Swine Influenza Investigation Update

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Coordinator: Good afternoon, and thank you all for holding. Your lines have been placed on a listen-only mode until the question and answer portion of today's conference.

I would like to remind all parties the call is now being recorded. If you have any objections to please disconnect at this time. I would now like to turn the call over to Ms. Alycia Downs. Thank you. You may begin.

Alycia Downs: Good afternoon, and welcome to today's COCA conference call on the Swine Influenza investigation.

We are very excited to welcome back Dr. Tim Uyeki. Dr. Uyeki is a medical epidemiologist in the Influenza Division, here at the Centers for Disease Control and Prevention in Atlanta, Georgia.

We will not be using a Power Point presentation for this call, and there will be no continuing education credits or contact hours available. I will now turn the call over to Dr. Uyeki.

Tim Uyeki: Thank you. Good afternoon.

What I'd like to do is just give you a brief update on the situation, and then try to address a few questions, or anticipate a few questions. And then we'll open it up to questions from the listeners.

So first, thank you very much for joining us. One thing I'd like to say at the outset is that this situation is very fluid, very dynamic. It is rapidly evolving. So what I tell you right now is likely to be very different than the situation, you know, later today or tomorrow.

In addition, the guidance that we have posted -- and we have posted quite a lot of guidance on our web pages -- realize that it is interim guidance. And because the situation is so fluid, because it is rapidly evolving, we are clearly focused on putting out guidance. But we are also focused upon revising that guidance given the new information as it develops. And we also really appreciate any feedback from our clinical partners out there.

So what we have posted is we have posted information for clinicians about anti-viral recommendations. We've also posted information about safety guidance for laboratory workers. We've posted infection control recommendations. We've posted some non-pharmaceutical community mitigation guidance. And we've posted some home care guidance, really for the public in terms of guidance to take care of a sick person who may either be suspected or confirmed at home.

So realize that this, all of our guidance, is interim. And we would suggest that you continue to consult our web pages for the latest information.

Now to date, or at this time, we have 40 confirmed cases of Swine Influenza AH1N1 virus infection in the United States. And those cases have been identified in five states. The median age is approximately 16 years, with a

range from 7 to 54 years of age. A significant proportion of those cases are less than 18 years old, with essentially an equal male to female ratio.

There is some history of travel to Mexico in some patients. In terms of the secondary attack rate, there are a lot of studies and investigations going on right now to determine it. That, but in terms of attack rates for Influenza-like illness, it appears to be around 18 to 20%.

Hello?

The attack rate, secondary attack rate for Influenza-like illness appears to be at 18 to 20%. Maybe a little bit higher for any kind of respiratory symptoms. But this is, you know, very early information from some of the investigations that were done on early cases.

It's important to realize that there have been no deaths in any of these 40 cases that have been confirmed in the US.

All of the individuals have had essentially Influenza-like illness, uncomplicated Influenza-like illness. That would be fever, cough, sore throat, headache, fatigue, generally upper respiratory symptoms, but also some muscle aches, body aches; as well as some gastrointestinal symptoms such as vomiting and diarrhea in some of the patients.

And again all of this -- fever, cough, runny nose, sore throat, headache, fatigue, muscle aches, vomiting and diarrhea -- these are what we have seen with sporadic human cases of Swine Influenza virus in the past, and actually recent past, in the United States.

Now what's important to realize is that the cases in the United States do not have a link to contact or exposure to pigs, sick pigs or any pigs. This all appears to be ongoing human-to-human transmission.

In terms of the international situation, clearly there are countries with probable cases. There are attempts underway to confirm these probable cases in a number of countries. And I think the expectation is that we will see much more disease in the US. We will see other countries that are affected.

And in terms of North America, certainly there appears to be a fairly widespread illness in Mexico, as well as some severe disease which I'll get back to in a second. There are also confirmed Swine cases in Canada.

Now as I mentioned, none of the 40 confirmed cases in the US have died. At least - my information is that 1 of the 40 cases has been hospitalized. It's possible that there are others where - it is a very fluid situation and we're looking to try to get you all that information. The case that was hospitalized was not necessarily hospitalized because of Influenza-like illness. Case had underlying autoimmune disease and was immuno-suppressed, and actually had a negative chest X-ray, normal chest X-ray, but had other underlying chronic medical conditions that really were likely involved in her admission.

In terms of Mexico, we have a number of CDC people in Mexico trying to work closely with the Mexican health authorities as well as the World Health Organization, Pan American Health Organization, in Mexico.

What I will say is that clearly there have been reported cases of very severe disease as well as fatal outcomes, and that they are virologically confirmed -- so laboratory confirmed fatal cases in Mexico.

This virus is a brand new virus. It has never been detected before in North America. And for clinicians what is important to realize is that this virus is resistant to the antiviral medications amantadine and rimantadine. And therefore, those medications are not recommended for treatment of this Swine Influenza virus infection.

The good news is that this virus, Swine Influenza AH1N1 virus is sensitive. It is susceptible to the neuraminidase inhibitor medications zanamivir, that's Relenza; and oseltamivir, that's Tamiflu. So those medications are recommended for treatment and chemoprophylaxis of Swine Influenza AH1N1 virus infections.

And I think what I'm going to do is just stop there, and open it up to questions.

Coordinator: Thank you. And at this time if you would like to ask a question, please press Star 1 on your touch tone phone. And please un-mute your phone and record your name clearly when prompted. Your name is required to introduce your question. Once again if you would like to ask a question, please press Star 1.

One moment please for the first question.

Our first question.

Question: Hi, Doctor. If you had a question regarding the diagnosis of this based on rapid flu tests and what's - how are these cases being picked up and initially in a regular ER with their normal nasal swab, are those positive? Or are they coming up negative? And then are they being sent for backup viral culture, and that's how these things are coming to light?

Tim Uyeki: Right. Thanks for your question.

So the way these confirmed cases are coming to light and are - initially these are people seeking medical care. The initial cases were, in some sense, accidentally discovered. That is, there were patients coming in with uncomplicated Influenza-like illness to outpatient clinics, outpatient facilities. And these facilities were initially, for the initial cases, were enrolled in or had surveillance protocols in which specimens were collected -- upper respiratory tract specimens, nasopharyngeal swabs.

In other words, it wasn't because the clinician suspected - there wasn't any clinical decision to obtain the specimen. It was simply because they were - the facility was participating in surveillance protocols. And these specimens were tested by real time RT-PCR, using the CDC primer/probe set, which detects Influenza A, Influenza B and Influenza A subtypes H1, H3 and H5.

And these initial cases, in fact most of these cases, have been picked up because they're testing positive for Influenza A, negative for Influenza B, and negative for the subtypes H1, H3 and H5. And so those primers for H1 and H3, those are for human Influenza A viruses, seasonal Influenza A virus subtypes.

So the primer/probe set out here, designed by CDC, will detect Influenza A, but they're coming up as what we call Influenza A, non-subtypable. Those are being shipped to CDC for immediate testing, and we have been identifying those as a new Swine Influenza AH1N1 virus.

So the way diagnostic testing - the recommendation is, is that specimens -- upper respiratory tract specimens -- should be collected from suspected cases and sent to the state health department for real time PCR. And those that are A positive, non-subtypable, are sent to CDC for confirmation. Now at some

point this is not going to be possible if there is widespread disease, and as you allude to, clinicians will rely upon other kinds of Influenza tests including commercially available rapid antigen tests, as well as immunofluorescence.

Those tests are obviously not specific for this particular virus, and they're not specific - they will not differentiate between seasonal Influenza A and Swine Influenza AH1N1 virus. But the expectation is that because they do detect conserve portions of the Influenza A virus proteins, that they would be able to detect the virus. And that means that you would get a positive result, but you wouldn't know for sure that's Swine Influenza A virus.

And the reason is that at this time there's still some seasonal Influenza AH1N1 and H3N2 virus activity in the United States. So that causes a little bit of confusion. However, this is towards the end of our regular Influenza season. And as we see activity to really drop off, and it has declined, a positive Influenza A test by other tests such as rapid test or immunofluorescence does suggest that the patient may have this Swine Influenza virus infection.

And in such a case, such a situation, that patient could be considered as a probably case and empirically treated. And that certainly would be true in communities where there is a fair amount of Swine Influenza A virus transmission going on.

In communities where you still have seasonal Influenza A activity and no confirmed cases of Swine Influenza AH1N1 virus, I'm not sure that that would be the appropriate conclusion. So confirmation is at CDC by real time PCR. And we have specific diagnostics to detect this new virus.

Question cont'd: Do we know how many are positive on rapid test - have been positive on rapid test since they've been sent? Or how many rapid tests were positive?

Tim Uyeki: So I can't give you that information, don't have that. I can tell you that of at least one, I think, that's been tested by rapid test was positive. But I think we can't give you a numerator or a denominator. It's obviously information that, as we are able to get that information, we'll get that out.

Let me just say one other thing. As the Food and Drug Administration, FDA, wanted me to say that as more patients are treated with oseltamivir and zanamivir, that if there are health care providers who are taking chemoprophylaxis or patients that experience adverse events, or if there are medication errors associated with the prescribing of these drugs, FDA would like to encourage clinicians to report these events to MedWatch. Or call the FDA, and the FDA website is www.fda.gov/medwatch. And the FDA phone number is 1-800-FDA-1088.

So one thing I'd like to talk about in terms of antiviral treatment is that we have current guidance on the web right now that does say for suspected cases, not confirmed, but for suspected cases we do say to use a combination of oseltamivir and adamantine drug.

What we'd like to do now and we will be revising this guidance, is that if you have a patient who is suspected to have Swine Influenza virus infection, if there are cases in your community, certainly if there's a probable case, that we are recommending only treatment, a monotherapy, with a neuraminidase inhibitor. That would be either oseltamivir or zanamivir. And the same is true for chemoprophylaxis -- either oseltamivir or zanamivir. And we will be revising and posting that guidance hopefully later today, or as soon as possible.

I can take another question.

Coordinator: Our next question.

Question: Yes. I was reading the interim guidance for infection control, and under the infection control's ill persons in a health care setting, the paragraph starts out describing airborne precautions. Yet two paragraphs down it talks about use of standard droplet and contact. Should we be using standard airborne and contact? Or what exactly should we be doing?

Tim Uyeki: We will be revising that guidance and try to clarify that for you. I think right now, we're in a situation where clearly this is human to human transmission, ongoing. We do not really - there's a lot that we don't know about this virus. We don't completely understand how it's being transmitted.

The working assumption is that this virus is being transmitted similarly to how seasonal Influenza A and B viruses are transmitted. That is, we believe primarily through large droplet or small particle droplet nuclei.

Now what we don't know is other modalities potentially for transmission. In addition, some of these patients have had diarrhea and vomiting. And we don't know whether or not there's the potential for this Swine Influenza A virus to be present in diarrheal stool of infected patients, and whether or not stool, diarrheal stool, could pose a transmission risk.

But in terms of the airborne precautions, yes we have recommended N95 respirators. And again, we will try to clarify the guidance and make it consistent. We would appreciate, you know, emails and so forth, feedback from the clinical community.

Question cont'd: Okay, thank you.

Tim Uyeki: Yeah.

Coordinator: Thank you.

Our next question.

Question: Well, hello. I think you kind of answered my questions.

The one thing is what is your probable new case definition?

Tim Uyeki: Yeah, thank you.

Question cont'd: And then I have another question and maybe it's in your guidelines. The Tamiflu is only for contact, is only for cases, or for contacts as well?

Tim Uyeki: So we would recommend clearly that any confirmed case of Swine Influenza A virus and H1N1 virus infection be treated with either zanamivir or oseltamivir. So definitely all confirmed cases. I think we are recommending also that probable cases, as well as suspect cases - but what - should be treated.

But let me just say this. In the United States, again, we have 40 confirmed cases to date. Undoubtedly this will increase. All of these cases have not had severe disease. I want to repeat that. The US cases have not experienced severe disease.

My understanding of the Canadian cases is that they have not experienced severe disease. In other words, cases are having self-limited, generally Influenza-like illness and recovery. This is in contrast to the situation in

Mexico where severe disease has been reported, including laboratory confirmed cases of fatal cases.

So, you know, obviously the concern is treating people who are severely ill. We are not seeing people who are severely ill in the United States. I think that we should not expect that we will only see mild cases. I think there is definitely potential, and we should expect that there will be severe cases.

This could function like a severe seasonal epidemic that is in which we see exacerbation of underlying chronic disease resulting in hospitalizations for severe complications. There could also be secondary invasive bacterial infections causing very severe disease and potentially fatal outcomes.

So I think the situation so far is good in the U.S., that we've seen mild cases, relatively mild cases, and in Canada. However, it does not mean that we will not see severe cases. It does not mean that we will not have fatal cases.

And the situation in Mexico is very concerning. And so there's a lot of attempts to try to understand what is happening with these severe and fatal cases in Mexico, better characterize them and so forth. And we're obviously - we have people down there working on that. But there's a limitation to the information we have now.

So there is - I want everyone to understand that there's sort of a reason why we have proceeded with some caution. And if we look at most seasons, Influenza seasons, that is seasonal Influenza, most people don't get treated. Most people have self-limited, Influenza-like illness and they recover without any specific treatment. And most of these confirmed cases in the US have not been treated. They have recovered without treatment.

So although we have recommended treatment for all confirmed cases and suspect and probable cases that may not be possible if there's a widespread disease in your community in the future.

And in terms of case definitions, we have different case definitions that are posted in different guidances. We apologize sincerely to the extent that this has created any confusion.

Realize that there are different case definitions for reporting, for surveillance purposes, and also for clinical management purposes. We are working and we have almost finalized some kind of harmonization of these case definitions. And we hope to post those as soon as possible so to avoid some of the confusion. But realize that for clinicians, what they need to know is maybe different than for reporting purposes.

We'd also clearly encourage any clinicians who are caring for a probable case or a confirmed case, especially if they're hospitalized, to report that information to the state health department.

Coordinator: Thank you. Our next question.

Question: Thank you. I think you probably have answered my question as well, Doctor. But I think my concern is with the situation in Mexico. Should we expect that we would see something similar here?

Tim Uyeki: I think that no one really knows the answer to that. I don't think anyone can predict. I mean we always say Influenza's unpredictable. Obviously we're very concerned about the situation in Mexico; given the severity of many cases, as well as, you know, clearly there are laboratory confirmed fatal outcomes. And

our understanding is that these have occurred in generally previously well people. But the information is, you know, incomplete.

We also understand that most of these severe cases had been sort of in the 20 to 59 year range. So they're not necessarily the very young or the very old. But clearly we need more information. So I think that clearly it's worrisome, and it's good that we have had mild cases in the US.

But I think we need to prepare for the possibility that we could see severe complications with this infection including exacerbation of chronic illness including invasive bacterial infection, co-infection, and including progressive disease. Again, we need to know more about the situation in Mexico.

But I think at CDC we're taking the situation very seriously and we do not want to send out the message that there will only be mild disease. We simply don't know, and we need to be prepared for the potential for severe disease.

Question cont'd: Thank you.

Coordinator: Thank you. Our next question.

Question: Yes. I oversee some correction facilities, and my environmental manager has already put out two of the rather inexpensive (HEPA Vac) HEPA filters in our lobby. I'm afraid this is going to cause more concern or overreacting. Do the cheap filters work at all against this virus?

Tim Uyeki: So I think that's a very good question and I think what I would do is refer that to some of my other colleagues at CDC. So I think if you could send that inquiry in so we can try to get a respond back to you. Either send by email or call in to CDC. I can't answer that question.

But, you know, we're not looking at this virus as sort of the airborne, aerosol transmission, in the sense that there are other airborne viruses such as variola or measles, varicella and so forth. This is - what we're talking about here is likely its close contact. So it's likely large droplet and small particle droplet nuclei. We're not talking about the likelihood that virus is being showered all over, you know, rooms and facilities and so forth.

But simply we don't know at this stage. And I'm not sure I can answer your question.

Question cont'd: Thank you.

Alycia Downs: And if you send that email to coca@cdc.gov, C-O-C-A at CDC dot gov, we'll try to get you an answer.

Question cont'd: Thank you.

Coordinator: Our next question.

Question: Hi. In the interview that Dr. Besser gave earlier, he talked about the stockpile of antiviral medicines, one-fourth of that being shipped to the states where there have been confirmed cases. But he also seemed to say that those drugs were sent to other states. And if that's the case, what states other than the outbreak states have received these antiviral medications? And after you answer that, I'd like to ask another question.

Tim Uyeki: So in terms of the situation, as you know the US government has declared this to be a national public health emergency. And in conjunction with that, CDC

has deployed 25% of our antiviral stockpile. And our antiviral stockpile consists of oseltamivir and zanamivir. It also consists of other supplies.

So the process is that states also have, some states have, stockpiles of antivirals as well. And CDC is in the process of - they've already shipped out some stockpiles, drug, to some states. And they're in the process of shipping it out widely throughout.

The priority initially has been on states with confirmed cases, or those along the Mexican border. I can't really comment anything further than that, but this is a national situation, so it's not just one state over another. Sorry, what's your next question?

Question cont'd: Yes. What are the trigger points for actually developing a vaccine from the seed stock, so to speak, trigger points for generating that on a massive scale. But is there a certain number of confirmed cases you'll have to see before you do that?

Tim Uyeki: So there have been active efforts underway to develop a candidate seed virus, vaccine strength. This has been going on over the week, and there are multiple efforts and multiple strategies that are underway. Includes the sort of classical (unintelligible) process, another using the reverse genetics process, and the third to develop a live attenuated candidate. So there's a lot of effort being done right now to develop vaccine candidates.

Question cont'd: And when would you...

Tim Uyeki: All commenced, all of those activities have started.

Question cont'd): Isn't there another point where you decide to develop, you know, millions and millions of doses?

Tim Uyeki: So obviously those decisions will be addressed, but the first step is to develop the candidate vaccines. But I think we can look forward to those kinds of decision, yeah.

Coordinator: Thank you. Our next question.

Question: Hi, thank you very much for taking my question. There's a lot of issue now about whether airplane travel should be avoided if it's practical. And are we at a point where such a recommendation can be made? And if a traveler does decide to go, is it wise to recommend that masks be worn on board?

Tim Uyeki: What I would say is I would consult our web pages as we post guidance on these issues. I would also say that we have right now 40 confirmed cases in the US. Undoubtedly there will be more, and undoubtedly that's probably an underestimate of all the cases our there.

But we don't have widespread disease and widespread transmission throughout the United States. So I think that CDC and others have not said anything about stopping all air travel. I think in terms of travel advisories we will - I would say consult our web pages to see if we are going to be posting travel advisories later today, and stay tuned. In addition in the global situation, I would suggest keeping up with the WHO web pages, and also US State Department web pages for travel advisories.

In terms of wearing a mask and so forth, I think that my colleagues from the Division of Global Migration and Quarantine will be posting guidance on that. And there is guidance up there right now about face masks. But specifically

about plane travel and so forth, I think that that will be addressed. But keep in mind we're not in a situation right now where we have widespread disease in the US, because we don't.

Coordinator: Thank you. Our next question.

Question: Hello, can you hear me?

Tim Uyeki: Yes.

Question cont'd: I have a couple of questions. I'm at the (San Diego VA) here.

One is the antigenicity of these glycoproteins -- is there any information about the relationship to the current vaccine?

Or is there any information regarding the presence of antibodies in people born before the mid-50s?

Tim Uyeki: So thanks, Dr. (Richmond), those are great questions.

The preliminary data that we have, which is sort of the standard way we would look at this, which is looking at ferret antiserum, strongly suggest that this new Swine Influenza AH1N1 virus is very distinct from circulating and recently circulating human Influenza AH1N1 viruses.

And so, in other words, based upon that data, which is not the same as clinical effectiveness, in a patient who had been either infected in the past with seasonal H1N1 or vaccinated with a seasonal vaccine, so we don't know the clinical effectiveness of past infection or vaccination against this. But it

appears, at least from the antisera analysis, that there would not be protection. Protection would not be expected.

In terms of people who have had, who were born a long time ago who might have antibody, perhaps antibodies even older H1N1 virus strains or so forth, I think we just don't know. It's a very good question, and I think that these are important questions, but we don't know the answer.

Question cont'd: Next question. In light of the suggestions of systemic disease and death in young, otherwise healthy people, is there anything known about the sequence of the (hemoglutanin)? Does it have a poly basic amino acid track that would make it amenable to more systemic infection? In diarrheal disease for example?

Tim Uyeki: Yeah, that's a great question.

So this is not, to my knowledge, a highly pathogenic, in other words, Influenza A virus. It is not like, say, the so-called avian Influenza AH5N1 virus, highly pathogenic virus strains that are circulating in poultry, and that have infected humans in 15 countries worldwide.

So it's not a highly pathogenic virus in that sense, but clearly it is causing disease and has caused severe disease and fatal outcomes in Mexico. Why exactly, we don't know. Our understanding is that the virus in Mexico is identical to the virus in the US and the virus in Canada. So clearly there's a high priority on trying to sort out what is going on with some of these severe cases and fatal cases. But we don't know that at this time.

Question cont'd: Thank you.

My final question is, the late presses had statements about the genetic composition having different Swine strains and there being an avian gene in the mix. Can you tell us whether this presumably reassortant virus, what genes come from whom?

Tim Uyeki: Now so let me just sort of comment on that briefly without going into a lot of detail.

So Swine Influenza A viruses are circulating among pigs in the United States, actually in North America and worldwide. So in the United States in the pig population, Swine Influenza is an endemic disease. There are outbreaks all the time all over. And there is some seasonality to it.

Now what we have seen over the past two to three years and frankly this has been going on for probably some time, there's cases with other viruses in the literature, but the viruses in the pigs have transmitted to people. And let's say over the last 2-1/2 years, prior to this new strain, this new virus, we have seen about 12 cases in humans that we have documented in the last 2-1/2 years in people who had some kind of contact with pigs prior to exposure. So it's pig to human transmission. And those individuals had upper respiratory tract and some had gastrointestinal tract illness. And the range was generally what we're seeing in the cases so far -- uncomplicated Influenza-like illness and diarrheal disease. But there were some severe cases as well.

Now those Swine viruses that are circulating in the US are what we call triple-reasortant viruses. And they have the genes; they bear genes from avian Influenza A viruses, human Influenza A viruses, and Swine Influenza A viruses. In other words, these are reasortant viruses that are circulating among pigs in the US and have transmitted to humans.

Now this new Swine Influenza AH1N1 virus is a new virus. It is distinct from any Swine virus that's been identified in the United States. The similarity is that, okay there are eight genes of Influenza viruses, and six of the genes are basically similar or the same as - sorry, they're very similar to six of the genes in the triple-reasortant Swine viruses circulating in the US. So they're also H1N1 viruses.

However, this new Swine Influenza virus has two genes that are distinct. And they are distinct in that they are not common - they've never been seen in North America. They're most closely related to what we call Eurasian lineage of Swine Influenza A viruses. So it suggests some kind of reasortant event with other Swine viruses coming from other parts of the world with this virus that's been circulating with pigs in the US.

And just want to clarify that the US cases, again, there's no contact with pigs. What we're seeing is ongoing human to human transmission with this new virus. So somehow this new virus became transmissible among people.

Coordinator: Thank you. Our next question.

Question: Hello?

Tim Uyeki: Yeah.

Question cont'd: My question is, is when I was reading the guidelines, when it came to doing the swab, the most common thing that they said in the guidelines was to use nasopharyngeal. But the latest one said that you want two swabs and you wanted an oropharyngeal. So I just wanted to make sure what we're supposed to be doing.

Tim Uyeki: Yeah, so we'll try to clarify that. What we are envisioning is that, you know, we're seeing this virus infect humans and being transmitted from person to person. And the assumption is, I'll just qualify again, it's a new virus. There's a lot we need to learn about this virus.

The assumption is that it's being transmitted very similarly to how seasonal Influenza A and B viruses are transmitted. And we also believe that it infects the upper respiratory tract. Therefore, the recommended clinical specimens are those that are the same for detection of seasonal Influenza A or B virus infection in people.

So nasopharyngeal swabs are ideal specimens. Aspirate specimens would also be okay. We realize, you know, we can make a recommendation like that, but we also realize that that may not be so practical. There are people that may not be well-skilled in collecting a nasopharyngeal swab. There are also people, the patient, an ill patient, may not want a nasopharyngeal swab collected.

So although the nasopharyngeal swab is probably the ideal specimen, there are other specimens that probably can detect this virus. And those would include nasal specimens, nasal swab, nasal aspirate, nasal wash. A throat swab alone, although it may yield this virus and has yielded this virus, for human Influenza, seasonal Influenza, it's not the optimal specimen.

So again we will try to clarify this guidance, but I'm not sure that we would want only a throat swab collected alone. I think if you're going to collect a throat swab, it would be really nice to have a nasal swab as well. And sort of maximize the potential to detect this virus.

So again I think nasopharyngeal specimens are optimal. An oropharyngeal, less optimal, but better than nothing. Nasal, better than oropharyngeal. Combination of oropharyngeal and nasal would be very good.

Question cont'd: And you do want two nasopharyngeal swabs?

Tim Uyeki: I'm not quite sure what guidance you're referring to. We'll try to clarify that, but I think right now, and certainly in areas that have not had confirmed cases of this new Swine Influenza virus, you kind of want to give your laboratory, state health laboratory, you want to maximize their ability to detect the virus. So, you know, sending more specimens can help in that there's other information that we need to know.

How well do immunofluorescence assays or rapid antigen assays pick this up, and those kind of comparisons need to be made. So we'll try to clarify this guidance.

Question cont'd: Thank you.

Tim Uyeki: This is a really evolving situation. As you can imagine, there's a huge amount of effort going on to this. We're trying to do the best we can. We realize that - we apologize for any confusion in our guidance. Realize it's interim. We're learning every day, and we really rely upon you and appreciate the clinical feedback so we can get the best guidance out.

Alycia Downs: Michelle, if we can take one more question.

Coordinator: Our next question, your line is open. Please check your mute feature.

((Crosstalk))

Question : This (unintelligible) Department of Health. How are you? Need to have clarification about those nasopharyngeal swabs. Number one, for children we do collect the swabs where we use the 3 cc's normal saline.

Tim Uyeki: Yeah, so a wash is what you're...

Question cont'd: A wash. What is the age recommendation - if we can't get a really good, purulent nasal swab, we should do the aspirate for the children, number one. Right?

Tim Uyeki: I'll just say this, that, you know, we can make recommendations. And I think that these are only recommendations. And I think certainly states and clinicians, hospitals, are welcome to use our recommendations, adapt them to your use. You know, clearly in young infants a nasopharyngeal swab is really, you know, the nasopharynx is not well developed.

So in children, an aspirate or wash specimen for young children is very common for other respiratory viruses including seasonal Influenza viruses. So I don't - I'm not sure that we've actually issued age cutoffs or so forth. But bottom line is you want to get some upper respiratory tract specimens, nasopharyngeal or nasal are optimal.

Question cont'd: Now that - thank you. And the second question I have is as far as the productive sputum. Now say if someone does have productive sputum, but we know that we can get a good swab from the nasal or pharyngeal route, we could just send the nasal or pharyngeal route, correct?

Tim Uyeki: Yes.

Question cont'd: All right, and then we can defer the throat - the productive sputum specimen.

Tim Uyeki: Yes, and just realize as all clinicians know that there are other human respiratory viruses and other pathogens that are circulating among people. Not every case of Influenza-like illness is going to be due to this Swine virus infection clearly. And there are also seasonal Influenza viruses circulating.

So there are many other pathogens that can cause Influenza-like illness, and you may want to test for - laboratories may want to test for some of these other, more common pathogens at the moment.

Question cont'd: Okay, and so if we can't get anything out of the nose and they only have a productive cough, we then should divert to the sputum. Okay.

Tim Uyeki: I think if you have an epidemiological suspicion that you may have, you know, that Swine Influenza A virus is, you know, is quite possible, then you should test for Swine Influenza virus infection at the state health lab using the CDC primer/probe set, and send us any non-subtypables.

I think we're sort of in the early stage right now. At some point communities that have lots of disease, if they do in the future, this may not be realistic in terms of testing. But right now we'd like to know more about the confirmed cases.

Alycia Downs: Dr. Uyeki, thank you so much for providing our listeners with this timely information. I'd also like to thank our participants for joining us today. If you have any additional questions, please send an email to coca@cdc.gov. That's C-O-C-A at CDC dot gov, and we'll try to get those answers to you as quick as we can. But we appreciate your patience in our replies.

The recording of this call and the transcript will be posted to the COCA website at emergency.cdc.gov/coca, within a few hours. We are planning another call later in the week, so please stay tuned for information on that. Please remember to check the CDC's Swine flu site regularly for any updated information or guidance. That URL is cdc.gov/Swineflu.

Thanks again for participating, and have a wonderful day.

Coordinator: Thank you. That does conclude today's conference. You may disconnect at this time.

END