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Interim Guidance on Prevention of Novel Influenza A (H1N1) Virus Infections in Long-Term Care Facilities

June 16, 2009 (**6 pages**) – *Replaces previous version dated May 8, 2009*

On May 3, 2009, the NC Division of Public Health reported the first confirmed case of a Novel influenza A (H1N1) virus infection in a North Carolina resident. On June 11, 2009, the World Health Organization raised the pandemic alert to phase 6. The number of cases and list of affected locations continues to expand on the state, national, and international levels. Now that community transmission is occurring in our state, epidemiologic risk factors (e.g., travel) can no longer be used to distinguish people with a high likelihood of having H1N1 infection from those who have acute respiratory illness due to other causes.

Early information suggests that the illness caused by the novel influenza A (H1N1) is similar in severity to infections caused by seasonal influenza strains. An estimated 36,000 people in the US die each year of seasonal influenza and the highest mortality is in the elderly. Influenza is a significant threat to LTCF residents, with clinical attack rates averaging more than 25 to 70 percent, and with case fatality rates averaging more than 10 percent in published studies. Although early information suggests that persons over the age of 65 might be less susceptible to infection with the novel influenza A (H1N1) strain, this could change as the situation evolves.

North Carolina long-term care facilities, primarily skilled nursing facilities, should now do the following:

1. Review their facility pandemic influenza plan and implement a syndromic surveillance plan.

- Screen all people arriving at the facility for illness. Do not allow ill healthcare personnel or visitors to enter. Institute visitor precautions - e.g., posting signs alerting visitors not to enter if they have symptoms of influenza-like illness.
- Do not admit a new resident to the LTCF if there is a history of febrile respiratory illness (fever greater than 100°F or 37.8° C plus one or more of the following: rhinorrhea or nasal congestion; sore throat; cough) until 7 days after the onset of their illness or 24 hours after their acute symptoms have resolved, whichever is longer.
- Review residents' immunization status for seasonal influenza and pneumococcal vaccines. Review employee seasonal influenza immunization status and remind employees of the importance of influenza vaccine.



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- Clinicians should maintain a high index of suspicion for influenza. The elderly may not always have fever but may present with other symptoms including severe fatigue, aches and pains, headache, and chest discomfort. Consider obtaining a nasopharyngeal swab for influenza / respiratory viral testing if flu is suspected. However, decisions regarding treatment and control measures should not be deferred while awaiting laboratory results. Diagnostic testing for novel influenza A (H1N1) is available through the State Laboratory of Public Health, and might also be available through commercial and/or hospital laboratories. Local Health Department approval is required to submit a specimen to the state lab.

2. Isolation Precautions

- Immediately place residents who have confirmed or suspected novel H1N1 influenza illness on droplet and standard precautions. Interim infection control guidelines for healthcare workers are available at <http://www.epi.state.nc.us/epi/gcdc/pdf/InterimGuidanceforHealthcareWorkers.pdf>.
- **Standard precautions** include hand hygiene before and after patient care (using water and an antiseptic or a waterless alcohol product approved by the FDA for hand antisepsis) plus gloves, gown, face shield/eye protection as indicated by patient care activities and risk of exposure to blood/body fluids.
- **Droplet precautions** indicate that a surgical mask should be used for all direct patient care activities (don mask prior to entering room; if patient is in an open area, don masks within 3–6 feet of patient). Use a private room if possible and keep the door closed. If a private room is not available, make sure the patient wears a surgical mask.
- The room door should remain closed except for access. Residents should be discouraged from participating in group activities while ill. If there is a roommate, the roommate should be considered “exposed” and not moved. Monitor roommates and other contacts closely for signs of febrile respiratory illness. Contact your local health department for guidance on possible testing and for treatment recommendations.
- **Droplet precautions** (surgical mask) plus gloves, gown, and eye protection should be used by the healthcare workers obtaining clinical specimens from the respiratory tract. This includes nasopharyngeal swab, nasal wash, and throat swab.
- **Airborne precautions** plus gloves, gown, and eye protection should be used during aerosol-generating procedures including bronchoscopy, intubation & extubation, and deep open tracheal suctioning. Airborne precautions include a fit-tested disposable N-95 respirator or powered air purifying respirator (PAPR). Prior fit-testing must be repeated annually for N95 respirators, and fit-check/seal check performed prior to each use. Facility procedures and protocols must be followed for decontamination of PAPR. Aerosolizing procedures can be performed in a single patient room with the door closed. Airborne protection should be used for the duration of the aerosol-generating procedure with droplet and standard precautions resumed thereafter.
- Increased levels of infection control may be indicated for a specific patient or situation, including an airborne infection isolation room (AIIR). At a minimum, AIIR rooms must: provide negative room pressure with a minimum of 6–12 air exchanges per hour or exhaust directly to the outside or to HEPA (High Efficiency Particulate Air) filtration. It is recognized that such rooms are not available in most LTCF’s and that moving patients within the facility (i.e., to a vacant private room) is as likely to spread virus as it is to prevent it. Therefore, every effort should be made to manage confirmed or suspected

cases of novel Influenza A (H1N1) in place with healthcare workers (HCW's) using the standard, and droplet personal protective equipment (PPE) outlined above.

- Transfer of residents with known or suspected influenza to other facilities should be based on their need for advanced care (e.g., intubation), and not on their need for isolation alone. If transfer is required, notify the receiving facility and personnel involved with transport in advance so appropriate precautions can be taken.

3. Communication Plan

- Maintain close communication between long-term care facilities, acute-care facilities, and local emergency medical services to ensure that transfers are not admitted with unrecognized febrile respiratory illness.
- Determine that key points of contact outside the facility have been identified (e.g., local public health department).

4. Occupational Health

- Consider implementing daily self-screening of personnel for symptoms of febrile respiratory illness (fever $>100^{\circ}\text{F}$ or 37.8°C plus one or more of the following: rhinorrhea, cough, sore throat, nasal congestion), and instruct those who develop fever not to report to work, or if at work, to cease patient care activities and immediately notify their supervisors and infection control personnel. If sent home, they should not report to work at a second job.

5. Control of Outbreaks

- In the event of an outbreak of acute febrile respiratory illness notify your local health department and follow infection control recommendations available at:
<http://www.epi.state.nc.us/epi/gcdc/pdf/InterimGuidanceforHealthcareWorkers.pdf>
- In the event of an influenza outbreak in a long-term care facility, it is recommended that ill patients be treated with oseltamivir or zanamivir and that chemoprophylaxis with either oseltamivir or zanamivir be started as early as possible to reduce the spread of the virus, as is recommended for seasonal influenza outbreaks in such settings. Chemoprophylaxis should be administered to all non-ill residents regardless of vaccination status and should continue for a minimum of 2 weeks. If circulating strains of influenza are not well matched to the vaccine (as is the case with novel H1N1), chemoprophylaxis should also be administered to all employees regardless of vaccination status. If surveillance indicates that new cases continue to occur, chemoprophylaxis should be continued until approximately 7 days after illness onset in the last patient. In addition to antiviral medications, other outbreak-control measures include appropriate infection control, establishing cohorts of patients with confirmed or suspected influenza, restricting staff movement between wards or buildings, and restricting contact between ill staff or visitors and patients, and active surveillance for new cases. Medical directors of long-term care facilities should review their plans for outbreak control of influenza. Additional guidance for infection control measures in long-term care facilities can be found at:
<http://www.cdc.gov/flu/professionals/infectioncontrol/institutions.htm>.

[NOTE: This guidance is based on recommendations for seasonal influenza and might change if evidence continues to indicate that persons ≥ 65 years of age are less susceptible to infection with the novel H1N1 strain.]

6. Respiratory Hygiene/Cough Etiquette

- Post visual alerts at the entrance to facilities instructing visitors and staff to practice respiratory hygiene and cough etiquette (see Attachment 1 as an example). This sign is downloadable at: <http://www.unc.edu/depts/spice/flu.html>). Residents, visitors, and staff should cover their coughs and sneezes. Coughing should be done into disposable tissues that are immediately thrown away, or the crook of the elbow, if tissues are not available.
- Hand hygiene with soap and water or alcohol-based hand sanitizers is essential to prevent spread of influenza.

7. Personal Protective Equipment /Respirators

- Make arrangements to have a supply of personal protective equipment such as goggles and face masks, available for staff use, and identify sources of antiviral medication for use in the event of exposure to or an outbreak of influenza. If aerosol-generating procedures are performed at your facility, make arrangements to have a supply of N95 respirators. An acceptable alternative to N95 respirators is the reusable Powered Air Purifying Respirator (PAPR) that is NIOSH certified. The PAPR can be used without fit-testing; following manufacturer's directions.
- Occupational Safety and Health North Carolina (OSHNC) requires a respirator program for the use of N95 respirators that includes medical evaluation, fit-testing and training. If conditions are such that healthcare workers are required by their employer to wear N95 then all of the provisions of the respiratory protection standard must be met including, but not limited to, fit-testing and medical evaluation. However, if the N95 respirators are made available for use on a voluntary basis in lieu of a surgical mask, the only requirement of the employer is to provide a copy of Appendix D of 1910.134 (see Attachment 2).
- Consider designating certain personnel to perform or assist with aerosol-generating procedures on patients with suspected or confirmed novel influenza A (H1N1) infection. This will limit the number of personnel who must be provided and fit-tested with N95 respirators.

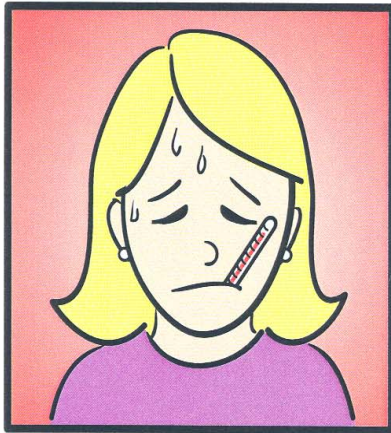
Information on respirators, including general instructions for use is available at <http://www.cdc.gov/niosh/topics/H1N1flu/>.

An on line respiratory medical evaluation site is available at <http://www.respexam.com/>.

Modified from "California Department of Health Prevention of Swine Influenza A (H1N1) Virus Infection in Long-Term Healthcare Settings" and "California Department of Public Health Swine Influenza Virus Q&A for Long-term Care Facilities" by the NC Statewide Program for Infection Control and Epidemiology and the NC Division of Public Health

If this is you...

¡Si este es usted...

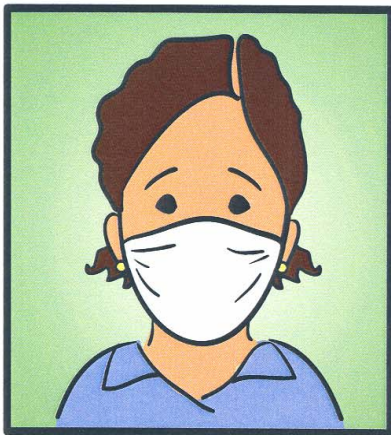


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this is what to do!

esto es lo que debe hacer!



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Attachment 2

Regulations (Standards - 29 CFR)

(Mandatory) Information for Employees Using Respirators When not Required Under Standard. - 1910.134 App D

• Part Number:	1910
• Part Title:	Occupational Safety and Health Standards
• Subpart:	I
• Subpart Title:	Personal Protective Equipment
• Standard Number:	1910.134 App D
• Title:	(Mandatory) Information for Employees Using Respirators When not Required Under Standard.

Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator. [63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998]