

# Orthopedics in the Era of COVID-19

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**A**cross the United States and around the world, the past several weeks have brought enormous changes to the way orthopedic surgeons practice. At our academic medical practice, all elective cases were cancelled or rescheduled beginning on March 16. Within a week, we had consolidated clinics, changed call schedules, embraced telehealth, and reimagined how we deliver care during the COVID-19 outbreak.

Intensivists, infectious disease specialists, and emergency department personnel are working on the front lines to diagnose and treat the sequelae of COVID-19. In some places with a heavy burden of patients, orthopedic surgeons have been asked to work in emergency departments or on inpatient services. However, even behind the front lines of this pandemic, there is a clear need for all practitioners to rapidly work to evolve our medical system and to care for patients safely and efficiently. We suggest that orthopedic surgeons can have a huge impact on community and individual safety by taking organized and thoughtful steps to safeguard their patients, their colleagues, and themselves.

## ELIMINATION OF ELECTIVE PROCEDURES

The first substantial change that has been broadly accepted is the elimination of elective procedures. This is difficult for all of us, as we are used to being responsive to individual patients. Our priorities must now include social welfare and provider well-being. Patients who are eager for surgery to relieve their joint pain or eliminate their radiculopathy may have to be told that our typical indications have been adjusted for an unknown period of time for reasons that include limiting exposure to patients by keeping them out of the hospital, protecting health care personnel to maintain

a healthy workforce, and conserving our diminishing supply of personal protective equipment.

At our institution, we have incrementally reduced our surgical volume to a point where only surgeries that help save life or limb and/or prevent long-term disability are now considered. Orthopedists not currently living in areas in which the virus is rapidly spreading may consider it premature to cancel elective surgeries and create an increasing financial burden to hospital systems. However, every action taken now will help mitigate disaster as COVID-19 spreads. It is crucial to act before situations become dire. By reducing our surgical volume by approximately 85%, our institution has managed to maintain a critical supply of personal protective equipment. We have also converted one of our busy ambulatory sites to a COVID-19 unit, with preoperative and recovery unit space being used for intensive care beds.

## TELEMEDICINE AND REMOTE HEALTH

As social distancing has become more critical, telemedicine has become essential. Through telephone calls or telehealth video exchanges, care can be provided to many patients without in-person evaluations. Although these interactions do not include a physical examination, crucial information can be obtained and treatment plans initiated. By offering patients a way to interact with us or discuss their problem, we demonstrate to them that we have not abandoned them and that we remain dedicated to providing care.

Our institution essentially has no history of using telemedicine to provide care. Telemedicine has had limited use by limited providers. Needing to rapidly transition to a new system, we used an organized process to implement telemedicine. First, providers reviewed their clinical schedules and made notes in the medical record system indicating which patients were appropriate for telehealth visits. Our scheduling team rapidly communicated these changes to patients and rescheduled them into dedicated clinical visits, with each provider choosing a day or time slot to conduct these visits. Our nursing and medical assistant teams as well as our scheduling team educated patients on

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how to access the technology necessary for telehealth. Finally, we have encouraged all patients with new problems who do not need to be seen in person to arrange visits with our mid-level providers, who are able to conduct such visits remotely.

### **LIMITING AND CONSOLIDATING CLINICS**

Among patients for whom in-person care is found to be necessary, screening by phone and in person for COVID-19 symptoms can help limit potential exposures to those in the clinics. Patients' temperatures are checked at the door and their symptoms are questioned. Still, we are increasingly aware that even asymptomatic patients should be considered to be positive.

An additional measure we have taken to limit workforce exposures and comply with social distancing is to transition from clinics by provider to clinics by specialty. As a result, in-person visits are limited to one subspecialist per week. This requires clear communication among colleagues, reasonable standards regarding which patients must be seen in person, and a dedicated team of administrators and schedulers. It has the additional benefit of building a system of redundancy among providers. As surgeons become sick, which is unfortunately almost inevitable, those colleagues who have been isolated at home and unexposed are able to continue clinical duties.

### **LIMITING VISITORS**

Another way to limit potential exposures is to limit visitors who are permitted to join patients in the outpatient or inpatient setting. Although this can be challenging, it can protect patients, families, staff, and providers.

Our institution has implemented complete visitor restrictions, with the only exceptions being for women giving birth, patients who have been made comfort measure, and one visitor for patients undergoing surgery. This may seem like a simple way to limit patient and provider exposure, but it brings with it enormously difficult choices. Family members of patients undergoing significant surgery cannot support them in person. Patients who are rapidly decompensating in the intensive care units may not be able to say goodbye to their families.

### **MAINTAINING A HEALTHY WORKFORCE**

Our institution has asked us to volunteer to cover inpatient medical services if needed. This is happening at many institutions affected by the COVID-19 crisis. As surgeons are drafted to provide general health care, the redundancy among colleagues and the system that we have developed will allow our patients to continue to receive necessary orthopedic attention.

Our institution has asked surgeons to complete surveys documenting their current skill sets. This pool is then deployed to medical or intensive care teams as needed. To this point, orthopedic

surgeons are primarily used as "spokes in the wheel" of a medical team. They can provide support services, communicate with families, and assist on inpatient and intensive care unit teams, without any specific additional training. Given the significant demands on the health care workforce, and the decrease in the volume of their own elective cases, orthopedic surgeons have an opportunity to provide much needed assistance to their colleagues.

### **ORTHOPEDIC URGENT ACCESS CLINIC**

Finally, orthopedics has a highly important role in maintaining the safety of our emergency department. We have been able to offer alternate-site urgent access appointments to patients who would otherwise be seen and treated in our emergency department. Our urgent access clinic offers same-day appointments to patients who need evaluation. It was implemented after discussions with the emergency department leadership led to their full approval and cooperation. In addition to triaging patients from the emergency department, we accept patients from the community who have urgent issues. Our scheduling center has the ability to direct these patients to the urgent access clinic once approval is received from the provider.

Although our orthopedic department did not have an urgent care or urgent access system, we were able to quickly implement this. By offering patients who do not have COVID-19 symptoms a place to come if they fracture their wrist, sprain their ankle, or sustain a laceration, we allow our emergency department colleagues to manage the influx of patients with respiratory complaints. We also maintain the safety of our patients by offering them a setting free of patients actively symptomatic with COVID-19 in which to be treated. We have received overwhelmingly positive feedback from patients and providers. Patients are grateful to be able to bypass the emergency department, which is on the front lines of this pandemic.

### **CONCLUSION**

Orthopedic emergencies will continue during the COVID-19 crisis. We will continue to perform life- and limb-saving surgery. As resources allow, we will continue to help patients with trauma or infections that would cause functional deficiency if not addressed.

Every action we take now may ultimately help to limit the impact of the pandemic in our communities. We recommend that orthopedic surgery practices eliminate elective surgery, consolidate clinics, employ telehealth visits, enforce careful screenings, limit visitors, and deploy urgent care sites for patients without symptoms of COVID-19. Other systems may have found other ways to change their practice, and further processes may evolve by necessity. We hope that by sharing our experiences we can help all orthopedic surgeons do their best for their patients.