

Sprains, Strains and other Pediatric Sports Injuries

Heather Barnes and Angela Vanderpool lead an interactive discussion on a variety of pediatric sports-related injuries.



Featured Speaker:

Angela Vanderpool, MSN, ONC, CPNP | Heather Barnes, APRN, CPNP, DNP, ONC

Angie is an APRN III in Orthopedics at Children's for over 12 years with a focus on Sports Medicine. She has certifications in Pediatrics and Orthopedics. Her practice covers sports medicine, orthopedic trauma injuries and some general orthopedic problems. She is a member of NAON (National Association of Orthopedic Nurses) serving on the Foundations Committee, PRiSM (Pediatric Research in Sports Medicine) and Chair of the Membership Committee also participating in NAPNAP and POPS.

Heather has worked as an APRN in the orthopedic and sports medicine clinic for approximately 9 years. She has worked at Children's Mercy for almost 15 years (all in orthopedics). Her practice is a mix of orthopedic trauma and sports medicine injuries. She recently co-authored with Angie Vanderpool a chapter in the journal Nursing Clinics of North America in 2020 titled Advances in Sports Medicine and Care of the Adolescent Athlete. She has presented podium presentations at the National Association of Orthopaedic Nurses (NAON) annual Congress's as well as the Allied Health day at the American Academy of Orthopaedic surgeons annual Congress. She recently served as chair of the NAON Chapter Advisory Committee and serves on the communications committee for Pediatric Research in Sports Medicine Society. She is currently serving on the Children's Mercy Advance Practice Review Council.

Transcription:

Trisha Williams (Host 2): Hi guys, welcome to the Advanced Practice Perspectives. I'm Trisha Williams.

Tobie O'Brien (Host 1): And I'm Tobie O'Brien. This is a podcast created by Advanced Practice Providers for Advanced Practice Providers. Our goal is to provide you with education and inspiration. We will be chatting with pediatric experts on timely key topics and giving you an inside look at the various Advanced Practice roles at Children's Mercy.

Host 2: We are so glad that you're joining us today. So sit back, tune in and let's get started. We are back from a little summer break. Today, we will be hearing from two APRNs from the Orthopedic Clinic, Angie Vanderpool and Heather Barnes. They're going to chat with us today about kids and sports injuries. First off, welcome to the podcast ladies.

Heather Barnes, APRN, CPNP, DNP, ONC (Guest): Thank you.

Angela Vanderpool, MSN, ONC, CPNP (Guest): Thank you.

Host 2: You're so welcome. Can you guys give us a quick little snippet about who you guys are? Give us the inside look on who Heather and Angie are.

Angela: Well, I'm Angie, I've been at Children's Mercy for a long time, greater than 30 or 35 years. I've been in orthopedics almost 30 years, in numerous different roles. And about 12 years ago, I went back and completed my nurse practitioner degree and became a nurse practitioner in orthopedics with the intent of helping found the Sports Medicine Clinic.

Host 2: Fantastic. What about you, Heather?

Heather: So I'm Heather and I have been working at Children's Mercy. I initially started back in 2001 as an orthopedic clinic nurse, and I've had a few travels that have taken me away from Kansas City in that timeframe. But I've always been in ortho. I completed my masters and nurse practitioner degree with Angie back in 2009, working in orthopedics and recently returned to work in the sports medicine department approximately five years ago or so as an Advanced Practice Nurse in sports medicine, and ortho.

Host 1: Great. Well, it sounds like you guys go way back, really?

Angela: A long time.

Host 1: A long time. Oh, well, good. Well, tell us a little bit more about the sports medicine clinic and how the APPs sort of function in the sports medicine clinic if you can.

Angela: Our role was kind of created when we kind of came up with the idea of the sports medicine section. It was identified somewhere around 2007, 2008, that we had an awful lot of sports injuries. They were occurring more and more frequently in kids and they were being treated in the adult world. And as we're referring out more people, we realized that they're not getting the kind of care that was necessarily based on their needs. And so that's where we started the creation. Dr. Canty, who is a pediatrician that has a sports trained fellowship. And Dr. Lap kind of formed this with Dr. Pacheco and myself, the APP role was going to be the coordinator for the section. And then the decision was that I could do more good seeing patients and being involved in the coordination of care.

And so it became a true department or section within our department. My role became more of a facilitator and coordinator. And Heather, I think can tell us a little bit more about what we do specifically.

Heather: Yeah. So as the advanced practice nurse practitioners in sports medicine and right now we are the only two. We have five sports medicine physicians, and then we have the two orthopedic surgeons as part of our group, we also have 35 athletic trainers. And we have 24 partner high schools, as well as supporting KC academy that we service, but our specific role is to really be a liaison between the sports medicine physicians and the sports medicine surgeons. So, we work to seamlessly to get kids over from the sports medicine physicians to the surgeons that need to have surgery or have a surgical consultation. We also follow those kids once they have had surgery and become the surgeons patients. We also provide their care and their followup. That we coordinate their surgeries, their physical therapy after surgery.

Sometimes there's specialized testing that needs to be arranged that we work to coordinate as well. We also added a sports medicine counselor to address the mental health needs among among our sports population. And so we work to facilitate those referrals too. In addition to our clinical roles of seeing our patients in sports medicine, we also staff fracture clinic, and we see sports-related fractures in our clinics as well.

We perform sports physicals for our partner schools and sporting academy, so that kids have their pre-participation physicals completed. A couple of years ago, Angie and I identified the need of our kids who are in the Kansas City, Missouri public schools and Kansas City, Kansas public schools were having trouble getting out to our sports medicine locations out in Overland Park and over by the Legends sometimes. And so we created a sports APN clinic that was housed at Adele Hall to make it easier for those patients to be able to get into sports medicine and be evaluated.

Host 2: Wow. That sounds like a fantastic program that Children's Mercy is able to offer our patients and that you and Angie are this kind of play a key role in getting it off the ground and running and making it run on a daily basis. So kudos for you guys. Can you guys share a little bit about what are some of the most common sports injuries and I'm sure it's season dependent and sport dependent, but like right now during the fall season, what are some of the most common sports injuries that you see?

Angela: I think any season really, ankle sprains are probably one of the most common sports related injuries that we see. And they happen with pretty much any sport and they really are about half of all sports related injuries. So definitely we're seeing those ankle injuries. Fractures of course. There's some very serious related fracture patterns that occur. And so we definitely see those. ACL tears. Again, you could probably argue that in any season, there is a sport that there's a fair amount of kids that end up injuring their ACL those activities. And then there's some other less common things that occur that we see like osteochondral lesions and Osgood-Schlatter is a common complaint that we see related to sports injuries.

But right now in football, I think you know, it would be ankle injuries, finger fractures, obviously concussions. Our sports medicine physicians are the ones that manage the concussion patients. But our fractures, our ACL injuries, our ankle sprains, meniscal injuries. Those are probably the most common things that we're seeing right now.

Host 2: You had mentioned a interesting thing that I've found about different sports have different types of fractures. Can you kind of, explain a little bit more about what you mean? Like what types of fractures, like say volleyball versus soccer versus football?

Heather: So for football, going to have a lot more hand fractures because of the way they're using their hands, ankle fractures, ankle sprains. You can have in both soccer, volleyball and football are the three biggest ones for ACL tears, but you can also have a tibia fracture or baseball, you can have a tibia fracture when they slide into base. So, there's some crossover between all of them. It's hard telling arm fractures happen with all of them. Clavicle fractures seem to be more frequent in things where they land on a shoulder. So, football is always big. Basketball, tibial tubercle fractures are one are more common. I think I've only seen one or two of those outside of basketball. So there's some things that are really keyed in on certain sports.

Host 1: So I think historically I had thought of those sorts of like ACL injuries being sort of a high school thing. But now that kids are starting to play sports so competitively younger and younger what are the typical ages of these common sports injuries? Can it just really range?

Angela: I think it, it does range. You know, there are definitely certain injury types that occur at kind of different developmental ages, but we are seeing kids younger and younger with ACL injuries. You know, it's a very I guess, want to say common for a high school athlete to have an ACL injury, but we're seeing a good deal of those in our middle school population.

And even in our younger population, we have, you know, a handful of kids that are under 10 with ACL tears. May be those didn't occur from a very specific sport injury. But you know, they exist. We have them and we're treating them, but definitely that middle school population is becoming more and more common to see ACL injuries.

Host 2: Wow that's fascinating to me, a little bit on the crazy side too. Cause you would think, you know, that's the 12 and 13 year olds and are like, wow.

Angela: Yes, and they can be challenging to manage because the high school athlete is very motivated to get back to their competitive sport. They're thinking about college and hopefully getting a scholarship or just wanting to, you know, not miss their senior year, be a part of that where, you know, that 12 year old kid who was, playing their recreational football, or even maybe they're competitive because some of them are on very competitive teams too. But the motivation sometimes just isn't quite the same as some of the high school kids to do the rehab because it's a very lengthy rehab after surgery. They're in physical therapy for no less than six months.

Host 1: Wow. Are there things that you recommend? I mean, you know, we think, of like, make sure you warm up and stretch, but are there certain things that we could be telling, counseling or that you guys counsel your kiddos on to potentially prevent a sports injury?

Heather: I think there used to be at web site, stop sports injury. And I don't know if they still have it up and running, but some of the things that they've been encouraging in the sports and the pediatric sports world is avoid early sports specialization. The American Orthopedic Society for Sports Medicine has a consensus statement on that.

And that's really keeping kids involved in a variety of things and not isolating to one sport at early ages. It's just much better for you. That variety of sports, the early diversification and then later specialization. And you'll see that with a lot of the pro sports and athletes Lorenzo Cain, Patrick Mahomes, all these guys played numerous sports and didn't really isolate themselves to one sport until they were almost out of high school.

If not out of high school. Make sure that you play more than one sport. Avoid playing more than one sport per season, so that there's a time off to give your body a chance to rest. Appropriate fitting cloths and good equipment, condition of good equipment, respect, pain, don't play if you're injured, good techniques. All of those things are important. Kids don't always spend a lot of time. They're more like a weekend warrior where they go out and they play tons on the weekend, but during the week they don't and you just set yourself up for more injuries.

Host 2: those are some really good, helpful tips for primary care providers to help with their patients. In lines of primary care, what are some things that can be done. So when the initial sports injury happens, families tend to take their kiddos to the urgent care or the ER, or their primary care office. So, what are some things that those providers working in their department can do to help you know, facilitate care, help improve patient outcome, things like that from the initial injury? And then at what point would they refer to sports medicine?

Heather: Sure. I think initially just kind of the basics of care of an injury. So the old adage RICE. You know, rest, ice compression, elevate that can be useful in most injury situation to initiate that treatment. I would be aware of any immediate joint swelling and if that's observed then definitely need to rule out a fracture or a dislocation.

So, always starting with some plain x-rays to rule out a fracture or dislocation. Immobilization for comfort, either in some sort of splint or brace and then protected weightbearing would be something else to consider. So crutches and usually just toe touch weight bearing, if there is a concern for an intraarticular fracture or something that affects the joint or a suspected ligament injury, and then always, you know, consider starting physical therapy to improve range of motion and not to lose a bunch of strength. So those are some just really basic things that can be initiated in primary care. And then obviously in an urgent care setting, radiographs to rule out a fracture. And then from that point, depending on the situation, the consideration of advanced imaging. I wouldn't really occur in urgent care. That'd be more primary care initiating some advanced imaging or at that point referring if they just aren't sure or comfortable

Host 2: At what point when we refer or consider a referral to sports medicine?

Heather: Definitely I think anything that involves a dislocation, a shoulder dislocation, an elbow dislocation, hip dislocation, any of those things definitely would need a referral to sports medicine. OCD lesions while they seem very common to us, they really are not that common. And a lot of primary care providers may not really be aware of, what those are.

And those are basically just an osteonecrosis or, you know, reduced blood flow of an area of subchondral bone in the joint. We see them commonly in the elbow, in the knee and the ankle. So if they obtained an x-ray or an MRI that indicated that, that definitely would necessitate a referral to sports medicine to manage and follow that. A patient that has recurrent ankle sprains definitely would be somebody to consider referring. Treatment of an initial primary ankle sprain, I don't think necessarily should go straight off to sports med. It seems pretty straight forward, but if you have that patient that keeps having problems with this particular ankle, then I think that warrants a referral to sports med. Some things that primary care providers can certainly manage would be the Osgood-Schlatter type of knee pain. It's tibial tubercle there or patellofemoral pain. You're kind of initial, basic ankle sprains, even toe fractures. And those are some easy things to manage in a primary care setting

Host 1: One other question I had for you guys, you had mentioned that there is now a sports counselor essentially, to help with mental health. And I think that is such a cool addition that you guys have added. How do our community providers refer to the sports medicine counselor?

Angela: As a general rule, some of that stuff can be managed by any counselor in the community. What we found is it's not necessarily on sports focus, as far as improving your game, it's more in how to cope with injuries. So, you refer to mental health here at Children's Mercy, there's ways to just to specify that it's sports-related, but I don't I don't know that there's enough resources here to handle just everything.

Host 1: Okay, that makes sense. I'm glad I asked that just so I know a little bit more. So, it's really more the counselor within the sports medicine group is really to kind of help with the recovery, from the sports medicine patients that you guys have in house.

Angela: Right because we found a lot of these kids that if you're off for six to eight months, because you've had an ACL tear, to get back to play, that's their whole identity. They go

through a whole grieving process. And so they have to start from scratch and learn how to cope with that. And a lot of them need help with it.

Host 1: Sure. That's great. Okay. That makes sense. And it's still something that's awesome that you guys have. Good deal.

Host 2: It's the holistic approach of patient care, which is what we want to achieve. And we strive for so very nicely done ladies, you guys are doing some amazing work there. Thank you so much for joining us. We are so grateful that you guys were here to share your wealth of knowledge.

We kinda like to end each episode with the same question and we have a new theme because this is a new season for us. So what is the most impactful thing that you've heard. Impactful, sensible, something that's been really meaningful for you.

Angela: Listen to your body and if it hurts, don't do it.

Host 1: I love that.

Host 2: Yeah. I wouldn't get out of bed. I love that. That is fantastic.

Angela: Well. I mean, if you're doing something you need to respect pain. We have been trained that you're supposed to push through everything. Why.

Host 2: That's great. I love that. That's really, really, really, good advice.

Host 1: Especially to tell our kids, for sure. You know, when to avoid injuries, I love that and ourselves.

Host 2: Heather, what about you?

Heather: I think along the same lines as Angie, you know, I think and I say this to kids. And I say it to parents is getting back to the whole sports specialization because I think it really makes a big impact on injuries and burnout. You know, we see a lot of kids get to high school and towards the end of high school and they're just done. So, I think the takeaway for me is, especially as a parent, why would you ask your kid to play a sport year round when professional athletes do not do the same?

Host 1: I think it's so true. It's, a really good question to ask just because of what our culture is like, you know, I do think everybody is specializing so early. So I loved hearing you guys talk about how that's really not the position statement that, you know, pediatric sports medical professionals are saying and giving that advice to really try to diversify yourself. So, and especially, it's great to hear that those athletes that we can all well, we'd like to relate to, but we know them. We feel like we should know them, right? Like, like Patrick to hear what he used to do, I think could be motivating for kids as well.

Well, thank you guys so much for joining us. We really appreciate hearing from you. guys and I loved hearing what you do and what all is offered within the sports medicine clinic. Our next episode will feature Dodie Schrobah from the allergy clinic.

Host 2: If you have a topic that you'd like to hear about or are interested in being a guest on our podcast, you can email us at tdobrien@cmh.edu (<mailto:tdobrien@cmh.edu>) or twilliams@cmh.edu (<mailto:twilliams@cmh.edu>) or twilliams@cmh.edu (<mailto:twilliams@cmh.edu>). Once again, thank you so much for listening to the Advanced Practice Perspectives.

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