

The Role of Dentists in Preventing Opioid Abuse
Tufts Health Care Institute Program on Opioid Risk Management
12th Summit Meeting
March 11-12, 2010

EXECUTIVE SUMMARY

It is well documented in multiple studies that prescription opioid abuse is a significant problem in the United States (eg, NSDUH, MTF, DAWN, TEDS¹). New initiates of prescription opioids abuse are only slightly behind new initiates of marijuana. The most frequently abused prescription opioids are the immediate-release (IR) hydrocodone-containing preparations, IR oxycodone-containing preparations, and other IR opioids (codeine, propoxyphene). While abuse of controlled-release (CR) opioids is certainly problematic, it is not as prevalent as IR opioids. Among both adolescents and adults, the most frequent source of abused prescription opioids is taken from or given for free by family and friends, or from their own prescriptions—drug dealers and the Internet are not common sources. The source where the friends or relatives obtained prescription opioids was usually 1 doctor. This *Tufts Health Care Institute (THCI) Program on Opioid Risk Management* meeting was convened in March 2010 to consider what part of this prescription opioid abuse problem the dental community might affect, and how to lessen inappropriate use without reducing availability of these medications for appropriate purposes.

The Role of Dentists

The top specialty prescribing IR opioids in the United States is family practice (approximately 15% of prescriptions written), but this is closely followed by dentistry and internal medicine (both approximately 12% of prescriptions). It is estimated that more than 12 billion dosage units of opioids are dispensed annually in the United States. If dentists write 12% of prescriptions, they prescribe an estimated 1 to 1.5 billion doses of IR opioid products annually. As the epidemic of abuse largely involves IR opioid products, it seems that dentists may be writing opioid prescriptions that are being ingested in the context of nonmedical use or abuse.

This meeting builds on the National Institute on Drug Abuse (NIDA) meeting convened in February 2009 to examine the prescribing of opioids to adolescents in dental settings, and how this might contribute to opioid abuse among adolescents. The NIDA meeting participants highlighted the need for data on and improved understanding of opioid prescribing practices in dental settings, including the amount of opioid analgesia that dentists typically prescribe, the amount that patients actually need/use for adequate pain relief, and what patients do with unused medication. Also relevant was more detailed understanding of medication diversion practices among adolescents, and the need for research on possible educational approaches to integrate drug abuse prevention efforts into dental settings. The objectives for this *THCI Program on Opioid Risk Management* meeting were to:

1. Produce materials, and a dissemination plan for those materials, to educate dentists about prescription opioid abuse in the United States.
2. Review available data on the role of dentists in opioid prescribing and the prevention and management of prescription opioid abuse and diversion.
3. Define a research agenda on the role of dentists in opioid prescribing, and prevention and management of prescription opioid abuse and diversion.
4. Develop recommendations for dentists on safe and effective use of opioids in dental practice.

¹NSDUH=National Survey on Drug Use and Health; MTF=Monitoring the Future; DAWN=Drug Abuse Warning Network; TEDS=Treatment Episode Data Set

Prescribing Practices for Acute Dental Pain

Oral surgeons are the knowledge opinion leaders amongst dental practitioners. A survey of dental prescribing practices among oral surgeons following third molar extraction (the most common dentistry surgical procedure, usually in healthy young adults [mean age 20 years]) found that on average, they performed 53 third molar extraction cases per month. This can be extrapolated to 3.5 million cases per year among oral surgeons in the United States (not including those performed by general dental practitioners). In 80% of these cases, general anesthesia or deep sedation is performed. The preferred peripherally-acting postoperative analgesic is ibuprofen (73.5%), but 85% of oral surgeons also almost always prescribe a centrally-acting opioid analgesic following third molar extractions, with the drug of choice being hydrocodone/acetaminophen (APAP) (64%). Therefore, 3.5 million individuals with an average age of 20 years, have possibly **their first exposure to opioids and anesthetics in dentistry**. On average 20 tablets of hydrocodone/APAP are prescribed by oral surgeons, with instructions in 96% of cases to “take as needed for pain” (PRN). Questions raised included:

- Is 20 tablets an appropriate amount following third molar extraction? What happens to unused opioids?
- Whether and how dentists inform patients and parents about how to secure that medication so that it is not diverted?
- Whether and how dentists inform patients and parents how unused medication should be disposed of?[†]
- What analgesic/anesthetic strategies could reduce the need for postoperative opioid analgesia?

Most of the available data on dentists’ analgesic prescribing practices focus on oral surgeons. Therefore, a statewide survey, developed by the Steering Committee for the *Tufts Health Care Institute Program on Opioid Risk Management: The Role of Dentists in Preventing Opioid Abuse*, was conducted in 2010 to evaluate pain medication prescribing patterns with an emphasis on opioids, and dentists’ experiences with patient drug diversion and substance abuse in West Virginia. Preliminary data presented, which represents 33% of all dentists in West Virginia (mainly general dental practitioners), revealed some trends that may have implications on dental practice:

- 12% of dentists in West Virginia dispense opioid analgesics from their office (these opioids do not appear in the data on opioid *prescriptions* dispensed from a pharmacy).
- 88% of dentists prescribed opioids in the past year.
- The most frequently prescribed analgesic if no opioids were prescribed was NSAIDs (55%), followed by APAP (35%).
- 90% reported writing or calling in 0 to 25 IR opioid prescriptions per week.
- The number 1 prescribed IR opioid was hydrocodone/APAP (73%).
- There was some misidentification of CR opioid formulations.

The amount of IR opioids given after third molar extraction varied, but 20 doses and a 3-day supply was most common. When asked about doses of IR opioids that dentists suspect patients have left after a third molar extraction, 36% of dentists expect patients to have leftover drugs, which could be a major source for abuse. Other common procedures showed a similar pattern of doses given, days of therapy, and suspected doses left over.

The survey also examined dentists’ experiences with drug diversion and substance abuse—36% did not ask new patients if they had a history of substance abuse. Other key findings were that

- 76% of dentists estimated that 1% to 20% of their patient population were substance abusers.
- 79% of dentists were aware of the West Virginia Board of Pharmacy Controlled Substance Monitoring Program, but 77% used it only for 0 to 25 instances in the previous year.

[†]The [FDA](#) has provided a list of which unused or expired medicines should be flushed down the sink or toilet. There are some local take-back programs run by health departments and town and municipal entities for drug disposal, but the police department is the only legal entity that can accept controlled substances that have already been dispensed.

- 58% believed they were the victims of prescription fraud or theft; the most common methods were fake pain symptoms (43%), patient claims their prescription was stolen (28%), forged written prescriptions (14%), and altered pill quantity (14%).

The survey revealed need for education for dentists on:

- The composition and pharmacokinetics of analgesics.
- NSAIDs as first-line agents in the appropriate population.
- Incorporating assessment of the diseases of drug and alcohol addiction, as well as substance abuse, during patient intake and over time.
- Prescribing to patients with the disease of addiction.
- Instructing patients on proper drug disposal of leftover medication.
- The use of the West Virginia Controlled Substance Monitoring Program.

Evidence-Base for Analgesic Use in Dental Pain

There are multiple randomized, controlled trials of analgesics in dentistry because a key pivotal model for an acute pain analgesic indication required by the FDA is the third molar extraction. These procedures, which involve trauma to soft tissue and bone, are performed under local anesthesia, usually with concomitant sedation or short-acting general anesthesia. Predictably, 3 or 4 hours after this surgical procedure, 95% of individuals have moderate to severe pain. Multiple studies using this model have shown that NSAIDs at optimal doses are superior in efficacy to single-entity opioids, and are at least as efficacious as optimal doses of peripheral-opioid combination drugs. NSAIDs also have a more favorable side effect profile than opioids. NSAIDs should be considered the first line drugs in most cases of postsurgical dental pain. One way to increase analgesic effects beyond maximum doses of NSAIDs or APAP is to combine an optimal dose of NSAID or APAP with an opioid. The use of preemptive NSAIDs and long-acting local anesthetics also appear to delay the onset of postsurgical dental pain and may have benefit beyond the immediate postoperative period.

Despite the evidence base available from dental acute pain models, evidence-based guidelines for how analgesics should be selected and prescribed in the acute dental pain setting are lacking. There are some published flexible analgesic strategies, but they lack a discussion of the level of evidence supporting the recommendations. Multiple guidelines for acute pain are available in medicine, which can be used as a basis to develop recommendations in dental practice. The available evidence can support practical, easy to follow algorithms to treat what is expected to be mild, moderate, or severe acute pain in the dental setting, or what to do if pain is inadequately controlled with the first-line therapy. In addition, existing guidelines in medical practice can guide the treatment of acute pain in special populations.

Pain Management in the Chemically Dependent Dental Patient

Considering that there is at least a 10% incidence of substance abuse in the population, dentists should expect to encounter such patients in their practice. However, substance use and addiction are commonly underdiagnosed in medicine and in dentistry. Patients with a history of substance abuse include those that are in drug-free recovery, those that are in recovery with adjuvant pharmacotherapy for prevention of relapse, and those that have active disease—these groups each have unique challenges (eg, how to manage acute pain in a patient on buprenorphine or methadone maintenance therapy). Dental professionals must learn to both recognize these individuals, and establish practices to manage their acute pain appropriately. It is important to consult with such patients' PCPs and collaborate with their family members or support network, particularly if it is established that a controlled substance is necessary for their care. Informed consent and strict parameters for treatment are essential. Again, medical practice has established standards of care that could be adapted by the dental profession. Tools such as state prescription

monitoring programs (PMPs) currently available in 33 states should be utilized, but it was not clear how tools such as urine drug testing could be incorporated into general dental practice.

Chronic Opioid Therapy in Dentistry

Most opioids in dental practices are prescribed for short-term acute pain. However, more recently, it is recognized that dentists also have a role in managing some types of chronic orofacial pain. The assessment and management of chronic orofacial pain differs from the usual model of acute pain, and sometimes requires long-term therapy with opioids, similar to medical models. It is important that dentists recognize the complexities of treating these pain patients with long-term opioids, and identify clinical tools to reduce risk, select patients, insure patient compliance, and improve outcomes. Appropriate use depends on accurate diagnosis, a detailed medical history, including prior treatments and prior drug history, and psychosocial evaluation. While all dentists, by licensure, may prescribe opioids for acute and chronic pain, the treatment of chronic pain requires additional considerations that prescribers should be aware of.

Chronic pain therapy is typically multifactorial and the dentist treating the chronic pain patient must be equipped to assess and utilize pharmacologic and nonpharmacologic treatment, stratify patients based on risk, and consider the use of referrals and coordination of care with other health care providers. In this setting, tools such as PMPs and urine drug testing become even more important, as does counseling patients on safe opioid use, including informed consent and a treatment agreement. In addition, an appropriate exit strategy is needed to terminate opioid therapy, when necessary. Therefore, the management of chronic orofacial pain requiring opioid medications should be provided by dentists who are skilled in the administration of opioid therapy.

Controlled Substance Regulations

It is essential that dentists understand federal regulations and their state regulations on the legitimate prescribing and administration of controlled substances in dentistry. Some state boards of registration in dentistry have developed advisories/statements regarding the appropriate use of controlled substances to manage pain in dentistry. The dentist is responsible and accountable for acquiring the knowledge, skills and abilities to practice in accordance with accepted standards of care for pain management.

Screening for Substance Abuse

Because community dentists see patients frequently and develop long-term relationships with patients, they are in a unique position for screening in a public health role. Although a question about substance abuse appears on the standard ADA patient screening form for new patients, it is not thought that this leads to clear-cut behavior on the part of the dentist. This is partly because guidance is lacking on what the dentist should do, and partly because the dentist has no financial incentive to take the time to ask psychosocial or substance abuse questions. Experience has shown that changing the behavior of healthcare practitioners requires reimbursement. There does exist a model for Screening, Brief Intervention, Referral, and Treatment (SBIRT) with reimbursable codes in primary care medical settings that could possibly be applied to the dental model. Experience has also shown that only something that is integrated into the routine office flow will be implemented. It was suggested that dental hygienists, who spend most time with patients, could integrate screening into their practice, with the dentist interpreting and discussing the results when necessary. For SBIRT to be effective, dentists should develop some sort of referral pattern for a substance abuse treatment center in their area and collaborate with patients' PCPs.

Research Agenda

1. Some gaps in are current pharmacologic knowledge with respect to the efficacy of nonopioid analgesics for managing acute and chronic pain in the dental setting. Specific topics include:
 - Efficacy of prescribing analgesics at fixed intervals versus as needed (PRN).

- Demographic, behavioral and genetic (polymorphisms) factors that potentially predict pain relief efficacy, adverse outcomes and abuse.
 - The utility of NSAID/APAP combinations in limiting the need for opioid analgesics.
 - The utility of long-acting local anesthetics alone or combined with buprenorphine to manage postoperative pain.
2. Research on the use of opioids for managing patients with chronic orofacial pain, with of both neuropathic and nociceptive origin. The potential to limit the dose of opioids and/or improve effectiveness of pain therapy by coadministering adjunctive medications such as NMDA receptor antagonists, anticonvulsants, or other adjuvants.
 3. Better understand practice patterns for pain management and analgesic use, (both opioid and nonopioid), among general dentists, as well as dental specialists. Better understand dentists' perceptions of risk and safety of opioid analgesics, and awareness about the increasing problem of prescription drug misuse and abuse.
 4. Examine the effectiveness of educational programs to improve pain management and prescribing practices provided by dentists.
 5. Determine patient behaviors regarding compliance with opioid prescriptions from dentists, and the prevalence and patterns of diversion of unused opioids prescribed by dentists, particularly among adolescents.
 6. Prevention practices for curbing diversion of prescription opioids in the dental setting, ie, appropriate dosing, safeguard medications stored in the dental practice, instructions to parents regarding storage, disposal of unused medication, and not sharing.
 7. Assess the effectiveness of educational programs addressing pain and anxiety management of patients who are chemically dependent and patients who are in recovery following drug dependence.
 8. Evaluate the impact of information campaign regarding appropriate use, storage, and disposal of prescribed analgesics on diversion of opioids by adolescents.