TWiV 1286 Clinical Update

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Guest: Daniel Griffin

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Vincent Racaniello: *This Week in Virology*, the podcast about viruses, the kind that make you sick.

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From *MicrobeTV*, this is *TWiV. This Week in Virology*, Episode 1286, recorded on January 8t 2026. I'm Vincent Racaniello, and you're listening to the podcast all about viruses. Joining me today from Rome, Italy, Daniel Griffin.

Daniel Griffin: Hello, everyone.

VR: What's the temperature there? It's got to be warmer than here, right?

DG: Actually, it is warmer than New York, only in that New York has been bitter cold, but it's a little chilly here. It was low 40s Fahrenheit for our Fahrenheit folks, which is what? Four or five degrees Celsius.

VR: It's about the same. It got above freezing here the last two days.

DG: We had a bit of rain, a little bit of wind, so it's a little colder than we expected, but what a fabulous place.

VR: I envy you. It's great. Rome is lovely.

DG: All right. Well, we're going to have a very interactive session tonight, or whenever you're listening to it, but tonight as we're recording it at 11:00 PM in Rome, 5 o'clock in New York, because there's some things I think we need to discuss. Let me start off with what I thought was very appropriate quotation attributed to Julius Caesar. "Men willingly believe what they wish."

VR: Well, it's appropriate that you quote Julius Caesar, right?

DG: Being in Rome, and I think also with the fact that people just believe whatever they want, right? They don't really seem to be bound by facts.

VR: I was thinking of this, and I think if you're a scientist, you're bound by facts. What science finds, you don't believe what you want, right?

DG: Well, I think that's what we're going to be talking about tonight, because there is a group down that's taken over the CDC and other parts of the government-controlled Health and Human Services. They seem not to really be on board with this idea. They actually need science and information, and thoughtful deliberation. You just can go with your gut and advance your - clearly, an anti-science agenda. I thought actually, a bunch of what we were

going to talk about is what's going on, and how this is really counter to really good science, previous good guidance coming from the CDC. Are you ready to go, Vincent?

VR: Yes, let's do it.

DG: [chuckles] Well, so they've broken this down. Instead of basically giving us, "This is the science, this is what we recommend, this is what the science and data would support as the best choice for your children," they've created this new hierarchy. They've broken this down into immunizations recommended for all children. That's a rubric that we're familiar with. Then, they add a couple more categories, immunizations recommended for certain high-risk groups or populations. I'm going to have a bit of a discussion about what they think is going on there.

Then, the last, which is really a cop-out, this is immunizations based on shared clinical decision-making, which, why don't we have a lot to say about that right up front? I mean, that's always been the foundation of everything. The CDC and the American Academy of Pediatrics, and a lot of professional organizations will look at the available evidence. They will make recommendations based upon what the preponderance of evidence supports.

Then, a lot of times, the pediatrician, the internist, the family practice, OB-GYN, and all the different providers will actually discuss these decisions with the patient. Clinical decision-making has always been an aspect, an add-on to the recommendations. It hasn't been this cop-out, like, "We're not going to make a comment, we're not going to tell you what the science supports, we're going to just tell you, you're on your own."

Fortunately, as we go into this, we still have those professional organizations. I'm going to leave in a link to the American Academy of Pediatrics, and their proper immunization evidence-based schedule. I'm going to refer to a figure from *The New York Times* article by Apoorva Mandavilli. This is the article, “Kennedy Scales Back the Number of Vaccines Recommended for Children.”

I'm also going to reference the editorial board at *WSJ* that published the article, “There, RFK Jr. Goes Again. His New Schedule for Childhood Vaccines Will Enrich the Trial Bar and Make Children Sicker.” I suggest, so, Vincent, you and I are going to have to walk through what's going on, and why this only makes sense if your goal is to make trial lawyers rich, and you're all right with children getting sick and dying.

Let me read the first part for *The Wall Street Journal*, because I really thought they captured something here. "Robert F. Kennedy Jr. never rests in his quest to make trial attorneys richer." This is *Wall Street Journal*. "After an exhaustive review of the evidence, we are aligning the U.S. childhood vaccine schedule with international consensus." They go on to comment, "Since when has the Trump administration justified a decision based on international consensus?"

VR: It's just baloney. It's just BS. They always come up with lies and excuses for what they're doing, but there's no science behind what they're doing here. That's the problem. Even Bill Cassidy is very upset about this. Did you read that?

DG: He's got to be, because they, the anti-science crowd here, in addition to encouraging us just to drink more, because it's a social lubricant, according to Mehmet Oz, they want to get rid of recommendations for hepatitis B vaccination, RSV active and passive immunization,

the rotavirus diarrhea vaccine, hepatitis A vaccine, the meningitis vaccinations, as well as flu and COVID vaccinations.

Vincent, I thought you and I would go point-by-point by vaccine, and discuss why this is bad advice. I thought we'd start with hepatitis B.

VR: One thing I wanted to just say first, he has said the reason he's doing this, aligned with this international consensus, which is BS, because every country is different. Especially with Denmark, it doesn't make any sense. Then, secondly, he says, "This is because there's declining confidence in vaccination." Well, yes, if you would keep your mouth shut, it wouldn't decline, because you're an anti-vaxxer. How roundabout is that argument?

DG: He should say, “because I have succeeded in undermining confidence in vaccinations.”

VR: Exactly.

DG: “Now, I'm going to take the next step and just put another nail in the lid of this.”

VR: Hep B, yes.

DG: Let's talk about hep B. Vincent, this is great. It's a virus, [chuckles] it's right up your alley. We've covered a lot of hepatitis B information studies. Now, the hepatitis B vaccine was universally recommended. It still is by most professional societies, so won't be ignoring these guys. It's been recommended at birth. It was recommended in the early 1990s.

The number of newborns infected with the virus each year has fallen to about 20 from 20,000. That's huge. This is a greater than 99% reduction in infection. I want to comment. You get hepatitis B. If that happens, you have a 1 in 4 chance of dying from it. A 25% chance that you're going to end up dying from this. If you get infected around the time of birth, 90% will go on to have a chronic infection. We've tried this before, testing moms. That was the prior strategy. That doesn't work. That results in babies getting hepatitis B. That results in babies dying from hepatitis B-related issues.

VR: We know from past experience that you have to give it at birth, because if you delay it, or if you just give it, say, to mothers who are seropositive for hep B, it will not limit transmission to infants, because they get it from other people besides their mothers. This is essential to get it right there at birth.

DG: It really is. A couple of things just to cover the hepatitis B thing before we move on is that, in the U.S., this is not Denmark, so not every mother gets tested for hepatitis B before the baby is born. It's about 15% to 20% of the moms in the U.S. do not get tested. Even if you got 100% testing, you're going to miss cases. The test is not 100% sensitive. This is not like a country that has a very low incidence of hepatitis B. We have hepatitis B virus circulating in our population.

If you go down this road, and you're going to see babies. They're going to get hepatitis B. It's not just mom. Caregivers can expose the baby. If you go down this road, well, one, you're going back to a time when babies were getting infected. Two, you're going back to a strategy that did not work. Three, if you're going to follow their logic, every single mom in the U.S. has to get antenatal care. They have to get testing. The babies have to be protected, so that all the people around them who might be their caregivers also need to

get hepatitis B testing, or vaccines.

VR: Do you think that this will make a dent on vaccination? Because many states have said, "We're not going to pay attention to this." I'm just worried that the red states will not do the right thing.

DG: That's what I'm worried about, that this will be a license permission for certain people going on this road. "It's no longer recommended. I'm going to think about this. I'm going to wait maybe a couple months later." Then, once the baby gets infected, it's too late. We are worried about that. I'll mention later on, New York has just said this is to be ignored. That's hepatitis B. We go down this road, thousands of kids are going to get infected, ending up with thousands of kids having all these problems.

Now, what about RSV? Oh my gosh, here we were, here we are, at a point where RSV is really being combated effectively. What is RSV? Respiratory syncytial virus. RSV, number one cause of pediatric hospitalizations each winter historically. The recent article, "Effectiveness and Impact of Maternal RSV Immunization and Nirsevimab on Medically-Attended RSV in U.S. Children," published in *JAMA Pediatrics*.

We saw that this nirsevimab, that's that great monoclonal stuff, remember, that saved Trump's life. Effectiveness, 81%. Maternal vaccine effectiveness, 70% against RSV hospitalizations. This study is population-based surveillance data. RSV hospitalization rates in 2024-2025 were reduced by almost half among newborns and infants. This is tremendous, right? Even more, 56% to 63% in the newborns and infants in the zero to two months of age. Here we have -[crosstalk]

VR: Does this affect maternal immunization where the mother will pass antibodies onto the baby?

DG: It's interesting. The schedule that we see came out was really going after the nirsevimab. I think if people are able to get through the paywall, and look at that Apoorva Mandavilli, you can see that what they're doing is this at-birth hepatitis B first dose, gone. Respiratory syncytial virus, the monoclonal antibody, the passive protection, gone. The two months, if you're going to get rotavirus, then you're going to see impacts there. At this point, I guess you could still squeeze in a dose for mom.

VR: We should emphasize, there's no reason for this change. None. There's no safety concern. There's nothing that would precipitate this change except ideology.

DG: That is true. No science, no safety data, no new discovery, nothing presented by the federal government. This is just the whim of an anti-vax group, which as we see here, will result in thousands of children in the hospital for RSV, and will result in children dying. That's RSV. Don't forget that those kids are then going to give it to their grandparents, and then grandma and granddaddy are going to die. That's not OK either. That's one of the nice things that we saw as a peripheral from pediatric vaccinations.

VR: We spent years without vaccines against RSV. Suddenly, in the last few years, we have them, we have monoclonals, and now they want to get rid of them. It's crazy.

DG: It throws me. How do you square this with a therapy that probably saved Trump's life? I just don't understand. Rotavirus. This probably bothers me personally the most because, oh

my gosh, rotavirus is so miserable. Before the rotavirus vaccine was routinely administered in the United States, the disease led to the hospitalization of up to 70,000 American children each year. This included 20 to 60 children dying each year. Before a vaccine was introduced in the U.S., the disease caused more than 400,000 doctor visits and 200,000 emergency room visits each year. This is going to overwhelm our healthcare system, the RSV, the rotavirus. This is just - Don't worry, it's going to get worse.

VR: What is interesting is that Denmark does not vaccinate against rotavirus, and they use - RFK is using that as an excuse. What is it? Nine million population?

DG: I think there they end up with about 1,700 folks end up in the hospital, which magnify that by a country. It's -[crosstalk]

VR: If you multiply it by the size that the U.S. is bigger, you'll come up with 70,000.

DG: That's 70,000.

VR: The same that we used to have. [crosstalk] Denmark has said, "We're not going to pay for that. We don't think it's so serious." That's their decision. Here, we do think it's serious.

DG: I think if your child ends up hospitalized because of rotavirus, and that was a vaccine-preventable issue, you should have a problem with that. If your child dies, 20 to 60 children. It really just floors me to say, "Oh, we're only talking about 20. Only 20 to 60 children." We can save those 20 to 60 children. They're not going to die of something else. All right. I don't know what is going on with hepatitis A. I guess they're just going to get rid of this with hygiene. Everyone's suddenly going to actually start washing their hands. Fortunately, no chronic form here, but lots of acute infections. Probably, a third of kids will get this before age five.

VR: What was that famous food chain infection that spread hep A years ago?

DG: Oh gosh, I don't know.

VR: It was a fast food, hep A, and fast food. What was the name of that? Some -

DG: Some burger place probably?

VR: No, it wasn't burger. It was like a Mexican type food. Anyway, it was-

DG: Taco Bell or I don't know.

VR: -something like that.

DG: You can -[crosstalk]

VR: Anyway, it's because there were workers don't wash their hands, right?

DG: That's the problem. I guess we're just all - This is the end of fast food. I guess we're not going to ever want to do that again.

VR: Well, that's in line with RFK's Healthy America and all that. [chuckles]

DG: No, but he's into fast food, remember? He's hanging out with Trump, and they're on the

airplane and he's like, "I would eat McDonald's every day if they just would start deep frying these potatoes in lard."

VR: Chi-Chi's.

DG: [chuckles] I've never heard of it. OK.

VR: I don't know. 2003, linked to green onions.

DG: Oh, wow.

VR: The green onions were contaminated with hep A.

DG: Oh my gosh. All right. Meningitis vaccinations. I don't know if anyone's ever seen someone with meningitis, someone die from meningitis, someone survive from meningitis. Maybe impacts on their vision, maybe their inability to hear. People listening probably remember *Little House on the Prairie.* The sister, that's probably why the sister was blind. That's probably why Laura Ingalls was such a great storyteller and writer, because she had to describe the experience that she could see to Mary, who was blind probably from meningitis.

I don't know if people remember all the outbreaks at universities, the issues with the military when this was something we saw in the kids. I think one case is too many for those of us who have seen and cared for kids that have had this. There'll be peripheral issues, because this won't just impact the kids, but it has the society effect as well.

Flu. Oh my gosh. What good timing to get rid of the encouragement for an annual flu vaccine in the children. We talked to last year, over 200 - Almost 300 children died from flu. This is so far the worst flu year that we've seen so far, is now a good time not to encourage people to get flu vaccines? Probably, going to see another 200 or 300 children die this winter from the flu.

Again, this is a largely vaccine-preventable illness, largely vaccine-preventable number of deaths. As we keep pointing out, you still might get the flu, but over 90% of people, particularly children that die from flu, were not vaccinated. Oh my gosh, COVID. Awesome. We're not going to do that anymore. No more COVID vaccines. In children, it's really the Long COVID is, I think, what we worry the most about. We still see 1% or 2% of the kids get COVID, and then they are not better for months.

We'll say, at least here in New York, we are ignoring all this business. Despite changes announced at the federal level, New York State's longstanding childhood vaccine requirements remain the same. State Health Commissioner Dr. James McDonald said in a statement just this past Tuesday, and I love this, “there was no new science, safety data, or discovery presented by the federal government. New Yorkers can continue to be confident that vaccines offer the best protection for preventable childhood diseases.”

VR: I think a good fraction of the U.S. population would not be supporting these changes. They need to vote in November to change this, if anything. They just cannot be making kids sick. This is unacceptable.

DG: It is unacceptable. The pediatricians, the general doctors, the Infectious Disease Society of America, we're not on board. This is not advice. This is not guidance. This is basically an

anti-science trial lawyer, got himself in a position of power through our political process, and is advancing that agenda. I think that's what people just need to see this as. It's an advancement of an agenda. This is not guidance. This is not health.

VR: RFK Jr. was asked, and he said, "I'm not taking away anybody's vaccines." That's BS. Look, at birth, hep B, RSV is gone. One month, hep B is gone. Two months, rotavirus is gone. Four months, et cetera, he's taken them away. Why does he have to lie continuously?

DG: He's lying because the whole shared decision-making, we are talking about at birth, the baby getting hepatitis B, getting the RSV protection. This whole idea that we live in a country where everyone has the luxury of these prenatal conversations, that they can make these informed choices. They're living in a very privileged situation. As we know, these folks, their kids are all vaccinated. They were all vaccinated as kids. They're really talking in this magical world, where they're really enriching their trial lawyer buddies.

VR: Daniel, since these vaccines have been removed from the childhood schedule, if you decide you would like to get it, let's say New York State, because they say we're going to recommend it, you could still have it covered by your insurance, I presume, right?

DG: In New York State, nothing changes. New York State, we're recognizing what this is. We're ignoring them. In New York, at birth, hepatitis B, you get your RSV monoclonal. One month of age, you get that second hepatitis B shot, and so on down the road. You get your rotavirus at two months, and then follow the evidence-based recommendations.

We're in a new year, and this is a little fishy, because measles. Let's talk about measles. I go to the CDC site. We reset the clock, and they say, "OK, three confirmed measles cases reported in the U.S. in 2026." Then, [chuckles] I read that there were 26 additional cases down in South Carolina. Yes, so we have to keep an eye on what's going on. They're desperate for us not to lose our measles elimination status.

The way you avoid losing the elimination status is by keeping measles eliminated, not by trying to play around with the numbers. They're doing all kinds of shell games with, "Well, we think that the Texas one isn't really related," or you think that they're separate measles outbreaks." Yes, I mean, it is -

VR: It's no difference. It's an outbreak of measles. It's it. It's lost.

DG: Yes, I mean, they're trying to - Their lawyer arguments about, "Well, there may have been over 2,000 confirmed measles cases, but," and they're trying to find a loophole.

VR: Lawyers need to stay away from science. They just contaminate it.

DG: It's a problem. Yes, it's a problem. Canada, in week 52, so we're still rounded there, another 16 new cases. They hit a total of 5,393, so not good up there. How are things going? Things are not going well when we look at where we are with flu. Flu is high. We've got a theme here. If you look at our multicolored map influenza activity, really, really raging in much of the country at a very high level.

Maybe we're reaching our peak is what we're hoping, because some of the areas in our country look like we might be seeing some declines in New York and New Jersey, California, a few other places, some places growing, or likely growing. We're hoping this is going to be

that single peak that we sometimes see. I hate to see when we peak, get a little drop, and get a second peak, so fingers crossed, but right now, we're seeing a lot of flu.

We're seeing a number of deaths, both of adults and children so far, so still reasonable to try to get that flu vaccination. If you get sick, we can do something. As we've talked about repeatedly, there's treatment if you've been exposed. There's treatment if you've actually gotten sick. Call your doctor.

RSV, not so great. We're seeing pretty high activity, and a little bit surprising, but in most of the country, it's growing, and maybe likely growing. Usually, we should be coming off the peak here, right? Our epidemic curve should be dropping for RSV. Not happy with that. Particularly, now, of course, is the time when you say that, "Let's not protect the little kids from RSV," so horrible timing.

COVID, pretty high. It's interesting. If we look at our epidemic trend, most of the country, it says it's growing. You're getting that little this delayed reporting from 12/27, where it looks like maybe it peaked in some areas, but I suspect we're still on the way up. We're already getting into high in a couple parts of the country.

VR: Look at that. Arkansas, no cases amazing, right?

DG: [chuckles] I think that's no data.

VR: A couple of states out west, Utah. What's the one above Utah?

DG: Wyoming.

VR: Wyoming, OK.

DG: Wyoming, Utah, Arkansas, we've got no data from those. The rest of the country, either it's holding steady, or it's growing. All right. Well, but, hey, as we all now know, Vincent, SARS-CoV-2, it's just like the common cold. No one gets sick. No one really dies. Well, is that true? Well, we have the article. We're going to actually share science, not just what our gut is telling us.

The article, “Estimated Burden of COVID-19 Illnesses, Medical Visits, Hospitalization, and Deaths in the U.S. from October 2022 to September 2024.” recently published in *JAMA Internal Medicine.* They asked the question, what was the burden of COVID-19 illnesses? Outpatient visits, hospitalizations, and deaths in the U.S. from September 2022 to September 2023? Then, more recently, October 2023 to September 2024.

We'll do '22 to '23, 43.6 million COVID-associated illnesses, 10 million outpatient visits, 1.1 million hospitalizations, 101,300 deaths. That was pretty bad. Now, '23 to 2024, we're well into Omicron. There were an estimated 33 million COVID-associated illnesses, 7.7 million outpatient visits, 879,100 hospitalizations, 100,800 deaths. If you look at the folks, 65 years and older, which make up 17.7% of the total U.S. population, I want to look at this number two ways.

They accounted for 48.9%, so a little less than half. You could look at this and say, the majority were not 65 and older. Interesting, the way they break that down. It's particularly worrisome if you're 65. A lot of folks under 65, the majority of folks under 65, COVID-19 illnesses. Then, you skew towards the older folks. When you're 64%, outpatient visits, 68%,

hospitalization, 81% of those deaths, so more serious than the other ones.

VR: Daniel, would you go to a hospital for a common cold?

DG: Apparently, [laughs] it's common cold and you're hypoxic, and you might end up dying, then, yes. I just don't think these folks understand what the common cold is. Because, yes, COVID, flu, RSV, these are not common colds. These people coming in, struggling to breathe, hypoxic. Yes. Remember those vaccines, and a really nice article here. "The Role of Vaccination in Maternal and Perinatal Outcomes Associated with COVID-19 and Pregnancy," published in *JAMA*. I don't know if you noticed, Vincent, but I'm talking with my hands. It must be being in Italy.

VR: In Italy, yes. When in Rome, do as the Romans do. [chuckles]

DG: [chuckles] Here, they looked at population-level surveillance of pregnant individuals infected with SARS-CoV-2 and their infants using the CANCOVID-Preg database between April 2021. This is beginning of the Delta variant time period, and initiation of recommendations for vaccination and pregnancy in Canada. The CANCOVID, and December 31, 2022.

Cases were identified based on COVID-19 diagnosis and pregnancy in nine of 13 Canadian provinces territories. Cases occurring through 2022 were followed into 2023 for pregnancy conclusion, and infant outcomes. What is the role of perinatal vaccination? Well, of 26,584 cases identified, 19,899 were eligible for analysis. Among these, most infections occurred among those aged 30 to 35, 46%, and among those of White race, 55.9%.

A total of 72% of cases were vaccinated, 28% unvaccinated prior to the COVID-19 diagnosis. Among those vaccinated prior, 80% were vaccinated prior to pregnancy, 20% were vaccinated during pregnancy. It's kind of want both of those. Cases occurred during both Delta and Omicron, most during Omicron, so 6,120 during Delta, 13,799 during Omicron. Vaccination was associated with lower risk of hospitalization. During Delta, it was 0.38, so about a 62% reduction.

During Omicron, 0.38, same, about a 62% reduction. We also see impacts on ARD, on critical care unit admission. When we look at Omicron and Delta, we're seeing pretty significant reductions. Really, in Omicron compared with the vaccinated group, those unvaccinated had an adjusted relative risk of hospitalization of 2.4. In Delta, it was 3.82, so pretty significant protection for the little kids if mom gets vaccinated.

Impressive that it was even before pregnancy, so really giving us, because we really talk about trying to get at the beginning of that third trimester. All right. Not a lot of big changes in our recommendations for the different phases of COVID, but I did have a little bit of a disturbing article for our post-acute sequelae. This is the article, "The COVID Generation: The Neurodevelopmental Consequences of In-utero Covid-19 Exposure," published in *Brain, Behavior, and Immunity*.

This study prospectively recruited 142 mother-baby dyads, I like that word. A 103 from a normative pre-pandemic cohort, and 39 pairs had been exposed to the SARS-CoV-2 virus during pregnancy. In-utero viral exposure was associated with altered newborn regional brain volumes in the cortical gray matter, subcortical gray matter, cerebral white matter, and left hippocampus.

Viral exposure additionally was associated with lower cognitive, and social-emotional scores. The lower cognitive scores on the BSID-3 following SARS-CoV-2 exposure were mediated in part by the altered cortical gray matter volumes. These lower cognition scores further mediated the relationship between the SARS-CoV-2 viral exposure, and increased internalizing behavior scores.

None of the moms have been vaccinated. I should say none of the moms, none of the babies had the protection that a mom being vaccinated could have offered. All right, I will wrap us up here. No one is safe until everyone is safe. We are still in our *MicrobeTV* fundraiser for the rest of January, hoping to double your donations, hoping to send them that maximum donation of $20,000. Go to parasiteswithoutborders.com, click on that Donate button.

VR: It's time for your questions for Daniel. You can send yours to daniel@microbe.tv. Josh writes, "I thought a point which Daniel made on a recent *TWiV* clinical update was very well-taken. This was as to the serious shortcomings of the epidemiological usage of wastewater concentrations of viral pathogens for infants in the USA, and probably in other industrialized countries since infant and toddler pee and poop, presumably, largely ends up in trash cans and landfills, rather than in residential wastewater systems due to the high popularity of single-use disposable diapers.

For precisely the same reason, I strongly suspect that wastewater monitoring also significantly underestimates the prevalence of these pathogens in wastewater streams which originate in the residences, or congregate living facility of seniors, especially those which house the more senior, or less healthy amongst this population."

DG: Wow. That's an excellent point. The absorbent garments that a lot of our seniors now use. Yes, a lot of them are not actually ending up with their urine, and other waste products in the toilet, in the wastewater systems. Good point. I like that.

VR: Deborah writes, "Always enjoy TWiV on my morning dog walks. I'm wondering about the duration of oseltamivir prophylaxis for influenza. My family was recently exposed to my adult daughter at a New Year's Day lunch. She developed ILI that evening, and tested positive by rapid test the following day. This, of course, led to rapid acquisition of multiple courses of prophylaxis for family members age range 29 to 101.

We were eager to treat the index case, and prophylaxis all contacts due to the ages and vulnerable health conditions of family members. Grateful for the rapid testing option. Of course, we're all vaccinated, but post-exposure prophylaxis seemed indicated. We had difficulty finding doses of baloxavir, called about five different pharmacies, so settled on oseltamivir. The question is, seven versus 10 days, and does it really matter? CDC says 7 and other sources, including last week's podcast note 10 days. Please weigh in."

DG: The recommendation, and I wonder how much this has to do with the box. In the box, if you're doing treatment, it's twice a day for five days. There's 10 pills in there. We talk about 10 days from exposure as a recommendation, but I've seen seven as well. The interesting is what's the outside. You've been on it, and it's seven days in. I got this call recently. You're seven days in, and then you get together. Again, you get the call the next day, "Oh, I'm so sorry. It's another person. [chuckles] When I was over your house last night, I didn't feel so well. I came anyway. I've got the flu." It's really 10 days from the last exposure. This can actually bounce along for a little while.

VR: Alan writes, "During a discussion of the classical appearance of Santa Claus, Vincent asked Dr. Griffin for a medical term to describe a red nose. Vincent refused to accept Daniel's reply that red nose was an appropriate medical term to describe Santa's schnoz. Vincent took the bait provided by Daniel's suggestion to try an internet search. That search led Vincent to a confident assertion that rhinophyma was the appropriate medical term to describe a red nose.

This was clearly an error. The most famous image of rhinophyma may be found in the 1490 painting by the Italian master Ghirlandaio entitled '*An Old Man and His Grandson*'. Here's a link. You can take a look. The painting depicts the diagnostic features of rhinophyma, namely a progressive non-malignant expansion of nose skin thickness that gradually distorts the profile of the nose, often associated with locally enlarged skin pores.

While rhinophyma may accompany rosacea with red skin color over the entire central face, the painting shows a profound contrast between the vaguely pink appearance of the nose tip of the old man with the red clothing worn by both characters. My father, Edward Caro, MD, was often the assistant surgeon to Dr. Wilford Hall, MD, from 1951 to 1953. As Dr. Hall performed rhinoplasty surgery to correct rhinophyma on nose skin of all colors in Air Force veterans during his Korean War service.

Since the red nose of Santa Claus may have had many potential causes, see biology insights in the Cleveland Clinic discussions below. Please correct the misapplication of the specific diagnostic term 'rhinophyma', which is a 2026 ICD-10-CM diagnosis code L71.1."

He provides a link for red nose etiologies, this Cleveland Clinic discussion, and further says, "In my humble opinion, the clinical history, Santa's nighttime exposure to cold winter wind during reindeer-powered open cockpit sled transport, and the physical exam that includes his generally intact nose profile is most consistent with windburn as the cause of his red nose.

Note that windburn lacks a specific ICD-10 diagnostic code, and may be coded as R23.9, unspecified skin changes. This is despite the specific features of windburn. See AccuWeather reference below. Please keep up your excellent partnership, and keep us informed about many fields of medicine, especially those associated with virology. I'm happy to keep listening and supporting *MicrobeTV*. Allan Caro, MD." [chuckles]

DG: I'm very entertained, and I concur. I suspect it's the cold and the wind that is making that red nose, and not the rhinophyma. [chuckles] I appreciate the entertaining email.

VR: I stand corrected. David writes, "You may have seen this in a recent *New York Times* roundup of little gems from notable editorial writing this year, because of your regular references to Occam's razor. I thought you'd appreciate it. In *The Times*, A.O. Scott wrote, 'Occam's razor, the venerable philosophical principle that the truest explanation is likely to be the simplest, has been thrown away. We're living in the age of Occam's chainsaw when the preferred answer is the one that makes the loudest noise, and generates the most debris.'"

DG: Occam's chainsaw. I like that.

VR: There you go. Johann writes from Norway, "Where I work as a general practitioner. Before I ask my question, I thought it may be of interest for you to know how we do our

seasonal vaccination here in Norway. The official recommendations for influenza vaccine are everyone over 65, and anyone below that age, including children from 2 years of age, with risk factors, which include pregnant women in the second and third trimester.

For COVID booster, the recommendation is everyone over 75, anyone above 18 with risk factors, children from 6 months of age with more serious underlying conditions. New this year is that everyone born in 1960, 65 years old this year, gets offered a subsidized dose of Prevenar 20. Next year, it will be those born in '61 and so on. In addition to this, anyone who just wants to get vaccinated for any of these diseases can, but at a slightly higher out-of-pocket cost.

All citizens are listed with a local clinic, have a specific GP as their family doctor. We started vaccinating this week in our clinic. There is some anti-vax sentiment floating around, but the problem is not nearly as bad as on your side of the pond. One of my patients is a woman with severe asthma and obesity. She was very reluctant when it came to vaccines. What convinced her to go ahead, was that I promised to take my shots together with her.

I first jabbed myself in both arms, and proceeded to give her the flu and COVID shots. Unfortunately, I can only use this method of persuasion once per season. Now, to my question, I'm going to visit the island of Réunion, which is in the Indian Ocean off the coast of Madagascar at the end of this year. Interestingly, that means that formally I'm not even leaving the EU as Réunion is part of France.

However, neither mosquitoes nor viruses care about borders, as you have often pointed out. We will be doing some hiking, but no camping. I'm in my 40s, healthy. The trip is a week. Should I get vaccinated for Chikungunya? Something else that doesn't stop at borders is the spread of good science information. On behalf of your international listenership, I would like to extend my warmest thanks for the fantastic job you're doing every week. I want to quote Brianne Barker in saying, 'Thanks, I learned a lot.'"

DG: [chuckles] That definitely sounds like Brianne Barker. I enjoy the quote there that we have. Looking at this question, should you be getting your Chikungunya vaccination, I would look at what's going on in Réunion. If we are seeing incidents, then we do have vaccination options for Chikungunya. Definitely something to look into and consider.

VR: That's *TWiV w*eekly clinical update with Dr. Daniel Griffin. Thank you, Daniel.

DG: Thank you. Everyone, be safe.

[music]

VR: Enjoy Rome.

DG: Oh, yes. What a wonderful place. I might just stay.

[00:42:52] [END OF AUDIO]