

PESH Staff Directive A10-1 Enforcement Procedures and Scheduling for Occupational Exposure to H1N1 Influenza

Purpose: This Instruction establishes uniform inspection procedures and guidelines to be followed when conducting inspections and issuing citations under Section 27-a(3)(a) of the PESH Act and pertinent standards for employees who are occupationally exposed to H1N1 influenza.

Scope: This Instruction applies PESH-wide.

- References:**
- A. PESH Instruction A09-04 Field Operations Manual (FOM), November 5, 2009.
 - B. OSHA Notice 09-05 (CPL 02) Site-Specific Targeting 2009 (SST-09), July 20, 2009.
 - C. OSHA Instruction CPL 02-00-120 (CPL 2-0.120) Inspection Procedures for the Respiratory Protection Standard, September 25, 1998.
 - D. Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers, OSHA Publication 3328, 2007 (reprinted 2009).
 - E. Guidance on Preparing Workplaces for an Influenza Pandemic, OSHA Publication 3327, 2007 (reprinted 2009).
 - F. CDC Guidelines, *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel* (October 14, 2009).
 - G. National Strategy for Pandemic Influenza Implementation Plan, Homeland Security Council, May 2006

Cancellations: PESH Staff Directive A09-1

Action Offices: PESH District Offices

Executive Summary

In April 2009, a *novel H1N1 influenza A* strain of swine origin was identified in Mexico. It was designated as novel because it was genetically distinct from the circulating seasonal flu virus and therefore humans had little or no immunity to it and there was no vaccine to protect against it. This strain sustained human-to-human transmission widely enough to have caused a worldwide pandemic. In June 2009, the World Health Organization (WHO) upgraded the outbreak of this novel H1N1 influenza A to a pandemic level, Phase 6.

On October 14, 2009 the Centers for Disease Control and Prevention (CDC) Guidelines, *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel* was published. The CDC Guidelines recommends protective measures during 2009 H1N1 influenza waves when healthcare workers are performing tasks or activities where they will be expected to have close contact (within 6 feet) with suspected or confirmed 2009 H1N1 influenza patients. This Instruction provides PESH's field staff with guidance to address the hazard and the control measures associated with occupational exposure to the 2009 H1N1 Influenza in healthcare and other settings.

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Appendix A OSHA Outreach and Guidance Documents

Appendix B CSHO Guidance: Questions to Consider During 2009 H1N1 Influenza-Related Inspections

Appendix C OSHA Fact Sheet: Healthcare Workers with High/Very High Exposure Risk

Appendix D OSHA Fact Sheet: Respiratory Infection Control: Respirators vs. Surgical Masks

Appendix E Examples of Control Measures

Appendix F References

- I. Purpose. This Instruction establishes agency enforcement policies and provides instructions to ensure uniform inspection procedures when conducting inspections to minimize medium to very high occupational exposure risk to the virus identified as 2009 H1N1 influenza.
- II. Scope. This Instruction applies PESH-wide.
- III. References.
 - A. PESH Instruction A09-04 Field Operations Manual (FOM), November 5, 2009
 - B. OSHA Notice 09-05 (CPL 02) Site-Specific Targeting 2009 (SST-09), July 20, 2009.
 - C. OSHA Instruction CPL 02-00-120 (CPL 2-0.120) Inspection Procedures for the Respiratory Protection Standard, September 25, 1998.
 - D. Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers, OSHA Publication 3328, 2007 (reprinted 2009).
 - E. Guidance on Preparing Workplaces for an Influenza Pandemic, OSHA Publication 3327, 2007 (reprinted 2009).
 - F. CDC Guidelines, Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel (October 14, 2009).
 - G. National Strategy for Pandemic Influenza Implementation Plan, Homeland Security Council, May 2006.
 - H. Appendix H: References
- IV. Cancellations. PESH Staff Directive A09-1
- V. Action Offices. PESH District Offices

VI. Background. According to the Centers for Disease Control and Prevention (CDC), a part of the U.S. Department of Health and Human Services, and the primary federal public health agency, there are three types of influenza viruses: types A, B and C. While both Influenza A and B viruses can cause seasonal influenza, only type A influenza viruses have caused pandemics. Novel influenza strains emerge from time to time. Over the past few years, a number of different subtypes of influenza A viruses have emerged including the *avian influenza A H5N1* virus which caused widespread human infection and sparked increasing concerns regarding the threat of a possible *influenza pandemic*. The CDC has acknowledged that during the early stages of any influenza pandemic, much is unknown about the characteristics of the pandemic influenza virus except that people will have little or no immunity to the new strain. Previous influenza pandemics have occurred in two or three waves of 6-8 weeks duration and spanned a 12-18 month period. After this period, the population will have built up immunity to the virus, either naturally or through vaccination.

In May 2006, the President's Homeland Security Council released the *National Strategy for Pandemic Influenza Implementation Plan (Strategy)* to aid in the U.S. pandemic influenza preparation efforts (www.flu.gov/professional/federal/pandemic-influenza-implementation.pdf). The potential impact on the healthcare system (i.e., impact on medical resources and personnel) was one of the many areas of focus identified for preparedness planning. The *Strategy* gave Federal Agencies with public health responsibilities the duty of developing recommendations and strategies to guide the general public and employers in preparing to address the pandemic influenza outbreaks. During a pandemic, the Secretary of Health and Human Services is responsible for the overall coordination of the public health and medical emergency response, including provision of guidance on infection control and treatment strategies, and ongoing epidemiologic assessment, modeling of the outbreak, and research into the influenza virus, countermeasures, and rapid diagnostics. The *Strategy* also instructed state, local governments and the private sector, including employers having workers expected to require protection for job-related exposures, to initiate planning for pandemic influenza outbreaks. The *Strategy* recognizes that employers in hospitals and other acute care facilities are recognized as having unique challenges regarding pandemic preparedness and should have already developed plans to address issues such as: surge capacity, continuation of patient care, occupational health, and other administrative issues which are expected to arise during a pandemic outbreak. Based on the guidance from the *Strategy*, U.S. pandemic response measures, including community public health and workplace protections would be implemented.

The Department of Labor through the Occupational Safety and Health Administration (OSHA) is primarily responsible for protecting the health and safety of workers, including communication of information related to 2009 H1N1 influenza to workers and employers. [Ref. 3, Appendix F] OSHA and several other public health agencies have developed recommendations to assist employers in preparing their workplaces to minimize transmission of a pandemic virus. A worker's risk of occupational exposure during an influenza pandemic may vary from very high to high, medium, or lower (caution) risk. [See Section VII for the definitions of these

exposure risk categories]. The category of risk depends in part on whether or not job tasks and activities require close contact (within 6 feet) with patients with suspected or confirmed 2009 H1N1 influenza or whether they are required to have either repeated or extended close contact with others (e.g., patients, coworkers, the general public, etc.). [Ref. 2, Appendix F] Some healthcare workers are considered to be at high to very high exposure risk based upon the nature of the tasks or activities they perform (e.g., those performing aerosol-generating procedures as defined in Section X.). [Ref. 1, Appendix F]

At the onset of a pandemic influenza, the knowledge concerning the severity and transmissibility of the virus may be limited and enhanced protection measures may be necessary. As the 2009 H1N1 influenza virus evolves and additional information becomes available, protective measures may need to be modified based on the updated information from the CDC, state and local government. Therefore, employers will need to adjust their 2009 H1N1 influenza virus plans as new information becomes known.

2009 H1N1 Influenza

In April 2009, a *novel H1N1 influenza A* strain of swine origin was identified in Mexico. It was designated as novel because it was genetically distinct from the circulating seasonal flu virus and therefore humans had little or no immunity to it and there was no vaccine to protect against it. This strain sustained human-to-human transmission widely enough to have caused a worldwide pandemic. [Ref. 17, App F.] In June 2009, the World Health Organization (WHO) upgraded the outbreak of this novel H1N1 influenza A to a pandemic level, Phase 6. The Phase 6 pandemic declaration is based on a geographic spread (i.e., the sustained worldwide spread) of the virus and not on the severity of illness caused by the 2009 H1N1 influenza virus. [Ref. 17, App F.]

By the fall of 2009 the CDC and WHO determined that the 2009 H1N1 influenza exhibited a virulence that was similar to that of typical seasonal influenza viruses, generally causing mild to moderate disease and a limited number of fatalities. It is unknown whether the 2009 H1N1 influenza will continue to occur in its current form or if it will mutate to a more virulent virus.

The 2009 H1N1 influenza is transmitted via direct or indirect person-to-person transmission of infectious droplets expelled when an influenza patient coughs, sneezes, talks or even breathes. For transmission to occur, the expelled infectious droplets must subsequently make direct or indirect contact with the mucus membranes of the mouth, nose or eyes of an uninfected person. [Ref. 7, App F.] Airborne transmission has been shown to be one of the potential routes of transmission. [Ref. 16, App F.] Since there is a great need for more research on the 2009 H1N1 influenza transmission, workers involved in tasks or activities which place them at risk must be offered protection from all possible routes of transmission (contact, droplet and airborne) to assure their protection.

The CDC recommends protective measures during 2009 H1N1 influenza waves when healthcare workers are performing tasks or activities where they will be expected to have close contact (within 6 feet) with suspected or confirmed 2009 H1N1 influenza patients. The following industrial hygiene hierarchy of controls applies to occupational exposure risk to the virus identified as 2009 H1N1 influenza of workers whose occupational activities involve contact with patients or suspected cases:

1. take steps to eliminate the hazard when feasible (e.g., postponing elective procedures for persons with suspected or confirmed influenza);
2. use engineering controls to eliminate or reduce exposure (e.g., use airborne infection isolation rooms [AIIR] for very high exposure risk procedures);
3. use administrative controls (e.g., provide and promote vaccination at no cost to employees);
4. use work practices (e.g., promote hand hygiene and cough etiquette); and
5. provide and ensure use of personal protective equipment, including respiratory protection, and provide proper training to affected employees.

[Note: Appendix E contains references to additional examples of control methods.]

The CDC has issued *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel* (October 14, 2009) which offers assistance in analyzing occupational exposure and measures for protecting workers in healthcare settings. The CDC has also published several checklists to assist employers in developing the minimum recommended components of 2009 H1N1 influenza preparedness plans. CDC checklists are available at www.flu.gov/professional/checklists.html. (Note: See Healthcare Checklists for those specific to the healthcare industry). Other CDC resources on the 2009 H1N1 influenza can be accessed at www.cdc.gov/h1n1flu/

In addition, OSHA has developed several documents to assist employers. Some OSHA resources are listed in Appendix A of this instruction. Other available resources can be accessed on OSHA's 2009 Pandemic Influenza Safety and Health Topics page located at www.flu.gov.

VII. Key Terms and Definitions.

This Instruction defines pandemic influenza virus, healthcare worker, and aerosol-generating procedures pursuant to the CDC's guidance. The occupational risk definitions are derived from OSHA's previous guidance, including the OSHA Fact Sheet at Appendix C, OSHA's Guidance on Preparing Workplaces for an Influenza Pandemic, OSHA 3327-02N, 2009, and the October 14, 2009 CDC Guidance.

- A. Influenza Pandemic. A pandemic is a worldwide epidemic of a disease outbreak. An influenza pandemic occurs when a new influenza virus emerges for which people have little or no immunity and for which there is no vaccine. The disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in a very short time. [*CDC Guidelines (Oct. 14, 2009)*] [Appendix F, Ref 7]
- B. Pandemic Influenza Virus. A novel influenza A virus that causes pandemic influenza.
- C. Healthcare Worker. For this Instruction, PESH has adopted the definition for Healthcare Worker from the CDC's *Interim Guidance on Infection Control Measures for the 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. The definition of "healthcare personnel," is "all persons whose occupational activities involve contact with patients or contaminated material in a healthcare or clinical laboratory setting." Healthcare personnel may be engaged in a range of occupations, many of which include patient contact even though they do not involve direct provision of patient care, such as dietary and housekeeping services. Work settings include inpatient and outpatient facilities, home healthcare settings, and institutional settings such as schools and correctional facilities. [*CDC Guidelines (Oct. 14, 2009)* Appendix F, Ref. 7]
- D. Aerosol-generating procedures. For this Instruction, PESH has adopted the definition of aerosol-generating procedures from the CDC's *Interim Guidance on Infection Control Measures for the 2009 H1N1 Influenza in Healthcare Setting, Including Protection of Healthcare Personnel*. The aerosol-generating procedures for which engineering controls, administrative controls, and personal protective equipment are required:
- Bronchoscopy
 - Sputum induction
 - Endotracheal intubation and extubation
 - Open suctioning of airways
 - Cardiopulmonary resuscitation
 - Autopsies [*CDC Guidelines (Oct. 14, 2009)* Appendix F, Ref.7]

Note: The CDC's Interim guidance explains that these procedures performed on patients are very likely to generate higher concentrations of respiratory aerosols compared with coughing, sneezing, talking or breathing presenting healthcare personnel with an increased risk of exposure to infectious agents present in the aerosol.

- E. Very High Exposure Risk. A job task or activity involving a medical or laboratory procedure during which there is a potential of occupational exposure to high concentrations of suspected or confirmed 2009 H1N1 influenza virus.
- Healthcare workers (for example, doctors, respiratory therapists, nurses, emergency responders, or dentists) performing aerosol-generating procedures on suspected or confirmed patients (such as, sputum inductions, endotracheal intubations and extubations, bronchoscopies, some dental procedures or invasive specimen collection).
 - Healthcare workers present during performance of aerosol-generating procedures during autopsies (such as, medical examiners).
- F. High Exposure Risk. A job task or activity involving a high potential for exposure to suspected or confirmed 2009 H1N1 influenza virus.
- Healthcare workers who are in close contact [working within 6 feet of suspected or confirmed patients or entering into a small enclosed airspace shared with the patient (e.g., size of an average patient room)].
 - Staff transporting suspected or confirmed 2009 H1N1 patients in enclosed vehicles (such as, emergency responders).
- G. Medium Exposure Risk. A job task or activity is in the Medium Exposure Risk category if it requires frequent, close contact (within 6 feet) with others (e.g., coworkers, the general public, school children, or other such individuals or groups).
- Employees with high-frequency contact with the general population [such as schools (e.g., teachers), high population density work environments (e.g. DMV clerks, workers at homeless shelters,)].
- H. Lower Exposure Risk (Caution). A job task or activity is in the Lower Exposure Risk category if it does not require frequent close contact (within 6 feet) with others (e.g., coworkers or the general public).
- Employees who have minimal occupational contact with the general public and coworkers (for example, office workers).

Note: This directive does not apply to lower risk occupational exposures. Examples of these categories of risk are provided for informational purposes only.

VIII. Inspection Scope and Scheduling.

- A. Scope. Inspections will be conducted in workplaces likely to have exposures to the 2009 H1N1 influenza where workers' occupational activities involve close contact with patients, suspected cases of H1N1, or contaminated material. It will also include medium exposure risk where there is frequent close contact with others.
- B. Inspection Scheduling. Inspections will be conducted in response to worker complaints, referrals (including media referrals), fatality and/or catastrophe investigations, and health programmed inspections.

1. Complaint and Referral Processing. District Offices shall refer to the procedures set forth in FOM Chapter 9 (Complaint and Referral Processing) for handling complaints and referrals.

A complaint alleging 2009 H1N1 influenza exposure in settings where employees are expected to perform only lower exposure risk tasks may not normally result in an onsite inspection. However, District Offices can assist employers by directing them to numerous publicly available guidance documents instructing these employers on measures that can be taken to protect employees (e.g., OSHA *Guidance on Preparing Workplaces for an Influenza Pandemic*; Pub. #3327).

2. Fatality/Catastrophe. A fatality/catastrophe inspection will be conducted when related to a death or multiple hospitalizations due to reported occupational exposure to pandemic influenza virus.

IX. Inspection Procedures. This section outlines procedures for conducting inspections and issuing citations for hazards arising from medium, high to very high risk exposures to the 2009 H1N1 influenza. CSHOs should consult PESH directives, appendices, and other references cited in this instruction for further guidance.

A. Opening Conference.

1. Healthcare facilities generally have internal infection control and employee health and safety programs that may be administered by a team or individual. Upon entry, CSHOs shall ask to speak to the infection control director, safety director, and/or the health professional responsible for occupational health hazard control. Other individuals responsible for providing records pertinent to the inspection should also be included in the opening conference or interviewed early in the inspection (e.g., facility administrator, training director, facilities engineer, director of nursing, human resources, etc.).

Inspections at non-healthcare facilities shall proceed in accordance with PESH FOM inspection procedures

2. CSHOs are to explain the reason for the inspection to the employer.

3. CSHOs shall establish whether the workplace has handled specimens or evaluated, cared for or treated suspected or confirmed 2009 H1N1 influenza patients within the last 6 months.
4. CSHOs must request information on any hazard assessment or exposure risk assessments performed at the facility for the following:
 - a. Any assessment to determine the presence of hazards which necessitate the use of personal protective equipment (PPE). [See Section IX.C.5, below, for additional information];
 - b. Initial respiratory hazard evaluation. [See Section IX.C.4];
 - c. Exposure risk assessment to determine employees' exposure risk categories. [See Section VII for definitions for exposure risk categories that apply to this Instruction].
5. CSHOs shall initially determine whether the employer has a written pandemic influenza plan as recommended by the CDC. If this plan is a part of another emergency preparedness plan, the review does not need to be expanded to the entire emergency preparedness plan (i.e. a limited review addressing issues related to exposure to pandemic influenza virus(es) would be adequate).
 - a. Determine and document whether the employer has considered or implemented a hierarchy of controls for worker protection (i.e., engineering controls, administrative controls, work practices, personal protective equipment, including respiratory protection program).
 - b. The evaluation of an employer's pandemic influenza plan may be based upon written programs and, in a hospital, a review of the infection control data. Other information which may be reviewed includes medical records related to worker exposure incident(s), PESH-required recordkeeping and any other pertinent information or documentation deemed appropriate by the CSHO. (See Appendix B for several questions that assist in evaluating 2009 H1N1 influenza plans).

Note: Several tools are publicly available which offer employers assistance in developing pandemic influenza plans. The CDC has developed checklists for various industries and for different types of settings. The available CDC checklists can be accessed at www.flu.gov/professional/checklists.html.

6. CSHOs must request all information regarding worker training programs, and other methods used to inform workers of the hazards associated with exposure to 2009 H1N1 influenza or in preparation for an influenza pandemic.

- B. Walkaround and Records Review. CSHOs shall use professional judgment in determining which areas of the facility will be inspected (e.g., emergency rooms, respiratory therapy areas, bronchoscopy suites, morgue). Photographs or videotaping where practical shall be used for case documentation. However, **under no circumstances shall photographing or videotaping of patients be done**, and CSHOs must take all necessary precautions to assure and protect patient confidentiality.

CSHOs shall interview those employees who work in areas where high or very high 2009 H1N1 influenza exposure risks would be expected (e.g., emergency rooms, treatment rooms, areas used for isolation, areas where sputum induction, bronchoscopy, airway suctioning, etc. are performed). Interviews shall **not** take place in a room or area where a high-hazard procedure such as bronchoscopy, sputum induction, endotracheal intubation and extubation, open suctioning of airways, cardiopulmonary resuscitation, or autopsies is being conducted.

1. Compliance Officer Protection. District Supervisors shall ensure that CSHOs performing pandemic influenza-related inspections are familiar with the most recent CDC Interim Guidelines and OSHA's guidance for healthcare workers, and that they are adequately trained through either related course work (e.g., OTI Course #3360 -Healthcare) or field experience in healthcare settings. Consultation with the Program Manager's Office is encouraged prior to beginning such inspections.

- a. CSHOs shall use judgment and exercise caution when engaging in inspection-related activities that may involve their potential exposure to 2009 H1N1 influenza. CSHOs shall inquire as to potential workplace hazards and adequacy of work practices through worker interviews, and inspect facilities in a manner that minimizes or prevents exposure (for example, view employee work tasks through an observation window).

- b. CSHOs shall avoid potential exposure to suspected or confirmed 2009 H1N1 patients in isolation areas or very high hazard procedure rooms (e.g., bronchoscopy suites). CSHOs shall **not** enter rooms occupied by 2009 H1N1 influenza patients or airborne infection isolation rooms (AIIRs) to evaluate compliance. If CSHOs must enter a vacant AIIR, sufficient time must lapse (to allow for proper clearance of the 2009 H1N1 influenza virus) before entry can be made. (For information on clearance rates under differing ventilation conditions, see <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm>). CSHOs shall practice social distancing (such as maintaining at least 6 feet of distance), if possible, while conducting interviews with employees.

It is not expected that CSHOs will perform tasks requiring the use of PPE while conducting inspections related to the H1N1 influenza. However, they must ask employers if there are any facility-imposed PPE requirements that will need to be adhered to during the inspection. Under circumstances where CSHOs need to test ventilation or air flow of a room (e.g., aerosol-generating procedure rooms), CSHOs shall wear a half-mask negative pressure respirator with at least N95 filters.

- c. CSHOs shall wash their hands with soap and water after each inspection or use hand sanitizers or antiseptic towelettes if handwashing facilities are not immediately available.
- d. CSHOs who conduct 2009 H1N1 influenza inspections are encouraged to get the seasonal and/or 2009 H1N1 influenza vaccinations

2. Access to employee medical and exposure records: CSHOs are encouraged to consult with the Program Manager's Office for further guidance if they have any questions when reviewing medical records.
 - a. A record concerning an employee's work-related exposure to the 2009 H1N1 influenza is an employee exposure record within the meaning of 29 CFR 1910.1020.
 - b. A record of 2009 H1N1 influenza test results, medical evaluations and treatment are employee medical records within the meaning of 29 CFR 1910.1020. Where known, the workers' exposure record should contain a notation of the strain or type of influenza virus to which the employee was exposed.
 - c. The medical records shall be handled in accordance with the procedures set forth in the PESH FOM concerning PESH access to employee medical records.
 - d. In situations where it is necessary for the CSHO to review medical records to confirm work exposure(s) to the 2009 H1N1 influenza, CSHOs may also consider obtaining specific written consent from an employee pursuant to 29 CFR 1910.1020(e)(2)(ii)(B), and should ensure that the agency or agency employee is listed on the consent form as the designated representative to receive the information.
3. Injury/Illness Records. CSHOs must review the employer's injury and illness records to identify any workers with recorded illnesses or symptoms associated with exposure(s) to patients with suspected or confirmed 2009 H1N1 influenza.
 - a. For purposes of PESH injury and illness recordkeeping, illnesses due to the 2009 H1N1 influenza are not considered a common cold or seasonal flu. The work-relatedness exception for the common cold or flu as described in SH 901.5(8) does not apply to these cases. Employers are responsible for recording cases of 2009 H1N1 illness if all of the following requirements are met: (1) the case is a confirmed case of 2009 H1N1 illness as defined by CDC; (2) the case is work-related as defined by Part 801.5; and (3) the case involves one or more of the recording criteria set forth in 12 NYCRR Part 801.7 (e.g., medical treatment, days away from work).

- b. CSHOs shall investigate SH 900 log entries for **confirmed** cases of work-related 2009 H1N1 influenza transmission.

C. Citation Guidance. The following requirements shall be cited for medium, high or very high occupational exposure risk as defined in this Instruction. This list is not exhaustive. Please see section IX.D for examples of hazards covered by other OSHA standards that may be encountered in inspections under this Instruction.

NYSLL Article 2 General Duty Clause of the PESH Act.

12 NYCRR Part 801 Recording and Reporting Occupational Injuries and Illness.

29 CFR 1910.132 General requirements-Personal Protective Equipment.

29 CFR 1910 .133 Eye and Face protection.

29 CFR 1910.134 Respiratory Protection.

29 CFR 1910.141 Sanitation.

29 CFR 1910.145 Specification for accident prevention signs and tags.

29 CFR 1910.1020 Access to employee exposure and medical records.

1. Use of CDC recommendations. The most current CDC guidance shall be consulted in assessing potential workplace hazards and to evaluate the adequacy of an employer's protective measures for workers. Protective measures or guidelines referenced in this Directive shall be considered adequate only if those measures are at least as protective as the CDC's.
2. Citation Review. In all cases where the District Supervisor determines that an OSHA standard has been violated or a condition exists warranting issuance of a 27-a(3)(a)(1) violation for an occupational exposure to influenza, the proposed citation shall be reviewed with the Program Manager II and the DOSH Director's Office prior to issuance.

Note: Violations of OSHA standards cited under this Instruction will normally be classified as serious.

3. Observation of hazards. Where no violations of OSHA standards, regulations, or the general duty clause are observed or documented, CSHOs shall terminate the inspection and leave the facility.
4. Respiratory Protection Standard. CSHOs must evaluate whether healthcare workers who are expected to perform very high and high risk exposure tasks are using respirators. Tasks with high occupational exposure risk to 2009 H1N1 influenza include: entering rooms with suspected or confirmed 2009 H1N1 influenza patients, attending to suspected or confirmed 2009 H1N1 influenza patients through close contact (within 6 feet), or transporting suspected or confirmed 2009 H1N1 influenza patients in enclosed vehicles. Tasks which subject workers to very high occupational exposure risks to the 2009 H1N1 influenza include the performance of very high exposure risk aerosol-generating procedures, such as bronchoscopy, sputum induction, endotracheal intubation and extubation, open suctioning of airways, cardiopulmonary resuscitation and autopsies where higher concentrations of respiratory aerosols are expected to be generated.

The CDC recommends that healthcare personnel who are in close contact with patients with suspected or confirmed 2009 H1N1 influenza, or are present during the performance of aerosol-generating procedures on patients with suspected or confirmed 2009 H1N1 influenza virus, wear respiratory protection that is at least as protective as a fit-tested disposable N95 filtering facepiece respirator. [Appendix F, Ref 7] The CDC recommends that such employees don respiratory protection prior to entering a 2009 H1N1 influenza patient's room. [Appendix F, Ref 7]

Employers in healthcare-related workplaces must identify and evaluate respiratory hazards in the workplace as required by §1910.134(d)(1)(iii) of the respiratory protection standard.

CSHOs shall cite 29 CFR 1910.134(d)(1)(iii) where employers fail to conduct an initial hazard evaluation to identify potential respiratory hazards of employees who have high or very high occupational exposure risk to the 2009 H1N1 influenza as defined in this Directive.

Note: The respiratory hazard evaluation requirement is performance-oriented, and a variety of methods may be used to characterize potential worker exposures. Employers, however, are expected to take into account all relevant information relating to potential respiratory hazards.

- a. Where the employer fails to select and provide appropriate respirators for each worker in the above-described exposure categories, cite 29 CFR 1910.134(d)(1)(i). The following sample language is provided for citations proposed under 1910.134(d)(1)(i) for high hazard exposures:

"The employer failed to select and provide an appropriate respirator based on the respiratory hazard(s) to which workers were exposed and workplace and user factors that affect respirator performance and reliability pursuant to 29 CFR 1910.134(d)(1)(i)": Employees were provided with a [*surgical mask, if applicable; list manufacturer/model*] instead of NIOSH-certified N95 respirators for protection against airborne transmission of H1N1 [*subtype*] influenza virus when performing high hazard tasks [*including close contact care of patients with suspected or confirmed pandemic influenza*].

Note: To address supply considerations, reusable elastomeric respirators or powered air purifying respirators (PAPRs) equipped with N95 filters, at a minimum, should be considered for workers who must perform these procedures.

- b. Where respiratory protection (including disposable N95 filtering facepiece respirators) is required, a complete respiratory protection program must be in place in accordance with 29 CFR 1910.134(c). Among the procedures employers are required to include in the program is training in recognizing respiratory hazards and the proper use of respirators.

Note: In situations where the employer does not have a respiratory protection program, violations will be written for 1910.134(a)(2) which references the elements of 1910.134 (c)

- c. Where the employer fails to conduct an initial or annual fit test for employees required to wear respirators, cite 29 CFR 1910.134(f)(2).

d. Respirator Shortage: In the event extended use or re-use of N95 respirators becomes necessary, the same healthcare worker is permitted to extend use or re-use the respirator, as long as the respirator maintains its structural and functional integrity and the filter material is not physically damaged or soiled. Employers must address in their respiratory protection program the circumstances under which a disposable respirator will be considered to be contaminated and not available for extended use or re-use. Guidance on reuse of respirators can be obtained from the CDC's website at:
www.cdc.gov/h1n1flu/guidelines_infection_control_qa.htm.

- e. Where an employer fails to ensure that respirators are inspected before each use and during cleaning, cite 29 CFR 1910.134(h)(3)(i)(A).
- f. CSHOs shall issue a citation for the failure to provide a respirator at least as effective as an N95 respirator to employees providing care in close-contact (within 6 feet) of suspected or confirmed 2009 H1N1 influenza patients, unless the employer can establish all of the following:
- There is a shortage of respirators that are at least as effective as an N95 respirator or better;
 - The employer made a good faith effort to obtain other alternative respirators such as N99, N100 or reusable elastomeric respirators;
 - The employer made an effort to monitor their supply of N95s and to prioritize their use according to CDC guidance;
 - Surgical masks and eye protection devices were provided as an interim measure to protect against splashes and large droplets (*Note: surgical masks are NOT respirators and do not provide protection against aerosol-generating procedures*); and
 - Other measures were instituted to protect employees, for example, use of partitions or other engineering controls that might reduce the need for PPE or reducing exposure through cohorting patients.

Note: PESH requires that all respirators be NIOSH certified. PESH does not require FDA clearance for respirators.

5. Other Personal Protective Equipment (PPE) Standards. CSHOs must evaluate the facility's assessment of hazards and implementation of personal protective equipment to protect the mouth, eyes and nose from sprays or splatters of infectious material and from autoinoculation from contaminated fingers or hands.

As stated above, employers must provide and ensure the use of respirators at least as effective as N95 respirators to workers with high or very high occupational exposure risk covered by this Instruction. Where the employer demonstrates that N95s are not available for high risk exposures, as outlined above, facemasks may be used in addition to other protective measures. This equipment would protect the nose and mouth from sprays or splatters of infectious material and from autoinoculation from contaminated fingers or hands. However, in addition, adequate eye protection (e.g., faceshields, goggles, or safety glasses with sideshields) may also be required if a potential for sprays or splatters of infectious material exists and if there is a potential for autoinoculation by touching the eyes with contaminated fingers or hands.

- a. Where an employer fails to conduct a hazard assessment to determine the need for PPE, such as faceshields, goggles, or safety glasses with side shields, in addition to N95s or facemasks, to protect an employee's eyes, as well as mouth and nose, from splashes, droplet sprays, and from autoinoculation of influenza virus from the fingers or hands, cite 29 CFR 1910.132(d)(1).
- b. In cases when there is an established shortage of respirators and surgical masks are not provided and used, cite 29 CFR 1910.132(d)(1)(i).
- c. Where an employer fails to provide or ensure the use of PPE that is needed to protect against splashes, droplet sprays and autoinoculation of influenza virus from the fingers and hands, cite 29 CFR 1910.132(d)(1)(i).
- d. Where the employer fails to provide training to each employee who is required to use this PPE, cite 29 CFR 1910.132(f).

6. The General Duty Clause. CSHOs shall consult Appendix D, the definitions in this Instruction, and current CDC recommendations and guidelines to determine whether high to very high occupational exposure risk to the virus identified as the 2009 H1N1 influenza is present.

- a. Because the use of respirators or other personal protective equipment may not completely protect against the 2009 H1N1 influenza virus, employers have obligations under the General Duty Clause [Section 27-a(3)(a)(1) of the PESH Act] to take further

measures where standards alone may not provide adequate protection. Where all the elements for a General Duty Clause violation can be established, the Supervisor, in consultation with the Program Manager II and the DOSH Director's Office, shall consider issuing a citation. The most current CDC recommendations/guidelines relating to the 2009 H1N1 influenza virus should be consulted as evidence of hazard recognition and potential feasible methods of abatement.

- b. CSHOs shall evaluate whether an employer has implemented engineering controls, particularly in areas where employees perform aerosol-generating procedures. An employer's failure to implement feasible engineering controls shall be evaluated for a potential section 27-a(3)(a)(1) citation. Potential engineering controls to be considered include:
- whether the employer has taken measures to ensure that AIIR rooms used for performance of aerosol-generating procedures are maintained under negative pressure;
 - where AIIR rooms are not available, whether the employer has increased air changes and eliminated/minimized unfiltered recirculation of the room air;
 - whether the employer has installed sneeze guards, windows at clerical intake areas or other barriers between workers and the general public (if feasible) to prevent transmission of the 2009 H1N1 influenza.
- c. CSHOs shall also evaluate whether the employer has implemented the following administrative controls:
- Ensured that unprotected healthcare personnel are not allowed in rooms where an aerosol-generating procedure has been conducted unless the employer establishes that potentially infectious particles have been removed or minimized;
 - Eliminated the potential source of infection by screening and limiting access to sick visitors; implementing a system for expeditious triage, isolation and/or cohorting of suspected pandemic patients; or developed exposure risk communication measures;

- Implemented a system that encourages employees at high to very high occupational exposure risk to get the 2009 H1N1 influenza vaccination and provide it at no cost. A signed declination form may be used to document that the employer offered and employees did not accept vaccination.

Note: Employees should be provided with training on influenza prevention and risks of complications of influenza. In addition, employees should be informed of the vaccination protocol including the benefits and risks for vaccine, engineering controls, administrative controls, and the use of personal protective equipment protection during high risk aerosol-generating procedures.

- Implemented a system for offering early treatment with antiviral medications after unprotected exposure.
- Adequately trained and supervised employees on specific work rules, administrative and work practice controls, including instruction to employees on recognizing the hazard of potential exposures to pandemic influenza viruses.

Sample Alleged Violation Description (AVD) for citing employee exposures to 2009 H1N1 Influenza

Note: This general language is presented as an example to assist CSHOs in developing citations. Citations should be drafted in consultation with the Supervisor to reflect specific conditions found at facilities and to give notice to employers of the hazardous condition or practice cited.

Section 27-a(3)(a)(1) of the PESH Act: The employer did not furnish to each of its employees, employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees, and which will provide reasonable and adequate protection to the lives, safety and health of its employees. In applying this paragraph, fundamental distinctions between private and public sector employment have been recognized.

(a) (LOCATION)(DATE)(IDENTIFY SPECIFIC OPERATION/TASK(S) AND DEPARTMENTS, DESCRIBE CONDITIONS, INCLUDING EXPOSURE LEVELS) An evaluation of this operation/task(s) indicated that employees required to perform this task were exposed to a hazard which caused, or was likely to cause, severe 2009 H1N1 influenza illness or death.

Abatement

Reasonable and adequate abatement methods for reducing this hazard include, but are not limited to, the implementation and use of engineering and administrative controls such as: (*List all recommended controls and practices that could potentially abate the hazards*). See Appendix E for a list of recommended engineering and administrative controls.

D. Other OSHA Standards Commonly Associated with Healthcare Employers. Other hazards may become apparent during the course of the inspection (e.g., from plain view observation or through information obtained during employer and/or employee interviews). These are examples of requirements commonly associated with healthcare-related workplaces; this list is not exhaustive.

1. Bloodborne Pathogens. The Bloodborne Pathogens standard has provisions requiring exposure control plans, engineering and work practice controls, PPE, hepatitis vaccination, hazard communication, training and recordkeeping. Compliance is required as per 29 CFR 1910.1030.

Citation Guidance. Detailed inspection and citation guidance, including guidance on how to address inadequacies relating to provision of sharps with safety engineered sharps injury protections (SESIPs), are contained in OSHA Instruction CPL 02-02-069-*Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens*.

2. Sanitation. Surfaces potentially contaminated with 2009 H1N1 influenza virus should be decontaminated pursuant to 29 CFR 1910.141.
3. Specification for accident prevention signs and tags. Warning signs shall be posted outside the entrance of isolation or treatment rooms in accordance with 29 CFR 1910.145. A description of the necessary precautions (e.g., “respiratory protection must be donned before entering”) should be included in the warning.

E. Program Evaluation.

1. This Instruction will be evaluated using data collected from case files and follow-up site visit reports submitted by each District Office to the Program Manager’s Office

- F. IMIS Coding Instructions. The instruction below is for recording 2009 H1N1 influenza-related inspections. The majority of pandemic influenza-related inspections will be "Health" inspections and should be coded as such. For all PESH inspections conducted where compliance officers investigate worker exposure to pandemic influenza (e.g. H1N1), the NYPESH-1 shall be marked with the following coding for tracking purposes:

NYPESH-1 - Block 42: Type = N ID = 16 Value =ER-H1N1FLU

1. When a NYPESH-7 is completed and the complaint alleges employee exposure to pandemic influenza (e.g., H1N1), enter the code "N-16-ER-H1N1FLU" in Item 46, Optional Information.

This new "N-16-ER-H1N1FLU" code applies to the following enforcement forms: NYPESH-1, NYPESH-7, OSHA-36, OSHA-90 and OSHA-55.

2. Consultation: Whenever a visit is made in response to this Instruction, Consultation request/visit forms are to be completed with the Instruction code "N-16-ER-H1N1FLU" in item 25 on Form-20, and in item 28 on Form-30.

APPENDIX A

OSHA Outreach and Guidance Documents

- Existing Outreach Products OSHA has continually addressed potential worker exposure to pandemic influenza viruses through the development of outreach and compliance assistance tools. Several products developed by OSHA are discussed in this Instruction. However, a complete list can be retrieved from the OSHA Pandemic Influenza Safety and Health Topics page at www.osha.gov/dsg/topics/pandemicflu/index.html
- 1. In 2007, OSHA issued guidance to all employers to help them plan for a severe pandemic in *Guidance on Preparing Workplaces for an Influenza Pandemic* (OSHA Publication 3327). Also in 2007, a separate guidance document titled *Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers* (OSHA Publication 3328) was issued to provide more specific information to assist healthcare workers and healthcare employers in pandemic-related planning for the situations unique to the healthcare industry. OSHA also listed [Frequently Asked Questions on Pandemic Influenza Preparedness and Resource Guidance for Healthcare Workers and Healthcare Employers](#).
 2. Subsequent guidance addressing concerns regarding the selection and use of respiratory protection was also developed by the agency. Among these is the OSHA Fact Sheet, *Respiratory Infection Control: Respirators Versus Surgical Masks*.
 3. Several other OSHA resource documents have been developed since the emergence of the April 2009 H1N1 outbreak. OSHA Fact Sheet, *Healthcare Workplaces Classified as Very High or High Exposure Risk for Pandemic Influenza*, and OSHA Fact Sheet, *Protecting Emergency Medical Responders During an Influenza Pandemic* provide specific guidance for healthcare workers.
 4. Additionally, an interactive *Influenza Pandemic eTool* has been developed to assist employers in performing task-based exposure risk assessment and guiding employers and workers through the process of selecting appropriate controls (i.e., engineering controls, administrative controls, work practices and personal protective equipment, including respiratory protection.)
- 5. In order to provide information that would be useful to workers as well as employers, OSHA created several Fact Sheets and QuickCards which provide concise and clear summaries of the recommendations for worker protection. The list of documents provided in this section is not an exhaustive list of all available OSHA tools. For further information please refer to the OSHA website at www.osha.gov.
 6. The following Fact Sheets were recently added to OSHA's website:

- Employer Guidance: Reducing Healthcare Workers' Exposures to the 2009 H1N1 Virus. <https://www.osha.gov/h1n1/healthcare.html>.
- Employer Guidance: Reducing All Workers' Exposures to the 2009 H1N1 Flu. <https://www.osha.gov/h1n1/nonhealthcare.html>.
- Worker Guidance: Precautions For Healthcare Workers during the 2009-2010 Flu Season. https://www.osha.gov/h1n1/protectyourself_healthcare.
- Worker Guidance: Precautions For All Workers during the 2009-2010 Flu Season. https://www.osha.gov/h1n1/protectyourself_nonhealthcare.html.

APPENDIX B

CSHO Guidance: Questions to Consider During 2009 H1N1 Influenza-Related Inspections

This appendix contains some questions that may assist CSHOs during the inspection of facilities where employees have high or very high exposure risks to 2009 H1N1 influenza. Additional questions may be needed and should be considered based on the specific circumstances of the investigation. The determination of effectiveness of the employer's 2009 H1N1 Influenza Plan should be made on a case-by-case basis and violations should not be proposed solely on the basis of the employer's failure to implement each and every item listed below. As a reminder, all proposed citations related to 2009 H1N1 influenza exposure should be coordinated with the Program Manager II and the DOSH Director's Office.

1. 2009 H1N1 Influenza Plan-

- Has the employer conducted a risk assessment to determine employees' exposure risk to 2009 H1N1 influenza?
- Has a plan been created using the information gathered in the risk assessment?
- Is there a person responsible for maintenance of the program and training of employees on the program?
- Has the employer developed procedures for early identification/isolation of cases (i.e., methods for screening suspected pandemic patients and sick employees)?
- Does the employer have a policy for dealing with sick workers (i.e. encouraging sick workers to stay at home)?
- Does the employer have a schedule for cleaning or decontaminating workplaces?

2. Engineering controls

- Does the employer perform very high risk aerosol-generating procedures on suspected or confirmed 2009 H1N1 influenza patients?
- Does the facility have functioning airborne infection isolation room(s) (AIIR) If so, is it operable?
- Has the employer implemented other measures for isolating employees from 2009 H1N1 influenza cases (e.g., installation of sneeze guards, windows at clerical intake areas and other barriers between workers and the general public)?
- Has the employer provided no-touch waste containers for used tissues?

3. Administrative Controls

- Does the employer provide and promote vaccination and if indicated post-exposure prophylaxis?
- Does the employer use a separate rooms to isolate a person suspected to have 2009 H1N1 influenza; does the room(s) contain its own hand washing sink, toilet and bath facilities, when possible?
- Has the employer implemented communication measures to educate patients, employees and visitors (e.g., posting signs at entry points instructing patients, staff and visitors of the policies and of symptoms of influenza)?
- Are surgical masks used on suspected or confirmed 2009 H1N1 influenza patients who can tolerate use?

4. Personal protective equipment, including respirators

- Has a hazard assessment determined the need for personal protective equipment (PPE)?
- Has the PPE been provided (e.g., eye protection, surgical masks, respirators)?
- Is PPE available in different sizes?
- Have employees been trained on the proper use of PPE?
- Does the employer ensure the use of PPE?
- Are respirators provided to employees who are entering the rooms of, or in close contact with (e.g. within 6 feet) individuals with suspected or confirmed 2009 H1N1 influenza patients?
- Are respirators provided to employees who perform aerosol generating high risk procedures on suspected or confirmed 2009 H1N1 influenza cases?
- If respirators are provided, is there a respiratory program in place and has it been reviewed and updated to include 2009 H1N1 influenza risks/exposures?
- Are employees fit-tested on the respirators they use?
- If surgical masks are used, what are the circumstances of use (e.g., what is the exposure risk category for employees using surgical masks; what engineering, administrative or work practice controls have been put in place to supplement the use of surgical masks)?
- Are there policies in place to keep respirators (or other PPE) clean and well maintained?
- If there is a respirator shortage, what policies are being used to address protection of employees (e.g., consider additional engineering controls; measures to limit contact; use of surgical masks on patients who can tolerate use; other administrative controls)?

5. Training

- What guidance is being given to workers covered under this directive who transport individuals who may be ill or exhibit influenza-like symptoms?
- Are employees aware of the signs and symptoms of 2009 H1N1 influenza?
- Are employees familiar with the employer's H1N1 program?
- Are employees aware of the PPE available?
- Do employees know what to do if they suspect someone may have 2009 H1N1 influenza and who to report suspected cases to in the facility?
- Do they know how to protect themselves from contracting 2009 H1N1 influenza and what to do if they have symptoms during the scheduled work time?
- Do employees know what the facility's policies are for sick employees (e.g., staying at home).

APPENDIX C

OSHA FACT SHEET

Healthcare Workplaces Classified as Very High or High Exposure Risk for Pandemic Influenza

What to do to protect workers

If your workplace requires your workers to have contact with people who are known or suspected to be infected with the pandemic virus, there are important practices to reduce the risk of infection and to protect your workers.

Very high exposure risk occupations are those with high potential for exposure to known or suspected sources of pandemic influenza during specific medical or laboratory procedures:

- Healthcare workers performing aerosol-generating procedures on known or suspected pandemic patients.
- Healthcare or laboratory personnel collecting or handling specimens from known or suspected pandemic patients.

High exposure risk occupations are those with high potential for exposure to known or suspected sources of pandemic virus:

- Healthcare delivery and support staff exposed to known or suspected pandemic patients.
- Staff providing medical transport of known or suspected influenza patients in enclosed vehicles.
- Staff performing autopsies on known or suspected pandemic patients.

Engineering Controls

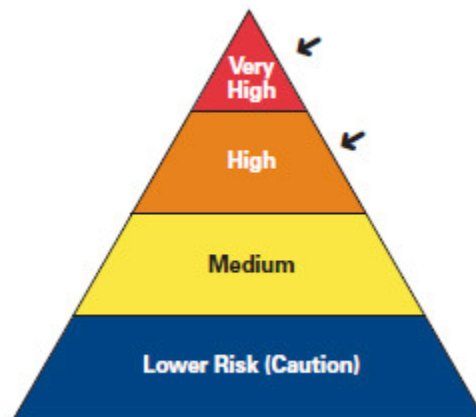
These types of controls involve making changes to the work environment to reduce work-related hazards.

Healthcare facilities equipped with isolation rooms need to use them when performing aerosol-generating procedures for patients with known or suspected pandemic influenza.

Only Biosafety Level 2 or 3 laboratory facilities (depending on the procedures performed) should process specimens from known or suspected pandemic patients.

Where possible, install physical barriers such as clear plastic sneeze guards in reception or intake areas.

Review and increase housekeeping vigilance to control the spread of infectious agents through additional cleaning of contact surfaces, and through prompt and thorough waste disposal.



Work Practices

Train workers in work practices such as hand hygiene, facility hygiene, and other infection control measures. For details see *Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers* at www.osha.gov/Publications/3328-05-2007-English.html.

Provide conveniently located masks, tissues and alcohol-based hand rubs for waiting areas and patient evaluation areas to reduce the spread of infection.

Administrative Controls

Healthcare facilities need to follow existing guidelines and facility standards of practice for identifying and isolating infected individuals and for protecting workers. Develop and implement policies that reduce exposures.

Post signs requesting patients and family members to immediately report symptoms of respiratory illness on arrival at the facility and use disposable tissues to cover the nose and mouth when coughing.

Personal Protective Equipment (PPE)

For those who work closely (within 6 feet) with people known or suspected to be infected with pandemic influenza:

Use NIOSH-certified respirators that are N95 or higher. When both fluid protection (e.g., blood splashes) and respiratory protection are needed, use a "surgical N95" respirator that has been certified by NIOSH and cleared by the FDA.

Consider NIOSH-certified elastomeric respirators (e.g., cartridge respirators) for essential workers who may have to decontaminate and reuse respirators in the event that there is a shortage of disposable respirators.

Consider NIOSH-certified powered air-purifying respirators for essential workers who may have to decontaminate and reuse respirators, wear respirators for prolonged periods of time, be exposed to high-risk procedures, or work in high-risk environments. Loose-fitting hooded powered air purifying respirators have the additional advantage of not requiring fit testing.

Be fit tested and trained in the proper use and care of a respirator. (www.osha.gov/SLTC/respiratoryprotection/index.html).

Use gloves made of latex, vinyl, nitrile, or other synthetic materials as appropriate, when there is contact with blood and other bodily fluids, including respiratory secretions.

Wear an isolation gown when it is anticipated that soiling of clothes or uniform with blood or other bodily fluids, including respiratory secretions, may occur.

Use eye and face protection if sprays or splatters of infectious material are likely. Goggles should be worn during the performance of aerosol-generating procedures. Use of a full faceshield in front of a respirator may also prevent bulk contamination of the respirator.

Education and training materials need to be easily understood and available in the appropriate language and literacy level for all workers. Employers must have a respiratory protection program that complies with OSHA's Respiratory Protection standard at 29 CFR 1910.134, including worker fit testing, medical evaluation, and training in the proper use and care of a respirator.

For more information, please refer to OSHA Publication No. 3328, Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers, which can be accessed at: www.osha.gov. Additional information can be found at www.pandemicflu.gov.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

APPENDIX D

OSHA Fact Sheet **Respiratory Infection Control: Respirators Versus Surgical Masks**

It is important that employers and workers understand the significant differences between these two types of personal protective equipment. The decision whether or not to require workers to use either surgical masks or respirators must be based upon a hazard analysis of the workers' specific work environments and the different protective properties of each type of personal protective equipment.

The use of surgical masks or respirators is one practice that may reduce the risk of infectious disease transmission between infected and non-infected persons. Since there is limited historical information on the effectiveness of surgical masks and respirators for the control of influenza during any previous pandemics, the effectiveness of surgical masks and respirators has been inferred on the basis of the mode of influenza transmission, particle size and professional judgment.

To offer protection, both surgical masks and respirators need to be worn correctly and consistently. If used properly, surgical masks and respirators both have a role in preventing different types of exposures. During an influenza pandemic, surgical masks and respirators need to be used in conjunction with interventions that are known to prevent the spread of infection, such as engineering and administrative controls (e.g., installing sneeze guards, teleworking) and work practices (e.g., cough etiquette, hand hygiene, and avoiding large gatherings).

Respirators

Respirators are designed to reduce a worker's exposure to airborne contaminants. Respirators come in various sizes and must be individually selected to fit the wearer's face and to provide a tight seal. A proper seal between the user's face and the respirator forces inhaled air to be pulled through the respirator's filter material and not through gaps between the face and respirator.

Respirators offer the best protection for workers who must work closely (either in contact with or within 6 feet) with people who have influenza-like symptoms. These generally include those workers who work in occupations classified as **very high exposure risk** or **high exposure risk** to pandemic influenza. For additional information on very high and high exposure risk occupations, please refer to OSHA Publication No. 3327, entitled *Guidance on Preparing Workplaces for an Influenza Pandemic*, which can be found at <http://www.osha.gov/dsg/topics/pandemicflu/index.html>.



Where workers are required by employers to wear respirators, They must be NIOSH-certified, selected, and used in the context of a comprehensive respiratory protection program, (see OSHA standard 29 CFR 1910.134, or www.osha.gov/SLTC/respiratoryprotection/index.html). It is important to medically evaluate workers to ensure that they can perform work tasks while wearing a respirator. For many workers, medical evaluation may be accomplished by having a physician or other licensed healthcare provider review a worker questionnaire (found in Appendix C of OSHA's Respiratory Protection standard, 29 CFR 1910.134) to determine if the worker can be medically cleared to use a respirator. Employers who have never before needed to consider a respiratory protection plan should note that it can take time to choose an appropriate respirator to provide to workers; arrange for a qualified trainer; and provide training, fit testing and medical

evaluation for their workers. If employers wait until an influenza pandemic occurs, they may be unable to implement an adequate respiratory protection program in a timely manner.

Surgical Masks

Surgical masks are used as a physical barrier to protect the user from hazards, such as splashes of large droplets of blood or body fluids.

Surgical masks also protect other people against infection from the person wearing the surgical mask. Such masks trap large particles of body fluids that may contain bacteria or viruses expelled by the wearer.

Surgical masks are used for several different purposes, including the following:

Placed on sick people to limit the spread of infectious respiratory secretions to others.

Worn by healthcare providers to prevent accidental contamination of patients' wounds by the organisms normally present in mucus and saliva.

Worn by workers to protect themselves from splashes or sprays of blood or bodily fluids; they may also keep contaminated fingers/hands away from the mouth and nose.

Surgical masks are not designed or certified to prevent the inhalation of small airborne contaminants. These particles are not visible to the naked eye but may still be capable of causing infection. Surgical masks are not designed to seal tightly against the user's face. During inhalation, much of the potentially contaminated air can pass through gaps between the face and the surgical mask and not be pulled through the filter material of the mask. Their ability to filter small particles varies significantly based upon the type of material used to make the surgical mask, so they cannot be relied upon to protect workers against airborne infectious agents. Only surgical masks that are cleared by the U.S. Food and Drug Administration to be legally marketed in the United States have been tested for their ability to resist blood and body fluids.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

APPENDIX E

Examples of Control Measures

Elimination of the hazard:

- Postponing elective procedures for patients with suspected or confirmed 2009 H1N1 influenza (e.g. elective surgeries; elective dental procedures etc.)
- Limiting access/entry to visitors with suspected or confirmed influenza
- Putting non-punitive policies in place to keep ill employees at home

Engineering Controls:

- Using airborne infection isolation rooms (AIIR) when performing aerosol-generating procedures to reduce spread of 2009 H1N1 influenza.
- Local exhaust ventilation (e.g. hoods, tents, booths) for aerosol-generating procedures.
- Use of hoods in laboratories during aerosol-generating manipulations/procedures with infectious specimen
- Optimizing ventilation of vehicles transporting suspected or confirmed 2009 H1N1 influenza patients.
- Providing hands-free soap and water dispensers, and receptacles for garbage and linens to minimize contact.

Administrative Controls:

- Vaccinating healthcare workers (once the vaccine is available)
- Instituting procedures to triage, identify and isolate influenza patients as soon as possible.
- If single rooms are not available, consider whether patients that have or are suspected to have the same infection can be assigned to share rooms or wards (cohorting).
- Post signs on the entrances to AIIR or procedure rooms to communicate the entry requirements necessary for worker protection (e.g., PPE needed)
- Limiting the number of persons present during aerosol-generating procedures and in isolation rooms
- Instituting and ensuring compliance with hand hygiene, respiratory hygiene and cough etiquette
- Providing dedicated patient care equipment for suspected or confirmed 2009 H1N1 influenza patients.
- Limit patient transport, whenever appropriate (e.g., do portable chest films at the bedside instead of transporting the patient to the Radiology department).
- Using facemasks on 2009 H1N1 influenza patients, if tolerated, to reduce exposure to employees (e.g., during transport; while in emergency waiting rooms; while awaiting diagnostic testing).

Note: These and other protective measures are recommended in CDC's Interim Guidance on Infection Control Measures for the 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel, Oct.14, 2009.

APPENDIX F

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