Dr. O'Connor: Welcome to the Health Disparities Podcast sponsored by Movement Is Life. We're recording this on April 6, 2020. My name is Dr. Mary O'Connor. I am chair of Movement Is Life and Director of the Center for Musculoskeletal Care at Yale School of Medicine in Yale New Haven Health. I am also professor of Orthopedics and Rehabilitation at Yale. I'm looking forward to hosting today's discussion, which will, hopefully, help you, our podcast listeners, learn about how orthopedic care is being provided during this coronavirus pandemic. We all know the importance of staying home but people still have joint pain, get injured, people can still break bones. So, it's important to talk about how medical care is being provided for these conditions during this time of crisis. I also want to share with our listeners that we're creating and updating a guide to the best information links on the internet, during this pandemic. It's called the Safe and Strong Guide and it's a list of helpful links from trusted sources. It's very easy to get this guide. Just send a text to the number 474747 with the word podcast in the message. You'll get an automatic reply with a link to the Safe and Strong guide. Now, I'd like to introduce our three panel members. All are outstanding board-certified orthopedic surgeons, who are members of our Movement Is Life steering committee and have graciously agreed to share their time and expertise with us today. Dr.

Tamara Huff is a board certified, general practice, orthopedic surgeon and owner of Vigio Orthopedics in Columbus, Georgia. Welcome, Dr. Huff.

Dr. Huff: Thank you, Dr. O'Connor and hello everyone. Glad to be joining you all today.

Dr. O'Connor: Our second panel member, Dr. Daniel Wiznia is an assistant professor of orthopedics and rehabilitation and an assistant professor of mechanical engineering and material science for total joint replacement of the hip and knee both at Yale School of Medicine. Welcome Dr. Wiznia.

Dr. Wiznia: How, Dr. O'Connor. Thank you for having me.

Dr. O'Connor: You're very welcome, Dr. Wiznia. Finally, Dr. Charles Nelson is professor of orthopedic surgery at the hospital of the University of Pennsylvania and chief of joint replacement service at Penn Medicine. Welcome, Dr. Nelson.

Dr. Nelson: Thank you, Dr. O'Connor. It's a pleasure being here.

Dr. O'Connor: This is such an important topic. I wanted to get right I not questions with our panel. First, let's talk about what's happening during this pandemic for patients who need surgery, and I'm really, interested in what

your hospital is doing to adress this? Dr. Wiznia let's start with you and what's happening at Yale New Haven Hospital and in the health system.

Dr. Wiznia: So, it is very remarkable what's been happening at Yale New Haven Hospital. We made the decision, early on, that we would reserve all our personal protection equipment, the masks, the gloves, the respirator masks, the N95 masks for patients who really, need it. And, we were also worried about running out of supplies. So, what we decided to do was we canceled all our elective cases and were only conducting early surgery. This was a little bit controversial because a lot of patients are really inconvenienced by not having their surgeries, but the way our hospital came to this decision was that we wanted to be sure that vital resources, resources that would help prevent deaths and saves lives would be available for those who need it.

Dr. O'Connor: Thank you, Dr. Wiznia. Dr. Huff, what's happening in Georgia?

Dr. Huff: So, in my practice, I have the opportunity to work at multiple hospitals, but my hospitals are mostly rural. So, while I'm in Georgia, I also work in Kansas and Middle America and what we're seeing in smaller more rural hospitals is that we're continuing to practice some elective cases. We're definitely trying not to do as many as usual. However, we still are. One of the challenges for many rural hospitals is they're working on such small

margins to start with that if we completely stop all elective cases, we literally are losing revenue to the point that these hospitals may close. We've actually, already had one hospital close in Kansas since this whole COVID-19 epidemic started. So, in our hospital, we're definitely limiting our cases that have very frank conversations with our patients on whether or not they really do need the surgery, but we are still doing some elective cases and the hospital administration, as well as the department of public health, have made that decision go back to surgeons. We are the ones that actually make that decision here.

Dr. O'Connor: Dr. Nelson, what's happening at Penn Medicine in Philadelphia?

Dr. Nelson: Well, in about the middle of March, the health system made a decision to not have any elective surgical procedures performed or to see patients, in an outpatient setting, on an elective basis. That was ahead of where that was done in some other places, just in anticipation of the upcoming pandemic. So, they were very early in that process of really, trying to maintain resources for the anticipated spike in the COVID-19 patients. Prior to instituting that, all of our division leaders met with our department leadership regarding what we would consider urgent cases so that we would have it defined for each subdivision, and then, our chair would stand as the person to determine whether or not a case was sufficiently urgent that it should be done. We also stopped our elective outpatient.

We stopped seeing people in the office. We would see them, now, with either telemedicine or video visits, if they had non-urgent problems that we did not need to see in person. We still would see patients that were post-operative patients, where we needed to see their wounds, to make certain there were no wound related issues or patients that needed to come in for radiographs, those patients we would still see, but we definitely cutdown, significantly, both our outpatient evaluations, as well as our elective surgical procedures, but we did start to enhance trying to keep our patients, at least, keep engaged with our patients and be able to provide some care to our patients through virtual visits, through telemedicine or videoconferencing.

Dr. O'Connor: I'd like us to dive a little bit deeper in to the definitions of emergent and urgent surgeries, to help our listeners better understand this triaged process because all three of you have discussed that there is some type of triage going on with things certainly more stringent in New Haven and in Philadelphia, than what Dr.. Huff is experiencing in Georgia. So, Dr. Wiznia, tell us about how urgent and emergent classifications are being used in New Haven, Connecticut.

Dr. Wiznia: When we first started to think about reducing our case volumes, we were asked to prioritize cases that we thought were urgent cases versus emergencies. As the time is progressing, as resources have been

consumed, we're now only doing emergency cases. Now, what's the difference? An urgent case might be for a patient who has a fracture that doesn't necessarily need to be treated with surgery. They're in a lot of pain and the surgery would relieve them of that pain and discomfort. An emergency surgery is a lifesaving surgery. Our hospital has become so stretched that they are even limiting surgeries to patients with cancer if they're eligible to undergo another round of chemotherapy. So, we sort of use that definition of the cancer patient and surgery for the cancer patient as a line in the sand, and then, every surgical discipline has to really, say, well, how can I compare my case to that cancer patient who may not be getting surgery. That being said, any cancer patient who needs emergency, lifesaving surgery is getting surgery.

Dr. O'Connor: Dr. Nelson, how does that description that Dr. Wiznia gave us fit with how you're applying triage criteria in Philadelphia?

Dr. Nelson: It is a spectrum and different people interpret what is urgent or emergent differently. So, for some people they may consider it urgent because they've been in severe pain for a long period of time. They can't walk, but, generally, in our institution that's probably not going to cut mustard for doing surgery, right now, in the middle of this crisis. However, currently, we're still doing someone with an acute fracture that still requires fixation. If someone falls and has a hip fracture, there is a high level of mortality if

those fractures aren't fixes relatively quickly. So, those patients, at least at this time, are still getting surgery. If we have somebody who has a redo type of situation where there is really, bad bone loss to the point that there's an impending fracture, those patients, at our center, are still getting surgery. As we get more and more COVID-19 patients, somebody may actually need to have a fracture and have surgery. And then, at some point, it may get to the point where even if you have a fracture, you still may not be able to get the surgery, depending on the resources that are available. It is a changing situation and it really depends upon where we go with this pandemic. I think the fortunate thing is it looks like things have started to flatten in the Philadelphia region with the social distancing, a little earlier than they did in the New York Metropolitan Area and, hopefully, we don't get into a severe, catastrophic situation. Really, it really depends upon, there are limited resources everywhere and it really depends upon what care we can safely provide in trying to preserve the lifesaving care for those patients that really need it with this pandemic, as well as other lifesaving conditions that come on in just every day practice of medicine.

Dr. O'Connor: Dr. Huff, I want to turn to you and have you share with us in a little bit more detail, again, what kind of triage is occurring and your experience in your area, which is more rural and rural focused and how you're doing with PPE, personal protective equipment, because that's certainly been a

driver at other large centers for limiting elective surgery because these large centers have to preserve the PPE for COVID positive patients and healthcare providers that are taking care of them. So, what's happening, literally, in your neck of the woods?

Dr. Huff: Currently, I'm practicing mostly in Kansas and Kansas has been one of the states that has been least affected by the COVID crisis. Now, part of that is issues with testing. In our particular county, we only have two cases in the entire county and these cases were just positive this weekend. With that in mind, we have still been very mindful of PPE. We do have the N95 masks here. We also have been screening all of our patients before they come into the hospital both with a thermometer for checking your temperature, as well as your symptoms. We're also checking all of our staff when they come in, as well. Starting this Monday, we are actually asking patients to wear masks, as well. All of the staff has the option of wearing masks, but they have not started all the way. Right now, our PPE supplies are just fine. We are starting to use N95 masks for surgical procedures, especially, for anyone that's getting general anesthesia or if there's any chance of sedation. Also, as far as surgical procedures, we're definitely trying to be mindful of the AAOS guidelines and the American Academy of Orthopedic Surgeon guidelines on what is urgent, just like the larger centers are, but, ,again, we also have to be mindful that we don't

have as many cases and if we do not do anything, the potential ramifications of that, as well.

Dr. O'Connor: I want to ask about testing. I know our listeners have heard a lot about testing and they've heard about testing that's not available, but we're making progress, and I think it would be very interesting for our listeners to just get a snapshot from each of you as to your perspectives on where your centers and locations are with testing, and lets first start with testing of patients who get admitted to the hospital either because they're sick with perhaps COVID-19 or they're sick with another condition or they're admitted because they fell and they broke their hip. Dr. Nelson, what is your testing protocol in Philadelphia?

Dr. Nelson: I believe that it's changing but, we are, basically, following the CDC guidelines, as they are changing. Anybody who has any suspicion for COVID should self-isolate and contact their physician and have their physician determine whether or not testing is appropriate and, ideally, contact their physician virtually, so they're not coming into a health system and putting others at risk. So that is the initial plan. If there is a good rationale based upon the CDC guidelines for them to be tested, then, we are recommending that they be tested. Penn has setup testing centers both downtown, as well as in suburbs that are drive-in testing centers, and they also have the rapid testing available that is being done in the facilities

themselves, particularly, when there's high risk patients where diagnosis is critical or where healthcare workers are potentially infected and could pass on infection to others. So, those processes in place, and they've been ramping up the testing. I can't tell you the exact numbers. I was trying to look at the most recent numbers on my phone, but they've been ramping up that testing.

Dr. O'Connor: Dr. Nelson, thank you and I know all of us are living in a time that's very fluid with things changing, basically, on a day-to-day basis. Dr.. Wiznia, your perspective and knowledge of the updated testing protocols for patients who are admitted in the Yale New Haven Health System.

Dr. Wiznia: Within the hospital our capabilities for testing are a little bit limited in that we're able to test about 400 patients a day. Now, this is also augmented by additional testing that we have access to from the Mayo Clinic. Our internal testing that we try to conduct is limited because of the reagents that we're consuming that all labs across the country require to do these tests that are in short supply, and because those reagents are in critical shortage were limited based on the delivery time. We also do have access to rapid testing and that rapid testing is reserved for two different populations. One, the healthcare workers and, two, high priority patients where a critical, immediate answer may influence their treatment.

Dr. O'Connor: Dr. Huff, what's the testing like in your area for patients being admitted to the hospital?

Dr. Huff: If you come into the hospital with symptoms, so if you have close contact with someone that's had COVID-19, or if you have been in a hotspot, outside of the state of Kansas or in the state of Kansas, in an area that has known cases and have a fever along with low respiratory symptoms. Then, you meet our criteria as far as getting tested. Now, the whole process is very fluid. Up until recently, you still had to get a respiratory panel before you could actually be tested for COVID-19. Since then, that has changed and those requirements are changing, it seems like hourly. So, I don't whether or not that's required. We do not have the rapid test that can be back in less than an hour or so, but, in general, it's coming back within two to three days. In the interim, if your symptoms seem to be COVID positive, of course, we isolate you and do all the typical personal protective standards.

Dr. O'Connor: Dr. Huff, just detail for our listeners what is a respiratory panel?

Dr. Huff: Absolutely. So, that would include checking to see whether or not you have the flu. Also, checking for other viruses that can be potentially causing this besides COVID-19.

Dr. O'Connor: Very helpful. I just want to, perhaps, provide some reassurance to our listeners. What I'm hearing from all of you is that if someone comes into the hospital, if they're in some type of accident, we'll just say a car accident, and, even before COVID-19, that person needed to go to surgery, as an urgent or emergent patient, emergency surgery, those patients are still getting the same kind of emergency surgical care, now, as they would have received prior to the pandemic, which is correct, Dr. Huff?

Dr. Huff: Yes, absolutely.

Dr. Wiznia: I would say in most situations, yes, but there are some situations in which, if you were in a trauma and there is an acceptable treatment that's not operative, that has primarily been treated operatively, in the past, we are now seeing nonoperative treatments being used in place, in some instances.

Dr. O'Connor: Understood. If someone in New Haven was in a major car accident and they needed surgery, right then, to save their life.

Dr. Wiznia: Lifesaving surgery is, of course, being given to those patients.

Dr. O'Connor: Right. So, I just wanted to reassure our listeners that for those patients that are coming into any of these for care, any of these three orthopedic surgeons' practice, lifesaving surgery is still occurring, which I think is important for our listeners to understand, but, then, after that we kind of get into a little bit more of the gray zone and the challenging area where patients that are urgent patients, for example, a hip fracture patient where we know that we operate on almost all those patients and it's very important for them to have timely surgery and not have surgery delayed because delaying surgery on an elderly individual with a hip fracture will increase the chances of them dying. So, in general, those patients are still getting general surgical care in a timely manner. Can I just poll everyone on the panel?

Dr. Nelson: Yes.

Dr. Wiznia: Yes.

Dr. Huff: Yes, absolutely.

Dr. O'Connor: So, then, it's the patients that come and have let's just say an ankle fracture or a wrist fracture that pre-COVID-19, the surgeon would have said, "Yes, I recommend surgery in a few days." Those patients are now

being handled in a different manner. Dr. Wiznia, I just want you to confirm or refute that.

Dr. Wiznia: I agree with that. Those patients are being triaged differently and if those patients do not require surgery, the treatment plan is nonoperative treatment.

Dr. O'Connor: So, Dr. Wiznia, just for my clarity, I think what I'm hearing from you is that given the pandemic, the surgeons are considering nonoperative treatments, probably, a little bit more strongly than they would have in the past. Is that an accurate statement?

Dr. Wiznia: That's an accurate statement and what we're also seeing is some patients, actually, would prefer nonoperative, that there's definitely a risk being in the hospital around patients that might be able to spread the disease, healthcare workers, who unknowingly are sick and spreading the disease. So, we are also noticing some patients saying, "You know what? I would rather delay the surgical care down the road and revisit this in six to eight weeks."

Dr. O'Connor: Yes, Dr. Nelson, has that been your experience with elective patients, as well, in Philadelphia?

Dr. Nelson: Well, I think elective patients, yes. So, I think there's a spectrum. I think at Penn we still are probably, surgically treating more injuries where the outcomes are significantly, adversely affected by delays in treatment because we still had enough room that the pandemic had not reached the point where those procedures cannot be performed. It becomes a gray zone. I would say like a wrist fracture, I think, in the past, was often treated nonoperatively with pretty good successful outcomes, increased stiffness compared to good surgical fixation, maybe a little more deformity, but they healed and they typically happened in elderly patients, and those patients are probably at higher risk for being hospitalized with COVID-19. So, you could make a very rational argument for not treating a risk fracture surgically during this pandemic. A hip fracture, on the other hand, the likelihood of mortality is much higher, as well as a femur fracture where the disability is more likely to be much more severely impacted, if it's attempted to be treated nonoperatively. So, those things, in our center, are still being treated surgically.

Dr. O'Connor: Dr. Huff, I want to get back to you, again, about rural hospitals. I, personally, have a lot of concern about how we're going to continue to provide access and care for patients in rural America. We know there are a record number of closures of hospitals in rural America. I mean we've seen that in big cities, too. For example, Hahnemann University Hospital in Philadelphia, but I think that people may not be as aware of the crisis of

hospital closures in rural America and that millions of Americans live in counties where they don't have access to an intensive care unit, for example. My concern is that we're starting to see more, I'll guess, a spread of the virus into the heartland, and as we see that, our rural hospitals and rural healthcare system is going to become even more stressed than previous to the pandemic. I just would like your thoughts on my concerns.

Dr. Huff: Well, I share a lot of your concerns. In rural America, the demographics typically skew older and there are issues with transportation. So, with the idea of an older population that does have difficulties with transport, it is really, important to keep the local hospitals going. Many times, just a 15-minute Dr.ive is a major concern for them because they don't have public transportation options. Also, too, my patients joke, they have been social distancing from the beginning. So, they live maybe several miles away from another neighbor or, if a hospital does close, they may have travel 20, 30 miles, sometimes, even, one to two hours to get to that level of care somewhere else. With that in mind, with the spread of COVID-19, we run into the problem of the patients that are older, that have comorbidities, are a lot of times in the heartland, are the highest risk patients in this population. So, they don't want to come out. They don't want to necessarily have surgery, unless they absolutely have to, so that greatly decreases the number of patients we're seeing and that actually affects

the bottom line of these smaller hospitals, which makes them even more financially insoluble, than they were before. So, I find that in the area where I'm practicing, now, and other places where I'm practicing and where I have colleagues that are practicing, there is that very fine line of what can we continue to do safely to service our patient population, but, at the same time, protect them from the threat. We want to have a hospital still available for them. So, come six months from now or however long from now that the Coronavirus is no longer a threat, we still want to have a hospital there, and if these smaller hospitals do steps where they stop seeing all clinic patients except for post-ops or stop seeing all patients except life of limb threatening surgical patients, they won't be able to open back up. The risk of closing and not opening back up is a major, major concern for these smaller facilities. There's actually an excellent article in The Guardian, I believe came out yesterday about this. Another great review of how this is affecting these smaller hospitals, especially, even in other states like Washington State where they've had major outbreaks in the larger centers but not in these smaller local areas.

Dr. O'Connor: Thank you, Dr. Huff. I want to follow that theme of access and ask Dr. Nelson, and then, Dr. Wiznia about what is happening from your perspective about uninsured or underinsured patients in Philadelphia and New Haven, respectively, because as you've described, your centers have gone to virtual visits. There's been a dramatic decrease in patients

actually being seen and everything is being kind of deferred as much as possible. What about patients that normally have challenges with accessing care, even in the best of times? Dr. Nelson?

Dr. Nelson: Yes, so, I think Penn has always been pretty good about providing care to patients who are underinsured and indigent and the really vulnerable patient population that some of the other facilities in our city are a little more reluctant to take care of. I don't think that has changed but I think all patients are having less access to medical care for nonurgent issues. So, if somebody has knee pain or hip pain or shoulder pain or back pain that's chronic and longstanding and they may have been able to get an appointment for evaluation of that in person, now, those patients are really, going to be able to get that evaluation only virtually, at this point, during this pandemic in order to try to protect the health of the patients that are in our facilities, as well as the healthcare workers who may be needed to take care of the victims during the crisis. So, like I said, early on, in the middle of March, there were decisions made among the leadership at our institution to try to make certain that not only the PPE resources, but, also, the bed resources, ICU's, the ventilator resources, and healthcare worker resources would be available to meet the needs during the pandemic.

Dr. O'Connor: Thank you, Dr. Nelson. Dr. Wiznia, would you like to comment?

Dr. Wiznia: One thing, in particular, I've been very interested in is our patient's ability to receive testing for COVID out in the community and we did a study looking at whether uninsured patients were able to obtain COVID testing in their community urgent care centers. Now, an uninsured patient, when approaching one of these urgent care centers, they're being told that they will have to pay for the test. We know that there's a federal law that says that insured patients, their insurance is going to cover that testing cost, but for the uninsured patients, we don't really know how much the testing will cost. So, when an uninsured patient goes to a center and they're told, yes, we can test you, but we don't know how much it's going to cost, it's very hard for someone who is financially limited to agree to have the test done in the first place. We have seen that become an issue at these urgent care centers.

Dr. O'Connor: I just want to follow that thread for another moment. For that uninsured patient, however, if they were to come to Yale New Haven Hospital or a hospital in that health system with symptoms that were of concern for COVID-19, would that patient be tested at our hospital, even though they don't have insurance?

Dr. Wiznia: That patient will be tested and will be treated. The hospital does not have a policy in terms of treating patients regarding their insurance in this acute

period, but it's a real issue out in the community and for communities that don't have access to institutions who are given this free or discounted care. There's a large number of uninsured workers, for example, construction workers, cooks, grocery and retail people, and a lot of these patients don't receive insurance with their jobs. Then, when they first seek out the testing, they're told that they're going to be financially liable for the testing. That leads to a lot of uncertainty whether, first of all, are these patients even finding out whether they were infected, are infected and whether they need to be quarantined appropriately. So, it adds a lot of additional risks to the community at large, if these patients are afraid to be tested given the unknown financial burden.

Dr. O'Connor: Dr. Wiznia I was just imagining an individual like that who has been laid off from their job, has a family to feed at home and concerned whether they're COVID positive or not and going to a center and being told what you're describing. Well, we can test you, we're going to send you a bill, but we don't know exactly what that bill is going to be. Of course, that's, in my personal opinion, completely messed up. I mean if we're going to control pandemics, we have to be able to test people and one of my personal hopes is that as we get through this current pandemic, we'll be able to make some important decisions and proactive planning that will put us in a much stronger position for, unfortunately, what would probably be our next future pandemic. I want to turn to the topic of physician stress and

surgeon stress. I just commented about stress to individuals and I think all of us understand that. Very stressful for patients, very stressful for their families. I have a patient that I'll be operating on tomorrow with a hip fracture. I just spoke to her daughter earlier today who was crying on the phone because she can't go in and be with her mother, which, of course, is very stressful for all involved but I want to ask each of you to comment on the stress that you feel that surgeons are encountering as we step up to take care of patients during this pandemic. Dr. Huff, I'll start with you.

Dr. Huff: I think, as a surgeon, part of how we treat patients is providing comfort. Those intangible things, sometimes it is just the interaction that you have with patients. Right now, with the coronavirus and maintaining safe and appropriate distances, having the proper protective equipment, it is a challenge to have that connection with patients. I also feel that it's very stressful for patients, if they have to have surgery, not being able to have a significant other present. Even though that's not directly affecting me, I feel that the onus, as a surgeon, is a little bit more on us to be that bridge, to be that supportive person and that can take a lot out of you, especially, if you're doing something like a hip fracture or an emergent case like we were talking about where it's an elderly patient, or an isolated patient that's use to having a spouse there or a daughter or someone else there with them and it's just you and that patient. They really, they need you more and you find yourself giving a little bit more. Again, I feel that it is

very, very important during these times to take time out for yourself to remain grounded. If you're a spiritual or religious person, tapping into those resources, whether it be meditation or actually attend online services to kind of keep my spirits up because it can. Your staff, right now, our staff, our patients, are all looking to us, as surgeons, to be that grounding factor, even down to the point of whether or not they'll have work the next day and it is important to take a step back and keep that personal peace and calm, so you can share that and be that rock for everyone else.

Dr. O'Connor: Thank you, very well said. Dr. Nelson, how are you dealing with the stress of the pandemic and how do you think your colleagues are?

Dr. Nelson: I think it's tough on everyone. I mean we're all Type A personalities. We like to be very, very busy. We like to take care of the patients and it's very difficult when we're not able to care for some of the patients that we'd like to care for. And then, obviously, there's some of the emergent and urgent types of cases, and I think Dr. Huff very nicely outlined some of the concerns there where family members aren't able to come into the hospital, now, in order to maintain social distancing and minimize the likelihood of spreading the pandemic, but this disease is really a very, very traumatic disease for families because of that inability for people to bound, when their loved ones are in the hospital and in the ICU on ventilators and

they don't get that time with their family members. I think this is one of the most difficult conditions that as health professionals, we've been involved in. I mean, fortunately, I'm not someone who works in the ICU or in the ER seeing that type of thing on a daily basis. I'm taking care of patients, right now, with musculoskeletal injuries, but there may come a time, even at our institution, if the pandemic becomes large enough, I mean I know there are orthopedic surgeons in Italy essentially working the ICU because of the need, and I know friends of friends who are in that position. It is a very trying and stressful period for everyone including all Americans and our patients, as well.

Dr. O'Connor: Dr. Wiznia, how are you and your colleagues dealing with the stress of this pandemic?

Dr. Wiznia: So, first thing is I have just shutoff the news because I think the new stream, the continuous barrage is stressful. It's anxiety provoking. What I have done is really focused all my energy on trying to assist the hospital with preparing for the pandemic. Through the School of Engineering, I've been working with two teams. One, trying to improve the system, so that we can treat multiple patients on one ventilator, and we have a system in place, and we are about to conduct testing. So that's taking up a lot of my time and the second has also been coordinating with a group who is trying to produce personal protection equipment, masks, gowns, we made

available to the medical staff, and that's been a distraction to me. The other thing I found is family and friends have been reaching out to me, asking me how I'm doing and it's been a great opening to rekindle some relationships, to find a little bit of time to call folks that I haven't had the chance to speak to, and speak to them, not just about the pandemic, but how their doing. So, we've got to try to see, if there is one silver lining here, it's that I have seen an incredible community at Yale band together, the research, faculty and put all of the systems together to prepare for this pandemic. If anything, it's been very uplifting and humbling to see so many faculties invest so much time and energy to prepare the institution.

Dr. O'Connor: Dr. Wiznia that was an excellent response. Panel, I'm going to ask you one final question, which is what's the best advice that you can give to our listeners so that they avoid that fracture and they don't need urgent or emergent orthopedic care during this horrible pandemic. What is the most sage advice that you could give our listeners? Dr. Huff?

Dr. Huff: Don't try anything new. This is not the time to go buy a table saw. This is not the time to go clean your gutters for the first time. We are having an epidemic of distal radius fractures, of metacarpal fractures.

Dr. O'Connor: Wrist and hand fractures, I'm just translating as you go.

Dr. Huff: Oh, I'm sorry, wrist and hand fractures. This is not the time to do those new things. This is the time to be with family. If there are things that you enjoy doing, this too shall pass. Take the time to enjoy those things but, please, please, please, do not go get a table saw. Do not do anything wild and crazy during this time because you can put yourself into a situation where you'll need our services, sooner rather than later.

Dr. O'Connor: Dr. Wiznia, advice for our listeners.

Dr. Wiznia: To really be careful when you go out shopping and going to the stores. Make sure you observe the social distancing. Make sure you're wearing a mask at all times. Make sure that you wash your hands when you come home. If you're careful, you can reduce spread of the disease and there's a good chance that you won't catch the infection. Also, you've got to be active. You can't stay at home watching TV the whole day. Make sure you're up and walking about your house. If you have a safe place to walk outside, I encourage you to do it and make sure you are observing the social distancing rules if you do go outside.

Dr. O'Connor: Excellent. Dr. Nelson?

Dr. Nelson: So, I'll follow-up on both Dr. Huff and Dr. Wiznia's comments and what I would say is social distancing is critical and washing your hands

frequently, not touching your face, that is very, very critical to not getting the virus. Wearing a mask also will decrease the likelihood of spread to others. These things are being highlighted on an hourly basis on the news. I think the other thing that's important is I think it is important to try to do things and be busy both for mental health, as well as, physical health, but you don't want to rush. You want to be efficient with your activities, but you don't want to rush. When you rush, that's when you fall down the stairs and break an ankle or you break a hip or something. You want to be thoughtful in your movements and I would agree with Dr. Huff, don't take up a new hobby, but it's okay to be careful doing some of your old hobbies, if you're going to be at home and fixing up your home, but, again, it's probably not a good idea to be on a ladder leaning over, and it's probably not a good idea to take up a table saw, if you've never used one before, but there is the opportunities for people to do things together at home, social distance and just don't rush, be careful and think about what you do before you do it.

Dr. O'Connor: Excellent, Dr. Huff, you had another comment.

Dr. Huff: Yes. Activity and movement is still very important and part of the part of our bones staying healthy is movement and weight bearing type activities. So, right now, we're not going to be, necessarily, out running. Hopefully, you're somewhere where you can safely walk and run. If you are in an

area where you're not, making sure you're still moving, but also making sure you're taking something like vitamin D and calcium to keep your bones strong during this process. Vitamin D and calcium are great for bone healing, heaven forbid, if you have a fracture, but, also, a good way to keep strong bones to help prevent fractures from happening in the first place. So, again, stay safe, stay active. No table saws. Stay off the ladders, but, also, do other things to keep those bones nice and strong with like the calcium and vitamin D. It's important, and you'll hear me say calcium and vitamin D. Many people know that calcium is a very important building block for bone health, but calcium does not work unless you have vitamin D. Vitamin D is actually what helps your body absorb the calcium and build that calcium into bone. So, that's why you may have heard your physician or if you've been in the vitamin aisle, you always see those two together. So, it's important to get calcium and the vitamin D, which a lot of times you can get from the sun, but we're not out as much as usual. So, it's great to get them together, so you can actually absorb that important calcium to make your bones stronger.

Dr. O'Connor: That's excellent. So, I'm going to just summarize for our listeners some of these bullet points of advice. One, now is not the time to go buy a new power tool or take up a new activity that you're not comfortable with because we're seeing an increase in orthopedic surgical injuries from people doing activities at home that are higher risk; falling off ladders,

table saw injuries, etcetera, and this is, obviously, not the time that anyone wants to get injured. Number two, keep moving. If you can walk outside and it's safe, great do that, but keep your social distance. Remember, it's important to be paying attention to your bone health because patients that are getting surgery in this COVID-19 pandemic are, for example, people that fracture their hips and we want the risk of a hip fracture to go down, and it will if your bones are strong. So, calcium and vitamin D and as Dr. Huff said, you need the vitamin D, so you can absorb the calcium. I love Dr. Wiznia's suggestion for our mental health, which is don't listen to the news 24/7 because it's just, I find it personally, I agree with Dr. Wiznia, it increases my level of anxiety. So, I think that is really good advice, Dr. Wiznia, to our listeners. I'm just going to ask everyone for some closing comments but before I would do that I want to remind our listeners that they can receive a link to our Safe and Strong Guide by sending a text to 474747 with the word "podcast" as the message. I'm just going to ask our panel for any closing comments they might have for our listeners, as orthopedic surgeons, something important that you would want to share. Dr. Wiznia?

Dr. Wiznia: I have a few points I'd like to get across. One, if you think you're sick, stay home, even if you suspect it's not the coronavirus, stay home, so you don't infect others. If you have any suspicion, you should get tested. This will help make sure that you're quarantined and anyone who was exposed

to you is quarantined, so that they aren't spreading the virus. Know that there is federal legislation that is supposed to give our uninsured individuals free testing. That it may be inconsistent, but I imagine, after the pandemic resolves, the billing will also get straightened out. So, if you aren't able to afford the testing that federal legislation is supposed to cover that testing fee. Make sure that you're following all the guidelines, wearing the mask, washing your hands, not touching your face. If you're responsible, you can actually save lives and you can prevent others from getting sick and not being available to help.

Dr. O'Connor: Dr. Wiznia, thank you. Dr. Nelson?

Dr. Nelson: I think Dr. Wiznia put it really, really well. I think the keys are social distancing, frequent handwashing, protecting yourself and protecting others and, really, finding that humanity of really, having that concern for everyone else. If you're sick, stay at home. Don't go to your doctor's office. Call your doctor and see what your doctor recommends. If your doctor, after speaking with you recommends testing, then, get testing and, as Dr. Wiznia mentioned, there is legislation that should cover the cost of that testing because it's really in everyone's best interest, nationally and internationally, that would beat this virus and that the people who are infected know as early as possible, so that they can be quarantined and help protect us against the spread of this devastating disease.

Dr. O'Connor: Thank you, Dr. Nelson. Dr. Huff?

Dr. Huff: I echo everything that's been said before. Just, again, stay safe by staying home and washing your hands regularly and being encouraged. This whole, all of this will pass eventually. So, just keeping a healthy mindset and keeping your spirits up is probably one of the most important things that you can do during this time period.

Dr. O'Connor: Panel, I want to ask the question, as if I'm a patient that was going to have joint replacement surgery because of my terrible hip or knee arthritis, and we know that there're so many patients out there because we do, in this country, one million hip and knee replacements a year. So, given the fact that these patients, who are considered elective surgeries, have been deferred. So, the patient who was on your schedule, for example, Dr. Wiznia, to have a knee replacement has been called and been told, "I'm sorry. We're going to have to reschedule your surgery." What is the best advice you have for your patient, as they're no waiting and still in pain and still having significant symptoms? How do you advise them to manage in this time of crisis?

Dr. Wiznia: So that's a great question, Dr. O'Connor. When I told patients and I've got to tell you it's been hard because I called all my patients who I had to

delay their surgery and I explained to them that we also have to see it as an opportunity. An opportunity to optimize yourself for an elective surgery, so then you can actually be healthier than you're going to be. You can lose weight. You can make sure that you fully stop smoking. You can continue to control your blood sugar and improve your blood sugar if you have diabetes. There's always an opportunity to be a healthier patient. Being a healthier patient will reduce the risk that you have a complication. So, there could be a silver lining there in that it does give patients a little bit of extra time to be optimized.

Dr. O'Connor: Dr. Nelson, what advice would you give that patient that I described that you had to reschedule, delay, cancel their elective surgery, for now?

Dr. Nelson: Well, I think we have to be empathetic and understand that they're experiencing a great deal of pain and it's very, very difficult for them and we work hard to try to help them understand that we really care and that their pain is important to us and helping them get over their pain is important to us. Unfortunately, there's no way for us to completely solve their pain, which is the reason we're planning on doing the joint replacement in the first place. However, there are things that they can do to optimize themselves, as Dr. Wiznia mentioned, weight loss, stop smoking and work on trying to be as healthy as they can be. They can also work on trying to modulate their pain to the best of their ability by

trying to strengthen the surrounding muscles, but in a way that they're not putting too much stress across the joints. So, nonimpact conditioning that's not putting tremendous stress. So, for a knee problem, you may do some straight leg raises, where your leg is completely straight and you're working your quads as you're lifting your leg up and down, but you're not bending the knee during that activity. As the muscles get stronger that can also help them recover faster after surgery, when they ultimately have the opportunity to undergo surgery, and it might help modulate their pain some. There's also a number of different both medications, as well as, different types of nutritional supplements that some people feel help them with their pain. Tylenol is the safest of the medications, but it's not as effective as the anti-inflammatory medicines, which are a little more effective but have more side effects. Then, there are things like glucosamine, chonDr.oitin sulfate MSN, which makes some people feel a little better. There are also some topical remedies such as voltaren gel and different anti-inflammatory topical solutions that, in some cases, may help modulate people's pain, but it is a challenge. Now, we're not even bringing patients in for injections because they're trying to avoid people that are elective situations in the office. However, somebody has really, severe, disabling pain, occasionally, we may bring them in to try to help with an injection, as we're not bringing too many people at risk by bringing those patients in.

Dr. O'Connor: Dr. Nelson, share with our listeners the advice that you would give your patient who has severe arthritis, who is scheduled for joint replacement surgery that now has to have their surgery delayed because of this pandemic.

Dr. Nelson: That is a very, very challenging problem and it's something that we are facing on a daily basis, now. There's a lot of our patients who are really, really suffering and we feel for them. We want them to be pain-free, which is one of the reasons that we offered them joint replacements in the first place and, unfortunately, we don't have a nonoperative cure for severe arthritis, but I would recommend that they do what they can to try to modulate their pain to the best of their ability, strengthening the surrounding muscles and doing it in a way that they're not putting excessive stress across their knee. So, for example, if you're talking about a knee problem, you could do straight leg raises where you're strengthening your quad muscles. That can help you recover, faster, after surgery and it doesn't put a lot of stress on your knee, as opposed to somebody trying to do a squat where they're strengthening their muscles but they're putting a lot of stress, especially, across their patellofemoral joint under their knee cap. Also, in those cases, we would discourage people from that type of exercise but recommend exercise that is less stressful on their joints. If people have access to a swimming pool, exercises in the water are an excellent way of unloading joint, getting

movement, getting some mobility of the joint, without putting on excessive stress. Then, there's different types of medications that people can take. Tylenol is what I would recommend because it's very, very safe. Some people talk about anti-inflammatory medications like Aleve or Advil, but given that we're in this COVID-19 pandemic and there is some evidence that these may increase the risk of mortality in patients who develop COVID-19, right now, I personally would not recommend that as a treatment for my patients. Then, there's other supplements like glucosamine, chondroitin sulfate, MSM or other topical remedies that can sometimes be helpful.

Dr. O'Connor: Dr. Huff, do you agree with that approach advising your patients, right now, to avoid the anti-inflammatory medicines like Aleve and Motrin and Advil and using Tylenol?

Dr. Huff: To a point. That's one of the most common questions I get, right now, is it safe, and many of these patients were very well managed on the anti-inflammatory prior to this happening. Thus far, I've been giving them a very similar talk to what Dr. Nelson is saying that, yes, if you develop COVID or coronavirus, there are potentials for significant interactions and complications if you're taking an anti-inflammatory and if you have any symptoms or are around anyone that has symptoms, then, you should probably stop taking it. However, I am not really, advising them to stop

taking it because it's helping them so significantly. Also, too, at my facility, we have a little bit more flexibility as far as treating people with steroid injections. So, we still are bringing a good number of people in for steroid injections to help with the pain, so we can get them through this period and, hopefully, get their surgery much later on in the year.

Dr. O'Connor: We know that we're advising patients to stay home, social distance, don't go out, but for people that are staying home, do you have any advice on resources for them?

Dr. Huff: Absolutely, there are various different resources but, first of all, given that you're on this podcast, we do have a Safe and Strong Guide. You can text the word "podcast" to 474747 and, again, you want to send the word "podcast" as the message. That's, again, 474747. That is a resource that has joint-friendly activities that you can at home with minimal, additional equipment. There are also resources online through the American Academy of Orthopedic Surgeons that are free, as well, at www.orthoinfo.org.

Dr. O'Connor: Doctor, I love the plug for our Safe and Strong Guide. I want to thank the members for their time and expertise. I am excited about sharing this podcast with our listeners and the valuable information and advice

that it contains. So, everyone stay well and stay safe out there. Thank you very much.

(End of recording)