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Back to School Illnesses

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Back to School Illnesses

In this episode, Dr. Eddie Lyon will lead a discussion focusing on back to school illnesses, and the preventative methods, including vaccinations, parents can take during this school year.



Featured Speaker:

Eddie Lyon, DO

Eddie Lyon, DO is a Physician, Infectious Diseases.

Transcription:

Back to School Illnesses

Rob Steele, MD (Host): Welcome to Pediatrics in Practice, a CME podcast. I'm your host, Dr. Rob Steele, Executive Vice President and Chief Strategy and Innovation Officer at Children's Mercy, Kansas City. Before we introduce our guest, I want to remind you to claim your CME credits after listening to today's episode. You can do so by visiting cmkc.link.cmeodcast.

And then click the claim CME button. Today, we are joined by Dr. Eddie Lyon to discuss back to school illnesses and treatment. Dr. Lyon was born and raised in Colorado, but moved to Kansas City for medical school 10 years ago and hasn't left since. He attended the Kansas City University of Medicine and Biosciences for Medical School and then completed residency and a Pediatric Infectious Disease Fellowship at Children's Mercy Kansas City.

Then he stayed on as faculty within the Division of Pediatric Infectious Diseases. Dr. Lyon is passionate about medical education for trainees of all levels, and also about providing empathetic care to families who trust us with their child's care. Outside of work, Dr. Lyon loves to be outdoors, travel, spend time with his wife and two children. Dr. Lyon, thank you for joining us today.

Eddie Lyon, DO: Thank you so much for having me. I'm excited to be here.

Host: I noticed that you like traveling around quite a bit, and I don't know if you're hoping to travel to Japan to see the cherry blossoms. For me, I'm good with D. C. in the spring, but, you want to go all the way, halfway across the world? I think, Japan would be awesome.

Eddie Lyon, DO: Yeah, I gotta see it right where, right where it started. My brother in law is actually in the Navy, and so we've gone kind of all over the world, finding him and where he's been. So we've been to Guam and California and Florida and Japan once already, and hopefully able to go back again here before too long.

Host: Very good. Well, you know, this podcast is going to focus more on school illnesses rather than travel, infectious disease, but I'm fascinated by that part. Maybe we'll touch a little bit, at the end of the podcast, we'll see, but why don't we jump into it? At the timing of this podcast, we're now like at that perfect spot for childhood illnesses that are school born. Folks have been in school now for about five to six weeks.

I can tell you, my kids, they're coming home snotty. Even despite the fact that we're still in warmer weather and all that other stuff. So it's good timing here in Kansas City, but could you walk us through the most common illnesses that you see at this time of year, or maybe just in general, with regard to school and has the prevalence of that, you know, after COVID, I mean, during COVID and after COVID, holy cow, trying to understand the seasonality.

I can't make heads or tails of it, but you could give a little sense of prevalence of, of illness within the schools.

Eddie Lyon, DO: Yeah, absolutely. I mean, you and me both for a little bit in trying to understand the prevalence of things. It's been kind of a wild west in understanding what we can predict in terms of the pathogens we'll see. But obviously lots of infections happen and all of the listeners here are very accustomed to seeing what is referred to in pediatrics as viral respiratory season, which is starting right about now.

My kids, I have a five year old and a two and a half year old and they're kind of constantly snotty, always have a little bit of a cough. So it's kind of a typically common thing. But otherwise you do see, besides respiratory viral illnesses, a lot of times you can see some gastroenteritis. That's more so kind of like the, the springtime and into summertime, but certainly present. Conjunctivitis, strep throat infections, are all pretty common things that we, that we see when kids go back to school.

But it has changed a little bit over the last several years, as you alluded to with the COVID pandemic, it used to be fairly predictable about when influenza would kind of spike and when RSV would spike. And it's seeming like it's starting to perhaps return to a somewhat normal cadence now. But for the first certainly year and two years after COVID, it was anybody's game, as to what was going on.

Right now we're seeing rhino enteroviruses that are kind of, you know, starting to pick up a little bit when we're looking at our trends here at Children's Mercy. And then we've actually seen some higher levels of mycoplasma infections, which are causes of atypical pneumonia, that have been more prominent on our testing platforms currently than they had been previously.

And then lastly, we've also been seeing some pertussis kind of making its way back into the community a little bit as well. And I did want to just mention a couple of things that I thought were kind of interesting that we have going on here. So at Children's Mercy, we have several research platforms, but two ones that are pretty cool is that Dr. Schuster's, Goldman, and Silvarengen, are part of this project with the CDC that is looking at school based prevalence of viral infections. And so they're working with several school districts around the community and looking at kind of the prevalence of those infections, because we don't really have data about how many people are, have a viral illness at any time.

And they're finding that about 25 percent of the time, people who have no symptoms have the presence of viruses in their nose. And then when people are symptomatic, it's about 50 percent of the time that those are positive. And then Kansas City is also a site for the CDC based collaborative, the New Vaccine Surveillance Network, which looks at prospective, surveillance for respiratory viral illnesses for kids who present to our emergency departments and urgent cares, as well as who are admitted to Children's Mercy for acute respiratory infections.

And then the last thing that I think might be kind of a reference tool for our community, is that if you go to the Children's Mercy Pathology and Laboratory Medicine public facing page, as you scroll down to the bottom, you'll actually see kind of the respiratory varometer, and the positivity rate of our COVID tests, our rapid strep and backup culture testing, the enterovirus testing, pertussis, and then our multi pathogen respiratory panel, which has like 19 different pathogens, including mycoplasma.

And then there's a little varometer graph that you can kind of really easily see the different spikes that happen over the last couple of years. So it's kind of a nice way to be able look at that information globally from what our testing platform is doing, which might reflect what's going on in the community a little bit too.

Host: Yeah, Dr. Lyon, I'm so glad you brought both of those up. You know, many of our listeners are the primary care pediatricians, not just here in this region, but in others. And, the data that's coming out, from the studies, done in school is really fascinating. And interestingly, had not been studied before, which honestly was a surprise to me because it seems so obvious to, to want to know what is actually circulating within the school. So I think that data is really fantastic. And with regard to the resources that we have here at Children's Mercy, Kansas City, to inform what is circulating, aside from just being a very interesting read, quite frankly, for the primary care pediatricians, it is a, I think it's a gold mine because it gives you a good sense of what's circulating.

And so, you're not just seeing patients in the clinic, but also fielding those phone calls from parents, and you have a good sense of what might actually be circulating. I know my daughter came back from KU this past weekend, and I swear she had rhinovirus. She had to. She was just. Drippy, the whole deal.

So, betting she, she was a statistic, I think, this past weekend. So, really great information. Let's, jump back a little bit, maybe to prevention, as we're talking about, you know, the post COVID era. The recommendations, for example, for flu vaccination really haven't changed, and yet the seasonality for flu is really challenging to figure out.

Okay, so when's the right time to vaccinate and all that. So maybe you could talk a little bit, let's start on vaccinations as a prevention strategy, and then maybe we can talk about some of the others.

Eddie Lyon, DO: Yeah, I'm happy to talk about vaccinations. I think you'd be hard pressed to find an infectious diseases doctor who doesn't, doesn't enjoy talking about vaccines. But so vaccines are, are a really important aspect of preventing, not necessarily the infection itself, but almost more so the deleterious like downstream effects of it. So either the severe infections or hospitalization. And even up to and including mortality, for a lot of these conditions. So you're right, the vaccine recommendations for influenza haven't necessarily changed over the last several years. It's still available. There's actually several AAP policy statements, so American Academy of Pediatrics policy statements on the prevention of influenza and it's updated yearly, in terms of what the recommendations are for vaccinations, who should get them, when, and all of that stuff. So in general, the practice that we're following is still kind of this fall time right now, is going to be probably the prime time to start the process of immunizing against, influenza.

There are several different vaccines that are available. Some are egg based, some are not egg egg based. This year, actually the Flumist or that nasal live attenuated influenza spray is available. And what I'll mention is that, so I saw a news article lately. So I think that the manufacturer of the nasal spray is actually working to try and get it so that it can be potentially administered at home versus in a physician's office, which I think will be really interesting to see there.

But the general thought is that you provide your vaccine, for those who are six months and up, around the fall season to then prevent the serious consequences of influenza. And I was reading one paper and it said, I think about 80 percent of children who die from influenza are unvaccinated. So it really does have a pretty profound protective effect against the most terrible consequences of influenza that we see.

Other vaccines that are currently available, so the SARS CoV 2 or COVID vaccine is certainly still available. The updated version. So the 24, 25 vaccines are all available, both for Moderna and Pfizer, which are kind of the two major platforms that are offered for the COVID vaccine. Those recommendations can be a little bit cumbersome at times to digest just because it's two different platforms with two different vaccine schedules for the most part.

The Moderna for your primary series, you only need two vaccines. Pfizer, you need three vaccines, for those who are in the younger age groups. So there is the CDC website, that has that guidance. And then the Link article that is sent out from Children's Mercy, monthly that the community members can sign up for has some information on, how to become up to date and provide those vaccines, to your patients that you're seeing in your clinic.

And then the last one, which is actually really exciting is the RSV vaccines, that are available. And so this is really the first time that there's been, these last couple of years that there's been RSV prevention, aside from the standard, you know, hand washing, staying home when you're sick, covering your mouth when you're coughing, all of those things.

And so it's really exciting to be able to offer that. And so it's not actually a vaccine. It's a monoclonal antibody. It's called nirsevimab or Bayfortis is the brand name. But the recommendation is that for any child who's less than eight months, of age and entering their first RSV season, should receive it.

And it is pretty effective at preventing hospitalizations and bad outcomes associated with RSV. So it's a really, really, impressive product and that's available. And then as a reminder, as it's kind of largely taken the place of palivizumab or Synagis, is that there are certain conditions with which people or children would be eligible for if they're 18 to 20 months to get it a second time around if they're entering their second RSV season, and including severe asthma, children with medical complexity who have tracheostomy dependent, transplant patients, of course, all of those patients would be eligible to receive it.

Pediatricians are pretty good advocates for vaccines, and is a large part of the conversations. I think that families that I have with families are around vaccines. And so I always remind family that really having a community of protection around your child is gonna give them the best chance of not getting sick from some of these things.

And so kind of having a gentle reminder to family that, hey, other members of the family should also receive these vaccines. There are RSV vaccines that are available for adults who are 60 or older and then they're additionally for pregnant individuals between 32 to 36 weeks, there's an RSV vaccine that they can get at that time.

And if the pregnant individual gets that vaccine, their child won't need nirsevimab because it largely takes the place of the monoclonal antibody that's received later after birth.

Host: Let me just pull on that string just a little bit, just from an infectious disease standpoint, because I've always, I don't know, maybe I've, I've bristled a little bit at monoclonal antibodies being referred to as vaccines, because technically they're more passive than they are active. Do the infectious disease folks care about that? Or is the term vaccination, even for the monoclonal antibodies, appropriate?

Eddie Lyon, DO: I mean, I think it's appropriate. I mean, I think it's probably by and large more important to have people understand that these are preventative measures to prevent infection, rather than the little logistics that, me as an ID doctor kind of nerd out on, and like how the mechanism of action of everything and stuff like that.

So, I mean, personally, myself, I don't have a problem with it being referred to as a vaccine, because I think if that makes it more accessible to the general population about willingness to utilize these preventions that are available, effective, and safe, I'm totally fine with that. And then there's one other thing I want to mention.

So there's something called COVR, I can't remember exactly what it stands for, but it's I put together by the Pediatric Infectious Diseases Society, and it's a vaccine platform that provides education about all the different vaccines. So it's something that any practitioner, pediatrician, nurse practitioner, family physician, really anybody who wants to sign up for it can, and it provides kind of updated guidance on the ins and outs of all of the vaccines that are currently available, not just the ones that we've talked about so far today.

Host: Oh, very good. Okay, so that's a, that's a great pearl of wisdom for, particularly for our primary care, pediatricians, and what I'm hearing you, Dr. Lyons, telling me is that I should take Taylor Swift's advice and just calm down with regard to my bristling of the term vaccination, and I will, I will take that advice. Briefly, let, now kind of move on to when the primary care pediatrician, they, you know, they, and parents that, you know, they see these viral illnesses all the time. They may, the child may or may not have fever, kind of tends to run its course. But when should we raise an eyebrow that it's not necessarily running the typical course and actually needs to be evaluated?

Are there certain aspects of that course that you think our listeners should really keep an eye on?

Eddie Lyon, DO: So as you alluded to, I think the listeners are kind of honed in on the details of this stuff. I mean, they live and breathe this type of infection every day for the whole winter season pretty much. So in my mind, when things don't follow the typical course would be if you have prolonged fevers. So if you're having fevers for more than five days, that's the time when it's certainly worth a visit to either a pediatrician and depending on age and symptoms, potentially even more, you know, to emergency department or other locations. If after kind of the traditional course or complication of these, so a lot of complication can be pneumonia following viral illnesses.

And so if you are starting with kind of the traditional treatment for community acquired bacterial pneumonia, with amoxicillin and that's not working, then you're having to kind of move on to other agents, that might be a time, that it might be worthwhile to make sure you're doing a chest x-ray and looking for a complicated pneumonia, whether that be with an effusion.

And, and I feel like we've been seeing a fair amount of necrotizing pneumonia, so far. So those are all kind of complications that we can certainly see, but, prolonged fever, not following the typical rhythm of improvement, are kind of times when I would think that it would be beneficial to potentially have them be seen for additional evaluation or potentially some lab work and stuff like that.

Host: That's, great advice. You know, in my experience, you know, that sort of double fever, one that runs its course, fever comes down and a couple days later or a few days later, the fever starts to spike up again, always, raised my concern, with regard to, that secondary bacterial infection. So, uh, it's great advice that you give to our primary care pediatricians. Well, Dr. Lyon, I really appreciate your time. I have to ask now, as an infectious disease expert, and one who is traveling the world, are you hawking the CDC website and getting your yellow fever vaccine or, and, or, you know, preparing for those unusual, making sure you don't get, I don't know what, schistosomiasis, uh, somewhere.

Uh, uh, do you nerd out on that as well?

Eddie Lyon, DO: Oh yeah. You better believe it. I have a couple apps on my phone, for that with the CDC yellow book is one of my go.tos that. I haven't actually received the yellow vaccine, yellow fever vaccine yet, but, it's on my list of places to go somewhere where I might be able to get that done. And as a reminder to the community, we do have a travel medicine clinic here available at Children's Mercy that can provide those consultative services to not only the children that are being cared for here, but also their entire family in terms of, preventative vaccines for yellow fever, typhoid, cholera, we even have that if people are going on relief trips, like mission trips and stuff like that. And then, preventative medicines for malaria and traveler's diarrhea and just general precautions on how to stay healthy and have a good trip, when you're going out there.

Host: Yeah, fantastic. It's a great plug and, and very important, particularly for the preventative medications, whether you're talking about malaria, those recommendations often change just based upon the prevalence of resistance and whatnot. So, great plug the clinic there.

Well, Dr. Lyon, thank you again for your time. It's been, really, jam packed with, good information for our listeners. As a reminder, claim your CME credit for listening to our show today. Visit cmkc.link/CME podcast and then click the claim CME button. This has been another episode of Pediatrics in Practice, a CME podcast.

I'm Dr. Rob Steele. See you next time.