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1.0 Summary

Department employees are included in the Pandemic Influenza Respirator Program when exposure or potential exposure to an airborne pandemic influenza virus exists at a work location(s) and other means of preventing exposure like social distancing are not possible. Respirator use is required and the respirator must offer appropriate protection for the user. Only employees meeting the authorization requirements of the Respirator Program Administrator can enter work areas requiring pandemic influenza respiratory protection.

This document is the Written Respirator Program for pandemic influenza respirators in the department. It includes the following:

- Department specific written program.
- Respirator selection procedures.
- Medical evaluations.
- Fit testing procedures for disposable particulate respirators.
- Procedures for routine and foreseeable emergency situations.
- Procedures and schedules for maintaining respirators.
- Staff training on respirators and hazards.
- Record keeping requirements.
- Program evaluations.
- Designation of a program administrator.

2.0 Purpose

This purpose of this program is to assure that each respirator user is adequately protected from airborne pandemic influenza viruses under routine and reasonably foreseeable emergency situations; that respirators remain clean, sanitary, and maintained in good operating condition; and that they are used by an employee who has been properly fitted and trained.

3.0 Responsibilities

Department Director

The director _____ of the department _____ is solely responsible for this program and has full authority to make necessary decisions to ensure its success. The director has assigned responsibility for implementation and day to day operation of the respirator program to a designated Respirator Program Administrator.

Department Respirator Program Administrator

The current Respirator Program Administrator is _____.

The Respirator Program Administrator will work with the Environmental Health & Safety, or equivalent authority, to assess atmospheric hazards and set up the program initially, and seek consultation at any time there is question regarding hazard determination or appropriate selection and use of respirators.

Employees

All department employees must abide by these program procedures. Authorized employees, while in an area that requires the use of a respirator, shall wear the appropriate properly fitted NIOSH approved respirator. (See Appendix A and Appendix B). Any changes in exposure conditions should be reported to the Department Respirator Program Administrator.

Environmental Health & Safety

The Environmental Health & Safety will work with the department to conduct hazard assessments, set up the initial program, provide consultation as needed, and periodically evaluate compliance and effectiveness of the department program.

4.0 Selection Procedures

Survey

An evaluation must be done to determine who will need a respirator for pandemic influenza protection. The person performing the evaluation for their department must determine:

- If the department would provide any essential functions to the University needed during a pandemic influenza virus outbreak.
- What department provided essential functions during a pandemic influenza virus outbreak result in the potential for an employee to be exposed to the airborne influenza virus.
- There is no alternate way to perform the essential function that eliminates the exposure risk to the employee.
- The number of employees that will need a respirator, assuming that half the normal work staff may not be available due to the pandemic influenza situation.

Selection Criteria

When a respirator will be worn by department employee(s) in the workplace to prevent exposure to the airborne pandemic influenza virus, assistance will probably be needed to develop the program. You should consult the Environmental Health & Safety (EHS) website initially, and then obtain additional assistance from EHS or other authorities on respiratory protection as needed. When a respirator is needed the department provides the employee an appropriate respirator model with acceptable fit at no cost. Only NIOSH certified respirators are used. Respirators are to be used once and not shared.

There are many types of respirators with varying capabilities. The primary respirator used for this program is a disposable particulate (filtering facepiece) respirator. Particulate respirators are also known as “air-purifying” respirators because they protect by filtering particles (including virus containing droplets) out of the air you breathe. University personnel can be assigned to wear any one of the NIOSH (National Institute for Safety and Health) – certified particulate respirator types available for protection against diseases spread through the air if they have been properly fit tested and maintained. NIOSH – approved disposable respirators are marked with the manufacturer’s name, the part number (P/N), the protection provided by the filter (e.g. N95), and “NIOSH”.



N-95 Marking

NIOSH-approved N-95 Disposable Particulate Respirator

Disposable particulate respirators are negative pressure, which means when you inhale the air is pulled through the filter into your lungs. It is imperative that the respirator seal tightly on your face so the air goes through the filter media. This filter does not provide protection from all air contaminants and does not provide any replacement oxygen if the level is low.

Disposable particulate respirators have a letter and number code to identify their capabilities against particulate contaminants. However, all of the NIOSH certified disposable particulate respirators have been found to be effective against biological aerosols including airborne influenza virus.

The types of NIOSH certified disposable particulate respirators available are:

N95 = filters at least 95% of airborne particulates when no airborne oil mist present.

N99 = filters at least 99% of airborne particulates when no airborne oil mist present.

N100 = filters at least 99.97% of airborne particulates when no airborne oil mist present.

R95 = filters at least 95% of airborne particulates and is somewhat resistant to oil mist.

P95 = filters at least 95% of airborne particulates and is strongly resistant to oil mist.

P100 = filters at least 99.97% of airborne particulates and is strongly resistant to oil mist.

If a person required to wear a respirator for pandemic influenza protection cannot wear a disposable particulate respirator, an authority on respiratory protection should be consulted to determine the correct respirator to use and how to avoid pandemic influenza contamination.

The respirator selection process includes the following considerations:

- Characteristics of essential operation or process.
- Location of essential operation or process.
- Time period of exposure.
- Type of work activity.
- Limits or respiratory protective equipment available.

Limitations of Use

Department employees are only allowed to wear the disposable particulate respirators they are fitted for and only for protection from airborne pandemic influenza virus. If any other air contaminant in a hazardous airborne concentration is known or suspected to be present the area should not be entered.

Use Approval

Employees must complete all requirements of the respirator program before using a respirator.

The authorization tables in Appendix A and Appendix B list employee names, the type of respirator, and the location or operation where respirator use is required. Only authorized employees may use a respirator.

5.0 Medical Evaluation

Employees assigned to wear a disposable particulate respirator for protection from a pandemic influenza virus outbreak must pass an initial medical evaluation overseen by a physician or other licensed health care professional to verify that wearing a respirator will not aggravate an existing medical condition (asthma, emphysema). After the initial medical evaluation, medical evaluations can be suspended until a pandemic influenza virus occurrence becomes likely. At that time a medical evaluation must be done before respirator use begins. The evaluation requires completion of a medical questionnaire presented in person for review by medical staff. The medical examination may be optional if medical staff's review of the questionnaire determines an exam is not required. Check with your department management about how to schedule a medical evaluation.

The University Employee Health Clinic (UEHC) will perform the required medical evaluations for employees assigned to use respirators.

Student help will have their respirator medical evaluation performed by Student Health Service (SHS).

Each respirator user's medical status will be reviewed at least annually during use.

6.0 Fit Testing

Individuals must be fit tested for the disposable particulate respirators they will use to verify that the respirator chosen will seal tightly on their face and work properly. Fit testing consists of wearing a respirator while being exposed to a safe but detectable (odor, taste) air contaminant.

- An initial fit test must be completed successfully with each make, model, style, and size of disposable particulate respirator to be worn. After the initial fit test, fit tests can be suspended until a pandemic influenza virus occurrence becomes likely. At that time a successful fit test must be completed with each make, model, style, and size of disposable particulate respirator to be worn before respirator use begins and then annually until the outbreak is over and respirator use is no longer needed.
- Qualitative Fit Tests, which rely on your senses for detection (saccharin, bitrex), are typically used.
- Anything that can interfere with the sealing surface of the respirator (facial hair) is prohibited.



Qualitative Fit Test with Bitrex

A qualitative fit test procedure for pandemic respirators can be found on the EHS website at <https://research.uiowa.edu/ehs>.

Fit testing will be performed before initial use of a respirator, at least annually until the outbreak is over and respirator use is no longer needed and whenever conditions (such as employee's physical condition) change that could affect respirator fit.

Fit testing requires the respirator user to handle the respirator, have it fitted properly, test the facepiece-to-face seal, and to wear it in normal air for a familiarity period.

7.0 Routine and Emergency Situation Procedures

The following procedures must be followed whenever using a disposable particulate respirator for pandemic influenza protection:

- Put on the respirator before entering the area where the airborne pandemic influenza virus hazard exists.
- Perform a successful user seal check using procedures from Appendix B-1 of OSHA's 29 CFR 1910.134 each time a respirator is put on and before entering the hazard area.
- Do not remove the respirator in the airborne pandemic influenza virus hazard area.
- Leave work area if needed to wash face to prevent eye or skin irritation.
- Dispose of each respirator after it has been used.

An airborne pandemic influenza virus hazard area is not to be entered without a properly fitted respirator with a good facepiece to face seal. Conditions that prevent a good fit may include a growth of beard, sideburns, a skull cap that projects under the facepiece, temple pieces on glasses, goggles or other personal protective equipment, or the absence of one or both dentures.

When a respirator user in an airborne pandemic influenza virus hazard area has respirator problems like breathing resistance changes, or facepiece leakage, the department must replace the respirator before the employee returns to the work area.

8.0 Maintenance Procedures and Schedules

The department has a respirator maintenance program to assure each respirator wearer has a clean, sanitary, functioning respirator. New respirators will be stored in a clean manner where they will not be damaged.

Disposable particulate respirators used for protection from the pandemic influenza virus are to be used by only one person and are not to be reused.

Inspection

The department will ensure respirators are inspected before each use checking respirator function, tightness of connections, condition of parts (including facepiece, head straps, filtering elements), and for any deterioration or loss of pliability of elastomeric (e.g., rubber or silicone) parts.

Respirator Repairs

Respirators are not to be repaired. Respirators failing inspection or found to be defective are discarded.

Storage

All respirators are to be stored in a clean and sanitary location to protect them from damage.

9.0 Training Procedures

Every respirator user must be trained to successfully use the respirator(s) assigned to them. Some basic training is performed when the initial respirator fit testing is done. The complete training can be postponed until a pandemic influenza virus occurrence becomes likely. At that time complete respirator training must be done before respirator use begins and then annual training is required until the outbreak is over and respirator use is no longer needed.

Training requirements include:

- Initial training completed prior to first respirator use in workplace.
- A minimum of annual retraining, more often when necessary for safe respirator use.
- Training covers proper use, limits, maintenance and storage of each specific respirator type assigned.
- Training is understandable, comprehensive, and effective.
- Training includes opportunity to handle, put on, and wear respirator.



Department employees are provided an opportunity to handle each respirator, have it fitted properly, test the facepiece-to-face seal, and wear it in normal air for a familiarity period.

10.0 Record Keeping Requirements

All records listed below will be kept for the duration of employment of the affected staff members plus an additional period required by regulations (30 year retention is recommended). The following records must be maintained for required respirator users by each department or workgroup:

- Respirator training. Any individual receiving 80% or greater on the Pandemic Respirator Online Training course exam will pass the course. A record of the course completion will be located on your employee self service website under the heading "my training".

- Medical evaluation. A record is provided by UEHC or SHS when an individual passes the medical evaluation.
- Fit Tests.
- Employees currently approved to use respirators.
- Pandemic Respirator Written Program.
- Program inspection & effectiveness evaluation.

The Respirator Program Administrator will maintain the following records:

- Records of employee respirator fit testing including: name or identification of employee tested; type of fit test performed; specific make, model, style, and size of respirator tested; date of test; and the pass/fail results for the fit test. A current list of staff members trained and medically approved for respirator use.
- Employee training records (course content, attendance sheets, and tests).
- Inspection and evaluation records of program effectiveness.
- A written copy of current Pandemic Respirator Program.

11.0 Program Evaluations

The Program Administrator must maintain appropriate surveillance of work area conditions and staff member exposure to assure the effectiveness of the program. Any problems identified during surveillance are to be corrected.

12.0 Resources and Assistance

The following publications were used in developing this written program and procedures:

- National Institute of Occupational Safety and Health (NIOSH), "NIOSH Respirator Decision Logic."
- American National Standards Institute (ANSI), ANSI Z88.2-1992, "American National Standard for Respiratory Protection."
- Occupational Safety and Health Administration (OSHA), 29 CFR Parts 1910 and 1926 "Respiratory Protection; Final Rule."

Respirators and fit test supplies can be obtained from:

Lab Safety Supply Company (1-800-356-0783 or <http://www.labsafety.com>.
 Grainger, Inc. (319-366-7174 or <http://www.grainger.com>.
 Or other safety suppliers

EHS is using:

Allegro Saccharin Fit Test Kit (Fit test solutions have a 2 year shelf life)
 3 M Saccharin Respirator Replacement Sensitivity Solution
 3 M Saccharin Respirator Replacement Fit Test Solution
 3 M Bitrex Respirator Replacement Sensitivity Solution
 3 M Bitrex Respirator Replacement Fit Test Solution
 3 M N95 (1860) Health Care Respirator (Standard and Small Sizes)
 Kimberly-Clark N95 (TecnoL Fluidshield PFR95) Respirator (Standard 170 and Small 174 Sizes)

EHS recommends you stockpile respirators and supplies so you can operate independently for the duration of a pandemic outbreak. EHS is planning to stock a six month supply for our department respirator users.

See EHS's web site for supporting resources, training offerings, checklists, and contacts for assistance.

APPENDIX B

Training Information Outline for Pandemic Influenza Respirators

General Respiratory Hazard Information

- How hazardous materials enter the body
- Anatomy and function of respiratory system
- Natural cleaning processes of respiratory system
- Characteristics of respiratory hazard
- Health effects of hazard
- OSHA respirator requirements
- Hazardous air contaminant control policy

General Respirator Information

- Respiratory protection class
- Air purifying respirator

General Respirator Program Information (covered in Pandemic Respirator Online Training)

- Program purpose
- Program components and personnel responsibilities
- Written Respirator Program
- Respirator selection procedures
- Resources
- Survey to identify hazard locations
- Selection criteria
- Respirator limits
- Use approval
- Medical evaluation
- Fit testing
- User seal checks
- Routine and emergency use procedures
- Maintenance procedures – storage and inspection
- Training requirements
- Record keeping requirements
- Program evaluations
- Comprehension Quiz

Department-Specific Respirator Training

- Program components and overview
- Specific respirator limits, procedures for use, maintenance

APPENDIX C

Use and Maintenance Procedures for Disposable Pandemic Influenza Respirators

This information is for a typical disposable particulate respirator used for pandemic influenza virus protection. Review the manufacturer's information for the specific type of respirator you will use.

Inspection

1. Inspect face piece for cracks, tears, holes, distortion.
2. Inspect head straps for breaks, tears, loss of elasticity.

Putting On (Donning), Removing (Doffing), and User Seal Checks

Putting Respirator on:

1. Inspect respirator (see above).
2. Stretch elastic straps to reduce risk of strap breakage. Hold a segment of a strap between your hands and stretch it gently a few times. Repeat this process along most of length of both straps. Do not pull on end of straps where they are attached to the face piece.
3. Hold respirator in hand with molded nose contour (narrow end) at finger tips, allowing head straps to fall below hand (photo #1).
4. Place respirator under chin with molded nose contour up (photo #2). Raise top strap to top back of head. Pull shorter bottom strap over head, below ears, to around neck. Do not wear with only one strap.
5. Adjust respirator for comfortable fit (photo #3). Place fingertips from both hands at top of the nosepiece. Mold nose area to shape of your nose by pushing inward while moving your fingertips down both sides of the nosepiece. Pinching nosepiece using one hand may cause a bad fit and make respirator less effective; use two hands.
6. Perform negative user seal check each time before entering work area. Lightly cover respirator by cupping both hands completely over respirator and inhale sharply (photo #4). Be careful not to disturb position of respirator. A negative pressure should be felt inside respirator. If you detect any air leaking adjust straps by pulling back along the sides and/or reposition respirator. If respirator has a metal nose strap, readjust nosepiece as described in step 5.
7. If you CANNOT achieve proper fit, DO NOT enter contaminated area.

1



#2



#3



#4



Removing Respirator:

1. Only remove the respirator in a fresh air location (clean off outer surfaces of respirator if necessary).
2. Remove straps over head and pull respirator away from face.

Cleaning and Sanitizing:

Disposable Particulate Respirators used for airborne pandemic influenza virus protection are to be discarded after use, not cleaned.

Respirator Repairs

Respirators failing inspection or found to be defective are removed from service and discarded.

Respirator Change Schedule

Discard respirator if breathing through unit becomes difficult or when leaving the area where pandemic influenza exposure is possible.

Respirator Storage

Store new respirators in a clean, dry, sealed container until needed.

APPENDIX D: Reserved

APPENDIX E: Reserved

APPENDIX F
Program Set-up Requirements for Pandemic Influenza Respirators

| Requirement | Action* |
|---|--|
| Respirator Program Administrator (RPA) | Designate a person to be RPA & train them to have adequate knowledge of your respirator program to oversee and maintain it. |
| Department Specific Written Respirator Program | Develop a department specific Written Respirator Program. Also develop checklists for annual requirements and new hires. |
| Evaluate Workplace for Operations that Create Potential Pandemic Influenza Virus Exposure | Determine workplace tasks that do not allow social distancing. Use alternate work methods if feasible. Where this is not possible, respirators will be needed. |
| Respirator Selection | Select appropriate NIOSH approved particulate respirators to provide respiratory protection. |
| Medical Evaluation | Each employee needs an initial respirator physical prior to being fit tested to wear a respirator. Contact University Employee Health Clinic for employee and Student Health Service for students. After the initial medical evaluation, medical evaluations can be suspended until a pandemic influenza virus occurrence becomes likely. At that time a medical evaluation must be done before respirator use begins. The evaluation requires completion of a medical questionnaire presented in person for review by medical staff. Medical examination may be optional if medical staff's review of the questionnaire determines an exam is not required. Check with your department management about how to schedule a medical evaluation. |
| Fit testing | Perform a successful initial fit test on each employee with each make, model, style, and size of disposable particulate respirator he/she will wear. After the initial fit test, fit tests can be suspended until a pandemic influenza virus occurrence become likely. At that time a successful fit test must be completed with each make, model, style, and size of disposable particulate respirator to be worn before respirator use begins. Then fit test annually until the outbreak is over and respirator use is no longer needed. |
| Routine & Foreseeable Emergency Situations | Develop procedures for respirator use including for any emergency situations. Include procedures in Written Respirator Program. |
| Respirator Maintenance | Developing procedures to inspect, and store respirators per manufacturer recommendations and OSHA requirements. |
| Respirator Training | Every respirator user must be trained to successfully use the respirator(s) assigned to them. Some basic training is performed when the initial respirator fit testing is done. The complete training can be postponed until a pandemic influenza virus occurrence becomes likely. At that time complete respirator training must be done before respirator use begins. Annual training is then required until the outbreak is over and respirator use is no longer needed. |
| Recordkeeping | Make arrangements to keep records of fit testing, employees approved to wear a respirator, respirator training, respirator program evaluations, and copies of the Written Respirator Program and OSHA respirator rules. |
| Program Evaluations | Develop plan for RPA to spot check program effectiveness and employee compliance with program requirements. |

*Use an EHS representative or other respirator expert for assistance

APPENDIX G
Program Maintenance Requirements for Pandemic Influenza Respirators

| Requirement/Situation | Action* |
|------------------------------------|--|
| Respirator program evaluation | When respirator program becomes active, RPA does routine checks to determine effectiveness of program and compliance with regulations using checklist developed for the department. Correct any problems found. |
| Check effectiveness of respirators | Confirm correct respirators are being used properly. |
| New respirator user in department | Complete tasks on checklist developed for when a new respirator user is identified. |
| Medical evaluations | Confirm employee medical evaluations from designated physical provider (University Employee Health Clinic for employees and Student Health Service for students) are current. |
| Fit testing | Confirm employee fit testing done for all types of respirators used by each employee authorized to wear a respirator. |
| Respirator supplies | Check inventory of spare respirators and materials to maintain an adequate supply level. |
| Respirator Training | Confirm training of each respirator user on all specific respirators they are authorized to use. |
| Recordkeeping | Check records of fit testing, employees approved to wear a respirator, respirator training, medical evaluations, respirator program evaluations, copies of the Written Respirator Program, and respirator rules as least annually and update as necessary. |

* Use an EHS representative or other respirator expert for assistance

APPENDIX H
Trouble Shooting Guide for Pandemic Influenza Respirator Program

| Requirement/Problem | Action* |
|---|--|
| Respirator Program Administrator (RPA) leaves. | Designate a new RPA and train them so they have adequate knowledge of your respirator program to oversee and maintain it. |
| New areas of potential airborne pandemic influenza virus exposure are identified. | Reevaluate area. If necessary, make changes in respirator use and update Written Respirator Program. |
| Medical evaluation due and no notice received from provider. | Contact designated physical provider (University Employee Health Clinic for employees and Student Health Service for students) and schedule an evaluation. |
| New employee(s) hired that will use respirators. | Complete tasks on the check list for actions to perform when a new respirator user is identified. |
| Suspect change occurred that effects respirator fit of an employee (face scars, dentures, etc). | Contact designated fit test provider and schedule a respirator fit test for employee. |
| A problem you are unprepared to handle occurs with a respirator. | Replace the respirator. Discard the problem respirator. |

* Use an EHS representative or other respirator expert for assistance

APPENDIX I
Self Review Checklist for Pandemic Influenza Respirator Program

Date _____ Program Administrator _____

| | | |
|--|-----|----|
| Checked with employees to determine if they have had any problems with their respirators and corrected any problems discovered. | YES | NO |
| Any significant change in workplace conditions has been evaluated and the respirators and procedures in use are correct for the airborne hazards in the workplace. | YES | NO |
| Respirators are proper ones for airborne pandemic influenza virus under work conditions the employees encounter. | YES | NO |
| Each employee required to wear a respirator has had a medical evaluation within the last year. | YES | NO |
| Each employee required to wear a respirator has passed a fit test on each model, type, and style of respirator he/she wears within the last year. | YES | NO |
| The respirator(s) assigned to each employee does pass user seal checks and is being worn correctly. | YES | NO |
| Employees assigned a respirator(s) are inspecting them before use and performing user seal checks when the respirator is first put on. | YES | NO |
| Each respirator is being stored in a clean, safe manner where the facepiece will not become distorted. | YES | NO |
| All employees required to use respirators have received initial respirator training and have had respirator training at least within the last year. | YES | NO |
| Training, fit test, medical evaluation and program evaluation records are current. | YES | NO |
| Copies of Written Respirator Program and respirator rules are available for employee review. | YES | NO |

For an item that is not satisfactory note corrective action taken to resolve.

APPENDIX J
New Employee Checklist for Pandemic Influenza Respirator Program

Date _____ Employee Name _____

| | | |
|---|-----|----|
| Determined that employee will be required to wear a respirator while at work. | YES | NO |
| Employee received and passed a medical evaluation allowing the use of the type of respirator that will be assigned. | YES | NO |
| Allowed employee to choose a NIOSH approved respirator that is acceptable to him/her and is adequate for airborne pandemic influenza virus exposure in the workplace. | YES | NO |
| Employee passed a respirator fit test with the brand, type, style, size of respirator he/she will use while using an OSHA approved respirator fit test protocol. | YES | NO |
| Employee has received required training on the respirators he/she will be using and has passed a test showing adequate understanding of respirator use. | YES | NO |
| Employee has received specific training on and demonstrates adequate knowledge of the department respirator program. | YES | NO |
| Employee assigned the correct respirator for his/her individual use. | YES | NO |
| Employee aware of location of Written Respirator Program and respirator rules. | YES | NO |
| Employee change out schedule for respirators determined and documented. | YES | NO |

For an item that is not satisfactory note corrective action taken to resolve.

Program Administrator initials _____

