



A PUBLICATION OF THE CALIFORNIA ASSOCIATION OF ORAL & MAXILLOFACIAL SURGEONS

Implant Dentistry and the Myth of the Lifetime Guarantee



by Mahr Elder, DDS, MD
and
Clark R. Hudson, JD



Dental implants provide remarkable reconstructive and functional benefits for patients. Their long-term success rates are high but, like any medical device, they carry an inherent risk of failure. When complications arise, patients often question who is responsible for the cost of retreatment or replacement. Determining whether the responsibility lies with the surgeon, the restorative dentist, or the patient can become complex. Patients are often disappointed when implants or restorations do not meet their expectations of long-term or lifetime success. These situations can strain long-standing referral relationships between restorative dentists and the surgeons and may quickly escalate into financial disputes or legal conflict. Clear communication, transparent treatment planning, and proper management of patient expectations are essential to minimizing misunderstandings and preventing future conflict.

Patient Expectations

Warranties are common for most consumer products in daily life, and American society has come to expect unconditional

guarantees from major retailers. But in the dental world, warranties are far less transparent and are often inconsistently defined. Dentistry and oral and maxillofacial surgery operate under professional service standards rather than consumer product law. This difference can lead to misunderstandings regarding treatment outcomes and financial responsibility. Dental reconstructions can carry the financial cost of a major consumer purchase, yet patients frequently receive limited guidance regarding how complications or failure will be managed. The absence of clearly defined warranty policies can come as a surprise to patients when problems arise. Many dentists may informally offer to redo dental work at no additional cost if complications occur within the first year. However, this informal practice lacks consistency, documentation, and clear parameters, particularly as time extends beyond the initial treatment period. This variability highlights the need for a more structured and transparent approach to defining professional responsibility and warranty expectations in implant dentistry.¹

The development of implant dentistry has created a significantly longer patient-provider relationship between oral and

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- CALAOMS also does business as:**
- * Oral & Facial Surgeons of California
 - * Southern California Association of Oral and Maxillofacial Surgeons
 - * Southern California Society of Oral and Maxillofacial Surgeons
 - * Northern California Association of Oral and Maxillofacial Surgeons
 - * Northern California Society of Maxillofacial Surgeons
 - * California Society of Oral and Maxillofacial Surgeons
 - * Southern California Oral and Maxillofacial Surgeons

EDITORIAL



*by Jeffrey A. Elo, DDS, MS, FACS
Editor, CALAOMS*

The Discipline Of The Unremarkable: Why Greatness Is Boring

I have the privilege of working in two very different - yet equally rewarding - clinical environments. During most of the week, I serve as the sole oral and maxillofacial surgeon at a dental school, providing patient care adjacent to students who are encountering much of dentistry and medicine for the first time. I also work as a part-time attending in an OMS residency program, where I either supervise and work with residents in clinic - often during sedations - or assist them in the operating room on whatever cases they may have. The contrast between these settings is striking. Dental students, still developing both clinical skills and professional awareness, can at times bring a level of informality that carries into patient spaces. Residents, by comparison, operate under intense workloads and responsibilities, and their focus reflects the demands of their training.

The discipline of oral and maxillofacial surgery has never been defined by spectacle. It is, instead, a profession shaped in quiet rooms (yes, noisy at times; but you get the point I'm making), under focused light, through movements that are as precise as they are practiced. While the outcomes of an OMS's work may at times appear extraordinary to those outside our field, we understand a more sobering truth: greatness, in its most authentic form, is often indistinguishable from routine. Indeed, greatness is, in many respects, boring.

This assertion is neither cynical nor diminishing. Rather, it is clarifying. The highest levels of surgical mastery are not achieved through moments of inspiration alone, nor through sporadic displays of brilliance. They are constructed incrementally, through repetition, discipline, and an unwavering commitment to the fundamentals. There are no cameras or microphones present when we rise early to prepare for the day's cases, when we review imaging in meticulous detail, or when we rehearse, mentally and physically, the steps of a complex procedure. There is no audience for the countless hours spent refining technique, revisiting foundational knowledge, or correcting small inefficiencies that, over time, define the difference between adequacy and excellence.

The work is hard. It is repetitive. At times, it is undeniably mundane. And yet, it is precisely this work - the unremarkable, disciplined, daily effort - that shapes the surgeon. We perform procedures not once, but hundreds, even thousands of times, each iteration an opportunity for marginal gain. The sutures we place today are informed by those we placed years ago; the decisions we make in moments of uncertainty are guided by a reservoir of prior experience built through sustained labor. It is through this accumulation that competence evolves into mastery.

In a culture that increasingly celebrates immediacy and visibility, there is a risk that the quiet rigor of our profession is misunderstood, even by those within it. We may, at times, find ourselves searching for affirmation in the absence of external recognition. It is in these moments that we must return to first principles. The value of our work is not contingent upon its visibility. Its worth is intrinsic, measured in restored function, alleviated pain, and lives improved in ways that are often known only to our patients and ourselves.

For those who may feel the weight of repetition or the fatigue that accompanies sustained effort, I offer this: I'm determined to encourage the discouraged. What may appear monotonous is, in fact, the very mechanism by which excellence is forged. The discipline required to engage fully in each seemingly ordinary task is not separate from greatness - it is its foundation.

We would also do well to remember that our professional journeys remain unfinished. No matter the stage of one's career, there exists the possibility for further growth, deeper understanding, and renewed purpose. In this light, we can affirm with conviction: The best thing to happen to you has not yet happened. This perspective is not rooted in abstraction, but in the lived reality of a field that continues to evolve, offering new challenges and new opportunities for those willing to persist.

At the same time, we must attend to the internal posture with which we approach our work. The constancy required of our profession need not preclude a sense of fulfillment. Indeed, it invites a deliberate choice in how we engage with our daily responsibilities. As such, the sentiment bears repeating: Be as happy as you make up your mind to be. This is not a dismissal of difficulty, but an affirmation that meaning and satisfaction can coexist with rigor and repetition.

As members of this esteemed profession, we are stewards of a tradition that prizes precision, resilience, and integrity. Let

us embrace, rather than resist, the quiet nature of our pursuit. Let us recognize that the very aspects of our work that may seem least remarkable are, in truth, those that sustain its highest standards.

Greatness is not found in isolated moments of recognition, but in the disciplined cadence of daily effort. It is built in the absence of applause, sustained without spectacle, and realized through a commitment to work that is, more often than not, unglamorous. And yet, it is this very work - steady, repetitive, and exacting - that defines us.



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PRESIDENT'S MESSAGE



*Vivian Jui, DMD
CALAOMS President*



A colleague once asked me why they should join CALAOMS. They were convinced the organization provided no meaningful benefit to their daily professional life. I suspect my expression mirrored that familiar “mind-blown” emoji. I was tempted to ask whether they had ever attended a CALAOMS CE course, read the Journal, volunteered for a committee, or participated in a California CareForce clinic—but I held back. The answer was likely no.

The reality is that the value of CALAOMS membership is often most tangible to those who actively engage with the organization. I see its benefits reflected in my practice every day. My surgical team is stronger because of their certification through OMSA, ACLS, and PALS. I am confident that my office meets the standards set forth by the Dental Board of California and AAOMS. And I am reassured knowing that dedicated colleagues—many far more knowledgeable than myself—are working diligently to advance, protect, and defend our profession.

As we move through the second quarter of 2026, I am pleased to share an update on that ongoing work.

We began the year with momentum. Our new lobbyist, Michelle Rivas, has been collaborating closely with our Legislative Committee and PAC. With Michelle’s guidance, CALAOMS is developing a Key Person Program designed to connect oral and maxillofacial surgeons with legislators in their home districts—building relationships and increasing awareness of the issues that impact our profession. Our recent Advocacy Day in Sacramento was a success, with productive

meetings arranged with Assemblymembers and Senators. If you are willing to host a legislator in your office, I encourage you to contact Robyn Alongi, CALAOMS’ Executive Director, at (916) 783-1332.

Our OMSA course is also undergoing important updates to reflect evolving standards and protocols. For those of you working with referring providers who utilize mobile anesthesia services, I encourage you to recommend this course to them and their teams. It offers a deeper understanding of anesthesia safety and emergency preparedness—benefiting both providers and patients.

CALAOMS is also preparing for our first-ever Office Managers’ Summit. This virtual program is designed to address the real-world challenges your team faces—insurance denials, third-party payors, contract navigation, human resources, and malpractice mitigation. Our goal is simple: provide practical solutions and expert guidance where it is most needed.

In addition to our Annual Meeting and January webinar, we have expanded our On-Demand CE library, offering concise, one-hour courses that can be completed conveniently—even over a lunch break. These include required topics such as the California Dental Practice Act and Infection Control – open to you and your staff.

Meanwhile, our California CareForce clinics continue to make a profound impact. Since its founding by CALAOMS in 2014, CCF has delivered essential care to underserved communities across the state. At our most recent clinic in Coachella, we treated 591 dental patients, 1,359 medical patients, and 354 vision patients—providing over \$766,000 in care to those in need. Our next clinic will take place in Humboldt County in Fall 2026, and we welcome your participation.

All these efforts speak to what you gain from membership. But they also underscore something equally important: what you give. Your involvement in CALAOMS strengthens your practice and our profession as a whole. Our collective voice shapes policy, protects our scope, and ensures a strong future for oral and maxillofacial surgery. Through mentorship and engagement, we also help guide the next generation.

As Peter Drucker observed, “The best way to predict the future is to create it.” CALAOMS is strongest when its members benefit from and contribute to its mission.



LEGISLATIVE UPDATE



by Michelle Rivas, CALAOMS Legislative Advocate



CALAOMS Legislative Update: Advocacy in Action at the State Capitol

The California Association of Oral and Maxillofacial Surgeons (CALAOMS) has started the year strong with a series of coordinated advocacy efforts designed to elevate the voice of the profession in the legislative process. These efforts include a successful Advocacy Day in Sacramento, a Legislative Committee meeting to review and adopt positions on key legislation, and a PAC Committee meeting focused on educating members about the political process and identifying key members of the Legislature for potential support.

In April, CALAOMS members traveled to Sacramento to meet directly with legislators and staff to discuss issues impacting the practice of oral and maxillofacial surgery and patient access to care. These meetings are a critical component of CALAOMS' broader advocacy efforts, ensuring that policymakers understand the unique training, scope, and challenges facing the profession.

Below is a summary of the key bills discussed during these meetings (for a complete list of bills CALAOMS is working on this year, see the CALAOMS.org website):

AB 2746 – Medical Debt - Position: Oppose

AB 2746 would expand the definition of “medical debt” to include third-party financing, such as credit cards. However, implementing this change would require lenders to access protected health information to determine what services were provided and whether they were medically necessary. This creates direct conflicts with patient privacy laws, making it impossible for healthcare providers to comply.

AB 1629 – Dental Coverage / Assignment of Benefits - Position: Support

AB 1629 ensures that when patients assign their benefits to an out-of-network provider, payment is sent directly to that provider. The bill improves transparency by requiring clear disclosures about network status, costs, and coverage, and provides greater certainty by reinforcing prior authorization as a baseline for payment.

Protect Medi-Cal Dental: Oppose Elimination of Proposition 56 Payments

CALAOMS is part of a coalition opposing the proposed elimination of Proposition 56 payments for Medi-Cal Dental providers. These cuts would jeopardize access to care for nearly 15 million low-income Californians, destabilize the provider network, and forfeit approximately \$518 million in federal matching funds.

Advocacy Day attendees spent time educating legislators and legislative staff on the extensive education and training of oral and maxillofacial surgeons (OMSs), including years of post-doctoral surgical training and experience in anesthesia and hospital-based care. They highlighted the specialized scope of OMS practice, which includes complex procedures such as facial trauma surgery, corrective jaw surgery, pathology, and the safe administration of anesthesia. This outreach helps ensure policymakers understand the advanced skill set of OMS and the critical role they play in delivering high-level, medically necessary care to patients across California in and out of hospital settings.

CALAOMS will continue to build on this momentum by scheduling oral and maxillofacial surgery office tours with key legislators throughout the year, providing valuable opportunities for policymakers to see firsthand the scope and complexity of care delivered by OMS. Please email CALAOMS Executive Director Robyn Alongi if you would like to participate in the Key Person Program @ robyn@calaoms.org.

AAOMS DISTRICT VI REPORT



by W. Frederick Stephens, DDS, FACD, FICD
AAOMS District VI Trustee



Greetings from your AAOMS District VI Trustee

Well, summer is on the way! Hopefully, you'll find some time to get away and enjoy yourself with friends and family this year and still have a very productive summer.

I am well into my 5th year as your *AAOMS District VI Trustee*. Next year will be my 6th and last year as your Trustee. I continue to be extremely grateful and humbled for the confidence you all have shown me, by once again electing me last year in the House of Delegates to this important and rewarding position. I will continue to represent all your interests at the AAOMS Board level, to the best of my ability, for the remainder of my term.

We, at AAOMS, have been very busy with president **Dr. Robert S. Clark** at the helm. Given his many years in private practice, his four years as AAOMS Treasurer, and his experience on The Board, Dr. Clark has been representing our AAOMS membership with skill, insight, and a lot of "Clark wit." Our Board of Trustee's (BOT) continues to be occupied by extremely sharp members with diverse viewpoints who all strive towards the collective goal of our AAOMS mission. Together with our fantastic senior management team and

their support staff, the AAOMS is strong and remains a highly recognizable and respected entity in healthcare.

Another very important group representing our Western States who deserve *special thanks* is all our dedicated delegates and alternates who represent us at the AAOMS House of Delegates. This is where AAOMS governance begins and ends. The Western Society of Oral & Maxillofacial Surgeons (WSOMS) is critical in organizing our states and their delegates at the District VI summer caucus and the House of Delegates at the AAOMS Annual Meeting. Being a member of the WSOMS and therefore supporting their mission is your obligation to your specialty and your region. ***It is a well spent \$50/year! Thank you to all our WSOMS members!***

Please remember to register for the upcoming *AAOMS 108th Annual Meeting and Scientific to be held in Seattle this year*. This will prove to be a very rewarding meeting in a great location, offering fantastic opportunities for CE and networking. More details can be obtained through *AAOMS.org*. Please look at the video presentation outlining the Annual Meeting for a more in-depth view.

The District VI *Summer Caucus* is scheduled in *Las Vegas @ UNLV August 1st, 2026*. We hope to see all our delegates and alternates this year. All members are welcome - *to see how the sausage is made*. More details can be obtained through *wsoms.org*.

Finally, I hope to see you at the *Dental Implant Conference (DIC) in Chicago, December 3-5th, 2026*. Please note: next year (2027), the *DIC* will be in *Orlando, FL*, for a "warmer" experience. More details can be obtained through *AAOMS.org*.

Please remember, as your Trustee, I am your portal of communication to the AAOMS - your specialty's national association. Please utilize me! You can contact me via E-mail at dr.wfstephens@gmail.com or if urgent, call me at (626) 353-4575.

Finally, if you are pondering expanding your professional experience by entering leadership in your state or at a national level, *please give your state societies' Executive Director, state Board members,...or me, a call or e-mail*. We are always looking for new people with new perspectives to advance our specialty. ***This can be a very rewarding experience and prove to be the apex of your career!***

Again, thank you for your continuing confidence and support.

April 2026 AAOMS TRUSTEE REPORT

PRIORITY INFORMATION POINTS

- **Day on the Hill:** AAOMS held another successful *Day on the Hill* on March 17-18 in Washington, D.C. This was its **25th Anniversary** and it brought together approximately 100 OMSs and residents to advocate on student debt relief, dental insurance reform, and coverage for congenital craniofacial anomalies. Please put the **26th AAOMS Day on the Hill, March 16-17, 2027** on your schedule. *It will be a very rewarding and educational experience for you.*
- AAOMS's member-facing podcast series – **AAOMS On the Go** – publishes new episodes twice a month. The podcasts can be downloaded or streamed at [AAOMS.org/Podcasts](https://www.aaoms.org/Podcasts) or popular platforms such as Apple Podcasts, iHeart, and Spotify. Topics cover research, advocacy, affiliate organization news, JOMS, practice management, and more. Recent episodes include one in which **Dr. Clark** shares his priorities for AAOMS in the year ahead, and another in which **Dr. Morrison** recaps highlights of his presidential term. Encourage members to listen and submit topics and speakers for future podcasts. *Questions and suggestions can be submitted to: communications@aaoms.org.*
- **OMSs on State Dental Boards:** The **AAOMS Strategic Plan** calls for getting an **OMS on every state dental board**. From anesthesia to scope of practice, these boards make decisions that can significantly impact how we care for patients. If OMSs don't have a voice at the table, these decisions could be made without our expertise — or worse, to our detriment. We encourage you to get involved, whether it's serving on your state's dental board, joining an anesthesia or scope committee, or even just attending meetings and submitting comments. And if you do, please **let AAOMS know at advocacy@aaoms.org**. We have resources, talking points, and staff to support your efforts.
- AAOMS has launched the **Milestones Campaign**, a national public health initiative in partnership with the **AAO** and **AAPD** to educate parents on key oral health milestones at **ages 1, 7, and 15**. The campaign promotes timely visits to dental specialists and features nationwide TV and radio public service announcements. Learn more and watch the video at [MilestonesMet.org](https://www.MilestonesMet.org). Members are encouraged to become campaign ambassadors and download the toolkit at [AAOMS.org/Milestones](https://www.aaoms.org/Milestones).



- Follow the **AAOMS LinkedIn account** at [LinkedIn.com/company/AAOMS](https://www.linkedin.com/company/AAOMS) to learn about the latest news about the Association's initiatives, publications, and offerings. The account on the business-focused social media platform has more than **15,000 followers** who can read about the latest JOMS research, advocacy updates, podcasts, CE courses, and more.
- AAOMS will host its **second OMS Program Directors Conference on August 17, 2026**, at AAOMS headquarters in Rosemont, IL. The program will provide an opportunity for OMS program directors to discuss strategies for attracting qualified candidates, and the importance of mentorship in resident development and knowledge sharing for continuous improvement and excellence in OMS residency training.

MORINFORMATION

Anesthesia and Patient Safety

- AAOMS continues to collect data from third-party sources, including private insurance claims, to support advocacy for the OMS anesthesia team model.
- Members are encouraged to report adverse events through the **Dental Anesthesia Incident Reporting System (DAIRS):** [AAOMS.org/DAIRS](https://www.aaoms.org/DAIRS).

OBEAM at State and Regional Society Meetings

- **State and regional OMS societies can host** the Office-Based Emergency Airway Management (*OBEAM*) module.
- This **two-hour, hands-on session** covers airway management techniques including BVM, LMA insertion, and endotracheal intubation using Airtraq[®].
- **Up to 10 surgeons per session** can train using **AAOMS** Laerdal 3G simulators.
- **Registration is \$925** per OMS and includes **6 CE hours**. **AAOMS** handles registration and provides equipment, staff, and facilitators.
- For more information, contact **Mary Allaire-Schnitzer at 800-822-6637 ext. 4315 or mallaire@aaoms.org**.

Education/Events

CE Online:

- **Clinical CE Subscription:** Access more than 150 hours of on-demand clinical CE for \$449 per year. Includes 20+ new courses annually. Learn more at AAOMS.org/CESubscription.
- NEW! **Practice Management Subscription:** Access more than 30 hours of on-demand practice management CE for \$449 per year. Learn more at AAOMS.org/PMSubscription.
- Members have the option to bundle both the clinical and practice management subscriptions to **save \$100**.
- **2026 Annual Meeting:** Registration will open in mid-April for the **2026 AAOMS Annual Meeting, Sept. 28 – Oct. 3 in Seattle, WA**. Please look at the video presentation outlining the Annual Meeting for a more in-depth view @ AAOMS.org.
- **OBEAM 2026:** Hands-on emergency airway management training is offered Feb. 7 and March 7 at the Daniel M. Laskin Institute for OMS Education and Innovation at **AAOMS** headquarters in Rosemont, Ill. \$925 for AAOMS members/fellows. Visit AAOMS.org/OBEAM.
- **Upcoming Webinars:** *Topics include 2026 Anesthesia Coding Updates: What OMSs Need to Know*. See the schedule at AAOMS.org/webinars.

Topics include:

- *Conventional Le Fort vs. Distraction in Cleft Patients, The Art of Modifiers.*
- *Ensuring Accurate Coding with OMS Procedures, New Subperiosteal Implants.*
- *An Outcomes Assessment Review, A Review of Hard-Tissue Grafting in Oral and Maxillofacial Surgery.*
- *AI and the Modern OMS Practice: Practical Tools and Real-World Applications for Efficiency, Marketing, and Patient Engagement.*
- *Register at AAOMS.org/webinars.*
- **Webinar Bundles:** Two coding and billing bundles available for \$495 each – **save 35%**.
- **Meetings & Events:** Explore all upcoming AAOMS educational opportunities at AAOMS.org/Events.

- **Coding Certificate Program (CCP):** Get Introduction to Insurance Coding and Billing, OMS Coding Essentials: Medical and Dental Procedures and Diagnoses and OMS Billing Essentials: Navigating the Insurance and Reimbursement System in one discounted bundle. Visit AAOMS.org/CCP.
- **DEA/MATE Act Training:** Free to members through 2025. Fulfills training for DEA license renewal: DEA Requirement Info. Register at ceonline.aaoms.org/MATEAct.

Governance and Membership

- Interested in sharing your OMS story with your colleagues? Participate in **AAOMS's Member Spotlight series**. More information is available on AAOMS.org/MemberSpotlight.
- Support your professional staff and save – learn more about **allied staff membership** AAOMS.org/AlliedStaff or email membership@aaoms.org.
- The **AAOMS Mentor Program** is available to dental students, residents, and surgeons considering a practice change. Visit AAOMS.org/Mentorship for more information or complete an application to become a mentor.

Federal Advocacy

- **Fraud Alert:** Scammers posing as CMS officials are faxing fake Medicare audit requests. Verify and learn more at CMS.gov/Fraud.
- **Day on the Hill:** **AAOMS** held a successful **25th Anniversary Day on the Hill** on March 17-18 in Washington, D.C., bringing together approximately 100 OMSs and residents to advocate on student debt relief, dental insurance reform, and coverage for congenital craniofacial anomalies. Please put the **26th AAOMS Day on the Hill, March 16-17, 2027**, on your schedule.
- **Federal Legislation Update:** **AAOMS** advocates on drug shortages, provide student loan relief, and require health insurance coverage for patients with congenital craniofacial anomalies. Add your voice to these efforts at AAOMS.org/TakeAction.
- **Federal Regulatory Efforts:** **AAOMS** commented on several proposed federal regulatory initiatives, including tariffs on pharmaceutical products and medical devices and supplies, new student loan limits, and the elimination of the Grad PLUS Loan program, proposed changes to the Public Service Loan Forgiveness program, and an exemption for health-care workers from new H1B visa fees.
- **Recruitment Resource:** A video on oral surgery assisting is available to help OMSs attract potential assistants. View it at AAOMS.org/OralSurgeryAssistant.
- **Medicare Dental Claims:** Since July 1, diagnosis codes and modifier KX are required to show medical necessity. Use modifier GY for denial-only claims. For more information related to Medicare dental claims, refer to the [AAOMS Medicare FAQs](#) on AAOMS.org.
- **2026 Medicare Payment Updates:** CMS increased hospital outpatient and ASC rates by 2.6% and the facility fee for G0330 to \$3,387.27 in the hospital outpatient setting and \$1,480.50 in ASCs. The hospital inpatient-only list will be phased out over 3 years, making more services payable in outpatient and ASC settings. On the other hand, CMS implemented a 2.5% efficiency cut to work RVUs and reduced facility PE RVUs to half of non-facility PE RVUs.
- **AAOMS Insurance Industry Open Forum:** To be held **Tues. May 5th** between dental directors, consultants, and AAOMS leadership to address coverage for OMS procedures and mutual challenges.
- **No Surprises Act:** **AAOMS** is closely monitoring developments. Resources are at AAOMS.org/practice-resources/coding-reimbursement.

- **OMS Action Network:** Get involved in grassroots advocacy. Text **“AAOMS” to 50457** for alerts and **take action** on current campaigns at AAOMS.org/TakeAction.

State Advocacy

2026 Wins:

- **State Advocacy Efforts in Q1 2026:** Q1 AAOMS supported Washington State Society of Oral & Maxillofacial Surgeons (WSSOMS) – in coordination with Washington State Dental Association (WSDA) – to successfully oppose a legislative proposal – SB 6138 - that would have required a separate anesthesia provider for every dental patient receiving deep sedation. **A special thank you goes out to Dr. Lisa Egbert, as the WSDS President, for her advocacy efforts in this matter.**
- Meanwhile, legislation (HB 2906) is advancing in **Arizona** to mandate a seat on the dental board for an OMS. **AAOMS** also continues to work with state OMS societies and other organizations in matters of specialty recognition, CRNA scope, insurance, imaging accreditation, and more.
- **Tracking Tool:** Follow key state legislative issues on the [State Legislative Tracking Map](#).
- **State Advocacy Grant:** State societies facing OMS-specific challenges can apply for matching grants at AAOMS.org/SAG. All grants have been distributed for 2026, but special requests may be submitted for BOT consideration.

OMSPAC

- **OMSPAC:** New recognition levels in 2026: **Bronze** (\$300), **Silver** (\$500), **Gold** (\$1,000), **Platinum** (\$2,500), and **Capital Club** (\$5,000). A \$50 **Early Career level** will remain in effect for OMSs who are within two years post-residency. Visit OMSPAC.org.
- **Congressional Key Contact:** Oral and maxillofacial surgeons play a crucial role in shaping the future of their specialty. By becoming a key contact for members of Congress, members can directly influence healthcare policy, protect the profession, and ensure patients continue to receive the care they need. Relationships with lawmakers make a difference, and reporting these connections back to AAOMS strengthens the specialty’s collective advocacy. Join the **Capitol Contact Campaign to help build stronger ties on Capitol Hill and advance the issues that matter most.** To get involved, reach out to advocacy@aaoms.org.

Informational Campaign

- **MyOMS.org** continues to grow in popularity – with about 1.5 million page views each year and more than 100,000 visitors to the website using the Find a Surgeon function.
- **More than 350 videos and 24 infographics** are featured on the MyOMS.org website and are available for members to download and use on their practice sites. Visit AAOMS.org/InfoCampaign.
- AAOMS continues to get a lot of free advertising (*total broadcast audience of 1.4 billion*) from **seven TV Public Service Announcements** – with a cumulative equivalent ad dollar value of more than **\$36.1 million**; and radio PSAs have generated an equivalent ad dollar value of more than **\$5.4 million**.
- A public-facing podcast series – **OMS Voices: An AAOMS Podcast** – debuted in 2023. Members can share the podcasts on their personal websites. Visit MyOMS.org/Podcast.

AAOMS Advantage

- **AAOMS Advantage** is proud to announce a new Partner Program with **Advancing Residents of OMS (AROMS)**. AROMS is a comprehensive online educational platform created exclusively for oral and maxillofacial surgery. Learn more at AAOMSAdvantage.org.
- You can now submit written entries for the **2026 Share-the-Savings drawing**. Drawing from entries received by May 30, three AAOMS members will win their choice of free registration to either the 2026 or 2027 AAOMS Annual Meeting. Only entries received via the official Share-the-Savings entry form will be accepted for the contest. Visit the Share-the-Savings page on the AAOMSAdvantage.org for more details.
- **HP & ODP Business Solutions** have teamed up again to offer AAOMS members HP high-yield cartridges at a special price. Most **AAOMS** members are familiar with standard cartridges, but many high-yield cartridges are available at a discounted price through special corporate agreements. These HP high-yield cartridges print up to three times as many pages as a standard cartridge, and the slightly higher upfront cost is offset by substantial annual savings.

OMS Foundation Highlights

- **Mission Progress:** The Foundation continues advancing OMS through donor engagement, philanthropy, and strategic program growth.
- **Annual Meeting Campaign:** A special 2026 fundraising campaign will again offer **limited-edition Seattle AAOMS dress socks** to donors contributing \$50+ in hopes of surpassing the 2025 goal of \$20,000.
- **Monthly Giving Launch:** A new recurring donor program was launched at the annual meeting to align with changing donor preferences.
- **New Faculty Award:** Launching in 2026, the **LEAD Award** will support experienced OMS faculty pursuing advanced degrees or leadership roles.
- **Historic \$2M Gift:** **Dr. & Mrs. Daniel J. Daley, Jr.** made one of the Foundation's largest gifts, prompting creation of the **Daniel J. Daley Millionaire Society**.
- **New Fellowship Award:** Beginning in 2026, the **Ramon L. Ruiz Endowed Fellowship** will support fellows focused on pediatric craniomaxillofacial surgery.
- **2025 OMS Foundation Strategic Plan:** Five key goals:
 1. *Elevate awareness of the Foundation.*
 2. *Cultivate future leaders.*
 3. *Promote Foundation-funded research.*
 4. *Strengthen donor engagement.*
 5. *Modernize programs to meet evolving need.*

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AAOMS District VI Trustee

IMPLANT DENTISTRY MYTH - CONTINUED FROM PAGE 1

maxillofacial surgeons and their patients. Unlike traditional surgical procedures, such as extractions, implant dentistry establishes a long-term functional and restorative partnership between the surgeon, the restorative dentist, and the patient. Implant treatment frequently initiates an ongoing clinical relationship that may extend for a lifetime. While this type of long-term relationship is common in general dentistry, it is less typical in oral and maxillofacial surgery.

Patients often perceive implant treatment as a permanent solution and may assume the existence of an implicit lifetime guarantee. This assumption is clearly inaccurate. However, when complications arise, patients may become frustrated or angry. Misalignment between patient expectations and clinical realities can lead to dissatisfaction, professional disputes, and potential legal exposure. Implant success is influenced by multiple non-surgical patient and biomechanical factors including smoking, uncontrolled diabetes, bruxism, peri-implant disease, prosthetic overload, and inadequate maintenance care. Lack of patient compliance or restorative oversight can lead to early implant failure and complications.

As demonstrated in Figures 1-4, implant failure is often multifactorial; and identifying a single root cause whether surgical, restorative, material-related, or patient-specific may be difficult or even impossible.

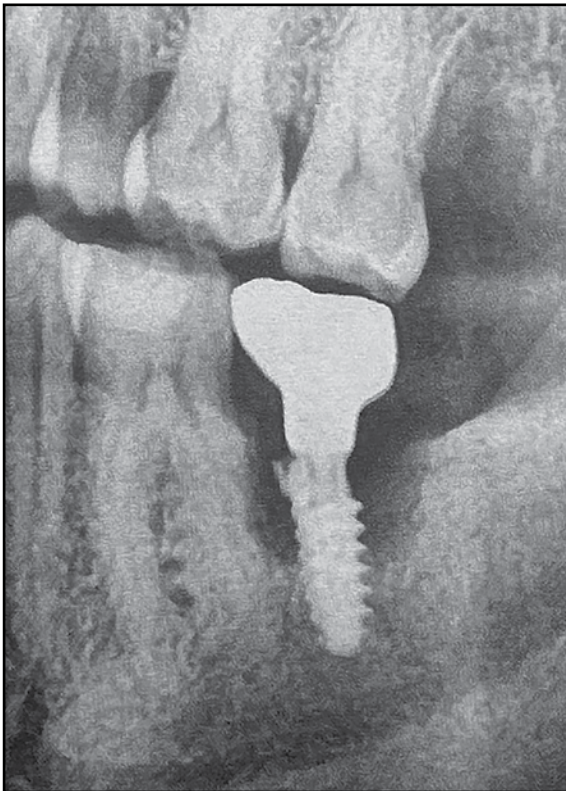


Figure 1. Failing left mandibular second molar implant.

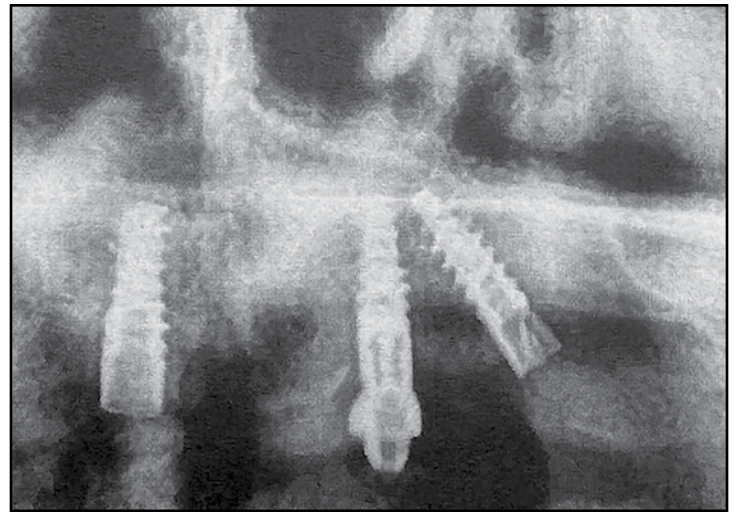


Figure 2. Multiple failing nonrestorable maxillary implants.

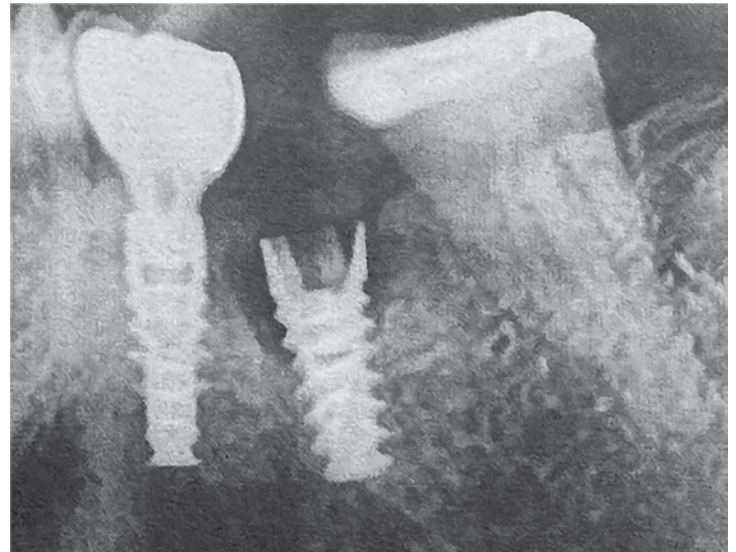


Figure 3. Fractured and failing left posterior mandibular implant.



Figure 4. Clinical photo of multiple failing mandibular implants with exposed threads and necrotic bone.

Legal Standards

These circumstances raise a couple of critical questions:

- What are the legal and professional responsibilities of the oral and maxillofacial surgeon and the restorative dentist?
- What steps can be taken to prevent patient confusion and reduce the risk of legal conflict?

Dentistry operates under a different legal and professional standard than retail products. *Dentists and oral and maxillofacial surgeons are not legally required to guarantee results*, but they are held to the *standard of care*. The provider must perform treatment at the level expected of a reasonably competent practitioner, but they are not required to guarantee a specific outcome.

Medicine and dentistry are considered *professional services*, not product sales. If a treatment result is unsuccessful but the provider followed accepted clinical standards, that generally does not constitute malpractice. Dental treatment outcomes are influenced by numerous variables including patient compliance, bone quality, healing response, systemic health, and oral hygiene. Because of these factors, courts do not treat dental treatment like a consumer product. An oral and maxillofacial surgeon is responsible for proper diagnosis, treatment planning, informed consent, surgical technique, and adhering to accepted professional standards. However, they are not legally required to guarantee long-term success.

Dentistry is a professional service governed by *negligence standards* rather than product warranty law. An oral and maxillofacial surgeon does not guarantee cure, success, or a specific outcome. Instead, the legal obligation is to act as a reasonably competent provider under similar circumstances. While medical devices - including dental implants - are governed by product liability and warranty law, the responsibility for a defective device generally falls on the manufacturer rather than the surgeon.

Many general dentists offer a 1-5 year “courtesy warranty,” which may include free remakes within this limited period. These policies are voluntary and not legally mandated. The commonly cited “5-year rule” is a myth and is neither a statutory requirement in California nor under federal law. The concept likely originates from the typical lifespan of dental restorations and the dental insurance payment timeline. But there is no automatic 5-year legal warranty requirement.

An oral and maxillofacial surgeon may be held responsible when negligence is present, such as improper diagnosis,

surgical error, failure to obtain proper patient consent, negligent technique, or treatment performed outside the provider’s scope of training. This responsibility is not linked to a specific time limit. The Dental Board does not require the dentist to guarantee work. However, if a provider advertises or promises a guarantee, that statement may become legally enforceable. Promising outcomes, such as “my implants last a lifetime” whether written or verbal, can create potential liability. Misrepresentation may also trigger consumer protection laws. Therefore, providers should carefully avoid the word “guarantee” or making unintentional promises that could be interpreted as promises of permanent success.

A dental study conducted in New Zealand that interviewed both dentists and patients suggested that dentists commonly consider a warranty period of approximately 18 months for dental restorations. The study found that dentists are generally reluctant to provide formal warranties for dental treatments, often citing the many variables that influence treatment outcomes. Patients tend to hold more optimistic expectations regarding the longevity of dental treatments, with older patients exhibiting the highest expectations.²

Warranties in Consumer Law

Most consumer purchases are covered by some form of warranty, even when a store does not explicitly advertise one. A warranty is a legal guarantee that protects consumers when purchasing goods. The two primary types of warranties are *express warranties* and *implied warranties*.

An *express warranty* is a clearly stated promise - either verbally or written - that a product will meet a certain level of quality and reliability. If the product fails in this regard, the manufacturer is required to repair or replace the product at no additional cost. In contrast, an *implied warranty* automatically applies to most consumer goods and provides a basic level of consumer protection even if no explicit guarantee is stated. Many implant manufacturers offer lifetime replacement of the dental implant or components but not the associated clinical costs of surgery or prosthetic reconstruction.

In the United States, the *Magnuson-Moss Warranty Act* (1975) governs written warranties on consumer products. This federal law requires that written warranties clearly disclose their terms, including how long coverage lasts and whether the warranty is classified as full or limited. Businesses must make these terms available to consumers before a purchase and must avoid concealing limitations in fine print or unclear disclaimers.

Warranty Practices in Dentistry

A verbal express warranty may be created unintentionally in healthcare settings. For example, if a dentist tells a patient, “I guarantee that this implant will last your entire life,” this statement could be interpreted as a warranty. Similarly, showing models or images of ideal treatment outcomes may unintentionally shape patient expectations. However, proving the existence of a verbal warranty can be difficult because there is often no record of the conversation.³

The oral and maxillofacial surgeon and restorative dentist must be cautious to avoid language that implies guaranteed outcomes. Advertising phrases such as “lifetime guarantee” or “permanent solution” may unintentionally create contractual obligations that extend beyond the standard of care framework governing health care services. Steps can be taken to reduce patient misinformation and prevent legal disputes. Patients and dentists may often leave the same conversation with very different expectations. While dentists and oral and maxillofacial surgeons may prefer not to outline warranty terms in informed consent documents, relying solely on verbal discussions can increase the risk of confusion and patient dissatisfaction. A simple and effective approach is to include clear language in the informed consent documentation stating that implant procedures are medical treatments with inherent risks of failure and not a guaranteed permanent product.⁴

Warranties are not legally required but some clinicians view limited warranty policies as a tool to strengthen patient trust. However, overly broad guarantees may create unrealistic expectations and expose providers to unnecessary legal risk. If warranty terms are offered, they should be clearly documented. This documentation should include the duration of coverage (e.g., 1-year, 3-year, 5-year) and specify what components are covered (e.g., implant fixture, crown). The conditions that may void the warranty should also be clearly stated. These may include failure to wear a night guard, failure to attend hygiene appointments, failure to attend follow-up visits, poor oral hygiene, and/or tobacco use.

Legal Analysis

The central issue in evaluating product warranties in healthcare is the legal distinction between providers of services and suppliers of products. Under California law, physicians, dentists, and hospitals are consistently classified as *providers of professional services* rather than sellers of goods. Courts have repeatedly emphasized that the essence of the provider-patient relationship is the delivery of medical care, not the sale of a product. In *Hector v. Cedars-Sinai Medical Center* (1986), the court held that a hospital was not subject to strict

liability for a defective pacemaker because the transaction was fundamentally one for services. This principle has been reaffirmed in subsequent cases, including *Pierson v. Sharp Memorial Hospital* (1989), *La Jolla Village Homeowners’ Assn. v. Superior Court* (1989), and more recently in *Bigler-Engler v. Breg, Inc.* (2017).

Healthcare providers are evaluated under a negligence standard, meaning liability arises only if the provider fails to meet the applicable standard of care. This stands in contrast to manufacturers and distributors of medical devices, who may be held strictly liable for defective products. In *Williams v. J-M Manufacturing Co., Inc.* (2024), the court reaffirmed that strict liability applies to those who manufacture and distribute products, reflecting the policy that such entities are best positioned to ensure product safety and absorb the costs of defects.

The distinction also extends to warranty law. Because healthcare transactions are legally characterized as services rather than sales of goods, traditional warranty doctrines do not apply to physicians and dentists. This reinforces the principle that medical treatment involves professional judgment and uncertainty, rather than guaranteed product performance.

However, an important exception arises when providers expressly guarantee a specific outcome. In such cases, courts may recognize a breach of contract claim - separate from malpractice. California case law makes clear that only a clear and unequivocal promise of a specific result can give rise to contractual liability. In *McKinney v. Noah* (1981) and *Pulvers v. Kaiser Foundation Health Plan, Inc.* (1979), courts held that general assurances of good results or high-quality care are insufficient to form a contract. By contrast, in *Christ v. Lipsitz* (1979) and *Debenbrok v. Kaiser Foundation Health Plan, Inc.* (1978), courts recognized that liability may arise where a physician explicitly promises a particular outcome and the patient relies on that promise.

This distinction carries significant practical consequences. While medical malpractice claims are governed by relatively short statutes of limitation, contract claims may extend liability exposure for up to four years. As discussed in *Dolan v. Borelli* (1993) and reflected in California Code of Civil Procedure 337 and 340.5, the characterization of a claim as contract versus negligence can materially alter both the time-frame and scope of liability.

Risk-management strategies

- Clear written informed consent

- Avoiding the word *guarantee* in consultations or advertising
- Documenting discussions about longevity expectations
- Written warranty policies if offered (e.g., 1-year surgical repair)
- Maintenance recommendations documented
- Coordination between surgeon and restorative dentist

Conclusion

California law draws a clear boundary that health care providers are liable for how they perform their services, not for guaranteeing outcomes or product performance. The case law consistently reinforces that medicine is not a product transaction. Efforts to introduce warranties into medical practice risk transforming professional obligations into contractual guarantees, thereby exposing providers to expanded and unintended liability frameworks traditionally reserved for commercial sellers.

The oral and maxillofacial surgeon is not legally required to provide lifetime free retreatment, refunds, or replacement of implants at no cost. However, the limitations and risks associated with implant therapy must be clearly communicated. Dental implants are not consumer products and cannot be guaranteed in the same manner as retail goods. The professional responsibility of the oral and maxillofacial surgeon is to provide treatment consistent with the standard of care while clearly communicating the risks and limitations of treatment.

Transparent consent, thorough documentation, and patient education remain the most effective tools for preventing misunderstanding and legal conflict. Implant consent forms should clearly state that implants can fail, that smoking and systemic health factors increase risk, and that no guarantees of longevity are provided. Any warranty offered may be limited to manufacturer replacement of defective components rather than coverage of clinical treatment costs.

An unfavorable outcome does not necessarily indicate negligence. Implant failure can occur even when treatment is performed appropriately and within accepted standards of care. Proper documentation is the key to reducing the surgeon's legal exposure. Ultimately, the professional obligation of the oral and maxillofacial surgeon is to meet the standard of care, not to guarantee lifetime success.

Acknowledgement

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References

Zanan M. Adopting a new standard: How dental warranties can shape the future of oral health care. *Dental Economics*. July 27, 2024.

Liu B, Roessler D, Morse Z. Attitudes regarding a warranty and the expected longevity of dental treatment amongst New Zealand dentists, dental students, and patients: a mixed methods survey. *BMC Oral Health*. 2024 Jan 13;24(1):74.

Hilst H. What are express and implied warranties? *FindLaw*. March 27, 2024. <https://findlaw.com>

Moriarty Injury Lawyer. Dental Implants gone wrong: When you should sue. July 5, 2023. <https://www.moriartyinjurylawyer.com>



OMS PAPERS



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Winston Doud, BSc BioEng

Portable Oxygen Concentrators (Poc) And Their Potential Applications In Contemporary Outpatient Oral And Maxillofacial Surgery Practice

Oxygen supplementation is a clinical necessity for medical and veterinary anesthesiology including applications in sedation dental care and oral and maxillofacial surgery. Supporting patient oxygenation is a vital and standardized practice from the moment before procedural sedation is initiated through the final moments of the recovery, and its use ensures optimal patient systemic stability.

Oxygen is typically continuously supplied as a safety buffer to prevent hypoxemia (the reduction of blood oxygen levels due to sedative depression of autonomous respiratory mechanics). Typically, a nasal cannula or hood system - used commonly in OMS care - increases the inspired oxygen content from ambient air's 20.9% by approximately 24-50% when using 100% oxygen at flow rates of 2-6 L/min.

Historically, compressed gas cylinders have been used in medicine as the standard delivery system for supplemental oxygen. In the past three decades, however, oxygen concentrators have accumulated a compelling track record in outpatient settings, veterinary medicine, remote destinations, and military combat and mass casualty care as alternatives to tank systems because of their efficiency, safety, resilience, and cost effectiveness. The recent pandemic also exposed

potential shortages of limited global stockpiles of medical grade oxygen in a crisis and natural disaster settings.

What is an Oxygen Concentrator?

An oxygen concentrator is an electronically powered medical device providing on-site generation of oxygen using molecular sieve technology. Ambient air is compressed and directed through a synthetic zeolite cylinder (composed of silica and aluminum), trapping nitrogen within the cylinder's framework while oxygen passes freely into a holding tank. The oxygen concentrator switches between two separate zeolite cylinders to provide a continuous flow of 90-96% pure oxygen.

Unlike traditional gas cylinders, oxygen concentrators do not have a finite reserve. They produce oxygen on-demand for as long as an electrical connection is available. Oxygen concentrators come in two variants: *stationary* units which are capable of high oxygen flow rates and *portable* oxygen concentrators which offer smaller size units suited for more mobile applications.

Stationary units require a large area for operation and are thus typically reserved for hospital and surgery center applications. For integration into small volume oral and maxillofacial surgery workflow, the larger "portable" offers the most seamless implementation, while stationary units are more well-suited for high volume environments.

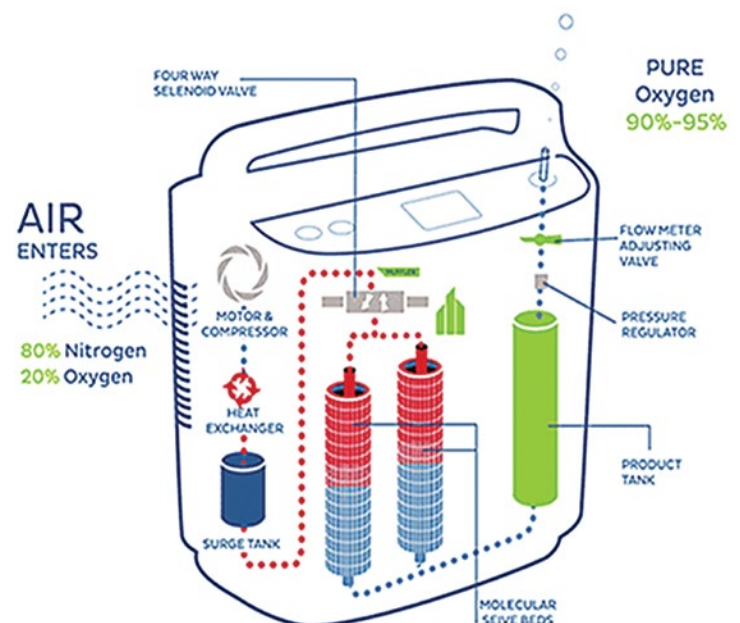


Figure 1. Schematic displaying how an oxygen concentrator works.

Advantages of an Oxygen Concentrator

When compared to compressed oxygen cylinders, the most quantifiable advantage oxygen concentrators possess is economic. A standalone oxygen cylinder carries recurrent lease, delivery, refill, and maintenance fees over the course of its use. In contrast, the initial capital cost of an oxygen concentrator is typically recovered within one to two years and has a functional lifespan of five to seven years.

A 2021 study found that transitioning from a cylinder-only system to a concentrator-dominant hybrid model reduced total costs to roughly 55% of the original expenses over a five-year period.



Figure 2. Hospital grade oxygen concentrator in a clinical setting.

Beyond economics, oxygen concentrators provide significant logistical advantages. Because they generate oxygen continuously, they reduce the risk of mid-procedure oxygen depletion. Additionally, they remove the burden of cylinder storage. High pressure gas cylinders require dedicated storage space, routine safety inspection, and careful transport protocols. Gas cylinders are subject to high compression levels (2,000 - 2,200 psi), requiring secure upright storage in a temperature-controlled environment. Failure to meet these requirements poses extreme fire and safety risks.

Oxygen tanks are inherently subject to explosive hazards when exposed to high temperatures or, in the case of a valve being sheared off, turning a 10-lb. E-cylinder into an extremely dangerous projectile reaching upwards of 50 mph instantaneously. An oxygen concentrator requires neither the

operational demands nor the safety risks associated with oxygen cylinders.

From a clinical perspective, oxygen concentrators are well suited to the flow demands of routine oral and maxillofacial surgery. A review of airway management equipment for outpatient dental and oral and maxillofacial surgery settings established that 4-6 L/min via nasal cannula delivering approximately 36-44% inspired oxygen is adequate supplemental oxygenation for patients continuously breathing under IV sedation. This range falls comfortably within the rated output of most portable oxygen concentrators which deliver 90-96% pure oxygen at 3-5 L/min.

Developing countries and military field hospitals have standardized the use of oxygen concentrators due to their logistics and supply constraints. Their global popularity and respective adaptation have been accelerated notably due to the COVID-19 pandemic which exposed the logistical supply chain fragility of cylinder-dependent systems.

From a clinical standpoint, oxygen concentrators have proved to be a reliable source of high concentration oxygen. A six-year review at a Nepal hospital encompassing 378 cases across neurosurgery, urology, and general surgery operations found that oxygen concentrators safely supported general anesthesia in adults and children for procedures lasting 45 minutes to 12 hours. A separate U.S. Army Special Operations study validated ultraportable oxygen concentrators as a capable oxygen



Figure 3. Oxygen concentrator use in field operations by the U.S. military.

source for delivering high FiO_2 during mechanical ventilation in austere locations at both low- and high-altitude flight and remote location bases.

For oral and maxillofacial surgery practices operating primarily within the low to moderate oxygen flow ranges, these medical setting experiences demonstrate the capability of providing at least a four-fold increased oxygen concentration in the clinical anesthesiology settings.



Figure 4. Oxygen concentrator delivery onboard an emergency response helicopter.

Limitations and Legal Requirements

The most clinically significant limitation of oxygen concentrators is its relatively low flow rate. Most units can deliver 90-96% pure oxygen at 3-5 L/min, and purity declines as flow rate increases beyond the rated capacity. Emergency oxygen protocols for oral and maxillofacial surgery require high oxygen concentration at 10-15 L/min via a non-rebreather mask - a requirement most current oxygen concentrators cannot achieve.

Electrical supply dependence is the second limitation. Power failure renders an oxygen concentrator unusable. Compressed oxygen cylinder delivery systems typically require no electricity and can deliver high oxygen concentrations at 10-15 L/min; that is, until they run out of gas. Additional stored gas cylinders are always required beyond what is anticipated in case of need.

Although oxygen concentrators cannot provide complete replacement of oxygen cylinders, a hybrid approach is the optimal model. An oxygen concentrator serves as the primary oxygen source for light sedation cases, post-anesthesia

recovery, or care of non-critical respiratory conditions, while a compressed cylinder remains onsite for deep level sedation or general anesthesia as well as medical emergency management.

Oxygen concentrators are clinically validated and classified by the FDA as a medical device cleared for oxygen delivery in healthcare settings. They offer good safety and financial margins when used appropriately. However, their use must be supplemented with an oxygen cylinder delivery system for emergency or high flow rate delivery cases.

Summary

Oxygen concentrators do not have the ability to currently fully replace the traditional oxygen gas cylinder systems for delivery of supplemental oxygen to oral and maxillofacial surgery patients. They are, however, clinically validated, economically advantageous, and operationally more practical for the routine demands of supplemental and procedural oxygenation in certain settings. Implemented within a hybrid gas delivery setup, oxygen concentrators can serve as a meaningful clinical care upgrade to modern oral and maxillofacial surgery and dental anesthesiology practices.

References

1. Singh V, Gupta P, Khatana S, et al. Supplemental oxygen therapy: Important considerations in oral and maxillofacial surgery. *Natl J Maxillofac Surg.* 2011;2(1):10-14.
2. Jain R, Sharma C. Oxygen supply in hospitals: requisites in the current pandemic. *Anesth Essays Res.* 2022;15(3):253-256.
3. McAllister S, Thorn L, Boladuadua S, et al. Cost analysis and critical success factors of the use of oxygen concentrators versus cylinders in sub-divisional hospitals in Fiji. *BMC Health Serv Res.* 2021;21:636.
4. Becker DE, Rosenberg MB, Phero JC. Essentials of airway management, oxygenation, and ventilation: Part 1: Basic equipment and devices. *Anesth Prog.* 2014;61(2):78-83.
5. Shrestha BM, Singh BB, Gautam MP, et al. The oxygen concentrator is a suitable alternative to oxygen cylinders in Nepal. *Can J Anaesth.* 2002;49(1):8-12.
6. Rybak M, Huffman LC, Nahouraii R, et al. Ultraportable oxygen concentrator use in U.S. Army Special Operations Forward Area Surgery: A proof of concept in multiple environments. *Military Medicine.* 2017;182(1-2):e1649-e1652.





by Solomon Poyourow, DDS, MD, MPH

Contemporary Antibiotic Management Of Dentofacial Infections: Evidence-Based Protocols

The Changing Landscape of Odontogenic Infection

Dentofacial infections - encompassing odontogenic abscesses, fascial space infections, pericoronitis, and post-surgical infectious complications - constitute some of the most frequent and potentially lethal pathology managed by oral and maxillofacial surgeons (OMSs). Despite their apparent familiarity, these infections carry real mortality risk when underestimated. Ludwig's angina, descending necrotizing mediastinitis, cavernous sinus thrombosis, and septic shock remain life-threatening sequelae of odontogenic infections that progress without timely surgical and antimicrobial intervention.

The bacteriology of odontogenic infections is polymicrobial, dominated by a mixture of aerobic streptococci and obligate anaerobes, including *Fusobacterium*, *Prevotella*, and *Peptostreptococcus* species. This predictable microbial ecology should anchor antibiotic selection, yet prescribing practices vary substantially across practitioners, regions, and institutions. Compounding this variability is the emergence of beta-lactamase-producing strains, macrolide-resistant streptococci, and metronidazole-resistant *Prevotella* species, which increasingly undermine historically reliable regimens.

The modern OMS must approach antibiotic therapy with the dual imperatives of *optimizing individual patient outcomes* and *preserving the efficacy of the antimicrobial armamentarium* for future patients. Antimicrobial stewardship - selecting the right drug, at the right dose, for the right duration - is not bureaucratic oversight but a defining characteristic of clinical excellence.

Classification of Infection Severity

A structured severity classification underpins rational antibiotic selection and guides the decision for outpatient versus hospital-level care. While no universally adopted formal scoring system exists specific to odontogenic infections, a three-tier severity framework is clinically useful and aligns with published guidelines from the American Association of Oral and Maxillofacial Surgeons (AAOMS).

Parameter	Minor / Grade I	Moderate / Grade II	Severe / Grade III
Location	Confined to alveolar process, periapical, or pericoronal	Buccal or vestibular space extension	Deep fascial space involvement (masticator, parapharyngeal, submandibular, parotid, lateral pharyngeal)
Systemic signs	None	Low-grade fever ($\leq 38.5^{\circ}\text{C}$), mild malaise	Fever $>38.5^{\circ}\text{C}$, tachycardia, leukocytosis, altered mental status
Trismus	Absent	Mild (>30 mm opening)	Significant (<30 mm) or absent
Airway	Not at risk	Not at risk	Potentially compromised
Dysphagia/Dysphonia	Absent	Absent or mild	Present — urgent surgical concern
Surgical management	Outpatient I&D or extraction	Outpatient or same-day surgery center	Operating room; possible ICU admission

Antibiotic Selection by Infection Severity

Minor Infections

The cornerstone of minor dentofacial infection management is source control. Isolated periapical abscesses confined to the alveolar process in immunocompetent patients without systemic signs frequently resolve with extraction or endodontic treatment alone, without adjunctive antibiotics. The 2019 American Dental Association clinical practice guideline - and subsequent Cochrane review evidence - reinforce this position: systemic antibiotics add minimal benefit when definitive surgical drainage is achievable and the host is immunocompetent.

When antibiotic therapy is indicated for minor infections (e.g., diffuse cellulitis without a drainable collection, high-risk host, or inability to achieve same-day source control), the following represent first-line and alternative regimens:

Agent	Dose / Route	Duration	Clinical Notes
Amoxicillin (first-line)	500 mg PO TID or 875 mg PO BID	3–5 days	Excellent oral bioavailability; narrow spectrum preferred for uncomplicated infections
Penicillin VK (alternative)	500 mg PO QID	3–5 days	Lower compliance than amoxicillin BID/TID; equivalent efficacy
Clindamycin (non-anaphylactic PCN allergy)	300–450 mg PO TID	3–5 days	C. diff risk; increasing streptococcal resistance — not a reliable reflexive first choice
Azithromycin (PCN allergy — caution)	500 mg day 1, then 250 mg days 2–5	5 days	Resistance rates >30 – 40% for oral streptococci in North America; use only with culture support
Metronidazole (adjunct only)	500 mg PO TID	3–5 days	Anaerobic coverage only; never monotherapy for odontogenic infections; always combine with streptococcal-active agent

⚠️ Macrolide Resistance Alert

Azithromycin and clarithromycin carry clinical resistance rates to oral streptococci exceeding 30–40% in many regions of North America. These agents cannot be considered reliable empiric therapy for odontogenic infections unless culture sensitivity data support their use. Reserve macrolides for documented susceptibility or true anaphylactic penicillin allergy with no safer alternatives.

Moderate Infections

Moderate infections - those extending into secondary fascial spaces (e.g., buccal, vestibular, canine) or associated with systemic signs without airway compromise - warrant more aggressive empiric coverage while still often being manageable in the outpatient or ambulatory surgical setting. The critical clinical decision is whether IV therapy is required to achieve adequate tissue levels, particularly in poorly perfused soft tissue planes.

Amoxicillin-clavulanate (875/125 mg PO BID) provides the most pragmatic step up from amoxicillin alone for moderate infections, expanding anaerobic and beta-lactamase-producing organism coverage in a single agent. For patients requiring IV therapy, ampicillin-sulbactam (3 g IV q6h) or piperacillin-tazobactam (4.5 g IV q6h) provide reliable empiric coverage. Metronidazole (500 mg IV/PO q8h) may be added to a beta-lactam backbone when there is significant concern for polymicrobial anaerobic burden, particularly in poorly controlled diabetic patients or those with delayed presentation.

Setting	Preferred Regimen	PCN-Allergy Alternative	Notes
Outpatient	Amoxicillin-clavulanate 875/125 mg PO BID	Clindamycin 450 mg PO TID; high-risk host: moxifloxacin 400 mg PO daily	GI intolerance common; advise taking with food
Inpatient / IV	Ampicillin-sulbactam 3g IV q6h	Clindamycin 600 mg IV q8h ± metronidazole 500 mg IV q8h	Transition to oral when tolerating PO with clinical improvement
PCN-allergic (anaphylactic)	Clindamycin 600 mg IV q8h	Moxifloxacin 400 mg IV/PO daily (non-pregnant adults only)	Assess QTc, hepatic disease, and drug interactions before use
Anaerobic-heavy polymicrobial	Amoxicillin-clavulanate ± metronidazole if added coverage needed	Clindamycin ± metronidazole	Metronidazole monotherapy always inadequate for odontogenic infections

Severe and Life-Threatening Infections

Airway management takes absolute precedence. Severe dentofacial infections - Ludwig's angina, descending necrotizing mediastinitis, parapharyngeal and retropharyngeal space infections, or any infection with airway compromise or sepsis physiology - represent surgical emergencies. Antibiotic selection should never delay operative intervention. Fiberoptic nasotracheal intubation in the awake patient is the preferred approach when trismus or supraglottic edema is present; cricothyrotomy setup should be at the bedside for every Ludwig's angina case.

Empiric antibiotic therapy for severe infections must provide activity against aerobic gram-positive cocci (including viridans streptococci), aerobic gram-negative rods (in hospitalized or diabetic patients), and obligate anaerobes. Emerging literature supports attention to MRSA in select populations (IV drug users, healthcare workers, prior MRSA colonization).

Clinical Scenario	First-Line Regimen	PCN-Allergy / Alternative	Add-On Considerations
Ludwig's angina / Deep space	Ampicillin-sulbactam 3g IV q6h + metronidazole 500 mg IV q8h	Clindamycin 900 mg IV q8h + metronidazole 500 mg IV q8h	Add vancomycin if MRSA risk factors present
Descending necrotizing mediastinitis	Pip/tazo 4.5g IV q6h + metronidazole 500 mg q8h	Vancomycin (weight-based) + metronidazole + aztreonam	Cardiothoracic surgery consult; consider antifungal in diabetics/immunocompromised
Sepsis of odontogenic origin	Pip/tazo 4.5g IV q6h ± vancomycin	Vancomycin + aztreonam + metronidazole	Blood cultures x2 before first dose; ID consultation; sepsis bundle
Cavernous sinus thrombosis	Vancomycin + pip/tazo + metronidazole ± anticoagulation	Vancomycin + aztreonam + metronidazole	Neurosurgery + ID required; anticipate 4–6 weeks IV therapy
Necrotizing fasciitis (post-op)	Vancomycin + pip/tazo + metronidazole	Vancomycin + meropenem in polymicrobial NF	Serial operative debridement essential; HBO may be considered

De-Escalation and Culture-Directed Therapy

Broad-spectrum empiric therapy is a bridge, not a destination. All purulent collections should be cultured aerobically and anaerobically at the time of I&D. Antibiotic therapy should be narrowed within 48–72 hours once culture and sensitivity data are available. Failing to de-escalate perpetuates resistance selection pressure and exposes patients to avoidable adverse drug effects. Infectious disease consultation is strongly recommended for any patient requiring ICU admission or prolonged IV antibiotic therapy.

Penicillin Allergy: The Most Consequential Diagnostic Error in Antibiotic Prescribing

Approximately 10–15% of the general population reports a penicillin allergy - yet rigorous evaluation reveals that 80–95% of these individuals can safely tolerate penicillin. This discordance represents one of the most consequential diagnostic errors in outpatient medicine. Patients labeled as penicillin-allergic receive broader-spectrum, more toxic, and frequently less effective alternatives that increase treatment failure rates, *C. difficile* infection rates, surgical site infection rates, and antimicrobial resistance.

For the oral and maxillofacial surgeon, the penicillin allergy label directly undermines access to the most efficacious, narrow-spectrum, and well-tolerated antibiotic class for odontogenic infections. Systematic allergy delabeling is among the highest-yield antimicrobial stewardship interventions available in ambulatory surgical practice.

Risk Stratification of Reported Penicillin Allergy

Not all reported penicillin reactions carry equivalent immunologic risk. A structured history is the critical first step:

Risk Category	Reaction History	Recommended Approach
Low Risk	Maculopapular rash only, remote history (>10 years), unknown or family history, GI symptoms only	Direct oral amoxicillin graded challenge; if negative, full penicillin use permitted
Moderate Risk	Urticaria or angioedema without anaphylaxis, pruritus, remote timing	Penicillin skin testing → oral challenge if negative; allergy referral preferred
High Risk — IgE-Mediated	Anaphylaxis, urticaria + hypotension, bronchospasm, angioedema within 1 hour of penicillin exposure	Allergy referral for formal skin testing; avoid penicillin class pending evaluation
Absolute Contraindication	Stevens-Johnson Syndrome (SJS), TEN, DRESS, hemolytic anemia	Penicillin and all beta-lactams permanently contraindicated; no testing; document explicitly

Penicillin Skin Testing: Protocol and Clinical Yield

Penicillin skin testing (PST) is the reference standard for evaluation of IgE-mediated penicillin allergy. The FDA-approved major determinant reagent, benzylpenicilloyl polylysine (Pre-Pen; AllerQuest), combined with penicillin G as the minor determinant, identifies most patients with clinically significant IgE-mediated sensitization. In published series, fewer than 1–3% of patients with a historical penicillin allergy label who undergo formal skin testing are confirmed positive.

A staged PST protocol proceeds as follows:

- Intradermal testing with benzylpenicilloyl polylysine (Pre-Pen, 6×10^{-5} molar) as major determinant.
- Intradermal testing with penicillin G (10,000 units/mL) as minor determinant, or commercially available minor determinant mix where available.
- Positive control (histamine) and negative control (normal saline) placed simultaneously.
- Reading at 15–20 minutes: wheal ≥ 3 mm greater than negative control constitutes a positive result.
- Negative skin test → supervised oral amoxicillin challenge (250–500 mg single dose, 30–60-minute observation).
- Confirmed negative challenge → patient formally delabeled; prescribe full beta-lactam course without restriction.

Clinical Impact of Allergy Delabeling

Published studies from academic medical centers demonstrate that systematic penicillin allergy evaluation programs reduce MRSA infections by up to 30%, C. difficile infections by 20–40%, and hospital length of stay by a measurable margin. Oral and maxillofacial surgery practices that routinely risk-stratify and refer low-to-moderate risk patients for allergy evaluation contribute demonstrable antimicrobial stewardship value at the community level.

Alternative Regimens for Confirmed Penicillin Allergy

For patients with confirmed IgE-mediated penicillin allergy, cross-reactivity with cephalosporins is now understood to be approximately 1–2%, not the historically cited 10% - a figure based on flawed early studies and shared penicillinase contamination. The true allergenic determinant is the shared R1 side chain, not the shared beta-lactam ring. Cephalosporins with dissimilar side chains from penicillin carry very low cross-reactivity risk and may be used with caution in non-anaphylactic penicillin allergy after informed consent.

- Clindamycin 300–450 mg PO TID (outpatient) or 600–900 mg IV q8h (inpatient): reliable anaerobic and streptococcal coverage in susceptible strains; primary concern is *C. difficile*-associated disease (CDAD).
- Moxifloxacin 400 mg PO/IV once daily: excellent oral bioavailability (> 90%), broad-spectrum including anaerobes; contraindicated in pregnancy, age < 18 years, QTc prolongation, or concurrent QT-prolonging drugs.
- Metronidazole 500 mg PO/IV TID (adjunct only): reliable anaerobic coverage; no streptococcal activity; always combine with a streptococcal-active agent.
- Vancomycin 15–20 mg/kg IV q8–12h (hospitalized anaphylactic patients): gram-positive and MRSA coverage; AUC-guided monitoring required; nephrotoxicity risk.
- Daptomycin 4–6 mg/kg IV once daily: MRSA-active alternative to vancomycin in non-pulmonary infections; CPK monitoring required.

Adverse Drug Effects: High-Stakes Complications in Antibiotic Prescribing

An antibiotic that causes a serious adverse effect is not therapeutically neutral - it shifts the risk-benefit equation of treatment. OMSs must be conversant not only with the efficacy profiles of the antibiotics they prescribe but with their toxicity profiles, drug interactions, and patient-level risk modifiers.

Clostridioides difficile Colitis

C. difficile infection (CDI) is the most common healthcare-associated infection in the United States and is directly attributable to antibiotic disruption of intestinal flora. Clindamycin carries the highest per-prescription CDI risk of any commonly prescribed dental antibiotic and should not be reflexively used as the default penicillin-allergy alternative without clinical justification.

Risk factors amplifying CDI risk include: age > 65 years, prior CDI episode, proton pump inhibitor use, hospitalization within 90 days, renal insufficiency, and immunosuppression. Any patient presenting with diarrhea (≥ 3 loose stools/day), abdominal cramping, or leukocytosis during or within 90 days after antibiotic therapy should be evaluated for CDI with nucleic acid amplification testing (NAAT) of stool.

QT Prolongation and Cardiac Arrhythmia

Fluoroquinolones (particularly moxifloxacin) and macrolides (azithromycin) are associated with dose-dependent QTc prolongation predisposing susceptible patients to torsades de pointes and ventricular fibrillation. The FDA has issued black box warnings for fluoroquinolones and multiple safety communications regarding azithromycin and cardiac events. Before prescribing either drug class, the clinician should assess:

- Baseline QTc interval (obtain ECG if multiple risk factors are present).
- Concomitant QT-prolonging medications: antipsychotics, antifungals, antiemetics (ondansetron), antiarrhythmics, many SSRIs.
- Electrolyte abnormalities: hypokalemia and hypomagnesemia are particularly dangerous, especially in diabetics during acute illness or patients on loop diuretics.
- Structural cardiac disease, congenital long QT syndrome, or prior unexplained syncope.
- Female sex: an independent risk factor for drug-induced torsades de pointes.

⚠️ Moxifloxacin in Oral Surgery: A Measured Caution

Moxifloxacin offers genuine advantages—once-daily oral dosing, excellent bioavailability, and reliable anaerobic coverage—making it an attractive penicillin-allergy alternative for moderate-to-severe infections. However, its use must be restricted to patients without baseline QTc ≥ 450 ms (male) or ≥ 460 ms (female), without concomitant QT-prolonging drugs, without uncorrected electrolyte abnormalities, and without structural cardiac disease. It is absolutely contraindicated in pregnancy and in patients under 18 years of age.

Fluoroquinolone-Associated Adverse Effects Beyond Cardiac Risk

The fluoroquinolone class carries a cluster of serious adverse effects that prompted the FDA's 2016 Drug Safety Communication advising restriction of their use to conditions with no available alternatives:

- Tendinopathy and tendon rupture: Achilles tendon most commonly involved; risk amplified by corticosteroid use, age > 60, and renal insufficiency. Discontinue immediately at first sign of tendon pain or swelling.
- Peripheral neuropathy: potentially irreversible sensory neuropathy; may persist or worsen after drug discontinuation.
- CNS effects: seizures, toxic psychosis, anxiety, insomnia; fluoroquinolones are absolutely contraindicated in myasthenia gravis.
- Aortic aneurysm/dissection: FDA black box warning (2018); avoid in patients with known aortic aneurysm or connective tissue disorders including Marfan syndrome.
- Fluoroquinolone-Associated Disability (FQAD): potentially disabling multisystem syndrome occurring days to weeks after exposure; pathophysiology may involve mitochondrial toxicity.

Beta-Lactam Adverse Effects

- Hypersensitivity reactions: range from delayed maculopapular rash (not predictive of anaphylaxis) to IgE-mediated urticaria, angioedema, and anaphylaxis. Phenotypic distinction is clinically critical and underscores the necessity of structured allergy assessment.
- Amoxicillin-clavulanate hepatotoxicity: idiosyncratic cholestatic hepatitis is the most common cause of antibiotic-associated drug-induced liver injury in Western countries. Risk elevated in males, age > 65, and with prolonged or repeated exposure.
- CNS toxicity (high-dose IV penicillin): penicillin encephalopathy, seizures, and myoclonus may occur at supratherapeutic concentrations in patients with renal insufficiency receiving unadjusted doses.

Metronidazole: Drug Interactions and Toxicity

- Disulfiram-like reaction with alcohol: patients must abstain from ethanol for the duration of therapy and 48 hours after the final dose.
- Warfarin potentiation via CYP2C9 inhibition: unpredictable, often dramatic INR elevation. Check INR within 3–5 days of initiation; anticipate warfarin dose reduction of 30–50%.
- Peripheral and central neurotoxicity: prolonged courses (> 10–14 days) may cause distal sensory neuropathy, cerebellar ataxia, and encephalopathy.
- Lithium toxicity: metronidazole reduces renal lithium clearance; avoid or monitor serum lithium closely.

Vulnerable Populations: Tailored Antibiotic Strategies

Pediatric Patients

Antibiotic dosing must be weight-based. Amoxicillin (40–45 mg/kg/day divided TID) remains first-line for odontogenic infections in children. Amoxicillin-clavulanate (40–45 mg/kg/day of amoxicillin component, divided BID-TID) is appropriate for moderate infections. Clindamycin (8–25 mg/kg/day divided TID-QID) is the preferred alternative in penicillin-allergic pediatric patients. Macrolides carry unacceptably high resistance rates and should not be used empirically. Fluoroquinolones are generally contraindicated under 18 years of age due to articular cartilage toxicity.

Pregnant and Lactating Patients

Amoxicillin (FDA Category B) is the preferred first-line agent throughout all trimesters. Clindamycin is considered safe throughout pregnancy. Metronidazole is supported by current ACOG guidelines when clinically indicated throughout pregnancy. Fluoroquinolones, tetracyclines, and TMP-SMX are contraindicated in pregnancy. For severe infections requiring IV therapy, ampicillin-sulbactam or cefazolin are preferred. In lactating patients, amoxicillin, amoxicillin-clavulanate, clindamycin, and metronidazole are all considered compatible with breastfeeding by the American Academy of Pediatrics.

Elderly Patients

The geriatric patient presents a convergence of risk factors: reduced renal clearance, polypharmacy, altered gut flora increasing CDI risk, immunosenescence, and diminished physiologic reserve. The Beers Criteria identify fluoroquinolones as potentially inappropriate in older adults due to CNS adverse effects including delirium, peripheral neuropathy, and tendinopathy risk. Clindamycin use in patients over 65 should be accompanied by explicit CDI counseling and a low threshold for stool testing when symptoms arise.

Immunocompromised Patients

Immunocompromised patients - including those on systemic corticosteroids, biologics (anti-TNF, anti-IL-17, JAK inhibitors), chemotherapy, post-transplant immunosuppression, or advanced HIV/AIDS (CD4 <200 cells/ μ L) - require broader empiric coverage and lower thresholds for hospitalization. These patients may present with attenuated inflammatory signs despite severe infection and are at risk for opportunistic pathogens including fungi.

- Consider antifungal coverage (fluconazole or micafungin) in severely immunocompromised patients with refractory deep space infections.
- Extended gram-negative coverage (pip/tazo or meropenem) in patients with prolonged prior antibiotic exposure or healthcare-associated infection patterns.
- Neutropenic patients (ANC < 500 cells/ μ L) require prompt hospitalization and empiric anti-pseudomonal coverage regardless of severity staging.
- ID consultation early for any hospitalized immunocompromised patient with dentofacial infection.

Comorbidities Complicating Infection Prognosis

Diabetes Mellitus

Diabetes mellitus is the most clinically consequential comorbidity encountered in the management of odontogenic infections. Diabetic patients are predisposed to more severe and rapidly progressing infections through impaired neutrophil chemotaxis and phagocytosis, reduced T-lymphocyte function, microvascular insufficiency limiting antibiotic tissue penetration, and a chronic inflammatory milieu that delays recognition of early infection progression.

Hemoglobin A1c provides a practical surrogate marker of immune competence: patients with HbA1c > 8% should be managed as functionally immunocompromised. Glycemic optimization during acute infection is an independent predictor of

treatment response. The clinician should anticipate broader initial empiric antibiotic coverage, higher treatment failure rates, greater likelihood of operating room intervention, prolonged antibiotic courses (often 7–14 days), and slower resolution of inflammatory markers.

Mucormycosis (*Rhizopus/Mucor* species) can cause fulminant rhinoorbital-cerebral mucormycosis in poorly controlled or ketoacidotic diabetics. A high index of suspicion - and urgent otolaryngology and ophthalmology consultation - is warranted for any atypical palatal necrosis, nasal involvement, or periorbital changes in a diabetic patient, particularly in the setting of DKA.

Bisphosphonate Exposure and MRONJ

Patients with current or prior bisphosphonate exposure who develop dentofacial infection present a dual management challenge: the active infection and the risk of MRONJ development or exacerbation. Bisphosphonates - and denosumab and antiangiogenic agents - impair osteoclastic bone turnover and reduce jaw vascularity, creating a substrate for osteonecrosis that may be triggered or worsened by surgical or infectious insult. Antibiotic selection should include coverage against *Actinomyces* species. Amoxicillin-clavulanate provides appropriate coverage; in PCN-allergic patients, clindamycin is a reasonable alternative. Prolonged antibiotic courses (8–12 weeks or longer) are frequently necessary for established MRONJ with secondary infection, guided by 2022 AAOMS staging criteria.

Hepatic Insufficiency

Significant hepatic dysfunction affects antibiotic selection through altered drug metabolism, impaired coagulation factor synthesis, reduced serum albumin, and immunocompromise from reduced opsonic and complement function. Clindamycin undergoes primarily hepatic metabolism and should be dose-reduced up to 50% in Child-Pugh B or C cirrhosis. Metronidazole accumulates in severe cirrhosis; extended dosing intervals are advised. Amoxicillin and ampicillin-sulbactam are preferred given predominantly renal clearance. Moxifloxacin is primarily hepatically eliminated and should be avoided in significant hepatic impairment.

Chronic Kidney Disease and ESRD

Renal impairment mandates dose adjustment for renally-cleared antibiotics. Creatinine clearance (Cockcroft-Gault) or eGFR must be estimated for any patient with known or suspected CKD. Amoxicillin and ampicillin-sulbactam require interval extension (q12h) in severe CKD (eGFR <30 mL/min). Vancomycin requires AUC-guided dosing with markedly extended intervals in advanced CKD and ESRD. Aminoglycosides should be avoided in CKD unless no alternative exists and therapeutic drug monitoring is immediately available.

Anticoagulated Patients

Drug-drug interactions are the primary antibiotic concern in anticoagulated patients:

- Metronidazole + warfarin: marked INR elevation via CYP2C9 inhibition; check INR within 3–5 days; anticipate 30–50% warfarin dose reduction.
- Fluoroquinolones + warfarin: variable INR potentiation; monitor INR closely.
- Macrolides + warfarin or DOACs: moderate P-gp/CYP3A4 inhibition may increase DOAC exposure, particularly rivaroxaban and apixaban.
- Amoxicillin and amoxicillin-clavulanate: minimal pharmacokinetic interaction with anticoagulants; preferred from a drug-interaction standpoint.

Oncology Patients and Radiation-Treated Fields

Radiation-induced microvascular obliteration creates a hypoxic, hypocellular, hypovascular tissue environment refractory to standard antibiotic regimens without concurrent surgical debridement. For active infections in irradiated fields, early aggressive surgical intervention is paramount; antibiotic therapy alone is insufficient. Pentoxifylline and vitamin E combination therapy has demonstrated modest benefit in improving oxygenation of radiation-damaged tissue. Hyperbaric oxygen (HBO) is supported as a surgical adjunct in both MRONJ and ORN. Chemotherapy-induced neutropenia (ANC < 500 cells/ μ L) mandates prompt hospitalization and empiric broad-spectrum IV antibiotics with anti-gram-negative activity regardless of clinical severity staging.

Antimicrobial Stewardship: Principles for the Practicing OMS

Duration of Therapy

The most commonly cited evidence-practice gap in dental antibiotic prescribing is excessive duration. Current evidence supports 3–5-day courses post-drainage for uncomplicated infections, achieving equivalent outcomes with substantially less resistance selection pressure and fewer adverse effects. Severe infections requiring IV therapy and deep space debridement typically require 7–14 days of total therapy guided by clinical response and inflammatory marker normalization (CRP, WBC trend).

IV-to-Oral Transition

The threshold for transitioning from IV to oral antibiotics is frequently delayed beyond clinical justification. Criteria supporting safe transition include: sustained defervescence, improving trismus and swelling, tolerance of oral intake, WBC count trending toward normal, and absence of organ dysfunction requiring IV-route-dependent drug levels. Amoxicillin-clavulanate, clindamycin, metronidazole, and moxifloxacin all achieve near-complete oral bioavailability, rendering IV continuation unnecessary once transition criteria are met.

When to Culture

Culture and sensitivity testing is systematically underutilized in oral and maxillofacial surgery. All purulent collections aspirated or expressed during I&D procedures should be submitted for aerobic and anaerobic culture. Specific indications requiring cultures: treatment failure after 48–72 hours on empiric therapy without clinical improvement, immunocompromised hosts, hospitalized patients, recurrent infections, and any patient in whom MRSA is clinically suspected. Blood cultures should be obtained before antibiotic initiation in any patient with SIRS criteria or sepsis physiology.

Antimicrobial Stewardship: Prescribing Checklist

1. Is antibiotic therapy indicated, or will source control alone suffice?
2. Is the spectrum appropriate for the expected pathogen profile (odontogenic = streptococci + anaerobes)?
3. What is the intended duration — is it evidence-based (3–5 days post-drainage for uncomplicated infections)?
4. Have I assessed penicillin allergy validity — and is this patient a candidate for allergy delabeling?
5. Are there drug interactions, comorbidities, or toxicity risks that should modify drug or dose selection?
6. Have I sent aerobic and anaerobic cultures from any purulent collection?
7. If hospitalizing this patient, have I requested infectious disease consultation?

Conclusion

The management of dentofacial infections demands clinical sophistication well beyond the instinct to write an antibiotic prescription. The rational, stewardship-aligned OMS brings a structured approach to severity classification, drug selection, duration, allergy assessment, and host-specific modification that directly improves patient outcomes and preserves antibiotic efficacy for future generations.

Penicillin-class antibiotics remain the foundation of dentofacial infection therapy, and the reflexive perpetuation of erroneous penicillin allergy labels without structured risk stratification and appropriate delabeling pathways imposes measurable harm on individual patients and the antimicrobial commons. The integration of allergy skin testing programs, culture-directed de-escalation, evidence-based duration, and host-tailored dosing represents the current standard of care to which oral and maxillofacial surgery must aspire.

As resistant organisms continue to emerge and the novel antibiotic development pipeline remains constrained, each prescribing encounter carries population-level consequences. The OMS who embraces antimicrobial stewardship as core clinical identity - not administrative obligation - will serve patients more safely, effectively, and responsibly.

References

1. Dar-Odeh NS, Abu-Hammad OA, Al-Omiri MK, et al. Antibiotic prescribing practices by dentists: a review. *Ther Clin Risk Manag.* 2010;6:301–306.
2. Lockhart PB, Tampi MP, Abt E, et al. Evidence-based clinical practice guideline on antibiotic use for the urgent management of pulpal- and periapical-related dental pain and intraoral swelling. *J Am Dent Assoc.* 2019;150(11):906–921.
3. Sridharan K, Sivaramakrishnan G. Drug treatment of odontogenic infections in the era of antimicrobial resistance. *J Infect Chemother.* 2018;24(12):944–952.
4. Blumenthal KG, Rogers BM, Wei L, et al. A randomized trial of risk stratification and oral penicillin challenge for penicillin allergy delabeling in hospitalized adults. *J Allergy Clin Immunol Pract.* 2021;9(5):2040–2049.
5. Macy E, Romano A, Khan D. Practical management of antibiotic hypersensitivity in 2017. *J Allergy Clin Immunol Pract.* 2017;5(3):577–586.
6. Romano A, Blanca M, Torres MJ, et al. Diagnosis of nonimmediate reactions to beta-lactam antibiotics. *Allergy.* 2004;59(11):1153–1160.
7. Ruggiero SL, Dodson TB, Aghaloo T, et al. AAOMS position paper on medication-related osteonecrosis of the jaws—2022 update. *J Oral Maxillofac Surg.* 2022;80(5):920–943.
8. Talan DA, Krishnadasan A, Gorwitz RJ, et al. Comparison of *Staphylococcus aureus* from skin and soft-tissue infections in US emergency department patients, 2004 and 2008. *Clin Infect Dis.* 2011;53(2):144–149.
9. U.S. Food and Drug Administration. FDA Drug Safety Communication: FDA updates warnings for oral and injectable fluoroquinolone antibiotics due to disabling side effects. July 26, 2016.
10. Mandell GL, Bennett JE, Dolin R, eds. *Principles and Practice of Infectious Diseases.* 9th ed. Philadelphia: Elsevier; 2022.
11. Baddour LM, Wilson WR, Bayer AS, et al. Infective endocarditis in adults: diagnosis, antimicrobial therapy, and management of complications. *Circulation.* 2015;132(15):1435–1486.
12. Dellit TH, Owens RC, McGowan JE Jr, et al. IDSA and SHEA guidelines for developing an institutional program to enhance antimicrobial stewardship. *Clin Infect Dis.* 2007;44(2):159–177.

RISK MANAGEMENT



Cybersecurity for Healthcare: Strategies to Mitigate Risks

by Richard F. Cahill, JD, Vice President and Associate General Counsel,
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Complex attacks using ransomware are among the most problematic cybersecurity concerns for healthcare practices and systems. Malicious software can prevent an affected organization from accessing its data unless monetary payments are made, which can interfere with the delivery of patient treatment.

In addition to immediate patient safety risks, a ransomware attack creates long-term enterprise risks. Patients' protected information is attractive to cybercriminals for its substantial value on the black market, and therefore data breaches, also referred to as crypto-extortion, are a typical collateral consequence of ransomware attacks. Healthcare organizations across the country have experienced data breaches, whether through ransomware or through other threats. Following a crypto-extortion incident, a covered entity's inadvertent violations of federal and state privacy laws may result in a multitude of civil, criminal, and administrative dangers. The results can be financially devastating.

Through a combination of advance planning and collaboration with trusted business partners, healthcare organizations can mitigate their cybersecurity risks, including risks amplified by overseas events, third-party vendor relationships, agency oversight, and technological advancements.

Geopolitical Risks

Some cybersecurity attacks are sponsored by foreign governments, and such threats increase in intensity whenever the U.S. engages in overseas conflicts. In spring 2026, pro-Iranian hackers turned their attention to vendors connected to

U.S. power, water, and healthcare. The Federal Bureau of Investigation (FBI), the Cybersecurity and Infrastructure Security Agency (CISA), and other agencies have repeatedly implored U.S. healthcare entities to amplify their cybersecurity.

Covered entities cannot predict international events, but they can predict that geopolitical shifts will at times increase their enterprise risks, and they can strengthen their cybersecurity postures accordingly.

Third-Party Risks

Cybercriminals may aggressively strike third-party vendors that support medical and dental practitioners. This threat demands careful deliberation and proactive, preemptive correction of vulnerabilities, because when data breaches begin through a third party, they can take longer to identify, cause more disruption, and cost more to contain than a direct attack.

Regulatory and Compliance Risks

When patient records are violated in large online assaults, federal and state privacy laws create an added risk to clinicians, practices, and systems. Understanding these risks is the first step to mitigating them. They include:

- Complaints from government agencies: Data breaches often lead to complaints initiated by government oversight and licensing agencies, including the Office for Civil Rights, with possible investigations subsequently resulting in fines, sanctions, and related administrative penalties.
- Damage to reputation: An inadvertent disclosure may also create negative publicity on social media, which may damage the professional reputations of individual or institutional providers and thereby impair the clinicians' ability to practice and even to earn a living.
- Loss of privileges: Harm to affected clinicians may include limitations to, or a complete loss of, admitting and surgical privileges at a medical facility or possibly exclusion from third-party payer networks, including CMS.

AI Risks—and Rewards

AI adds new weapons to the cybersecurity fight, with some experts espousing an advantage to defenders. Nevertheless, AI facilitates novel forms of cyberattack. It also expedites or enhances some familiar forms of cyberattack:

- Some cybercriminals find an entity's vulnerabilities, then sell their access to other bad actors, who carry out the actual malicious strike. The time window for

handing over these access points has shrunk from hours down to seconds.

- Technological advancements are also enabling malicious actors to produce more and more convincing phishing attempts: A large proportion of serious cyber threats to healthcare come through contact with employees.

Strategies to Mitigate Cybersecurity Risks

Healthcare organizations should work proactively with experts in the relevant domains to recognize and mitigate potential cybersecurity risks. Healthcare professionals can:

Identify risky circumstances: The U.S. Department of Health and Human Services (HHS) Office of the Inspector General (OIG) recently reported that a “large Southeastern hospital” had conspicuous weaknesses in its cyber defenses. For example, multifactor authentication (MFA) was not enabled on an account management platform, and a mock phishing campaign was able to capture credentials that should have been secure. Cybersecurity experts can help healthcare practices identify open digital doors that will be obvious to cybercriminals and that need to be swiftly closed, such as by enabling existing software capabilities.

Cybersecurity experts can also identify other digital risks that may result in economic damage or otherwise impede the operation of the practice. The goal is to avoid potential negative events, including those related to civil liability; contract violations; and administrative complaints to governmental oversight agencies, which can result in administrative investigations; along with highly detrimental and often defamatory social media postings, which can potentially injure the reputation and ongoing financial stability of the practice or institution.

Provide training across the enterprise: A recent survey of cybersecurity professionals identified AI-driven social engineering as one of their top concerns. Appropriately, a senior leader at the American Hospital Association has described “a patient safety-focused culture of cybersecurity” as an organization’s “most important defense.”

Design in-house patient safety precautions: Distributed denial of service (DDOS) attacks can lock legitimate users out of a hospital’s computer systems, including its EHRs, presenting a swarm of simultaneous threats to patient safety. For this reason, in addition to developing and periodically auditing internal protocols implemented to help limit ongoing cybersecurity threats, healthcare organizations are urged to design and execute in-house patient safety precautions in conjunction with onsite risk managers and facility administrators. Defensive measures should be uniformly compatible with

applicable community standards to best ensure continuity of care, as well as the delivery of optimum clinical outcomes.

Investigate insurance coverage: Corporate counsel, agents, brokers, and liability carriers can help organizations consider the nature, scope, and amount of business protection that may be advisable. Practitioners can coordinate with these insurance professionals to complete a risk evaluation to include assessments of exposure from numerous sources, such as medical malpractice claims, general premises liability, corporate errors and omissions, workers’ compensation, and cybersecurity. In addition, related coverages are designed to protect against complications that may impair a clinician’s ability to continue practicing medicine or dentistry unimpeded by administrative restrictions or monetary sanctions. Developing a comprehensive risk assessment before a crisis occurs is critical to ensure continuity of professional services and operational integrity in the event of an unforeseen adverse event.

Coordinate with business partners: Healthcare providers, working closely with their insurance carriers, can coordinate with business partners to develop policies and procedures to evaluate and address risks. A proactive analysis can help the organization target its efforts to implement best practices while remaining consistent with prevailing community standards, which will evolve over time. Clinicians and their practice management teams should institute routine periodic audits of office policies to help ensure that practice protocols are being applied uniformly, are being updated at regular intervals to comply with evolving standards, and are properly and timely documented in administrative files. Such documentation ensures that the facility can prove with competent and convincing evidence that due diligence was exercised to protect patients and business associates in the event that a security breach results in civil or administrative proceedings that seek monetary damages or other institutional sanctions. Following such a strategy will decrease the likelihood of the enterprise suffering harm from either existing or yet unknown potential threats, while enhancing the quality of transactional efficiency.

Through vendor agreements and other cooperative arrangements, U.S. healthcare organizations and the businesses that support them are inextricably connected, and this chain is only as strong as its weakest link. Each healthcare system that mounts a vigorous and vigilant cybersecurity defense shields itself, its patients, and the U.S. healthcare system.

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.



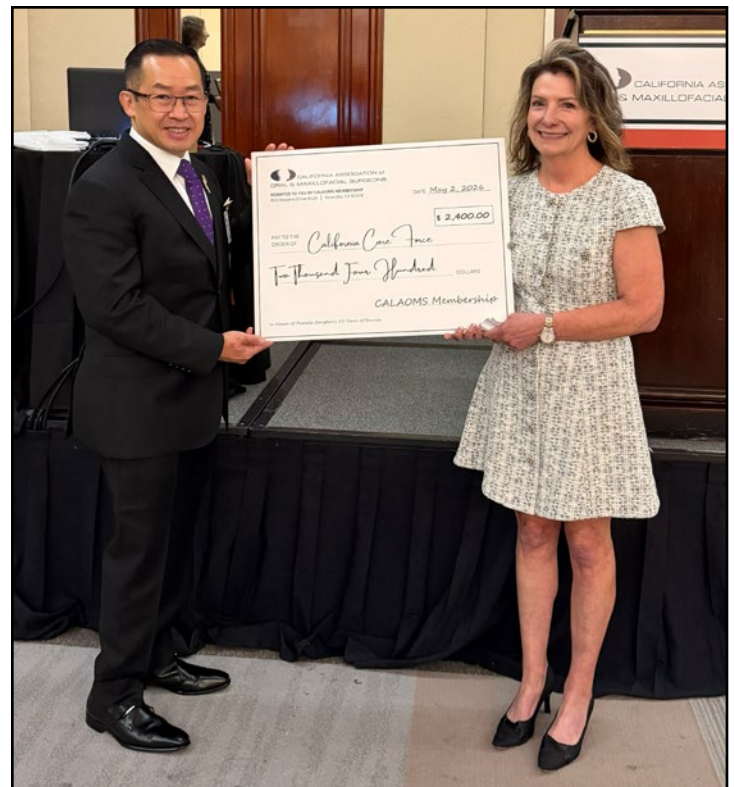
26TH ANNUAL MEETING

Over 100 oral surgeons attended the 26th Annual CALAOMS Meeting in Long Beach, California, May 2–3. Attendees heard from two distinguished speakers: Joel Weaver, DDS, PhD, who presented “Top Ten Reasons for Poor Anesthesia Outcomes,” and Louis Rafetto, DMD, MEd, who spoke on “Preparing Your Team to Respond Effectively to Adverse Anesthesia Events in the Office.”

These sessions complemented AAOMS’s Office-Based Emergency Airway Management (OBEAM) course, which provides hands-on training using simulators to practice emergency techniques and enhance patient safety. Participants described the course as highly valuable.

Three individuals were honored for their exceptional contributions to the profession, resident support, and improving access to care: Dr. Ned Nix, Dr. Margaret Delmore, and retired CALAOMS Executive Director Pam Congdon. Their vision, compassion, and dedication continue to inspire others.

On Sunday, residents presented research on a range of leading edge OMS topics. We greatly appreciate their preparation and contributions as new members of our OMS community.



Pamela Congdon, CAE, IOM, CALAOMS Executive Director - Retired, was presented with this year's Meeting Dedicattee Award after 32 years of service to CALAOMS. During Pam's busy tenure as Executive Director, she saw a void in the California healthcare system addressing those who do not have the means to obtain dental and optometric care. Through her empathy, foresight, perseverance, and an innate ability to achieve her goals, she established California Careforce (CCF) in 2014. To honor that, Dr. Kenneth Wong, CALAOMS Vice President/Secretary presents Pam with a California CareForce donation check in her name in the amount of \$2,400.



CALAOMS Past Presidents in attendance for Pamela Congdon's meeting dedication left to right: Sam F. Khoury - 2022, Shama Currimbhoy - 2021, Ned L. Nix - 2009, P. Thomas Hiser - 2004, W. Frederick Stephens - 2012, Timothy S. Shahbazian - 2001, Mary Delsol Dobson - 2002, Terrence F. McCarthy - 1998, David R. Cummings - 2023.



Dr. Ned L. Nix was presented with this year's Distinguished Service Award. Dr. Nix served as President of CALAOMS in 2009 and has been an active member since joining the organization in 2000. After many years in private practice in San Jose, he accepted a faculty position at the University of the Pacific (UOP). Dr. Nix was also among the earliest CALAOMS members to train his staff for the Dental Sedation Assistant permit. He also became a lead advocate for expanding student participation in California CareForce (CCF).

Dr. Margaret Delmore was presented with this year's Committee Member of the Year Award. Dr. Delmore has generously contributed her time and expertise to numerous CALAOMS committees, including Ethics, ACLS, and Continuing Education. Even after retiring from private practice, she continues to advance the oral surgery and dental community through countless hours of teaching ACLS, PALS, and BLS, as well as volunteering on committees for the Sacramento District Dental Society (SDDS).



Resident's that presented at this year's Resident presentations from left to right: Keshav Kumar, DDS, MD - USC, Kyu Choi, DMD - San Diego Naval Medical Center, Karen He, DMD, MD - UCLA School of Dentistry, Thomas LeCheminant, DDS - Harbor UCLA Medical Center, Brandon Talmood, DDS, MD - Loma Linda University.



The meeting was well attended with Saturday presentations on “Top Ten Reasons for Poor Anesthesia Outcomes in Dental Office Anesthesia” by Joel Weaver, DDS, PHD and “Preparing Your Team to Respond Effectively to Adverse Anesthesia Events in the Office” by Louis Rafetto, DMD, MEd. Sunday was filled with presentations from residents from Southern California’s OMS residency programs.



Although most of the day is spent in lectures, there was ample time during breaks, lunch, and the evenings for CALAOMS members to engage in meaningful discussion, and camaraderie that defines our specialty.

MEANING IN ETHICS



by Richard Boudreau, MA, MBA, DDS, MD, JD, PhD, PsyD

'AI' in Medicine – Thoughts

Since the age of enlightenment, reason has guided our understanding of the world and our role in it. The ability to create efficient machines, useful structures, and inspiring art is, indeed, a unique human quality. The transformation of artificial intelligence (AI) in the medical profession from simply hard-coding data to a human-like, reasoned approach to processing facts and ideas continues to rapidly progress. AI is currently a product of human ingenuity and under our control; however, in the future, as AI can perceive aspects of the world faster, more efficiently, with fewer errors, and in ways that exceed our capabilities, we will be forced to reconsider the value of human reasoning and our place in the world.

Will future innovations in AI be credited to a specific named person or to an avatar in the metaverse? Will that avatar win the Nobel Prize in medicine for their innovative contribution? Is this just a further step in our gender-neutral social landscape? Just another pronoun with which to become comfortable?

In current medical practice, human errors in judgment are responsible for tens of thousands of mistaken diagnoses every year, accounting for a significant number of patient disabilities and even fatal outcomes. In both medical and surgical practice, when human technical errors are identified as the cause of patient suffering, the responsible physicians and surgeons are held accountable. However, when AI is responsible, who is accountable? Is it the innovator and manufacturer? The algorithm provider? The engineer algorithm author? Ultimately, the judicial system will decide.

AI limitations are real and likely to remain so, including blind spots concerning creativity, empathy, and the need for surgical hand-eye dexterity - still very much a 'human skill'. Should we not demand or mandate the design and construction of all AI physicians with our finest human values and Code of Ethics? Who will decide exactly what those values and ethics are? The medical field should consider proactively addressing these issues rather than just reacting to an impending future crisis. AI's presence in medicine and surgery is inevitable, but the role it will play is not.



After the Board meeting at the 26th Annual Meeting, board members gather for drinks with CALAOMS' retired Executive Director and meeting dedicatee Pamela Congdon. Left to right: David Cummings, DDS, Special Delegate, Sam Khoury, DMD, Long Term Delegate, Fred Stephens, DDS, District VI Trustee, Shama Currimbhoy, DDS, MS, Long Term Delegate, Lauren Odonon, DDS, Director, Donald Liberty, DDS, Director, Pam Congdon, Executive Director - Retired, Vivian Jui, DMD, President, Peter Scheer, DDS, MS, Director, Hooman Adamous, DMD, Director, Nima Massoomi, DMD, MED, MD, President Elect.

CALIFORNIA ASSOCIATION OF ORAL & MAXILLOFACIAL SURGEONS UPCOMING CE EVENTS

2026 Meetings

- OMSA Course On-line Open Year Round
- Medical Emergencies Hayes Mansion, San Jose, CA - November 21, 2026

2027 Meetings

- January 2027 Webinar OnLine January 16, 2027
- CALAOMS 27th Annual Meeting Nor Cal - TBD

VENDOR SPOTLIGHT

CALAOMS WISHES TO THANK THE FOLLOWING VENDORS THAT
GRACIOUSLY SPONSORED CALAOMS' MEETINGS IN 2026

- **The Doctors Company** - Speaker Sponsor, January 2026 Meeting.
- **OMSNIC** - Breakfast and Breaks, January 2026 Meeting.
- **Scripps Oral Pathology Services** - WiFi Sponsor, January 2026 Meeting.
- **The Doctors Company** - Webinar Sponsor, 2026 Risk Management.
- **The Doctors Company** - Speaker Sponsor, 26th Annual Meeting.
- **OMSNIC** - Residents Sponsor, 26th Annual Meeting.
- **Scripps Oral Pathology Service** - WiFi Sponsor, 26th Annual Meeting.

COACHELLA CLINIC 2026



THANK YOU to our **FORCE**
of healthcare
professionals and
general volunteers.
These 508 dedicated
people provided
\$766,468 worth of care!



591 DENTAL PATIENTS

- 531 Dental Exams
- 1,767 X-Rays
- 260 Fillings
- 300 Extractions
- 14 Dentures (upper/lower, reline, repair)
- 37 Crowns (permanent/temporary, recementation)
- 18 Root Canals
- 61 Root Extractions
- 291 Hygiene
- 29 Other

1,359 MEDICAL PATIENTS

- 1,080 Glucose & Blood Pressure Screening
- 279 Medical/General Exams
- 31 Mammograms
- 23 Pap Smears
- 21 Acupuncture
- 232 Education/Counseling

354 VISION PATIENTS

- 260 Eye Examinations
- 402 Single or Bifocal Glasses

**2,304 People Received Dental, Vision and/or
Medical Services**





ASSOCIATE/PARTNERSHIP OPPORTUNITIES

EAST BAY AREA: Part time opportunity available. Busy practice with two locations and four surgeons. Mondays and Fridays available immediately. Full time will become available in the fall. Traditional practice: extractions, bone grafting and implants, biopsies, sedations. Please contact osjob2023@gmail.com.

NAPA & SONOMA: Seeking a motivated and hard-working OMS with excellent interpersonal skills. We have a well-established dentoalveolar/implant practice with room for growth and opportunity to perform additional procedures. Candidates would be expected to establish and maintain relationships with existing and potential referring doctors in the community. This is a great opportunity for new graduates or experienced oral surgeons to join our established and busy practice with a pathway to partnership. We have two locations: Sonoma and Napa. Please contact Sandra@oralsurgerydentallimplants.com

ORANGE COUNTY: We are currently seeking a motivated, compassionate surgeon to join our growing practice in the greater Orange County area. We have a two in one oral surgery office fully equipped in the beautiful city of Huntington Beach, CA. All current staff surgeons are board-certified with extensive experience in Dentoalveolar, implant, orthognathic, and trauma surgery. Currently both in the past and present all surgeons held or hold leadership positions in the local dental societies as well as local academic appointments. Primary surgeon is

on staff at 3 local hospitals but no ER coverage is required with this position unless associated prefers. The scope of the practice includes but not limited to: dentoalveolar, orthognathic surgery, trauma, pathology, grafting, IV sedation.

Our position is for a unique individual who is caring of patients with exceptional interpersonal skills. Included with employment: salary, health coverage, 401K, CME reimbursement, mentorship with other surgeons, and more. All single or double degreed candidates will be considered as well as BE and BC. Currently this practice only has one doctor owner and seeking a well-qualified and skilled colleague with eventual partnership opportunity. Please contact Ofc managers- Rod or Mary 714-766-6560 or 949-514-8714 or send us an email: socalomfsdds@gmail.com.

ORANGE COUNTY: Solo practice for 26 years one location considering associateship leading to sale. The practice is in great location in Orange County close to Pacific Ocean, very central and next to hospital. The practice scope is tailored to Dentoalveolar surgery and Implant surgery. The practice has full operating room for general anesthesia with anesthesiologist. The details of the practice are available.

Very relaxed working environment. No calls, no hospital cases. Will consider sale for the right candidate. Send resume to: scalpel_4me@yahoo.com.

ROSEVILLE, CA: Immediate full-time oral surgeon needed to join our team. Practices a full scope of oral and maxillofacial surgery with expertise ranging from corrective jaw surgery to wisdom teeth extraction to teeth-in-an-hour/ Dental Implants. Diagnoses and treats facial pain, facial injuries and TMJ disorders, and performs a full range of dental implant and bone grafting procedures.

Please contact- Dr. Antipov
Phone: 916-769-8900
Email: info@galleriaoms.com.

SAN DIEGO: Well-respected oral surgery practice located in central San Diego. 25 years in practice and one of the most successful, busy practices in the city. Very active Seattle study club sponsor for over 21 years with 50 members. Scope of practice includes all dentoalveolar surgery, implants, bone grafting, PRF/PRP active use, orthognathic and TMJ surgery, sleep apnea treatment with MRD and bi-maxillary advancement and facial trauma. In house OR capable of supporting single jaw orthognathic/TMJ surgeries. Active hospital practice for more complex cases.

We are looking for a board certified/eligible surgeon with active skills in orthognathic/TMJ/Trauma surgery comfortable with outpatient anesthesia and dentoalveolar surgery that is interested in becoming a partner in this practice. Comfort with public speaking is a big plus. Outgoing personality with excellent patient care skills is mandatory. Interested parties, please contact via email at info@mvoms.com, or office phone at 619-298-2200 and ask for Kim, office manager.

SAN FRANCISCO - UNION SQUARE: Excellent private practice is looking for a full or part time oral surgeon to join our wonderful and professional team. Please send CV and letter of interest / inquiries to: sfomfsjob@gmail.com.

OMS POSITIONS

SAN FRANCISCO - UNION SQUARE: Excellent private practice is looking for a full or part time oral surgeon to join our wonderful and professional team. Please send CV and letter of interest / inquiries to: sfomfsjob@gmail.com.

LA JOLLA: Scripps Center for Dental Care is seeking a board certified Oral Surgeon with minimum 5 years of post training clinical experience. We are looking for a long-term commitment of 1-2 days per week and someone with excellent interpersonal and team skills. Our practice is a progressive, high quality, multi-specialty, patient cen-

tered dental office located on Scripps Memorial Hospital campus. Our team consists of 8 doctors, 4 hygienists, and 16 additional supporting team members all committed to exceptional patient care in a true interdisciplinary approach in one location. The office location in close proximity to research, medical, and professional environments combine for a very strong and reliable patient base. Our team is expertly trained and the office is outfitted with modern equipment and systems including optical impressioning, 2D/3D digital radiography, electric hand pieces, hard/soft tissue lasers, microscopes, intra-oral cameras, 3D printing, etc. We do not participate in any capitation or managed care programs. Our growth is sustained primarily by clinician and patient referrals. For additional information, please visit: www.scrippsdentalcare.com.

Send bio, resume and photo to: admin@scrippsdentalcare.com

PRACTICE FOR SALE

BAKERSFIELD: Long established OMS practice located in a new office in the heart of town. This busy practice is perfectly located in the middle of Bakersfield with all major highways intersecting within a few blocks from the office. Within 10 minutes of both Mercy and Adventist Health hospitals, the office is also surrounded by many dental offices for referrals. I am currently doing 7-8 surgeries a day, and there is an extra room ready for a surgical suited making it easy to produce more surgeries a day if needed. The community is growing quickly, so you can't go wrong with this practice. Call 661-835-7389 or email genehughesdds.oralsurgery@gmail.com.

CHICO: Established | High-Producing | Real Estate Available. Ideal opportunity for oral surgeon seeking ownership with immediate cash flow. Exceptional opportunity to acquire a 35-year legacy Oral & Maxillofacial Surgery practice with deep community roots and a long-standing referral network. This highly profitable practice collects over

\$2.2M annually on a 3.5 day work week and is supported by a tenured, experienced team and state-of-the-art clinical technology. Established 3,000 sqft freestanding building; 3 fully equipped operatories 2 consult rooms; CBCT; Intraoral Scanner; Dentrix Practice Management Software; Modern clinical workflow and technology infrastructure; Real estate available for purchase. Interested parties should call (530) 321-7731 or email tbeltramo@gmail.com.

LOS ANGELES: "Turnkey, high-tech full scope oral and maxillofacial surgery practice in the LA suburbs with proximity to downtown LA, Hollywood, Burbank Studios, the westside, beaches, and Beverly Hills. Full scope practice offering Dentoalveolar, implants, full arch reconstruction, Zygora implants, Pathology, reconstruction, orthognathic surgery, TMJ surgery, facial trauma and facial cosmetic surgery; IO Scanner, CBCT , 3D photography and 3D printer to facilitate digital workflows, anesthesia machine, and OR table set up for full-arch, orthognathic, TMJ, facial trauma, and cosmetic surgery cases. Affiliated with an OMS residency program. Stellar reputation with 40 years of goodwill and the only oral surgery practice in the zip code. Located on the first floor of a three-story building primarily occupied by dental offices, directly across the street from a community hospital with strong affiliation to facilitate hospital OMS cases and emergencies. 1,650 sq ft office with private parking and back-office access. Includes three operatories plus an OR suite ready for accreditation as an office-based surgery center, recovery room, oxygen, nitrous, and vacuum setup in all rooms. Modern reception and waiting room, private doctor's office, business office, staff room, sterilization room, and bathroom. Gross collections averaging \$1.45M over the last three years. Seller motivated due to moving out of the area. Rare opportunity in the LA area. email laoms2025@gmail.com for confidential information.

SONOMA, CA: Practice for sale, FACILITY ONLY. Turnkey operation. Great opportunity. Dr. Retiring. Please respond to (510)409-0742 or nfantovrn@aol.com for inquires.

SAN JOSE, CA: - Well-Established Oral Surgery Practice. Exceptional opportunity to acquire a highly regarded oral and maxillofacial surgery practice with over 30 years of goodwill. The practice focuses on dentoalveolar and implant surgery and is ready for a new doctor to carry it into the future. Located in an upscale, desirable area of San Jose, the office features modern facilities including CBCT, digital x-ray sensors, new computers (2024), OMSVision, and Anatomage software. The practice operates 4 days per week, generating \$1.5M in annual collections with a 53% overhead. This is a fee-for-service/PPO practice with a loyal referral base and strong reputation for quality care. The seller is open to an immediate sale or a short transition to help introduce you to the community and referring dentists. If you're looking for a turnkey, profitable, and well-established oral surgery practice in one of California's most desirable markets, this is an outstanding opportunity. If interested, call 650-704-3458 or email AVOSSJ95123@gmail.com.

SANTA BARBARA: Central coast 40+ years established OMS practice. Office located near a level 1 trauma hospital. Call 805-692-8500 or email drwelsh.oms@gmail.com with any questions. Price \$800,000.

SILICON VALLEY: Oral Surgery Practice seeks buyer to continue a decades long tradition of providing quality OMS services to a traditional referral base in San Jose, Los Gatos and Saratoga. Interested prospects can send a CV to molinelli@aol.com or call 650-347-5346.





OMSNIC MEMBER

Dr. Thomas Burk
Apex Oral Maxillofacial
Surgery & Implantology
Nashua & Bedford, NH

Defending OMS is our Priority

OMSNIC was created by oral and maxillofacial surgeons who understand what's at stake should a patient allege malpractice.

Claims are reviewed by a panel of practicing OMS thought-leaders, who understand complex treatment decisions. The panel meets regularly to examine claims and make an objective, collaborative, and thorough clinical assessment of the care and treatment rendered. Every decision is made with you and with one goal in mind: doing what's right for you.



ENDORSED



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