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# Proceedings from the OMS Resurgence Conference for resuming clinical practice after COVID-19 in the USA

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**Abstract.** The COVID-19 pandemic has altered and reshaped the delivery of oral and maxillofacial surgery (OMS) over the past few months. As the USA gradually lifts restrictions and re-opens, surgeons must adjust accordingly. Therefore, the *OMS Resurgence Conference: Safely Resuming Practice with a New Normal* was organized for 11 May 2020 to gather and disseminate expert opinions and recommendations for OMSs to thoughtfully resume work with efficiency and safety. This manuscript offers a summary of the highlights from the conference discussion.

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The novel coronavirus (COVID-19) pandemic has altered and reshaped the delivery of healthcare services over the last number of months<sup>1,2</sup>. Oral and maxillofacial surgery (OMS) is no exception to this trend, as it has been particularly affected by the postponement of surgeries<sup>3–5</sup>. While many surgeons remained committed to serving patients during these turbulent times, utilizing new tools such as telemedicine, OMS is an inherently hands-on specialty. Many patients require procedures that cannot be achieved through virtual means. As the USA gradually lifts restrictions and re-opens, many OMSs are undoubtedly

eager to return to caring for their patients in person<sup>6</sup>.

Therefore, the *OMS Resurgence Conference: Safely Resuming Practice with a New Normal* was organized for 11 May 2020 to gather and disseminate expert opinions and recommendations for OMSs to thoughtfully resume work efficiently and safely. The conference featured leaders from academic institutions, private practice, and representative organizations. Specifically, the conference aimed to share an update on the COVID-19 situation, including rapid testing capabilities, supply chains of relevant medical resources, and institutional criteria for

resuming surgical operations. In addition, the conference sought to offer strategies to protect the physical and mental health of patients, staff, residents and faculty during the resurgence process from the COVID-19 pandemic.

While rapidly emerging scientific evidence continues to improve the medical community's understanding of the SARS-CoV-2 virus, such as its risk of occupational exposure and potential of reinfection, much of the current evidence remains limited in strength<sup>7–9</sup>. As such, this manuscript contributes to the literature with a summary of the pertinent expert advice discussed during the conference to help

inform OMSs to safely resume practice during the COVID-19 resurgence.

**Institutional reopening strategies: Pushkar Mehra, BDS, DMD, MS, FACS–Boston University; Mark E. Wong, DDS, FACS, FACP–The University of Texas Health Science Center at Houston; Deepak Krishnan, DDS, FACS–University of Cincinnati Medical Center**

Reopening strategies must be tailored to institution size and structure along with local, state and national medical and dental governing agencies. Differing rules among institutional and governing agencies require close analysis while developing reopening strategies. Decisions on returning to clinical and operating room care, testing and personal protective equipment (PPE) are often made at the institutional level. At large multi-site institutions, resurgence plans are complex and must reconcile considerations from multiple groups. For example, OMSs at an academic institution often bridge the hospital system and the dental school. These two bodies tend to have different priorities and regulations that must be delicately navigated. As such, it might be prudent to reopen in phases, ramping up gradually while careful monitoring of the progression of the pandemic. Model projections may be helpful in this regard. Leadership must be firm in their vision but also open-minded to changing course based on new evidence. Moreover, programs should encourage clinical and basic science research endeavors to contribute to the scientific literature, particularly as public and private funding sources have not dwindled during the pandemic.

For more compact OMS departments, operations should also be in phases. It may be prudent to reopen the outpatient clinic before resuming operating room cases to ease into reopening. If rapid COVID-19 testing is not available, providers can ask patients to seek alternative ways of testing, such as at drive-through clinics in their community or at their local health department. Providers also should not feel obligated to retrofit their current offices with extensive features, such as a negative pressure room, because there is still much uncertainty about the best way to overcome COVID-19. It may be a more effective strategy to work at the nexus of practicality and evidence, adapting pre-existing protocols and resources for the new normal.

Regardless of size, though, all OMS institutions must prioritize safety during

resurgence. OMSs should screen their staff and themselves for COVID-19 symptoms. Also, appropriate PPE and disinfection protocols must be stringently observed. In addition, patients should be scheduled to arrive at staggered time intervals to avoid waiting room crowding. It may also be helpful to have patients wait in their cars until ready to be treated. All items should be removed from a waiting room except for chairs, which should be placed at least 6 feet apart.

**COVID-19 resurgence for private practice: Kevin Rieck, DDS, MD, FACS, President, The American College of Oral and Maxillofacial Surgeons**

OMSs in private practice should reference both official recommendations from governmental agencies and assess their local pandemic situation to determine a resurgence strategy. The following recommendations do not supersede the aforementioned guidelines, but rather can help inform strategy for reopening when it is appropriate. There are four steps that may be helpful. (1) Appoint a staff COVID-19 safety officer – the officer can be in charge of screening staff and patients upon entry to the premises. A COVID-19 screening form should be completed and documented into the electronic health record. The officer should also stay up to date with local, state, and federal guidelines on the pandemic, and in turn help coordinate appropriate measures to protect occupational health. Finally, the officer should ensure that infection and cleaning protocols are being followed. (2) Create a hygienic environment – staff should wear at least a surgical mask at all times, and clinical staff should use N95 respirators. Staff should also complete training modules that increase awareness about respiratory hygiene, disinfection, and PPE use. If feasible, enhanced air filters can be installed into the building to improve airflow. (3) Implement pre-appointment protocols – staff should be trained to call the patient before the appointment. During this time, staff can administer a COVID-19 screening questionnaire, complete forms, and instruct patients to go to the appointment alone or have an escort waiting in the car. Appointments slots should be increased from pre-COVID-19 levels, and patient arrival times should be staggered. Expanded use of teledentistry may also be helpful for consultations and follow-up visits. (4) Alter patient flow to minimize contamination and transmission – upon arrival, patients should be moved

into the operatory as quickly as possible. In the meantime, signs should encourage patients to maintain physical distance. Patients should be given a mask at the door if they do not have one and be instructed to wear the mask until treatment.

**Physician wellbeing and leadership in the COVID-19 pandemic: Richard F. Summers, MD, Senior Residency Advisor, Department of Psychiatry, University of Pennsylvania, Treasurer, American Psychiatric Association, Author of “Combating Physician Burnout”**

Stress and physician burnout are unfortunately common occurrence during the pandemic. Providers in the inpatient setting are experiencing significant physical stress amidst struggling against the influx of COVID-19 patients, disease transmission, and the lack of PPE. Providers in the private sector, while many are inactive, are experiencing a great deal of financial stress as experienced by many common businesses. The lack of in-office visits and testing has created fear and uncertainty of financial sustainability. With regard to physician burnout, surgeons in general tend to report higher rates of burnout than other physicians<sup>10</sup>. A recent internal survey of psychiatrists suggests that burnout may be associated with factors such as being female, lacking schedule control, and working in inpatient, community, and government settings. Burnout is also comorbid with depression, which is similarly associated with being female and lacking schedule control, as well as being younger. In addition to harming the physical and mental wellbeing of our healthcare personnel, physician burnout is also financially costly. Studies estimate that physician burnout cost the USA healthcare system \$4.6 billion in 2018<sup>11</sup>. As such, it is crucial for OMSs and their institutions to be mindful of provider wellbeing to prevent stress, burnout and depression during the COVID-19 resurgence.

There are several great resources for organizational and social factors for institutions to support healthcare personnel during pandemics<sup>12</sup>. Important aspects to focus on include training, equipment, camaraderie, communication, preparation, education, support, and growth mindset for the future. Similarly, there are resources available for crisis leadership<sup>13,14</sup>. These considerations include being present, communicating effectively, ensuring equipment, encouraging and practicing self-care, normalizing grief

and reactions, providing resources, and planning ahead. During the COVID-19 resurgence, there will undoubtedly be obstacles and struggles. It may be helpful for OMSs to reference the aforementioned resources to ensure their own physical and mental wellbeing, as well as that of their peers.

**COVID-19 testing—molecular and antibody testing: Irving Nachamkin, DrPH, MPH, D(ABMM), FAAM, FIDSA, Director of the William Pepper Laboratory and the Division of Laboratory Medicine, University of Pennsylvania, Perelman School of Medicine**

As of early May 2020, there are a multitude of methods that have been developed for rapid testing for COVID-19. These methods use biomolecular techniques, generally in the form of real-time polymerase chain reaction (PCR), to detect the virus primarily from respiratory samples such as nasopharyngeal swabs, nasal swabs and there is increasing research on the use of saliva<sup>15</sup>. Recent analyses suggest that nasopharyngeal or nasal swab testing methods appear to be the specimens of choice<sup>16</sup>. There is one current non-molecular antigen-based test, using nasal swabs, that is authorized for use under the Food and Drug Administration Emergency Use Authorization to use in an office setting<sup>17</sup>. Based on institutional experience, the current turnaround time for most rapid COVID-19 antigen tests ranges from 1 to 2 h.

There is much discussion surrounding the utility of antibody testing for COVID-19. IgG antibodies are accurately detected approximately 14–17 days from onset of symptoms or PCR test positivity. Currently, the use of antibody testing for the diagnosis of COVID-19 is not recommended. A positive antibody test should not be interpreted as evidence of disease immunity, nor should it dictate strategies for institutional safety and PPE usage. It is recommended that antibody testing is reserved for identifying plasma donors, assessing seroprevalence in specific populations, and studying seroconversion if a vaccine becomes available.

Despite the plethora of tests currently available and being developed, questions have been raised about their accuracy<sup>18</sup>. It is important to note that most if not all of the current tests were developed to test symptomatic patients. However, during the resurgence period, it will be just as critical to test for asymptomatic carriers. As such, these tests should be used and

interpreted with caution. Finally, no current test exists to test whether patients who have recovered from COVID-19 infection are immune to re-infection.

**Marketing strategies for OMS in the current environment: Ian McNickle, MBA, Founding Partner, WEO Media—Dental Marketing**

While private practice OMS is a primarily referral-driven business, effective online marketing can help augment patient volume. The COVID-19 situation, while disruptive, also offers an opportunity to get ahead in one's digital marketing strategy. There are six pillars of online marketing: website, search engine optimization (SEO), pay-per-click campaigns, online reviews, social media, and videos.

It is important for OMSs to not to withdraw from their marketing efforts in light of the COVID-19 pandemic. Instead, OMSs can consider modifying their online presence to reflect the situation. For example, it may be helpful to have a safety messaging section on the website, providing a short informational flyer or recording, to reassure prospective patients and referring doctors about the infection control protocols of the practice. OMSs can also add a virtual chat box to their websites to offer virtual consultations. Also, the COVID-19 situation may offer an opportunity for OMSs to improve their search engine optimization. Because many providers may have stopped their website, those who continue with these efforts may be able to boost their own rankings significantly. Relatedly, it is important now, as always, to keep a close eye on the online patient reviews, because they can have a big influence on whether a website visitor actually walks in the clinic door. In short, it is important for OMSs to adjust, rather than stop, their digital marketing efforts during this pandemic.

**Industry voices: Greg Bosch—Geistlich Pharma North America, Inc.; Alex Herzlinger—Deputy Synthes CMF/Johnson & Johnson; Patrik Eriksson—Nobel Biocare**

The COVID-19 pandemic affects the corporate partners who supply and support OMSs by changing how certain products are produced, marketed, and sold. In short, the supply chain of medical resources has been altered in a major way. For example, many OMSs may change their preferences for certain products, prioritizing aspects such as reducing patients' length of stay, reducing readmission rates, and improving

procedural efficiency. Despite a shortfall in medical revenue, these corporations have remained steadfast in supporting surgeons, by offering virtual Continuing Education (CE) courses and practical resources such as guides on reopening practices. There are plans to continue offering these virtual resources even after the pandemic.

**American College of Surgeons—resumption of elective surgery: L. Scott Levin, MD, FACS, Chair, Department of Orthopedics, University of Pennsylvania, Vice-Chair, Board of Regents for American College of Surgeons**

The American College of Surgeons (ACS) made recommendations to delay all elective surgery on 17 March 2020 to preserve healthcare resources in anticipation of the projected surge in COVID-19 cases. As the COVID-19 curve peaks and flattens, reinstating elective surgery is imminent due to surgical backlogs and revenue declines. Nevertheless, this requires a carefully strategized plan to limit a second wave of COVID-19 infection. To this end, the ACS has developed a guideline for surgeons to ensure the safety of elective procedures during the pandemic.<sup>[19]</sup>

First, resumption of elective surgery requires knowledge of regional and institutional COVID-19 epidemiology as well as local diagnostic testing protocols. It is recommended that elective procedures are reinstated following a decrease in COVID-19 incidence for over 14 days – consistent with the estimated incubation period of the disease. Diagnostic COVID-19 testing is recommended prior to surgery, but protocols vary based on state and institutional regulations. For instance, at the University of Pennsylvania Health System, rapid testing for COVID-19 is considered for every patient within 48 h prior to a planned procedure. Patients with a negative test can proceed with surgery whereas those with a positive test will have their surgery delayed for at least 2 weeks and require a repeat test. Despite advances in testing, surgeons must be aware that the false negative rate may be as high as 30 percent. A second test may also be considered given high transmissibility of the virus.

Second, the supply of healthcare resources at an institution must be able to meet the needs of surgical patient care. These resources include local facility capacity, healthcare workforce, PPE, and surgical supplies. An upsurge in surgical cases must not overburden the institution

from its usual levels of medical, emergency, and critical care. The supply chain should reliably allocate PPE to protect OR staff and other healthcare providers from virus exposure. There may also be staff shortages due to fatigue and burnout from overworking during the pandemic. A governance committee may be helpful in resolving potential conflicts in allocation of resources and devise a contingency plan.

Third, all postponed elective cases must be rescheduled using an effective prioritization system. An example of this system is the Medically Necessary Time-Sensitive (MeNTS) scoring system, which considers resource limitations and COVID-19 transmission risk to healthcare providers and patients. Each case is assigned to a MeNTS score and the operating room schedule is prioritized starting with the lowest score in ascending order. The score is summated based on 21 factors which fall into one of three general categories: procedure, disease, and patient. Each of these factors is scored on a five-point scale based on objective measures and perceived clinical probabilities. The resultant total MeNTS score ranges between 21 and 105 points. A higher value is associated with worse perioperative patient outcome, increased risk of COVID-19 propagation, and increased healthcare resource utilization. Upper and lower limit MeNTS scores can be assigned and adjusted in response to the operating room capacity and other resources<sup>20</sup>. At the University of Pennsylvania Health System, OMSs are required to calculate and provide MeNTS score as part of their OR surgical order requests. It is recommended that OMS in private practice adopt a similar scoring system that could be used to restart and prioritize backlog of office-based surgical procedures.

Lastly, surgeons must ensure patient safety and high-quality care throughout preoperative, intraoperative, and postoperative phases, utilizing standardized care protocols and quality improvement programs. The ACS will continue to provide unified guidelines for all surgical disciplines. A comprehensive list of clinical guidance is found at: <https://www.facs.org/covid-19/clinical-guidance>

**COVID-19: The American Dental Association's response and strategies for practice recovery: Chad Gehani, DDS, President, American Dental Association**

The American Dental Association (ADA) is committed to supporting all

dentists and OMSs during these turbulent times. The organization has three immediate goals: (1) give providers tools to navigate practice during the COVID-19 pandemic; (2) help providers return to work prudently; and (3) advocate for dentistry at the highest levels of government.

The ADA has a resource center that includes new updates, clinical seminars, and practical resources relevant to the pandemic at: [ada.org/virus](http://ada.org/virus). The ADA has also created a task force focused on helping dentists recover from the situation. This task force recently published the "Get the Return to Work Interim Guidance Toolkit" for dental providers, available at: [ada.org/returnto-work](http://ada.org/returnto-work). Finally, the ADA is advocating to both state and federal governments to rejuvenate dental practices and support dental providers during and after the pandemic. To date, enabling private dentists and OMSs to administer point of care COVID-19 tests remains one of the biggest challenges in dentistry. Other major issues that the ADA is focusing on include federal small business loans, expanding dentists' role in telehealth reimbursement, and expanding access to PPE.

**AAOMS initiatives update: Victor Nannini, DDS, FACS, President, American Association of Oral and Maxillofacial Surgeons (AAOMS)**

AAOMS has worked tirelessly throughout the COVID-19 pandemic to support and advocate for OMSs. In addition to creating a special page for COVID-19 updates and resources, AAOMS leadership have recently appointed a special committee for the resurgence effort<sup>21</sup>. The committee is focused on gathering evidence and designing strategies to guide OMSs to return to work. AAOMS has also expanded its social media presence to better disseminate resources to members.

On May 14, 2020, AAOMS released a document intended to provide OMSs with appropriate guidelines for returning to practice<sup>22</sup>. While OMSs must use their professional judgment in line with local and state regulations, the document includes the following practice protocols:

- Perform COVID-19 screening.
- If a patient has had a COVID-19 positive antigen test, delay elective treatment until 14 days after symptoms have resolved and the patient has a negative repeat test.

- Practice proper infection control protocol including using an EPA-approved disinfectant.
- PPE for aerosol-generating procedures include a face shield, FDA- or NIOSH-certified N95 mask, surgical gloves, surgical gown, hair cover, and shoe covers.
- Encourage patients to wear their own masks.
- Consider using a preoperative rinse with 1.5% hydrogen peroxide (1:1 dilution of 3% hydrogen peroxide) or 0.5% povidone iodine (1:20 dilution of 10% povidone iodine) for 60 s.
- Consider using a mode of anesthesia that reduces coughing and aerosol dissemination. When feasible, local anesthesia may be preferred over sedation or general anesthesia.
- Recover patients where the procedure was performed.
- Use telehealth postoperative visits over in-person visits as appropriate.

AAOMS has continued to vocalize the essential role of OMSs as first responders during this pandemic to regulatory agencies and governments at both the state and federal levels. These efforts aim to increase OMSs priority access to PPE and other medical resources. A recent internal AAOMS survey found that over 80% of members had closed their operations for all except emergency treatments, and 10% were closed completely. Of those who were closed, 78% would reopen if they had sufficient PPE. Going forward, AAOMS will continue to serve as a major resource for its members and equip them with what they need to make educated decisions based on their location, expertise, and conscience.

In conclusion, the *OMS COVID-19 Resurgence Conference: Safely Resuming Practice with a New Normal* provided best practices and expert opinions as OMSs prepare to resume practice in the new reality. This information can hopefully contribute to the growing evidence base that will aid OMSs in their decision making. It remains critical for the specialty to maintain open communication and share resources so all practitioners can take steps to safely and efficiently care for patients going forward.

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