

Infection Control in the School Setting

New York Statewide School Health Services Center

School Nurse Questions and Answers

Infection Control Measures, N95 Respirators, and 2009 H1N1 Influenza

The Centers for Disease Control and Prevention (CDC) has issued updated guidance on infection control measures to help prevent the transmission of 2009 H1N1 influenza, in response to the current H1N1 pandemic. This guidance is intended to assist healthcare personnel who may come in close contact with individuals with symptoms of 2009 H1N1 influenza. School nurses are included in the definition of healthcare personnel.

The Occupational Safety and Health Administration (OSHA) and the State Department of Labor Public Employees Safety and Health Division (PESH) will enforce these CDC recommendations as a requirement under the General Duty Clause and General Industry Respiratory Protection Standard.

The New York State Department of Health (NYSDOH) and the New York City Department of Health and Mental Hygiene (NYCDOH-MH) has recommended that healthcare facilities and organizations follow the CDC guidelines.

The CDC guidance recommends a hierarchy of controls to prevent the spread of 2009 H1N1 influenza, which is the ranking of interventions according to their likely effectiveness in preventing transmission.

Hierarchy of Controls:

- ***eliminating potential exposures***, such as excluding persons with influenza-like illness, (ILI - defined as a fever greater than or equal to 100°F and sore throat or cough) until fever free for 24 hours;
- ***engineering controls***, such as separate rooms to hold individuals with ILI until they can be dismissed;
- ***administrative controls***, such as vaccinations;
- ***personal protective equipment***, such as wearing N95 respirators.

The following Question and Answer document has been designed specifically to assist school nurses/school health personnel in implementing the hierarchy and the required respiratory protection program. As previously noted the information contained in this document is unique to the special circumstances of the current 2009 H1N1 pandemic.

Q1: What is a Respiratory Protection Program (RPP)?

A1: A respiratory protection program is a plan to ensure that certain required employees are protected from identified respiratory risks through the proper use of N95 respirators. All respirator use must occur within the context of a comprehensive program as per the standards set forth by OSHA and PESH. This requires a written program, medical evaluation, training, and fit testing. For a full explanation and resources, please see <http://www.osha.gov/SLTC/respiratoryprotection/index.html>

Q2: Who is responsible for implementing the RPP and providing oversight in the school district?

A2: As part of the RPP the school district must assign a "Qualified Administrator" also known as the RPP Administrator, to implement the program. This person is qualified when they have had the appropriate training or experience to oversee the program, and conduct the required program evaluation. Administering the program may include, but is not necessarily limited to: arranging for training and fit testing sessions, providing employees with the proper respiratory protection, and monitoring OSHA/PESH standards and CDC and DOH recommendations to ensure school district compliance.

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Q3: When does the N95 respirator need to be used in the school setting?

A3: All school health personnel who work in close contact with individuals with suspected or probable 2009 H1N1 influenza, which for the purposes of this pandemic includes anyone with ILI, should wear a N95 respirator. Close contact is defined as working within 6 feet of an individual with suspected ILI or entering into a small enclosed airspace shared with the individual. School health personnel should also adhere to standard precautions and wear respiratory protection (N95 respirator) when involved in the following high-risk aerosol-generating procedures with individuals with symptoms of ILI: open suctioning of airways and cardiopulmonary resuscitation. Nebulizer treatments are not to be considered a high-risk aerosol-generating procedure. School health personnel should incorporate the “Hierarchy of Controls” as a multi-layered approach to decrease influenza transmission. Accordingly, personal protective equipment, such as a N95 respirator, is the last line of defense in the “Hierarchy of Controls” to reduce disease transmission risks that cannot be otherwise eliminated or controlled.

Q4: Is it mandatory for the school district to provide the training?

A4: Yes. The employer shall provide the training for all school health personnel that it employs at no cost to the employee. [OSHA Respiratory standard (1910.134(c) (4)]

Q5: Do substitute school nurses need to be trained?

A5: Yes. Employers are responsible to ensure all school health personnel receive training and fit-testing. This would include substitute school nurses.

Q6: How can N95 respirators be obtained?

A6: Schools can obtain NIOSH approved N95 respirators for their health personnel through a medical supply company, pharmacy, or hardware store. In the event schools are unable to acquire N95 respirators, limited quantities can be obtained for school health personnel from the strategic national stockpile by contacting their county emergency managers. A list of county emergency managers was included with the November 16th memo from the State Education Department’s (SED) Associate Commissioner Jean C. Stevens.

Q7: The use of N95 respirators requires a medical evaluation in the form of a questionnaire. Depending on the results of the evaluation a medical examination may be required. What does this mean and who can perform these?

A7: Employers must provide a medical evaluation to determine the employee’s ability to use a respirator, such as an N95, before the employee is fit tested or required to use it. A follow-up medical examination is to be provided for any employee whose initial medical evaluation demonstrates the need for such follow-up. A copy of the questionnaire and the examination, if an examination is needed, shall be administered confidentially by a physician or other licensed health care provider during the employee’s normal working hours, or at a time and place convenient to the employee.

[OSHA Respiratory standard (1910.134(e) (4) (i)]

A school health personnel’s medical questionnaire can be evaluated by another licensed healthcare professional such as a school nurse (RN) colleague. The medical examination must be performed by a licensed healthcare provider other than the individual being assessed.

A sample Respirator Medical Evaluation Questionnaire can be found at:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9783

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Q8. What is the process for having the N95 respirators fit tested for the school nurse?

A8: To further assist schools in complying with the respiratory protection program requirement, SED has partnered with DOH and BOCES to develop an H1N1 infection control technical assistance training program. This program includes the following topics: implementing a respiratory protection program; guidance on conducting medical evaluations; and fit-testing for an N95 respirator. Based on factors such as geographic location, participation in a BOCES health and safety service, or even scheduling – school districts in consultation with their RPP Administrator can determine what service listed below best meet their training needs:

- BOCES health and safety offices;
- PESH Consultation Service;
- New York State DOH staff; or
- DOH-funded occupational health clinics.

Q9. How long can an N95 respirator be used? Should it be used when caring for one patient only, or can it be used when caring for multiple patients?

A9: Currently, disposable N95 respirators for 2009 H1N1 influenza are only recommended for single use in healthcare settings. Used N95 respirators are considered contaminated and ideally should be discarded after each patient encounter. However where a shortage of N95 respirators exist, school districts should shift to prioritization mode which would allow the same school health personnel to appropriately select and judiciously re-use or extend the use of the N95 respirator. The prioritized use of a N95 respirator should also be adapted to local conditions taking into account such factors as the vaccination status of an employee, the duration of exposure, and other employee health risk factors. In prioritized mode, the RPP administrator may need to consider prioritizing and extending the use of, or re-using N95 respirators. These practices can involve a risk of contact transmission by touching a contaminated surface of the N95 respirator and then touching the mucous membranes of the face. The precise balance of contact transmission and benefit is unknown, although the risk will be minimized if school health personnel perform hand hygiene every time prior to and after touching the respirator. **Extended use** of an N95 respirator refers to wearing the respirator for multiple patient encounters, as long as the respirator has not been removed and re-donned between encounters. **Re-use** of an N95 respirator is when it is removed and re-donned between patient encounters. In general, extended use (wearing over multiple encounters while minimizing touching, removing or re-donning between encounters) is favored over re-use because it is expected to involve less touching of the respirator and face. Once again, because the effectiveness of extended use and re-use of an N95 respirator is unknown with respect to infection control, these alternatives should only be considered in the event of significant supply shortages/disruptions. Please refer to CDC guidance for additional recommended measures to reduce contact transmission when extending or re-using N95 respirators. (http://www.cdc.gov/h1n1flu/guidance/ill-hcp_qa.htm).

Q10. What should the RPP Administrator do if they are unable to obtain N95 respirators?

A10: If the administrator is unable to obtain N95 respirators for school health personnel, and has documented a good faith effort to acquire them, the RPP Administrator should direct school healthcare personnel to enter prioritization mode and provide them with surgical masks.

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Q11: N-95 respirators should always be inspected prior to use. How should the N95 respirator be inspected and when should it be discarded?

A11: All N95 respirators should be closely examined and carefully inspected for structural integrity. Look for nicks, abrasions, cuts, or creases in seal area, or if the filter material is physically damaged, wet or soiled. Also, check the N95 respirator straps to be sure they are not cut or otherwise damaged. If any of these conditions exist, do not use the N95 respirator and discard promptly. Respirators are not considered medical waste and can be discarded in the regular trash.

Q12: Can the school nurse use the N95 respirator in advance of fitting and training?

A12: Using disposable N95 respirators that have not been fit-tested does not provide the same assurance of respiratory protection as N95 respirators that are properly fit-tested. Normally a requirement for using any NIOSH approved respirator, including disposable N95 respirators, is that the respirator be selected, fitted, used and maintained in accordance with OSHA and other applicable regulations. It is advisable that the wearer perform a user seal check with every use of a respirator [*OSHA respiratory Standard 1910.13(4)*]. Please see the CDC guidance on how to perform a user seal check (also known as a fit check) at <http://www.cdc.gov/h1n1flu/eua/pdf/n95instructions.pdf>, which is attached for review.

In the context of supply limitations unique to the special circumstances of the current 2009 H1N1 influenza pandemic, non-fit-tested disposable N95 respirators may be considered for school health personnel at lower risk of exposure, or at lower risk of complications from influenza until fit-testing can be completed. This use will provide protection from droplets and splatter, as would facemasks, and may provide some additional protection against small particle aerosols. School health personnel wearing the respirator before having a fit test completed should perform a user seal check with each use. School health personnel using the replacement, non-fit-tested disposable N95 respirators should receive training on use of the model being used. The RPP Administrator should ensure that school health personnel are fit-tested with the new model of disposable N95 respirator as soon as possible, beginning with school health personnel assigned to duties that involve higher-risk exposure.

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Sources:

Centers for Disease Control:

- Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel
 - http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm
- Regarding Respiratory Protection for Infection Control Measures for 2009 H1N1 Influenza Among Healthcare Personnel
 - http://www.cdc.gov/h1n1flu/guidance/ill-hcp_qa.htm
- Questions and Answers About CDC's Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel
 - http://www.cdc.gov/H1N1flu/guidance/control_measures_qa.htm

PESH Staff Directive – Enforcement Procedures and Scheduling for Occupational Exposure to H1N1 Influenza
www.labor.state.ny.us/workerprotection/safetyhealth/PDFs/PESH/H1N12.pdf

OSHA Instruction

http://www.osha.gov/OshDoc/Directive_pdf/CPL_02_02-075.pdf

OSHA News Release 2009 – 10/14/2009 – Statement by Acting Assistant Secretary of Labor for OSHA Jordan Barab re: H1N1-related Inspections

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=NEWS_RELEASES&p_id=16602

New York State Department of Health – H1N1 Influenza

<http://www.health.state.ny.us/diseases/communicable/influenza/h1n1/index.htm>

New York State Education Department – H1N1 (Swine Flu) Information

<http://usny.nysed.gov/swine-flu-info.html>

New York Statewide School Health Services Center – H1N1 Flu

<http://www.schoolhealthservicesny.com/h1n1.cfm>

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General Procedures for Properly Putting on and Taking Off a Disposable Respirator



- Before handling the respirator, wash hands thoroughly with soap and water.
- If you have used a respirator before that fit you, you should use the same make, model and size.
- Inspect the respirator for damages. If your respirator has been damaged – DO NOT USE IT. Get a new one.
- Anything that comes between the respirator and your face will make the respirator less effective. Do not allow facial hair, hair, jewelry, glasses or clothing to come between your face and the respirator, or interfere with the placement of the respirator on the face.

If respirators are used for people performing work-related duties, employers must comply with the Occupational Safety and Health Administration's (OSHA) Respiratory Protection Standard, 29 CFR 1910.134. Consult www.OSHA.gov for more information.

Put the respirator on correctly: NOTE: Follow the instructions that come with the respirator. Manufacturer instructions for many NIOSH approved disposable respirators can also be found at: http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/

Always check your fit when you wear a respirator. There are two steps to assessing the fit.



1 Position the respirator in your hands with the nosepiece at your fingertips.



2 Cup the respirator in your hand, with the nosepiece at your fingertips, allowing the headbands to hang freely below your hand.



3 Position the respirator under your chin with the nosepiece up. The top strap goes over your head, resting high at the top back of your head. The bottom strap is positioned around the neck and below the ears. The straps do not cross over one another. If there is only 1 headband, it should rest high at the back of your head.



4 Most disposable respirator models have a metal nose clip. Place your fingertips from both hands at the top of the metal nose clip. Slide your fingertips down both sides of metal nose strip to mold the nose area to the shape of your nose.



1 First, place both hands completely over the respirator, then take a quick breath in to check whether the respirator seals tightly to the face. Be careful not to disturb the position of the respirator.



2 Next, place both hands completely over the respirator and exhale.



3 If during either step, air leaks around the nose, readjust the nosepiece as described above. If air leaks at the mask edges, work the straps back along the sides of your head until a proper seal is achieved.



4 If you cannot achieve a proper fit and seal, ask for help from someone else, try a different size in that respirator model, or try a different respirator model. Different models of respirators may fit faces differently. Do NOT attempt to get a better fit by tying the straps into "knots" to shorten them.

When taking off a respirator



1 Front of respirator may be contaminated —DO NOT TOUCH!



2 Grasp bottom strap and pull over back of head without touching respirator, then with top strap and carefully remove



3 Discard in waste container and wash your hands thoroughly after removing the respirator.

WASH YOUR HANDS THOROUGHLY AFTER REMOVING THE RESPIRATOR