DR. BILL SCHAFFNER: Good morning, everyone. I’m Dr. Bill Schaffner. I’m past president of the National Foundation of Infectious Diseases. I’m also a professor of preventive medicine at the Vanderbilt University School of Medicine in Nashville, Tennessee. I’m pleased to welcome you all here today on behalf of the National Foundation for Infectious Diseases. Now it’s time to talk about flu. For those of you on Twitter, please use the hash tag #fightflu.

It’s our distinct honor to have with us today Dr. Tom Frieden, Director of the Centers for Disease Control and Prevention. He will be our keynote speaker. In addition, I’d like to introduce our distinguished panelists, Dr. Laura Riley, who is Director of Labor and Delivery at the Massachusetts General Hospital and Associate Professor of Obstetrics and Gynecology and Reproductive Biology at the Harvard Medical School. She also chairs the Immunization Task Force of the American College of Obstetricians and Gynecologists.

And my friend Dr. Paul Offit, Professor of Pediatrics, Division of Infectious Diseases and Director of Vaccine Education Center at the Children’s Hospital of Philadelphia.

All of these folks are experts in their fields. And each of them is very passionate about public health and the importance of prevention through vaccination. Dr. Frieden will tell us how we are doing as a nation when it comes to flu prevention and preparedness. He’ll highlight the latest influenza vaccination coverage estimates among more age groups as well as in pregnant women and healthcare personnel. He will review CDCs measures for prevention and treatment and he’ll announce a new vaccine recommendation aimed at protecting adults, aged 65 and older against pneumonia and other infections caused by pneumococcal bacteria. I’ll also be talking about pneumococcal vaccination a bit later.

Dr. Riley will explain why flu vaccination is so important in protecting the health of pregnant women and also, ultimately, their newborns. And Dr. Offit will share his firsthand experiences about the impact of flu in children. He will also talk about the importance of education parents and healthcare personnel about the impact of flu and the safety of vaccines.
We’re also pleased to see a strong showing of support from colleagues representing leading public health, medical, government, industry groups as well as consumer organizations as we prepare the public for the upcoming flu season. Joining us today on their behalf today are physicians, pharmacists, nurses, public health experts and parents.

Influenza is constantly evolving as a virus and it’s unpredictable, which is why we recommend influenza vaccine every year for everyone age six months and older. What is it about everyone that we don’t understand? Healthy people are not excluded. Last year was an unfortunate reminder that no one is exempt from flu’s most severe consequences. Flu hit young and middle aged adults hard last and just over 100 children died. You’ll hear more about that from Dr. Frieden and the other panelists.

There is simply no reason to take the risk. There are many types of flu vaccines available to help protect you from illness, more than ever before and many locations in addition to doctors’ offices to get vaccinated, such as pharmacies, community clinics, health departments, colleges, schools, and many work places. This season there are multiple vaccine options available including needle-free vaccines and a high-dose option for older adults. And a complete list of the available vaccines you have in your press kits.

So let’s put these flu vaccines to good use. They don’t prevent influenza if they are left in the refrigerator. Don’t wait to vaccinate, if your first choice of vaccine is not available. Vaccines are available right now. So there’s no reason to delay.

Following the panelists’ presentation there will be a Q&A session. And now, to kick all this off, it’s my pleasure to welcome Dr. Frieden. Tom.

**DR. TOM FRIEDEN:** Thanks very much, Bill, it’s great to be here with you. And I really thank Dr. Riley, Dr. Offit, and Dr. Schaffner for kicking off this year’s flu season with us at CDC. We have some new information. But the bottom line here is that there’s one thing to know about flu. It’s unpredictable and the best thing you can do to protect yourself, your patients, your
family from the flu is to get a flu vaccination this year and every year. It is safe and effective. I get a flu shot. I took my 10 year old for his flu inhalation or intranasal last Saturday. And we recommend that everyone six months and older get a flu shot this year and every year.

We can’t predict what this season is going to be like, severe or less severe. We can’t predict exactly which strains are going to be circulating. But we can predict that the best way you can protect yourself against flu is to get a flu vaccination this year. And now is the time to start getting one.

Now, I’d like to just recap what happened last year. Last year, as you may remember it was a relatively bad year for flu. There were tens of millions of illnesses. Lots of people went to the hospital. It hit young adults, middle-aged people harder than it usually does. And they accounted for a larger proportion of cases. Last year it was predominantly the H1N1 strain the first emerged in 2009. That strain remains in this year’s flu shot. And you need this year’s flu vaccination to protect you against this year’s flu.

Now last year we also saw more than 100 documented deaths in children from influenza. And that’s a terrible tragedy. Many of those deaths might have been prevented if children had gotten a flu vaccination. And there are so many options now, different forms of vaccination, small needles, less small needles, inter nasal vaccinations. And so you really should try every way you can to protect your kids and your family from flu. And for physicians to make sure that you set it up as a routine so it’s not taking an extra step to make sure that you’re helping your patients protect themselves and their families—but you, yourself are getting a flu vaccination and you’re ensuring that your patients are routinely offered that as well.

Of those more than 100 kids who died with flu, first off we know that the actual number is higher because we’re not able to identify each, such tragic event. We know that about half of those kids didn’t have a pre-existing condition. They didn’t have some health problem that would have identified them as high risk. And we know that the overwhelming majority, around 90 percent
didn’t get a flu shot. So, please, get a flu shot for yourself and your kids this year and every year. There are many more options for flu vaccination.

Now, I also want to tell you about another important report that CDC will be releasing today. We’re reporting flu vaccination coverage rates among healthcare providers. And for the first time we’re reporting that because of a terrific collaboration between CDC and CMS. Our two organizations figuring out ways to work together to help get more value for our healthcare dollars, to help protect patients better, to help improve the quality of care.

And what CMS has done is to require that healthcare facilities report on their flu vaccination rate. And we check to see if that reporting matches other surveys that we do to look at the vaccination of healthcare providers. And they are quite close. So we’re encouraged that this data seems representative and it’s encouraging. We know that data was reported for more than 4,000 hospitals. And that represents about 85 percent of such hospitals in the country. That is the most complete accounting available for this measurement.

We looked at that by employees, by types of practitioners and by trainees and volunteers. And overall, 82 percent of healthcare providers working in these hospitals were reported to get a flu vaccination. That’s encouraging because we’ve seen steady increases. The highest proportion was among hospital employees, 86 percent; the lowest among independent, licensed practitioners. That was at 62 percent.

That’s a baseline to look at the future. Because what gets measured can get managed. And we anticipate seeing those number continue to increase now that we have a system to track them. That’s important. By healthcare providers getting vaccinated, they’re protecting themselves because they’re at high risk of getting flu when they are taking care of patients. They’re protecting their families and they are protecting their patients. Influenza vaccination for healthcare is a patient safety issue.
And hospitals that do things like have multiple days when their employees can get a free, flu vaccination are much more likely to have a higher rate of flu vaccination. That’s a bottom line. The easier we make it for people to get a flu vaccination, the more likely it is that they will get vaccinated. We still are seeing numbers lag in places like nursing homes, long-term care facilities, allied health workers, people who work at various levels at the hospital. So there is more to be done there.

I wanted to also give you the final vaccine coverage estimates for last flu season. Last flu season about 46 percent, about half of all Americans, six months and older were vaccinated against influenza. Now you can be a glass half full person or a glass half empty person. I would like in this case to say, it’s really unfortunate that the half of Americans are not getting the protection from flu that they could get. Because the result of that is that a lot of days missed from work and school, a lot of suffering, a lot of hospitalization and a number of deaths that could have been avoided.

I’m happy to report, though, that last year more kids got vaccinated than ever before. The estimated coverage was 59 percent overall among kids. So most kids are getting vaccinated. And interestingly, Asian, Hispanic and Indian, Alaskan Native kids had higher vaccination rates that either African-American or white kids in America who had similar rates, around 55, 57 percent.

Dr. Offit will say more about protecting kids against flu. But I want to make one point and that has to do with kids with asthma. There’s been a lot of understandable media attention to the cluster of EVD68, enterovirus D68. We’ve seen this virus a bit before. It tends to peak in the fall. So we’re seeing a lot of cases in many states around the US and we may well see more cases. Many of the kids with the most severe illness were kids with asthma. So making sure that asthma is well controlled and that every kid with asthma gets a flu shot is very important and more important than ever this year.

Among adults overall, the rate remained 42 percent. And unfortunately, here there were big differences between different race and ethnic groups. For whites it was 45 percent. For Asians
and American Indians about the same. But it was much lower for African-Americans, Hispanics and people of multiple races. We also need more adults under the age of 65 to get a flu shot. Of adults 18 to 64, only a third, 34 percent got a flu shot. This is the working population. That’s a lot of days of work missed. That’s a lot of suffering and pain because people didn’t take the couple of minutes to get a flu shot.

We need to make it easy for people. We see that a large proportion of flu shots are now being given—flu vaccinations are not being given in pharmacies and at workplaces. There are more options than ever for flu vaccination. So we hope to see that number increasing because it will really help. And last year was a bad year for people in that middle age group in terms of flu. We’re particularly concerned about the low rate of vaccination for adults with high risk conditions like asthma, lung disease, heart disease. They are at higher risk for ending up in the hospital or intensive care units or even dying from flu. And yet their flu vaccination rate is only 46 percent.

Last year 65 percent of 65 year olds got a flu vaccination. Typically most of the hospitalizations and deaths are in this population. We do have some more options for vaccinations among the elderly. And we’ve seen big differences between different states and how they do on flu vaccination.

Now I’d like to turn to two reports in today’s MMWR. The first is about pregnant women. And here I’m encouraged that most pregnant women are not getting a flu shot. But it’s only just barely most. It is 52 percent. And so we know that it’s important because pregnant women are more susceptible to severe complications of flu. And Dr. Riley will be talking more about that.

We also know that nurses often lead the way. And I didn’t say that just because a nurse is going to give me my flu vaccination later today. Nurses led by example and reached the 90 percent goal last year. Ninety percent of nurses got a flu vaccination, joining doctors who also reached the 90 percent. You know, the more you know about flu the more likely you are to get vaccinated. I’m getting my flu vaccination and I recommend everyone six months and older get
their unless they have an absolute contraindication. Overall about three-quarters of healthcare workers get the flu shot. And we’re seeing a big increase in healthcare workers working in hospitals, up to 90 percent.

Now we do have another vaccine recommendation and that has to do with the new, pneumococcal vaccination. Pneumococcal disease causes pneumonia. It can be severe. And we’ve had one form of pneumococcal vaccine for people 65 and over. We are now recommending the second form of pneumococcal vaccine, what is called the conjugate vaccine. It’s been tremendously effective in kids and we’ve seen the number of pneumococcal cases plummet in recent years.

And the advisory committee on immunization practices has now recommended people 65 and over get this new vaccine. So the most important group are those turning 65. We want to make sure that when you go in for your flu shot you get this newer vaccine if your doctor has it. We’re encouraging doctors to stock it. Insurers have told us that they will reimburse for it. So that’s a new vaccine recommendation. That’s the most important group for it. There’s a lot more detail about who should get that vaccine and how you deal with two different vaccines. It’s a little complex and I’ll let other people deal with that. The bottom line is, if you’re turning 65 this year, you can look forward to not just an influenza vaccine but an even better anti-pneumonia vaccine.

Finally, I’d like to conclude with a couple of comments about flu overall. At CDC we have three-step approach to fighting the flu. First and foremost is to get a flu vaccine. Everyone six months and over, now is a great time to get vaccinated. New this year we’re preferentially recommending nasal spray vaccine for healthy children two to eight years old who don’t have any contraindications or precautions when it’s available immediately. But if it’s not available immediately, by all means get any form of flu vaccination. They all work. They don’t work as well as we would like but they are the best way to protect against the flu.

Second, we recommend that for fighting flu and other respiratory illness, take every day preventive reactions. That means stay at home if you are sick. If you are sick, stay away from
other people. Have good hygiene like washing your hands often and covering coughs and sneezes. And finally, if you do have symptoms of flu particularly if you have an underlying condition and your doctor prescribes antiviral medicine take them. They are a good second line of defense against flu. Again, bottom line, we can’t predict what this year’s flu season will be like. But we can predict that the best way to protect yourself is to get a flu vaccination.

Thank you very much.

[Applause]

**DR. BILL SCHAFFNER:** Thank you, Tom. Your dedication to the prevention of influenza and pneumococcal disease is very evident and we appreciate your passion in this regard. Dr. Riley will now tell us a little bit about her perspective as an obstetrician regarding the flu in the pregnant woman and in her newborn.

**DR. LAURA RILEY:** Thank you. Good morning. So my life is spent on labor and delivery units and hopefully delivering as many healthy babies as possible and making really wonderful families. One thing that’s clear is that no otherwise healthy, pregnant woman should ever have to go to an intensive care unit, gasping for air and trying very desperately to save her newborn from delivering prematurely. It’s just not fair and it’s unnecessary. During pregnancy and in the immediate postpartum period influenza can lead to severe respiratory infection and even death. And when mothers become this acutely ill, they are at risk for delivering their babies way too early.

The best prevention for the flu, as you know is the flu shot. An overwhelming number of studies have shown that the flu shot is safe in pregnancy during all trimesters. There is no increased risk of birth defects, of miscarriage or preterm delivery from the vaccine itself. The vaccine benefits the mother, because it prevent severe illness for her. And it protects the baby from infection in the first six months of life before the baby can be vaccinated.
So as Dr. Frieden stated, last year only half of pregnant women received their annual flu shot. We can do much, much better to protect mothers and unborn babies from this preventable illness. We know that a strong recommendation from obstetricians, nurses and midwives can increase the number of pregnant women who will accept vaccination. So here is my strongest recommendation. Don’t delay. Get your flu shot.

[Applause]

**DR. BILL SCHAFFNER:** Thank you, Laura. And we’ve been doing a little bit better. The moms are accepting and the docs are giving it, right?

**DR. LAURA RILEY:** Yes.

**DR. BILL SCHAFFNER:** We are making step-wise progress and we have more to go. Paul Offit, come on up here and tell us about the impact of flu in children.

**DR. PAUL OFFIT:** There is not a year that goes by a child dies that the Children’s Hospital of Philadelphia from vaccine–preventable disease. Occasionally, it’s pneumococcus or whooping cough pertussis but mostly it is flu. When the 2009 pandemic hit we had five children die of influenza. And you should see this because here is the way it.

There was actually the child of a friend who came in a number of years ago who was eight years old. And he came into the Emergency Department laughing and joking requiring face mask oxygen. But over a period of eight days he went from face oxygen to CPAP, which is continuous positive air pressure to a ventilator to an oscillator to a heart / lung machine and then he died. And you watch these parents every day go through this event where they are watching their child fall off a cliff in slow motion.

And then you in your practice see parents who are choosing not to get a flu vaccine. And it’s impossible not to be passionate about this. Because to watch these parents lose their future is hard. The parents’ reaction is invariably the same. They can’t believe it. They can’t believe this
happened. So that they then do is they invariable become members of parent activist groups, groups like Families Fighting Flu, the Amanda Kanowitz Foundation, are all foundations founded by patients whose children have died of flu. But the reactions are all the same. They just can’t believe it, “I can’t believe this happened to me,” until it happens to you.

I think part of the problem here is the word flu. You know, we will often say, well, it’s just the flu virus. I think we don’t really understand what influenza is. Influenza makes you sick. The old medical school aphorism was if medical students really want to know what it feels like to be sick they should get the flu. You often remember the exact how when you illness started with high fever, headache, shaking, chills progressing to congestion, coughing, and occasionally a lower respiratory tract disease, pneumonia.

We confuse it with other viruses like rhinovirus, which are much more trivial. But there is nothing trivial about flu. What I’m going to sort of end by challenging Doctor’s Frieden and Schaffner to come up with a new name. I think we need a new name for influenza virus. Over the past week I have been asked 1,000 questions by reports on enterovirus D68 and Ebola, which combined have caused about zero deaths in the United States. And yet flu causes thousands of deaths. But I think we need to maybe give it a Greek letter designation and an interesting city name, I think preferable from an exotic city. I think that’s the biggest problem with flu is its name. So, thank you.

[Applause]

DR. BILL SCHAFFNER: So, thank you Paul. And we might just reinforce Paul’s comments by remarking that of the over 100 children who died last year, half had no underlying illness at all, perfectly normal children infected by fierce influenza. How’s that?

DR. PAUL OFFIT: You’re getting there.

DR. BILL SCHAFFNER: I’ll work on it. I’m going to take just a few minutes to review influenza and pneumococcal vaccination recommendations for the persons out there who are 65
years of age and older. A high dose flu vaccine is now available for that group. And the provides
a large dose of antigen. That’s the part of the vaccine that actually stimulates the body’s immune
response to create antibodies.

New data recently published in the *New England Journal of Medicine* indicate that the high dose
vaccine leads to significantly higher antibody levels in people aged 65 and older. And also,
those higher antibody levels translate into greater protection against influenza. So the vaccine
really does its job as intended.

Getting influenza also increases a person’s risk of getting pneumococcal disease. You know,
influenza in and of itself is very bad. But it also leads to complications. And one of those
complications is pneumonia. And pneumococci, these bacteria are the leading cause of that
pneumonia. And they can also cause pneumococcal meningitis and blood stream infections. So
these infections, these pneumococcal infections are particularly deadly for older people.

But even in younger people pneumococcal disease often requires hospitalization and weeks to
recover before returning to normal activities. This makes it critical that everyone in the
recommended age groups is protected against both diseases now that influenza season is
approaching. As Dr. Frieden said, for those 65 and older, the CDC now recommends two
vaccines against pneumococcal disease, the conjugate vaccine, known as PCV 13 already
recommended for universal use in children and with powerful effect is now recommended for
adults age 65 and older

That, along with the well-known and long used polysaccharide vaccine, also known as PPSV 23,
which has been used for many years in the 65 years plus population. And if you’d like to discuss
the details about how those vaccines are to be administered, we can do that later in the Q&A
session or after the news conference.

This new combination of pneumococcal vaccines is expected to reduce vaccine-type pneumonia
in people age 65 and older by about 45 percent and reduce invasive disease, the most deadly
form by 75 percent. These represent very significant decreases in illness for this 65-plus age
group in our community, who suffer more than 50,000 hospitalizations each year for
pneumococcal pneumonia alone. So, together, the vaccines will provide protection again
pneumococcal disease. The two vaccines cannot be given at the same visit. Ideal, the conjugate
vaccine is given first followed by the polysaccharide vaccine six to 12 months later.

Excuse me here for a minute. Now, what I’d like to do is invite Sharon from the MedStar
Visiting Nurses Association to the podium to vaccinate Dr. Frieden who will demonstrate his
personal commitment to the prevention of influenza as he has done in the past.
[Applause]

DR. TOM FRIEDEN:  Hardly felt a thing.

DR. TOM FRIEDEN:  You can fit this into any busy schedule.

[Laughter]

SHARON:  Thank you.

DR. TOM FRIEDEN:  Thank you very much.

[Applause]

DR. BILL SCHAFFNER:  Sharon, thank you for doing that so efficiently. And thanks to Dr.
Frieden our country’s leading preventions who is also, obviously, a very good sport.

DR. TOM FRIEDEN:  Thank you.

DR. BILL SCHAFFNER:  Now for the questions and answer session. This is reserved for
questions from the media. We’ve got two, roving microphones. Please indicate that you have a
question, you know, raise your hand, and someone will come over with a mic. Please remember to identify yourself and the media outlet you represent. For the media participating via the webcast, please email your questions as indicated on the webcast. If you’re on the teleconference the operator will come on the line momentarily to advise you how to submit your questions.

And finally, if you would like to schedule one-on-one interviews with any of the speakers or representatives of the supporting organizations present, one of our staff here can arrange that for you. And a full list of those organizations is available to you in your press kit. So, who would like to ask the first—

**LAUREN NEERGAARD:** Lauren Neergaard with AP, a couple of questions. First of all, how much flu vaccine is there this year? How much is quadrivalent? Dr. Frieden are you going to be pushing for all of it to eventually be quadrivalent and how soon? And then I also have question for Dr. Offit.

**DR. TOM FRIEDEN:** The answer is there is plenty of flu vaccine; 77 million doses are quadrivalent or four different strains. And we will be working with the manufacturers to see about increasing that portion over time.

**DR. BILL SCHAFFNER:** Lauren, do you have another question?

**LAUREN NEERGARD:** And Dr. Offit, it was said earlier that the enterovirus means we really need to be sure that we’re vaccinating kids against flu this year. Can you talk a little bit about that? Is that doing to complicate things just to have the two different, similar infections going around at the same time?

**DR. PAUL OFFIT:** Well, I mean they’re both respiratory tract respiratory tract infections so in that case they are similar. But they are distinct, certainly, immunologically. The flu vaccine will prevent influenza virus and influenza virus only. It is not going to prevent, do anything for the enterovirus D68. Certainly we see a lot of mixed, respiratory virus infections in
our hospital. We’ll see, often, you know, two viruses that are infecting at the same time. It is certainly possible that could be true here. So that makes it all the more important I think to make sure that you get flu vaccine. Sure.

**DR. BILL SCHAFFNER:** Is there another question? Yes. Please.

**CARLOS BONGIOANNI:** Hi. Carlos Bongioanni, *Stars and Stripes* Newspaper. You mentioned, Doctor, earlier about the parents who would never suspect that their children would die from influenza. I’m just wondering, do you have any statistics of how many of those children that died had the vaccine and how many didn’t have the vaccine?

**DR. PAUL OFFIT:** Certainly. I mean the experience at Children’s Hospital in Philadelphia is invariably they haven’t had the vaccine. I mean so if you look nationally, typically children who die have not been vaccinated. So the numbers, I’m not sure that those numbers are known. But I think one can say, sort of the largest percentage—it’s certainly true when you look at vaccine-preventable diseases in general, like the current measles outbreak, the vast majority are unvaccinated.

**DR. TOM FRIDEN:** For influenza, of the children who die about 90 percent were not vaccinated. That’s in contrast with overall we’re at close to 60 percent are vaccinated. So 90 not among those who die versus overall, 57 percent vaccinated.

**DR. BILL SCHAFFNER:** So Laura Scott from Families Fighting Flu. Say a few words about that. Why don’t you stand up, please.

**LAURA SCOTT:** I’m Laura Scott representing Families Fighting Flu, which is an advocacy organization made up primarily of families who have lost children—

We are an advocacy organization made up primarily of families who have lost children to influenza or whose children have been hospitalized. The majority of our members, advocated,
children were not vaccinated against the flu. And as Dr. Offit said very well, that these families are left shocked and devastated and cannot believe that their children actually died of this vaccine-preventable disease.

So you ask any of them now, they actually will push the vaccine. And all of them believe that had their children been vaccinated, their children may still be here today.

DR. BILL SCHAFFNER: Thank you, Laura. Very heartfelt. Yes, please.

DONNA YOUNG: Donna Young with Script. For those parents who didn’t get their children vaccinated what was the reason? And for those who died as well as others who haven’t gotten their children vaccinated, what is the reason that you are finding most often?

DR. BILL SCHAFFNER: Paul?

DR. PAUL OFFIT: Either one of two things. One, the considered influenza to be a trivial infection and not worthy of prevention. Number two, they have false or at least scientifically unfounded concerns about safety issues, you know, that the flu vaccine causes the. The flu vaccine doesn’t prevent the flu vaccine and I got sick from it. That is causes other things like Guillain-Barré Syndrome and for that reason they don’t want to get the vaccine.

I think it’s our inability to understand risk. I think we don’t really know where the real risks lie. The riskiest aspect of getting vaccines in general is driving to the office to get them.

DR. TOM FRIEDEN? I would just add to that, that doctors can so a lot here. That doctors making it routine and easy for kids to get vaccinated increases the vaccination rate. And for many of the kids who were not vaccinated, it wasn’t that the parent didn’t want a vaccine it is just that the system didn’t work for them.
DR. BILL SCHAFFNER: So Dr. Beers come on up here, Dr. Lee Beers from the American Academy of Pediatrics. Can you say a few words about how those pediatricians are working to get everybody vaccinated?

DR. LEE BEERS: Absolutely. Absolutely. And I would agree with all the comments that have just been made about why parents don’t get vaccines. I think it’s scary. And when it is something that you don’t fully understand and you see media reports about, I agree, false, scientifically unfounded information about the dangers of the flu shots, it’s hard to know how to make a decision. But I think as pediatricians we are trusted advocates with the family. And so having a good relationship with families we can talk about that together.

One of the first things I do is I tell parents, “I get the flu shot every fall. My school-age children get the flu shot every fall. They’ve been getting it since they were six months old. And if I didn’t, in my heart believe it was safe, I wouldn’t take them to get it. So I think being able to have that conversation, have a discussion about what the concerns are, what their fears are about risk really helps. And it helps parents make a decision.

DR. BILL SCHAFFNER: Thank you very much.

DR. PAUL OFFIT: One thing, one quick thing, Bill.

DR. BILL SCHAFFNER: Yes, please.

DR. PAUL OFFIT: Thank you. I completely agree with that. What you’ve seen over, say, the past 30 years is I think a change in the way that pediatricians interact with their families. You know, you want the patient and the parent to buy in to what you are doing. So at some level you them to make the decision. And when you do that you accede your expertise and experience at some level. So we’re not as strong or passionate about vaccines I think as we were decades ago. We want—
I think there is probably no better example of this than the human papillomavirus vaccine, which is horribly underutilized. We need to be stronger. We need to be more passionate. You don’t have to work in a tertiary care hospital like I do to know that children can die from this and to watch children die from this. Or to have the parent advocate groups like Parents Fighting Flu, you know, who have seen this happen. I mean it does happen. And you don’t want it to happen to your child. It’s a game of Russian roulette. It’s not five empty chambers. It’s 100,000 empty chambers but it is still a game you don’t have to play. And I think people don’t see it that way. We need to be far more passionate in the front lines. I completely agree.

**DR. BILL SCHAFFNER:** So I have another question here and it has to do with the pediatric immunization. We seem to get a lot of interest in that this morning. And that’s very good because children not only need to be protected themselves, they are the great distributors of influenza virus in the community, right? They share it amongst themselves and then bring it home to mom and dad and to granddad.

So the question is, and this is to Paul for starters. Why is it now preferentially recommended that children two to eight receive the nasal spray vaccine if it’s available.

**DR. PAUL OFFIT:** So the live, attenuated, influenza vaccine or nasal spray vaccine actually was a vaccine that originally was developed in the 1960s at the University of Michigan. So there is a lot of data and experience with this vaccine. It’s made using a scientifically different strategy than the inactivated vaccine. The inactivated vaccine is made by taking an influenza virus, growing it up, relatively purifying the two, surface proteins of that virus, the hemagglutinin and neuraminidase. The virus is completely inactivated and then giving it as a shot.

The live attenuated vaccine, is attenuated. It is weakened, which is to say it is adapted to growth at a temperature of a about two degrees cooler than body temperature. So therefore it can’t possibly reproduce itself at core body temperature. Rather it reproduces itself at a temperature two degrees cooler, which is to say that of the nose. It induces, therefore, a better, frankly a better response in the upper respiratory tract. And the data for young children are, in the children
two to eight year old age group is that it is a better vaccine. Both are excellent vaccines. Both work. But the LAIV is better in that age group.

This is not—there are a number of other countries that have already expressed their preference. There are two states in this country, Oregon and Washington that already have expressed a preference. So now this preference has occurred at a national level.

**DR. BILL SCHAFFNER:** So it’s a preference but not everyone will have LAIV. Not everyone will have the nasal spray vaccine available. So the secondary note is, parents shouldn’t shop around too much looking for it. Make sure your child is vaccinated with influenza vaccine that’s available because the vaccine that’s deferred is often the vaccine that winds up not being received. So the important thing is to get your child vaccinated.

We have another question here from CBS News from Dana Carberry. Can you talk about, Dr. Frieden, the current supply of vaccines for the season. You’ve said a few words about that again. And there’s a sub question here. Are there shortages or delays?

**DR. TOM FRIEDEN:** We’re confident that there will be ample supply this year. We’re told by the manufacturers that they will be bringing about 150 million doses of flu vaccine to the market. There are many different options. It’s always possible that in one doctor’s office or even in one area that you may have to shop around some. But there is plenty of flu vaccine to go around. We hope that everyone will take advantage of it.

**DR. BILL SCHAFFNER:** Great. Thank you. And a few more questions here. Are there any strains of influenza out there that are particular concern this season? I think we predict in our cloudy crystal balls that we anticipate the circulating strains this year will be very similar to the strains that were around last year.

**DR. TOM FRIEDEN:** We will really have to see. We have to see what happens. Last year it turned out it was H1N1, the strain we first saw in 2009. We track influenza around the world. It’s
a wonderful, global collaboration because we work to help other countries track and respond to the flu better. And when they do that, we have better information of what we are going to do. And that’s something that we are going to be looking at very closely.

We hope that this year’s vaccines will be a good match will all of this year’s flus. But whether it covers all or whatever proportion, only time will tell again. Flu is unpredictable. The only thing we can predict with certainty is that the best way to protect yourself against flu is to get a flu vaccination this year.

**DR. BILL SCHAFFNER:** I think we can also predict that there will be flu.

**DR. TOM FRIEDEN:** Yes.

**DR. BILL SCHAFFNER:** Absolutely. Further questions?

**KIMBERLY LEONARD:** Hi, I’m Kimberley Leonard from *US News and World Report*. For people who don’t have health insurance, how much does the vaccine cost?

**DR. BILL SCHAFFNER:** The vaccine costs a variety of amounts depending upon your resource. But you can also—people who don’t have medical insurance can go to their public health clinics. And many of them are providing vaccines. Tom, do you want to—

**DR. TOM FRIEDEN:** We would have to get back to you with the exact information on cost. But, you know, as we just released information about yesterday, and increasing number of Americans have insurance coverage. And as an ACIP recommended vaccine, there are no copayments for flu vaccination among virtually all people who are not covered with health insurance. For those without health insurance, there are options locally. You should check locally for what you can do to get a flu vaccination the least expensively.

**KIMBERLY LEONARD:** Can I ask one more?
DR. TOM FRIEDEN: Please.

KIMBERLY LEONARD: You mentioned earlier that among the African-American and Latino population there is a very different percentage of people who are actually vaccinated. Do you have more specific numbers on that? I didn’t see it in the report.

DR. TOM FRIEDEN: We can give you the numbers. The trend is quite interesting. If you look at children, actually, the vaccination rates are higher among African-American children than among white children. But if you look among adults, they are lower. One of the issues is access to care. And when people have access to care and are cared for by doctors and nurses and physician assistants who make flu vaccination a routine part of care, they get very high vaccination rates.

For adults, there may be less access to care. And in some communities there is concern about the needles or concern about the vaccine. That’s why it is encouraging. The needle I got was a big needle. But they have little needle vaccines, too, that many adults can get. So there are lots of options and we really encourage. And up to age 49 you can get the intranasal as well. We found that fear of needles is one of the reasons that some people don’t get vaccinated.

DR. BILL SCHAFFNER: So from the Hospitals and Health Network, here is a question. Are there steps that hospitals can take to increase the number of staff getting vaccinated, particularly independent physicians, that is, physicians in the community who practice in the hospitals?

And hospitals have been doing that in a variety of mechanisms, making the vaccine widely available, making it available free, making it as easy as possible, sometimes at medical grand rounds or pediatric grand rounds. Once you leave the grand rounds you can get vaccinated right on site. And then, as the questioner suggests further, or observes further that many hospitals are now making it a condition of employment. So that clearly has assisted in driving immunization rates up.
DR. PAUL OFFIT: Can I comment?

DR. BILL SCHAEFFNER: Sure.

DR. PAUL OFFIT: Well, I’ll tell you how we did it in our hospital. Starting in the early 2000s the immunization rate among our healthcare workers was around 35 percent, which was pretty close to the national average. By healthcare worker I mean anybody who could walk into a patient’s room. So it’s not just doctors and nurses and nurse practitioners but environmental services, dietary services. All of those are healthcare employees. So we had about 10,000 healthcare employees in our hospital.

And we did a variety of things. I mean we had—we certainly brought—it was free. We brought the vaccine right to the place where people worked. We had educational modules, which you could see on our intranet. We had giveaways. We would do things like give away 76er tickets at a time when they were still competitive.

[Laughter]

I mean it was all good. And we got immunization rates up to sort of in the mid-60- percent range.

Then what we did is we had a declination form, which said on the front of it that, “I know that there are children who come into our hospital with influenza. I know that there are children who—that we can spread influenza as caretakers from one patient to the next. I understand that there are vulnerable populations in this hospital who can’t be vaccinated because they are getting chemotherapy for their cancer or immune suppressive therapy for their rheumatologic diseases or because they are too young, less than six months of age. I know I can transmit that virus. I know that they can catch that virus. And I know that they can die from that virus.”
I mean that’s the way it read. It really read like it should have a skull and crossbones on the front of it. And still about 20 percent of people signed that form that they did not want to get the vaccine. And on the back we asked them to explain why and it was the usual reasons. I get flu from the flu vaccine. I never get flue, whatever.

So then what we did is we’d had enough. In 2009 we, as Bill alluded to, we mandated a flu vaccine. Which is to say that if you chose not to get an influenza vaccine in 2009, you had two weeks of unpaid leave to think about it. If you still didn’t want to get the vaccine you were fired. And so we fired nine people in 2009 because they refused the vaccine. No one has refused since.

We did not accept—just so you know how this worked exemption wise. Obviously, we accepted any documented medical exemption. We did not accept the philosophical exemption because it didn’t make sense. What’s the philosophy? Nietzsche? I mean that which doesn’t kill me makes me stronger? I mean we not accept that. We did accept religious exempts. This was always very tricky. The way that—they put me in charge of this the first year. The way that worked was I said that you just had to have a letter from the cleric of your religion showing where in the major text of your religion it said you should get vaccinated.

[Laughter]

Got a lot of notes from yoga instructors. That didn’t count.

[Laughter]

We have full compliance for that vaccine. Because, you know, we’ve had two children die in our hospital, both in around 2003 who came into our hospital without flu. They were cancer patients and they caught the flu. They couldn’t get a flu vaccine because they were immunosuppressed. They caught flu in our hospital and died from flu. Who’s responsible for them? We feel we’re responsible for them. And if you choose to work in the healthcare situation, in our case among a
vulnerable population of hospitalized children, it’s your duty to make sure that you don’t spread that virus. We just were not lenient anymore.

**DR. BILL SCHAFFNER:** Influenza immunization of healthcare personnel is first and foremost a patient safety issue. We do not wish to give influenza virus to our already, somewhat sick and sometimes seriously sick patients. And the only way we can assure our doing our best to do that is by being vaccinated. Staying home when you are sick is only partial solution because the day before you become sick you are already breathing out influenza virus. And you could then cover your patients. So the only way we can try to prevent this by immunizing ourselves in advance.

I would like to take a moment and ask Dr. Riley once again to emphasize the importance of influenza immunization in protecting not only the mom but the newborn baby during those first six months of life before we can directly immunize the baby. How does that work, Laura?

**DR. LAURA RILEY:** So I think someone asked why do people say no to the vaccine. And I think this is a conversation I have every day with pregnant women who are concerned about the safety of the vaccine. I think there is lots of data to suggest that it’s safe. I think what really is most appealing to mothers who want to just protect their babies at all cost is that the only way to protect a newborn between zero to six months of life is for mom to get vaccinated.

She develops antibodies. Those antibodies cross the placenta and they protect the baby during the time that the baby is most vulnerable. It is the only thing that is available. We know that the minute the baby is out, the baby is exposed to whatever is in the environment. I’d just like to say at our hospital, Mass General and on our labor floor and the postpartum floors, we have like 99.9 percent of people got vaccinated last year. We had one person who had to walk around with scarlet letter of a mask, which was ridiculous.

So I think that you can make the recommendation to healthcare providers. And I think at the end of the day it really is a responsibility issue. And I think none of the nurses or doctor or the women taking the dietary trays in and the gentlemen who are doing their jobs as well, anybody
who had contact with moms and babies understood that it was their responsibility to protect those patients. Those babies have no other protection.

**DR. BILL SCHAFFNER:** And that is a passionate person, also. Dr. Frieden you have to run. Thank you, always for doing this. Thank you very much.

[Applause]

We have time for just a couple of more questions. From *Parents* Magazine, is the nasal spray a better vaccine option for healthy adults as well as children two to eight?

Once you cross the threshold of about eight years of age, the vaccines are of comparable effectiveness going forward. So there is less to choose then going forward.

Pardon? And don’t use it in pregnancy. That’s correct. Pregnancy is a specific contraindication. It’s available for use age two up until the age 50 if you are otherwise healthy, that is, the nasal spray vaccine. Those are the licensed indications.

From Stacey Burling, from the *Philadelphia Inquirer*, has the flu season started anywhere in the country at this time?

Well, flu is always with us. So let me tell you about a colleague who called me about two and a half weeks ago. His patient was in her nineties, was an independent person, had no major, underlying diseases. But she developed a cough, persistent cough that her family suggested she see her very good primary care physician about. She chose not to do that. Two days later, that is two nights later, she was found parked in an awkward way at the side of the road by police officers. She was somewhat delirious, coughing. She had been out trying to get to her private physician’s office.

She was admitted to the hospital and as things sadly eventuated within three days died. And when she came into the Emergency Room they were clever enough to actually do a test. She had
diagnosed influenza, late summer influenza. So influenza is always with us. It hasn’t take off yet anywhere in the country as we think of influenza season. But it’s out there lurking, ready to strike.

Perhaps one more question. Yes.

**MIRIAM TUCKER:** Miriam Tucker with *Medscape*. I’m just wondering if you can summarize how it works with the pneumococcal vaccines. It is a little bit confusing, the recommendations.

**DR. BILL SCHAFFNER:** So the recommendation has to do with the pneumococcal vaccine and how it works. There are various ways to do that. But the most straightforward way is, once you reach age 65 and you haven’t been vaccinated against pneumococcal disease in the past, the recommendation is that your initial vaccination with PCV 13, the conjugate vaccine. And then wait six months to a year and then get vaccinated with the polysaccharide vaccine. And there are other combinations and permutations and we can discuss those a little bit later. It gets kind of complicated I must say.

**MIRIAM TUCKER:** … already had polysaccharide.

**DR. BILL SCHAFFNER:** If you have had the polysaccharide vaccine then you wait at least six months before you receive the conjugate vaccine. Correct. Lauren. You need to wait in order to maximize the immune response and also to minimize sore arms.

When you get the polysaccharide vaccine you get an immune response, right. The PCV 13 has obviously many of the main sero types. So you want that immune response to settle down so that you are not sort of neutralizing the antigen with the antibodies that are circulating in your bloodstream.

**MIRIAM TUCKER:** So it will cancel it out?
DR. BILL SCHAFFNER: It will lessen the effect. Yeah.

So, thank you very much for all your attendance. Let’s hope for, shall we say, an uneventful flu season. But as we’ve heard from the experts, our best defense is a good offense. I want to thank all the supporters of this. Thank you all for coming. Writing your stories, transmitting them electronically and every other way, it’s so important. We appreciate your opportunity. And all of you have available the opportunity to get vaccinated against influenza right here, right now, at no cost.

Thank you all.

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