

NWX-DISEASE CONTROL & PREVENTION

Moderator: Dale Babcock

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11:00 am CT

Coordinator: Welcome and thank you for standing by. At this time all participants are in a listen-only mode.

During the question and answer session you may press Star 1 on your touch-tone phone if you'd like to ask a question.

Today's conference is being recorded. If you have any objections you may disconnect at this time.

Now I would like to turn the meeting over to Dr. Andrew Kroger. You may begin.

Andrew Kroger: Thank you very much and welcome to Current Issues in Immunization CDC NetConference. I'm Andrew Kroger, a Medical Officer in the Education Information and Partnership Branch or EIPB of the National Center for Immunization and Respiratory Diseases at the Centers for Disease Control and Prevention or CDC. And I will be the moderator for today's session.

To participate in today's program you need a telephone connection and a separate Internet connection.

The learning objectives for the session are one, describe an emerging immunization issue; two, list a recent immunization recommendation made by the Advisory Committee on Immunization Practices or ACIP; three, locate resources relevant to current immunization practice and four, obtain, assess and apply patient information to determine the need for immunization.

Today is March 12, 2014 and we will have two speakers today. First Dr. Yabo Beysolow, a Medical Officer in the Education Information and Partnership Branch in NCIRD will talk about the 2014 childhood and adolescent immunization schedule.

Next Dr. Carolyn Bridges, the Associate Director for Adult Immunization in the Immunization Services Division will discuss updates on adult immunization recommendations and standards for adult immunization practice.

A question and answer session will follow Dr. Bridges' presentation.

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CDC does not accept any commercial support.

So before proceeding to Yabo Beysolow's presentation we'd like to ask our listeners to take advantage of the new technology we are using.

We'll ask a few questions and you should be able to input your answers. We'll allow ten seconds for your answer. We will not reveal the results of these pre-conference questions now but we will tell you the answers at the end of today's program.

Here is the first question, which meningococcal vaccine is recommended in a 2-month old patient with asplenia?

Choices are: meningococcal conjugate vaccine, MenACWY-CRM or Menveo; meningococcal conjugate vaccine, MenACWYD or Menactra; the

meningococcal polysaccharide vaccine, MPSV4 or Menomune; or all of the above? So take ten seconds.

Time is up. Thank you. We'll move on now to the second question. How many doses of pneumococcal polysaccharide vaccine are recommended for a 50-year-old man with chronic heart disease?

The choices are: zero; one; one now and one at or after the 65th birthday; one after the 65th birthday; or two now? Take 10 seconds.

Okay time's up. Thank you very much for your input. I will give you the answers at the end of the session.

Now I will turn the mic over to Yabo Beysolow. Yabo you may begin.

Dr. Yabo Beysolow: Good afternoon. Thank you Andrew. It's a pleasure to present to you all today from Atlanta.

Today we'll be reviewing updates to the child adolescent immunization schedules from 2013 until 2014.

We'll review updates to Haemophilus influenza Type b vaccine recommendation. And then lastly we'll review a few tips when using the catch-up immunization schedule.

If you have your 2014 schedule nearby please open it up and have it available during this session. And that's the childhood and adolescent immunization schedule.

Immunization schedules are an integral part of immunization practice. Because immunization recommendations change frequently the schedule for the United States are revised annually.

The schedules are developed using a process in which input is first obtained from workgroup members during monthly telephone calls and then reviewed by subject matter experts.

ACIP recommendations published since January of 2013 were added to the schedule for 2014.

The annual immunization schedules are really intended to be a concise summary of current ACIP recommendations.

New policy and recommendations are not made with the schedule.

The development of the immunization schedule is a collaborative effort. The schedule for children and adolescents birth through 18 years are developed by the principle groups that make pediatric and adolescent immunization recommendations in the United States.

These groups are the Advisory Committee on Immunization Practices or ACIP, the American Academy of Pediatrics, the American Academy of Family Physicians and the American College of Obstetricians and Gynecologists.

The schedules represent the concurrence of all four groups for vaccination of children and adolescents. The schedule is published in February 2014 by all partner organizations.

As you will note on this slide the only change made to Figure 1, the recommended immunization schedule for persons zero through 18 years was to change the minimum age for MCV4-CRM or Menveo vaccine down to 2 months of age for use of the vaccine in infants at high risk from meningococcal disease.

Additions were made to Figure 2, the catch-up schedule for the following vaccines Hib, PCV13, and Tdap in an attempt to provide more guidance for providers on how to catch up individuals who are behind on the routinely recommended schedule.

Minor footnote changes were made to all of the vaccine footnotes to improve clarity as well as consistency and format.

For Tdap vaccine the highlighted areas show that further guidance was provided for providers as to how to proceed if DTaP vaccine was inadvertently administered outside of the recommended age range.

For Hib vaccine, guidance was added to complement the latest ACIP guidelines on the use of Hib vaccine published in MMWR in February of 2014. I will return to this shortly.

For pneumococcal vaccine, further information from the already published ACIP recommendations from 2010 were added to the scheduled footnotes. No new guidance was added.

Providers may access the full ACIP recommendations on use of pneumococcal vaccine on the Web site that is cited on this slide from December 2010 and from June 2013.

From meningococcal vaccine, footnotes were updated to instruct providers on age recommendations for each of the licensed conjugate vaccines in persons with high risk conditions and other persons at increased risk of disease.

This includes the new recommendation for use of one of the conjugate vaccines, Menveo, as young as 2 months of age.

All of the information in the footnotes about meningococcal vaccines and more is available in the March 2013 ACIP recommendation for use of meningococcal vaccines and that is easily accessible on the CDC's Web site.

Now will turn our attention to ACIP recommendation for use of Hib vaccine and the new information reflected in the 2014 child adolescent immunization schedule.

Hib disease was once a leading cause of bacterial meningitis among US children less than 5 years of age.

As a result of the introduction of Hib vaccines in the United States and sustained high vaccine coverage Hib disease is now rare. However the risk for invasive Hib disease continues amongst unimmunized and under-immunized children highlighting the importance of full vaccination with the primary series and booster doses.

Persons with certain immunocompromising conditions are considered at increased risk for invasive Hib disease. These conditions might include persons with functional or anatomic dysplasia, HIV infection, immunoglobulin deficiency including immunoglobulin and G2 subclass deficiency or early component complement deficiency, recipients of

hematopoietic stem cell transplant and those receiving chemotherapy or radiation therapy for malignant neoplasm.

This is Table 2 from the aforementioned recommendation which provides guidance for Hib vaccination in these high risk groups. We'll look at these a little bit more closely in the next two slides.

The majority of Hib disease in the United States again occurs among un-immunized and under-immunized infants and children and among infants too young to have completed the primary immunization series.

As previously mentioned, patients at high risk for Hib disease are even more vulnerable and hence the need for additional doses in this age group.

ACIP voted to approve these changes in February of 2013. And these were subsequently published in February of this year.

I will not go over all of these recommendations but rather let's talk about a few of them. For patients at high risk for Hib disease who present between 12 through 59 months of age if they're unimmunized or have received either no doses or only one dose before age 12 months then two doses of vaccine are recommended to be administered at least eight weeks apart.

Likewise if two or more doses were given before 12 months of age then only one dose is recommended at this age at least eight weeks after the previous dose.

If the child had completed a primary series and received a booster dose at age 12 months or older then no additional doses are recommended.

On this slide I will highlight just a few of the recommendations cited.

Hib vaccination during chemotherapy or radiation therapy should be avoided because of possible suboptimal antibody response.

Patients who are vaccinated within 14 days of starting immunosuppressive therapy or while receiving immunosuppressive therapy should be considered unimmunized and doses should be repeated beginning at least three months following completion of chemotherapy.

Patients who are vaccinated more than 14 days before chemotherapy do not require revaccination.

An exception is recipients of hematopoietic stem cell transplant who should be revaccinated with a three dose regimen six to 12 months after successful transplant regardless of vaccination history with at least four weeks between doses.

Another group is adolescents, adults and unimmunized older children who are asplenic or who are scheduled for elective splenectomy.

For these patients a single dose of any licensed Hib conjugate vaccine should be administered.

On the basis of limited data on the timing of Hib vaccination before a splenectomy, experts suggest vaccination at least 14 days before the procedure.

And lastly unimmunized children 16 months or older who have HIV infection should receive one dose of Hib vaccine.

I understand that this is a lot of information and again all of this may be found in the February 2014 MMWR recommendations.

Moving on to the catch up schedule, to help clarify the Hib vaccine section additions were made to a few of the columns.

In the dose two to dose three column further clarification on how to proceed in the table is provided. This was based on the age at which the patients received their first dose of Hib vaccine.

Now we'll turn our attention to use of the catch-up schedule in general.

We receive anecdotal report from providers that the catch-up schedule is at times difficult to interpret. So here are a few tips as a provider. When do you use the catch-up schedule?

You'd use it when the patient is in your office and is either more than one month delayed on the routine vaccination schedule to help you determine if a vaccine dose can be administered today or not and also to determine when the next dose is due.

You will need to know the current age of the patient for the vaccine in question, the dates of prior vaccine doses if any and the ages at which those doses were administered. You would also need to know the health status of the patient.

One important point to remember is that once the patient is caught up we recommend that you return to using the routine vaccination schedule.

To help illustrate this a little further we'll do a couple of case studies before we end.

The first case study is a healthy child born on October 30 of 2012 received three doses of PCV13, one at 6 weeks of age, the second at 2 months 2 weeks of age and the third at 1 year 1 month of age.

The child is now 16 months old and the question is does this child need a fourth dose of PCV13?

So to summarize the information we have already, the first thing would be to review the intervals between the prior doses.

There was at least four weeks between doses one and two so that interval was met. There was also at least a four week interval between dose two and three and so that interval was also satisfied.

Next you would of course turn to the catch-up table. And to give you a clearer version of this you would first go to the dose three to dose four column because the patient has already as you remember had three prior doses of PCV13 and you're trying to determine if they need a fourth dose.

So the wording in that box states this dose is only necessary for children age 12 through 59 months who received three doses before age 12 months or for children at high risk who received three doses at any age.

Remember that our patient received doses at 6 weeks of age, 2 months and 2 weeks and then the third dose at 1 year and 1 month of age. Also our patient was healthy so this column does not apply.

So then you would go back to the dose two to dose three column and see if any of the lines there do apply. And we find that this second bullet does. Eight weeks at final dose - I'm sorry, yes eight weeks at final dose for healthy children if current age is 12 months or older And that's the interval between dose two to dose three.

And there was at least eight weeks between dose two and dose three in this patient's prior history of vaccines. And the child is currently 16 months of age.

Hence the dose three to four column does not apply to the situation but the dose two to three does apply so no further doses are needed.

Another example: you have a healthy 15 month old child arriving in your office. The patient received the first dose of Hib vaccine at 11 months of age and a second dose at 13 months of age. Is another dose indicated today?

So again you would pull out your catch-up schedule and for ease of viewing we've blown up just a section of that schedule.

So again your patient has had two doses already and the minimal interval was met between those two doses. So now you're determining if a third dose is needed.

So you go to the dose two to dose three section. And this is the information that is in that section.

And the way to read this is you would first look at what the current age of your child is and see which scenario this would fit into.

And as we discussed earlier the child is now 15 months old. So it says in the highlighted area, that if current age is 12 through 59 months and first dose administered younger than age 12 months which it was in this case then the next dose should be given in eight weeks and age - and at least age 12 through 59 months as the final dose.

So the answer here is that if it has been eight weeks since the prior dose than you would administer the final dose today to satisfy all those requirements.

In closing I just wanted to share that CDC is now offering a service called content syndication. We know that inevitably despite our best efforts there will be updates to the schedules once published.

By using content syndication when the schedules are updated on the CDC Web page immediately the schedules on your site are updated.

This of course will lessen your time and hopefully remove some of that consuming process of checking CDC site to see if any updates were made.

So please visit the Web site listed on your slide for more information on this.

Finally I would like to remind providers to use the child adolescent schedule in its entirety not only Figures 1 and 2, but also the footnotes that accompany these schedules.

I'd like to acknowledge the work of everyone in the Immunization Services Division as well as the ACIP Child Adolescent Schedule Workgroup for their contributions to the annual publication of the schedule. Thank you.

Andrew Kroger: Thank you very much Yabo. Now I'll turn the mic over to Carolyn Bridges.
You may begin.

Dr. Carolyn Bridges: Thanks very much Andrew. So today I'll be providing an overview of the adult immunization recommendations in the United States and update you on the adult immunization practice standards.

The objectives for my talk today are to review the changes in the 2014 adult immunization schedule, provide a brief update on the most recent adult immunization coverage data including data from the 2012 national health interview survey, also describe the new, or revised, adult immunization practice standards, and provide you with some additional and new resources for implementation of the adult standards and for improving adult vaccination rates.

As Yabo mentioned, each year the Advisory Committee on Immunization Practices updates the schedule both for adults and adolescents and for pediatrics. This reflects and summarizes existing ACIP policy.

For the adult schedule it is also approved by the American College of Physicians, the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the American College of Nurse Midwives.

The schedule summarizes the vaccines recommended routinely for adults based on their age group, immunizations they may have received as a child or adolescent, medical conditions that they have, whether they are pregnant or not, occupation in some cases, and other factors including in some cases lifestyle.

Information for vaccines related to travel can be found on the CDC travel Web site cdc.gov/travel.

I will briefly review some of the changes to the adult schedule. The adult schedule has two figures. One figure is based on age group. The other one is based on medical and other considerations. As Yabo mentioned, these figures must be interpreted along with the footnotes.

For the two figures there are really only two changes. One is that for adults who need PCV13 vaccine as well as the PPSV23 vaccine we wanted to help remind clinicians that the PCV13 should be administered first. And so those two rows were moved around to have the PCV13 come before PPSV23.

In addition based on the new and updated recommendations for Hib vaccine a bar was added for Hib vaccine.

So this is Figure Number 1. This is the adult schedule based on age group highlighting those two changes that I've mentioned. And Figure 2 which is based on medical and other indications for vaccination again with the changes highlighted.

In terms of the footnotes there were relatively few changes. For influenza vaccine, information on the recombinant influenza vaccine, or RIV, was added as well as information on other inactivated influenza vaccines.

We also included more information about the use of these different vaccines in egg allergic patients.

The recombinant influenza vaccine is approved by the FDA for adults 18 to 49 years of age, and this vaccine does not have any eggs in any step of the manufacturing process.

For the list of all influenza vaccines, their age indications, precautions and contraindications, you can follow the Web site link as listed on the slide.

The Td and Tdap footnote was also updated. There were no changes to the recommendations but we did harmonize the language more with the pediatric schedule.

As had been recommended, adults vaccinated with one dose of Tdap vaccine do not need a another dose unless they are pregnant. And a dose received since age 11 would count towards that adult dose.

Pregnant women however are recommended to receive one dose of Tdap vaccine during each pregnancy.

Information on Td boosters have been included in all of the adult immunization schedules and figures. But some of the language was inadvertently dropped from some prior versions in the footnotes.

This language was now added back. Again there's been no change in recommendation and again the language is harmonized with the pediatric schedule.

Information on HPV vaccine a footnote was also harmonized with the pediatric schedule with additional information provided in the footnote regarding the intervals between the first and second, second to third, and first and third doses with the intervals described as below.

We removed the bullet on healthcare personnel vaccination against HPV both for HPV vaccine as well as for the Zoster vaccine.

Healthcare personnel should receive these two vaccines if they have the appropriate age and other indications.

Have or being a healthcare worker in and of itself is not an indication for either vaccine. The healthcare personnel should receive these if they again meet other criteria and recommendations for these vaccines.

For the meningococcal vaccine again there were no changes made in the recommendations. But we did clarify information in the footnote regarding which person needed one versus more than one dose of the MenACWY, or conjugate vaccine, or the MPSV4, or meningococcal polysaccharide vaccine.

We also clarified that persons with HIV who are adults are not routinely recommended for MenACWY but that two doses of his vaccine should be given among HIV-infected adults who are vaccinated.

Of note there was an error in the Annals print version of the adult immunization schedule. That error has been corrected in the Annals online version, and of course the CDC version is also correct. The errors are the abbreviations for the polysaccharide and conjugate vaccines.

And as Yabo mentioned if you use content syndication then the persons that you have on your Web site will be corrected if any other corrections also need to be made.

Also as Yabo mentioned they were updates - updated language for Hib vaccine. For adults one dose of Hib vaccine should be administered to persons who have functional or anatomical asplenia, sickle cell disease or who are undergoing elective splenectomy if they have not previously received Hib vaccine.

Hib vaccination 14 or more days before a splenectomy is advised. Adults who have had a successful haemopoietic stem cell transplant are recommended receive a three dose series of Hib vaccine six to 12 months after transplant regardless of prior Hib vaccination.

Prior Hib vaccine guidance recommended that Hib vaccination of adults infected with HIV be considered. The updated guidance no longer recommends Hib vaccination of previously unvaccinated adults with HIV infections because the risk for Hib infection is low.

As I mentioned for the PCV13 and PPSV 23 vaccines there is no change in the recommendation but reordering of both the rows in the figure as well as the footnotes to again remind providers that for patients who are recommended to receive both of these vaccines that PCV13 should be administered first.

Ands for the adult schedule there is a table of primary precautions and contraindications. I would remind everyone however that this is a very brief summary of primary precautions and contraindications and that providers should make sure and consult the full ACIP recommendations, in particular the package insert, for other details regarding precautions and contraindications.

For the table we added recombinant influenza vaccine information. We also updated information on influenza vaccine use among persons with egg allergy and also added Hib vaccine to the table.

This is a reminder for the 2013 adult immunization schedule this was the first year that the PCV13 vaccine was included. And we received a number of questions about the use of PCV13 and PPSV23 vaccines, so I'm just providing this summary again of the use of these two vaccines. Again PCV13 should be given first for persons for whom both vaccines are recommended for adults.

And in red you can identify those conditions for which the PCV13 is recommended followed by eight weeks later or more the PPSV23 vaccine.

And for some groups, particularly immunocompromised persons, a second dose of PPSV23 is recommended at the five year interval. And then again persons who are 65 and older should also receive the PPSV23 vaccine.

So now I would like to just provide for you a brief summary of vaccine coverage among adults.

So shown here is vaccine coverage based on certain age criteria based on the National Health Interview Survey from surveys that were conducted during 2012 in the United States.

For pneumococcal vaccine among persons 65 and older, coverage is approximately 60% which has been unchanged for the last three years.

For herpes zoster vaccine there was an increase in coverage up to 20% in 2012. For HPV vaccination coverage was 34.5%. This was an increase

however it is not known whether these respondents received their vaccine during adolescence or as adults.

And there was no change for HPV vaccine coverage among males 19 to 21.

For persons with high-risk conditions for whom pneumococcal vaccine is recommended coverage rate was approximately 20%. This has not changed from the prior two years.

We did not have data this year for hepatitis A vaccine among persons with liver disease but coverage was also low in the prior two years, less than 20%.

Among persons with diabetes who are 19 to 59, coverage was 28.6% this year. And among persons 60 and over with diabetes coverage was 15.1% -- so very low coverage for all of these high risk groups for these vaccines.

In terms of tetanus toxoid containing vaccines over all about 64% of adults 19 to 49 had to have a tetanus vaccine. For 50 to 64-year-olds the rate was similar at 63.5%. It was somewhat lower among adults 65 and older at 55%.

Among patients , 19 to 64 years of age, only 15.6% reported Tdap vaccination and among adults 65 and older only 8%.

For influenza vaccination among adults we have slightly different source of data. This is from the behavioral risk factor surveillance system. And what we find is overall coverage for adults is 41.5% although there we do show some increases compared to the prior year in all adult age groups.

So I'll now move on to discussing the adult immunization practice standards. So as I've just described to you, vaccine coverage among adults is very low.

What I did not show you in these slides, it is included in the links provided for the vaccine coverage slides, is also that there is substantial differences in vaccine coverage among adults by race and ethnicity.

There's limited patient awareness about the need for vaccines for adults although there is somewhat better awareness for flu vaccine, it is low for other vaccines.

Patients however report that they are willing, for the most part, to get vaccinated when vaccines are recommended by the medical providers.

And we know that systematic offering and recommendations for clinicians results in higher uptake and can largely help to reduce the disparities that we see by race and ethnicity.

And on another positive note we know that primary care providers believe that immunizations are an important part of services that they provide and are important for their patients.

In order to help improve current adult vaccine coverage the adult immunization practice standards have been updated.

These standards recognize that adult patients often see more than one medical provider and they are vaccinated in a variety of settings including medical settings, workplace, pharmacy and other settings.

And the update was really required because many of the prior standards really focused just on the medical office setting.

In addition these standards recognize that the adult immunization schedule and vaccine record-keeping can be challenging.

The standards also emphasized the need for adult vaccine doses to be entered into immunization information systems, also known as immunization registries.

By entering the adult immunizations into registries this allows for all the patient's providers to have access to information about vaccines received already by the patient to help ensure that patients are fully immunized and to reduce potential for unnecessary additional vaccines, or unneeded vaccinations.

The adult immunization standards are a call to action for healthcare professionals to assess the immunization status of all patients in every clinical encounter and to strongly recommend the vaccines the patients need.

We also include in the standards the call to action to administer needed vaccines or, if a provider doesn't stock needed vaccines, to refer the patient to a provider who can provide the immunization.

Lastly the standards call on the professional to document vaccines received by patients including entering immunizations and immunization registries.

To help support the standards a number of number of communication resources have been developed by CDC and many other resources are also available from many of our immunization partners.

So the framework for the adult immunization practice standard includes the recommendation for all providers to incorporate immunization needs

assessment into every clinical encounter, to recommend needed vaccines and then to either provide the vaccine or refer and then to make sure that those vaccinations are documented.

The call out is also for non-immunizing providers. Even if providers don't offer vaccination services they still have an important role to ensure that their patients receive routine assessments of needed vaccines and to have a strong recommendation and then refer them to others.

The updated standards also call on professional healthcare related organizations associations, and healthcare systems to work to improve routine assessments vaccinations.

And also public health departments ,of course, have a very critical role in helping to increase adult immunization awareness and vaccine coverage rates.

I wanted to provide an example of a best practice in terms of implementation of the standards which comes from the Indian Health Service.

The Indian Health Service is a federal agency which is charged with providing health care to eligible American Indians and Alaska Native persons who are members of one of the 566 federally recognized tribes and who are residents in the Indian Health Service catchment area.

The Indian Health Service provides services to approximately 2 million patients each year through a network of Indian Health Service tribal and urban Indian healthcare facilities in 35 states.

What the Indian Health Service did was to leverage their technology to increase the assessment of vaccine needs and routine standing - uses standing

orders as well as provider reminders and prompts about vaccines that their adult patients may need.

And they use their system to increase coverage for a number of routinely recommended vaccines for adults.

And as you can see this is the coverage data from the Indian Health Service from the first quarter of 2014. And the immunization rates that you can see here are substantially higher than the ones that I just reported from the National Health Interview Survey from 2012 where for the most part we had seen various little increase over the last three years.

But here again if you looked at Indian Health Services data you can see coverage at Tdap vaccination for example of 74% which is relative to the approximately 14% coverage of Tdap that we find among young adults nationally.

So I mentioned there are a number of new resources that CDC has available on its Web site. You can find those at cdc.gov/vaccines/AdultPatientEd.

Other patient education materials are available at the vaccine/adult standards with more materials on their way. And additional resources that are for healthcare providers can be found at the vaccine/adult standards Web site with again more materials that will be added soon.

Additional important resources that you can find on the CDC Web site include the adult quiz. This is the way for patients to go into the Web site, add in their age and other information and this quiz can be used to identify which vaccine the patient might need.

The patient can then print out those results, take them to their provider and have a discussion about which vaccines are best for them.

The Heath Map Vaccine Finder is another really important resource. This is housed on the CDC Web site but also the HHS Web site.

This Vaccine Finder is actually run by Harvard University but it's a wonderful resource. Links on the CDC Web site and other places But patients can go in there to this Web site, add in their ZIP Code and it will show various locations in their area where they can get needed vaccines.

This is also an important resource for providers who may not carry or stock needed vaccines for their patient.

Another important tool is the Adult Immunization Scheduler Interactive Tool. You can find that and other tools to help navigate the immunization schedule at cdc.gov/vaccine/schedulethehealthcareprovider/adult.

In addition the National Adult and Influenza Immunization Summit and Immunization Action Coalition have a number of other resources that they have gathered and put on their Web site immunizationsummitpartners.org or [\(iacsummitpartners\).org](http://iacsummitpartners.org).

They've have gathered resources from many different partners and put them in one place so that you can find tools that you need to implement immunizations in your practice.

The National Foundation for Infectious Diseases also has a number of important and helpful tools on their site. And the American College of

Obstetricians and Gynecologists has tools that are geared specifically toward preventive care for women, in particular for pregnant women.

So these are just a few examples. There are many other very helpful Web sites from our partners. But starting with these you can certainly identify other links to many other helpful sites.

So in conclusion there are relatively few changes to the 2014 adult immunization schedule relative to 2013. However coverage rates among adults are very low leaving many adults vulnerable to illnesses that could be prevented through vaccination.

The adult immunization practice standards have been updated. And really implementation of these is the key to increasing awareness of adult immunization and improving vaccine coverage.

And also there are many tools and resources available to help providers with implementation and practice standards and also to help educate patients on the importance of vaccinating adults.

And I'd like to conclude by thanking the adult working group of the ACIP and the many colleagues at CDC and others who have assisted with the vaccine coverage as well as CDC Communications and the National Adult and Influenza and Immunization Summit members for all their help in publishing the standards. Thank you.

Andrew Kroger: Thank you very much Carolyn. Now I'd like to present two more content-based polling questions. You will have ten seconds after I finish the question to input your choice.

The first question is how many doses of Hib vaccine a recommended for a previously unvaccinated healthy child with functional or anatomic asplenia 16 months of age? So take ten seconds.

Your time is up. And we will show you the correct answers. So you can see it was kind of a close call there between two doses and three doses.

The answer is two doses. And this is a change to the recommendations that did occur recently.

Previously all children over 15 months of age were routinely recommended for only one dose of vaccine. There were considerations for patients that had high risk conditions but no full recommendation.

Now children 12 through 59 months of age who have received either zero or one dose before 12 months of age and fall into certain high risk categories functional or anatomic asplenia being one of them are recommended for two doses.

Why don't we go to the next polling question. Which vaccine should be administered to an adult with a cochlear implant?

Let me give you the choices. The choices are PPSV23; PCV13; PPSV23 followed by PCV13 eight weeks later, PCV13 followed by PPSV23 eight weeks later; and PCV13 and PPSV23 simultaneously? So the clock starts now, ten seconds. Time's up.

We'll show you the answers. So you can see 82% of you chose PCV13 followed by PPSV23 eight weeks later. And that is the correct answer.

When both vaccines are recommended PCV13 should be administered first. I guess the first part is knowing that they're both recommended and they are in this case.

And then when both are recommended PCV13 should be administered first. The reason for that is that when you administer PVC13 first the correct interval till the dose of PPSV23 is eight weeks.

By contrast if PPSV23 were given first the interval to PCV13 would be one year long. And the reason for this is thought to be that the dose of PPSV23 and the immune response that results from that dose is strong enough to cause a hypo responsiveness to follow-up pneumococcal vaccines including PVC13.

And that effect is thought to last a year. So the recommendation if PPVS23 is given first is one year PCV13.

So in order to try to maximize and optimize doses of pneumococcal vaccine we recommend PVC13 be given first followed by PPSV23

Now I'm going to just share the results of the pre-conference questions. For the question which meningococcal vaccine is recommended in a 2 month old patient with asplenia? The answer was the conjugate vaccine MenACWY-CRM or Menveo. And the majority (or plurality) got that response so good job.

For the other question how many doses of pneumococcal polysaccharide vaccine are recommended for a 50-year-old man with chronic heart disease? The correct answer is one now and one after the 65th birthday.

And 89% of you got that question correct so excellent job.

I would now like to invite our listeners to call in and ask questions. To do that you dial Star 1 on your telephone.

Be sure to restrict your questions to the content discussed today. Tell us your first and last name where you're from. And I'm going to now temporarily turn the mic over to our operator.

Coordinator: Thank you. At this time we will begin the question and answer session. To ask a question you may press Star 1 on your touch-tone phone.

Please remember to un-mute your phone and record your first and last name clearly when prompted. To withdraw your question press Star 2.

Once again if you'd like to ask a question press Star 1 and record your name. One moment please for our first question.

Andrew Kroger: And while we wait for that first question I would like to provide some additional information. First a re-cast as well as the slide set will be available at www.cdc.gov/vaccines/ed/ciinc the week of March 17, 2014.

For CE credit please go CE credit please go to www2a.cdc.gov/tceonline. The course number for this net conference is EC2064. And the verification code is the word Schedules.

Remember that CE credit does expire on April 14, 2014. So now I am happy to take the first question in the queue.

Coordinator: Our first question comes from (Wanda).

(Wanda): Hi.

Andrew Kroger: Hello.

(Wanda): Hello?

Andrew Kroger: Hello. Hi (Wanda).

(Wanda): Hello.

Andrew Kroger: Hello. We can hear you.

(Wanda): You can, good.

Andrew Kroger: Yes.

(Wanda): Okay my question is if you have a child that needs both PVC13 and PPSV23 and they're from a foreign country and you don't know what their immunization status is do you still give the PVC13 first?

Andrew Kroger: Thanks (Wanda) for that...

(Wanda): (Unintelligible)?

((Crosstalk))

Andrew Kroger: Yes thank you (Wanda) for that question. So yes in that case you would still give the PVC13 first and then eight weeks later the PPSV23.

Thank you very much. We'll take the next question or...

(Wanda): Thanks.

Andrew Kroger: ...does that answer your question?

We'll take the next question in the queue. Thank you.

Coordinator: Okay. The next question comes from (Kim Haas).

Andrew Kroger: Hi (Kim).

(Kim Haas): Hi. Can you hear me?

Andrew Kroger: Hello. Yes we can hear you.

(Kim Haas): Actually my question was answered. I wanted to know where we can get a copy of the PowerPoint presentation. Thank you.

Andrew Kroger: Oh great. You're welcome. Thank you. We'll take the next...

Coordinator: Our next question comes from (Teresa Moverly).

Andrew Kroger: Hello?

(Teresa Moverly): Hi. My question is on that tetanus diphtheria schedule for an 8-year-old. Am I reading it correctly that if you have an 8-year-old that say had one dose of DTaP at two months but received nothing else are they going to get - they're going to get a total of four - they're going to get three additional tetanus diphtheria one other thing and Tdap is that right?

Dr. Yabo Beysolow: (Teresa) let me just try to walk through the scenario. So you're saying it's an 8-year-old who's presenting.

So you'll go to the bottom of the catch-up schedule and they got their first dose of DTaP vaccine at 2 months of age so now they're only eligible for Tdap because of the license age of the product.

So they would get a second dose of Tdap this time vaccine because they already had DTaP so they get Tdap in four weeks. And then they will give a first dose of TD vaccine four weeks later and then a final dose of TD vaccine in six months.

(Teresa Moverly): Okay. So they're going to have to have had - the DTaP is sort of like it didn't happen then...

Dr. Yabo Beysolow: That's right.

(Teresa Moverly): ...they get the regular three dose of TD products?

Dr. Yabo Beysolow: Well and let me just look at this again. I'm also going to just write your question and just to make sure I'm getting this correct.

So they got their first dose of DTaP at 2 months. Per the catch-up schedule they would get a Tdap vaccine today.

(Teresa Moverly): Right.

Dr. Yabo Beysolow: And then the dose to two dose three column says four weeks later if first dose of DTaP DT administered younger than age 12 months which it was so...

(Teresa Moverly): Right.

Dr. Yabo Beysolow: ...so they would get TD then. And then...

(Teresa Moverly): So that's their number three in the tetanus series right?

Dr. Yabo Beysolow: Exactly. And then...

(Teresa Moverly): Okay.

Dr. Yabo Beysolow: ...final one 6 months later because again at first dose of DTaP
administered younger than age 12 months. Yes and you can...

(Teresa Moverly): Okay.

Dr. Yabo Beysolow: ...also send that to NIP info if you have further questions on that.

(Teresa Moverly): Thank you very much.

Dr. Yabo Beysolow: Thanks.

Andrew Kroger: Thank you. We'll take the next question in the queue.

Coordinator: The next question comes from nurse (Vetke).

(Vetke): Good afternoon.

Andrew Kroger: Good afternoon.

(Vetke): Hi. My question is about the patient that is taking Humira that has temporarily stopped so they can receive the Zoster Vac.

Is there a recommendation for the interval that they should wait before resuming the Humira so that they can mount the appropriate immune response?

Andrew Kroger: This is Andrew Kroger. I guess I can take that - take a crack at that one. That's a complicated general recs question.

So Humira or adalimumab is one of the iso-antibodies, the tumor necrosis factor drugs (or medications) that are used in patients with Crohn's Disease and in rheumatoid arthritis.

We think of those drugs as like steroids essentially.

(Vetke): Yes.

Andrew Kroger: And so what we say for those drugs is basically it's a - the general recommendations say a 30 day or actually it's 28 days. It's a one month interval following completion of the medication before you use live vaccine. So that would be our recommendation for Zoster vaccine.

There are other sources that state longer intervals but the Zoster specific recommendations say that such - that a one month interval is okay.

With Zoster vaccine you have to remember that this is a vaccine that's being given. It's a live vaccine, yes, and adalimumab is an immunosuppressive medication, yes.

Zoster vaccine is given to patients who are presumed to have some immunity already. They've been exposed to varicella virus. They've mounted an immune response to that and the Zoster vaccine is intended to boost it.

Even immunosuppressed from the meds they'll have some immune response. And so that's why we kind of make a that rule for these drugs and for Zoster vaccine specifically so that is our recommendation.

And CDC has no published recommendation on the other direction in terms of like an interval following use of Zoster vaccine.

There are other organizations that say a four-week interval would be prudent. But I think a key point here is you have to keep in mind as well the degree of altered immuno competence or immunosuppression and whether you can withhold medications...

(Vetke): Sure.

Andrew Kroger: ...following a vaccine or the feasibility has to be taken into it. So...

(Vetke): Okay.

Andrew Kroger: I'll end there if that's a - if that answers your question?

(Vetke): Yes it does. Thank you so much for taking the time to answer it.

Andrew Kroger: Okay thank you. We'll take the next question in the queue.

Coordinator: The next question comes from the (Sharica).

(Sharica): Hello.

Andrew Kroger: Hello. We can hear you (Sharica).

(Sharica): Hi.

Andrew Kroger: Hi.

(Sharica): You know for individuals with immuno compromising conditions in the adults if they have a previous vaccination with a PPSV23 it's recommended that we wait a year before administering the PCV13.

However for any - for our younger children who are 6 to 18 the recommendation is to wait only eight weeks. Is that appropriate?

Dr. Carolyn Bridges: Sure. Thank you (Sharica). We do understand that there is a difference there. But the recommendations are different as you point out. For 6 to 18-year-olds there's still an eight week interval between PPSV given first and then PVC13.

This is not like the adult recommendations where you would have to wait a year after PPSV to give PPV13.

(Sharica): Okay great. Thank you.

Dr. Carolyn Bridges: Thanks.

Andrew Kroger: Thank you. Why don't we take the next question.

Coordinator: The next question is from (Lisa Miller).

Andrew Kroger: Hi (Lisa).

Coordinator: (Lisa) please check to see if your phone is on mute.

(Lisa Miller): Oh okay. Can you hear me?

Andrew Kroger: Yes we can hear you. Thank you.

(Lisa Miller): Thank you. My question concerns the pneumococcal polysaccharides and its use with adults who smoke cigarettes.

We had - I'm a public health nurse and a question arose with the doctor sending a client over because they had quit smoking. And do you have any guidelines on that or is it strictly the letter of the law for adults who smoke cigarettes?

And they had quit smoking in January and she wanted the pneumonia vaccine for her and I - so I just wondered about that?

Dr. Carolyn Bridges: Well the current ACIP recommendation recommends the PPSV23 vaccine for current smokers.

(Lisa Miller): Okay.

Dr. Carolyn Bridges: You know, of course clinicians are - this is a licensed product and they are able to make clinical decisions of the use of licensed products but the current ACIP recommendation specify...

(Lisa Miller): Strictly smoking...

Dr. Carolyn Bridges: ...current smokers.

(Lisa Miller): Current smokers okay. Thank you so much.

Andrew Kroger: Thank you. Why don't we take one more question?

Coordinator: Our next question comes from (Paula).

(Paula): Hi. This is more of a comment than a question. So on the catch-up schedule for kids 7 and above who are not up to date on their tetanus I find it a little confusing.

I know that you should always use the footnotes. But if you look at all the other vaccines and then you come down the Tdap for 7 years it looks like you should give a Tdap each, you know, for each dose instead of the T, you know, a Tdap and then TDs.

So I just wanted to just know if that could be clarified just a little bit more for others because it's a little bit different than all the other vaccines?

Dr. Yabo Beysolow: That's a very good point (Paula). We'll definitely take that into consideration in the workgroup. That is a valid point. Thank you.

(Paula): Thank you.

Andrew Kroger: Thank you very much. Due to time restraints I think we'll now move on to some closing information and review some housekeeping items so a great set of questions there but we've got to move on.

First of all for continuing education credits please go to www.2a.cdc.gov/tceonline. The course number for the net conference is EC2064 and the verification code is the word Schedules and that is capital S-c-h-e-d-u-l-e-s.

Keep in mind that CE credit for the net conference will expire on April 14, 2014.

Once you become familiar with the online system you will find it easy to use and a great way to keep track of CE credit earned from CDC training programs.

If you are having any difficulty or are new to the system you can get assistance by phone at 8-800-41-TRAIN or 418-7246 with availability from 8:00 AM to 4:00 PM Eastern Time.

To get help by way of email you can contact ce@cdc.gov.

We received many great questions today. If you were unable to ask your question today or if you have other questions related to this net conference you can contact us at the email question and answer service at the address nipinfo@cdc.gov.

Another way you can ask a question is to contract the CDC Info Program. One way to do that is to call 1-800-CDC-INFO, CDC INFO.

This line is staffed from 8:00 AM to 8:00 PM Eastern Time Monday through Friday.

Another way you can ask a question or contact the CDC Info Program is to go to the CDC Home Page at www.CDC.GOV which you see here and click on the link at the bottom circled in red.

This is a general question and answer service. CDC Info Program is a general question and answer service which handles immunization related questions and in addition to other public health related questions.

I really want to thank everyone for joining us today with special thanks to our subject matter experts Dr. Yabo Beysolow and Dr. Carolyn Bridges all the work that they've done on the schedule over the years is much appreciated. So thank you very much from Atlanta.

Coordinator: This completes today's conference. Thank you for joining us. At this time you may disconnect. Speakers please stand by if you require a post conference.

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