# Health Inequities in Joint Health Care

**Monica Peek:**

Hello and welcome to a very special podcast that is part of a series I am leading on diversity, equity, and inclusivity with CME Outfitters. Today's CMEOcast is entitled “Health Inequities in Joint Healthcare.” I'm Dr. Monica Peek, and I am a Professor of Medicine and the Associate Director of the Chicago Center for Diabetes Translational Research. I'm also the Executive Medical Director of Community Health Innovation and the Director of Research at the McLean Center for Clinical Medical Ethics at the University of Chicago here in Chicago, Illinois.

I would now like to welcome Dr. Antonia Chen. Dr. Chen is the Associate Professor of Orthopedic Surgery at Harvard Medical School and the Director of Research of Arthroplasty Services at Brigham and Women's Hospital in Boston, Massachusetts. Antonia, I'm honored to have you joining us today and I'm excited for our discussion.

**Antonia Chen:**

I'm honored to be here too. This is a fantastic topic, and I'm very glad that we're highlighting this area.

**Monica Peek:**

I want to remind our audience that the CMEO podcast is a continuation of our initiative to address unconscious bias, health disparities, and racial inequities. We’re building a comprehensive library of educational activities addressing these important issues, and today's activity continues the discussion in chronic pain and joint health. The titles of the activities in this series are on the slides and links—you can simply click on the images to review any of those programs. If you participate in at least three of the programs in our D&I hub, you will also be eligible to receive a digital badge demonstrating your commitment to education on diversity, equity, and inclusivity.

So let's jump in with our learning objective for today's program—analyze the influence of unconscious bias, health disparities, and health inequities on joint healthcare. So let's start by giving a quick overview of some of the many conditions related to joint health and pain. Antonia, can you set the stage for us?

**Antonia Chen:**

Absolutely. This is my area that I enjoy. So the area that I interface with the most is arthritis and that comes in multiple different flavors, including osteoarthritis, rheumatoid arthritis, psoriatic arthritis, and can actually result from gout as well too. But there's multiple different areas when it comes to joint health that are important—autoimmune that affect certain gender groups and certain ethnic groups differently, connective tissue disorders, osteoporosis, but also tickborne diseases, especially on the East Coast, like Lyme disease, osteomyelitis, Paget's disease of bone, rickets, sickle cell disease (SCD), tendonitis, and many more that actually affect people's health and their joint health and it can affect their mobility.

**Monica Peek:**

Thank you for that. And one thing I'll just note for our audiences as a reminder, some of the things that predispose you to having some of these diseases may be related to underlying social factors. Like rickets is a result of malnutrition and certain deficiencies of nutrients and tendonitis is often related to overuse injuries that

people may have from being a laborer for employment. And so some of the kinds of arthritis that you may be seeing or that I may be seeing as a primary care physician may be the result of people's social circumstances as well as the exposure to certain medical conditions.

So as we begin to address joint health disparities, I also want to review some foundational points regarding historical racism that can help us all remember how we got here. And this is some of the things that we've done in previous programs to cover these topics in depth. Those programs can be found on our D&I hub, and I just want to recognize that we'd be doing a disservice if we didn't just take a minute to think about some of those larger issues, some of these groundwater issues that we always have to address when thinking about any chronic disease.

And so thinking about how structural racism and inequities may be affecting bone and joint health, we think about some of the ingrained elements. So things like unequal access to housing and education, how higher exposure to poverty and crime leads to... Or other things like decreased access to basic human conditions like fresh food, clean water. Increased exposure to bad things like toxins and pollutants in the air, the water, the soil, all of those things that can directly impact people's health. And then we also add into there healthcare provider bias. These lead to or are associated with in indirect effects.

So unequal healthcare access, deviations from standard of care or unequal delivery of healthcare, increased rates of depression, anxiety, and PTSD that may be seen when people are exposed to toxic environments, let's say. And then elevation of stress levels. And we know that chronic stress from a variety of conditions, including poverty, racism, discrimination, and other things, triggers the set of pathophysiological changes in your body, which can lead to a number of poor chronic health outcomes.

And then we think about the long term effects, which can be a decreased retention in the healthcare system. So these are just some of the pathways which we know operate in general and which set the context for our discussion today in thinking about bone and joint health.

So Antonia, let's focus in, now that we've been screened out, let's focus in on joint health and let's talk about how some of these disparities may be demonstrated in your area of expertise and what ethnic and racial variations do we see in orthopedics or joint health that we need to be aware of?

**Antonia Chen:**

I feel like that you're taking a systemic approach to all this because I think as a physician, especially as an orthopedic surgeon, I see a very myopic view of this. And what I've noticed and what studies have shown when it comes to race and ethnic disparities within joint health specifically, for example, as patients who are underserved come later. So what happens is patients, for example, with osteoarthritis, they don't come when it's early stage. They come when it's debilitating, and they can't ambulate anymore. And no longer is it just affecting their joints, it's affecting their cardiovascular system, it's affecting their pulmonary system because they're not ambulating and doing activities of daily living that they normally do.

The hard part is also cultural competent care. Things from an ethnic perspective, a lot of times people don't want surgery. So, few studies actually explore these disparities, but cultural competent care is you need to meet

patients where they are. They may have had a relative who's had surgery and didn't do well, or they've heard horror stories about surgery. So understanding and meeting patients in that context is actually very important. A lot of times, there's a recent study actually in our main journal, which is the Journal of Bone and Joint Surgery. And in it we found that most studies actually don't report on race or ethnicity or socioeconomic status, which is vital because whether or not something can translate to other patients when we look at these studies. And again, we have to be able to ensure to look at our own biases, which is obviously very important. We have our own implicit biases, all of us do, and we have to be able to examine the patient and meet them where they are as opposed to where we think they should be.

And the thing when it comes to joint health too, is there's also predispositions, predispositions with regards to comorbidities such as diabetes. So for example, Black adults, 60% are more likely to receive a diabetes diagnosis and because of that, they actually can lead to lower limb amputations. And that happens because patients are showing up with later stage or end stage disease. And when that happens, the only option really is amputations for some patients. And that's really devastating for patients, especially if they're laborers, especially if they need their limbs to work and it's just a cascade effect on the rest of their lives as well. You can also see that SCD also occurs worse in Black infants and Hispanic Americans. And the idea with severe joint pain is African Americans and Hispanic Latino Americans report a higher amount. And the harder part with that too is there's again, confounders that come with it. Confounders such as being more laborers or being more active on their feet and things like that, and that can actually affect joint health.

Unfortunately, they're less likely to receive not just opioid medication, but just management in general, right? Patients are often dismissed because of that. So they can be dismissed because they say, well, you should live with the pain or you're just drug seeking or things like that become really problematic for our patients, and they don't actually get the pain relief that they need to feel better in order to perform and actually address their joint health. So these are all problems that are full in when it comes to joint health and looking at race and ethnicity as well.

**Monica Peek:**

Thank you for all of that background. It's very, very interesting to see how consistent some of these themes are between other chronic diseases and joint health as well.

Are there differences in the clinical diagnosis and arthritis attributable activity limitations (AALs) among patient groups?

**Antonia Chen:**

There is. So just talking about race and ethnicity as a broad category is not enough, as you can imagine. You've highlighted this as well too. You can see the breakdown of different individuals, and you can see the incidents and the effect of their arthritis-attributable activity limitations—basically, how much does their arthritis limit what they can do? And you can see it's pretty significant to go different, not different racial groups and ethnic groups. And because of that, again, that affects their socioeconomic status or how much they can work, or what they can do, and how they contribute. And those are the tough parts about it too. So you don't want to look at an

 

individual just as a general group of… You want to look at their race, you want to look at their specific ethnicity, to be able to address it more accurately.

**Monica Peek:**

I like that term, arthritis-related activity limitations. And it goes back to your comments about certain populations, certain racial and ethnic minoritized populations, not getting adequate pain control. So their activities would be less limited if their pain was better controlled. And there is just a large body of evidence that show that physicians have biases and false assumptions that patients of color are more likely to abuse opioids when that's actually not the case. The data has not borne that out. But because of that, that may be driving some of the practitioner behaviors and being less likely to treat with opioids and to try and mitigate some of the pain, which then drives some of these activity limitations, which you had mentioned earlier, can then go on to have cardiopulmonary effects. If you're not moving around, we're always telling people get up and move, you need to exercise, expand your lungs, it's good for your cardiac health. But if people are not able to do that because of pain, then it has much broader implications for their overall health.

**Antonia Chen:**

And not just their health, actually, it affects their income as well; it affects their socioeconomic status. If a patient can't ambulate, they fall into a disabled category. If they went to a disability category, you can't garner the same socioeconomic status potentially if you weren't disabled. And there's clear studies that show that as arthritis decreases, income does increase, and if you have that, we can look at poverty rates in the U.S. are higher in Native American, Black, and Hispanic groups compared to White groups. And that is directly correlated with disability and that becomes a really big problem. And that also has a cascading effect. So in my field, I do total hips and total knees. So if you're lower at socioeconomic status, you're also less likely to undergo surgery. And if you can't get the surgery to help improve your disability, then you stay in a disabled state for a longer period of time. It's a self-fulfilling prophecy for these patients, and it really hurts them. And not just hurts them, right? Hurts their families, their friend group, their network and everything like that.

So it has a cascading effect on all these individuals. And that also potentially can correlate with things like opioid use, right? We are all trying to move away from opioids to try to reduce pain. And if you have prolonged opioid use, those can actually be problematic because they are associated with things like lower income, lower education, even actually in this case it'd be White race. And that becomes problematic because that can actually inhibit people or debilitate people from that meaningful case.

**Monica Peek:**

All excellent points. Can you talk a little bit more just about the role of the manual labor on joint health?

**Antonia Chen:**

That's the hardest part I see with my patients. And it's heartbreaking, right? They come and they're like, "I just want to give back to work, I just want to get back to what I'm doing." But the hardest part is if you have a more manual job, it's harder to get back to that manual job if you have poor joint health. And unfortunately, labor

 

intensive jobs are disproportionately held by racial and ethnic underserved populations. And the hard part about multiple different triggers that can do this. So for example, lupus is one, right? We talk about autoimmune conditions. And autoimmune conditions can disproportionately affect certain individuals. And because of this, because it's underserved populations, they're not getting the treatment that they need. They're not getting either the autoimmune medications or the biologics. They're more expensive, they're harder to come by. So they may be diagnosed with it, but they can't actually get the treatment that they need.

Rheumatoid arthritis is another one. Patients who have rheumatoid arthritis have much higher risk of disability. Unemployment is higher. And because of that, again, if you're a manual laborer, that becomes much harder on your joints. If you're not a manual labor, you can potentially live with lupus and potentially with rheumatoid arthritis and still perform the activities that you need to do to get your job completed. But as a manual laborer, it becomes almost impossible.

**Monica Peek:**

I think that is one of the most interesting things about this kind of a chronic disease, is how much it disproportionately affects people's ability to do the kinds of work that so many of racial and ethnic minority populations are disproportionately already doing. Whereas if you have diabetes, for the most part, you can still continue working, if you have other kinds of disease. But when you have a really severe joint disease, like you said, it breaks that cycle of, or there is a cycle of income, and work, and disability. And like you had also mentioned, it spreads throughout the social network, that when you are lower income, that income tends to be spread amongst the family. You're less likely to be caring financially for yourself as opposed to yourself and others. And so, when one person is out of work, that affects many more in the family. It has a disproportionate effect on family finances. So this is really something that I think is overlooked when we think about health disparities and the impact on the community.

So we've talked a fair bit about how marginalized patients may have a delay in diagnosis, which can lead to greater disability, and we know that lower income persons have worse joint health. But I want to talk a little bit more about diabetes. And you had mentioned that earlier when you were talking about limb amputations, and a lot of the work that I do is in diabetes. And we know that in this country and in many countries, we say the diabetes epidemic is being chased or pushed by the obesity epidemic.

And obesity is something that is a primary driver, as you know, of osteoarthritis. And so it's pushing both of those things forward. But what's driving obesity, a lot of times, is the built in social environment that these populations are being forced to live in. Environments where there is more physical crowding, less green space, less space where there are structures for physical activity that's low costs or that's affordable, where there's fresh fruits and vegetables, where there are community fitness classes, parks, sidewalks, where people can just naturally ambulate within the community.

And so we talk about obesogenic environments as far as what's available for food and exercise. These are ones where racial ethnic minorities are more likely to live, then setting them up for increased risk for joint disease, increased risk for diabetes, and those two feed off of each other.

Antonia, I want to cover another area, which is telehealth, age, and surgical care. And so can you talk a little bit about what the data is in those areas?

**Antonia Chen:**

Something that really came to light amidst the pandemic, which is really scary actually to see. So we all went to shut down, and we all were excited that we could use telehealth so that we didn't have to completely cut ourselves off from patients. And we realized that a great number of patients did not have access to what they needed in terms of access to their health care, access to physicians, access to healthcare workers, et cetera. And that came through telehealth. For example, Black patients are 35% less likely to use telemedicine versus White patients. And we saw this actually in our patient reported outcomes. We have a patient portal, a patient gateway. Patients didn't have access to phones, to tablets, to laptops, and because of that, their chronic conditions got worse; their joints got worse. The normal care that they would've gotten if it weren't for the pandemic fell to the wayside. Either they were afraid of getting COVID, which was totally understandable, or just didn't have access to the providers that they needed, which is really tough to see.

Patients get affected by that too and the problem is, as time goes on, it just widens the barriers between patients and that just gets worse and worse. And the hardest part, as you can imagine, is underserved populations. In the beginning, their severity of osteoarthritis is worse, but they're less likely to get surgical care—either they don't have access to it or they don't feel that they want to undergo it because they don't understand it. So it becomes a disparity that keeps, again, feeding itself because you don't have the resources to be able to talk to others about what potential options there are for treating your joint health specifically in this area. And because of the Black, Hispanic, for example, post-menopausal women in terms of total knee replacements and total hip replacements are less likely to undergo total knee replacements compared to their White counterparts.

So again, the treatment that they would need, they don't actually get. And that comes in disparities in surgical interventions. That's also true even in hip fracture surgery, which is crazy. Hip fractures are not elective procedures—hip fractures happen from trauma, you end up in the hospital. And sometimes there's been studies that showed that Black patients have disproportionately lower rates of surgical interventions if they sustain a hip fracture. And we know that with hip fractures, if you don't undergo surgery, your rate of mortality and morbidities can be worse, especially within one year after surgery. So undergoing surgery is actually very important for patients, especially in hip fracture surgery.

It's also true for total joint replacement patients as well too. Black patients, especially those with comorbidities, have a higher rate of complications after surgery. And if patients have a higher likelihood of having complications, more than likely patients won't undergo outpatient surgery. And outpatient surgery has been found to be safe and effective for not having been to the hospital environment. So White patients have less outpatient total hip replacements. And that's a problem in patients because again, we want to offer in the best care, especially in the era of COVID. During COVID, we only performed outpatient surgery for a period of time. So a large swath of patients did not get the surgical procedures that they needed in order to improve their joint health.

 

**Monica Peek:**

So that's a lot for us to chew on and think about. Let's switch gears and think about how we can tackle some of these problems that you've just laid out for us. How can we address some of these barriers? We've talked about the issues, so hopefully we're making all the healthcare providers more aware of what we have on our plate and the current disparities that we see. And so let's shift to educating our audience on easy things that they can do—easy—to improve the care of our patients that are not fully served, our underserved patients, and all patients actually. So what can you tell us? What advice do you have?

**Antonia Chen:**

This is a tough one, but the more important one, right? We've done a lot of studies looking at what are the problems, but identifying the problem is only half the battle. It's actually only a part of the battle. The bigger part of the battle is trying to make changes with it. So part of it is the planning process. Integrating, making sure that you screen patients, discuss [with] patients, and there's other resources that you probably know better than I do for sure. So now how you can identify resources that are available to patients that we can actually incorporate in the [electronic medical record] EMR. So as a provider, I don't always think about it when I see a patient, right? If it was incorporated in my EMR, it pops up, then I can address it at that time. A big thing for us, and especially in the surgical world, is pre-operative patient optimization.

So for a lot of patients, they probably were told, I'm sorry, you have a lot of comorbidities, come back when you fix them. And then... Well, that's not very helpful for patients. How do we assess patients prior to surgery, optimize them so they don't have the complications such as infections, or DVTs or deep vein thrombosis, or other things that can cause problems in patients. Can we correct factors beforehand and work alongside patients as opposed to just sending them away and saying good luck. These are areas such as obesity, diabetes, smoking. Can we give them social support, a good home environment so they can recover well from surgery? And even just talking to the patient about surgery as well too. What does a surgery entail? Do you need to go to rehab after surgery? I spend a lot of time talking to my patients like going home is actually great, but it really depends on their home environment.

If they have a big family environment that can help out for them, which isn't true for a lot of these families, then that can be helpful. But if they're the caregiver of 10 different people in their family, they can't get home because if they go home, they're going to be put to work right away and they need to recover. So taking that in consideration for the pre and postoperative periods. And then just in general, asking patients. You want to see what are problems with getting treatment. What are problems with doing follow -up and following medications, right? Because if they don't do that and address it, then their joint health can't get better over time.

**Monica Peek:**

Those are excellent, excellent pearls and advice for our providers. Patient education is also vital to improving outcomes for the patients that we see. We want to make sure that they're empowered in their care. Are there patient resources that you use in your practice. Do you have any stories that you can share on how you integrate that into your practice and how it's impacted patients?

 

**Antonia Chen:**

So the hardest part is actually just giving patients access to resources. So we talked about before how telehealth is a problem. So there are websites that are useful for some patients, but if patients don't have access to the internet, they can't get access to them, such as MyArthritisRx. It actually creates a network and basically a resource and a community for patients with arthritis to talk to one another, tell them what works and things like that. And telling them what exercises helped me, this is what I've taken in terms of food or medication, and this is the doctors that I've seen, and things like that. Movement is Life is also a great platform as well because it raises awareness to try to advocate for patients to advocate for themselves and be able to use the right terminology and basically giving patients background as to what really is about their joint and their joint health.

So those are resources that I like to use. One of the big things that we've done actually is shared decision making. So in the past, decision making between a physician and a patient was a physician telling a patient what to do, saying this is what I think you need next, and that's it. End of story. There wasn't really a discussion about whether to undergo a total hip replacement or to undergo a total knee replacement. But shared decision making is something that's become more popular over time, which is great. And the idea is the focus on shared, right? It's a shared decision between the physician and the patient in trying to make a decision together, whether it be non-operative care or operative care. So we've been using shared decision making aids here in our practice for some time. And the first question on the front page of it says, “Are you ready for surgery?”

And for some patients, that's great. For a lot of patients—especially Black, Hispanic, Asian patients—the answer is no, I'm not here to discuss surgery. I'm in a lot of pain. Let's talk about ways to make my pain better. And so it's nice, we have a shared decision making aid team go through non-operative and operative treatments. And one of the feedbacks that came from our patients that said, while this is nice, these are good shared decision making aids, I can’t identify with the individuals in the actual shared decision making aid by pictures, by video, et cetera. So we actually put together a short clip video for shared decision making aid featuring different groups of people with different ethnic groups, different races. And the idea is that, can patients identify with them? Can they identify with different physicians as well? Because it's not a one size fit all. Studies have shown that patients like to see physicians or healthcare providers that they can identify with. And this is what this offers to do by doing the shared decision making aid.

**Monica Peek:**

You know what I really liked about what you said? I liked it all, but that you were reframing how you presented the options to the patients and to include a larger range of options so that people came in and saw the spectrum of things that may appeal to them. And so it wasn't just the binary of surgery versus not surgery, it was more open to a range of things that may be more salient to what their interests are, pain control or something else. And so that was great. Thank you so much for that.

This has really been a wonderful discussion. And so let me put today's discussion into actions that we can all do to provide more equitable care.

First, identify health disparities that may impact the joint health of each patient, including recognizing unconscious bias, asking patients about their prior health healthcare experiences, doing an assessment of their

social determinants of health. Think about their age of the onset of their joint pain and how that may relate to their disability. What is their occupation? Ask them to share back with you so that you can hear and understand that you ensure that they understand you.

Next, when developing your treatment plan, make sure to consider comorbid disease and how that impacts joint health and outcomes. Can they walk? Do they have a place to exercise? Can they afford a gym or even have a means of getting to a facility for physical therapy or exercise? What's their social structure, and will their family be supportive?

Finally, let's make sure we use our entire care team and that it's involved in helping to educate and empower our patients. Ensure your teaching materials reflect diversity and take into account the unique needs of a diverse patient population. Offer materials in different languages and make sure your care team reflects the patients that you serve.

And one last point, take a minute to connect with your patient. Look them in the eye, be empathetic, and show your true concern and desire to help them. It'll go a long way to making them feel valued.

Antonia, any action items that you would like to add?

**Antonia Chen:**

That's hard to beat. That's a fantastic list and something small can always be said is, telehealth, people may not have access to this. Have paper copies of things, be able to hand out physical paper because A, patients like to feel it. Patients go home and read it and mark it up. And be sure to have those in different languages as well too. I think we're all guilty of that only where it's either having be only one or two languages but have multiple languages if possible, that people can address and also be willing to reach out to other family members. I have definitely FaceTimed or audioed with other people and during a visit because they're there, they're listening to you, but they're scared. They may not absorb everything. A lot of patients have networks, and with those networks they want other people would have ears and listen to it. So be willing to take a number down and call them afterwards or connect with other people besides just the patient themselves and I think they'll really appreciate that.

**Monica Peek:**

Absolutely. Bring the whole family team.

**Antonia Chen:**

Exactly.

**Monica Peek:**

If not in that visit, then at another time.

 

Thank you so much. This has been extremely helpful. I just want to thank Dr. Antonia Chen for joining me today and to remind our audience that you can join me here from more CMEO podcasts, live webinars, case discussions, and more, including an upcoming CMEO BriefCase in joint health care. You can find out all about the upcoming live events and view previous ones on the D&I hub at the link here. Here are just some of the topics we have covered so far, and we'll be adding new content every month and we really want to hear from you, our audience, on what you need so we can make an impact on these important issues.

Please email us at questions@cmeoutfitters.com with your comments and feedback. We assure you, we read every email and we really appreciate your feedback.

Please remember to collect credits for this activity by using the apply for credit button on your screen.

Again, thank you, thank you, thank you Dr. Chen. What a pleasure. What a pleasure of having you for your input today. And thank you to our audience for all your work in providing equitable and holistic care to all patients around the globe.

 