



A PUBLICATION OF THE CALIFORNIA ASSOCIATION OF ORAL & MAXILLOFACIAL SURGEONS

CALAOMS Launches *Saving Our Children Through Opioid Education Program*



The California Association of Oral and Maxillofacial Surgeons (CALAOMS) is dedicated to a culture of patient safety. CALAOMS is pleased to announce our proactive Opioid Education Outreach Program. This program is designed for presentation to classroom-sized groups of middle school- through high school-aged children.

The *Saving Our Children Program* has been developed by CALAOMS to educate the most vulnerable age group to the dangers of prescription opioid misuse, abuse, and addiction.

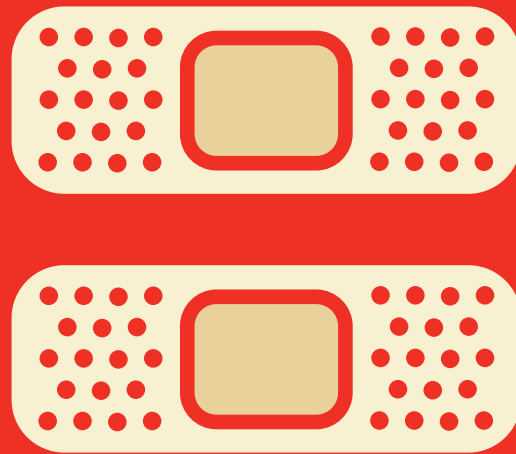
The membership of CALAOMS, representing 800 Oral and Maxillofacial Surgeons, recognize an epidemic of opioid

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CALAOMS also does business as:

- * Oral & Facial Surgeons of California
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- * Northern California Society of Maxillofacial Surgeons
- * California Society of Oral and Maxillofacial Surgeons
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EDITORIAL



by Jeffrey A. Elo, DDS, MS, FACS

Positive thinking to improve your professional and personal outlook on life

Not long ago, I heard the story of a friend who was in his garage attempting to jump start his wife's car battery, which had been drained from leaving the lights on all night. While an innocent mistake, it led to an event – a simple oversight, really – that could have been quite devastating to the car, his wife, potentially his house, and even him, personally. In a preoccupied hurry, he had unknowingly attached the wrong ends of the jumper cables to the battery (he attached the red [positive] clamp to the black [negative] clamp and then connected the other black clamp to a red terminal), leading to a liquification of the rubber covering the jumper cable wires and a garage full of smoke. You see, the reversal of polarity can cause a buildup of hydrogen gas within the battery, which can ignite and/or possibly explode; essentially creating a type of homemade hydrogen bomb. Fortunately, no one was injured in this incident. But the takeaway lesson here was clear: bad things can happen when you attempt to put a negative where there is supposed to be a positive. To me, this doesn't just seem to be good car-electrical advice; the same can be true about our mental outlook on incidents and activities that take place in our practices or daily personal lives. If you maintain a negative thought or outlook where you should or could have a positive one – and yes, you are in control of how you think, you might not ignite or blow up, but you

might also not grow up and mature into the surgeon/business owner/parent/friend/relative/neighbor that you aspire to be.

To carry the car battery narrative even further: overall, most of the time most of us are probably pretty “positive”-thinking people. But we also realize that many of those around us are those who are quick to look down on us “positive thinkers.” Ironically, many of these same people happen to be pretty “negative” people in their own right. The more I've paid attention to the polarity (positivity) of my own mind, if I'm being honest, the more I've enjoyed the direction of my life. Now, don't misunderstand me: I'm not a naïve fool who skips to work every day with a bizarre smile painted on my face, but I do try to see the positive in most circumstances; though I freely admit I don't always succeed in doing so.

People who study and write or speak on these things suggest that we ought not just try to look at our metaphorical cups as being half full; rather we are to attempt to appreciate all things and see our cups as constantly overflowing. We are to have faith in our future; but work toward and have a plan to make it all happen. Faith allows us to believe our beliefs and doubt our doubts. When we feel like complaining or if we see ourselves acting or behaving selfishly, or if we are feeling overworked and in a bad mood, let's stop and reflect on all the good around us and be filled with joy and gratitude instead. Setting our minds and thoughts on things that are above us is actually like declaring war on such lower-level thinking. If we let negativity in our doors, it will want a seat at our tables; and if we allow it a seat at our tables, it's going to want to sleep in our beds. Soon, if we let it, negativity can become our default mode.

The news and social media is replete with negative stories. Much of the entertainment that the up-and-coming generations watch is pessimistic, suffering, and unhappy. Many of today's popular TV series and movies are all, to one degree or another, apocalyptic. They're made up of characters who are in constant suffering and pain that's being inflicted upon them by others. They're challenged just to get up every day and try to go on. And these are the popular shows. But, in sewing all these constant negative examples to developing minds, to some degree we've reaped the resultant dark cloud that has enveloped many of the thoughts and opinions of these young people.

I'm not alone when I say that I am constantly in awe that our great nation exists. I think about some 240+ years ago, around the time of the writing of the Declaration of Independence, and I am in awe over what our great leaders accomplished. It's not enough to simply say they had intellect; and did they ever. Have you ever seriously spent time reading their writings from that period? Their ability to write so beautifully

and so elevated makes me embarrassed to even attempt putting pen to paper. These great people were inspired. And what they created was and is, simply, the best place on earth for human existence. It has always been that since the days of our founding. That's always been the direction this country has been on. That's been where we are headed — every day better than the previous, every year better than the year prior. The thing that people like Washington, Adams, and Hamilton did; the sacrifices they made, the idea they had that they followed through on, the wars that they fought, and the challenges that they overcame. We – those born over 200 years later – continue to benefit and thrive in the country they created, in the

country they made possible. Any honest, historical look back could have nothing but vast appreciation and overwhelming regard.

We the people of this great country have the opportunity to fix whatever perceived flaws remain or pop up. There is no honest, intellectual, or emotional reason to feel negative, depressed, or angry about today. Take some time to reflect on how truly unique and how special and how blessed America is and has been; and how special and blessed you as an individual are. It will improve your professional and personal outlook on life.

SAVING OUR CHILDREN... CONTINUED FROM PAGE 1

misuse and abuse exists in the United States. Scientific evidence supports that the most vulnerable population for developing new problems with opioid misuse, abuse, and addiction is the teenage and early 20s population due to ongoing brain development in this age group.

The majority of oral and maxillofacial surgery patients are in this age group. Teenagers may be exposed to legal prescription opioid medications following oral surgery. Sometimes opioid pain medications are necessary for effective post-surgical pain management. Often, nonopioid alternatives are adequate.

CALAOMS offers an educational presentation aimed specifically at the at-risk population of middle school and high school students.

In March, several CALAOMS members shared this message and this presentation with over a dozen lawmakers at the Capitol in Sacramento. The legislators and their staffs were extremely impressed and thankful for CALAOMS' proactive

efforts and message to their constituents about this very serious topic.

CALAOMS members throughout California will be given this PowerPoint presentation and encouraged to share it with appropriate classrooms in their local high schools and middle schools.

CALAOMS members will also be available to present the program to Parent-Teacher Associations, School Boards, and other groups interested in mitigation of the opioid crisis.

You may download the latest version of the presentation by typing the following URL into your internet browser https://www.calaoms.org/download/CALAOMS_Opioid_Presentation.zip, or you may contact CALAOMS and request a flash drive with the slideshow pre-loaded on it. Either way, it is intended for presentation only by an Oral and Maxillofacial Surgeon. *Although the presentation is in slideshow format, "PowerPoint 2016" or greater is required to view/deliver the presentation.*



PRESIDENT'S MESSAGE



by Larry J. Moore, DDS, MS
CALAOMS President

April 2019

As we enter our 19th year as a unified state association, I am pleased to have this opportunity to recognize the talent and dedication of Dr. Jeffrey Elo, CALAOMS immediate past president. Jeff was a role model for me, and a rock of calm stability for the association in extremely turbulent times. Dr. Len Tyko deserves special recognition for his stalwart support of CALAOMS during personally trying events. Len was there for CALAOMS even when wildfires raged around his home and office in Santa Rosa. Thanks to volunteer leaders like Dr. George Maranon, Dr. Jim Jensvold, and past presidents Drs. Jeff Elo, Alan Kaye, Len Tyko, Monty Wilson, and Tom Indresano, we weathered an existential legislative crisis for the practice model of oral and maxillofacial surgeons in California with the passage of SB 501 (CALAOMS-sponsored pediatric anesthesia safety bill). I also want to thank my friends and colleagues on the AAOMS Board of Trustees, who gave of their personal time as well as much-needed financial support for the legislative battle.

CALAOMS has become the flagship component society of the AAOMS: we are the largest and most politically successful and charitably active state society in the 101-year history of the AAOMS:

- The Culture of Safety in anesthesia care began in California. We invented the periodic office safety inspections more than 10 years before they were mandated by state law.
- The concept of a dental specialty association—CALAOMS—giving back to the less fortunate communities of our state began in California. California CareForce (CCF)

began as the brainchild of our Executive Director, Ms. Pamela Congdon, C.A.E., I.O.M.

- CCF has provided free medical, optical, and dental care to well over 30,000 patients throughout the state with an estimated value of over \$12,000,000. Thousands of volunteers have participated since the inception of the program in September 2011.
- CALAOMS launched its proactive community outreach program, “Saving Our Children Through Opioid Education” at the January membership meeting in San Francisco and on our Legislative Day in Sacramento on March 13, 2019. This program will be presented again at the Annual Meeting in Newport Beach. The program is intended for every CALAOMS member to present to local schools, parent-teacher associations, first responders, and classrooms of middle- to high school-aged children.

CALAOMS cannot continue its robust support of your practice without your help. We need volunteers to perform office anesthesia examinations for the Dental Board of California. We need volunteers to work in our CCF clinics that promote the obligation of successful professionals like you to give back to the less fortunate. We need members to volunteer to take the message of opioid misuse/abuse prevention to our teenage patients and their parents and teachers.

Most importantly, we need you to loyally support our Continuing Education programs. CALAOMS adds value to your membership by providing high-quality CE and using the profits to fund the activities that keep our practice model viable. You have many choices in CE, but only one CE provider stands up and fights for you in the legislature. Start by coming to the 19th Annual Meeting in Newport Beach this May.

2019 Annual Meeting and Anesthesia Update May 4-5, 2019

It is my distinct pleasure to invite all CALAOMS fellows, members, and their office staff to join us in beautiful Newport Beach, California for a weekend of collegiality, networking, and learning. The Fashion Island Hotel is a destination resort with all the amenities needed to make your weekend fun while helping to fulfill those important continuing education credits in anesthesia. Nearby shopping and sight-seeing opportunities abound, and our exhibit hall will provide hands-on and face-to-face opportunities to interact with the vendors who make our practices run smoothly.

This year the CALAOMS Board and the Committee on Continuing Education are pleased to provide a high-powered educational program focusing on office-based deep sedation

and general anesthesia. Our featured Saturday speaker is Dr. Michael Rollert, the Immediate Past President of the American Dental Society of Anesthesiology. Dr. Rollert is an internationally renowned authority on office-based anesthesia who practices Oral and Maxillofacial Surgery in Denver, Colorado. Dr. Rollert's morning lectures include an anesthetic drug update, anesthetic considerations for pulmonary and cardiac disease, and anesthetic implications of cannabis and illicit drugs. His afternoon lectures will focus on innovative treatment of anesthetic complications, crisis resource management in pediatric anesthesia, and an introduction to the Dental Patient Safety Foundation.

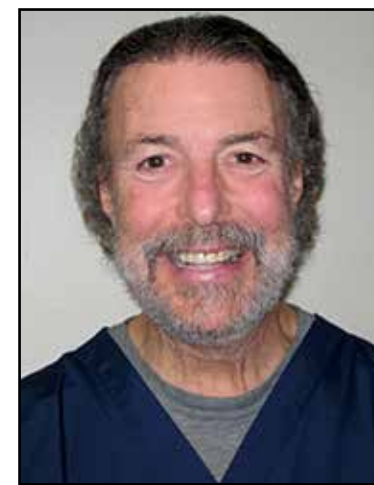
Our Sunday program will feature the presentation of our Opioid Education Program by Dr. Alan Kaye, who brought this forward-thinking idea to CALAOMS. Our CE program will continue with short presentations by the OMS residency programs of Southern California and resident table clinic presentations that allow us to offer up to 10 hours of CE credit over this otherwise relaxing weekend.

The 2019 Annual Meeting will take time to recognize and honor some of our colleagues who have given of their time and talent to CALAOMS. The CALAOMS Board of Directors and I are proud to dedicate this meeting to Dr. Mary Delsol Dobon. Dr. Delsol Dobon is a past president of CALAOMS, the Western Society of OMS, and the American Board of Oral and Maxillofacial Surgery. Her accomplishments as a teacher, private practitioner, and leader represent a significant contribution to the current status of the specialty of Oral and Maxillofacial Surgery as the premier specialty in healthcare.

Dr. Craig Bloom will receive the Distinguished Service Award for his selfless dedication to the charitable arm of CALAOMS - California Care Force. CCF provides hundreds of thousands of dollars in desperately needed dental, medical, and optical care to medically indigent Californians every year.



Mary Delsol Dobon, DDS



Craig Y. Bloom, DMD



Richard C. Robert, DDS, MS

Dr. Rich Robert will receive the Committee Person of the Year award for his stalwart and indefatigable efforts to make Oral and Maxillofacial Surgery Assistants' training more relevant through innovations like the Dental Sedation Assistant (DSA) program, a permit-based (license) program incorporated in California statute.

The following awards were presented at the January 19-20, 2018 CALAOMS meeting in San Francisco:

Mr. Gary Cooper, our lobbyist, has received the President's Award for service beyond the call of duty in his efforts to navigate safe passage for SB 501, CALAOMS's pediatric anesthesia safety bill. After two years of intense opposition by the dental and medical anesthesia lobbies, our bill was signed into law by Governor Brown on September 29, 2018. We could not have done this without the wisdom and guidance provided by Mr. Cooper.

Finally, with deep appreciation and respect we have conferred our Legislator of the Year Award on California Senator Steven Glazer, the author and champion of SB 501. Senator Glazer developed an uncanny understanding of the evidence-based safety of the OMS anesthesia team concept, while respecting the emotional nature of the issue and the need to always raise the bar for safety.

Don't miss this opportunity to celebrate the moment and to meet and greet old friends and make new ones in beautiful Newport Beach. Your support of CALAOMS CE events makes our support of the specialty in California possible.

Larry J. Moore, DDS, MS, FACD, FICD
Diplomate, ABOMS, NDBA
President, California Association of Oral and Maxillofacial Surgeons



AAOMS DISTRICT VI TRUSTEE REPORT



Mark Egbert, DDS, FACS
AAOMS District VI Trustee

Greetings from the District VI Trustee,

On the eve of the second AAOMS Anesthesia Patient Safety Conference scheduled April 25th, and with the National Commission on the Recognition of Dental Specialties and Specialty Boards having recently approved the tenth ADA specialty of Dental Anesthesiology, it seems appropriate to begin with a comment on safety and Anesthesia in OMS and dentistry. Patient safety will always remain the focus of any and all AAOMS initiatives around anesthesia. Maintaining and promoting the OMS team model of delivery is consistent with a safety-first approach. Itinerancy in anesthesia practice is inherently risky. We will continue to evolve to increased levels of safety in our own model, and to work with others to establish safe practices in all venues. As we are all aware, when one member of the dental community has trouble, we are all painted (or tainted as it were) by that brush. The AAOMS will continue to strive for improvements in patient safety through our policies, our qualifications for membership, our educational offerings for the entire team, and our advocacy initiatives. Some of these initiatives are listed here.

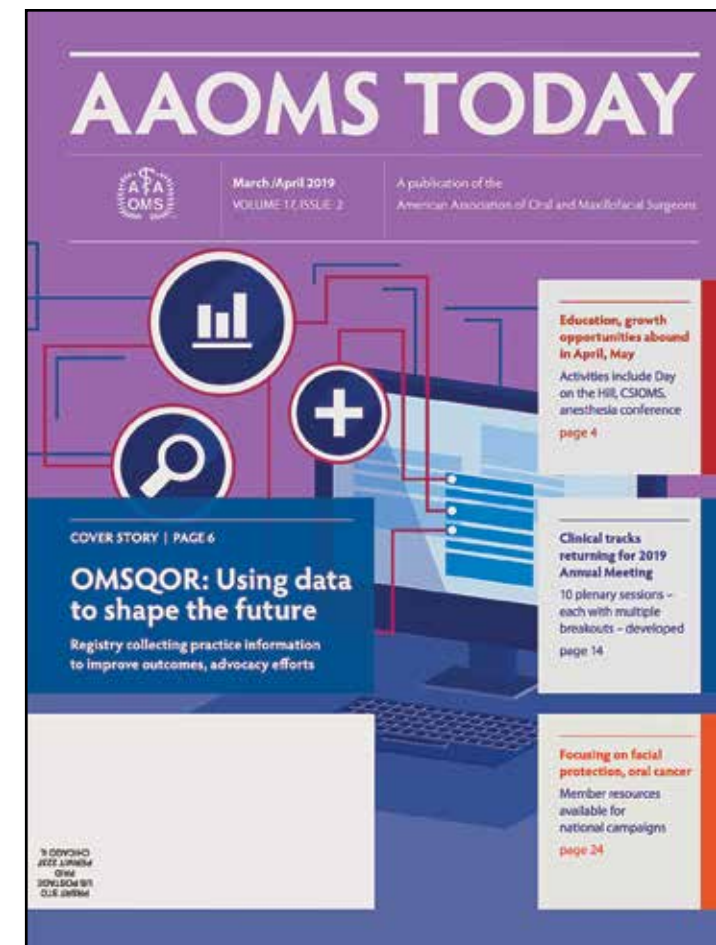
- The Office Anesthesia Evaluation 9th Edition is now available. The new edition includes emergency scenario drills for the team; chapters on considerations for the geriatric patient and patients using illicit drugs; and medical illustrations as reference materials. The Committee on Anesthesia is also developing a web application for OAE evaluators.

- Simulation: Basic Emergency Airway Management (BEAM) module focuses on critical airway management skills for handling office-based emergencies. BEAM will be offered again in June and July this year, and also at the Annual Meeting in Boston.
- Simulation Phase 2: the Office Based Crisis Management (OBCM) module focuses on the OMS anesthesia team model and includes all 4 team members. OBCM should be available later this year
- In 2018, the House of Delegates approved moving forward with developing a simulation and education center on ¼ of the second floor of the headquarters building, as the lease for that space expired last month. We will have four simulation labs and a classroom that will accommodate 100 attendees when construction is complete. Construction should be beginning very soon, and we are hopeful of hosting programs in the new space early in 2020.
- The OMS Quality Outcomes Registry was rolled out March 1st, and there is a featured article in the March/April AAOMS Today. We need all members to participate to give us the data we need to advocate on behalf of the specialty. The OMSQOR website is live now, so please check it out at www.aaoms.org/member-center/oms-quality-outcomes-registry.
- The Dental Anesthesia Incident Reporting System has been live for about a year now. Links to DAIRS are available on the AAOMS website. Members are asked to report any anesthetic event, including near misses and other serious incidents. Please check this out by going to www.aaoms.org/member-center/dental-anesthesia-incident-reporting-system.

The importance of monitoring any and all legislative and regulatory proposals that could affect patient safety and access to care is heightened with the recognition of a new specialty. Our federal and state legislative and regulatory activity monitoring is ongoing and ever improving.

- The State Legislative Tracking Map on the AAOMS website provides quick access to the current status of all issues impacting OMS.

The CALAOMS is a model for the rest of the nation to emulate in all areas related to promoting patient safety in ambulatory anesthesia practice. Especially with state level advocacy and surveillance of legislative and regulatory



AAOMS' quarterly publication, AAOMS Today, is now in magazine form and well constructed to keep members easily apprised of the many things going on in our society and with our profession."

activities, yours is a well-oiled machine. Congratulations to you all and thank you for your leadership and for showing the way.

The last thing I would like to mention is the AAOMS Today magazine. This quarterly publication, which is now in magazine form, is very well written and put together to keep you easily apprised of the many things going on in our society and with our profession. Please flip through it. Read what catches your eye and stay abreast of your AAOMS and our profession.

As I mentioned earlier, the current AAOMS Today contains an in-depth piece on the OMSQOR. Please read it. Participation is vital to the future of our profession and our scope of practice. We must have data to support our advocacy initiatives. Please sign up!

Finally, Happy Spring! I am very much looking forward to seeing many of you in Newport Beach for your Annual Meeting in May. Please stop me to say hello.

Best Regards,

Mark A. Egbert, DDS, FACS, FACS
AAOMS District VI Trustee

101st Annual Meeting, Scientific Sessions and Exhibition

Boston, Mass.
Sept. 16-21, 2019



TECHNICAL ARTICLES



by Peter Krakowiak, DMD, FRCD(C)

Total Non-Narcotic Pain Management for Outpatient Oral Surgery – Today's Quintessential Best Practices Paradigm

The last decade has dramatically enhanced our understanding of prescription drug addiction and misuse, and it has added significantly to our consideration of potentially deleterious and life-altering side effects of narcotic prescriptions in the U.S. patient population. The federal and state governments, as well as most organized health professional associations, have ramped up campaigns to curb the epidemic of overdose death attributed to opioid analgesics. It is no surprise, as in 2017 over 70,000 Americans died from drug overdoses. That is more deaths than in car accidents or gun-related incidents. The data is quite alarming, indeed, and has followed a slow and steady rise over the past two decades. The most acutely important number is that deaths from synthetic opioids - other than methadone (e.g., fentanyl, fentanyl analogs, and tramadol) - have increased 45% from 6.2 per 100,000 in 2016 to 9.0 in 2017. Synthetic opioids now outpace the rates of drug overdose deaths caused by heroin (4.9 per 100,000), natural and semi-synthetic opioids (4.4), and methadone (1.0) which were largely counted as the same in 2016 and 2017. Most of us personally know of someone who has lost a loved one to this curse. Necessary and rapid changes are a must in light of these numbers, and we as healthcare providers must make immediate changes in our practice in light of this new reality.

In clinical practice, the pendulum of opioid analgesic prescribing habits is quickly swinging away from opioid use, and healthcare providers are adapting to what used to be “standard practice” in order to support this emerging paradigm. Personal anecdote: just last week, a CVS pharmacist refused to fill my prescription for Tylenol #3[®], for a 15.5-year-old having canine

exposure and cyst biopsy due to their new corporate guidelines for narcotic dispensing to what they consider *children*.

At the same time, we as caring surgeons and doctors must still ensure patients are reasonably covered for peri-operative and acute pain. An optimal level of pain control is fundamental for compassionate patient care and successful contemporary surgery practice. Over the previous four decades, per our best intentions, we have been keenly aware and focused on making patient comfort the top of our approach to their care. Decades before the universal introduction of pain scores, patients' expectations of unreasonable peri-operative pain were set at much higher thresholds. Pain was generally expected and better tolerated psychologically. But as we made pain another vital sign in the 1990s, we added the application of analog pain scales such as Wong Baker scores. The approach to peri-operative analgesia became focused on reducing these scores to a bare minimum as such reductions were to be a benchmark of the caliber of care that we delivered. Narcotics did not always provide the desired pain relief but allowed patients to experience euphoria and “highs” that masked or reduced their experiences of pain so as to lower their perception and degrade the acuity of experience of these quite normal and often physiological symptoms.

Fortunately, we do have some options to retool our post-surgical analgesic planning using several agents that have been around for years and have just taken a bit of a backseat due to the previously acclaimed narcotic-based post-surgical analgesia measures. As with any pharmaceuticals there are always adverse reaction considerations and contraindications. The non-narcotic analgesics certainly have these as well, but when trying to choose the lesser of the two evils, they are a much safer bet overall; especially in short-term courses. NSAID medications have always been used as an adjunct to narcotic management of mild to moderate post-surgical pain. They are now taking the front stage as the primary medication for these patients. Most members of this drug class, including ibuprofen, aspirin, and naproxen, require little introduction, as they are already well-recognized and widely used for mild to moderate pain in narcotic-intolerant patients. Also, Cox-2 inhibitor Celebrex[®] can also be considered as a potential medication to include for short-term management of dental or oral surgical pain. It is not a new medication but for some patients it may be perceived as a step up from “plain” ibuprofen. And this brings us to an important consideration: not all NSAIDs are equally recognized and well known to the public. This gives an ability to introduce more similar-acting non-addictive agents and try to get a placebo ride out of using something new, and likely unknown, to at least some of the patients. Like it or not, placebo is well-demonstrated and documented as a successful therapeutic method within medical literature.

With this in mind, I like to bring ketorolac to our consideration and highlight its significant, but often overlooked, potential and therapeutic value to our specialty practice. Unlike most dental providers, we as OMS providers routinely establish parental intravenous (IV) access in most of our surgical patients; and therefore, we are in the unique position to best utilize this very potent NSAID. The best prescribed way to use ketorolac is to start the patient dosing with an IV infusion of 15-30 mg and then follow the initial IV dose with a 5-day oral regimen of 10 mg tablets every 4-6 hours as needed for pain (*not to exceed total of 40mg per day*). Alternatively, intramuscular (IM) dosing of 30 mg can be considered as the loading dose if IV access is not possible. If delivered properly and supported by concurrent acetaminophen, corticosteroids, and cryo-ice pack regimen, it can provide an adequate level for pain relief in many, if not most, typical outpatient oral surgical care cases. If we combine this agent with effective long-term local anesthesia, we certainly have a good first-line agent to work with for the majority of our patients and we'll be able to reduce, if not eliminate, the need for narcotic analgesics. Liposomal bupivacaine (e.g., Exparel[®]) may be our best option for the long-term local anesthetic, but I will return to this later in the article.

Of course, as I mentioned earlier, no current analgesic medication is without contraindications and/or potential adverse effects (AE) associated with it. The main AEs of ketorolac (e.g., Toradol[®]) include abdominal irritation - producing symptoms ranging from indigestion and pain to diarrhea. Other side effects are possible. Bleeding and kidney failure are likely the most serious, but rare, issues that have to be considered; these can be avoided by proper patient selection. Toradol[®] oral tablets can be continued for up to five days. I have used IV Toradol[®] on most of my typical third molar, surgical exodontia, and implant/regenerative cases in the past five years and have been able to achieve remarkable pain relief in combination with either acetaminophen and/or acetaminophen/codeine tablets. In fact, numerous patients who had been given Norco[®] and Toradol[®] expressed that the Toradol[®] had “much better” pain relief capabilities than the Norco[®] tablets. The narcotic medications are usually used minimally (only once or twice) once the mainstay of our analgesic efforts is supported by the potency of ketorolac. For those that are in need of additional pain medications, a high dose 500-1000 mg of acetaminophen taken at six-hour intervals is highly efficacious.

Another medication that has been considered as potentially beneficial in the reduction of post-surgical pain has been the IV form of acetaminophen, Ofirmev[®]. It can be used IV as a loading dose of 640-1000 grams, and the patient can then receive oral acetaminophen dosages post-operatively. Ofirmev[®] has a significant price tag compared to Toradol[®], and recent studies have indicated that it may not be any more effective at post-operative pain management than oral acetaminophen. However,

in our setting it may be an adjunct to the NSAID and steroid regimen at least at the loading dose level. Of course, liver toxicity is a concern with all acetaminophen products, and such must be considered in patients with liver disease.

Glucocorticoids are used by most OMSs for their perioperative anti-inflammatory effects and have been historically helpful to secondarily reduce pain pathway activations from inflammatory mediators and prostaglandin synthesis. Glucocorticoids also reduce vascular permeability, which helps lessen tissue edema. Glucocorticoids are also lipophilic and can easily cross the blood-brain barrier. Research has shown that steroid receptors are found in the central and peripheral nervous systems and are associated with control of growth, differentiation, development, and plasticity of neurons. Specifically, corticosteroids have been shown to reduce spontaneous discharge in an injured nerve, which reduces neuropathic pain. Dexamethasone (Decadron[®]) is the most commonly prescribed corticosteroid for post-surgical pain in United States, but prednisone or prednisolone can also be considered as potential adjunctive second-line analgesic agents. An advantage of prednisolone is that the side effect of myopathy is less common, especially in longer-term therapy. Most of our patients do not require long-term steroid therapy. Hence, dexamethasone, which causes less fluid retention than other steroids owing to the fact that it has less mineralocorticoid effect, is our best option. It is relatively more potent and, due to its longer half-life, it can be taken as little as once daily. The typical OMS patient will receive IV dexamethasone preoperatively in doses from 8-20 mg. The most appropriate dose of oral dexamethasone has not been fully determined, but a range of 2 to 8 mg orally or subcutaneously once to 3 times daily has been suggested.

Another important adjunct that is often not utilized adequately is the application of ice compresses to the areas around the surgery sites postoperatively. Clear and explicit instructions must be given to all patients postoperatively and during follow-up phone calls to increase the compliance. Ice compresses applied 20-minutes on and off for the initial 48 hours after surgery have shown repeatedly to greatly reduce swelling, inflammation, and post-surgical oral and facial pain. This task can be easily handled by the doctor or well-trained staff. Re-freezable complimentary gel pouches/packs given out to the patients after surgery are ideal for an improved patient experience as well as their recognition of our compassionate approach to their care.

Finally, a potentially groundbreaking opportunity for the reduction of all oral analgesics is the development of long-term analgesics that are site-specific. Currently, no such FDA-approved medications are available; however, some potential long-term local anesthetics can prove to be helpful. OMSs already employ Marcaine[®] injections for inferior alveolar nerve “regional” blocks. The concern is always about long-term

anesthesia of main cranial nerve branches as they are widely distributed and can be profoundly affected by actual regional nerve blocks. Another variable of long-term local anesthetics is their toxicity, both systemic and local. Exparel® is a newer long-term local anesthetic that shows some promise. It is based on the principle of liposome-bound medications, which has as a result of their lipid binding, produced a delayed release into function - prolonging their normal duration of action. However, today it has some limitations including cost and lack of full FDA approval for actual nerve blocks. In December 2015, the FDA advised that Exparel® has an acceptable indication for infiltration into the surgical site to produce postsurgical analgesia. The indication is limited to its use for postsurgical analgesia when administered as local infiltration only at the peridental or apical site of oral surgery procedures. The indication includes use as a local anesthetic deposited near a peripheral terminal branch of the maxillary or mandibular branch of the trigeminal nerve (periapical injections). The use as a nerve block for traditional inferior alveolar and lingual mandibular block is not in the FDA approval's language. With that being said, off-label use of the agent is increasing and there are several studies that have been completed with promising outcomes. Further work must be completed to fully establish optimal delivery techniques, clinical efficacy, and patient safety of this potentially groundbreaking analgesic agent.

It is important to note that many holistic medications are also potential second-line agents for the treatment of pain. Unfortunately, most "holisthetics" are best suited for the management of sub-acute or chronic pain, such as the very popular cannabinoids - including CBD - or other more traditional anti-inflammatory substances including capsaicin, resveratrol, Boswellia serrata resin, pycnogenol, green tea, and curcumin among others. The concern is the perceived lack of empirical research and lack of product safety and purity practices by smaller, unregulated manufacturers when handling these naturopathic agents. The FDA, by its statutes, has limited oversight over these agents. Many of these natural remedies have great potential, but dosages and clinical indications are not adequately delineated or fully standardized. One of the most well-documented and researched topical naturopathic agents is clove oil and its active ingredient, eugenol. Eugenol has been a cornerstone of analgesia in dentistry for years and has proven safety. Timely application of eugenol-containing dressings into alveolar osteitis sites is a very immediate and definitive method of reducing post-operative narcotic use after the initial four days of healing. As practitioners, we may consider a 4-5-day follow-up for our patients versus the typical 7-14-day post-op schedule. With such timelines, the cases that would benefit from dressing applications may be best identify and treated with topical agents versus calling in another opioid-based prescription. It's worth at least some consideration

in light of all the issues with overprescribing and opioid misuse and abuse.

Finally, the practitioners must have a real and forthright discussion with patients to set realistic expectations of the inherent post-operative pain and discomfort. This exercise will create realistic expectations and coping approaches for our patients prior to the development of the symptoms. Pain is an inherent response to surgical insult. It is to be expected and conscientiously managed by multi-prong approaches - both pharmacological and psychosomatic. Having a separate consultation and surgery appointment may be helpful, as it allows the patient to receive instructions and medications prior to the procedures. Narcotics still need to have a place in our armamentarium of potent analgesics and can be carefully provided, but perhaps no longer as universal first-line agents, and only in cases where Prescription Drug Monitoring Programs (e.g., California's CURES-PDMO database) have been reviewed and patient opioid prescription contracts have been formulated. Frank and direct discussion with patients regarding their pain management plan must be made. A small number of pills and lower narcotic potency may be considered on the initial prescriptions. Moreover, any requests for refill must be met with much greater scrutiny to prevent misuse and abuse. Any long-term pain management may be best delegated or at least communicated with the patient's primary care physician or pain management specialist as to close the loopholes and potential for duplicate prescriptions.

We have attempted to again, like many other alarmed members of the health care profession, highlight the contemporary concerns with unfathomable numbers of opioid overdoses and widespread abuse conditions that currently exist. This article aims to review at least some of the most readily available avenues to, if not completely, at least partially cut down on those "standard" prescriptions for 20-30 narcotic tabs many providers have been writing over the past decades. Frankly, most of these were just generally given out of habit and without much forethought given. We, as OMS specialists, are arguably the surgical and anesthesia opinion leaders in the dental community, and hence, have a responsibility to take on this leadership role more so than all others. Certainly, physicians and dentists have not caused this problem unilaterally, or most certainly not intentionally, despite some of the rhetoric present today in the media. The opioid abuse epidemic is much more complex and multifactorial than just that. Be that as it may, we as surgical specialists have to deal with it in our daily practices like never before. We have to now, each and every one of us, start to develop and apply these alternative non-narcotic analgesic therapies to retard and reverse the growing synthetic opioid abuse trends before more lives are forever ruined. There is no doing this tomorrow. Today is the day. Let's make this happen now. *Primum non nocere.*



MEANING IN ETHICS



Function of Clinical Ethics & Meaning in Medicine

by Richard Boudreau, MA, MBA, DDS, MD, JD, PHD

Let us reflect and recall the function of clinical ethics as oriented to the retrieval of 'meaning.' In a somewhat Platonic vein, I will term such a task always poised between forgetfulness and remembrance, the anamnesis of meaning.

The task calls for preliminary clarifications. On account of its closeness to professionals and their practices, clinical ethics can be seen as a form of mindfulness that impels the practice of medicine encompassing its own teleology (*G-telos* 'end' & *logos* 'meaning') vis-à-vis Plato and Aristotle, i.e., the ends proper to medicine. At the same time, because it articulates the ends of medicine in the context of a communal ethos, with its needs, values, and priorities, clinical ethics may be better understood as a function of critical analysis that borrows from the anthropological milieu in which it operates. The telos of medical action cannot be found independently of the context it is supposed to serve.

The mind-set created by modern scientific medicine has required for medicine to be somewhat inattentive, i.e., not "hear" the sick person's experience of illness. The stethoscope metaphor also symbolizes the mind-set of the moral philosophy that has dominated and shaped much of our ethical inquiry in medical ethics. In the critical judgment of many, the field has concentrated on a very restricted version of moral language, the language of biomedical quandaries, as well as principles and rules that sustain the rational argumentation for the solution of concrete cases.

Such a normative preoccupation with problem solving, however, strongly fosters an attitude of inattentiveness and voices that do not communicate in the language of quandary, do not

create a challenge for ethical argument, or do not speak with the precision and articulation required in our intellectual culture to draw the attention of serious ethical argumentation. In addition to a critical integration of positivistic attitudes in medicine and the reduction of moral discourse to the normative, one must mention the basic presumption of a cultural situation, which, in the name of modernity, raises serious doubts about the possibility of engaging in questions of meaning across moral boundaries.

Influenced by a positivist framework, 19th century medical scientists popularized the notion that practical clinical medicine should be viewed as a form of applied theoretical medicine. For example, in the United States, the reformation of medical studies was introduced by educator Abraham Flexner (1910 *Flexner Report*) which completed the picture. Moreover, this happened as a result of modernity's understanding of scientific knowledge which German epistemologist and hermeneutical philosopher Hans-Georg Gadamer (*Truth and Method*) poignantly describes as a "capacity to produce effects." In the modern version of scientific knowledge, the mathematical-quantitative isolation of laws of the natural order provides human action with the identification of specific contexts of cause and effects, together with new possibilities for intervention. In relation to clinical medicine with its matrix of subjective components and contextual features and extending to the detached "objectivity" of theoretical knowledge, one can interpret the healing process itself as a production of effects.

Of course, one cannot in principle question the application of scientific reasoning to medicine. In trying to identify and explain the cause of symptoms, medicine employs probabilistic laws and rules, theories and principles, of the biomedical sciences. Concepts of normal and abnormal, for an example, are statistically derived concepts, based on scientifically validated norms of human biological functioning. In the attempt to classify symptoms as the manifestation of particular disease entities, medicine relies upon hypothetic-deductive and inductive reasoning reminiscent of the notions of Descartes. Moreover, in order to determine what can be done to remove or alleviate the cause of particular diseases, medicine appeals to prognostic knowledge about the course of the diagnosed disease, as well as efficacy and toxicity of relevant therapeutic possibilities.

And yet, in spite of its indisputable scientific basis, medicine cannot be entirely equated with science. The goal of medicine is not to reduce different segments of scientific explanations into a unified theory; rather, the specific goal of medicine consists of bringing together, in a synthetic action, which is theoretical and practical at the same time, an understanding of

CONTINUED ON PAGE 15

LEGISLATIVE UPDATE



by Gary Cooper
Legislative Advocate, CALAOMS

Spring 2019 Update



CALAOMS DAY AT THE CAPITOL - 2019

On Wednesday, March 13, 2019, it was my pleasure to accompany seven CALAOMS members along with Executive Director Pam Congdon on a day-long legislative adventure at the Capitol in Sacramento. Drs. Larry Moore, Alan Kaye, Leonard Tyko, Ed Balasanian, Jim Jensvold, Shama Currimbhoy, and Gary Chan actively participated in CALAOMS Day at the Capitol.

This year, our visits with key legislators representing districts throughout California focused on two very important issues: 1) The introduction of CALAOMS' opioid education outreach program "Saving Our Children Through Opioid Education;" and 2) The need for a mandated OMS position on the Dental Board of California. Both issues were received very well by the fifteen legislators with whom we met face to face. In addition, the day started with a breakfast meeting with Karen Fischer, Executive Officer of the Dental Board of California (DBC); and Fran Burton, President of the DBC.

CALAOMS is very proud that our relationship with the DBC continues to be strong and very mutually respectful, which has served us very well. As always, I recommend CALAOMS members participate as much as possible in our legislative activities, particularly the Day at the Capitol. We will be back there next year, so stay tuned and please sign up to attend. It is well worth it.

AB 149 (Cooper)

AB 149 (Cooper) is a bill that was introduced to respond to the confusion over the implementation of AB 1753 (Low) last year. AB 1753 required that prescription pads used by healthcare professionals to prescribe Schedule II through V controlled substances shall have unique and serialized numbers. Unfortunately, the bill took effect on January 2019, which did not give providers enough lead time to order and secure new prescription pads. AB 149, which was signed by Governor Newsom on March 11, 2019, authorizes pharmacies to fill prescriptions on forms that were valid prior to January 2019. CALAOMS joined with CDA and the California Medical Association in supporting this bill.

Sugar Sweetened Beverage Bills

During this legislative session, as in previous sessions, legislators have introduced a package of 5 bills dealing with the sugar sweetened beverage industry. It has long been believed that sugar sweetened drinks contribute significantly to diabetes, obesity, tooth decay, and other health conditions.

AB 764 (Bonta): Prohibits soda companies from offering manufacturer's coupons to partner bottlers, distributors, or retailers. These discounts can lower prices for consumers and contribute to the overconsumption of sugar sweetened beverages.

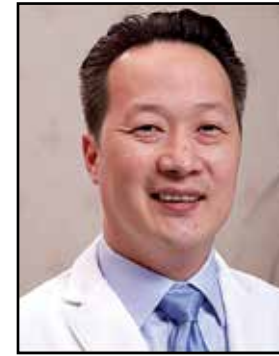
AB 138 (Bloom): Creates a tax on sodas and other sugary drinks sold in the state and would use the revenue to help fund programs to combat diabetes and other health conditions.

AB 765 (Wicks): Bars the placement of sugar sweetened drinks near checkout counters at retailers. Violators would be fined from \$1000-\$5000 per day.

AB 766 (Chiu): Restricts the sale of unsealed sugar-sweetened beverages larger than 16 fluid ounces at restaurants and other locations with self-service soda machines. It also targets convenience stores such as 7-Eleven that sell extra-large cups of soda.

SB 347 (Monning): Mandates sugar sweetened beverages contain a health warning label. It would exclude beverages containing 100 percent natural vegetable juice with no added sweeteners.

All of the sugar sweetened beverage bills are supported by CDA and CMA. CALAOMS has been asked to join in that support.



David Y. Park, DDS, MD

Invest in People

During team meetings I will often pose a simple question to our staff: "Which piece of equipment is the most important and vital in our practice?" Invariably, the answers will run the gamut from computers to cone beam CT to implant handpieces. They will also be consistently incorrect. I have yet to have an employee give the right answer. The simple answer is the phone. It is the link between the practice and the patients; and if the phone doesn't work then the whole office doesn't work.

Similarly, when I talk with new dentists and new practice owners, I also ask them what the most important investment in their practice would be; and again the answers will run the gamut from a new website to a new chair or some fancy piece of equipment that they have their eye on. I always give them a simple piece of advice: invest in people.

After being in private practice for almost ten years and being successful in building and maintaining a private practice, I've learned simply that I cannot do it all. I have neither the time nor the talent to be able to do everything my practice and patients need. For example, I love children, but I don't have the same type of touch and grace with them as my main assistant who is a mother of three. I can never handle the endless calls with the insurance companies to assist patients with their needs and still be able to do surgery. I've come to realize a simple truth: that my practice is built by a team of people and not a sole person.

This year we have added two people to our practice. They are both filling positions that they have absolutely zero experience in. We've decided to hire these people not because they were the most experienced candidates, but because they were the right people for our practice. I've learned that experience can be attained, and people can be trained, but the intangible qualities of their personal nature can often be hard, if not impossible,

to change. I don't know how to train people to be genuinely compassionate or how to be calm under pressure. I do know how to train them to assist during surgery or recover patients after anesthesia.

At CALAOMS we are invested in providing surgeons the resources to help them find and train new team members. I am proud to be a part of the CALAOMS committee that has taken a vital role in training team members to meet a standard of care and safety for our patients with the OMSA course that has a long history in providing a baseline education for team members to begin their training. In our office, every team member is certified although they may not be directly involved in surgery. It sets the tone that continuing education and patient care is paramount in our practice above all.

When thinking of our practices we must realize that although a new piece of equipment may allow us to perform surgery or refine our surgery techniques, it may not be the difference in making our practices reach the next level of growth and development. Patients often come back to our practice with their family members not because of me, but because of their relationships with our team members. The experience that a patient has is a direct byproduct of the people that take care of them while they are in the practice.

So, as this year progresses and your practice sets its sights on new goals and heights, keep in mind that the most valuable thing in your practice may not be an object, but people; the people that define your culture and your patients interact with on a daily basis.

MEANING IN ETHICS - CONTINUED FROM PAGE 13

illness with a specific medical decision on behalf of the patient. Unlike the pathophysiology of disease, the phenomenon of illness cannot be observed, analyzed, and explained "in itself" as Gadamer suggests; rather, it can be fully understood only hermeneutically, i.e., through an act of interpretation that takes place within the sociological, cultural, and ideological matrix of a defined life-world. For this reason, medicine represents a peculiar unity of theoretical and practical knowledge within the domain of the modern sciences, "a peculiar kind of practical science for which modern thought no longer possesses an adequate concept."

My point here should not be misconstrued. Careful scientific attention to the pathophysiology of disease, together with ever more extensive biotechnological applications, has certainly yielded marvelous advances in modern medicine. Yet, its positivist reduction has also created a mind-set that brackets questions of 'meaning,' themselves highly significant to health and well-being and to the ethical aspects of medicine.

CALIFORNIA ASSOCIATION OF ORAL & MAXILLOFACIAL SURGEONS UPCOMING CE EVENTS

2019 Meetings

- **19th Annual Meeting** - Fashion Island Hotel, Newport Beach May 4 – 5
- **OMSA Summer 2019** - Crowne Plaza, LAX July 27 & 28
- **OMSA Fall 2019** - Crowne Plaza, Foster City September 14 & 15
- **ACLS & BLS** - Solono Community College October TBD
- **Medical Emergencies** - Northern California November 6

2020 Meetings

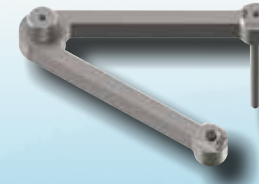
- **January 2020 Meeting** - Palace Hotel, San Francisco January 18 – 19
- **Annual Meeting** - The Westin, San Diego May 2 – 3



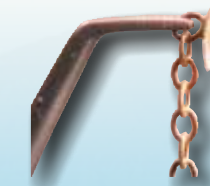
Attention CALAOMS Members. Save the Date for California CareForce's next free clinic in Sacramento on October 25-27, 2019

Earlier this year in Coachella, our volunteers served 1,411 patients over the 3-day clinic – including 729 patients needing fillings, extractions, and cleanings alone. (That's \$454,931 worth of dental services!) You'll enjoy being part of our community of caring, dedicated healthcare professionals. Don't hesitate to ask your referring dentist to join us too! By the end of the weekend, our volunteers are smiling even wider than our patients. Visit www.californiacareforce.org to sign up.

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Highly absorbent alternative to gauze throat pack



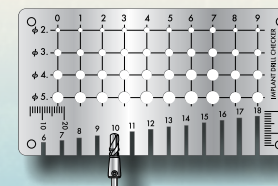
PTFE Suture
A non-absorbable, monofilament suture that produces a minimal pore size while maintaining integrity and tensile strength



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Side-cutting action is ideal for redirecting a pilot osteotomy



Zcore™ Porcine Xenograft
Supports formation and ingrowth of new bone



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Easy way to check the diameter and length of implant drills on the fly



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Benefits and harms associated with analgesic medications used in the management of acute dental pain

An overview of systematic reviews

Paul A. Moore, DMD, PhD, MPH; Kathleen M. Ziegler, PharmD; Ruth D. Lipman, PhD; Anita Aminoshariae, DDS, MS; Alonso Carrasco-Labra, DDS, MSc; Angelo Mariotti, DDS, PhD

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ABSTRACT

Background. Effective pain management is a priority in dental practice. Government and private agencies highlight the need to provide optimal pain relief, balancing potential benefits and harms of both opioid and nonopioid analgesic agents. The purpose of this study is to summarize the available evidence on the benefits and harms of analgesic agents, focusing on preexisting systematic reviews.

Types of Studies Reviewed. An overview of systematic reviews was conducted to evaluate the efficacy or reported adverse events associated with orally administered medication or medication combinations for relief of acute pain. Reviews were inclusive of all age populations but were limited to those that evaluated medication and medication combinations marketed in the United States and had moderate or high methodological quality according to the A MeaSurement Tool to Assess systematic Reviews (AMSTAR) 2 tool.

Results. Five reviews were found eligible for inclusion. The data identified combinations of ibuprofen and acetaminophen as having the highest association with treatment benefit in adult patients and the highest proportion of adult patients who experienced maximum pain relief. Diflunisal, acetaminophen, and oxycodone were found to have the longest duration of action in adult patients. Medication and medication combinations that included opioids were among those associated most frequently with acute adverse events in both child and adult-aged patient populations.

Practical Implications. The best available data suggested that the use of nonsteroidal medications, with or without acetaminophen, offered the most favorable balance between benefits and harms, optimizing efficacy while minimizing acute adverse events.

Key Words. Analgesia, pain relief, adverse events, systematic review, decision-making opioids, nonsteroidal anti-inflammatory drugs, opioids, acetaminophen

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<https://doi.org/10.1016/j.adaj.2018.02.012>

Safe and effective pain management is an essential goal for all dental practitioners. Oral formulations, including both opioid and nonopioid analgesic agents, are among the medications commonly provided to manage pain for dental patients. Although the 2016 recommendations from the Centers for Disease Control and Prevention (CDC) about management of long-term pain were less well codified with respect to analgesic use for acute pain, it did include recommendations about limiting dose and duration of opioid-containing medications.¹ This likely reflects growing concern about the increasing occurrence of opioid misuse leading to deaths from both prescription and illegal opioids.² Although effective redress of this problem will be multifaceted, it will likely result in increased scrutiny about the choice of medications to be used when managing acute pain. The dual goals for pain management are safety and efficacy.

A variety of oral formulations of prescription and over-the-counter analgesic agents are often included alone or in combination as a component in strategies to manage acute dental pain.³ Clinical considerations when determining the analgesic agent to

be used include, but are not limited to, severity of the pain, patient pain sensitivity, medical history, specific dental pathologic process, and, in postoperative situations, the degree of surgical trauma.

The objective of our study is to summarize the data on oral analgesic medications with the aim of creating a compendium that details both the benefits and harms of these medications as a resource for dentists to use in their clinical decision making. This work was conducted in response to a request from the American Dental Association (ADA) Council on Dental Practice, using a protocol established a priori (available from the authors) and registered with the International Prospective Register of Systematic Reviews (PROSPERO) database (no. CRD42017080270) to summarize the best available evidence with respect to questions of safety and efficacy for relief of acute pain relevant to dental practice in the United States.

METHODS

This overview of reviews used the rapid review methodology⁴ to identify and summarize the available evidence from existing systematic reviews that examined the relative safety and efficacy of oral opioid and nonopioid analgesic agents available for use in the United States for the management of acute postoperative dental pain.

Selection criteria of included reviews

Type of Studies

We included systematic reviews and overviews of reviews with or without meta-analysis. We considered a report to be a systematic review by using a combination of selection criteria

- identified by the authors as a systematic review;
- included an explicit description of the search strategy;
- conducted the search in at least 2 electronic databases.

In addition, we selected reviews that ranked as moderate to high methodological quality according to the A MeaSurement Tool to Assess systematic Reviews (AMSTAR) 2 tool.⁵ Narrative reviews, editorials, and letters to the editor were excluded.

Type of Participants and Interventions

Systematic reviews or overviews of reviews that summarized data on the use of orally administered medications for the management of acute pain from studies that involved either adults or children were eligible for inclusion. The source of pain was mostly acute postoperative dental pain (for example, following third-molar extraction).

Type of Outcome Measures

Systematic reviews or overviews of reviews with data on the pharmacologic management of acute pain that reported on efficacy of pain relief (defined as at least 50% relief from maximum pain that lasted 46 hours), duration of pain relief (time before rescue remediation was requested), or any acute adverse events were included in this review.

Search methods for systematic review retrieval

The literature search strategy used the key words “(acute pain) AND (dental OR dentist* OR postop* OR postsurg*)” and was performed with the PubMed Clinical Queries for Systematic Reviews tool on April 13, 2017. In addition, manual searches of the reference lists of key articles were conducted to complement the electronic search. We also searched PROSPERO to identify systematic reviews under development that may have been relevant for our study.

Study selection, data collection, and analysis

The preliminary screening of titles and abstracts for all potentially eligible citations identified in the literature search was conducted in duplicate with the use of EndNote (Clarivate Analytics). In a second stage, the full text of any citation considered as potentially eligible was retrieved, and the eligibility was assessed. In case of disagreements among screeners, a third researcher acted as arbiter.

Abbreviation Key:

ADA:	American Dental Association,
AMSTAR:	A MeaSurement Tool to Assess Systematic Reviews
CDC:	Centers for Disease Control and Prevention
NNTB:	Number Needed to Treat for Benefit
NNTH:	Number needed to treat to harm
PROSPERO:	International Prospective Register of Systematic Reviews

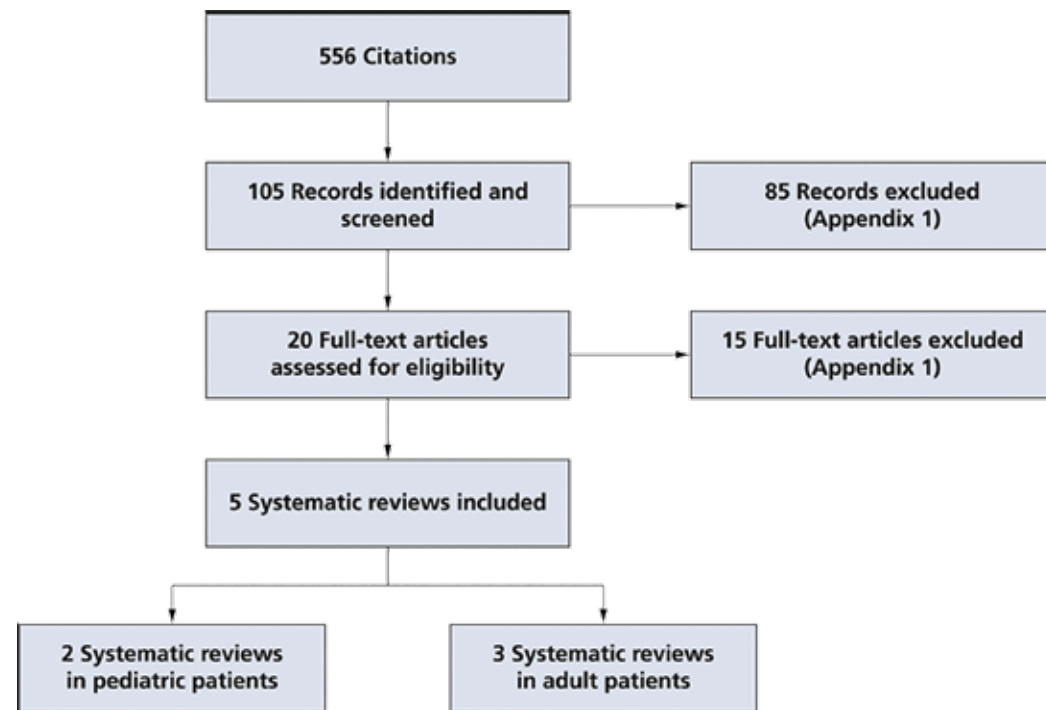


Figure. Scheme of citations identified in the PubMed Clinical Queries search.

Assessment of the Methodological Quality of Reviews

We used the AMSTAR 2 tool to evaluate the methodological quality of the potentially eligible systematic reviews,⁵ and we used the AMSTAR rating of the individual reviews included in the overviews of reviews provided by the overview authors. The AMSTAR 2 tool includes 16 items; only reviews that did not contain critical flaws were considered to provide a sufficiently accurate summary of the results from available studies to be included in our overview.

Data Extraction

After identification of eligible reviews, we collected numerical and narrative data reporting on desirable and undesirable outcomes when using any type of analgesic medication. The data were extracted by 1 researcher and entered directly into tables that were checked for accuracy by a second researcher in an independent fashion. We used the DynaMed Plus database (EBSCO Information Services) to determine which medications or medication combinations were marketed in the United States so as to only report data on medications or medication combinations marketed as of May 2017 in the United States.

Absolute Estimates to Summarize Study Results

We present analgesic efficacy data as the number of patients needed to treat for benefit (NNTB) along with the 95% confidence interval (CI) and the proportion of people attaining at least 50% maximum pain relief over 4 to 6 hours. In terms of pain medications, the NNTB is the number of people who must be treated by a specific dose of pain medication to receive 50% pain relief, which is considered clinically meaningful pain relief.⁶ The lower the NNTB, the more effective the analgesic agent. For example, an analgesic agent with an NNTB of 1 means that the medicine is 100% effective at reducing pain by 50%; that is, everyone who takes the medicine has effective pain relief. A drug with an NNTB of 2 means that 2 people must be treated for 1 to receive effective relief. According to a National Safety Council report,⁷ for oral pain medications, an NNTB of 1.5 would be considered very good and an NNTB of 2.5 would be considered good, whereas a drug with an NNTB of 10 would not be considered an effective analgesic (that is, 10 patients would have to be treated for 1 patient to experience pain relief). Analogous to NNTB, to compare risk of harm, the number needed to treat to harm (NNTH) can be calculated. NNTH is the number of patients needed to be treated for an additional adverse event to occur compared with the placebo group.

RESULTS

No ongoing or completed systematic reviews were identified through the search of the PROSPERO database that were relevant to this work. The PubMed Clinical Queries search identified 556 citations (Figure). Title and abstract screening of the retrieved citations, as well as any identified in manual searches of the reference lists of key articles, narrowed the results set of potential

citations to 105. Of these, a total of 74 (Appendix 1, available online at the end of this article) were excluded from the evidence review for having been superseded by subsequent systematic reviews or meta-analysis; 1 was excluded for not answering a relevant question; 4 were excluded for reviewing oral agents; and 6 were excluded for not being systematic reviews. After a review of the remaining 20 citations at the full-text level,⁸⁻²⁷ 15 were excluded (Appendix 2, available online at the end of this article) because they were included in subsequent reviews, were not systematic reviews, included studies that involved preoperative medication, examined an intervention unlikely to have a pharmacologic basis for efficacy, or reviewed medications that were not marketed in the United States. The remaining 5 systematic reviews or overviews of reviews were included.^{17, 18, 21, 22, 24} Two of these specifically targeted pediatric populations; 1 compared as-required versus fixed-schedule dosing of analgesic agents for postoperative pain in children,¹⁷ and the other focused on the safety of common analgesic agents for acute pain (albeit, nonsurgical) in the pediatric population.¹⁸

Among the systematic reviews that met the inclusion criteria, the 3 that explored pain management questions in adult populations^{21, 22, 24} explicitly indicated that they used AMSTAR to assess methodological quality.²⁸ Of the 2 systematic reviews that explored pain management in pediatric populations, 1¹⁷ simply documented adherence to these same principles for assessing the methodological quality of the systematic reviews they included, and the other¹⁸ reported using the McMaster Quality Assessment Scale of Harms.²⁹ Along with appraising the literature on which they were based, 4 of the systematic reviews^{17, 21, 22, 24} also satisfied the AMSTAR 2 criteria for high methodological quality.⁵ Appraisal of the work by Hartling and colleagues¹⁸ found it to be of moderate methodological quality using AMSTAR 2.⁵

Relief of postoperative pain with the use of pharmacologic agents in adults

The data from randomized controlled trials that studied single-dose oral analgesic agents in acute postoperative pain come almost exclusively from studies that involved people after extraction of third molars. It derives from an overview of reviews of 39 Cochrane reviews by Moore and colleagues,²² which included only randomized clinical trials. The results are from more than 58,000 adult participants (15 years or older) in approximately 460 individual studies.

Evidence was considered high quality if data were available from at least 2 studies, each of which included at least 200 participants, and the results were of low risk of publication bias.²³ High-quality evidence was available for 53 medication and medication combinations. Several studied more than 1 dose in “painful postsurgical conditions”; these included various fixed-dose combinations and fast-acting formulations of some analgesic agents. Table 1 provides data for drugs available in the United States with the use of NNTB in order from most to least effective. NNTB ranged from 1.5 to 12 for at least 50% maximum pain relief over 4 to 6 hours compared with placebo with the proportion of participants achieving this level of benefit ranging from approximately 77% to 26% compared with 40% to 0% for placebo.

Medication and medication combinations with the lowest NNTBs, meaning that patients were most likely to experience treatment benefit, were 400 milligrams of ibuprofen plus 1,000 mg of acetaminophen with an NNTB of 1.5 (95% CI, 1.4 to 1.7), 200 mg of ibuprofen plus 500 mg of acetaminophen with an NNTB of 1.6 (95% CI, 1.5 to 1.8), 1,000 mg of acetaminophen plus 10 mg of oxycodone with an NNTB of 1.8 (95% CI, 1.6 to 2.2), and 100 mg of diclofenac potassium with an NNTB of 1.9 (95% CI, 1.7 to 2.3).

Medication and medication combinations with the highest proportion of patients who experienced at least 50% maximum pain relief for 4 to 6 hours were 600 mg of ibuprofen (77%), 400 mg of ibuprofen plus 1,000 mg of acetaminophen (72%), 200 mg of ibuprofen plus 500 mg of acetaminophen (69%), and 50 mg of flurbiprofen (69%) (Table 1).

Duration of postoperative pain relief with the use of pharmacologic agents in adults

Duration of postoperative pain relief, assessed as the time to remedication ranged from 1.5 hours (placebo) to more than 20 hours (Table 1).²² Medication and medication combinations with the longest duration of action, meaning that they had the longest time before rescue remedication was requested, was 10.9 hours for 1,000 mg of diflunisal, 9.9 hours for 650 mg of acetaminophen and 10 mg of oxycodone, 9.8 hours for 500 mg of diflunisal, and 8.9 hours for 500 to 550 mg of naproxen. The medications and medication combinations that provided the shortest duration of pain relief were 3.5 hours for 600 to 650 mg of acetaminophen, 3.1 hours for 25 mg of diclofenac potassium, 2.7 hours for 60 mg of codeine, and 2.4 hours for 250 mg of gabapentin.

Adverse events associated with provision of pharmacologic agents for relief of postoperative pain

Studies of medications for relief of acute pain are designed and powered for primary outcomes that have to do with analgesia rather than adverse events. Although reporting of adverse events in clinical trials is generally poor and variable depending on

Table 1. Efficacy data from high-quality studies for analgesic agents available in the United States in order of effectiveness (most to least) according to NNTB*.^{22,24}

DRUG OR DRUG COMBINATION, DOSE	NNTS	95% CONFIDENCE INTERVAL	AT LEAST 50% MAXIMUM PAIN RELIEF OVER 4-6 HOURS %		MEAN OR MEDIAN TIME TO REMEDIATION, HOURS	
			Active	Placebo	Active	Placebo
Ibuprofen Plus Acetaminophen, 400 Milligrams/1,000 mg	1.5	1.4 to 1.7	72	6	8.3	1.7
Ibuprofen Plus Acetaminophen, 200 mg/500 mg	1.6	1.5 to 1.8	69	6	7.6	1.7
Acetaminophen Plus Oxycodone, 1,000 mg/10 mg	1.8	1.6 to 2.2	68	13	9.8	1.5
Diclofenac (Potassium), 100 mg	1.9	1.7 to 2.3	65	13	6.3	2.0
Ketoprofen, 25 mg	2.0	1.8 to 2.3	62	12	46 [†]	79 [†]
Diclofenac (Potassium), 50 mg	2.1	1.9 to 2.5	64	17	4.5	1.7
Diflunisal, 1,000 mg	2.1	1.8 to 2.6	62	15	10.9	3.2
Ibuprofen (Fast-Acting), 200 mg	2.1	1.9 to 2.4	57	10	43 [†]	78 [†]
Ibuprofen (Fast-Acting), 400 mg	2.1	1.9 to 2.3	65	18	32 [†]	82 [†]
Ibuprofen Plus Caffeine, 100 mg/200 mg	2.1	1.9 to 3.1	59	10	26 [‡]	60 [‡]
Ketoprofen, 100 mg	2.1	1.7 to 2.6	66	18	43 [†]	85 [†]
Acetaminophen Plus Codeine, 800-1,000 mg/60 mg	2.2	1.8 to 2.9	53	7	5.0	2.3
Ibuprofen Plus Codeine, 400 mg/26-60 mg	2.2	1.8 to 2.6	64	18	NA [§]	
Fenoprofen, 200 mg	2.3	1.9 to 3.0	57	13	NA	
Ibuprofen Plus Oxycodone, 400 mg/10 mg	2.3	2.0 to 2.8	60	17	NA	
Aspirin, 1,200 mg	2.4	1.9 to 3.2	62	19	NA	
Diclofenac (Fast-Acting), 50 mg	2.4	2.0 to 3.0	61	20	7.6	3.8
Diclofenac (Potassium), 25 mg	2.4	2.0 to 2.9	56	15	3.1	1.2
Ibuprofen Plus Caffeine, 100 mg/100 mg	2.4	1.9 to 3.1	43	0	34 [‡]	79 [‡]
Ketoprofen, 12.5 mg	2.4	1.9 to 3.1	56	13	80 [†]	98 [†]
Flurbiprofen, 100 mg	2.5	2.0 to 3.1	65	24	16 [†]	68 [†]
Ibuprofen (Acid), 400 mg	2.5	2.4 to 2.6	52	12	5.6	1.9
Celecoxib, 400 mg	2.6	2.3 to 3.0	43	5	8.4	1.6
Diflunisal, 500 mg	2.6	2.1 to 3.3	53	14	9.8	3.2
Acetaminophen Plus Oxycodone, 650 mg/10 mg	2.7	2.4 to 3.1	51	14	9.8	1.5
Flurbiprofen, 50 mg	2.7	2.3 to 3.3	69	32	25 [†]	66 [†]
Ibuprofen (Acid), 600 mg	2.7	2.0 to 4.2	77	40	NA	
Naproxen, 400-440 mg	2.7	2.2 to 3.5	49	11	NA	
Naproxen, 500-550 mg	2.7	2.3 to 3.3	52	15	8.9	2.0
Piroxicam, 20 mg	2.7	2.1 to 3.8	63	26	NA	
Etodolac, 400 mg	2.9	2.3 to 4.0	39	5	NA	
Ibuprofen (Acid), 200 mg	2.9	2.7 to 3.2	41	7	4.7	2.1
Etodolac, 200 mg	3.3	2.7 to 4.2	44	13	NA	
Flurbiprofen, 25 mg	3.3	2.5 to 4.9	35	5	35 [†]	70 [†]
Ketoprofen, 50 mg	3.3	2.7 to 4.3	48	18	48 [†]	81 [†]
Acetaminophen, 500 mg	3.5	2.7 to 4.8	61	32	35 [†]	63 [†]
Acetaminophen, 975-1,000 mg	3.6	3.2 to 4.1	46	18	3.9	2.7
Acetaminophen Plus Codeine, 600-650 mg/60 mg	3.9	3.3 to 4.7	43	17	4.1	2.4
Aspirin, 600-650 mg	4.2	3.8 to 4.6	39	15	55 [†]	75 [†]
Aspirin, 1,000 mg	4.2	3.8 to 4.6	41	14	67 [†]	83 [†]

* NNTB: Number needed to treat for benefit. † Percentage remediating within 6 hours. ‡ Percentage remediating within 8 hours. § NA: Not available.

Table 1. Continued

DRUG OR DRUG COMBINATION, DOSE	NNTS	95% CONFIDENCE INTERVAL	AT LEAST 50% MAXIMUM PAIN RELIEF OVER 4-6 HOURS %		MEAN OR MEDIAN TIME TO REMEDIATION, HOURS	
			Active	Placebo	Active	Placebo
Celecoxib, 200 mg	4.2	3.4 to 5.6	35	11	6.6	2.6
Ibuprofen (Acid), 100 mg	4.3	3.2 to 6.4	31	8	NA	
Acetaminophen, 600-650 mg	4.6	3.9 to 5.5	38	16	3.5	2.4
Etodolac, 100 mg	4.8	3.5 to 7.8	41	20	NA	
Gabapentin, 250 Milliliters	11.0	6.4 to 35	15	5	2.4	2.1
Codeine, 60 mg	12.0	8.4 to 18	26	17	2.7	2.0

Table 2. Acute adverse events for medication or medication combination with statistically significant difference from placebo controls.²¹

DRUG OR DRUG COMBINATION, DOSE	NUMBER NEEDED TO TREAT TO HARM	95% CONFIDENCE INTERVAL	REPORTED ACUTE ADVERSE EVENT, %	
			Active	Placebo
Ibuprofen Plus Caffeine, 200 Milligrams/100 mg	2.2	1.0 to 4.9	11	6
Acetaminophen Plus Oxycodone, 650 mg/10 mg	1.8	1.4 to 2.3	58	28
Diflunisal, 1,000 mg	1.8	1.2 to 2.6	29	16
Acetaminophen Plus Codeine, 600-650 mg/60 mg	1.6	1.3 to 1.9	34	17
Acetaminophen Plus Oxycodone, 1,000 mg/10 mg	1.6	1.3 to 2.0	68	43
Aspirin, 1,000 mg	1.6	1.1 to 2.3	26	12
Acetaminophen Plus Codeine, 800-1,000 mg/60 mg	1.4	1.2 to 1.6	31	19
Ibuprofen Plus Acetaminophen, 200 mg/500 mg*	0.7	0.6 to 0.9	30	48
Ibuprofen Plus Acetaminophen, 400 mg/1,000 mg*	0.6	0.5 to 0.8	29	48

* Statistically fewer adverse events in medication combination than in placebo controls.

methodology, Moore and colleagues²¹ have summarized the data on adverse events available from studies of sufficient quality to have been included in Cochrane reviews of pharmacologic agents used for single-dose oral analgesic agents for acute postoperative pain.^{22,24} Although noting that accurate estimation of frequency or severity of adverse events is difficult at best, they calculated that serious, acute adverse events are rare and estimated that they occur in approximately 1 in 3,200 people.²¹

Methodologically, information about acute adverse events was most often gathered through the use of patient diaries. Adverse events included drowsiness, respiratory depression, nausea, vomiting, and constipation for the opioid medications and drowsiness, dizziness, nausea, and headache for the nonsteroidal anti-inflammatory drugs, although there was no effort made to parse the frequency of specific adverse events.²¹ Table 2 presents the relatively short list of medication and medication combinations with a statistically significant difference in the proportion of patients who reported an adverse event compared with patients in the placebo group. Although the largest NNTB reported was for 200 mg of ibuprofen and 100 mg of caffeine (2.2; 95% CI, 1.0 to 4.9), 4 of the 6 other medication and medication combinations in which the NNTB was statistically greater than placebo were for opioid-containing combinations (Tables 2 and 3). That the 2 combinations of ibuprofen and acetaminophen, at dosages of 200 mg/500 mg and 400 mg/1,000 mg, were observed to have statistically fewer adverse events in the active treatment group than in the placebo control group (Table 2) may reflect a sample size issue. The data on adverse events for the medication and medication combinations for which there was no statistically significant difference compared with the placebo control are presented in Table 3 in alphabetical order.

Table 3. Alphabetical listing of medication and medication combination with no statistically significant difference in acute adverse events compared with placebo controls.²¹

DRUG OR DRUG COMBINATION, DOSE	NNTH	95% CONFIDENCE INTERVAL	REPORTED ACUTE ADVERSE EVENT, %	
			Active	Placebo
Acetaminophen, 500 milligrams	0.9	0.4 to 1.9	7	6
Acetaminophen, 600-650 mg	1.2	0.9 to 1.5	16	14
Acetaminophen, 975-1,000 mg	1.1	0.9 to 1.3	18	16
Aspirin, 600-650 mg	1.2	1.0 to 1.4	11.0	9.5
Codeine, 60 mg	1.3	0.9 to 1.7	20	16
Diclofenac (Fast-Acting), All Doses	1.0	0.6 to 1.8	8	46
Diclofenac (Potassium), All Doses	1.0	0.7 to 1.6	8	46
Diflunisal, 500 mg	1.3	0.8 to 1.9	18	15
Etodolac, 100 mg	1.6	0.9 to 2.8	11	7
Etodolac, 200 mg	1.2	0.9 to 1.7	22	17
Etodolac, 400 mg	0.8	0.5 to 1.2	28	34
Fenoprofen, 200 mg	0.9	0.4 to 2.1	6	6
Flurbiprofen, 100 mg	1.0	0.6 to 1.8	12	12
Flurbiprofen, 25 mg	0.9	0.5 to 1.7	14	16
Flurbiprofen, 50 mg	0.8	0.5 to 1.1	13	17
Gabapentin, 250 mg	0.9	0.7 to 1.3	28	32
Ibuprofen, 50 mg	1.3	0.6 to 3.0	10	7
Ibuprofen, 100 mg	1.2	0.7 to 2.1	14	13
Ibuprofen, 200 mg	0.9	0.7 to 1.02	19	19
Ibuprofen, 400 mg	0.9	0.8 to 1.04	17	16
Ibuprofen Plus Caffeine, 100 mg/100 mg	1.9	0.8 to 4.1	14	8
Ibuprofen Plus Codeine, 400 mg/26-60 mg	1.2	0.8 to 1.7	28	19
Ibuprofen Plus Oxycodone, 400 mg/10 mg	1.2	0.8 to 1.7	28	19
Ketoprofen, 100 mg	1.2	0.7 to 2.2	22	18
Ketoprofen, 12.5 mg	1.3	0.5 to 3.6	6	4
Ketoprofen, 25 mg	1.2	0.7 to 2.0	10	10
Ketoprofen, 50 mg	1.6	0.9 to 2.6	21	14
Naproxen, 400-440 mg	1.3	0.8 to 2.2	22	17
Naproxen, 500-550 mg	1.0	0.7 to 1.2	27	29
Oxycodone, 5 mg	1.1	0.8 to 1.6	31	29

Relief of postoperative pain with the use of pharmacologic agents in children

A 2015 Cochrane review attempted to evaluate the management of postoperative pain in children younger than 16 years.¹⁷ Three randomized clinical trials that met their inclusion criteria were found, enrolling a total of 246 children. (The only medication for which the researchers found data sufficient for calculating the risk ratio with 95% CI was dipyrone, which is only available for human use in Europe and Latin America. It is included here for completeness in reporting the results from this Cochrane review.) The researchers found moderate quality data to indicate that 500 mg of oral dipyrone provided 70% of patients with at least 50% relief of pain at 4 to 6 hours (95% CI, 1.8 to 3.1). They reported being unable to conduct analysis of adverse events because data were inconsistently reported.

Adverse events associated with provision of pharmacologic agents for management of acute, nonsurgical pain in children

A systematic review by Hartling and colleagues¹⁸ on adverse events on children (defined as younger than 18 years) who received pharmacologic agents for managing acute pain included nausea; vomiting; headache; gastrointestinal symptoms other than nausea and vomiting; drowsiness, sleepiness, tiredness; dizziness; itchiness, rash, pruritus; central nervous system symptoms; and pulmonary symptoms. Although original data were insufficient to calculate NNTH, we qualitatively summarized the results in Table 4 which show that the medication and medication combinations that include opioids are associated with the largest proportion of acute adverse events, ranging from 132% (that is, more than 1 type of acute adverse event per patient) for 2 mg/kg of codeine, 95% for 0.2 mg/kg of oxycodone, and 60% for 0.5 mg/kg of morphine and, at the low end of the spectrum, 15% or fewer patients who reported an acute adverse event for 10 mg/kg of ibuprofen, 20 mg/kg of naproxen, 40 mg/kg of ketoprofen, 2 mg/kg of tramadol, or 15 mg/kg of acetaminophen. (The list of the medication and medication combinations are presented in descending order of study participants affected by adverse events in Table 4.)

DISCUSSION

To determine which oral analgesic medications to use for relief of acute dental pain appropriate for the patient, health care professionals should consider both the medication's potential to provide pain relief and its potential to cause harm. A variety of medication and medication combinations, including formulations that contain opioids, may be considered for the management of acute dental pain, and it is important to be cognizant that no medication or medication combination produces high levels of pain relief in all patients and that the analgesic agents prescribed are not intended to eliminate all pain that may present. When prescribing analgesic agents, practitioners should appreciate and counsel patients that the goal is for the patient to be as comfortable as possible, although patients should be aware that some discomfort is normal and may still occur. The range of results with single-dose analgesic agents in participants with moderate or severe acute pain was from 7 of 10 (70%) achieving good pain relief with the most effective medicine to approximately 3 of 10 (30%) with the least effective medicine. In terms of the decision-making process about what medication or medication combination to prescribe, the Joint Commission's statement on pain management indicates that pain management strategies should reflect a patient-centered approach and consider the patient's current presentation, the health care providers' clinical judgment, and the risks and benefits associated with the strategies, including potential risk of dependency, addiction, and abuse.³⁰ Although most data in adults presented here derive from the study of third-molar extraction, the results are more broadly applicable, because comparable findings, for example, have been reported for relief of pain of endodontic origin.³¹

When comparing the efficacy of nonsteroidal anti-inflammatory medications with opioids in relation to the magnitude of pain relief, the combination of 400 mg of ibuprofen plus 1,000 mg of acetaminophen was found to be superior to any opioid-containing medication or medication combination studied. In addition, the opioid-containing medications or medication combinations studied were all found to have higher risk of inducing acute adverse events than 400 mg of ibuprofen plus 1,000 mg of acetaminophen. Thus, in general, when considering either benefits or harms, management of acute pain with nonsteroidal medications, with or without acetaminophen, appears to have a therapeutic advantage to opioid-containing medications. Although there are situations in which clinical judgment indicates an opioid-containing medication may be warranted, the data make a compelling case favoring use of nonsteroidal medications, with or without acetaminophen.

Many factors contribute to prescribing decisions made by dentists, including education, training, and local legislation. There is reported geographic variation in opioid-prescribing patterns.³² No single common course curriculum, objectives, or assessments are used by all dental schools.³³ Another approach may be dental school and continuing education programs about the CDC guidelines for prescribing opioids for long-term pain,¹ which have been effective in changing opioid-prescribing patterns for clinicians in the fields of surgery³⁴ and emergency medicine.³⁵ Although data presented in this study do not cover the breadth of the CDC recommendations, they are relevant to the concept of optimizing nonopioid therapy before moving to a trial of opioids. This is consistent with the recent ADA Statement on the Use of Opioids in the Treatment of Dental Pain revised in October 2016, which indicates that "Dentists should consider nonsteroidal anti-inflammatory analgesics as the first-line therapy for acute pain management."³⁶

Strengths and limitations of current review

The AMSTAR 2 evaluations found that the information gleaned from the available systematic reviews on efficacy and acute adverse events is of moderate-high methodological quality. This should allow readers to have confidence that the use of appropriately selected nonsteroidal anti-inflammatory analgesic medication can deliver the desired pain management. Although studies are not designed with adverse events as a primary end point, with report of serious adverse events being minimal, clinicians can use this to extrapolate about the overall safety of these medications. In terms of limitations, the literature search strategy used was systematic, but broadening it to capture primary studies and eliminating the English-only language

exclusion criterion may have yielded additional information. The data evaluated in randomized clinical trials to assess analgesic efficacy used a single-dose model of treatment and are unable to quantitatively evaluate adverse events that may require longer follow-up to be detected—that is, dependence or medication diversion that is increasingly seen to be problematic.

CONCLUSION

Opioid medication and medication combinations are not among the most effective or long lasting of the options available for relief of acute dental pain. In addition, opioid medication and medication combinations are associated with higher rates of acute adverse events. From the perspective of risk-benefit analysis, justifying general use of opioid medications as first-line therapy for management of acute pain remains unclear. The large set of published research reports summarized here suggests that relief of postoperative pain in dental practice with the use of nonsteroidal anti-inflammatory drugs, with or without acetaminophen, is equal or superior to that provided by opioid-containing medications.

To access the references to this article, as well as the Appendix and Reason sections, please visit: [https://jada.ada.org/article/S0002-8177\(18\)30117-X/fulltext](https://jada.ada.org/article/S0002-8177(18)30117-X/fulltext).

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California CareForce Coachella Clinic 2019 and Future CCF Clinics

by Emerald Carroll
CCF Volunteer & Outreach Coordinator
and

Pamela Congdon, CAE, IOM,
Executive Director, California CareForce and CALAOMS



Hello all you amazing, wonderful, hard-working, big-hearted people! California CareForce is proud to announce that we had another successful Coachella Clinic in March!

Thank you so much for volunteering your time to help us serve 1,411 patients. You helped provide critical healthcare to those in need right in your own community.

With the help of 841 volunteers over the course of three days, CCF provided more than \$681,000 worth of dental, vision, and medical services.

729 dental patients were registered throughout the three-day clinic. Almost half a million dollars worth of dental services were provided with the help of hygienists, assistants, dentists, and 20 OMSs.

CALAOMS members from all over California took part in making this clinic a success by volunteering their time and talents at the clinic.

Please make sure to stop by our Facebook page to check out the pictures from throughout the weekend. Also, while you're there, please leave a review of your experience volunteering with CCF if you feel so inclined!

Your support – whether it be simply spreading the word or donating your time or money – is what keeps CCF clinics running. Thank you for making California communities happier and healthier by sharing your talents with those less fortunate. Not only do patients walk away from the clinic with bigger smiles, but also our participating California senior dental students walk away with bigger dreams and better relationships with OMSs.

What's Next for CCF?

The Camp Fire of 2018 was the deadliest and most destructive wildfire in California history to date. It is also the deadliest wildfire in the U.S. since the Cloquet fire in 1918 and is high on the list of the world's deadliest wildfires; it is the sixth-deadliest U.S. wildfire overall. It was the world's costliest natural disaster in 2018.

CCF is planning to hold a clinic in Chico this August 3-4 to support the Camp Fire victims in Paradise and Chico. But CCF needs the help of ALL CALAOMS members. We need to raise \$50,000 to put on this clinic and we are grateful for whatever support CALAOMS members can provide.

Leaders from CALAOMS and CCF recently met with California State Senator Jim Nielsen (R-Tehama) who was so impressed by CALAOMS' proactive efforts with regard to opioid education for youths as well as CCF's proactive mission to host free medical/dental/vision clinics that he has expressed his desire to give CALAOMS a proclamation at this August CCF clinic. CCF is also looking to partner with Goodwill for this clinic in Chico, as many people forever lost items such as clothes, dishes, toys, furniture, etc.

Thank you, again, for your hard work and dedication to the mission of California CareForce. I hope to see you all at our next clinic in northern California in August. Follow our social media accounts for all CCF updates.

Thank you for being a part of a Force that cares.

For more information on how to give back and get involved, please contact California CareForce Volunteer & Outreach Coordinator, Emerald Carroll, at emerald@californiacareforce.org



CALAOMS immediate past president Dr. Jeff Elo (second from left) attends the CCF Clinic in Coachella with students and faculty from Western University of Health Sciences College of Dental Medicine

RISK MANAGEMENT



When Treating Children, Avoid These Risks

by Darrell Ranum, JD, CPHRM, Vice President,
Patient Safety and Risk Management, The Doctors Company

A study of malpractice claims against physicians in 52 specialties who treat children reveals that while there are common elements in allegations, the types of problems experienced by pediatric patients—and that lead to malpractice claims—change as they age.

The Doctors Company studied 1,215 claims filed on behalf of pediatric patients that closed from 2008 through 2017.

The study focused on four groups: neonate (less than one month old), first year (one month through 11 months), child (one through nine years), and teenager (10 through 17 years).

Of the claims, 446 (37 percent) resulted in a payment to the claimant. The mean indemnity payment was \$630,456, and the mean expense was \$157,592. The median indemnity payment was \$250,000, and the median expense to defend these claims was \$99,984.

The patients represented in these claims and lawsuits were treated by a variety of specialties. Obstetricians were most frequently involved with neonatal patients. Pediatricians, orthopedic surgeons, emergency medicine physicians, and family medicine physicians were most frequently named as defendants for children older than one month.

Diagnosis-related allegations were the most common allegation in all but the neonate age group. Patients older than neonates experienced diagnosis-related claims in 34 to 44 percent of all claims and lawsuits.

Physician experts identified factors that contributed to patient harm and evaluated each claim to determine whether the standard of care was met.

The most common factor contributing to injury in neonates was selection and management of therapy. This issue refers to decisions about vaginal birth versus cesarean section.

The most common factors contributing to patient harm for age groups other than neonates were patient assessment issues and communication between the patient or family member and provider.

The following strategies can assist physicians in preventing some of the concerns identified in this study:

For Neonates

1. Become familiar with the National Institute of Child Health and Human Development nomenclature. Physicians and nurses should participate together in regular fetal monitoring learning activities.
2. Respond without delay when a nurse requests a physician assessment.
3. Conduct drills to ensure 30-minute response times for emergency cesarean section deliveries and carry out simulations of low-frequency/high-severity obstetric emergencies.
4. Estimate and document fetal weight when considering vacuum-assisted vaginal delivery.

For Children Ages One Month to 17 Years

1. Ensure quality documentation.
2. Conduct careful reevaluations when patients return with the same or worsening symptoms.
3. Ensure an adequate exchange of information. Utilize translations services if communication is difficult.
4. Provide parents with information to help them recognize when a sick child requires emergency care.

This study showed that neonates and infants in their first year of life were more vulnerable than older children. Children less than one year of age experienced high-severity injuries at almost twice the rate of children older than one year.

Neonates may experience complications due to difficult labor and delivery. They also face congenital conditions that may not be readily diagnosed and treated.

Children older than one year experienced more injuries from trauma, communicable disease, and malignancies. Teenagers experienced trauma and illness, and teenaged females may also face the dangers of pregnancy and childbirth.

This wide spectrum of development adds to the challenges of diagnosing and treating pediatric patients and shows that clinicians need the assistance of reliable systems to help prevent these errors.



By Christopher M. Cirino, DO

Concerns about U.S. Measles Outbreak

A recent poll by The Doctors Company received 9,459 responses to the question: How concerned are you as a healthcare provider about the recent U.S. measles outbreak? Some 43 percent responded that they are very concerned. There are significant reasons for this level of concern.

The number of measles cases reported in the United States in 2018 (372) was three times higher than that of the preceding year, and currently, only the second month in to 2019, there are more than 100 reported cases of measles. With an estimated worldwide 30 percent increase of measles cases over the last few years, it is frustrating to think that this vaccine-preventable illness, which can be associated with serious consequences, including death, is resurging. Do we as healthcare workers really need to be concerned about measles?

In this global stage, what goes on in one country really does affect the entire world. The highest caseloads of measles worldwide in 2018 were seen in India, Ukraine, and the Philippines. We are now in a time when you can cross the

globe in as little as 18 hours—in less than the typical time it takes for an infected person to develop the telling measles rash. A person can acquire the infection from a high-prevalence country, spread the infection to others in the closed quarters of an airplane, and return to a low-prevalence country with a silent stowaway, only to then go back to a social circle with similarly low vaccination rates—and this is precisely what is happening.

Measles, which is one of the most transmissible infectious diseases (with an attack rate of 90 percent), has always been regarded as a “canary in the coal mine” for the status of vaccine programs both nationally and worldwide. Breakdowns in the vaccine chain have typically been seen in countries beset by war and political turmoil, which often abandon vaccine programs, leaving children unvaccinated or incompletely vaccinated. There has also been a growth in the level of distrust and “alternate facts” about vaccine safety and need, specifically regarding the MMR and MMRV, and this spread has been kindled by social media. Unfortunately, this distrust isn’t something that can easily be mitigated by education initiatives.

It might be easier for some to decline a vaccination, because the risk of death from measles is one in 1,000. Though sadly, with the estimated caseload of measles each year worldwide, more than 100,000 children likely die from measles each year. The medical field is steadfast on the principal of reducing the risk of death from a vaccine-preventable illness, and concerted vaccination programs were able to eradicate a much more harmful viral illness—smallpox—which had a death rate of one in three. Though until we can bridge the rift between public health goals and anti-vaccination sentiment, and bolster the more highly prevalent countries’ vaccination programs, we should all expect to see more cases of measles, mumps, and a myriad of other vaccine-preventable illnesses coming to a clinic near you.

The guidelines suggested here are not rules, do not constitute legal advice, and do not ensure a successful outcome. The ultimate decision regarding the appropriateness of any treatment must be made by each healthcare provider considering the circumstances of the individual situation and in accordance with the laws of the jurisdiction in which the care is rendered.

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Photo: Giselle Hartill, oral surgery assistant, and Michele S. Bergen, DMD, MD, FACS, oral and maxillofacial surgeon, at Infinity Oral Surgery, Greenwich, Connecticut

