, not to conduct a criminal investigation. Dentists generally do not need to review further back than six months unless other information suggests that it is necessary. The CURES 2.0 search automatically defaults to a six-month search.<sup>11</sup>

*Reviewing records:* When reviewing the PDMP, dentists should look for current prescriptions, repeated early refills, duplicate medications, MEDDs and multiple types of prescribers, such as emergency room practitioners, family practitioners and other dentists. CURES 2.0 also provides additional information including comments from peers and agreements with other health care providers who may prescribe controlled substances for SUDs or chronic pain.<sup>11</sup>

*Lacking information in PDMPs:* Of equal importance to the information provided is what is not in the PDMP profile. Indication for prescribed medications, refusals to dispense, surrounding states’ PDMP profile information, medications prescribed through a federal program such as Veterans Affairs services and errors not yet corrected can all potentially add to possible conflict.

*Dealing with discrepancies:* Information reported in the PDMP should not



automatically be assumed to be evidence of misuse or criminal activity. The Department of Justice houses and provides oversight of the CURES 2.0 program, but it is not responsible for the accuracy of the data. The data found in CURES 2.0 reflect what is exactly entered into the dispensing site's database.<sup>11</sup> Any anomalies that may lead to changes in patient treatment must be verified before taking any action. For example, patients with common last names such as Smith or Jones may inadvertently have another patient's medication dispensing information in their PDMP profile if an error was made during order entry of the prescription at the dispensing site. Other examples include the wrong prescriber being listed in the profile or misspelling of names that excludes the desired patient completely. When finding additional active and current prescriptions for opioids, patients should be queried regarding current opioids or prescriptions received after verification from the dispensing site that the prescription was actually dispensed. Questions regarding diagnosis and confirmation of that diagnosis with the prescriber may lead to the patient "getting caught." Blatant accusations of misuse or diversion attempts should always be avoided. Verified aberrant findings may require several actions including, but not limited to, referring the individual for treatment if an SUD is suspected, prescribing alternate medications, refusal to dispense other controlled prescription medications, notification of law enforcement, dismissal from the practice and notification of other facilities of possible doctor-shopping behaviors.

*Protecting your dental practice:* The CURES 2.0 database allows prescribers of controlled prescription medications to review a list of all prescriptions dispensed based on the prescriber's DEA identification number. Dentists are

encouraged to review their dispensed-prescription profile at least every six months with an office staff member, such as the office manager, who has significant familiarity with the dental practice's patients in order to help detect unauthorized prescriptions.<sup>11</sup>

### Summary

The practice of dentistry may be complicated by a wide variety of attempts to obtain controlled prescription medications illegally. Diversion tactics vary from simple prescription forgeries to overt theft by office employees. Many patient behaviors should cause dentists to be cautious when prescribing since they may be a target of diversion. CURES 2.0 is a necessary tool for all dentists prescribing controlled substances to utilize and prevent diversion in their practices. Utilization of information from CURES 2.0 should be verified prior to making any critical decisions. Preventing prescription medication diversion requires a team approach including dental office personnel and pharmacists caring for your patients. ■

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**CARSON**— **Price Reduced!!** Long established GP in a small shopping center. **Grossed \$277K in 2017. Net \$132K.** Has 3 eq ops & 2 plmbd not eq. Retiring seller work 3 days/wk. Great street visibility. **Property ID #5181.**

**CENTURY CITY**—GP in 11 story prof med bldg. Has 5 eq in a 1,955 sq ft. **Grossed approx. \$715K. Buyer's net of \$200K. Property ID 4509.**

**DIAMOND BAR**—GP + Real Estate! Established in 1984. Has 8 eq ops + 1 plmbd not eq. **Grossed \$1.3M in 2017. Property ID # 5249.**

**ENCINO**—**COMING SOON!!!**

**LANCASTER**—GP + Real Estate! Long established practice w/ 4 eq ops in a single standing bldg. On a major downtown street. **Net \$243K. Property ID #5222.**

**LYNWOOD**—**COMING SOON!!!**

**SOUTHGATE**—Leasehold Improvements & Equipment with Real Estate. 4 eq ops and 4 plmbd not eq in free standing building. Excellent street visibility. **Prop. #5250.**

**WOODLAND HILLS** - Well established GP in a 5 story med/dent bldg with 4 eq ops and 1 plmbd not eq. **Projecting \$1M for 2018. Property ID #5246.**

### KINGS & VENTURA COUNTIES

**LEMOORE**— GP + Real Estate. 33 years of goodwill with 5 eq ops in a 1,655 sq ft office. Averaging 35-40 new patients/mo. **Grossed \$1.4M in 2017. Net \$377K. Property ID # 5232.**

### ORANGE COUNTY

**IRVINE** - Well established Cash Only GP w/ 5 eq ops in a 1,915 sq ft office . **Grossed approx. \$482K in 2017. Property ID #5193.**

**LADERA RANCH**— Beautiful GP in premier shopping center. Has 11 eq ops. **Grossed \$1.9M in 2018. Property ID 5262.**

**ORANGE**— Turn-Key GP in small shopping center on a major heavy traffic street. Has 3 eq ops in a 1,800 sq ft suite. **Proj. approx. \$164K for 2018. Property ID # 5253.**

**SANTA ANA**— GP W/ 3 eq ops and 1 plmb not eq in 4 story med bldg. **Property ID 5113.**

**TUSTIN**—Well established GP in a 2 story busy shopping center. **Projecting \$1.6M in 2018.** Has 3 eq ops in 1,222 sq ft suite. **Property # 5236.**

**TUSTIN**— **LH & EQUIP ONLY!** Beautiful remodeled office with 3 eq op and 1 plmbd not eq. Located in a single story professional building. Has two price points. **Property ID #5244.**

**TUSTIN** - **GP + Real Estate.** Established in 1987w/ 4 eq ops in a 1,140 sq ft office. **Proj. approx. \$353K for 2018. Net \$128K. Property ID #5247.**

**YORBA LINDA**— GP established in 1987 consists of 4 eq ops in a 1,150 sq ft suite. PPO & Cash Only. **Proj. approx. \$673K for 2018. Property # 5258**

### SAN DIEGO COUNTY

**CARLSBAD**— This beautiful **Holistic** practice has over 22 yrs of goodwill. Has 4 eq ops in a 1,800 sq ft suite. Fee for service office. **Projecting approx. \$440K for 2018. Property ID # 5256.**

**EL CAJON** - **COMING SOON!!!**

**OCEANSIDE**— Orthodontic practice w/4 chairs in open bay in a 1,550 sq ft office. **Grossed \$263K in 2017. Property ID #5225.**

**OCEANSIDE**—**COMING SOON!!!**

**SAN DIEGO**— **Price Reduced!!** GP in med/dent bldg. w/ 3 eq ops. Fee for service. Estab. circa 1950. **Grossed \$301K in 2017. Net \$117K. Property ID # 5212.**

**SAN DIEGO**—Spacious GP located in a 3 story professional building. Has 5 eq ops in a 2,157 sq ft suite. **Proj. approx. \$645K for 2018. Property ID #5233.**

**SAN DIEGO**— Beautiful GP in a 2 story professional bldg w / 6 eq ops and 2 plmb not eq in a 2,250 sq ft suite. **Proj. approximately \$1.2M for 2018. Property ID #5251.**

### RIVERSIDE &

### SAN BERNARDINO COUNTIES

**CORONA**— Beautiful GP w/ 6 eq ops / 4 plmbd not eq for expansion in a 3,700 sq ft office. Located on a one story free standing building next to a busy shopping center. **Grossed \$346K in 2017.** Great potential for a full time dentist. **Property ID #5224.**

**PALM DESERT**— Beautiful GP located in a single story corner building. Heavy traffic flow. Consists of 4 eq ops in a 1,800 sq ft office. Reasonable rent. **Monthly revenues of \$132K. Grossed \$1.4M in 2017. NET \$477K. Property ID #5217.**

**TEMECULA** - **Pedo and Ortho Practice + Real Estate!!** It's located in a duplex single story building. **Projecting approximately \$1.8M with a Buyer' net of \$1M.** PPO/Cash/Denti-cal. Has 8 eq ops in a 3,500 sq ft office. **Property ID # 5243.**

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# Patient Selection: Instincts, Courage and Healthy Relationships

TDIC Risk Management Staff

Of the nearly 3,500 professional liability claims The Dentists Insurance Company addressed between 2012 and 2017, many could have been avoided or mitigated had the dentist been more cautious about choosing which patients to accept into care.

“Prevention is the best strategy to avoid risk,” said Taiba Solaiman, senior TDIC Risk Management analyst. “Being selective in the patients you see goes a long way in avoiding trouble down the road.”

## New Patients

Dentists are not obligated to accept all patients into their practice (barring discrimination). Those you do select to make up your patient base should be those with whom you can form productive, healthy doctor-patient relationships.

Some signs to look out for when meeting a new patient include the following:

- *Patients who arrive for the initial exam complaining about the past several dentists they've seen, especially if it's within a short time frame.* This may indicate the patient is hard to please, so there's a high likelihood they won't be satisfied with your treatment either.
- *Patients who attempt to dictate treatment or who do not follow treatment recommendations.* Patients cannot consent to negligent treatment. You are required to follow the standard of care and failing to do so can set you up for a liability claim.

- *Patients who refuse to disclose the name of their former dentists.* For continuity of care purposes, it is standard practice to contact previous dentists for dental history. Treating patients without knowing their complete dental history can put you at risk. Investigation into the patient's treatment history can provide invaluable insights on the patient you are considering accepting into your practice.

## Emergency Patients

For patients who present for emergency treatment, it is recommended to discuss the limited scope of the relationship prior to treatment. The patient should understand that you are not establishing a doctor-patient relationship beyond their emergency care. The ethical standard for emergency services for patients who are not patients of record is to make “reasonable arrangements for their emergency care,” according to ADA Principles of Ethics and Code of Professional Conduct. To facilitate meeting this standard, consider maintaining a list of phone numbers of clinics and dental societies to provide to the emergency patients who don't have an established dental provider.

After the completion of emergency care, document the treatment and refer the patient back to his or her established dentist. If you decide to keep the patient, understand that there is a duty to provide care until one of the parties officially terminates the relationship.

## Second-Opinion Patients

Patients often present to dental

offices seeking a second opinion on recommended treatment from another dentist. Some patients simply want to compare prices. Some want to confirm that a treatment is truly needed. Others may be trying to build a case against another dentist. If you are unsure about a patient's motives, it is acceptable to ask questions. For every patient who presents for a second opinion, raise questions such as:

- What brings you here today?
- How did you choose my office?
- Are you currently under the care of another dentist?
- When was your last dental visit?
- Why are you seeking a second opinion?

If a patient refuses to answer these questions, consider carefully whether you want to accept this patient into your practice. Avoiding these questions can be a red flag. Let the patient know that refusing to answer these simple questions prevents you from providing a thorough assessment and suggest that they seek a second opinion elsewhere.

If you choose to proceed with the exam and notice questionable dentistry, consider that the patient could have omitted facts or withheld important information. Refrain from making commentary or making disparaging comments. Let the patient know that it is difficult to make an accurate assessment based on limited information.

When providing an assessment related to care previously provided by another dentist, Solaiman said only state the facts and refrain from making subjective comments.

### Noncompliant Patients

Dentists have a right to refuse to treat noncompliant patients. If you allow patients to remain in your practice despite their failure to follow a recommended treatment plan, you could be at risk for allegations of supervised neglect. You are responsible to provide dentistry within the standard of care and a patient's refusal of a specific treatment, such as refusing to have diagnostic radiographs taken, does not allow a dentist to practice below the standard of care. Depending on the circumstances, dentists should be aware of continuing treatment when the patient's refusal jeopardizes the possibility for a successful outcome or the patient's health, in which case terminating care may be the only reasonable option. Occasionally, some dismissed patients may want to

return to your practice; however, it is not advisable to accept them back.

"Old habits can be hard to break and it is not worth exposing yourself to the same liability risks that caused dismissal in the first place," Solaiman said. Rather, refer them to a local dental society or their insurance company so they can access a provider directory.

### Treating Friends and Relatives

Dentists often want to help friends or relatives by providing affordable dental care. But dentists often feel obligated to take on these patients despite their better judgement. Uncomfortable scenarios can turn into high-risk scenarios, so keep in mind that you have the same responsibilities regarding documentation, care and treatment

of friends and family members as you would with any other patient.

Patient and case selection is an essential component of a dental practice. While it can be difficult to walk away from a perceived financial gain for the practice, often the end result could be more costly than the anticipated benefit. Trust your instincts and have the courage to walk away from a patient or treatment plan that makes you uncomfortable.

If you find yourself facing an uncomfortable or uncertain situation, please call TDIC's Risk Management Advice Line at 800.733.0633. ■

*(This article appeared in the Fall 2018 issue of TDIC's Liability Lifeline.)*

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**4261 CAPITOLA GP** Retiring doctor offering an established practice in professional office complex built around a garden setting. Beautiful and modern 1,465 square foot facility with 4 fully-equipped operatories. Average gross \$743K+ with 10 doctor days and 6 hygiene days per week. Approximately 1,800 active patients. Asking \$562K.

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**4178 CONTRA COSTA COUNTY PEDIATRIC** Practice in a bright and relaxing atmosphere in an ample 1,600 sq. ft. 3 op facility with large private office that can be upgraded to include a fourth op. Surrounded by referral sources in a class A medical center. 3 doctor days per week. Scan X with Visix software fully-integrated with Open Dental. Seller retiring. Great upside potential. Asking \$141K.

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**4233 SF GP** Seller offering 26+ year general practice in SF Financial district. Ground floor office with high volume foot traffic. Approx. 1,200 sq. ft. facility with 4 fully-equipped ops. \$930K+ avg. annual GR. Seller willing to help for a smooth transition. Asking \$640K.

**4324 SF GP** Seller offering 33 years of goodwill in busy financial district bldg. Gorgeous 890 sq. ft. office with 3 fully equipped ops (plumbed for 4). Incredible panoramic views with amazing natural light pouring into each window. 500+ active patients. 2 days of hygiene/wk. Current average GR approx. \$410K with adj net of \$115K. Asking \$199K.

**4331 SF GP** Downtown SF practice in gorgeous, remodeled 1,300 office with panoramic views. Suite includes 4 fully equipped ops, reception area, business office, private office, staff lounge, lab area, and sterilization area. Beautiful, modern cabinetry and equipment. 1,600 active patients with 15-20 new patients/mo. Owner/doctor works 3 days/wk with 5 hygiene days/wk. Average gross receipts \$738K with average adj. net of \$305K. Asking \$495K.

**4344 SF GP** Prime & convenient location in Laurel Heights neighborhood. 9 year practice averaging \$500K+ with approx. 50% overhead in fully-equipped 2-op modern facility. Motivated seller relocating out-of area.

**4336 SAN BRUNO GP** Legacy practice centrally located in a combined commercial & residential neighborhood, convenient to highways 101, 280, and 380 and close to the BART station. Elegant, remodeled 1,463 sq. ft. office with 5 fully-equipped ops. & digital radiography. 5 year average Gross Receipts \$922K+. 1,000 active patients with an average of 10 new patients per month. Asking \$661K.

**4316 SARATOGA GP** Vibrant and active practice located in beautiful 4 op, fully-equipped, facility at upscale residential, professional, and commercial neighborhood. 100 new pts./month. 4 doctor days & 4 hygiene days per week. \$464 avg. Gross Receipts. Asking \$357K.

**4216 SIERRA NEVADA FOOTHILLS** 23 year practice located in the heart of the Sierra Nevada foothills in modern building close to downtown area. 1,024 square foot office with 4 fully- equipped ops., upgraded major equipment and digital radiography. Average Gross Receipts \$890K+ with 56% average overhead. Asking price for practice \$604K. Seller is offering real estate for sale to the buyer of his practice.

**4256 SANTA CRUZ COUNTY GP** Seller moving out-of-state and offering 33 years of goodwill. Wonderful location on major thoroughfare in a charming beach community close to wineries and the water. Tranquil and modern, beautifully appointed, 5 op facility. Approx. 1,300 active patients (all fee-for-service). Seller will help for smooth transition. Asking \$180K.

**4178 SONOMA COUNTY PERIO** Seller retiring from 21 year practice with trained, seasoned staff and great location. Exceptional 2,100 sq. ft. ample office with 6 fully equipped ops. Majority of equipment purchased in 2002. 4 doctor-days & 3 hygiene days per week. Average gross receipts \$1M+. Asking \$677K.

**4340 WEST SONOMA COUNTY GP** Charming and growing community practice with over 40 years goodwill in seller owned building. Busy corner location adjacent to several retailers. Well appointed, 4 op office with several Recent leasehold improvements and upgrades. Approximately 1,000 active patients. Average Gross Receipts \$788K with consistent growth. 2018 on schedule for \$822K with 65% overhead and 3.5 doctor days per week. Primarily Restorative dentistry with no implant placement. Average 4 days of hygiene per week. Owner willing to help for smooth transition. Asking \$538K.

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# CDA Practice Support Resources on Prescribing and Dispensing Controlled Substances

CDA Practice Support

CDA members can turn to CDA Practice Support for information they need to know in order to prescribe, administer or dispense controlled substances. “Controlled Substances: Prescribing and Dispensing” is an article that can be downloaded from [cda.org](http://cda.org). In addition, the website has the “CURES 2.0 — Frequently Asked Questions” document and a link to the list of state-approved secure prescription-form printers. A comprehensive list of resources on the subject of opioids and pain management is also available on [cda.org](http://cda.org). This article contains a summary of the information found in “Controlled Substances: Prescribing and Dispensing.”

## Drug Enforcement Agency Registration

A dentist must have an active, unrestricted dental license and be registered with the U.S. Drug Enforcement Agency (DEA) in order to prescribe controlled substances. A DEA registration is not required to prescribe antibiotics, fluoride or any noncontrolled substance. The DEA registration is site-specific. If a dentist administers or dispenses controlled substances at another facility, then the dentist must have a second DEA registration. To register or to update an address, go to [deadiversion.usdoj.gov](http://deadiversion.usdoj.gov).

A prescriber who wishes to discontinue administering, prescribing and dispensing controlled substances must submit written notification of registration termination to the nearest DEA field office. The notification must be accompanied by the DEA Certificate of Registration and any unused Official Order Forms (DEA Form-222).

## Prescribing

**Written prescription:** A written prescription for a controlled substance must be on a tamper-resistant form. Dentists may use the tamper-resistant forms for prescribing other types of medicines such as antibiotics. The forms should be used when writing a prescription for a patient whose prescription benefits are paid by a government program such as Medicare or Medi-Cal Dental Program.

Purchase tamper-resistant prescription forms only from state-approved printers listed on the Department of Justice’s website, [oag.ca.gov/security-printers/approved-list](http://oag.ca.gov/security-printers/approved-list). The forms may be ordered in any format (including a duplicate-copy format) and must have the following preprinted items and security features:

- Prescriber’s name and address.
- Category of licensure and license number.
- Federal controlled-substance registration number (DEA number).
- The statement “Prescription is void if the number of drugs prescribed is not noted” on the bottom of the form.
- Check boxes so that the prescriber can indicate the number of refills ordered.
- A place to indicate the prescription’s date of origin.
- A check box indicating the prescriber’s order not to substitute.
- An identifying number assigned to the approved security printer by the Department of Justice.
- A check box by the name of each prescriber when the form lists multiple prescribers (the prescriber signing the form must check the box next to his or her name).

- A lot number for each batch of forms with each form in a batch numbered sequentially beginning with the number one.
- A latent, repetitive “void” pattern printed across the form so that the pattern is readily apparent on a copy or scan of the original.
- A watermark on the backside of the prescription with the text “California Security Prescription.”
- A chemical void protection that prevents alteration by chemical washing.
- A feature printed in thermochromic ink.
- An area of opaque writing so that the writing disappears if the prescription is lightened.
- A description of the security features printed on each prescription form.
- Six quantity check-off boxes so that the prescriber may indicate the appropriate prescription quantity range: 1–24, 25–49, 50–74, 75–100, 101–150 and 151 and over. Include space to designate the units referenced in the quantity boxes, for example “ml” if a liquid is prescribed.

The prescriber must sign and date the written prescriptions in ink. In addition to the required preprinted information, the prescription form should include:

- Prescriber’s telephone number and individual National Provider Information (NPI) number.
- Name of the ultimate user of the controlled substance. Patient contact information can be collected by the pharmacy for reporting to the Department of Justice.

- ICD-10 code, if available.
- Name, quantity, strength and directions for use of the controlled substance prescribed.

Forms that are missing a required element or have circles or lines instead of check boxes may be rejected by a pharmacy for noncompliance. A prescriber should verify that a new order of prescription forms contains all required elements and not just rely on the fact that a printer is approved by the state of California.

**Electronic prescriptions:** An electronically transmitted prescription may be an “electronic image” prescription (a fax) or an “electronic data” prescription under California law. A pharmacy may accept a faxed prescription for Schedule III, IV or V controlled substances. A prescriber who plans to fax a prescription should write it on regular paper because use of the tamper-resistant form will create a copy that has “VOID” throughout and the pharmacy will be unable to fill it. Any individual who transmits, maintains or receives any faxed prescription must ensure the security, integrity, authority and confidentiality of the prescription.

Electronic data prescribing, or e-prescribing, can reduce opportunities for diversion of controlled substances by eliminating the use of paper forms that can be stolen, lost or left behind and used illegally. E-prescribing also aids in providing timely patient care, such as relieving a patient from making a trip to the dental practice to pick up a written prescription for a Schedule II drug. Starting Jan. 1, 2022, all California prescribers will be required to be able to utilize e-prescribing.

Use of e-prescribing for controlled substances (EPCS) is growing nationally due to state mandates and prescribers’ increasing comfort level with technology. Be aware that prescribing software is sold with or without EPCS. EPCS software

must be certified that it complies with the DEA regulation that requires:

- Identify-proofing of prescribers.
- Two-factor authentication when signing prescriptions.
- Software users establishing access controls.

A prescriber with practice management software (PMS) should check with that company for the availability of e-prescribing. A list of prescribing software applications is available on [surescripts.com](http://surescripts.com), however, many are proprietary products associated with a specific PMS or electronic health

Forms that are missing a required element or have circles or lines instead of check boxes may be rejected by a pharmacy for noncompliance.

record or an entity such as Access Dental.

**Orally transmitted prescriptions:** A prescriber or someone authorized by the prescriber may call in a prescription for Schedule III, IV or V controlled substances. A pharmacist or pharmacist intern must receive a telephone order. In addition, the pharmacist must be able to authenticate the validity of the prescription.

### CURES – California’s Prescription Drug Monitoring Program

A prescriber registered with the DEA has two requirements related to California’s Controlled Substance Utilization Review and Evaluation System (CURES): to register to access the database and to check a patient’s prescription history on the database if the prescriber intends to prescribe, order, administer, furnish or

dispense a controlled substance as part of the patient’s treatment for a surgical procedure, that is for more than a five-day supply or is refillable. If the controlled substance remains part of the patient’s treatment, the dentist must subsequently check the CURES database prior to writing another prescription and every four months while the substance is part of the patient’s treatment. The CURES patient activity report must be pulled no earlier than 24 hours prior to prescribing. CURES users are required to maintain effective controls for access to patient activity reports, and accessing information for any other reason than caring for one’s patients or falsifying an application for access may result in disciplinary action. HIPAA and all confidentiality and disclosure provisions of state law cover the information contained in the database. To register for or to access the CURES database, go to [oag.ca.gov/cures](http://oag.ca.gov/cures).

In addition, if a prescriber dispenses controlled substances, he or she is required to submit information to CURES, with the exception of Schedule IV controlled substances that are dispensed in a quantity limited to an amount adequate to treat the patient for 48 hours or less. Read the next section for more information on this reporting requirement.

### Risk Assessment

In addition to the CURES system, CDA Practice Support, with assistance from TDIC Risk Management, has created two resources to help members gather previous patient prescription data. When logged in to the CDA Practice Support website, [cda.org/member-resources/practice-support](http://cda.org/member-resources/practice-support), members can access an updated “Confidential Health History Form” (also available in Spanish) and “Consent to Prescribe Opioids to a Minor.”

CONTINUES ON 194





**POSTING REQUIREMENTS?**

**WE'RE ON IT.**

With an easy-to-display federal and state poster set designed specifically for California dental offices, you can keep the latest required health, safety and employee rights postings in one place. As a benefit of CDA membership, practice owners will receive sets for 2019–20.

Visit [cda.org](http://cda.org) to update your Member Profile information under My Account. Be sure your ownership status and practice details are current to benefit from a new poster set.

Learn more and update your profile.  
[cda.org/posterset](http://cda.org/posterset)

  
cda

**PRACTICE  
SUPPORT**

Practice Management  
**Employment Practices**  
Dental Benefit Plans  
Regulatory Compliance

CONTINUED FROM 192

**Examples of Controlled Substances**

Schedule II	Schedule III	Schedule IV
Oxycodone combination products (Percodan, Percocet)	Tylenol #3 (with codeine)	Zolpidem (Ambien)
*Hydrocodone combination products (Vicodin, Vicoprofen, Lortab, Lorcet, Norco)	Anabolic steroids	Lorazepam (Ativan)
Meperidine (Demerol)	Ketamine	Triazolam (Halcion)
Hydromorphone (Dilaudid)		Hydroxyzine (Vistaril)

\*Moved into Schedule II effective Oct. 6, 2014.

**Dispensing**

Prescribers who dispense controlled substances must comply with federal and state law with regard to storage and record-keeping:

- Store controlled substances in a locked cabinet or drawer.
- Maintain a three-year log.
- Inventory controlled substances at least once every two years. The inventory record must be in written, typewritten or printed form and maintained at the practice for at least two years from the date that the inventory was conducted. Controlled substance samples provided by pharmaceutical companies must be included in the inventory record.

Dispense to a patient no more than a 72-hour supply of a Schedule II controlled substance in accordance with normal use. Prior to dispensing, a prescriber must offer a written prescription to the patient that the patient may elect to have filled by the dentist or by any pharmacy. The patient must be provided with a written disclosure that he or she has a choice between obtaining the prescription from the dentist or obtaining the prescription at a pharmacy of the patient's choice.

When dispensing, a prescriber must:

- Use a childproof container.
- Label the container as required by law.
- Inform the patient orally or in writing of possible side effects of the drug.

**Reporting to CURES:** A prescriber who dispenses Schedule II or III controlled

substances in a quantity limited to an amount adequate to treat the patient for 48 hours or less may submit the required information monthly. A prescriber who dispenses in quantities greater than this must submit information weekly. Report to CURES the information below for each prescription dispensed:

- Patient's full name, address, telephone number (if available), gender and the patient's date of birth.
- Prescriber's category of licensure, license number, individual NPI and DEA number.
- National Drug Code (NDC) of the controlled substance dispensed.
- Quantity of the controlled substance dispensed.
- ICD-10 code, if available.
- Number of refills ordered.
- Whether the controlled substance was dispensed as a refill or a prescription or as a first-time request.
- Date of origin of the prescription.
- Date of dispensing the prescription.

CURES currently uses an outside vendor, Atlantic Associates Inc. (AAI), to collect the information. Data must be submitted in a prescribed format. For more information, refer to the CURES website at [oag.ca.gov/cures](http://oag.ca.gov/cures) or contact AAI at [CACures@aainh.com](mailto:CACures@aainh.com) or 800.539.3370.

**Administering**

The administration of a Schedule II or III drug does not have to be reported to the CURES program. However, any prescriber

who prescribes or administers a Schedule II drug must make a record of the transaction that includes all of the following:

- Name and address of the patient.
- Date of transaction.
- Character, including name and strength, and quantity of the controlled substances involved.
- The pathology and purpose for which the controlled substance was administered or prescribed.
- The information can be kept in the patient record; a separate drug log is not required for the administration of Schedule II drugs.

**Prohibitions**

No person shall:

- Prescribe, administer or furnish a controlled substance for himself or herself.
- Prescribe, administer or furnish a controlled substance except under the conditions established by law.
- Antedate or postdate a prescription.
- Make a false statement or give a false name or false address in any prescription order, report or record.

"Controlled Substances Prescribing and Dispensing" has more details on compliance requirements and information on reporting the loss or theft of drugs or forms and how to dispose of controlled substances. ■

*Regulatory Compliance appears monthly and features resources about laws that impact dental practices. Visit [cda.org/practicesupport](http://cda.org/practicesupport) for more than 600 practice-support resources, including practice management, employment practices, dental benefits plans and regulatory compliance.*



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**6161 SAN FRANCISCO BAY AREA PROS PRACTICE - "OUT-OF-NETWORK"** 2018 produced \$1.18 Million and collected \$1.18 Million. 4-days of Hygiene. Owner available for long transition. Condo available as optional purchase.

**6160 SAN FRANCISCO'S 450 SUTTER** 12th floor with unencumbered views of Downtown. Upgraded office, technology and delivery systems. PPO practice collected \$270,000 part-time due to Owner's East Bay practice.

**6159 WOODLAND** 3-day practice perfect for first practice, or acquisition by nearby DDS as can be relocated. Collections in 2018 totaled \$518,000. 3-days of Hygiene. 4-ops in well-designed office. Quality patients. Full Price \$250,000.

**6158 FORTUNA** Relaxed lifestyle in Humboldt County's Banana Belt. Adjacent to Ferndale. Perfect for Dentist seeking small town living. Collects \$390,000. 6-weeks off. Lots of work referred. Full Price \$75,000.

**6157 SACRAMENTO'S DELTA – WALNUT GROVE** Looking for sure bet? This is it! 2018 collected \$909,000 on Owner's 3-day week. Successor can immediately increase days as practice is rich in patients. 25+ new patients per month.

**6156 SANTA ROSA** Sited on Sonoma Highway near Oakmont. Strong foundation evidenced by 4-days of Hygiene. Well-designed 5-op office. 2018 collected \$730,000. Over \$200,000 invested in equipment and technology. Full Price \$325,000.

**6155 LAKEPORT - "SOLD"** 5-days of Hygiene. 2018 collected \$825,000. Lakeside location and nicely equipped. Seller happily looks forward to retirement. Full Price \$225,000.

**6152 SAN RAFAEL - "SOLD"** Across the street from Marin Academy. 2018 collected \$520,000. Stand-alone building optional purchase. Nearby DDS who desires their own building should vertically integrate their practice here and have an instant \$1+ Million practice in a superior location.

**6151 MODESTO** Located on north end of Coffee Road where new development is occurring. Attractive 3-op office. 2018 collected \$408,000 on 2-day week. Did \$700,000+ in 2016 when Owner was full time with \$240,000 in Profits. Full Price \$200,000.

**6150 HAYWARD - "SOLD"** Strong Dental DNA. Well-designed 5-op office. Digital radiography and computers. 2018 trending \$850,000+. 5-days of hygiene. Full Price \$200,000.

**6149 NOVATO - PERFECT START-UP OPPORTUNITY – BUILDING + 3-YEAR OLD OFFICE** Stand-alone building at busy stop light intersection off Highway 101. 4-ops, paperless at cost of \$180,000. Doorway to Hamilton with 100s of homes. No competition. Perfect for Dentist seeking perfect location. Scott McDonald from Doctor Demographics states: "Well, I have to say that you were right, Ray. This is an interesting and viable location."

**6147 SAN FRANCISCO BAY AREA - "OUT-OF-NETWORK" - "SOLD"** 2018 collected \$2.2 Million. Hygiene produced \$1+ Million. \$700,000+ in profits. Unique in so many ways! Seller available for long transition.

**6143 BERKELEY'S ALTA BATES VILLAGE - "SOLD"** 3-day week collected \$540,000 in 2018. 4-days of Hygiene. Housed in its own building on Webster Street.

**6141 NAPA VALLEY'S CALISTOGA - "SOLD"** 3-day per week PPO practice. 3-days Hygiene. 2018 shall collect \$350,000. Attractive 3-ops. 15 new patients per month. Full Price \$100,000.

**ALTA LOMA** Great exposure. Grossing \$700,000. 5-ops, 3-equipped.  
**BAKERSFIELD AREA** Grossing \$1.2. Owner works 16-hours. Nets \$300,000.

**BAKERSFIELD AREA** Grossing \$40,000/month on 2-days. 5-ops.  
**BAKERSFIELD** Practice & building. Has done \$500,000. Full Price for both \$350,000.

**CAPISTRANO BEACH** Senior Dentist Grosses \$200,000. Full Price \$150,000.

**DEL MAR -- ENCINITAS HMO** Grossing near \$400,000. 4-ops.

**DENTURE PRACTICE** Needs Western Boards. Grossing \$750,000. Did \$1.2 with OS. Prosthodontist / Implant Specialist will do extremely well.

**DIAMOND BAR** High identity Asian center. Will do \$1 Million. Hundreds of people walk by each day.

**EMERGENCY SALE** Southern California Paradise. Seller moving out-of-state. 9-ops. Skilled and driven Successor can net \$400,000 first year and it will only get better.

**ENDODONTIST** Join Periodontist in Santa Clarita. Only \$35,000 or GP who wants a good reliable job.

**GLENDALE / BURBANK** Grosses \$840,000. Includes apartment.

**INLAND EMPIRE** Adec, cone beam. Gross \$1.3 Million. Includes RE.

**INLAND EMPIRE** DentiCal grossing near \$300,000. Full Price \$150,000.

**INLAND EMPIRE** Union Practice can do \$1+ Million. 5-ops.

**INLAND EMPIRE** HMO \$8-to-10K/month. Grossing \$500,000. All Hispanic. Full Price \$450,000

**IRVINE** Female Grossing \$1.2 Million. 5-ops.

**LA HABRA** Shopping mall. Female Grossing \$330,000. 6-ops, 5 equipped. Million Dollar location. Full Price \$270,000.

**LA MIRADA** Like new 5-ops, 3-equipped. Grossing \$450,000.

**NORTH PASADENA** Million Dollar practice. 5-op free-standing building across from Starbucks.

**OC BEACH** 6-ops, Dentrix, digital, computerized. Full Price \$150,000.

**OC BEACH** Absentee owned, grossing \$550,000. 4-ops. New Doc does \$1 Million.

**ORANGE COUNTY BEACH** Grossed \$100,000 last month. FP \$900,000.

**OC'S FASHION ISLAND** Grossing \$650,000. Rare opportunity.

**ORANGE COUNTY- INLAND EMPIRE** Two-practices grossing \$1.8 Million. Right Buyer does \$3 Million.

**PEDO** Chinese & Latino. Grosses \$450,000. Full Price \$285,000.

**RIVERSIDE** Female grossing \$250,000. 30-new patients/mth. FP \$165,000.

**SANTA CLARITA** Hi identity center. Dentist wishes to share office and remain 1-day in 2-ops. 8 ops available. 70,000 autos pass per day. This location did almost \$2 Million in past.

**TUSTIN - SANTA ANA** Just opened. \$450,000 invested. Cone Beam.

**TORRANCE** Entrance to Palos Verdes. Grossing \$300,000+. Full Price \$290,000.

**UPLAND** Grossing \$135,000 part time. 3-ops. Full price \$65,000.

**VAN NUYS** 2-ops, room for more. Hi identity medical building. On first floor. Full Price \$150,000

**VENTURA** Three HMO practices grossing \$2.6 million.

**WEST COVINA** Grossing \$650,000. 2-days hygiene. Refers lots of work!



# WESTERN PRACTICE SALES

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Unsurpassed  
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us to offer you

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Candidate

Better  
Fit

Better  
Price

## BAY AREA

**AC-886 SAN FRANCISCO (Facility):** Unsurpassed visibility & location! Potential here is limitless! 850 sf w/ 3 ops **\$85k**

**AG-871 SAN FRANCISCO:** Seller Motivated! 600 sf w/ 2 ops **Price Reduced \$75k**

**AG-895 SAN FRANCISCO:** Stellar reputation and delivers the highest quality of dentistry! 1500 sf w/ 4 ops **\$675k**

**AG-933 SAN FRANCISCO Prosthodontics:** Highly profitable with net profit close to \$400,000! 1500 sf w/ 4 ops **\$675k**

**AG-944 SAN FRANCISCO:** An opportunity like this does not come along very often! 980 sf w/ 3 ops **\$625k**

**AG-945 SOUTH SAN FRANCISCO:** Be a part of this vibrant, diverse population. 1800 sf w/ 4 ops **\$495k**

**AN-939 REDWOOD CITY:** Tradition of restoring smiles & improving dental health! 1165sf w/ 4 op + 2 add'l. **\$295k**

**AN-947 DALY CITY:** Great staff, stellar reputation are just some of this opportunities attributes! 1500sf w/ 4 ops. **\$450k**

**BC-741 DANVILLE (FACILITY):** Move in Ready! ~ 1600 sf w/ 3 ops. **PRICED TO SELL! \$10k**

**BC-926 ANTIOCH:** Long established, well respected office. 1866 sf w/ 5 ops **\$495k**

**BG-925 HAYWARD:** Profits close to \$900K per year! ~ 1930 sf w/ 6 ops **\$1.15M**

**BG-929 WALNUT CREEK:** Practice on track for its best year ever! ~ 1700sf w/ 5 ops. **\$635k**

**BN-891 PINOLE:** This seller is ready to retire, & looking for someone to continue the legacy! 1300 sf w/3 ops. **\$350k**

**BN-906 OAKLAND:** Located in Oakland's thriving and bustling China Town! 1,000sf w/2 ops. **\$195k**

**BN-943 MARTINEZ:** Opportunities like this only comes along every great once in a while. 1520sf w/ 4 ops +1 add'l. **\$450k**

**BN-952 BERKELEY:** Step into this quality practice and you'll know you belong here! ~ 835 sf w/ 3 Ops. **\$450k**

**CC-846 SAN RAFAEL:** Prof/Retail Building Complex. 3 ops 640 sf Collections \$433k in 2017 **Price Reduced \$275k**

**CC-927 SAN RAFAEL:** Build the practice of your dreams by increasing this 2-day work week! 800 sf w/ 3 ops **\$250k**

**CC-960 SONOMA:** Great location in one-of-a-kind setting! 950 sf w/ 3 ops. **\$385k/ Real Estate Available \$350k**

## BAY AREA CONTINUED

**CC-963 SANTA ROSA:** Dream Practice in Free Standing Building on major thoroughfare. 1765 sf w/ 5 ops **\$550k**

**CG-616 NAPA:** State-of-the-Art practice and on track to do \$100k more in 2018. **Seller is ready for retirement! \$425k**

**CG-859 SONOMA:** Priced below market value at only \$395k! 2000 sf w/ 4 ops highly esteemed FFS Practice **\$395k**

**CN-911 SANTA ROSA:** "Quality Care & Patient well-being FIRST". 2250 sf w/4 ops + 1add'l. **\$545k**

**CN-951 VALLEJO Facility:** Move In Ready! 2000 sf w/ 4 fully equipped ops. Negotiate your new lease! **Only \$50k**

**DC-916 DUBLIN:** Rare Opportunity to own practice and real estate. 1220 sf w/ 4 ops & **PRICED TO SELL!**

**DC-946 REDWOOD CITY:** Long established. Seller unable to work full-time due to health issues. 1577 sf w/ 2 ops & plumbed for 2 add'l **\$120k**

**DG-862 MID-PENINSULA:** Rare gem with up to 7 operatories in the Bay Area!! 2274 sf w/ 6ops + 1 add'l. **\$475k**

**DN-771 SOQUEL Facility:** Sink down roots, raise a family & build an empire! 1100 sf w/2 ops + 1 add'l. **\$38,500**

**DG-857 SAN JOSE:** Do the math - this associate-driven practice with profitability consistently! 1709 sf w/5 ops **\$595k**

**DG-892 SAN JOSE:** Excellent location & stellar reputation in one-of-a-kind setting! 1500 sf w/ 3 ops + 2 add'l. **\$295k**

**DN-898 SAN JOSE:** Built-out 2015 w/ location, visibility, convenience in mind! 2,204 sf w/4ops + 2 add'l. **\$500k**

**DN-907 PLEASANTON Facility:** One of the "50 Best Cities to Live 2014" by Money Mag. 1,170 sf w/ 4ops. **\$50k**

**DN-914 SANTA CLARA:** This beautiful and compact office produces a lot of dentistry! 950sf w/ 3 ops. **\$210k**

**DN-937 SAN JOSE:** This opportunity is waiting for your talent & skills! 2210 sf w/ 4 Ops + 2 add'l. **\$500k**

**DN-938 SUNNYVALE:** The ideal opportunity to practice in this community! 2000 sf w/ 4 Ops + 2 add'l. **\$500k**

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Timothy Giroux, DDS



Jon B. Noble, MBA



Mona Chang, DDS



John M. Cahill, MBA



Edmond P. Cahill, JD

### NORTHERN CALIFORNIA

**EN-664 SACRAMENTO Facility:** Great corner location, excellent visibility & easy access! 2300 sf w/ 4 ops. **\$30k**

**EG-849 AUBURN:** Imagine living in a peaceful, rural town w/ "big city" amenities nearby. 1400 sf w/ 4 ops **\$350k**

**EG-910 MIDTOWN SACRAMENTO:** Unlimited Potential. Well-established ~ 1107 sf w/ 2 ops + 1 add'l. **\$248k**

**EG-965 SOUTH AUBURN VICINITY:** The ideal opportunity to practice in this community! ~1100 sf w/ 4 Ops. **\$350k**

**EN-836 CITRUS HEIGHTS:** Well-established, quality practice. 30+ years of goodwill. 1300 sf w/3 ops + 2 add'l. **\$188k**

**EN-885 ROSEVILLE Facility:** Ideal location, great visibility, and close to just about anything! 1000 sf w/3 ops. **\$85k**

**EN-899 DIXON:** State-of-the-art office, with all the "bells & whistles"! This fantastic practice w/ 3 ops. **Only \$95k!**

**EN-935 SACRAMENTO:** Word to the wise: Act fast on this, it will not be available for long! 1800sf w/ 4 ops. **\$400k**

**FC-650 FORT BRAGG:** Family-oriented practice. 5 ops in 2000 sf **\$350k for the Practice & \$400k for the Real Estate**

**FG-841 ARCATA:** Own a little slice of heaven! 1114 sf w/3 ops **Reduced Price: \$275k/ Real Estate Also Available**

**FN-961 EUREKA:** Where the quality of life can't be beat! 1400sf w. 4 ops. **\$395k/ Real Estate Available \$395k!**

**FN-855 NO. HUMBOLDT:** Seller relocating! Long-established, 100% FFS practice! 1600 sf w/ 3ops + 1 add'l. **\$275k**

**GN-799 PARADISE:** Remarkable opportunity – Call for Details! 1800 sf w/ 4 ops. **Practice \$375k, Real Estate \$325k**

**GN-904 CHICO AREA:** Family-friendly, community-oriented, multi-generational patient base. 880 sf w/ 3 ops. **\$310k**

**GN-953 CHICO:** Established for 55 years and the seller is passing their goodwill on to you! 1067sf w/ 3ops. **\$315k**

**HG-815 SIERRA CO:** Perfect location for outdoor enthusiast! 1000 sf w/ 3 ops **Reduced Price: \$165k/ Real Estate \$437k**

**HG-827 SO. LAKE TAHOE:** Ski, live, play and practice here where your lifestyle can't be beat! 1200 sf w/4 ops. **\$310k**

**HG-851 SO LAKE TAHOE:** Projected Revenue on track to do \$700k this year! 2100 sf w/ 5 ops **\$425k**

**HN-618 SIERRA FOOTHILLS:** Seller Retiring! Huge opportunity for growth by increasing office hours! 750 sf w/ 2 ops **\$65k**

**HN-740 SHASTA CO:** Beautiful mountain community, well-established practice, exceptional long-term staff. 2400 sf w/5 ops + 1 add'l. **\$475k/ Real Estate \$350k**

**HN-773 SUTTER CREEK:** Qualified & credentialed Seller willing to show you how! 1536 sf w/4 ops + 1 add'l **Only \$95k!**

**HN-879 SONORA:** Live and practice in the captivating beauty of this family-oriented, scenic town. 2950 sf w/ 3 ops **\$275k**

**HG-934 GRASS VALLEY:** Just imagine living and practicing here! ~1200 sf w/ 3 Ops **\$225k/Real Estate Also Available**

**HN-941 GOLD COUNTRY/CALAVERAS CO:** This is the right practice for you! 2,300sf w/2 ops + 3 add'l. **\$175k**

### CENTRAL VALLEY

**IG-832 OAKHURST:** Rare Opportunity. 2048 sf w/3 ops + 1 add'l. **\$235k/ Real Estate 375k**

**IG-881 TURLOCK:** Consistently growing practice ~3500 sf w/ 10 Ops (shared). **\$360k**

**IN-764 STOCKTON:** Well-established, fully computerized, paperless, digitalized. 5,000 sf w/10 ops. **Only: \$120k!**

**IN-917 MERCED AREA:** Well established practice with a stable, loyal patient base! 1300 sf w/ 3 Ops. **\$325k**

**JC-811 FRESNO COUNTY:** Amazing Opportunity! Considerable Goodwill in Community! 3,000 sf w/ 6 ops **\$350k**

**JC-823 LOS BANOS:** Heavy emphasis on hygiene. Growth potential by increasing DDS days. 1000 sf w/ 3 ops **\$80k**

### SOUTHERN CALIFORNIA

**KL-909 SAN DIEGO:** Remarkable Opportunity. Long established in vibrant North Park. 2400 sf w/ 5 ops & 2 Pedo chairs **\$1.05M**

**KG-921 SANTA MARIA:** Live and practice in this desirable collegiate coastal community! 930 sf w/ 3 ops **Seller Motivated \$315k**

**KL-955 SAN DIEGO:** Just Listed! Well established & centrally located in 1<sup>st</sup> floor suite w/easy freeway access. Adjacent vacant suite available for expansion. **\$225k**

### SPECIALTY PRACTICES

**BC-784 CENTRAL CONTRA COSTA CO Perio:** Seasoned Staff. Office runs like well-oiled machine! 3 ops **\$395k**

**BG-843 WALNUT CREEK Perio:** Collections over \$1M! Great gross and profit for only 2 ½ days per week! 1085 sf w/ 4 ops **Reduced Price: \$595k**

**DC-835 TRI-VALLEY Perio:** Professional office bldg in highly desirable location. Owner available to work back to assist w/ transition. Collections over \$1.2M. 2,100 sf **\$800k**

**DG-912 SUNNYVALE Ortho:** Premier ORTHO practice opportunity in the Silicon Valley today! ~2030 sf w/ 5 chairs in open bay **\$925k**

**DN-908 SAN JOSE Pedo:** Amazing Location! Providing affordable pediatric dentistry to families! 3600 sf w/ 4ops + 3 add'l. **\$175k**

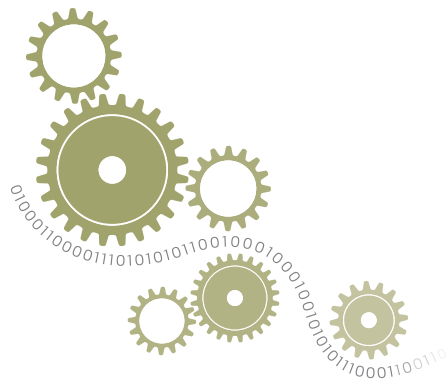
**EG-903 CARMICHAEL Oral Surgery:** Gross receipts were over \$1.1 million in 2017! Stable patient base won't be affected by transition! 2282 sf w/ 5 ops **Amazingly Priced: \$450k**

**EN-822 SACRAMENTO Perio:** This practice is known throughout Sacramento for its stellar reputation! 2200 sf w/ 5 ops + 1add'l. **\$790k**

**GG-940 NORTHERN CALIFORNIA Pedo:** Practice is on track to collect more than \$1.2million in revenues this year! 4300 sf w/ 5 ops. **\$785k**

**JG-757 VISALIA Perio:** 9 Hygiene days per week, this practice is a rare gem! On track to do almost 800k this year! ~ 2,000 sf w/ 5 ops **Steal at \$350k**

"ASK THE BROKER" can now be found at [WWW.WESTERNPRACTICESALES.COM](http://WWW.WESTERNPRACTICESALES.COM)



## A look into the latest dental and general technology on the market

### Quip Toothbrush (Starting at \$40, Quip)

Simply an electric toothbrush without extra features, Quip rewards patients for maintaining oral health. Quip's slim handle comes travel ready in plastic or aluminum designs in a range of colors, and the cover doubles as a travel case that can be wall mounted or attached to a mirror with a tape strip. There is a single option for a replaceable soft-bristle brush head that contains 1,200 rounded-end DuPont nylon bristles arranged in 34 tufts. The sonic motor runs on a single replaceable AAA battery that vibrates the bristles at 15,000 brush strokes per minute, pulsing every 30 seconds and stopping after two minutes. Quip does not offer Bluetooth or mobile app-controlled functionality. The toothbrush comes with a detailed illustrated guide providing instructions on its use and the importance of having good oral-hygiene habits.

The unique feature of Quip is its refill subscription plan, which provides users with a fresh brush head and battery auto delivered to their home every three months for \$5 (the first refill is free). For \$5 more, users can add a supply of mint anticavity toothpaste to their subscription plan. Users on an active refill subscription plan receive a lifetime guarantee on their toothbrush versus a one-year warranty for nonsubscribers. Users can receive various \$5 credits for referring friends, connecting dentists and posting on blogs or social media. Dentists can sign up to be connected to the Quip network, which sends digital reminders and personalized advice to their Quip-enabled patients. Dentists can also reward patients for making their regularly scheduled appointments on time by sending them free replacement brush heads, batteries, toothpaste and other Quip accessories.

It is important to note that Quip does not compare its features with other more expensive electric toothbrushes. Rather, it places value on simplicity and rewards as a path to better oral hygiene. With so many choices for electric toothbrushes available to patients today, the most simple and inexpensive approach can reach a wider population to encourage good oral health.

– Hubert Chan, DDS

### Google Wifi (Starting at \$99, Google)

The principle of Google Wifi is elegantly simple: Turn one wired internet connection into one wireless internet connection that can cover up to 9,000 square feet with minimal user input. To accomplish this, Google Wifi employs Wi-Fi points – identical, cylindrical devices that communicate with each other through wired and/or wireless means. To setup the Google Wifi system, a user downloads the Google Wifi app on their phone, plugs in a Wi-Fi point to the power outlet, then connects their internet modem to the Wi-Fi point via a standard network cable. The Google Wifi mobile app provides clear, concise, step-by-step setup instructions that are easy to follow. In minutes, the Wi-Fi point is configured to provide internet to about 1,200 square feet of space. To expand this coverage area, additional Wi-Fi points can be placed at the outer edges of the coverage radius. These additional Wi-Fi points only need to be plugged into a power outlet and the Google Wifi app is smart enough to prompt users when a new Wi-Fi point is placed.

Up to six Wi-Fi points can be connected to one Wi-Fi point that has a wired internet connection, though this number can increase if some or all the Wi-Fi points are wired. The mobile app acts as a central hub to control this wireless network, giving users the ability to create separate (and limited) guest networks, pause all traffic, set parental controls, control traffic to specific devices and more.

Using Google Wifi is a satisfying experience. Its entire user interface is written in plain language, the Wi-Fi points are interchangeable and the results (secure, reliable, full-strength Wi-Fi that can be controlled with a mobile app) are on par with many commercial networks. For a larger practice that wants to provide Wi-Fi to its patients while maintaining a separate, faster connection for its employees, Google Wifi is a product to consider.

– Alexander Lee, DMD

### Would you like to write about technology?

Dentists interested in contributing to this section should contact Andrea LaMattina, CDE, at [andrea.lamattina@cda.org](mailto:andrea.lamattina@cda.org).

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