

Good afternoon. I am Commander Ibad Kahn and I'm representing Clinician Outreach and Communication Activity (COCA) with the Emergency Risk Communication Branch at the Center for Disease Control and Prevention. I would like to welcome you to today's COCA call: 2021 through 2022 recommendations for Influenza Prevention and treatment in children. An update for pediatric practitioners. All participants joining today are in listen only mode.

Next slide please. Free continuing education is offered for this webinar instructions on how to earn continuing education will be provided at the end of the call. In compliance with continuing education requirement. CDC, our planners, our presenters, and their spouses/partners wish to disclose no financial interests or other financial factors with commercial products or commercial supporters except doctor Flor Munoz disclose she receives a royalty for offering the Seasonal Influenza in Children chapter in UpToDate and is a member of the Data Safety Monitoring Board Pfizer, Moderna, and is a member of American pediatrics committee on infectious diseases. Planners have reviewed content to ensure no bias.

This presentation will not include the unlabeled use of This presentation will not include the unlabeled use of products or products investigational use. CDC did not accept commercial support for the continuing education activity. At the conclusion of today's session. The participants will be able to accomplish the following. Review data from the 2020 to 2021 U.

S. influenza season to inform preparations for the 2021 to 2022 influenza season. Highlight key recommendations in the AAP influenza policy statement. Recommendations for prevention and control of influenza in children 2021 to 2022 and in the CDC advisory committee practices document. Prevention and control of seasonal influenza and vaccines recommendations of advisory committee on immunization practices- United States 2021 to 2022 influenza season.

Discuss the importance of vaccinating, testing and treating influenza during COVID-19 pandemic and review recommendations about using influenza antivirals in children. After the presentation there will be a Q and A session you may submit questions at any time during today's presentation. To ask a question using Zoom click the Q and A button at the bottom of the screen, then type your question into the Q and A Box. Note we receive many more questions than we can answer during webinars. If you are a patient, please refer your questions to your health care provider.

If you are a member of the media, please contact CDC media relations at 404-639-3286 or send an e-mail to media@cdc.gov. I would like to now welcome our presenters for today's COCA call. We are pleased to have Dr. David Shay, who is a medical officer in the National Center for Immunization and Respiratory Diseases.

We also have Dr. Flor Munoz. Who is an Associate Professor of Pediatrics, Infectious Diseases, and Molecular Virology and Microbiology at Baylor College of Medicine. It is my pleasure to turn it over to Dr. Shay.

Dr. Shay. Please proceed.

Thank you my name is David Shay and from CDC Influenza Division. We are going to start out with a review of last season. For flu, was there a last season? We know not much happened. To confirm, influenza activity was unusually low in the U. S.

and globally during 2021. For example, during September 2020 through May 2021, only 0.2% specimens submitted for respiratory testing were positive for influenza. To put that into contrast, three

seasons before the COVID pandemic, the proportion of specimens testing positive for flu peaked between 26 and 30 percent. The lack of activity directly led to dramatically fewer illnesses, hospitalizations, and death due to the flu.

For example, the cumulative rate of lab-confirmed hospitalizations was the lowest recorded since data collection began in the large system in 2005. More to the point for pediatrics, CDC received one report of a pediatric flu death in 2020 to 2021 and that had ranged from a low of 37 during the 2011-2012 season to a high of 199 in the proceeding season. 2019 to 2020. Next slide. So why was flu so low last year? Obviously the COVID-19 mitigation measures played a role.

Perhaps in sort of order of rough order of importance we have physical distancing. Particularly during the winter season. Wearing a face mask. Improved hand hygiene and many situations including outside of the usual health care situations. School closures and perhaps improved indoor ventilation.

I think it is helpful to think about how less transmissible flu is compared to COVID-19. There is a concept called R naught. A number of cases that an infect person may cause. For flu it is thought to be 1.3 or 1.

5. For SARS that range is thought to be R naught of 1.5 to 3, when the delta variant up to 5 and further context provided that most infectious typical viral disease of childhood is Measles which has an R naught of 12 to 18. In other words physical distancing and other measures that reduce COVID-19 probably led to a dramatic decrease in flu circulation. Also a year that a record number of flu vaccine doses were distributed.

Next slide. This is the season thus far this year, and as you can see this extends through last week as well. There have been few confirmed flu positives thus far in the United States and flu season, we would say, has not yet begun. Next slide please. As I mentioned a few slides ago, there was only one pediatric flu death reported last year.

And you can see that in Week 47 of 2020 In the graphs for the three seasons before show the typical range of well over a hundred deaths per year making a typical season flu the vaccine preventable disease associated with the most deaths in children. Last year we only had one. Next slide please. So, these are preliminary estimates of illnesses, visits, hospitalizations, and deaths associated with influenza during 2019 to 2020. There is an estimate by each group for each outcome and a corresponding uncertainty interval around the estimates.

Focusing on the pediatric age groups. Adding the 0 to 4 and 5 to 17 age ranges together. There are about 11 and a half million flu illnesses at season. 6.6 million visits.

42,000 hospitalizations and perhaps up to 486 deaths. Note the estimated total of 486 exceeds the number reported of 199 which reflects the known unreporting of flu outcomes and particularly lack of confirmatory flu testing for all suspected influenza hospitalization. Next slide please. This slide shows the proportion of flu outcomes for each category by age group and this is a pattern consistent from year to year for flu and for pediatric in the pediatric population. The bulk of more serious flu outcomes, hospitalizations and deaths occur in older people as is well as established.

Substantial proportions of medical visits for flu occur in children from 0-4 and 5-19 years and this holds typically for flu seasons. Illnesses peak perhaps in younger persons but medical visits and the substantial number of hospitalizations are due to in particular children 0 to 4 years of age. Next slide please. Here

are some links to additional sources of flu data as we head into the flu season this year. Beginning in October there is typically more detailed reports of flu activity as it begins to pick up on the FluView website and it is an if good resource to check periodically for updates.

It has a weekly report. In addition a component called FluView Interactive that let's you pull down specific data perhaps in an age group you are interested in or a region of the country. Next slide please. We will review CDC antiviral treatment recommendations next. Antiviral treatment is recommended as early as possible for any patient with confirm or suspected influenza who is hospitalized or severe, complicated, progressive illness, or is high risk for influenza complications.

Next slide please. We typically define the people at high risk as children less an two. Adults age 65 or older. Pregnant or postpartum women. Children less than 18 receiving long term Aspirin therapy.

Persons with American Indian or Alaska native ethnicity. Underlying medical conditions, in particular, pulmonary, cardian, immunosuppression, neurologic and neurodevelopment conditions. And residents of nursing homes or other long term care chronic care facilities. Next slide please. Antiviral treatment is recommended by CDC early as possible for any patient with confirmed or suspected flu.

Is hospitalized, has severe illness or high risk. Antiviral treatment considered for any previously healthy patient symptomatic outpatient not at high risk based on clinical judgment if treatment can be initiated within 48 hours of illness onset. We know the medications have the greatest benefit if given early during the course of illness. Next slide please. So right now there are four antiviral medications recommended for use in the United States.

You are probably more familiar with the three neuraminidase inhibitors: Oseltamivir, Zanamivir, Peramivir. There is however a new agent. A cap-dependent endonuclease inhibitor, called Baloxavir, that is an oral medication. Next slide. This table summarizes the differences between these available antiviral medications and Oseltamivir, and Baloxavir are oral.

Zanamivir is administered using a disk inhaler and Peramivir is IV only. Oseltamivir can be given to persons of any age including infants according to CDC if they have a disease process that justifies it. Zanamivir is approved for children seven and up. And because it has been inhaled and had associated with bronchospasm and those with preexisting asthma. It is not recommended for use with anyone with underlying airway disease.

Peramivir is licensed for two and up and is IV only And Baloxavir, the new agent is approved by FDA for acute uncomplicated influenza within 2 days of illness for people 12 years and older. So a little bit more about Baloxavir, it is a new drug as I said. It acts and through a new mechanism of action that blocks viral replication and FDA approved in October 2018 for acute influenza in patients age 12 to 64 years. An oral medication given in a single dose and that is perhaps it is advantage of this particular preparation. Dosage based on weight with those weighing 40 to 80-kilograms taking one 40 mg dose and those greater than 80 kilograms taking one 80 mg dose.

In clinical trials, Baloxavir was associated with significantly shorter time to alleviate symptoms than placebo and contributed to rapid declines in viral load and shorter duration of virus detection than Oseltamivir or placebo. Again similar to the existing antiviral drugs clinical benefit was greatest when initiated early after illness onset. It is worth pointing out for the agent the emergence of viral escape mutants with reduced susceptibility to the drug were observed in clinical trials and some family clusters.

It is important to continue surveillance for the emergence of possibly antiviral resistance in people who receive the medication. Next slide please.

Next we will turn to the most recent ACIP recommendations for use of influenza vaccinations in 2021-2022 recommendations which were published in August. Again, to go over background information. ACIP makes no preferential recommendation for use of a specific vaccine when more than one licensed recommended age appropriate vaccine is available. During this flu season the following vaccines are available and expected to have good supply. Inactivated influenza vaccine.

Recombinant influenza vaccines. And live attenuated influenza vaccine. Next slide please. As you know, routine annual flu vaccinations recommended for persons six months or older, who do not have a contraindication. Vaccination is recommended for all however if supply is limited the recommendation is to vaccinate those at highest risk and that includes persons six months and older with increased risk of complication and severe illness and contacts and caregivers of persons who are less than 5. Greater than 50 or with medical conditions that put them at greater risk for influenza.

Such as coexisting heart or cardiac or pulmonary disease. Next slide. Again, just to go over the list in a little more detail. That would be children age 6 through 59 months and adults greater than 50. Persons with chronic pulmonary disease.

Including asthma, Cardiovascular, Renal, Hepatic, Neurologic, Hematologic Metabolic disorders including diabetes mellitus. Immunosuppressed persons. Women who are or will be pregnant. Children and adolescents who receive aspirin or salicylate-containing medication. Residents of nursing homes and other long term care facilities.

Those with American Indian or Alaska native ethnicity. Or persons who are extremely obese with a BMI greater than or equal to 40. Next slide. Specifics from this year's influenza statements. All seasonal flu vaccines available for use in the United States this season are quadrivalent in nature.

For this year the U. S. influenza vaccines were updated to include new components for the H1N1 pandemic pdm09 and influenza A. H3N2 the age indication for the cell culture based inactivated influenza vaccine known as Flucelvax Quadrivalent was extended from its previous indication of those greater than or equal to 4. Down to those ages greater than or equal to 2.

Finally perhaps of particular concern this season. Administration of influenza vaccines with other vaccines is fine. And coadministration of influenza and other COVID-19 vaccines is encouraged. Next slide please. So the guidance for use of vaccines in this season now states that vaccinations should proceed soon after it becomes available to be considered for pregnant women in their third trimester and the children who need two doses those six months to 8 years who haven't receive a previous flu vaccination or have received in total two doses in the past should receive the first dose as soon as possible after it is available.

Ideally to allow the second dose which is given four weeks later to be received at the end of October this month. Next slide. There is some new information about contra indications and precautions for the use of the cell based and recombinant influenza vaccines for those who have a history of severe allergic reactions to the influenza vaccine. The information is those with the history of a severe allergic reaction of a previous dose of any egg based influenza vaccine is a precaution to the use of either of the vaccines the cell based or recombinant vaccine use of these two vaccines in such instances should occur in a medical setting under the supervision of a provider who can recognize and manage a severe allergic

reaction, and that would include allergy specialists. History of a severe reaction to any cell based vaccine is a contraindication to future use of the cell based vaccine and history of a severe allergic reaction to a recombinant vaccine is indication of future use of recombinant flu vaccines. Next slide.

And again, all of the vaccines this year are quadrivalent and components for the H1N1pmd09-like virus and H3N2 virus were updated and these list specific antigens that are used for the vaccine this year. Use of the quadrivalent vaccine means there is a Victoria B virus and a Yamagata B virus included in all preparations for this season. Next slide please. To go into a little bit more specifics about the labeling change for the cell based vaccine. In March 2001 FDA approved the use of Flucelvax Quadrivalent for use in children 2 to 4 years and initially approval for those 4 through 18 was based on immunogenicity data only and FDA required a postmarked efficacy study.

The expanded approval was based on a randomized observer-blinded clinical study that was conducted in children age 2 through 18 over three seasons and in this trial the vaccine demonstrated efficacy against laboratory confirmed influenza of approximately 55 percent compared with a noninfluenza control vaccine. Next slide. Finally some more thoughts about coadministration of flu and COVID-19 vaccines. Simultaneous administration of live and inactivated vaccines field zero conversion or reaction rates generally found when vaccinees are given separately. Particularly in pediatric populations the recommendation for the year is COVID-19 vaccines may be administered without regard of the timing of other vaccines and that would include simultaneous administration of COVID-19 vaccine and other vaccines on the same day.

We don't know, specifically, if reaction with COVID vaccines changes with administration this data is not available from clinical trials. However, monitoring of coadministration is going on at CDC through the usual vaccine safety surveillance platforms. Deciding whether to administer vaccines with a COVID-19 vaccine consider whether the patient is behind or at risk of becoming behind of recommended vaccine schedule. The risk vaccine preventable disease and the reactogenicity profile of any vaccine given in addition to the COVID-19 vaccine. Of course administer each vaccine in a different site and administer COVID-19 vaccines and vaccines that are more likely to cause local reaction in different limbs if at all possible.

Next slide. This just lists some resources that are available. The CDC flu home page. Flu Surveillance sites. As you know there are specific websites available for professionals as well as for the general public concerning flu.

The 2021 flu, I didn't update this it is 2021. ACIP recommendations have been published and our antiviral home page has been update and finally CDC and AAP have created a website and activity book together. Thank you for your attention I would like to turn the presentation over to Dr. Flor Munoz. Dr.

Munoz?

Dr. Munoz you are still muted please check your mute button. For the attendees please standby Dr. Munoz seem it is to be experiencing technical difficulties and we will try to have her reconnect and restart her portion as soon as we can. Please standby.

Please standby we are connect doctor Munoz in the next few moments.

Can you hear me now.

Thank you so much. Sorry to the audience for any technical difficulties can I hear a little more from you to make sure we have good audio.

Thank you so much I apologize as well. Hope you can hear me well now.

We can and hear loud and clear thank you so much.

Thank you so much and again my apologies as well for everyone. I am very pleased to discuss with you today the recommendations from the American Academy of Pediatrics. In the next slide please. I will be able to share with you the recommendations that the American Academy of Pediatrics has put together for this season 2021, 2022. And discuss some of the considerations regarding influenza and COVID-19 for this season as Dr.

Shay has as well. This is the current document. Just a quick update for everyone. We have in the past traditionally had a single document coming from the AAP on recommendations for prevention and control of influenza. This year we have two documents that complement each other.

One is a policy statement that has a summary of the recommendations as you see here. And the other is a technical report for those of you who are interested in reviewing in more detail the guidance and also the the resources and references available to support the guidance. This is what we would like you to see. This publication is going to be available to you soon. Next slide please.

I won't spend too much time discussing some of the updates and I wanted to make some points in addition to what Dr. Shay has already mentioned and just to remind everyone we of course had a very abnormal influenza season last year with practically no influenza activity, but we are seeing already a little bit of influenza circulating even before the season begins. Of course it is impossible to know what the season will look like. I just wanted to point out it might be this season we could see influenza is in more numbers than what we had last year simply because I think the conditions are in place. There is more opportunity for people to interact.

More mobility and international travel and certainly a vulnerable population that has not been vaccinated or infected with influenza for at least a full season. The next slide these are of course CDC data and showing when you look at the age groups of those who have had influenza-like illness recently the younger children always tend to be well represented. 0 to 4-year-olds we know tend to have influenza illness or respiratory-like illness often and that is true for school age children as they have more opportunities to interact. Next slide is to show you as Dr. Shay mentioned fortunately we haven't had pediatric deaths from influenza.

And hopefully we don't see that this year if we are able to protect everyone through vaccination. The next slide I wanted to bring up a question I get all of the time which is try to go predict what is going to happen this season and we have some clues of what happened in the southern hemisphere where there is surveillance for influenza cases through the Global Influenza Surveillance and Response system. Which is through the WHO and this is one of the graphs. Again, we don't know if this will be the same in the northern hemisphere. As they finish their winter in countries in the southern hemisphere they noted even though continued testing for influenza there is the still relatively low activity of influenza compared to previous seasons.

If you see in the graph there has been however, influenza B and A which is the blue colors detected throughout the world. The next slide -- the last slide regarding the epidemics. You see again it is not an

issue of us, people not looking for influenza. It is rather that it is very low and this is a global picture as well of the global influenza surveillance system where you see in the pink and the testing in the bars and then the positives for COVID-19. While in the blue you see the testing of the bars for flu which has occurred, maybe even at higher levels than we did before in the previous season.

Yet the positives for influenza remain relatively low so we will see what happens. In general we expect then that both influenza virus and SARS-CoV2 two could be circulating this fall and winter, and it is possible to have both infections at the same time And it is difficult for clinicians to differentiate both diseases especially early on in illness so we need to test and continue to test which is one of the recommendations this season to know which one we are dealing with. This is a table to try to again point out some of the main differences between influenza and COVID and similar ways of transmission. We know influenza is much shorter in terms of its incubation period, 1 to 4 days. COVID-19 can be as short as 5 days as well.

Both very contagious especially if we talk about the delta variant. Both present very similarly with the upper respiratory illness but also systemic symptoms The complications as you can see are quite similar. Clearly if you have something like loss of taste or smell that is more characteristic of COVID. And I think the main message I would like the to bring is clinically it might be difficult to differentiate the two. Next slide? This is showing the impact and as we know in a regular influenza season up to 10, 30, 40 percent of children or people can be infected and children do have the highest attack rates and play an important role in transmitting influenza and if there is influenza circulation it is possible we will see the same role.

They have increased for complications and especially young children under five and a higher likelihood of going to the doctor because of the symptoms that they have. Next slide? As a reminder the complications for COVID-19 and influenza can be similar in terms of risk factors and groups that have complications and you can see it is the same groups and persons who is have immune deficiencies or problems with their immune systems due to medications and unable to respond to the virus. Heart, lung disease. Kidney disease. Obesity as a matter of fact had been identified as a risk factor before COVID-19 came along.

And you see children under one and those children of any age with some metabolic disorders can also be affected. Next slide please. Again without trying to repeat this is still data looking at the cases of laboratory confirmed influenza hospitalizations when you do tend to have a pattern here with similar to what we are seeing now with COVID and children with no underlying conditions can come in with severe complications and be admitted to the hospital. Those with lung and neurological diseases are at higher risk. Next slide please.

These are the groups that we consider high priority for vaccination and Dr. Shay already went through this. It is basically the same list that you see from CDC. Is what the American Academy of Pediatrics supports. These populations as mentioned before would need to be definitely a group that is in our minds to offer influenza vaccine as soon as possible this season.

Next slide. Regarding testing. Just to complete that concept. Again it is difficult to assess with symptoms and fortunately we have PCR testing more widely available right now and a lot of the tests include both influenza and also SARS-CoV-2 But as well as in many cases RSV and other respiratory viruses. In addition to being aware of your local community, it is important to see what is circulating the community it is important to continue to offer the testing by PCR when you want to try to make a specific diagnoses.

Next slide please. Here are the recommendations. For this year, from the American Academy of Pediatrics. The recommendations have not changed compared to previous years. AAP Recommends annual influenza vaccination for children six months of age and older as well as adults and any licensed vaccine appropriate for the age and health status of the child can be used.

We don't have any preference for a particular influenza vaccine or one product over another. As long as there is no contraindication for the use of a particular licensed age-appropriate vaccine. Next slide. The updates for this year, it has within mentioned already. There is a new updates in the composition of the vaccine.

New influenza A strains. But all of the vaccines that are available this year for children as they have been in the year before are quadrivalent and new formulations available for children as was mentioned before and there is no change in the AAP's recommendations regarding egg allergy guidance we do emphasize importance of influenza vaccination during the pandemic and we also agree and concur with the guidance from CDC that coadministration of COVID vaccines and influenza vaccines is allowed. We don't have as we have heard any concerns regarding vaccine supply and my understanding is there is quite a bit of vaccine already that has been distributed. Next slide please. So, this is -- if you can you move through some of these.

Rather quickly because I think this is already if you could click next please. These are animated slides and I am hoping they will come up, can you press next slide, as in next slide. there you go. Dr. Shay already mention and this is to make the point that the influenza A strains are new this year while the B strains are unchanged.

Next slide please. and again, if you can also click through these again and again. T this is the summary of what we mentioned before and this is some of the abbreviations that we used. Standard IIV for inactivated and LAIV for live vaccine and then there is cell culture based vaccine that is inactivated as well. but remember that all pediatric influenza vaccines are free of adjuvants most are single dosed, preservative free and prefilled syringes Meaning no thimerosal or preservatives an intramuscular injection vaccine is available for everybody six months of age or older while the vaccine is two years and up and nasal vaccine two years and up.

This is just a table to show you all of the different products that could be available as we mention before. Practically all of the vaccines as you can see can be given starting at six months with the exception of the cell base and live vaccine. The cell base you've heard the changes and we had initially a requirement for four years and up and now we can start as young as two years and up to start using the vaccine. Next slide please Here is the same algorithm that we have used in the past to try and remind that everyone for children six months to 8 years of age that have not been vaccinated in the past or have incomplete vaccinations, so have not received two or more total doses of a vaccine prior to July 1st, 2021. they should have two doses with a four-week interval between the two.

while children nine years of age or older only need one dose regardless of previous vaccination history. And our goal is to complete the immunization by the end of October as we usually do. Here if you can also click through these there are several bullets and that is the last one. We emphasize the point that influenza vaccination is particularly important during the COVID-19 pandemic because of how unpredictable flu can be and of the concern of that coinfection and coseverity of infection could occur. We have supported the recommendation and guidance that these vaccines tend to be given at the same time or any time before or after each other if that is appropriate for a particular patient.

I think in pediatrics as we are heading towards potentially having vaccines for children. 5 to 11-year-olds. We are already given the COVID vaccine to 12 to 15-year-olds. It will be important to have the conversation with the parent to know what the expected reactogenicity profile is and make sure that there is agreement that the parents want to have both vaccines at the same time. However they don't have to be given at the same time.

If they prefer to give separately to try to reduce any side effects then that is totally appropriate as well. Children who are ill with either COVID-19 or any other illness. Similarly if they have moderate or severe illness they should be waiting until they recover before they get vaccinated if for flu and then children with mild illness could be vaccinated so keep up with the guidance as they become available we are expecting changes for the COVID-19 vaccines. Here just a reminder as we have before we don't have any changes in the requirements for egg allergy. egg allergy doesn't increase the risk of an anaphylactic reaction to vaccines and there are no special precautions when giving flu vaccine to children with a history of egg allergy.

We do ask about general reactions to previous vaccines. But in general and not specifically to eggs and children who do have an allergic reaction to flu vaccine can see an allergist to see about vaccines the future. the contraindications for the inactivated vaccine. Given as intramuscular injection are really based on an age indication and we don't have vaccines for children under six months of age. we talked about those with moderate severe illness is more of a precaution and wait until they recover.

But really the contraindications listed based on anaphylactic reaction to previous vaccination and precaution for Guillain-Barre syndrome can be due to previous vaccination. Other than no specific contraindications and the common side effects are related to injected site reactions even in children who may have a day or two of mild systemic symptoms. and the next slide gives you IIV, and it will give you contraindication and precautions Next slide IIV. If you go to the next slide. The as little bit busier because it has specific age indications and not give to anybody who has a allergic and anaphylactic reaction to the vaccine.

Not to children younger than two or persons more than 49 years old and this is one of the contraindications is children 2 to 4-year-old with asthma or wheezing but for those as you can see there with underlying medical conditions and asthma in more than five years of age similar to those with moderate to severe illness it could be a precaution for those groups and GBS is also listed the same way and potential side effects are related to the local reaction to the immunization. Next slide please. I think just to now finalize the comments. AAP also wants to make a statement regarding health care provider vaccination and that the AAP supports the mandatory vaccination with influenza as well including in outpatient settings and this is important now that we talk about COVID vaccination. Next slide please.

For the treatment of influenza recommendations are the exactly the same as described by Dr. Shay for CDC. They have not changed over the last year and we continue to prioritize and offer treatment for those with high risk for complications and those who are hospitalized and are progressing and considering treatment for those that can be treated early on, especially those with early onset especially high risk and with contacts at home. The doses and treatments that are available are listed here. Dr.

Shay already went through these, so I won't repeat them. Next slide please. And this is considerations for administration during the pandemic and I think we have learned quite a bit about this in the last year and I think that people are now a lot more used to telehealth and also to drive throughs. And nevertheless it is important to emphasize the fact vaccination at the medical home and at the physicians office is ideal and is recommended and this is an opportunity not just for immunization with influenza

but other immunizations covid 19 vaccination, routine care and additional guidance for preventive care for the family. We do follow the CDC guidance regarding how to give the vaccines as you can see there.

and the next slide. Just to emphasize again the planning and I think that maybe I am hoping the interest from patient ins flu vaccine might be higher this season. Because again we have all of the elements in place to be concerned it is a more severe season. Although we don't know that and may have more evidence of this as we go along. It is important again to have everyone involved in your practices and in any contact with patients to emphasize the importance of influenza vaccination.

the fact that we can do it safely in the offices and we have concerns regarding cocirculation of the SARS-CoV-2 with influenza and we have adapted well with the innovative vaccination strategies and should continue to utilize them during the next season. Thank you so much. And the next slide I think we are here now with a quick summary. Without having to repeat this is mostly for you to keep in mind. All of the main messages we have given.

Cocirculation. Similar clinical presentation. Importance of testing and the fact that influenza vaccination is really our main tool to prevent this disease this year. But we also have treatments available to reduce the impact of this infection and also help with the pandemic and I can I think I have one more slide that is a summary at the end please. One more.

If we go to the next slide This is immunization most effective public health strategy to prevent influenza and is particularly most important this season. And that the recommendations as we have stated are the same. Six months and age and older. Two doses for under 8 as needed. Any vaccine could be use and had we can co-administer the vaccines with influenza and COVID vaccine.

Next slide. AAP resources just like the CDC resources that were shared. Next slide. And also to give that are available to you for educational purposes. Next slide.

Thank you so much for your attention I will pass I it back to the moderator.

Thank you so much Dr. Munoz presenters thank you for providing our audience with the timely information and we will now go in to the Q and A session. Please remember that to ask a question using zoom click the Q and A button at the bottom of the screen and then type your question. For our presenters the first question asks can blocks be given shortly or after a COVID vaccine administration? I am happy to repeat question if you would like.

Thank you I think we may have two lines un-muted. If everyone can please mute themselves. Thank you. Just to repeat the question can blocks be given shortly before or after COVID-19 vaccines.

I can start with that. We actually have guidance regarding antivirals and when they can be given in relation to vaccination. In the case of inactivated vaccines there should be no concern with using antivirals as a matter of fact when have you a situation where you have high risk in a patient of becoming infected with flu. As in there is already high level of influenza circulation in the community and patient is at high risk and knowing it takes about two weeks to get immunity from the vaccination one option that is available in terms of use in antivirals is to use it as a prophylaxis for that two-week period of time until they develop their own immunity and antivirals will not interfere with the immunity produced by inactivated vaccines. On the other hand for the live intranasal influenza vaccine which does depend on the replication of the virus and nasal mucosa.

It is not indicated. There should be avoidance of antivirals after intranasal vaccination and the time is variable. Depending on the duration and the effect of the antivirals. Indeed if you start an antiviral after live vaccine administration. It actually basically counteracts the effect of the vaccine.

The duration of time as to when you can use an antiviral after vaccination or when you can vaccinate after using antiviral is available in the policy and recommendations.

Thank you very much for that very helpful answer. For if audience looking for the documents Dr. Munoz was referring to, please note the contents of this presentation as well as additional resources are available on the COCA call web page and I will share the link towards the end. The next question and this is quite a frequent question we are seeing.

Is can you speak more about coadministration of the COVID-19 vaccine and the influenza vaccine which currently could be happening for ages 12 and up and may soon be happening for younger children's as well. Can you address coadministration of those two vaccines in these pediatric age groups.

I can start with that. This is David Shay As we noted there were no contraindications. It is actually encouraged. It is useful if have you someone who is in the office to get a COVID-19 vaccine. If it is age appropriate flu vaccine available to offer it.

As you noted at this time of year it is the perfect time to get an influenza vaccination. No known contraindications to administering those two vaccines together. I do not know if Dr. Munoz wanted to add more.

Thank you, Dr. Shay. Yes, I think this is a very common question. Because parents are trying the to make that decision and providers as well. I think one important message is we do not want to miss opportunities for vaccinating children with these two vaccines and so the coadministration allows for a one time visit and not having concerns with missing a chance to get vaccinated in time.

These recommendations are also based on what we know regarding coadministration of inactivated vaccines as these two are. Especially when talking about IV and mRNA COVID vaccines that we can give to children. That there should be no reason to be worried about interference with immune response. Our immune system is very much able to tolerate and respond to multiple vaccines at the same time and that are given in the same manner. And again in terms of safety we are very well familiar now with the safety profile of these vaccines and if we know what to expect with each one of them and inform the families that is these potential side effects could occur then everyone is prepared and had you could also consider recommending or telling the parents that is obviously they can treat the fever or any side effects after vaccination if necessary as well.

I think at this point it is clear that the coadministration or any administration without any concern to intervals between the dose ss appropriate.

Thank you to you both. Next question we have is, we have also seen various verses of this today. Pop up in the Q and A box. The question really amounts to, should antiviral treatment be started only after a positive test for influenza or should antiviral treatment be started while waiting for results and I think the reason is probably because a lot of similarity between symptoms between influenza and COVID-19.

I can probably start with that. This is Flor Munoz. You are right. Traditionally every season we have stated you don't have the to wait for the results to come back. Because we have a pretty good sense of

when influenza is circulating the community and that if you have an illness that looks like influenza in the middle of influenza season it is likely influenza and we should offer treatment without having to wait for a result.

It does pose a little bit more of an issue right now given the persistent circulation of COVID-19, SARS-CoV-2. The similarity of the illnesses. I think in order to make a decision it is going to be a little harder at the beginning when we don't have a lot of influenza out there yet and testing is what will allow us to determine whether flu is out and have a sense of how active the outbreak is of influenza. I think early in the season right now, if I see a patient with fever and body aches and different symptoms I would think of COVID-19 first based on the epidemiology. I would test and wait for the result because that would help me determine the treatment.

I think if I started to see more influenza in the community and clearly we are in the middle of the influenza outbreak and I have a patient with that, I would probably start to treat influenza right away rather than waiting for the test results because I can treat that and help them recover and do better even if they have a COVID infection as well. Or hopefully less likely COVID at that moment. We have to be clinicians I think in this case but be aware of the local epidemiology and circulation of the virus.

I would agree. This is David Shay. Know your local and regional influenza activity and make treatment decisions accordingly.

Thank you for that. Our next question is also about the antiviral Baloxavir Do you consider Baloxavir to be a viable alternative if Zanamivir is contraindicated for whatever reason.

Dr. Shay you want to comment?

Go ahead Dr. Munoz.

Thank you. So, yes. You know the difference is certainly Baloxavir has its own specific age indications and as long as you are proper age indication. And especially for ambulatory patients I think Baloxavir is a good option. It is a single dose oral administration.

It is very effective and especially against Flu B strains and from what we see in the southern hemisphere influenza B strains are going to be circulating and that could be helpful. It could be a potentially better tolerated than a five-day course you would do with Oseltamivir which is the oral counterpart. The question specifically Baloxavir verses Zanamivir long as you are in the age group for which it is recommended it should be okay.

I will add only it might be particularly attractive in a setting where follow up might not be assured or more difficult for example than an emergency department or urgent care setting.

Thank you very much, we have time for one more question and the question asks do you anticipate any changes to the CDC/ACIP or AAP's guidance for younger children this flu season as COVID vaccines receive additional pediatric authorizations over the next several months.

This is David Shay in terms of influenza recommendations? I think we all know that the COVID-19 vaccine. EUA and eventual licensures for children are coming and I do not anticipate any changes in the ACIP recommendations for the use of influenza vaccine or influenza antivirals in the next few months.

I think I would agree. I think that the guidance that is available right now has taken into consideration the coadministration questions and safety profile. And the timing of the vaccination. I think if anything I would say we would be in agreement that supporting vaccination of children with these two vaccines is a very important this season. No particular changes in what we have already provided as guidance.

Great thank you so much and I want to thank everyone for joining us today and special thank you to our presenters Dr. Shay and Dr. Munoz for sharing their expertise. All continuing education for COCA calls are issued online through the CDC training and continuing education online system at <http://tceols.cdc.gov>

Those who participate in today's COCA call and wish to receive continuing education. Please complete the online evaluation by November 8th, 2021 with course code WC2922-100721 access code is COCA100721. Those who participate in the on demand activity should complete the online evaluation November 9th, 2021, and November 9th, 2023 and use course code WD2922-100721 the access code is COCA100721. Again the access code is COCA100721. Continuing education certificates can be printed immediately upon completion of your online evaluation.

A cumulative transcript of all CDC continuing education obtained through the CDC training and online system will be maintained for each user. Today's COCA call will be available to view on demand a few hours after the live call, you can find the video recording and the additional materials discussed such as resources and slides of today's COCA call at emergency.cdc.gov/coca Continue to visit emergency.cdc.gov

to get more details on upcoming COCA calls as we plan to host more COCA calls to keep you informed on the latest guidance on COVID-19. Share the call announcements with your clinical colleagues. You may also sign up to receive weekly COVID-19 updates by visiting this link on this slide. Next slide please. COCA call announcements for upcoming calls and other products are sent via e-mail in addition to visiting the webpage, please remember to subscribe to COCA to receive notifications about upcoming calls or products and services.

Be sure to subscribe to receive notifications by going to emergency.cdc.gov/coca. Next slide. We invite you to join the COCA e-mail by visiting the COCA webpage at emergency.cdc.gov/coca

click on "get e-mail updates" and enter your e-mail address where indicated. Finally, to stay connected and get the latest news from COCA, be sure to like and follow us on Facebook at facebook.com/CDCclincianoutreachandcommunicationactivity. Next slide.

Thank you for joining us. For today's COCA call and have a great day.