COCA Conference Call – Upcoming Influenza Season
Speaker: Abigail Shefer, MD, FACP; CAPT, USPHS
October 24, 2006

Coordinator: Good afternoon. And thank you all for holding.

At this time I would like to inform all participants that you will be on listen only until the question and answer portion of today's conference. During the question and answer portion, if you'd like to ask a question, you may press star-1 on your touchtone phone. Also today's conference is being recorded. If you have any objections, you may disconnect at this time. I would now like to turn the conference over to Dr. Diana Hadzibegovic. Thank you. Ma'am, you may begin.

Diana Hadzibegovic: Thank you, Melissa. Good afternoon. Thank you for joining us for today's Clinician Communication Outreach Activity Conference Call.

Topic for today's call is the upcoming the influenza season. We are pleased to have Dr. Abigail Shefer. And she is currently the Associate Director for Science in the Immunization Services Division Office, National Immunization Program, NIP at the Central for Disease Control and Prevention.

She has been the medical epidemiologist in the National Immunization Program for the last 12 years. Her areas of interest and research includes evaluating strategies to improve and promote adult immunization, improving coverage of low income children to coordination of National Immunization Initiative, conducting systematic reviews on cost and cost effectiveness of population-based intervention to improve coverage for both routine and high risk flu vaccination and integrating immunization-related quality improvement activities at the practice level.

Objectives for today's call are to understand the burden of influenza disease in children and adults, recommended groups for vaccination, understand vaccine supply and distribution issues for '06-'07 season, and understand how best to communicate with the patient. Dr. Shefer, you may begin.

Abigail Shefer: Hello, good morning and thank you for inviting me to take part in this presentation. For the next half hour or so I'll be talking about the 2006-2007 influenza season.

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I'm going to talk about burden of influenza disease, recommendations for vaccinations, influenza vaccine supply and distribution, and communication surrounding influenza vaccine and vaccination.

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First, I'm going to talk about burden of influenza disease. They're typical winter epidemics. Approximately 5% to 20% of the US population gets sick with the flu. The highest illness rates are in children and the highest complication rates are in the elderly and infants.

There are on average approximately 36,000 deaths due to influenza each year, and approximately 90% of deaths are in the greater than 64 years of age. This is due to either primary viral pneumonia or secondary bacterial pneumonia.

There are over 200,000 hospitalizations each year due to influenza and approximately 66% of these are on those greater than 64 years of age.

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The burden of influenza disease in children is variable from season to season. The attack rate can vary from less than 5% to greater than 30%. The hospitalization rate among children less than five years old is different if we are talking about high risk children or healthy children.

In high risk children, for example with asthma, the hospitalization rate is approximately 500 per 100,000 children. For healthy children, the attack rate is approximately 1,000 per 100,000 children.

Next slide.

As mentioned previously, the highest influenza illness rates are in children. This figure - the figures here show low and high estimates of illness rates by age groups based on a number of different studies. So even though the highest complication rates and death are in the elderly and infant, children carry more of the overall disease burden due to actual illness. And you can see the peak in the figure from five to 14 years of age.

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The next topic I'm going to talk about has to do with recommendations for use of influenza vaccine.

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We recommend influenza vaccination for the following groups of patients. Children six to 59 months old, adults, 50 years old and older, residents of nursing homes, adults and children five to 49 years old that are high risk for

complications of influenza, adults and children that are household contacts of persons at high risk for complications from influenza, healthcare workers, and adult and adolescent women that are pregnant. We ask providers to consider vaccinating anyone wishing to decrease their risk of illness with influenza vaccine.

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High risk medical conditions for which vaccination is recommended include, as many of you know, chronic heart or lung disease including persons who have had a heart attack or who have bronchitis, metabolic diseases including diabetes, renal disease, weakened immune systems such as - due to HIV, conditions that interfere with lung function or control of secretions in children on chronic aspirin therapy.

Next slide.

Beginning in the 2006-2007 season, routine annual vaccination has been expanded to those 24 to 59 months of age. Previously, it was only recommended for those six to 23 months of age.

This recommendation was based upon risk of clinic and emergency department visits for this age group. This recommendation often includes vaccination of household contacts and out-of-home caregivers of children in this age group.

For this season at least, the timing of the recommendation and the limited supply of vaccine for young children will impact implementation of this recommendation, probably.

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If a child has not previously received a flu vaccine and they are less than nine years old, it is necessary to give two doses of vaccine to maintain effectiveness and result in protection. This is important as recent studies have supported limited effectiveness with only one dose.

To provide the best protection, the optimal time to complete vaccination is before the influenza season. Often this is not possible before because of when vaccine is distributed. Because children being vaccinated for the first time require two doses, it is recommended if possible that these children receive their first dose in September.

Next slide.

Annual influenza vaccination is recommended for high risk person, their household contacts and caregivers and healthcare personnel. This slide depicts the changes and the estimated size of ACIP recommended target groups beginning in 1964 when approximately 79 million persons from the US were recommended for vaccination.

The total number of persons targeted for routine influenza vaccination in the US is now approximately 218 million persons or 73% of the population. Household contacts shown in dark blue in the figure are now the largest group recommended for vaccination and probably the most difficult to reach.

As we strive to decrease influenza-associated morbidity and mortality, we're considering different options for recommendations. Recommendations, should we expand to have universal vaccination recommendations that include an additional 78 million people, should we strive towards better coverage levels among the existing target populations that are in the number of 218 million, should we consider taking a more focused approach such as vaccinating schoolchildren, or most probably, some combination of these approaches.

Continued interest in these issues as well as research into these issues will enable us to work toward improving the prevention and control of influenza.

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Providers as well as patients often ask just how effective the influenza vaccine really is. Effectiveness really depends on the age group you are talking about as well as the season in match between the circulating strain and the vaccine strain.

The above table shows the range from a number of studies when the match between vaccine and circulating strain is good. Not included in this table is when the match is not good, effectiveness can actually be as low as 0% and that is not included in this table.

You can see that in the elderly, the effectiveness is much lower for protection against the illness but it's better when one is talking about protection against hospitalization and death.

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I just want to show a few figures and how well we have been doing in vaccinating.

This figure shows coverage by race ethnicity with Whites in yellow, Hispanics in green and African Americans in orange. As you can see, the differences are substantial and the gap has not really narrowed over time.

The coverage rates have pretty much leveled off at least for Whites and there have been some effects because of the shortages recently.

It's not shown in here, but it's interesting to know that the coverage rates for children is even lower, but these recommendations as you know, for healthy children have been much more recent.

Based on the national immunization survey conducted by the CDC, coverage rates for children with one or more doses of flu vaccine was approximately 17% in the 2003-2004 season and approximately double that in the 2004-2005 season.

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Next, I'm going to talk about influenza vaccine. I think you might have had one extra slide. We should be on the slide, Vaccine Supply and Distribution. I'm going to talk about influenza vaccine, supply and distribution.

Next slide.

Reduction and distribution of current seasonal influenza vaccine takes many months from discoveries of strain to licensure of the vaccine; approximately six to nine months from the virus selections to getting the vaccine in someone's arm.

The issue surrounding the timeline are even more important, if one starts talking about pandemic flu, if a pandemic strain were to appear, it would take time to develop and distribute large quantities of vaccine that could protect humans against the pandemic flu strain.

Development and distribution of vaccine for pandemic strain of influenza cannot fully begin until the actual pandemic strain is identified. This adds a lot of complexity to preparing for not just seasonal influenza but for pandemic flu.

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In terms of the supply, we will have available to reach these recommended groups; we anticipate approximately 110 to 115 million doses being available for this season. There are four licensed US flu vaccine manufactures this season representing seven different products.

Earlier in the season we had estimated approximately 100 million doses. Recently GSK -- GlaxoSmithKline -- got a new product license called FluLaval adding an additional 10 to 15 million doses to the market.

Next slide.

Here we see the four influenza vaccine manufacturers listed and the seven products that they produce. As noted previously and shown on the last row of this table, is the new product FluLaval from GSK which has added another 10 to 15 million doses to the market.

The only live attenuated vaccine, LAIV, is produced by MedImmune shown in this table and is delivered by nasal spray.

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Twenty-six million doses of vaccine were distributed by the end of September. Forty million doses were distributed by October 13th, and the majority of doses are to be distributed by the end of October; we expect 75 million doses by the end of October. This is actually 15 million more doses than were delivered by the end of October in 2005.

As most of the providers in this call probably know, manufacturers do partial shipment orders. The goal is to provide some vaccine to all who ordered it by the end of October. It is estimated that virtually all doses will be distributed by the end of November and into to December - mid-December.

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Probably most of the providers in this call will have some influenza vaccine by October and perhaps earlier. The optimal time to vaccinate is October and November.

One priority group in particular we have always recommended waiting until October are those in nursing homes. This is because of waning immunity in this age group.

We recommended continuation of vaccine in December and later. A specific recommendation was made this year directed to those who organized flu clinics to schedule on one such clinic in December. Because the reality is, phased distribution of flu vaccine that certain amount is given every week and it's not given at one time, providers should have contingency plans in place every year, if an October or early November clinic is scheduled but at the last

minute, needs to be changed. And I know this has been very frustrating to providers especially during this season.

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The data in this slide comes from a telephone survey of adults conducted in the fall of 2005. I know straight for a fact that physician offices are the most commonly reported place of flu vaccination but there's a large number of other venues are reported as well.

Before leaving this slide, I also wanted to point out between that during 2005-2006 season, 10% of adults surveyed reported receiving their flu vaccine in a store. This is interesting because often, you know, people report that they see so many flu clinics being held in grocery stores, et cetera, but really very little vaccine relatively is delivered in stores.

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For adults who receive Medicare, Medicare will cover flu vaccine for free. It’s important to know however that 15% of Medicare beneficiaries belong to a plan called Medicare Advantage which is a joint Medicare Managed Care Plan. If patients in this plan want Medicare to cover the cost of their vaccine, they must receive their vaccine within the plan probably within the managed care clinic environment.

Beneficiaries and the fee for service Medicare plan can receive their vaccine at any setting that takes Medicare. Patients, as well as providers and health departments need to be aware of this limitation.

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So, the take-home message, one of them, is that we expect to have more vaccine available this season compared to any previous seasons.

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As this group is well aware, flu vaccine production distributions in the US is largely a private sector activity. The primary exception to this being state distribution or publicly purchased flu vaccine which represents a relatively modest amount of the annual influenza vaccine sold each year. This slide illustrates flu vaccine production and distribution totals during the past 25 years.

As you can see, total production has increased substantially since 1980. In addition, you'll see that in any given year, a percentage of doses remain undistributed at the end of the year.

In the past five years, the number of these undistributed doses and thus wasted doses has ranged from between 4% to 13%. You can also see that compared to 2005 when 86 million doses were produced, there's now going to be up to 115 million.

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This graph, I'm not going to give any detail, but I just want to show it, it's produced by Dr. Wallace of CDC; it shows the timing of flu vaccine distribution by month for 2000, 2002, 2004 and 2005 seasons.

The white dotted oval will help you focus in the month of October, you know, a time when a lot of providers especially are, you know, itching to get the vaccine and start vaccinating. And when vaccine arrival and delays, vaccine delays become increasingly problematic.

The light blue line represents the year 2000, the season in which there was a delay that results in only about 30% of doses being delivered by the end of October. In contrast, the orange line represents 2002 which is kind of a unique season in which nearly 100% of doses were distributed by the end of October. The most recent season showing yellow fall somewhere between 2000 and 2002 in terms of vaccine availability during October.

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CDC anticipates the providers may be unable to obtain sufficient vaccine for their three-year old patients. This is both because there's only a single supplier of vaccine for this age group and because the formulations indicated for this group were largely pre-booked at the time the recommendations - the new recommendation - expanded recommendations were made by ACIP.

ACIP had added healthy 24 to 59-month olds into their priority table as I mentioned earlier and CDC recommends that providers without sufficient vaccine for all six to 59 month olds consider prioritizing healthy six to 23-month olds over healthy 24 to 59-month olds because of the increased risk of hospitalization in the younger group.

So, if providers don't have enough vaccine, they should prioritize the younger six to 23-month olds first.

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So, what are some key concepts about supply and distribution? We like to talk about distribution in terms of actual timing rather than using terms like delay. What is normal or good season is really ambiguous, we need to set realistic expectations but we don't want to deter the public from seeking vaccination. One main issue that CDC is trying very hard to address is in this conception that it is too late to be vaccinated in December and beyond.

Although, we still need to emphasize the benefits of October/November vaccination to get the best protection, there's still a lot of benefits to get from vaccination in December and later.

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The next topic I'm going to talk about is communication, mostly with patients.

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Here are some common reasons why people don't get the flu shot even if they really should. For example, "flu vaccination is for other people, flu isn't a very serious illness or disease. I got the flu shot and I got the flu," that's pretty common for people to say, "I wasn't aware I needed a flu shot. My doctor didn't recommend one," and then some people have concerns about vaccine safety.

We have learned that several messages we have used to increase flu immunization among people at high risk for severe illness have had unintended consequences. Through focus groups that we conducted over the past several years, we have found that many people who do not usually receive the annual flu vaccinations nevertheless recognize that immunization is recommended for people 65 and older and for younger people with certain medical conditions.

However, in their mind these messages foster the perception that immunization was recommended for seniors and people in generally poor health. If they weren't elderly, or they didn't perceive themselves to be elderly or if they considered themselves to be healthy and active, people tended not to think they ought to be vaccinated.

These included participants and focus groups of people with chronic health conditions and of people who were 65 and older who often said that flu vaccination is for older people but upon questioning them to find older people at people in their 80s.

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Perhaps the most troubling mixed messages related to annual influenza immunization is its relatively low uptake among healthcare professional. Coverage among healthcare professionals were 42% in 2004; healthcare workers, including doctors and nurses fight many of the same misperceptions that are voiced by the public.

And I have some listed here, “if you get the flu your body will work it out. We are people who often aren't ill, we get immune by being around sick people,” et cetera.

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This slide shows some of the issues that arise when there is a crisis of any type that occurs. And I'm just using as the contrast what typically happens during influenza season, you know, you have - when there is any type of crisis, you have insufficient information, there's confusion, there’s escalating flow of events, there's a lot of media and public scrutiny.

And next slide.

You can see the characteristics of a typical influenza season and many of the same very same issues mark the events that occur throughout a typical flu season. Flu season are typically unpredictable, confusing, there's a lot of media and public scrutiny and in general are marked by a general lack of information.

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So, we all need to utilize crisis communication best practices and this applies to both the CDC state and local health departments, provider organizations and practices, as well as individual providers when dealing with the patient.

And these are just some things that - some key topics that I want to cover. And everyone should acknowledge uncertainty. We’ve learned in the past two years there is always some uncertainty regarding flu vaccine supplies. Even if the manufacturer tells us they’ll deliver a certain number of doses or they tell the provider, things happen and those doses are not delivered.

Share the dilemma, discuss what's going on to your providers, discuss it with your patients. We're sorry this is frustrating for so many people and tolerate uncertainty. Life is unpredictable; we don’t know what's going to happen so we have to develop a number of plans.

This is really a big issue - we're really trying to encourage providers to - on a routine basis develop contingency plans because flu vaccine is just such a volatile issue.

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Use communication strategies and messages that are characterized by mutual respect and empathy, use of language and view points that the public can understand, commitment to helping people achieve and maintain good health even if they aren't unfavorably predisposed to flu vaccination. And recognition that individual health-related decisions may be based more on values than on evidence.

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So some of the key messages that should be transmitted to the public and to your patients: flu is a serious disease, there are an average of 36,000 deaths per year, hospitalizations over 200,000. Getting a flu vaccination every year is your best protection against the serious disease. Go over who should get vaccinated and in addition, anyone who wants to reduce their chances of getting the flu can get vaccinated and should be offered vaccine especially if there's ample supply.

Your flu vaccination can help protect elders, loved ones, young children especially less than six-months old who can't get vaccination. And lastly, October and November are the best months to get vaccinated; however, vaccination in December or later is also beneficial.

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These are some ideas on communicating, with adult patients addressing some of their concerns about people who feel like they get the flu after getting vaccinated. So, such as relaying the information that it takes two weeks for the vaccine to become protective, it's possible to be infective with influenza virus after vaccination, people can develop influenza disease after being vaccinated and other microbes besides flu can cause influenza-like illness.

When talking with parents of children, some other key issues; many of these are the same as for adult patients - first it takes two weeks for flu vaccine to stimulate an antibody response, so the child is protected from flu virus is not immediate. It's important to convey that other microbes besides flu can cause influenza-like illness. What's going on in the community, when people are getting vaccinated.

Another message is that children less than six months of age are in the pediatric group at highest risk but cannot receive a vaccine. Therefore, it's particularly important to vaccinate all household contacts and other caregivers of children less than six months of age. And this is very important to go over with parents and other caregivers.

Vaccination is also recommended for household contacts and out-of-home caregivers of all children six to 59 months and of older children and adults with increased risk of flu complications.

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So, some take-home messages: begin vaccinating when you have the vaccine, get vaccinated yourself if you're a healthcare worker. Influenza vaccine cannot cause influenza even among healthcare workers; this is a very common misperception.

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And I just wonder if people are aware that there a lot of information on the CDC flu gallery and the Website is given right here, a lot of posters that can be downloaded, informational sheets that you can give to patients. These are more for adults.

And next slide, there's also some posters targeting children that are under on the Website. So, that's actually the end of my talk and I'm happy to take questions. Thank you.

Diana Hadzibegovic: Dr. Shefer, thank you very much. This was a very good presentation; so much valuable information for clinicians. Now, we can start the question and answer session.

Question: Hello. I was just wondering if you could address, we received a fax from our distributor yesterday that stated that our vaccine shipment would be delayed three more weeks. We have only received 1/5 of our order. Have you heard more of this and what we have been told is it's due to slow growing strain?

Abigail Shefer: That's a good question. We actually have not heard of these slow growing strains. I mean, during this whole month of October and the manufacturers have still told us that they're going to be getting out the 75 million.

And, some of their messages that you might have gotten is, you know, make the end receiver kind of aware that things, not to be so upset if they don't get

all their vaccines. They're trying to be very conservative in the way they talk about this.

We actually haven't heard anything about slow growing strain but I know there is a lot of communication. We do have almost daily communications with the manufacturers, but there's a lot of stuff that - a lot of things that change fast, there's a lot of stuff that we - we know as much as the manufacturers tell us also. But actually, no, I don't know about that. I know I've heard about it.

Q (con't): Okay. And this comes from the distributor in regards to a couple of - who distributes a number of different vaccines from different manufacturers.

Question: All right. My question relates to the two doses that children previously vaccinated under nine need. I believe I got a communication that because this year's strain don't match last year's strains, those children under nine who only received one dose last year, previously we would account that as - they only needed to receive one dose in subsequent years. But I believe the communication said that because the strains are different even those children still need two doses a month apart this year.

Could you please confirm or let me know …

Abigail Shefer: That's true that if they - if somebody - if a child has got one - at the first of the season the child is vaccinated, they should get two doses.

Q (con't): Right.

Abigail Shefer: So it's true that for this season, you know, also who never received one dose and didn't receive any should get two doses.

Q (con't): But my question relates to those children last season who did receive at least one dose, if not the two. In previous years we only just gave them one in subsequent years but I - and I - that's what I was always planning on this year. But I've heard because the strains are different even those children that have been vaccinated before are supposed to receive two this year under…

Abigail Shefer: No, actually no. Who do you hear that from?

Q (con't): I believe it was - I don't know if it was on the AAP or I don't remember who but that what's - I think it was an AAP notice that came to one of our pediatricians.

Abigail Shefer: I don't think that's true but I'll look into that.

Q (con't): Okay. Because we were planning on not doing that for now, given, you know that we don't have all of our supply and just waiting to hear about that. So clarification would be great.

Abigail Shefer: Okay.

Q (con't): Thank you.

Diana Hadzibegovic: You can write coca@cdc.gov and we can send your answer and for everyone who didn't have a chance today to ask a question, please write to coca@cdc.gov and we can send you answers.

Question: I have been led to believe that the flu vaccine is most effective in the first 60 to 90 days after it's administered and then slowly begins to lose its effectiveness as time goes on, is that true?

Abigail Shefer: You might be talking more about in the elderly and if you're over 70 years especially 80 years and you have waning immunity and that's why there is - elderly people are recommended to be vaccinated later in the season.

But for others that are not elderly, I don't know the exact numbers for the waning immunity but when you get vaccinated in September/October, you're considered protected throughout the season.

Q (con't): Thank you.

Question: Hello. There have been suggestion here that we might consider setting up our multiple state clinics at a later time based on sort of average delivery times in the past and I'm wondering to avoid kind of the management - manage mania I guess that we get into when we don't have delivery - either no delivery or under what low amounts for the clinics that we anticipate and had set up. I'd like your comments on setting up from the beginning, clinics that start later than our usual has been mid-October.

Abigail Shefer: That's a very question and I definitely think that with the distribution of flu vaccine setting up a clinic really, anytime in October is a little bit risky and you have to have contingency plans if you set that up.

It's probably better and we're starting to recommend this more to set up clinics more so in November when you're more sure of having vaccine and definitely having clinics in December also. And if you do have earlier clinics, you have to have contingency plans on if you don't have vaccine.

I know sometimes that can be very expensive and you've gotten people lined up to work in the clinics, et cetera, but if you're able to have contingency plans, it's good to get the vaccine out when you get it.

So in October, you really need to have contingency plans. But I would focus and we're trying to focus people more on realistic timetable of November, really setting up most of the clinics. That's a very good question.

Q (con't): Thank you.

Abigail Shefer: And I think people - providers are always expecting they're going to get vaccine on October. And one of the reasons is because CDC also recommends vaccinating in October/November. And it's very frustrating when the vaccine doesn't get there.

And realistically, it's kind of pretty typical that you don't get - you get some - maybe some vaccine in October. You get it mid or late October and you're not really going to have a lot of providers have enough vaccines to start really vaccinating until early November.

Question: Yes. I was wondering why the federal government via the national news repeatedly told us that there was plenty of vaccine. I am an avid watcher of the news and I find it fascinating that they tell all of us there's plenty of vaccine. And I'm in the State of Maine and really people don't have vaccine and I realized it's made at different times. And it takes nine months to prepare.

But I think our government has done us a good service, and I wonder how much contest they are in with the CDC to let people know of the current situation.

Thank you.

Abigail Shefer: All right. Again, that's a good question. I mean, there's a lot of communication issues that everybody is learning about it, including the CDC.

We're trying to take a different approach now to talking about early or late vaccine and talking about phase distribution which is going to be routine reality of how flu vaccine is distributed.

And even when we talk about there is going to be - there are going to be more vaccine this year than any other season in the last, you know, 15 years, 20 years, more than we've ever had.

But the whole issue is with timing and when it comes out. I mean, if we are able to get 75 million doses out by the end of October that's going to be a phenomenal amount. But there's always going to be regional differences, because it depends, you know, where you ordered from, what manufacturer, what type of product, there's just so many nuances that no one's going to be pleased at the same time. And there's going to be people that are going to be frustrated.

And I think we have to do a better - we at CDC and the federal government has to do a better job at explaining how the vaccine distribution or how does that influence the market really, how it works. It's not a public - we don't have a lot of control over what happens and neither does the government. It's a private industry.

Q (con't): Yes. I'm in a boarding school situation and the kids go home for Thanksgiving break. I'm going to guess like five days before Thanksgiving. They fly all over the US. And some go off to Bermuda and Europe. And you've just tried to get them vaccinated two weeks before they go, but we're in the catch 22 situation. Then we get them when they come back and they're all sick.

So you just - is it worthwhile do you think to have them do something as simple as wear a mask? I mean, we do all the handwashing techniques and we educate…

Abigail Shefer: I mean, wearing a mask hasn't really been shown to - I mean, if there is a pandemic going around, you know, there's a lot of studies and discussions about use of mask. But it's not something that's recommended during typical flu seasons. And hopefully, we'll be able to get some vaccine or they'll be able to get it somewhere before they go away for break.

You know, one of the things that HHS, you know, the government has been doing a lot of putting some money into a more efficient technology for producing flu vaccine. I mean, know we have the egg-based technology that has a lot of time, you know, it's a very complex process. And if they can develop a cell-based technology, it will make the process much more efficient and timely.

So there is a lot of work being done. It's just that the whole process to develop flu vaccine especially is just an old, cumbersome process.

Q (con't): Well, I thank you for taking my questions and thanks for doing this. It's been really good.

Abigail Shefer: Good. Thank you.

Question: Yes. Is that consensus on immunization of pregnant women with thimerosal-free vaccine exclusively? This appears to be the case in California this year. And I was curious if there will be sufficient thimerosal-free vaccine to meet this objective?

Abigail Shefer: For pregnant women? CDC, it is actually - CDC and ACIP, really does not take into account thimerosal. Well, the studies haven't really documented that issue, I mean, it's an issue but it's not an issue that is going to affect vaccine recommendations.

I mean, there is a push to get thimerosal out of all vaccines, but some flu vaccines still have it. It's true. And California has actually been pretty aggressive about banning any vaccines with thimerosal. And there are a number of states that have done that, and that's an issue. I mean, CDC and ACIP really have not taken a stand on that. There's been a number of studies that have not reported that level of concern.

Q (con't): Thank you.

Question: Yes, ma'am. I was surprise to see that 17% of the workplace - 17% of people getting the flu shot in the workplace. Do you have any trend data on that? And how we could possibly correlate that into meeting our 2010 healthy people roll of 95%?

Abigail Shefer: The figure I showed is 17%. I mean, and you have to remember that this was all adults. I mean, there are actually other figures that I have that I didn't show where you break it down by eight groups obviously, over 65 years old much less. Most of them get vaccinated in provider offices. I think it's like 50% to 60%.

If you look the working adults, a lot of them get vaccinated in - at the work site. So this is a big difference by age group among adults.

And so you were – I understand you're asking about how to utilize the workplace better to provide - to deliver vaccine?

Q (con't): Yes, ma'am, and to meet the healthy people 2010 goal.

Abigail Shefer: There's been a big push actually. We've been working with the National Business Group on Health in helping them put together materials and issue briefs, et cetera, that they use for the Fortune 500 companies; I think is about 50 million covered lives they have on influenza vaccine. And they've been providing a business case for vaccinating in - at the work site. We also did a Webinar for all the Fortune 500 companies on work site vaccination.

So it's something we really - we have an ongoing relationship with them and doing some studies together, et cetera, and what strategies work best. So it's definitely an untapped potential for increased delivery of vaccine especially to those that are high risk, you know, at the work site but others who also desire to be vaccinated. So it's a good point and we are working on that.

Q (con't): Is that going to be pushed for the federal workforce?

Abigail Shefer: Well, flu vaccine is - we're not - we're really working right now with the National Business on Health. I don't actually know. I don't think there's any specific initiative with the federal workforce.

Q (con't): All right thanks.

Abigail Shefer: That's a good point.

Question: Thank you for taking another question from me. Could you please address the booster dose for the elderly? This is the very first year that I've heard a number of physicians actually thinking about implementing a booster dose.

Abigail Shefer: For the very elderly?

Q (con't): Yes.

Abigail Shefer: Well, I don't think ACIP or CDC has put in any recommendations on that. But, if elderly do get vaccinated early in the season, and if there's a lot - if there's a bad season going around, and it comes, January, et cetera, and if there is a lot of vaccine available like we do think there will be this season, it's not a bad idea. It's not something that ACIP or CDC specifically is recommending.

Q (con't): Thank you.

Diana Hadzibegovic: Thank you very much.

We were pleased to have Dr. Shefer with us today. Dr. Shefer, that was great presentation again. And please contact coca@cdc.gov if you have additional questions.

Diana Hadzibegovic: Thank you everyone. And stay tuned for our next COCA conference call. Goodbye.