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Division of Healthcare Quality Promotion

Healthcare Infection Control Practices Advisory Committee (HICPAC)

Discussion of CDC's Interim Guidance for Infection Control for Care of Patients with Confirmed or Suspected Novel Influenza A (H1N1) Virus Infection in a Healthcare Setting

Teleconference

July 23, 2009

Transcript

List of Participants

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Transcript

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Begin

PJ Brennan: Good morning. Welcome to this HICPAC Teleconference.

My name is PJ Brennan. I am the Chair of HICPAC.

The purpose of this call is for HICPAC to hear the recommendation from its working group on the subject of H1N1 guidance. Beginning on Monday April 27th, The Division of Healthcare Quality Promotion convened partners calls that included HICPAC members and liaisons as well as other interested parties. The calls were convened daily for the first week and continued to meet the following week on several occasions. On May 13th, 2009 interim guidance was updated and posted. Even prior to that date the partners group led by DHQP began to discuss the type of information that we would need to consider revisions to the guidance. The reason for these early considerations was the more stringent recommendations made in this emerging pandemic setting in distinction to those made by HICPAC and CDC for seasonal influenza.

The interim CDC guidance is also at variance with some of WHO's guidance. The issue of greatest concern has been the recommendation to healthcare personnel to use N95 respirators for known or suspected cases of novel influenza A (H1N1).

In June, HICPAC convened a seven-person working group charged with reviewing and summarizing available information on this topic and presenting proposed recommendations to HICPAC.

The working group met on one occasion prior to the committee's June HICPAC meeting in Atlanta. The working group members included four HICPAC members and three representatives from organized labor.

The HICPAC members include David Pegues who chaired the group, Russell Olmsted, Barbara Soule and Jeffery Engel.

At the June HICPAC meeting, David Pegues presented a summary of the discussion from the first working group meeting. However, the working group had not had time to develop recommendations in time for that meeting.

The group was re-charged with producing those proposed recommendations, and subsequently met by teleconference on July 9 with only the HICPAC members in attendance

on the call. The working group has now delivered its proposed recommendations to HICPAC, which will consider them during this teleconference.

I also want to point out that this call, and the proposed recommendations you will hear from the working group, are part of a larger advisory process that CDC Director Dr. Thomas Frieden has requested.

This process was outlined in a memorandum to CDC stakeholders that was circulated yesterday from Doctors Dixie Snider and Toby Merlin.

The process for CDC consultation with partners has three parts. The first is the novel influenza A (H1N1) infection control HICPAC working group whose activities I've just described.

On today's call HICPAC members will vote on the proposed recommendations from the working group in order to provide guidance for CDC.

The second part is a labor union stakeholders-meeting. Invited participants will meet with CDC leadership on July 28, 2009 in Washington, DC.
Participation in the meeting is designed specifically to listen to concerns of the labor unions representing healthcare personnel and other employees.

The third part of the consultative process is through the Institute of Medicine, which has agreed to convene an expert panel to provide guidance on personal protective equipment for healthcare personnel caring for patients with novel influenza A (H1N1). The IOM panel will convene on August 11 to 14, 2009. On August 12 the 13 members of the public, scientists and researchers will be invited to provide comments. The IOM panel will report its findings by September 1, 2009.

With that as background, I'd like to move on to the discussion and call on Dr. David Pegues to summarize the working group's findings and provide us with their proposed recommendations.

Following his comments HICPAC members will engage in discussion and may question and comment on the proposed recommendations.

As time permits, those listening will be able to ask questions for the purpose of clarification. However, this will not be an open comment period and questions should be brief and focused on the recommendations and limited to two minutes per speaker.

David, the time is yours.

David Pegues: Thank you very much. Earlier this week a copy of our preliminary recommendations were circulated electronically.

I'd like to if I could briefly review the process including discussion points in the May and July teleconferences and summarize the June HICPAC discussion.

Our guidance document focused first on studies looking at the transmissibility of novel influenza A (H1N1) and trying to compare it on a molecular and a population based level with risk of transmission of seasonal influenza.

I think there was broad consensus among all involved in the working group that there is evidence to support the transmission of influenza virus by both direct and indirect contact by droplets, as well as by droplet nuclei, which infers the airborne route of transmission.

However, the relative contribution of each of these routes to the transmission of novel influenza A (H1N1) remains unclear.

Preliminary data suggests, based on both animal and modeling data, that virulence, lower respiratory tract binding specificity, and transmissibility are similar to that of seasonal influenza.

In addition to our process, a systematic evidence review was conducted by the CEBR- Center for Evidence Base Practice at the Hospital of the University of Pennsylvania, University of Pennsylvania Health System.

This was very useful in that it looked systematically at specific modeling studies and animal studies, as well as population-based evidence which focused on (but was not restricted to) healthcare, assessing influenza transmission dynamics.

Based on this review and our own independent assessments, there is good evidence that close contact to an infected person with influenza can facilitate the transmission of influenza, here we're speaking of seasonal influenza, by droplet or contact transmission.

However there is unclear evidence supporting the significance of human influenza infection by airborne transmission.

No studies to date have demonstrated human infection occurring from naturally aerosolized influenza or human infection occurring by inhalation of artificially aerosolized influenza in ambient rather then directed air.

Epidemiologic studies supporting the potential role of airborne transmission were potentially confounded by opportunities for droplet transmission or variation from influenza season to influenza season in the detectable results.

Finally a recent study focused on air sampling in a busy hospital emergency room during influenza's seasonal activity in February suggested that a large proportion, approximately 50%, of virus detected in the air fraction was in small particles 1 to 4 micrometers in size.

PCR detection, rather then viral culture and assessment of viability, was utilized in this study, so the significance of these findings needs further investigation.

Finally, we assessed the efficacy and tolerability of respirators and surgical masks in healthcare settings. There is clear evidence that particulate respirators offer a greater degree

of protection against infectious aerosols then surgical masks; however, there is also evidence that surgical masks can decrease the risk of transmission of influenza virus from patients ill with Influenza A or B to other at-risk individuals.

We also briefly reviewed some of the challenges to implementation and compliance with the use of respirators in healthcare situations.

Our final discussion point tried to place the use of personal protective equipment, including respirators, in the broader context of the important hierarchy of administrative work-practice and engineering controls.

By this I mean a program of respiratory hygiene and cough etiquette, disease-recognition protocols, surveillance practices, availability of anti-viral agents and vaccine, patient placement, and air handling.

Emphasizing that a careful risk assessment is needed on an ongoing basis at all facilities to appropriately assess the need for and appropriateness of personal protective equipment.

Ultimately our proposed recommendations were as follows. First emphasizing the importance of clinical recognition and the use of standard precautions when caring for all persons with symptoms of a respiratory infection, including the need to wear gloves if hand contact with secretions is - or surfaces is anticipated, and wearing a gown if soiling of clothes with the patient's respiratory secretions is anticipated.
And the importance of changing gloves and gowns and performing hand hygiene with an alcohol-based hand rub or antimicrobial [or regular] soap after contact with the patient or potentially contaminated environmental surfaces.

In addition to standard precautions, during the care of a patient with suspected or confirmed novel influenza A (H1N1) infection, we recommended that, at minimum, healthcare personnel should adhere to droplet precautions for seven days after illness onset, rather then the five days recommended for seasonal influenza.

We emphasized the need for placement in a private room. And if a private room is not available, cohorting patients with suspected novel influenza A (H1N1) together.

We recommended that a surgical procedure mask be used for all routine patient care when entering the patient's room and the need to remove that mask and perform hand hygiene when exiting the room.

Finally on the issue of respiratory protection, although we endorse the use of surgical masks for the routine care of patients with confirmed or suspected, novel influenza A (H1N1), we agreed that a careful risk assessment should be performed and that it is appropriate at this time to recommend the use of N95 or higher respiratory protection for procedures that are likely to generate small particle aerosols.
These include but are not necessarily limited to bronchoscopy, intubation under controlled or

emergent situations, cardiopulmonary resuscitation, open airway suctioning and airway induction.

Healthcare personnel performing or assisting in these procedures should wear a fit-tested disposable N95 or higher respirator; respirators should be donned when performing the aerosol generating procedure and removed when exiting the procedure room.
This should be in the context of a comprehensive respiratory fit-test program with appropriate user training.

In addition, the use of an airborne infection isolation room with negative pressure handing and up to 6 to 12 air exchanges per hour should be considered for elective procedures such as bronchoscopy or sputum induction that are likely to generate small particle aerosols.

It is important to note that these recommendations are considered to be the minimum isolation precautions recommended for the evaluation and care of patients with confirmed or suspected novel influenza A (H1N1) infection.

Individual institutions are encouraged to regularly perform organization-wide as well individual employee-level occupational risks assessments, and to consider the current activity of flu in the surrounding community, the number of persons ill with influenza like illness who require medical evaluation, and evidence within their own institution of transmission of virus to patients or healthcare personnel when determining on an institution specific basis how they should implement or expand these precautions.

Thank you.

PJ Brennan: Thank you David. Do members of the committee have questions for Dr. Pegues?

So to summarize David on the issue of respiratory protection, the working group's recommendation is for the use of surgical or procedure mask for the routine care of patients with confirmed or suspected novel influenza A (H1N1).

And that for selected procedures, as you listed them, a fit tested disposable N95 respirator or higher should be employed. Is that correct?

David Pegues: That is correct.

PJ Brennan: Okay, comments or questions from the committee? Okay, why don't we open up to questions from the listeners...

Denise Murphy: (PJ)?

PJ Brennan: Yes?

Denise Murphy: This is (Denise). Can you hear me?

PJ Brennan: Yes I can.

Denise Murphy: I'm sorry it took me a minute to get on. I do want to just ask David, if you could clarify - when David just mentioned the procedures that could aerosolize small particulates he said something about open suctioning.

Could you just state that again and be as specific as possible so that everyone on the call understands what kind of suctioning procedures you're talking about?

PJ Brennan: David what did the committee consider there?

David Pegues: It was not a major point of discussion. But by open suctioning we contrast the routine method used in critical care when a patient has a nasotracheal or endotracheal tube in place. Respiratory tubing typically contains an in-line suction catheter that does not require the tubing to be disconnected from the patient's naso or endotracheal tube. It is a closed system under such circumstances, and much less likely rather to generate droplets or aerosols.

Open suctioning in comparison means you have disconnected the patient's endotracheal tube from the ventilator tubing, and are more likely with insertion and removal of the suction catheter to generate droplets and or aerosols because the procedure itself is likely to induce deep coughing.

Denise Murphy: Okay thank you for that clarification because I think with so many ICU patients on ventilators and, you know, now in-line suctioning does take care of a lot of (aspirate).

But in the absence of that, this is going to be required for many patients in ICU's on ventilators, in the absence of in-line suctioning if people don't have in-line suction systems. Correct?

David Pegues: I think that would be prudent and that is our preliminary recommendation.

Denise Murphy: Okay. Thanks for your clarification.

PJ Brennan: Okay with the operator's help we'll solicit calls from the listeners. Questions should be restricted to Dr. Pegues's comments and the material related to his comments and should be limited to two minutes. Are there any questions from the audience?

Coordinator: If you would like to ask a question on the phone please press star then 1. Please un-mute your phone and record your name clearly when prompted.

To withdraw your request press star 2. Once again to ask a question on the phone please press star then 1, one moment for any questions.

There is a question on the phone from (Sandra Yen). Your line is open.

Sandra Yen: Yes, this is a question for Dr. Pegues. I just wanted to hear again the list of procedures when the N95 respirators should be selectively used.

David Pegues: Thank you for your question. At this point we are proposing the use of N95 masks for these specific procedures.

Again to emphasize an individual institution should make a institution specific risk assessment. We think the highest risk procedures of generating small particle aerosols include bronchoscopy, intubation, cardiopulmonary resuscitation, open airway suctioning and sputum induction.

We did not include in this list the use of metered-dose inhalers or nebulized medicines that are being administered for therapeutic purposes and not for sputum induction.

Sandra Yen: Thank you.

Coordinator: The next question will come from (Cindy Price). Ma'am your line is open.

Cindy Price: Yes I was wondering about the use of eye protection?

David Pegues: Eye protection is encouraged in any situation where there is likely to be cough generation. So we consider that, and I'm sorry I didn't specifically mention that, in the context of personal protective equipment included in standard precautions.

And the specific recommendation is that eye protection should be worn, consisting of a face shield or goggles when splashes to mucus membranes with the patient's respiratory secretions is anticipated.

So it could certainly be explicitly stated. But for the same procedures that are likely to generate small particle aerosols like bronchoscopy, intubation, resuscitation, suctioning and sputum induction eye protection should be worn.

Cindy Price: Okay thank you.

Coordinator: There are no further questions.

PJ Brennan: And that is not unique to this situation. That's standard precautions for the care of any patient should include gloves, gown, eye protection, hand hygiene and so on. Are there other questions?

Coordinator: There are no further questions on the phone.

PJ Brennan: Thank you. David do you have any final comments?

David Pegues: I don't. I would be happy however to incorporate comments from those who've had a chance to review the guidance document from the working group and incorporate them. And I'll pass it on as soon as possible to Dr. Snider and colleagues at the CDC.

PJ Brennan: So the recommendations, if I can summarize then David, and correct me if I mis-state this.

The recommendations from the working group for the care of patients with novel influenza A (H1N1) includes standard and droplet precautions.

And for the routine use of a surgical or procedure mask except in the selected aerosol-generating procedures that you've identified for which respirators are recommended.

David Pegues: That is correct.

PJ Brennan: In that case an N95 or higher level respirator would be appropriate.

David Pegues: And emphasizing that this is the minimum infection control recommendation. That an individual institution based on the action on the ground, their patient population and the impact on delivery of healthcare can consider modifying these recommendations to fit their needs.

PJ Brennan: Okay thank you. Before we go on to a vote have any other members of HICPAC joined the call? Has Yvette McCarter joined?

Yvette McCarter: Yes I have.

PJ Brennan: Okay thank you Yvette. Russ Olmsted?

Russ Olmsted: Yes (PJ), I'm here.

PJ Brennan: Okay. We know Barb Soule cannot join, Bill Schechter? Okay, all right.

You've heard the recommendations of the working group. We'll take a vote now. The motion on the floor then is to approve the proposed recommendation of the working group for the use of standard and droplet precautions.

And the use of as a routine practice surgical or procedure masks, except in those circumstances and procedures that David has listed wherein an N95 or higher level respirator should be used.

And that these are the minimum precautions that should be implemented at any facility. Is there a second to the motion?

Man: Second.

PJ Brennan: All those in favor say "aye".

All: aye.

PJ Brennan: Are there any opposed? Hearing none, the recommendation and motion is approved and will be forwarded to DHQP for further action within the agency.

Are there any final comments from the committee?

Tammy Lundstrom: This is (Tammy), just awesome work David and also Craig, the document on the evidence review.

PJ Brennan: Yes I want to thank the members of the working group for their hard work and the expeditious turn around on this recommendation. Mike Bell or Denise or any other members of CDC staff who are on the call, do you have any comments?

Dixie Snider: This is Dixie Snider. I just want to thank you all for again, as others have said the hard work you've done. And we really appreciate your recommendation.
And I'm sure our director will give it very serious consideration.

PJ Brennan: Thank you Dr. Snider.

Lillian Burns: Hi, this is Lillian Burns and I'd also like to commend the workgroup for the work that they have done. And I believe these guidelines will be very helpful to those in the hospitals and in the field who are - who have to implement them and work with patients.

Denise Cardo: (PJ) this is (Denise). Thank you for the work. Just for the record it would be good for us to know if all the HICPAC members in the call voted.

PJ Brennan: I didn't ask about abstentions. I heard no dissenting votes. Were there any abstentions? Okay and I would also mention that Barb Soule cast her vote electronically to us and indicated that she supported the recommendations.

Denise Cardo: Thank you. And thank you for a very thoughtful process. And as Dr. Snider said this is going to be considered with the other input to Dr. (Tom Freiden). It's very, very helpful.

PJ Brennan: Well thank you again to the working group and to the committee for all their hard work and attention to this and to all of those listening in. This meeting is adjourned. Thank you.

Wendy any final words?

Wendy Vance: No, we'll go ahead and conclude the meeting. Thank you to all.

End