Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

PERSPECTIVE

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The UIC COVID Coverage Protocol: A Technical Note for Pandemic Oral and Maxillofacial Surgery Call Coverage

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The COVID-19 pandemic has placed an unprecedented challenge on the global healthcare system. Working almost exclusively within the oral cavity, our unique profession places us at an increased risk of contracting respiratory infections compared with other healthcare workers.[1] However, our duty to our patients cannot be left unfulfilled, which challenges us to continue our emergency services while mitigating any risk of contracting or spreading such an illness within our patient population.

The University of Illinois at Chicago (UIC) oral and maxillofacial surgery (OMS) residency program consists of 6 full-time attendings, 17 residents, and several part-time faculty members. Although the occurrence of even a single COVID-19–positive team member would be devastating to our service, we are obligated to continue to provide clinical services to 4 hospital systems covered by our OMS program. To reduce the chance of COVID-19 spreading among our team members, we have devised a remote, team-based approach to ensure that patient care can continue even if one or more of our team members were to be compromised.

It is the duty of our OMS service to remain available 24/7/365 for emergency coverage for as long as possible. As COVID-19 threatens to overwhelm our healthcare systems, OMS practitioners are charged with reducing the burden placed on other emergency centers and, if necessary, to lend our unique experience and training in anesthesia and intensive care unit care to other medical and surgical services.

Basic Precautions for All OMS Team Members

Every member of our OMS team is expected to maintain and promote the recommendations of the Centers for Disease Control and Prevention for healthcare workers.[2] Compulsory hand washing, proper and judicious personal protective equipment use, and appropriate distancing between personnel (6 ft when not examining or operating on patients) are essential.

At present, all elective dental and OMS procedures have been postponed until the COVID-19 outbreak is better contained. For patients requiring emergency examination and/or treatment, it is prudent to assume COVID-19 infectivity until proved otherwise. N95 respirators, or equivalent protection, should be used when interacting with potentially infectious patients.[1] To extend the availability of respirators, a standard level 3 surgical mask, to be disposed of between patients, can be worn over a respirator.[3]

Team-Based Isolation

During the COVID-19 pandemic, our UIC teams consist of an attending surgeon, a chief resident, a senior level resident, and a first-year level resident. The upper level and intern residents are restricted to working only with members of their respective team at their respective institution. The teams are rotated every 3 to 4 days. Members of a single team are isolated from

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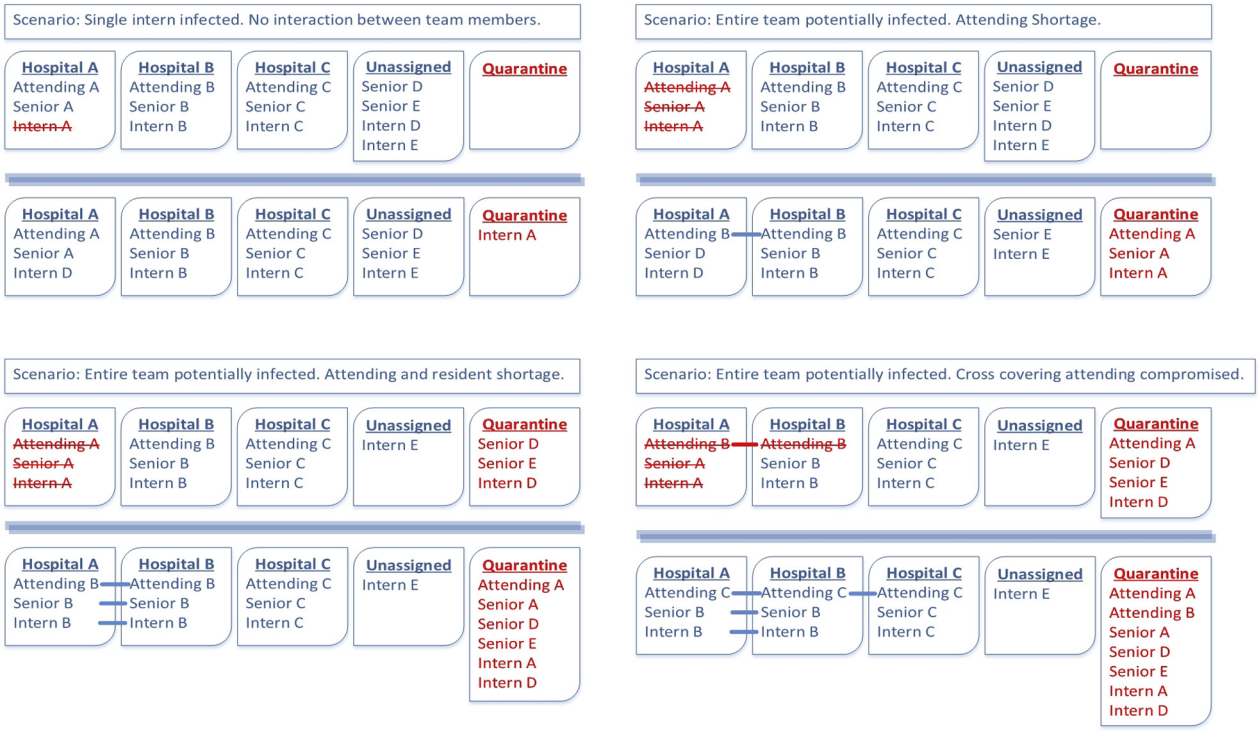

FIGURE 1. Select example scenarios. Reserve residents should be brought in as needed. Intern level residents should not function without an upper level resident. Attendings, available but working primarily remotely, will cross-cover as needed.

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each other as much as possible. Ideally, the intern level resident can function independently in treating chairside or bedside emergencies, thereby avoiding the potential exposure of the more senior team members.

Residents who are not on-call remain available but self-isolated in their homes (in accordance with Illinois requirements) and continue remote scholarly activities. When 1 team rotates off call, an entirely new team is called in, preventing cross-contamination. Normally scheduled conferences have transitioned to web-based remote platforms, and residents are encouraged to continue independent academic pursuits.

Urgent and Emergency Care

Patients are encouraged to use telemedicine before presenting for evaluation. Patients who describe symptoms consistent with COVID-19 infection, have recently travelled to areas with high COVID-19 burden, or otherwise are at a high risk of being infectious are directed to a center adequately equipped to treat infected patients.[1] Although highly subjective, patients describing nonemergency concerns are advised to not visit an emergency clinic facility. Patients with ambiguous symptoms might require evaluation, and nonscheduled medications can be electronically prescribed remotely.

The environment in which emergency care is delivered must also be considered. Waiting areas should allow for adequate social distancing. Only those presenting patients, with 1 guardian for pediatric patients, are allowed in emergency clinics. Examination rooms and operatory use has been staggered to avoid repeat usage in rapid succession. Emergency examinations and treatment are delivered in a manner that mitigates potential spread within the operatory environment.[4] Operatories should ideally be adequately isolated, well-ventilated, and able to be thoroughly disinfected. Finally, aerosol-producing procedures must be avoided, including extractions that could require use of a handpiece.

For inpatients, the same team will remain on for the duration of that patient's care. Assuming that all attendings are privileged at all locations of patient care, the attending with the least amount of current responsibility or specialized training will be selected to take ownership of a specific case. To limit usage of hospital resources, patients will be discharged on the day of admission (eg, isolated mandible fracture or dentoalveolar trauma), unless contraindicated. When possible, adjunct procedures requiring close follow-up will be discouraged in favor of appropriate alternatives (eg, no-chew diet preferred over intermaxillary fixation).

For oncologic patients whose care might not meet the level of an emergency situation but is nevertheless essential to their survival and outcomes, the oncologic surgeon must carefully consider which treatments must not be delayed, the expected burden on hospital resources, and the expected individual patient prognoses.[5] The mounting pressures on our healthcare system are being placed on patients at all levels of care.

Provisions for Infection Among Team Members

It might be unreasonable to expect that no member of our service will remain unaffected. Therefore, we have put certain redundancies in place to ensure that care can proceed in the event that 1 or more team members become compromised.

All team members who have worked closely with the affected team member should be mandated to a 14-day self-isolation period or other appropriate care before returning to the service rotation.[1] Assuming minimal interaction between teams, this exposure should be limited to, in the worst-case scenario, 1 distinct team.

A new team should be assigned to cover at the affected facility, after mitigation of the factors that could have contributed to the initial exposure of the other team. In the event of a staffing shortage, entire teams might be asked to cross-cover between facilities or a senior level resident might be asked to work without a junior resident. Specific examples are provided in Figure 1.

Attending surgeons represent the final line of defense for the OMS team and should be reserved for only those clinical cases requiring direct attending involvement. In the unlikely event that all attending surgeons require quarantine simultaneously, the entire OMS service could risk a complete shutdown.

In conclusion, the goal of our OMS team protocol is to maintain the provision of OMS services for as long as possible in the face of a worsening pandemic. Although cessation of elective surgical procedures has forced an unprecedented amount of "downtime," adherence to a specific protocol has allowed for OMS services to continue for those patients for whom our unique training and services are most needed. It has also allowed us, as oral-maxillofacial surgeons, with our excellent training in anesthesia and management of critically ill and trauma patients, to be an asset to our clinical facilities should our expertise be required elsewhere. As the COVID-19 pandemic continues to worsen, it remains our duty to continue to provide emergency services, be excellent stewards of existing healthcare resources, and mitigate the risk of our healthcare system becoming overwhelmed and exhausted of resources.

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