



Pamela G. Rockwell, DO: Hello and welcome to this series on vaccines. My name is Pamela G. Rockwell. I'm a physician, professor of family medicine at the University of Michigan Medical School, where I teach medical students and residents. I also have a robust outpatient clinic and I also attend inpatient. For the past seven years, I have been the American Academy of Family Physicians' liaison to the ACIP, Advisory Committee on Immunization Practices, through the CDC.

**Julio Alberto Ramirez, MD:** I'm Julio Ramirez. I'm an emeritus professor of medicine in the Division of Infectious Diseases here at the University of Louisville. Currently, I'm the chief scientific officer at the Norton Infectious Diseases Institute at Norton Healthcare here in Louisville. Over the years, my primary area of research has been the area of respiratory infections, emerging respiratory pathogens and, primarily, community-acquired pneumonia.

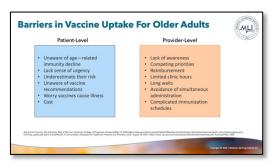
**Myron J. Levin, MD:** I'm Myron Levin. I'm at the University of Colorado School of Medicine where I'm a professor of pediatrics and medicine. I'm an infectious diseases doctor both for pediatrics and adults. I have a research clinic for vaccine here on campus. Like Pamela, I was with the ACIP sometime in the past and have that experience.

**Dr. Rockwell:** An overview for today is improving vaccine uptake. What are the barriers to vaccine uptake? How do we overcome those barriers? Some of the vaccine misinformation that's out there and strategies to address vaccine myths, and how to orient your practice to solutions to overcoming these barriers? Case one is a 67-year-old woman with a history of hypertension who presents for a routine check-up. She has skepticism about a new vaccine recommendation. She fears side effects and she questions its efficacy. I want to maybe hear from my colleagues. What are the primary reasons for vaccine skepticism? Do you see a mistrust among older adults in your practice?

**Dr. Levin:** Things that I hear from time to time include that, "Vaccines, we don't know enough about them. They're not well studied and, therefore, they may have side effects in me that are bad." In some cases, they tell me, "We heard this with COVID. They're not known to work very well." This is something I hear. We also hear that, "I don't need it, I'm healthy" or "I had that before and I don't need it now," if they had pneumonia, for example. These are common things that I hear. I also find that a lot of people somehow either have not had the information that they need a certain vaccine. They don't know how to get it. There are these problems that they bring to us in the office.

Dr. Rockwell: Dr. Ramirez?

**Dr. Ramirez:** I would agree. I think that Myron summarized all the issues. I think that the consideration that either "I don't need the vaccine" or "These vaccines don't work" is a very common situation that we see from the patients.



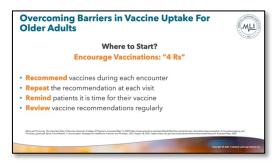
### **Barriers in Vaccine Uptake for Older Adults**

**Dr. Levin:** I think one of the biggest problems in explaining to patients about what vaccines do is the expectation that a vaccine will totally prevent a disease. That's often not the case. The purpose of vaccines, especially in high-risk people that we've talked about and we're going to talk about, who are at risk to get severe disease with certain pathogens, the idea of the vaccine is to attenuate the disease. If the disease happens, it will still be less severe.

They're less likely to go into the hospital. This was very clear with the COVID vaccine, and it's actually true of every other vaccine that we use.

**Dr. Ramirez:** I would have to say, Myron, that I completely agree with this because this to me is a critical aspect of what we're discussing today. I worked over the 30 years at our VA Hospital in Louisville. Here, I'm dealing with all the veterans. Then every September, October, the influenza vaccine arrives. The goal is to vaccinate everybody. Then we vaccinate, and we tell the patients why you need the vaccine. Then over the winter, we have a large number of veterans admitted with influenza. Then plenty of the patients are telling me, "My doctor gave me the influenza vaccine, here I am in the hospital with influenza, and he mentioned to me that I'm not going to get influenza because I got the vaccine."

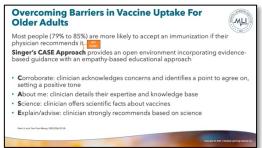
This is misinformation from the doctor to the patient. I agree with your point. We are misinforming the patient, telling, "You're an older adult, I'm giving this vaccine for you not to get the disease." I think that this is critical, "I give you this vaccine for you, you may not get the disease or you may get a mild form of the disease." I have to tell you that a lot of patients with COVID were told the story that you get the vaccine, you're not going to get COVID. This was a wrong message.



### Overcoming Barriers in Vaccine Uptake for Older Adults

**Dr. Rockwell:** Let's talk about overcoming barriers in vaccine uptake for older adults. Where to start? Well, we encourage vaccinations with a little mnemonic called the 4 Rs. R, recommend vaccines during every encounter. If they're there for a sprained ankle, if they're there for their health maintenance annual exam. Repeat the recommendation. R number two, repeat the recommendation at each visit. Sometimes it does sink into

the patient. Third R, remind the patients it's time for their vaccine and they can get the vaccine. Then the last R is review vaccine recommendations regularly with your patients. The more they're going to hear your recommendations, the more likely they are to agree with them.



#### **Overcoming Barriers in Vaccine Uptake for Older Adults**

Most people in the range of 80 to 85% are more likely to accept an immunization recommendation if their physician recommends it. Singer's CASE approach provides an open environment incorporating evidence-based guidance with an empathy-based educational approach. CASE. C, corroborate. Clinician acknowledges concerns like side effects or doesn't work or I might get sick from it. Identifies a

point to agree on and setting a positive tone.

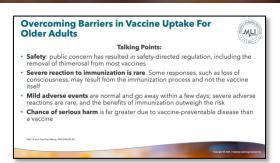
A of CASE is about me. The clinician details their expertise and knowledge base. S, science. The clinician offers the scientific facts about the vaccines, evidence. Then E, explain and advise. Strongly recommend the vaccine based on science. Case number two, the same woman returns during flu season, reporting she's been caring for her sick grandchild who has the flu. She's now reconsidering her stance on vaccination but is concerned about catching the flu from the vaccine herself.

I know I hear that all the time. We know as physicians you don't get the flu from getting a flu vaccine. It's an amazing amount of people out there who think they're getting flu. A couple things, one, they might have been exposed to influenza the day before they came into your office, gave them the vaccine, and now they actually have influenza the next day because it was incubating for that couple of days. Two, there are side effects to vaccines, which could mimic a mild myalgia, feeling crummy, fatigue. That's not the flu. I try to head that off by addressing that if I see any hesitation in the patient. How about you two, any tips for how to address this?

**Dr. Ramirez:** I say to most of the veterans, I say, "Yes, the vaccine, if you consider that flu is fever, myalgia, headache, feeling poorly," I say, "the vaccine is going to give you the flu." Just to be on the side of the patient, I say, "Let me tell you that I'm giving you a kill virus, and my goal is to see if I can trick your immune system that you have the real virus. Then if the dead virus activates your immune system, you're going to respond with everything that looks like the flu. Since the virus is dead, you're not going to be able to get the disease. With a regular vaccine, you're not supposed to get the flu, but you can get the immune respond that looks like a flu. This is another way to see this fever and myalgias."

Now, some people say when you get into the younger population because influenza is recommended for everybody, and then sometimes they say, "I always get the flu-like symptoms, and I don't want to have this." I say, "You tend to have the flu-like symptoms, then you need to get the vaccine on Friday. You are 25, 30 years old and don't want to miss work. You may get one day of fever, then get the vaccine on Friday, and you have the weekend to recover, but we don't want you to get the real influenza." Another way to look at these problems with the flu-like syndrome after influenza vaccine.

**Dr. Levin:** There are two things I would add to my interaction with people being vaccinated, one is that the concept of risk and benefits. I will confess readily to them that they may have some slight reactions to the vaccine. That's what you call the flu-like reaction to it. Do it on Friday and get it over with. I ask them to compare that to how they would feel if they got the actual disease where they would be much sicker for much longer and they would miss some time at work or school or whatever. I ask them to weigh the risk of a short-term discomfort against the benefit of a long-term gain if they are prevented from having a disease. That's the first thing. The second is I make it personal. I say, "Look, I'm such and such an age. I think at my age, I should and I do take the vaccines that I'm recommending for you. I also recommend them for my wife and my grandchildren and my children. I wouldn't do it if I didn't believe that the benefit exceeded the risk. I'm sharing that with you because that's my job as a doctor for you."



#### Overcoming Barriers in Vaccine Uptake for Older Adults

I would say that there are multiple points along the way in vaccine development and licensure and recommendation that are directed toward safety. They continue for every vaccine, even to this day, the new vaccines that come along. COVID's a good example. An example of the past where there was a problem with mercury in vaccines as a preservative, that was looked at and it turned out not to be a problem, but even so, it was removed just to make people

feel more comfortable with it. Even to this day, we continue to scrutinize the use of vaccines to keep them safe.

**Dr. Ramirez:** I discuss with a patient the basic vaccinology. "I going to give you a piece, an antigen of the pneumococcus or the RSV or any virus. Your immune system is going to respond with antibodies and then when you get the real thing, you are protected. In this response to antibodies, you need to have some form of inflammation. The white blood cells need to go there. Then to me, the pain in the area of the vaccine, the fever, the feeling a little poorly is part of your immune response.

"I don't call this an adverse events of the vaccine. I call this a normal event for me to give you a foreign antigen. Then I will not call all these local events an adverse event. I will call it almost like a physiologic. It's a normal event for me to giving you something that looks like a pathogen for your immune system to respond."

**Dr. Levin:** Even though there are reports of vaccine events that are so-called side effects or adverse events, severe ones are pretty rare. That something like fainting, for example, which is not a vaccine side effect-- It's a side effect. It's not caused by the vaccine, it's the body's response to being exposed to the fear of getting the vaccine, I think.

**Dr. Ramirez:** Some patients see needles and they have a drop of blood pressure just because of a-- fainting due to the situation. Then sometimes you need to be ready. This is why if you give the vaccine, you sit because you know the person. It's not the vaccine itself, it's the phobia for the vaccination. Now, one thing that probably to me in every vaccine, the worst scenario for adverse events is that sometimes I give you a foreign antigen and your immune system respond with an antibody. Sometimes these antibodies cross-react with another area of our body, primarily the central nervous system, the peripheral nervous system, and then you can get the very rare, rare situation.

You get some form of autoimmune disease. You can get a case of Guillain-Barré that probably may happen due to a cross-reactivity. It's an autoimmune response. This is what we need to say for all the influenza vaccines, based on the amount of Guillain-Barré that happened in the general population, it may be one extra, two extra per million doses. Then there is a consideration for some of these immunological diseases of the nervous system that may happen. This is probably the risk-benefit that we need to consider. To me, if a person has a history of Guillain-Barré or a history of one of these rare neurological diseases, I may discuss the consideration to give a vaccine but not for any other vaccine.

**Dr. Rockwell:** Let's talk a minute about overcoming barriers based on vaccine misinformation. We know that there's a lot of social media misinformation out there that really was exacerbated during the COVID pandemic and seems to be now systemic about all vaccines in general. I know CDC

has been better at putting stuff out on the social media platform to try to increase the education of the public. Vaccine safety has always been an issue for people who are anti-vaccine.

I think we're doing a pretty good job of promoting the safety of vaccines. In fact, the COVID vaccine is probably the most highly evaluated and monitored vaccine in the history of vaccines in the whole world. Safety is definitely there and we need to keep stressing this to our patients. I think communicating that clearly to our patients will help them to understand. Try to meet patients in places where they are. If it's minority groups, maybe in their community, community center, maybe place of worship. Try to develop talking points that is understandable. Encourage patients not to listen to friends on social media or to go to non-scientific sources for their information.

I find I am addressing vaccine myths and misinformation quite often, but I'm used to it now. I'm in the process of training a whole group of future family physicians as residents in better ways to do this as well.

**Dr. Levin:** I just want to emphasize that using the technique of motivational interviewing, which is to really elicit from the patient what their reasons are or their fears are about accepting or not accepting vaccines, make sure they express them clearly so that you can respond to them. It doesn't help to give information without understanding what information they want and will accept. Sometimes they won't accept any information, but I think finding out from the potential vaccinee what is really bothering them is a good initial approach.

We've mentioned a number of times risk-benefit analysis and explaining clearly if you have time to do it, the fact that side effects will occur with vaccines, but the side effects are very minimal compared to the potential benefit from being vaccinated. That really bleeds into the third point of whether or not vaccines cause illness. They certainly often can use some side effects, but again, the benefit of them exceeds them.

The cost is something I think is a local issue that needs to be discussed with whatever the issues are locally. This business of personal experience, for me, it's telling about what you've seen in patients who've been sick, but also I like to personalize it with respect to my being vaccinated, why I got vaccinated, why it's benefited me my whole life, and why I share that experience with my family and I feel the same responsibility in sharing it with my patients.

**Dr. Rockwell:** I can add, I did convince a few patients to get two vaccines at once when they were hesitant when I said I took my 80-some-year-old parents. Soon as RSV vaccine became available, they got RSV COVID booster and their influenza booster all in the same day.

**Dr. Ramirez:** I think that more and more patients are looking at their primary care physician as the expert and the advocate. I then think we need to remind primary care physicians that at the end of the day, people can look at whatever is on the internet or Google, but they are going to go and see the doctor and they are going to want to know, "Tell me the truth, what do I need to do?" I think that all these points are very important, but people need to recognize that we are the ones that the patients say, "You are here for me. After all this confusion, what should I do?" This is a very important part. With all this confusion, there is more relevant to the primary care physician than ever.

**Dr. Rockwell:** Some ideas for a practice-oriented solution to increase your immunization rate among your diverse adult populations in your practice are many, and they're evidence-based. One is a daily huddle. If it's possible, you huddle with the physician, other healthcare providers. If

there's a nurse involved, medical assistant, and talk about the patients that day, what immunizations they might need. Use your state immunization registry to see what is due, even if the person's not coming in for their annual. Use the IIS for sure, because I know in Michigan, ours will predict what is due in the future and shows a record of what has been given in the past.

You want to get into partnerships with local community religious leaders or trusted leaders in the community to start to promote immunizations. Personally, I have done a little talk in Lansing, our state capital, to promote immunizations during the start of the school year. Things like that. You want to identify somebody as an office champion. It does not have to be a physician, could be a nurse, could be a medical assistant. Somebody who has an interest, but somebody whose job is to stay abreast of recent updates. My office, it's me.

We have a monthly staff meeting. I have an agenda, blocked item, just to go over immunization reminders so everybody is hearing it from the staff who sit at the front desk to the checkout staff, nurses, medical assistants, our pharmacists, everybody. We're all in the same boat and we all have the same message to give to our patients.

In addition to what I've mentioned, you want to use this team-based care where everybody's on the same page, but if you are having the good fortune to have an electronic medical record that can give you what's called a best practice alert to prompt when a patient is due for a vaccine, that is super helpful because, to be honest, we don't think about vaccines every second of the day. If somebody's coming in for a cut on their arm or coming in for back pain, we may not think about it, but if that BPA or best practice alert comes up, we may be reminded to give the vaccine that day.

The immunization coordinator could be your practice champion for vaccines, but it does take work to have effective vaccines in your office, proper handling, storage, proper maintenance of the refrigerators, and then always you have to document well. Standing orders in our practice have had a huge impact on improving vaccination rates. We don't have a standing order for every vaccine, but some like influenza, pneumococcal, tetanus, things like that.

Standing order has been signed by all the physicians and other mid-level practitioners who might work in your practice, and then the medical assistant who rooms the patient, that patient is due, the patient accepts, they get the VIS or vaccine information statement, and then that medical assistant can deliver the vaccine before we even get to the office. Standing orders have really been proven to increase vaccination rates. You want to make sure you record why patients are refusing, but you can still work on them time after time, and I have had some success over the years to have patients vaccinated.

**Dr. Rockwell:** Case number three, 72-year-old man, a retired teacher, has consistently declined the pneumococcal vaccine. He believes he maintains a healthy lifestyle that provides enough protection, and he's wary of unnecessary medical interventions. We can talk about what strategies can be implemented, and I think we've discussed quite a few of these, reminding them that being healthy is great, but that doesn't prevent him from getting a communicable disease.

If he would like to avoid, even if he's not fearful of dying from that disease, but he could potentially avoid work loss or infecting his new granddaughter or something like that. Sometimes I find that even with healthy patients, I want to invoke a sense of community responsibility and extended family responsibility to them.

**Dr. Ramirez:** This reminds me sometimes these healthy, very healthy, elderly patients that sometimes come to our international travel clinic, where they're going to go for this trip in the Amazons, or they're going to go to a safari, and they want all the vaccines not to get sick when they are in Africa. Then you ask, do you have the pneumococcal vaccine? No, I don't have because I'm healthy. Then sometimes we use a lot of the pneumococcal vaccine in our international travel clinic. We say, well, one of the worst scenarios when you travel abroad is to get pneumococcal pneumonia.

Another thing that we didn't discuss in the epidemiology, because again, in the United States, we have a very strong pediatric vaccination. You go to places that children don't have a strong pediatric vaccination, there's a lot of pneumococcal going around. Sometimes people want to be healthy. We say, well, to be healthy, what are the most important vaccines? Again, we are discussing now the most important vaccines for you to be healthy, even when you are traveling. You don't want to get RSV, you don't want to get pneumococcal, you don't want to get Zoster when you're in the Caribbean, then you have to go to a local hospital.

Dr. Rockwell: Right, exactly.

Dr. Levin: Healthy people get sick.

Dr. Ramirez: Exactly, yes.

**Dr. Levin:** That's all I can tell you. Being healthy doesn't ensure that you can't get sick with any of the three pathogens we're talking about here. It's somewhat a luck of the draw. The only way to be protected is to be protected.

**Dr. Ramirez:** I think that in this session, we have discussed that essentially, there's no magic bullet where we want to improve vaccination. I think that we all need to be thinking, these three circles, that is, one is the patient factors that we need to work, physician factors or healthcare providers. We need to get better into our education, because one thing that is clear is that as adults, we are not as prepared as pediatricians with our knowledge of vaccination.

**Dr. Levin:** I used to say that the most important advance in medicine in the past 75 years, I can now say in the past 100 years, the most important advance in keeping people healthy and living to old age has been vaccines. It's still true now. It's even more true as people get older, that to maintain a healthy lifestyle, our best chance is to be protected against the things that we ultimately we get if we live long enough.

**Dr. Rockwell:** This brings us to the end of part three of this series, Moving the Needle in Vaccinations of Older Adults. We've taken a look, applying evidence-based approaches to address patient-level challenges, barriers, and perceptions related to vaccines in older adults. I think this is really important because some patients need to have more information than what they're getting from social media. I know my patients trust me if they're still with me after 20, 30 years, and they do listen to what I say.

For younger physicians or people who might be working in an urgent care, it is imperative to be factual, present the evidence with a good, strong recommendation, and then listen to patients when they have concerns.