

Isabel Valdez ([00:01](#)):

Hello and welcome to Optimizing Immunization Practices, your Role, your Impact, a podcast series brought to you by the American Academy of Physician Associates and the Fresno Foundation. This activity is sponsored by an independent educational grants from Pfizer and GSK. This podcast series focuses on how you can optimize adult immunizations in your practice. And in today's episode, we will focus on influenza and discuss the burden of disease, the current immunization rates, recommendations and strategies that you can use in your clinic to increase vaccine uptake. As always, we will share resources that you can use in your practice on [aapa.org](#) as well. I am Isabel Valdez, physician assistant and assistant professor at Baylor College of Medicine in Houston, and today I'm delighted to be joined by our esteemed colleague in Family Medicine Family practice, our expert PA Sarah McQueen. Welcome again, Sarah. We're so glad you're here with us.

Sarah McQueen ([00:58](#)):

Thank you, Isabel. That introduction is wow. I have been in family practice at a FQHC for 16 years now, and I am the AAPA liaison to the combined vaccine schedule work group, and I have really enjoyed my time doing that. And really we're almost, this is my favorite topic, influenza, and I love talking about influenza and the vaccines and so I'm excited to dig in. I'm excited about this.

Isabel Valdez ([01:27](#)):

Me too. And part of me is wishing that we'd had this conversation maybe like a month ago or six weeks ago because in my neck of the woods we just had a big flu outbreak and it was like these things wax and wane during the flu season. And we just had it in January, February, early February. And I'm seeing people still come in follow ups from hospitalizations because they got pneumonia from the flu. And the classic story, I thought I just had a cold or I thought it was allergies. That's my other favorite one. But upper respiratory illnesses are caused by viruses can mainly affect our nose, throat, and lungs, which in areas where we have a lot of allergies, it's easy to think, oh, it's just my allergies again, really mid-January. Sure, okay. But as soon as they start getting those body aches and those fevers, that's when I'm trying to educate my patients.

([02:14](#)):

As soon as you get body aches, low grade fevers that turn into higher grade fevers, this is your sign that this is not just your basic allergy. And the flu is, I try to educate my patients. It happens during winter, early spring months, so I use sports a lot. And that's when I say as soon as football season starts, that's when you're going to start seeing some flu information out there. You're going to start hearing about getting your flu shot around that time. I also use it with patients who have kids as soon as school starts, that's going to be your reminder that flu season is coming so you can start getting vaccinated because the infection in of itself really does ramp up during the winter and early spring months just like we had here. And most of the time the flu is a mild to moderate infection, at least in severity and the recovery is relatively easy.

([03:03](#)):

However, it can be a severe with some long-term repercussions in certain populations like our vulnerable patients, our older patients, and the class of description you always hear, right. I feel like I hit by a truck with those severe body aches and fevers of course and the upper respiratory symptoms that we've had. But I mean, as soon as I hear, did you get hit by a truck? I'm like, yes. Okay. It's fluent until proven otherwise, then sure enough. So what kind of a burden of disease have you noticed or do you talk to your students and your peers and your patients about when you're talking about your favorite topic of the influenza?

Sarah McQueen ([03:39](#)):

So as far as the disease burden goes, the CDC estimates that there's about 9.3 million to 41 million illnesses, and this was in the 2010 to 2024 range. And then with that you have these hospitalizations of between 120,000 to 710,000. And so when you look at this that these yearly hospitalizations, this is a big deal for our healthcare system. And then we talk about deaths. We're looking at about 6,300 to 52,000 deaths annually. And so this is a big yearly problem that we have. And so this affects lots of people back in the old days before the triple demic period that we find ourselves in. It used to be if you feel like you have the flu and you've been around somebody with the flu, you probably had the flu and you didn't even have to test folks. You could just diagnose and treat. Now things are a little bit trickier, but so I do talk with them about, listen, the flu can be mild, but in most cases you're really going to feel rough.

([04:43](#)):

You're going to feel rough enough that you're going to welcome that kind of five day period that we talk about staying home sometimes, because even though you can return 24 hours after your last fever or symptom improvement, it's probably going to be four to seven days before you have that last fever and symptom improvement. The flu is one of those things that in adults you really do have high fevers and body aches and chills, and so you're going to miss work, you're going to miss your children's activities, you're going to miss all of the things that you had planned on doing your vacations, your Christmas functions, your other religious holidays that take place during flu season. All of those things get affected when you have the flu. And I think one thing that we don't focus on is sometimes it's the economic burden with the flu, and part of that is what we spend when we have copays, when we go places and we have the cost of medication and if you're feeling worse than you have a follow-up visit.

([05:45](#)):

So all of these things add up. There's definitely a lot of insurance plans now are high deductible, and so you're paying for everything until you get to that deductible. And so there really is a high cost to ourselves and to our patients, and it can be staggering, especially when you look at it from a US population. There's this 2003 US population study that showed that there were 3.1 million hospitalization days. That's a lot of days in a hospital over our population there was 31.4 million outpatient visits. And so the flu is one of those things that definitely brings people in. The folks that you don't see, the stereotypical blue collar folks that don't come in or the self-employed, if self-employed, employed folks don't work, they don't get paid. And so those folks don't ever come in. They come in when they have the flu because they really feel like garbage. And the projected lost earnings annually due to illness and loss of life, it amounted to about 16.3 billion in 2003. This is the big economic impact. And of course it starts with families and the individual that's in front of you. And so it's easy for us to think of just health, but our finances are definitely a big part of that too. And what do you know about some risk factors when you think of our folks that are more at risk for these disease burdens and things like that?

Isabel Valdez ([07:24](#)):

Yeah. Well, one of the biggest risk factors that I see in my population, I'm in internal medicine, so my population tends to be older. I think my average patient age is probably in their sixties, so right away age, and I have patients who live in long-term care facilities and hearing that one of the residents got the flu, one of the residents got sick, they thought again, it was just allergies and it just starts to spread. I hate to say the cliché, it spreads like wildfire within that home. Of course during the holidays, everybody's at home, everyone's enclosed. So it's easy for once one person gets it, it's a domino effect among everybody. But in my practice, I also see a lot of patients with chronic disease, cardiovascular

disease, diabetes being a huge one, patients who have obesity as a chronic disease, and these patients, just like you mentioned, they got to go to work, they have to take care of their kids.

[\(08:21\)](#):

They can't miss if one of their kiddos get sick from the flu. They have to stay home and take care of them, and then of course they get sick. So all these things that I try to paint a picture of it as if you, particularly because you have diabetes, because you just had a stent placed because you just got out of chemo a month ago, you're taking these injections every two weeks or every month, immunocompromising for your autoimmune condition. I try to frame it based on their disease and then I tell them, and why I want you to get the flu shot. It's because you have this disease. It's because actually a lot of patients use that disease for a reason as to why they should not get the flu shot. They tell me, well, I got the flu last year, I'm not going to get it again.

[\(09:06\)](#):

I'm like, yeah, you are. Yes, you can't. I'm on all these medicines. I'm on all these pills that I got from my cardiologist after my heart surgery, and it's because we want that heart surgery, so you not to have complications from it that you need to get this flu shot and try to frame it around those things that are really important. In addition to what you said earlier about framing it around the holidays, and one of the things I noticed based on what you mentioned a second ago, the flu year starts around the same time as the insurance year starts. For a lot of folks who have high deductible plans that start in January at the same time that this infection is spreading and the flu vaccine can actually prevent a lot of the things that these folks are losing because they lose work days, which means they lose revenue and of course they lose medical costs because of the medical costs they're having to pay a lot of out of pocket.

[\(09:59\)](#):

So the CDC, you estimated in 23 and 24 flu season that the vaccine prevented 9.8 million flu related illnesses. That's fewer hospital visits, fewer doctor's visits, 4.8 million medical visits were prevented just with the flu shot vaccination also helped reduce hospitalizations. Their estimate, it was about 120,000 hospitalizations were eliminated, were decreased with the flu shot and another really great number that we saved, 7,900 lives were saved because of the flu shot. That's 7,900 deaths that we prevented with the flu shot. So we prevent a lot with this vaccine in numbers, in hospital visits and in work loss and the burden that comes as well, the economic burden that affects our day-to-day patients. So as far as current immunization rates, what are some of the trends that you've noticed in the data out there?

Sarah McQueen [\(10:55\)](#):

So when we talk about immunization, when we talk about herd immunity, again, we want to be around 70 to 90%, and that is just kind of the most effective range when we look at just the flu vaccine when we see at 18 and above. So this is everyone 18 and above, we're right around 45%. When we look at just 65 and over, that gets higher to 70%. And I think that shows that we're doing a great job at our at-risk folks, our elderly folks, our folks with comorbidities of making sure that they're getting the vaccine. I think it also shows that we have quite a bit of work to do in the younger adult range of getting their vaccination rate up where it needs to be. Another statistic that I think is interesting is that compared to the pre covid flu season that we had, we have lost doses of flu vaccine.

[\(11:52\)](#):

We are vaccinating much less, it's 9.2 million fewer doses were administered in the 2023 and 2024 flu season compared to before Covid and during our current season that is 2025 as of January 18th, there have been approximately 1.2 million fewer doses administered compared to the same point last year. So we are still going down in our vaccination rates and I think that should be a memorial stone for us of

like, okay, we should remember that this is where we are and we need to do better and looking forward to really make sure that we are advocating for the flu vaccine.

Isabel Valdez ([12:34](#)):

I like how you said that because I feel that maybe just anecdotally, one of the reasons I have a lot of hesitancy for getting the flu shot now is, well, I don't want to get it at the same time as I got my covid shot and I don't want to get it at the same time that I'm getting my TDAP vaccine and whatnot. And then we kicked the bucket like, okay, fine when you follow up, but follow up might not be until after flu season and in the interim they were left unprotected. So I think that's one of the strategies and we'll get into that. That's one of the strategies we can think about is it's okay to give patients multiple shots to which I tell patients using my personal story, I gave my mom, I took her to the pharmacy, she got three shots, she only has two arms, you got two arms, you can get two shots.

([13:16](#)):

And there's always that little giggle that patient has. It's like, okay, fine. I said, might as well knock it out. If you're going to be, you're going to out and about today, you're already here, might as well get the two shots. You got two arms. If you've got a third, I'll give you a third shot. That's when they stop right there. But now as far as vaccines that are currently available, what seems to be the data out there or what are our available products out there that we can see most common? I feel like there's always something different. So what's out there? What do you tend to use? What do you recommend?

Sarah McQueen ([13:44](#)):

So what we have, so this year it's been different. We have a trivalent flu vaccine and then years past we've had a quadrivalent trivalent flu vaccines are formulated every year by the FDA based on circulating strands. This particular 20 24, 20 25 vaccine includes both type A and type B, which is standard. We have an a H one N one virus, an a H three N two virus and a B Victoria lineage. And these lineages stay the same, but based on circulating viral type. This is how our vaccine gets chosen about every summer is when they start working on the new formula. And so we have kind of the same arsenal as we have always had. I do like to remind folks that they're made differently. Some are grown in hen's eggs. We have some that are grown in mammalian cells. And so I think the interesting thing to remember is that we really used to make a hard line between vaccines that contained egg and vaccines that don't.

([14:49](#)):

And now in terms of allergy, there's really not a preference. You don't have to avoid the vaccines grown in hen eggs and folks that are egg allergic. And so that has been a great change. The studies have been done, the safety has been finalized and that is awesome, but those things are still out there for our folks to use. Some of our vaccines are approved for six months and up, some are approved specifically just for 65 and older, and those are interesting. They have either more adjuvant or they actually have more of the vaccine that actually produces a higher immune response, which is the higher risk groups. You want that higher immune response. We do have the nasal one, the nasal mist. It is back, it was here and then it went away and it's back. And I listen if I'm trying to get even my husband, my husband's like, dude, I've had all the shots that I want to take over the last few years.

([15:54](#)):

Can I just get the nose thing? And I'm like, yeah, your body of choice, take the nasal mist and I won't make fun of you. It's fine. And so it is out there. New information for our nasal flu vaccine is that beginning and fall of 2025. It will be available with a prescription for home administration and use,

which is pretty cool. But it's important to note that you can only use it in ages two to 49. And there are some contraindications for folks with wheezing and asthma that are important to look into. You can't use 'em in immunocompromised people at all because it is a live attenuated vaccine that we have.

Isabel Valdez ([16:33](#)):

I love that you mentioned this with our immunocompromised patients because they're the ones that I'm tired of shots, I'm tired of needles since they're probably in and out of hospitals, but I'm glad you reminded us because that's something that I probably overlook, I might easily overlook. And the age range is something new to me. So you really are giving me some practice changing information today. And I wanted to mention the use of the stronger, the high, what we commonly call the high dose flu shot. I've actually had specialists, autoimmune specialists who are immunologic patient, who have patients who are immunocompromised, who are under the age of 65, who actually send them over to my clinic and they say, my rheumatologist really wants me to get the high dose flu shot even though they're not that age. And I think it's one of those shared medical decisions that the patient made with their specialist and me as one of their primary care providers. I'm happy to oblige. So I mentioned that because it's a trend that I'm seeing now a lot in our health system. I don't know if you've run into that as well.

Sarah McQueen ([17:42](#)):

Absolutely. And that is the newer recommendation for this year is so for 65 and older that the high dose higher adjuvanted vaccine is available. It is also available for immunocompromised aged 18 to 64, but it also should be clear there is not a preference. And so if you are aged 65 and over or you're immunocompromised, it is better for you to get a flu vaccine than no flu vaccine. And so if you're able to offer the high dose in your clinic, I think that is great. There is a price difference between the lower doses versus the high dose. As far as vaccines go. Flu vaccines are very affordable, thank goodness. And so that is one that most clinics can handle and can stock. As far as recommendations for everyone, really it's one flu vaccine per season. There is kind of a sweet spot. You want to hit it between September and October.

([18:44](#)):

That is because you just want to make sure that everyone's protected before that first wave hits. You never really know when it's going to hit. Sometimes it's early, sometimes it's March. Our population was the same as you. It was a couple weeks ago, and oh man, it was rough, but we made it. And so September, October, just remember the flu shots then. And I think the other important is pregnancy. Whenever folks are pregnant, we want to make sure that we're getting a flu vaccine during pregnancy. And part of it when we vaccinate our pregnant folks is we're having the immunity that can transfer to the newborn baby as some of the babies can't get. Like for instance, your covid vaccine or your Tdap or influenza until sometimes two months, sometimes six months depending on the vaccine. And so you're giving some of that immunity to the newborn baby.

([19:34](#)):

The also really important part for pregnant folks is that we're actually protecting the mother. We're protecting them because when you're pregnant, you are at risk for severe complications from the flu even up until two weeks after you deliver. And so it really is about any illness when you're pregnant, yes, it can be dangerous to the fetus, to the baby, but it's dangerous to the mother too. And so we really need to be making sure that our pregnant folks understand they need to get these vaccines to protect themselves as much as it is the baby that they're going to give birth to.

Isabel Valdez (20:08):

I think that's really important that it's again, with their immunity idea, if we had to put just simplify things into buckets, immunocompromised bucket versus the non immunocompromised and in the immunocompromised bucket being so many patients there that we see day to day with chronic disease, our older folks, and of course I'm so glad you mentioned this about pregnancy because it's a population I don't see in my clinic at all in my practice. So this is great information. And as far as barriers to, I often see, actually when I was in family medicine, that was one of the barriers that patients had was like, well, I'm pregnant. I don't want to get my baby sick. And it's because you don't want to get your baby sick that you need to get this vaccine. The other barrier that I hear a lot is, well, I'm allergic to eggs. I can't get this anymore. And I love that you mentioned this, reminded our listeners, reminded me too that that's no longer an excuse. So trying to negotiate with their patients that this is something that's going to help protect them along the way. And I'm going to give this to you, right? Imagine I'm your patient. Well, no PA McQueen, I don't want to get my shot because every time I get the flu shot, I get the flu. So how would you change my mind?

Sarah McQueen (21:20):

Yeah, we all get that. And every time I'm like, no you didn't. No, you don't. It's a hard thing. And so sometimes I'll really try to address it and I'm like, well, tell me about that. What did you experience? Well, I was just achy. Did you have a really high fever? Well, no. Okay, then I really don't think you really had had the flu. Did you get tested? No. Okay. Or I talk about you could have been exposed to it before you came in. You could have been exposed to it in the waiting room, all those things. Or sometimes I really relate it to anytime we get the dreadful stomach virus, we always blame whatever it is. That last meal that we had before, everything broke loose. I still, there's one time that I got a stomach bug after eating a baked potato and I will never, I don't know if it was the smell or the way it looked when it came back out, but I was like baked potato food poisoning, never going to eat a baked potato.

(22:16):

And I am like, sometimes these are not related, but it's really hard for our brains to make sense of that. And so yes, you probably had some symptoms. It's probably from the actual vaccine you were having an immune response. Some folks I'll be like, I tell you what, I really think we should do this. How about if you think you have the flu after we give you this vaccine? And usually they mean in the immediate, the one to two days after come back in, I will test you and I will tell you that I am sorry that I was wrong and you were right. And I'll say that is how confident that I am that medically you cannot get the flu from these vaccines. It's just not going to happen. And so I just try to have that conversation. I mean, there are definitely, we know the hard no's that we see in clinic and those hard no's are going to remain hard nos. And that's the, all right, I have warned you, and this is a choose your own adventure from here on out kind of way of thinking. And so I try to relate different things from experience, but sometimes it's still a no. Are there things that you have done in your own clinic in practice to increase vaccine uptake?

Isabel Valdez (23:31):

Well, the no are hard because, and actually I had a student with me not too long ago, same situation. Patients declined the flu shot. And my student very diligently asked, but why they really the shot? And I said, I need this patient to trust me from here on off for their other medical conditions. So sometimes we have to pick our battles and we make ourselves available without shaming them for if and when they do get the flu infection, right? So say, okay, didn't you didn't get today. I just want you to stay really protected as soon as someone's sick, stay away from them, make new friends if they get the flu. And if you do feel sick, come see me as soon as possible. I will test you as soon as possible because I don't want

you to get the complications from the infection. And if there's anything we can do to stave them off then and so be it.

[\(24:18\)](#):

So allying ourselves with them that way. But of course, still trying to get that vaccine. But in the clinic, I think it's been really helpful. And I think I'm going to take this back to my institution of having not just the flu shot, but having high dose vaccine. Basically having the shot available in clinic is one of the strategies that we can use to make sure that our patients are getting their vaccinated and using every single opportunity. But also if you have the variety, it's new to me that we can have now the nasal mist is available again. So something to share with our leadership. Also, having the availability is so important. Make sure it's there that way. As soon as your patient comes in, it could be that they came in for knee pain while you're here. Let's give you a flu shot because I don't want you to miss out on the kids' football games.

[\(25:06\)](#):

Football being so huge here in Texas, so I don't want you to miss the football game. You got the flu. You don't want to be that parent. I don't want you to be that grandparent. I want you to be active. So let's get your flu shot right now. So right there, using every clinical opportunity, not just the annual visit and having the access in clinic, having the different types if possible, if we can ever have them available. And of course, I think we forget the number one reason people do think sometimes is because they hear it from their trusted providers. So they say, you convinced me, PA McQueen, I'm going to get my shot even though I feel like I get the flu shot all the time, but I'm going to make an appointment to see you in two days because I'm going to be sick. Of course not. But because I hear from you of someone I trust as a patient, I'm more likely to do it. So of course that's being the number one reason we do things. But yeah. Any takeaways that you want to share with us as we talk about your favorite topic today, influenza?

Sarah McQueen [\(26:02\)](#):

The reason that influenza is near and dear to me is that my grandmother, Shirley, Shirley, Alice Longfellow Shannon was, I mean as we all have fond memories, most of us have fond memories of our grandparents, but she was diagnosed and actually declared dead during the Spanish influenza of 1918 as a six month old infant. But thankfully they were wrong. I don't know if it was a coma or whatever, but she did survive. And so after that, I mean just the devastation of the Spanish flu, when you look at that, there was no household untouched by death from that. There was no family, no street corner that didn't have a death during that time. And so it was just devastating and people remembered. And so my grandmother, when the flu vaccine came out, she was first in line every season. She was calling all the, my grandma played piano for the Eastern Star.

[\(27:01\)](#):

All the Eastern Star ladies had to go out and get their flu shots. We had to get everybody on Shedden Road had to get their flu shots. And so that was a part of, that's just what I did. That's what I grew up with. And so I do share that story. Whenever I talk about flu vaccines with our clinic and even with my patients, I was like, look, my grandmother was totally 100% committed to the flu vaccine and it's because she dealt with a really severe outbreak. And so this vaccine influenza is really near and dear to my heart, and I just want to impart some of that on you. And I want you to be protected. I want you to not end up in the hospital. I want to try to save you a few days of misery of getting the flu if that's all the virus is for you.

[\(27:50\)](#):

And so that's just the anecdote that I usually always share on flu season. And I like it. Most people have stories of the cookies that their grandma made mine. It was the flu vaccine. And so I guess that's why I am the way that I am today and why I do what I do and why you're here too. Yeah, that's why I'm here. And so I think just these takeaways is we all need to understand how serious flu can be. We all need to understand that. We hear a lot that the flu vaccine, I'll still get the flu later on. It doesn't prevent the flu. Well, you're right. But it does a fantastic great job at preventing hospitalization and death. And it reduces disease burden, it reduces hospitalizations and even clinic visits. And so this is a very effective, very safe vaccine that we've studied for decades. And so just making sure that everyone knows it's still here, it's still important. And now that we know that our numbers have decreased from before Covid again, I think just let this be our call to action of, let's get back on it. Let's start to do better with flu vaccine because we definitely don't want to go back to some of the dangerous pandemics that we've had before.

Isabel Valdez ([29:08](#)):

You're absolutely right, and I'm so glad that you're here because the influenza had that been true. You wouldn't be here, right? So we are so grateful for you sharing such a personal touching story with us today, Sarah, something that we can, you're sharing with us, something for us to take home and to take to clinic as we get into those tough conversations with our patients about, yes, you've got to get the flu shot. You're not going to get the flu from the flu shot. We're giving it to you to make your infection less severe. And we are the stewards. We are vaccine stewards today. As PAs, we are here because we like to educate our peers. We like to educate ourselves. That's why we're here getting educated from you, so grateful to you. And here's our also chance to educate our patients. As evidence has shown, patients are more likely to do, get a vaccine if they hear it from us.

([30:00](#)):

So thank you so much, Sarah, for joining us and imparting all this great information about the financial burden, the economic burden of this disease, and of course the health burden of influenza and sharing strategies that can help us get our patients get vaccinated. So thank you so much. And you're right. Let's boost food vaccine uptake. Make every visit count regardless. If it's a follow-up on your diabetes, it's a skinned knee. Anytime you get a chance, give 'em their flu shot. So again, thank you and of course, thank you to you. Our dear listeners, our PAs for listening today to this episode of Optimizing Immunization Practices, your Role, your Impact. Please tune into the other episodes in this series where we will provide an overview of adult vaccination and discuss vaccination specific information for COVID-19 tetanus, diphtheria, pertussis, RSV, or Respiratory Syncytial virus and shingles. You can find the full list of podcast episodes on [apa.org](#). I'm PA Isabel Valdez. Thank you for joining us and can't wait to share more information with you in this series.