

## Changing Immunization Practices: 2-Dose Vaccines - Frankly Speaking EP 63

### Transcript Details

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### Dr. Frank Domino:

Recently, the Centers for Disease Control released new guidelines and recommendations with regard to vaccines. That included highly clinically pertinent changes with regard to the HPV vaccine, the hepatitis B vaccine, the herpes zoster vaccine, and the vaccine for mumps. Hi, this is Frank Domino, Professor in the Department of Family Medicine and Community Health at the University of Massachusetts Medical School. With me today, is Robert Baldor, Professor and Senior Vice Chair in the Department of Family Medicine and Community Health at the University of Massachusetts Medical School, and we're gonna be discussing vaccines today. Welcome to the show, Bob.

### Robert A. Baldor, MD, FAAFP:

Thanks, Frank, glad to be here again.

### Dr. Frank Domino:

So the HPV vaccine, the human papilloma virus vaccine, has been making a fair bit of news. Can you tell us what the CDC is now recommending, regarding changes with the vaccine schedule?

### Robert A. Baldor, MD, FAAFP:

Yes, I think that we actually did a podcast on this before it was finally released, and so I think there's a lot of information out there for folks. But basically, in October, they updated the

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recommendation, in saying just two doses of the HPV vaccine given, if starting the series before the 15th birthday. Previously, it had been three doses for starting it on or after the 15th birthday. And it actually continues, so, if you're giving it after 15 years of age, it's still three. But they're really recommending that this be a routine vaccine for all girls and boys, ages 11-12, it can even be started as early as age nine, for that matter, and that continues for women up to the age of 26, and men up to the age of 21, although males up to 26 can still be vaccinated. And so what you're saying then, is if you're giving this before the 15th birthday, just two doses. And guess what? The second dose is six to 12 months apart.

This really enhances the ability to get individuals vaccinated, because the original dosing on this was... You give a dose now, in one month, and then six months, so that it was kinda hard to get those adolescents in that many times to vaccine. But you can give a dose now and give a dose a year from now, when they're coming in for the well child check. I think we'll just continue to see a continuing uptake of the HPV vaccine as we're seeing this. Now, probably the reason why they did that, is that studies showed that the antibody response after two doses, given at least six months apart, in those nine to 14 years of age, was as good as or better than an antibody response that was given three doses to older adolescent, so seeing some increased efficacy with this.

**Dr. Frank Domino:**

As someone who hated getting vaccines as a child, and still not a big fan of them as an adult, it's wonderful to hear both the earlier immunization, and the two-dose schedule over 12 months. Well, great. Thank you, Bob. Hepatitis B had some changes as well. What happened there?

**Robert A. Baldor, MD, FAAFP:**

Well, I think this is fascinating, 'cause we're beginning to see some changes in how vaccines are being made. And so, for years, there's been one hepatitis B vaccine, and it's an attenuated vaccine, and this new one was just approved here. It's a two-dose vaccine as well. It's called, if I can say this, Heplisav, Heplisav-B, and it's for adults greater than 18 years of age. Interestingly though, since we've had universal childhood vaccination, the rates of hepatitis B vaccine have

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really dropped in this country, considerably. This is something to be used more in adults who haven't been vaccinated, or are at higher risk for work, or so on. What's different about this, is it contains a... This is a recombinant vaccine, and so it's a yeast-derived hepatitis B surface antigen vaccine, but it has an immuno-stimulatory adjuvant that goes along with this. And so, what it uses, this is... This adjuvant to help stimulate the immune response, is derived from bacterial DNA. Now, the original vaccines use aluminum-hydroxide as this, so this gets you a little bit more of an immune boost from it. Now, the problem with that, of course, is that... It's interesting, as you boost the immune response, there's much more of a local response to this, and so people are actually having more side effects, more pain, fever, and so on, from the vaccine, but no real significant long-term effects, but more immediate effects are seen with it.

**Dr. Frank Domino:**

Very good. As you note, most children in this country get vaccinated in infancy. The number of people who are gonna need this is gonna go down, but it's wonderful to know that there's this new vaccine, and for both people who are new to the country, that may not have been vaccinated, or adults who weren't vaccinated as children, we've got this two-dose vaccine that's gonna work.

**Robert A. Baldor, MD, FAAFP:**

And of course, for those of us who work in healthcare, we screen to see if people have the antibody. If they don't, then go ahead and use this two-dose to actually boost their immunity, and probably have a better response, than you had from the first part of it. Certainly, anybody who comes in asking for hep B vaccine, we go ahead and give it to 'em. There are some high risk groups out there too, that you wanna be considering as adults.

**Dr. Frank Domino:**

Sure. Alright. Well, we have a new herpes zoster vaccine for the prevention of varicella zoster. Can you talk a little bit about this new shingles vaccine?

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**Robert A. Baldor, MD, FAAFP:**

Yes, and this, again, is a... The original Zostavax is a live, attenuated live vaccine. Well, this new one, this is Shingrix, it's called. Shingrix. It's a recombinant sub-unit that's actually being manufactured as part of it, so it has a higher antigenicity. The studies have actually shown better protection. I was fascinated to review this. Zostavax has an efficacy about 70% for folks that have been vaccinated between 50 and 70 years of age, and only about 18% for those that have vaccinated over the age of 80. Well, this newer one, 97% efficacy of those age 50 to 69, 91% efficacy for those older, so a lot more of an efficacious vaccine.

Now, of course, the trouble with it is, it's two. As you recall, the Zostavax was one dose as part of it. But also, as you look at it, it has increased efficacy, but it also has long-lasting power. The Zostavax seemed that the immunity was waxing and waning after about five years of use. This seems to have sustained protection as people age. Also, the recommendations have changed. Zostavax was for folks aged 60 and over. This is actually age 50. So the recommendations. Two doses of Shingrix are recommended for adults 50 and older, regardless of their prior zoster or vaccine history, so whether they've had the Zostavax or not. Now, if they've had the Zostavax, again, this was an attenuated live vaccine, they can still have this. It should be at least two months later. You should wait two months later before giving them this dose of the RSB vax, the common vaccine that's out here. And for those that are over the age of 60, the recommendation's you can still either receive either vaccine, but this is preferred, because it's much more efficacious.

**Dr. Frank Domino:**

I appreciate you bringing this forward, because I've seen a couple of commercial... A number of retail outlets that are offering the older vaccine for folks, and it made me uncomfortable to think that they were trying to use up their supply. It's really important we bring this forward with our patients.

**Robert A. Baldor, MD, FAAFP:**

The guidelines are still, it's reasonable to use. We've been using it for a long time, and a little bit

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like that new recombinant vax for hepatitis B vaccine, folks who get this have a more local reaction to it, than the older vaccine. Just a word about paying for this, a couple things. The Zostavax you used to have to keep frozen, which is a problem. This one does not have to be kept frozen. It's easier to store. Medicare doesn't cover either of these vaccines under Part B. Flu vaccine is covered under Part B. These are covered under Part D. If people have the prescription drug benefit, then there'll be a co-pay with it, so there's some potential financial barriers with this, but Zostavax is treated... Shingrix is treated the same way as Zostavax under the Medicare program.

**Dr. Frank Domino:**

Bob, does that compel us to try to improve our vaccination rates in our well-insured patients, because the new zoster vaccine will be covered?

**Robert A. Baldor, MD, FAAFP:**

Well, it compels us to start offering this vaccine at an earlier age, because you're really seeing, at age 50, it really has a significant improvement for life-long protection against zoster. Whether or not their private insurance is gonna be better coverage, than getting onto Medicare, it's really dependent on their individual insurance, Frank. There's no blanket statements you can make for that.

**Dr. Frank Domino:**

Very good to know. Finally, Bob, the CDC recently gave us an update on the mumps vaccine. Can you tell me what happened there?

**Robert A. Baldor, MD, FAAFP:**

Yeah. Once again, this is another 'two-for.' They turned around and they said that, "For any of those who are at risk for contracting mumps, because there's been a local outbreak... And they've had two or fewer doses of the mumps vaccine prior to this, they should get a booster of the MMR."

**Dr. Frank Domino:**

Wow.

**Robert A. Baldor, MD, FAAFP:**

Measles, mumps, and rubella vaccine.

**Dr. Frank Domino:**

If in your local community, there's been a mumps outbreak, and even if you've been vaccinated like we have as children, you should probably get an updated mumps vaccine?

**Robert A. Baldor, MD, FAAFP:**

Yes.

**Dr. Frank Domino:**

Wow.

**Robert A. Baldor, MD, FAAFP:**

MMR.

**Dr. Frank Domino:**

Alright, keep that in mind, for those of you who are at risk. Well, thank you, Bob. This is a wonderful update and I appreciate learning about these new vaccines, as well as better use of our current ones. Practice pointer: Consider using the new herpes zoster vaccine starting at age 50, for both improved efficacy and for long-term protection. Join us next time, when we discuss new research that compares low fat to low carbohydrate diets.