STATE OF MICHIGAN
MODEL PANDEMIC INFLUENZA SAFE WORK PRACTICE

This Pandemic Influenza Safe Work Practice was a collaborative effort between the Department of Community Health (DCH), the Department of Energy, Labor and Economic Growth (DELEG)/Michigan Occupational Safety and Health Administration (MIOSHA) and the Office of the State Employer (OSE).

PURPOSE

The purpose of this Model Pandemic Influenza Safe Work Practice (PISWP) is to:

- Reduce the likelihood that all employees, visitors and volunteers will become infected by those with a contagious airborne or droplet-transmitted disease.
- Increase the State of Michigan's ability to continue its core missions and return to normal operations in a timely manner.
- Minimize the disruption and impact on employee's lives that occur with pandemics, epidemics, and other respiratory illness outbreaks.
- Serve as a template or model safe work practice.

SCOPE

This PISWP is to provide guidance for all State Departments.

OBJECTIVE

The objective of this model and guideline is to assist departments in developing and implementing their own PISWP for respiratory illness outbreaks. Ultimately, reducing the spread of infection is a primary goal of pandemic planning. Implementing safe work practices will help reduce influenza transmission by reducing contact between sick and uninfected persons.

Because the nature of pandemic flu or any respiratory illnesses, the object of this PISWP is to focus on educating and protecting employees as well as curtailing the spread of the disease. We also recognize that employee protection and service delivery can be achieved through a combination of infection control methods and the use of personal preventive measures and equipment. However, communications, education and employee engagement are the keys.

Departments will be faced with the conflict between needing employees to fulfill critical roles and reducing the likelihood of employees at work from becoming infected by having ill employees come to work. Employees will more likely remain at home to avoid infecting others if they believe the State has contingency plans addressing their concerns. Also engaging employees in their own safety is critical. By continuing to involve employees and their bargaining unit representatives in safety and health committee activities relative to pandemic planning, employees can become confident that they will be protected. Consequently when appropriate, employees will come to work to fulfill their

roles, and just as important, will stay away from work when appropriate to avoid infecting their co-workers.

This PISWP provides practical occupational safety and health information. DCH, OSE and MIOSHA are available for assistance as departments work on developing their plans.

DCH has educational information and through its website information on the status of the world wide pandemic, basic personal preparation expectations, activities, and infection control techniques and good hygiene practices.

This PISWP is broken into two parts: what to do now to prepare for the next pandemic influenza event and what to do during the pandemic.

STATE OF MICHIGAN - PLANNING ASSUMPTIONS AND DECISIONS

1. Influenza

   a. **Seasonal influenza** occurs each winter and is primarily a self-limiting disease lasting for 2 to 7 days in most infected individuals. With seasonal flu, studies have shown that people may be contagious from one day before they develop symptoms to up to 7 days after they get sick. Children, especially younger children, might potentially be contagious for longer periods. These viruses can be transmitted person-to-person primarily through large droplets that directly contact the nose, mouth or eyes. These droplets are produced when infected people cough, sneeze or talk..

      At about 2 days, most infected persons will develop symptoms of illness that might include: fever (usually high); headache; extreme tiredness; dry cough; sore throat; runny or stuffy nose; chills; fatigue; body and muscle aches. Other symptoms may include nausea, vomiting, and diarrhea (more common in children than adults).

   b. **Novel H1N1 influenza** virus symptoms are similar to the symptoms of seasonal flu and include fever (temperature over 100° F with either cough or sore throat). A significant number of people who have been infected with this virus have also reported diarrhea and vomiting in addition to the typical influenza symptoms. Also, like seasonal flu, severe illnesses and deaths have occurred as a result of illness associated with this virus.

      Employees who have influenza like illness in the absence of a KNOWN cause should self-isolate (i.e., stay away from others) at home for 7 days after the onset of illness or at least 24 hours after symptoms have resolved, whichever is longer.

   c. **Pandemic influenza** refers to a worldwide outbreak of influenza among people when a new strain of the virus emerges that has the ability to infect humans and to spread from person to person. Pandemic influenzas are not a common type of influenza, but occur approximately 3-4 times per century, and can be mild or severe. During the early phases of an influenza pandemic, people might not have any natural immunity to the new strain; so the disease would spread rapidly among the population.

   d. **Avian influenza-**also known as the bird flu – is caused by virus that infects wild birds and domestic poultry. Highly pathogenic avian influenza spreads rapidly and has a high death

rate in birds. Highly pathogenic H5N1 is one of the few avian influenza viruses to have crossed the species barrier to infect humans and it is the most deadly of those that have crossed the barrier. Most cases of H5N1 influenza infection in humans have resulted from contact with infected poultry or surfaces contaminated with secretions/excretions from infected birds. The Avian Interagency Working Group, made up of representatives from MDA, MDNR, OSE and MDCH and others, developed an Avian Influenza Safe Work Practice that addresses safety issues due to an outbreak response to avian influenza.

2. Estimates of the duration of an influenza pandemic are from 2 to 24 months, with waves lasting from 6-12 weeks and a second or third wave occurring several months apart within the following 2 years.

3. Absenteeism: Best estimates are that cumulatively 30-40 percent of personnel will not report for work in a serious pandemic due either to personal illness, family illness, dependent care, or personal decisions about risk.

4. Citizens may try to conduct business at off-peak hours to reduce contact with other people, or prefer other options, such as drive-through service, to reduce person-to person contact.

5. With regards to influenza, DCH will designate the Pandemic Stage, severity and the implementation of the Michigan Pandemic Influenza State Operational Plan.

6. Because a vaccine to prevent a specific flu strain cannot be developed and produced until the final form of the virus is known, most experts predict that there will be little or no vaccine during the first six months of a pandemic. With current technology, it takes four to six months to produce a vaccine.

7. The influenza virus can survive and can infect a person for up to 2-8 hours after being deposited on environmental surfaces.

8. There will be limited supplies of antiviral medication, which currently is stockpiled by state, federal, and international health agencies.

9. DCH will maintain as necessary their Pandemic Influenza website with up to date influenza prevention and family and home preparedness.

10. Office of the State Employer will place and update as necessary the PISWP on its web site.

PART 1 - PREPARING FOR A PANDEMIC INFLUENZA EVENT

The sources of information and elements of a model PISWP are:

1. **Identify the essential functions.** Identifying the essential functions is required by your department's Continuity of Operations Plan (COOP).

2. **Set up standard operating procedures (SOP).** For each critical function, establish standard operating procedures in order that anyone who is required to take over the essential function to know what needs to be accomplished for that function.

   An SOP lays out an operational process in a step by step format so that someone unfamiliar with the process, or who has not done it in some time, can step in and complete the process with little else but the SOP. The standard operating procedure should detail the work process associated with the essential function to assure the ongoing operation can be maintained. The procedure should include the specific tasks, protocols, individuals, approvals and regulations that may be relevant to the performance of the essential function.

3. **Provide cross-training for back up staffing.** It is recommended that there be three back-up staff cross-trained for employees performing essential functions OR who have unique credentials. Focus should be on succession and decision making roles that must continue to assure the ongoing operations of the department. This staffing may include the identification of ancillary staff or alternative plans for staffing of essential function.

4. **Identify and assign pandemic emergency operations leadership and support team** to coordinate preparedness and implementation activities and to respond to pandemic influenza issues and questions. The US Department of Health and Human Services (HHS) provides sample Planning Checklists.

5. **Develop plans to protect employees.** A good place to start which will result in the most efficient expenditure of time is to begin with the department's critical function jobs and highest risk jobs. Your department Safety and Health Coordinator should be able to provide assistance and guidance to assist in the development of the job safety analysis.

   - **PANDEMIC INFLUENZA JOB SAFETY ANALYSES (JSA) ELEMENTS** Appendix B**:**

     - **Specific Functions/Activities:** A job is defined for the purpose of this JSA, as one individual task that is a specific and separate activity, rather than a total Civil Service Position Description. This JSA should describe or list narrower task activities such as when and where the activity brings the employee in close contact (less than 6 feet) with potentially infected individuals or those with influenza like illness.

     - **Common Worksite Encounters:** Identify the situations or locations where close encounters may impact all employees and visitors at a work site (e.g. entering and exiting the work site, elevators).

     - **Categorize the influenza exposure risk of all jobs within the department using Occupational Safety and Health Administration (OSHA) guidelines:** Again, a job

is defined for the purpose of this JSA, as one individual task that is a specific and separate activity that brings employees into proximity to infected people, extended or repeated exposure to the general public, and proximity to known sources of the pandemic influenza.

The following information was adapted from OSHA's Guidance on Preparing Workplaces for an Influenza Pandemic. The guidance provides an explanation to assist in identifying the risk potential for each task or function. Your department Safety and Health Coordinator and the Office of the State Employer can provide guidance on the assessing risks and completing a Pandemic Influenza Job Safety Analysis.

OSHA Risk Categorization

Contact with certain respiratory diseases may vary from very high to high, medium, or lower (caution) risk. The level of risk depends in part on whether or not jobs require direct and close proximity to people potentially infected with a communicable respiratory illness. "Close contact" to a communicable respiratory disease is generally considered to be less than 6 feet in distance.

OSHA Occupational Risk Pyramid for Pandemic Influenza

Departments with critical infrastructure and key resource employees (e.g., law enforcement, emergency response) should identify safety measures for these employees by their exposure risk, due to the necessity of such services for the functioning of the community as well as the potential difficulties in replacing them during a pandemic or severe outbreak (e.g., due to extensive training or licensing requirements).

Note: By placing employees in the very high or high risk categories departments are indicating that personal protective equipment and respiratory protection may be required because of the tasks they perform. As a consequence the department will likely be required to meet MIOSHA's Respiratory Protection Standard. There are a number of conditions that will need to be met including medically evaluating whether each employee is safely able to wear a specific type of respirator and each employee has been fit tested annually on the respirator they will be required to wear.

Very High Exposure Risk:

Healthcare employees (for example, doctors, nurses, dentists) performing aerosol-generating procedures on known or suspected pandemic patients (for example, cough induction procedures, bronchoscopies, some dental procedures, or invasive specimen collection).

Healthcare or laboratory personnel collecting or handling specimens from known or suspected pandemic patients (for example, manipulating cultures from known or suspected pandemic influenza patients).

High Exposure Risk:

Healthcare delivery and support staff exposed to known or suspected pandemic patients (for example, doctors, nurses, and other hospital staff that must enter patients' rooms).

Medical transport of known or suspected pandemic patients in enclosed vehicles (for example, emergency medical technicians).

Performing autopsies on known or suspected pandemic patients (for example, morgue and mortuary employees).

Custodial or patient care staff in institutions, laboratory personnel, law enforcement.

Medium Exposure Risk:

Employees with high-frequency contact with the general population (such as schools, high population density work environments, and some high volume retail).

Lower Exposure Risk (Caution):

Employees who have minimal occupational contact with the general public and other coworkers (for example, office employees).

➢ FOUR INFLUENZA CONTROL METHODS: TIME, DISTANCE, SHIELDING AND HYGIENE PRACTICES

These are the four basic methods to curtail the spread of influenza. As the severity of the pandemic increases, "Decrease the Time, Increase the Distance, Use Shielding when appropriate, Increase Hygiene Practices and Plan for an Emergency."

These methods and safe work practices can be adapted and should be used and combined in a variety of ways to meet each worksite, unit or personal needs. Many can be applied without spending money or requiring complicated changes to the way business is conducted.

Employees should be engaged in assessing the safety of their job by participating in JSA process and customizing the safe work practices at the work site. Any number of methods can be employed to gather safety suggestions from employees. Employees can provide innovative suggestions when asked individually or brainstorming at a staff meeting to reach consensus on composite suggestions where there are common job functions. The Pandemic Influenza Job Safety Analyses is provided for ease of use.

From the JSA, the next step for pandemic emergency operations leadership and support team in the risk assessment process is to identify the appropriate influenza control methods, safe work practices, orderly personnel face to face interactions, entrance and egress practices, preventive measures, and projected appropriate supplies for each job, task, function or work location. It permits management to prioritize and implement selected actions as the severity of the pandemic increases and service delivery declines. The selections should be entered on the Trigger Point Matrix. A model Trigger Point Matrix is included.

As the State of Michigan's lead agency, DCH will report on Stage levels. As the severity of the pandemic increases departments should select from and apply their pre-identified escalating combination of control methods and appropriate safe work practices as approved by the department and listed on their Trigger Point Matrix (ices).

➢ CONDUCT EMPLOYEE AWARENESS, COMMUNICATION, TRAINING AND PRACTICE DRILLS.

Employees must be aware of the potential impact that pandemic influenza may have on their home and workplace. Employees should prepare for anticipated limitations in normal public services, access to healthcare facilities, and availability of other resources during a pandemic outbreak.

The elements of an awareness and communications program should include:

- Strategically posting Hand Hygiene and Cough Etiquette posters.
- Conveying to employees the measures the department has taken or planned to deal with a pandemic.
- The status of and critical information on department operations.
- The current DCH Stage.
- Communication of the Department's PISWP.
- Communication of the Trigger Point Matrices where appropriate.
- Internal and external websites for information.

- Emergency call-receiving protocols (telephone call trees).

Practicing should include:

- Practicing SOPs and alternative ways to conduct business that will minimize close contact with the public, co-workers and infected persons.

6. **Departments should submit for review their Pandemic Influenza Safe Work Practice to Ken Swisher, Director, Employee Health Management Division, Office of the State Employer (OSE), by August 1, 2009.**

   The Department's submission should include:

   a. The department's pandemic emergency operations leadership and support team.
   b. Within each of the OSHA Risk Categories provide:
      i. The total number of employees in each category.
      ii. A brief description of the task.
      iii. An estimate of the percentage of time spent per day performing the task.
      iv. An estimate of the number of employees performing very high and high risk level tasks that have been medically evaluated and fit tested on the assigned respirator.
   c. The Department's Trigger Point Matrix. (See Model Trigger Point Matrix examples pp 9-11, and Trigger Point Matrix Form-Appendix G)
   d. The Department's communication plan to provide employee awareness and pandemic information.

PART 2 - WHAT TO DO DURING A PANDEMIC EVENT

Recognizing that influenza cannot be eliminated there are techniques that can be used to curtail its spread. Curtailing the spread of influenza is similar to controlling other hazards and exposures.

There are four basic methods to curtail the spread of influenza. The four basic influenza control methods are Time, Distance, Shielding and Hygiene Practices. As the severity of the pandemic increases, "Decrease the Time, Increase the Distance, Use Shielding when appropriate, Increase Hygiene Practices and Plan for an Emergency."

A list of Safe Work Practices for each of the influenza control methods should be obtained during the Job Safety Analysis process. The department's approved Trigger Point Matrix should include the appropriate type of safe work practices and methods that are suitable to meet the operational needs of the department and each specific worksite. Using the matrix permits management to prioritize and implement selected actions as the severity of the pandemic increases and service delivery declines.

MODEL TRIGGER POINT MATRIX

Influenza Control Methods	**List the appropriate safe work practices (SWP) approved by the department for each type of control method from which the department can apply as the severity of pandemic increases.** **Departments should create safe work practices that meet their respective operational needs during the Preparing for a Pandemic Influenza Event.** **(The following are examples of potential safe work practices subject to Departmental approval)**

Lower Severity	Examples of Potential Safe Work Practices
Time	Minimize meeting times. Reduce as much as possible the time spent in close contact with people who might be ill or in crowded settings.
Distance (Initiate Social Distancing Behaviors)	Keep a safe distance away (6 foot) from people who might be ill and those with confirmed illness. Increasing the distance significantly reduces the likelihood of exposure. Limit personal face to face interactions. Reduce the numbers of individuals or occupancy in a room. Reduce face to face meetings – use teleconferences or webinars. If necessary choose a large room for meetings and sit at least 6 feet away from each other. Practice work site or building entrance and exiting processes. Apply department approved staggered work shifts and lunch times. Change shift times and practice wherever possible, with employees going off duty leaving the workplace before the new shift enters. Draft flexible work schedules and telecommuting arrangements to reduce contact. Use pick-up or delivery systems where clients and customers can pick up or deliver without face to face contact. And or request information via telephone/email/fax.
Shielding	Where appropriate, position clear plastic sneeze and cough shielding between employees and individuals if in repeated contact with people who might be ill (e.g., customer service counter). If in repeated contact with or caring for people who are ill, take precautionary measures (e.g., use N-95 respirators). Distribute supplies as necessary.
Hygiene Practices	Frequently clean potential contaminated work surfaces, and other frequently touched surfaces (e.g., door knobs). Wash hands frequently with soap and water or alcohol based hand cleaners, especially after couching or sneezing. Avoid touching your face, mouth, nose, or eyes. Use Cough and Sneeze Etiquette: Cover your mouth and nose with a tissue when couching or sneezing. Reduce sharing work surfaces, telephones, computers, etc. Avoid hand shaking. When possible open windows to increase air flow. Distribute supplies as necessary. Replace missing or illegible sneeze and cough postings.

Higher Severity	Examples of Potential Safe Work Practices
Time	Continue to reduce and limit as much as possible the time spent in close contact with people who might be ill or in crowded settings.
Distance (Escalate Social Distancing Behaviors)	Activate alternative methods or processes to conduct business that limits personal face to face interactions and /or time of exposure. Isolate critical work groups to reduce face to face interactions with other work groups. Temporarily suspend less than critical functions or activities. Discontinue face to face meetings – use teleconferences or webinars. Apply entrance and exiting practices to limit crowded situations (e.g., entrances and exits, elevators). Close cafeterias, break rooms. Apply previously department approved flexible work schedules. Apply previously department approved tele-commuting. Expand the normal one shift work day to one with multiple shift periods. Control, limit and monitor access to work place. Screen symptomatic employees and visitors. Use employees recovering from influenza to perform essential functions. Reassign staff to essential functions from less critical areas. Request staff reassignments from other state departments.
Shielding (Increase diligence)	If in repeated contact with people who might be ill, when and where appropriate take precautionary measures (e.g., surgical facemasks). Avoid touching mask when in use and do not reuse. See Appendix C. If in repeated contact with or caring for people who are ill, take precautionary measures (e.g., use N-95 respirators and Safety Precautions and Personal Protective Equipment for OSHA Very High and High Risk Job Categories). See Appendix C. Distribute supplies as necessary.
Hygiene Practices (Increase diligence)	Re-emphasize the need to wash hands frequently with soap and water or alcohol based hand cleaners, especially after couching or sneezing. Avoid touching your face, mouth, nose, or eyes. Use Cough and Sneeze Etiquette: Cover your mouth and nose with a tissue when couching or sneezing. Increase the diligence and frequency of cleaning potential contaminated work surfaces, and other frequently touched surfaces (e.g., door knobs). Discontinue sharing work surfaces, telephones, computers, etc. Discontinue hand shaking. Open windows and increase ventilation rates to improve air flow.

APPENDIX A: REFERENCES

FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES ARE THE BEST SOURCE OF INFORMATION. BELOW ARE SEVERAL WEBSITES THAT SHOULD BE RELIED UPON FOR THE MOST CURRENT AND ACCURATE INFORMATION:

1. Michigan Prepares: http://www.michigan.gov/prepare

2. Pandemic Influenza Home Page - Michigan Department of Community Health (DCH): http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40567-138344--,00.html

3. Guidance on Preparing Workplaces for an Influenza Pandemic - Occupational Safety and Health Administration (OSHA): http://www.osha.gov/Publications/OSHA3327pandemic.pdf

4. State of Michigan, Office of The State Employer Telecommuting Guidelines: http://csintranet.state.mi.us/aws/

5. Pandemic Flu.Gov Department of Health and Human Services (HHS) Planning Checklists: http://www.pandemicflu.gov/plan/checklists.html

RESPIRATORS, FACEMASKS AND PPE INFORMATION

6. Interim Recommendations for Facemask and Respirator Use to Reduce Novel Influenza A (H1N1) Virus Transmission: http://www.cdc.gov/h1n1flu/masks.htm

7. MIOSHA website: http://www.michigan.gov/dleg/0,1607,7-154-11407---,00.html

8. Proposed Guidance on Workplace Stockpiling of Respirators and Facemasks for Pandemic Influenza (OSHA): http://www.osha.gov/dsg/guidance/stockpiling-facemasks-respirators.html

SEASONAL FLU INFORMATION

9. What You Should Know About the Seasonal Flu - Centers for Disease Control and Prevention (CDC): http://www.cdc.gov/flu/

HAND HYGIENE AND COUGH ETIQUETTE INFORMATION

10. Wash Your Hands Poster (CDC): http://www.bt.cdc.gov/disasters/pdf/flyer-wash-your-hands.pdf

11. Germ Stopper Posters (CDC): http://www.cdc.gov/germstopper/materials.htm

12. How to Stop the Spread of Germs at Home, School, & Work (CDC): www.cdc.gov/flu/protect/stopgerms.htm or www.cdc.gov/flu/protect/preventing.htm

13. Clean Hands Saves Lives (CDC): http://www.cdc.gov/cleanhands

APPENDIX B: PANDEMIC INFLUENZA JOB SAFETY ANALYSIS (JSA)
(PAGE 1 OF 3) SEE REVERSE FOR GUIDANCE

DATE: _____ **JOB FUNCTION:** _____ **OR**

WORK LOCATION/SITE/UNIT: _____

DESCRIBE SPECIFIC JOB FUNCTION OR ACTIVITY:
COMMON WORK SITE ENCOUNTERS:
OSHA JOB RISK CATEGORY:
FOUR INFLUENZA CONTROL METHODS: TIME, DISTANCE, SHIELDING AND SAFE WORK PRACTICES
TIME: LIST SUGGESTED SAFE WORK PRACTICES TO EXPLORE
DISTANCE: LIST SUGGESTED SAFE WORK PRACTICES TO EXPLORE

SPECIFIC FUNCTIONS/ACTIVITIES: A job is defined for the purpose of this JSA, as one individual task that is a specific and separate activity, rather than a total Civil Service Position Description. This JSA should describe or list narrower task activities such as when and where the activity brings the employee in close contact (less than 6 feet) with potentially infected individuals or those with influenza like illness.

COMMON WORKSITE ENCOUNTERS: Identify the situations or locations where close encounters may impact all employees and visitors at a work site (e.g. entering and exiting the work site, elevators).

OSHA RISK CATEGORIES: The following list of occupations is not intended to be all inclusive.

Note: By placing employees in the very high or high risk categories departments are indicating that personal protective equipment and respiratory protection may be required because of the tasks they perform. As a consequence the department will likely be required to meet MIOSHA's Respiratory Protection Standard. There are a number of conditions that will need to be met including medically evaluating whether each employee is safely able to wear a specific type of respirator and each employee has been fit tested annually on the respirator they will be required to wear.

Very High Exposure Risk

The following are occupations which are considered very high risk:

- Healthcare employees (e.g., doctors, nurses, dentists) performing aerosol-generating procedures on known or suspected pandemic or avian influenza patients (e.g., cough induction procedures, dental procedures, or invasive specimen collection).
- Healthcare or laboratory personnel collecting or handling specimens from known or suspected pandemic patients (e.g., manipulating cultures from known or suspected influenza patients).
- Employees assigned to respond to avian influenza outbreaks.

High Exposure Risk

- Healthcare delivery and support staff exposed to known or suspected pandemic patients (e.g., doctors, nurses, and other hospital staff that must enter patients' rooms).
- Medical transport of known or suspected pandemic patients in enclosed vehicles (e.g., emergency medical technicians).
- Employees assigned to:
  - Custodial or patient care staff in institutions (e.g. corrections, healthcare or mental health).
  - Law enforcement.

Medium Exposure Risk

- Employees with high-frequency contact with the general population (e.g. schools, high population density work environments, and some high volume retail).

Lower Exposure Risk (Caution)

- Employees who have minimal occupational contact with the general public and other coworkers (e.g. office employees).

INFLUENZA CONTROL METHODS: List the suggested Safe Work Practices to explore. (See Model Trigger Point Matrix for Suggestions)

SHIELDING: LIST SUGGESTED SAFE WORK PRACTICES TO EXPLORE

HYGIENE: LIST SUGGESTED SAFE WORK PRACTICES TO EXPLORE

APPENDIX C: PERSONAL PROTECTIVE EQUIPMENT (PPE)

The following was adapted from MIOSHA's PPE Standard Part 433, Respiratory Protection Standard Part 451 and OSHA's Proposed Guidance on Workplace Stockpiling of Respirators and Facemasks for Pandemic Influenza. PPE is any type of specialized clothing, barrier product, or breathing (respiratory) device used to protect employees from serious injuries or illnesses while doing their jobs. Examples of PPE include but are not limited to (e.g., gloves, gowns, goggles, face shields, and respirators).

Proper use of PPE by employees helps prevent the spread of infection because it:

- Helps protect wearers from infection or contamination from blood, body fluids or respiratory secretions.
- Serves as a barrier between infectious materials and the skin, mouth, nose, or eyes (mucous membranes).
- Reduces the chance that employees will infect or contaminate others.

PERSONAL PROTECTIVE EQUIPMENT REQUIRMENTS:

1. If the department determines that PPE is necessary to protect employees, then wearing the PPE by employees is required.
2. Employees must be trained to recognize why the PPE is needed, the type of PPE that is required, the limitations of PPE, and the care, storage and the use of PPE.
3. Must be used properly and employees must be trained in proper don-doff procedures.
4. Single-use devices should never be shared.
5. Disposable single-use personal protective equipment cannot be washed or reused. Washing medical gloves or disposable masks and gowns will destroy their protective barrier.
6. Dispose of PPE carefully and properly after each use or if the equipment becomes soiled.
7. When disposing of PPE always wear gloves; place used or soiled PPE into a tied plastic bag; carefully clean waste containers with disinfectant or diluted bleach (1 part bleach to 9 parts water); and wash hands thoroughly with soap and water or alcohol-based hand rub after handling.
8. Perform hand hygiene after removal of PPE.

FACEMASKS AND RESPIRATORS

Although some disposable filtering face piece respirators look similar to facemasks, it is important that employees understand the significant functional differences between disposable respirators and facemasks.

Respirators are designed to reduce an individual's exposure to airborne contaminants, such as particles, gases, or vapors. They are designed to protect against particulate hazards. Since airborne biological agents such as bacteria or viruses, including pandemic influenza viruses, are particles (or are attached to particles), they can usually be filtered by particulate respirators. In comparison, facemasks are not designed to prevent inhalation of airborne contaminants. Their ability to filter small particles varies greatly and cannot be assured to protect employees against airborne infectious agents.

Another important difference in protecting employees from airborne infectious agents is the way respirators and facemasks fit the user's face. Respirators are designed to provide a tight seal between the sealing surface of the respirator and the person's face. 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. Facemasks, however, are not designed to seal tightly against the user's face. During inhalation, potentially contaminated air can pass through gaps between the face and the facemask, thus avoiding being pulled through the material of the mask and losing any filtration that it may provide.

To offer optimal protection, facemasks and respirators need to be worn correctly and consistently throughout the time they are used. Respirators with exhalation valves are more comfortable than those without. However, compared with a respirator, a facemask is more comfortable to wear and would likely be worn for longer periods. In contrast, if used correctly, a respirator is less comfortable than a facemask, is more difficult to wear and therefore is unlikely to be worn correctly for longer periods of time.

If determined by the department that the task involves the direct and close contact with influenza (e.g., those in very high or high risk categories) respirators will be required for that task. Most state operations and tasks however, will likely be in the medium to low risk categories. Therefore, departments should consider supplying, and when appropriate, allowing facemasks for most worksites and operations.

If the department has determined that respirators are necessary to protect an employee from becoming infected by influenza during the performance of their job, a formal Respiratory Protection Program is required. A sample Department/Agency Pandemic Influenza Respiratory Protection Program developed by MIOSHA is available from OSE.

To help departments and employees better understand respirators and facemasks, the following paragraphs discuss their construction, classification, and use.

FACEMASKS

Facemasks are primarily used in health care settings (i.e., protecting the patient against infection from the healthcare worker) to prevent contamination of a sterile field or work environment by trapping bacteria and respiratory secretions that are expelled by the wearer primarily during coughing, sneezing, or talking. Facemasks are also used as a physical barrier to protect the employee from hazards such as splashes of blood or bodily fluids. In most of our settings a facemask could be comfortably worn to prevent unexpected splashes from a sneeze or cough reaching the wearer's nose or mouth. However, facemasks are not permitted as a substitute when the department requires the use of a respirator.

Facemasks have several designs:

a. May be labeled as surgical, laser, isolation, dental, or medical procedure masks.

b. Are designed to cover the mouth and nose loosely; not sized for individual fit.

c. Are made of soft materials and are comfortable to wear.

d. Are usually packaged in boxes of single-use masks.

e. Surgical facemasks stamped or labeled NIOSH-approved (i.e. a N-95 respirator) are covered under MIOSHA's Respirator Protection Standard.

f. Surgical facemasks approved only by FDA are not covered by the MIOSHA Respirator Protection Standard.

RESPIRATORS

1. MIOSHA requires all tasks be assessed for hazards and that the appropriate PPE be provided. A Pandemic Influenza Job Safety Analyses must be completed for the potential or expected tasks performed by employees. From those analyses it can be determined if the wearing of a respirator is required or permitted.

2. Departments are required by MIOSHA to determine when a NIOSH-approved respirator is necessary to perform assigned tasks (i.e. involve the direct and close contact with an infectious person or patient with an airborne-transmitted disease, very high or high risk categories, custodial or patient care staff in institutions, laboratory personnel, law enforcement, emergency or medical service responders, or those caring for persons with respiratory illnesses).

3. OSHA recommends disposable particulate filtering or tight-fitting air-purifying respirators (NIOSH-approved N-95, N-99, or N-100) as the minimum level of respiratory protection that must be worn for employees in direct contact with the influenza virus or infected patients. "R" or "P" 95, 99 or 100 NIOSH–approved disposable particulate filtering respirators are also satisfactory, but are more expensive.

4. Respirators:

    a. A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous gases, vapors, or airborne particles (e.g., dust or droplet nuclei containing infectious agents, viruses, fungi, bacteria). An air-purifying respirator accomplishes this by filtering the contaminant out of the air before it can be inhaled by the person wearing the respirator. A type of respirator commonly found workplaces is the disposable particulate filtering respirator (often referred to as an "N95", see below).

b. Respirators are designed to be a barrier between the source of the droplet (e.g., a sneeze) and mucous membranes of the nose and mouth from small-particle residue of evaporated droplets or dust particles. If a respirator is not labeled as NIOSH-certified, it has not been approved to protect against the smallest of particles.

c. Types or respirators must be selected based on the physical demands of the task, the specific work environment and the protective properties of the respirator.

d. All NIOSH-approved disposable particulate filtering or surgical N95 respirators are considered respirators by MIOSHA. All respirators are required to be tested and certified by NIOSH. NIOSH uses very high standards to test and approve respirators for occupational uses. NIOSH-certified particulate respirators are marked with the manufacturer's name, the part number, the protection provided by the filter (e.g., N95), and "NIOSH." This information is printed on the face piece, exhalation valve cover, or head straps. If a respirator does not have these markings and does not appear on one of the following lists, it has not been certified by NIOSH.

e. A respirator must be used by employees when direct and close contact or caring for an infectious person or patient is unavoidable (e.g., emergency medical service responders, custodial and patient care staff in institutions, law enforcement).

f. When both fluid protection (e.g., blood splashes) and respiratory protection are needed, a "surgical N95" respirator can be used. Surgical N95 respirators combine the filtration requirements of NIOSH and the ability to resist blood and body fluids required by the US Food and Drug Administration (FDA).

g. Particulate filtering respirators can be divided into several types:

    i. Disposable or filtering respirators (often referred to as a filtering facepiece) are where the entire respirator is comprised of filter material. It is discarded when it becomes unsuitable for further use due to excessive breathing resistance (e.g., particulate clogging the filter), unacceptable contamination/soiling, or physical damage.

    ii. Reusable or elastomeric respirators, where the face piece is cleaned, repaired, and reused, but the filter cartridges are discarded and replaced when they become unsuitable for further use.

    iii. Powered air-purifying respirators (PAPR), where a battery-powered blower pulls contaminated air through filters, then moves the filtered air to the wearer. This type of respirator is more effective than respirators that depend on tight-fitting seals and should be considered for the highest risk procedures.

h. If employees are required to wear a respirator to perform any task, they must be medically evaluated and cleared to wear a respirator. This is accomplished by having a physician review the completed Medical Evaluation Questionnaire and if required by the physician after reviewing the questionnaire, conducting a follow up physical evaluation.

i. Employees must also be fit tested annually on the specific respirator selected for the task, hazard or exposure (loose fitting PAPR respirators do not require fit testing).

j. If voluntary use of NIOSH-approved disposable particulate filtering respirators is permitted and the respirators are made available, employees must be given, and sign, the "Mandatory – Information for Employees Using Respirators When not Required Under the MIOSHA Standard." The notice must be signed even if the employee is permitted to bring and wear in their own NIOSH-approved disposable particulate filtering respirators.

k. Other than the voluntary use of a disposable particulate filtering respirator, the use of any other type of respirator requires a medical evaluation and training on its use and storage (e.g., tight fitting respirators, loose-fitting (helmeted or hooded) Powered Air Purifying Respirator (PAPR)).

l. When using any tight-fitting respirator, the user's face-seal shall be sufficiently tight to prevent contaminants in the work environment from leaking around the edges of the face piece into the user's breathing air. Individuals required to wear tight-fitting respirators must be clean shaven. Any type of apparel which will affect a satisfactory fit will be removed or altered.

m. Respirators are not substitutes for and must be used in combination with other preventive measures (e.g., hand hygiene, respiratory hygiene/cough etiquette, and social distancing).

n. For employees who must wear a respirator but cannot wear a disposable particulate or tight-fitting respirator because of fit limitations (e.g., prominent cheekbones, deep skin creases, scars, severe acne) should wear a loose-fitting helmeted or hooded Powered Air Purifying Respirator (PAPR). Loose fitting respirators do require a medical evaluation however they do not require fit testing.

APPENDIX D: ACQUISITION OF SUPPLIES AND STOCKPILES

Proposed guidance on stockpiling of supplies, vaccines and anti-virals for pandemic influenza has been developed by the Federal government. OSHA and the Department of Health and Human Services issued cost and supply estimates and formulas in the "Proposed Guidance on Workplace Stockpiling of Respirators and Facemasks for Pandemic Influenza"

Preparedness strategies include:

1. Establish and determine the current level of equipment and supplies, including PPE. (e.g., gloves, safety goggles and glasses, facemasks, respirators).
2. Assess anticipated supply needs and determine a trigger point for ordering extra resources.
3. Consider the need for back-up sources of supplies if the Department relies on only one manufacturer or one vendor/supplier for particular supplies or equipment.
4. Determine how consumption of supplies will be tracked during a pandemic.
5. Stockpile necessary equipment and supplies prior to a pandemic outbreak (e.g., soap, tissue, hand sanitizer, cleaning supplies). When stockpiling items, be aware of each product's shelf life and storage conditions (i.e., avoid areas that are damp or have temperature extremes) and incorporate product rotation (i.e., consume oldest supplies first) into your stockpile management program).
6. Suggested PPE and disinfectant supplies include:
   a. Disposable gloves.
   b. Alcohol-based hand sanitizer (greater than 60% alcohol by content).
   c. Cleaning/disinfecting supplies (a 10% bleach and water solution must be made up daily).
   d. You can mix your own solution by adding one quarter of a cup of chlorine bleach to one gallon of cool water. Apply it to frequently touched surfaces. Leave the surface wet for 10 minutes and then rinse it off with water. This solution has a shelf life of around 24 hours. If you do not need that much solution, you can use 4 cups (0.95 L) of water and 1 tbsp (14 mL) of laundry bleach.
   e. Face shields/safety goggles for very high or high risk categories.
   f. Disposable gowns or coveralls for emergency medical responders or patient care staff.
7. Stockpiling of vaccines and anti-virals per DCH Guidance for very high and high risk categories should be considered.
8. Respirator and facemask types:

   For higher levels of physical exertion and closer interactions with others, increase the changes per shift as appropriate. All very high and high risk categories are likely to require additional supplies during a pandemic.

   - If disposable respirators for very high and high risk categories are required by the department, OSHA suggests that for "employers who anticipate providing respiratory protection to these employees for the duration of the pandemic could instead consider using *reusable* respirators that are designed to be cleaned, repaired and reused."
   - If a PAPR is required by the department OSHA suggests one (1) for each employee who is required to use it.
   - Facemasks are suggested for all other risk categories.

APPENDIX E: HYGIENE PRACTICES

Influenza Infection Control Methods	Descriptions
Environmental Cleaning Supplies/Disinfectants and Hand Sanitizers: (e.g., bleach and water, soap and water, alcohol hand rub/sanitizer, EPA registered cleaners)	Influenza viruses are enveloped viruses, meaning they are surrounded by a protective membrane. This renders them susceptible to standard environmental cleaning and disinfection techniques. Cleaning and removal of heavy soiling should precede application of the disinfectant. Work surface cleaning and disinfection should occur at regular intervals, focusing on high-touch areas. Clean and disinfect commonly touched surfaces, bathroom, customer service surfaces, door knobs, etc. on a regular basis using detergent/disinfectants. Clean surfaces first with detergent and water and then disinfect with an EPA-registered disinfectant in accordance with manufacturer instructions. (Note: Disinfectant products, available in grocery stores or hardware stores, are all EPA-registered.) If EPA-registered disinfectants are not available, use a dilute solution of household chlorine bleach to disinfect surfaces. To prepare this solution, add ¼ cup of bleach to a gallon of clean water, or 1 tablespoon of bleach to a quart of clean water. Apply to a cleaned surface, preferably with a cloth moistened with the bleach solution, and allow the surface to remain wet for minimally 3 – 5 minutes. This solution has a shelf life of around 24 hours. If you do not need that much solution, you can use 4 cups of water and 1 tbsp of laundry bleach.
Social Distancing: **Six feet** is the distance considered adequate distancing for droplet and airborne diseases	Reducing the frequency, proximity, and duration of contact between people (both employees and customers) reduces the chances of spreading pandemic influenza from person-to-person. **Six feet** is the distance considered adequate distancing for droplet and airborne diseases. Increasing the distance significantly reduces the risk of infection. Social distancing can be as simple as rearranging workspace (e.g., spacing people farther apart, canceling meetings, and staggering starting times). Social distancing may be voluntary, be implemented by the employer, or required by a Public Health order (e.g., cancellation of public events, etc).
Cough and Sneeze Etiquette: Contain respiratory secretions, regardless of presumed cause	➢ Avoid coughing or sneezing into hands. ➢ Cough or sneeze into elbow/shirt sleeve or use tissues to contain respiratory secretions. ➢ Avoid the use of handkerchiefs to reduce the opportunity for transferring infection to others. ➢ Dispose of tissues in the nearest waste receptacle after use.

	➢ Carry baggies or zip lock type bags to dispose of tissues or dispose of tissues in the nearest waste receptacle after use. ➢ Perform hand hygiene after contact with respiratory see secretions and contaminated objects, materials or surfaces.
Hand Hygiene: If soap and clean water are not available, use an alcohol-based product (> 60% alcohol content hand sanitizers) to clean your hands.	➢ In general, hand washing is required whenever significant hand contamination occurs and cross-contamination may occur. Hand washing must occur frequently. ➢ The fundamental principle of hand washing is removal, not killing, of viruses. ➢ Proper hand hygiene involves the use of soap and running water, rubbing all surfaces of the hands vigorously for at least 20 seconds (e.g., sing the "Happy Birthday Song" twice). The use of a nail brush is not necessary or desired, but close attention should be paid to the nail areas, as well as the area between the fingers and under rings. ➢ Hand washing is defined as the vigorous, rubbing together of all surfaces of lathered hands, followed by rinsing under a stream of water. The fundamental principle of hand washing is removal, not killing, of viruses. ➢ The amount of time spent washing hands is important to reduce the transmission of pathogens to food, water, people, and inanimate objects. ➢ If soap and running water are not available, use an alcohol-based hand sanitizers (> 60% alcohol content) to clean your hands. Alcohol-based hand sanitizers significantly reduce the number of germs on skin and are fast-acting. Hands should be rubbed until the surfaces of the hand are dry. ➢ Hand drying after washing with soap and water, should be achieved by use of single use disposable paper hand towel. Turn off the faucet by using the disposable hand towel to reduce recontamination of the hands by the faucet handle. If forced air dryers are used, use the lower portion of the arm or elbow to turn off the water facet after hand washing. ➢ Repeated drying of hands with reusable cloth towels is not recommended and should be avoided. ➢ Good infection control practice to avoid self contamination is to avoid touching your eyes, nose and mouth with gloved or ungloved contaminated hands, placing pens, pencils caps or your fingers in your mouth, or licking your finger to turn a page. ➢ Wash your hands to minimize contaminating your work environment by touching door knobs, light switches, and telephones with contaminated, gloved or ungloved hands.

Safety Precautions and Personal Protective Equipment for OSHA Very High and High Risk Job Categories	
Influenza Infection Control Methods	**Descriptions**
Goggles and Face Shields *May be used in addition to other protective barriers.*	Are used to protect the eyes from splash or spray of bodily fluids, harmful liquids or chemicals. Anyone whose duties require exposure to splashes or sprays of harmful liquids or chemicals, blood, bodily fluids, and other potentially infectious materials.
Disposable Gloves and Gowns (e.g., Latex or alternative non-sterile gloves for examinations and non-surgical procedures are recommended) Should be changed between patients. *May be used in addition to other protective barriers.*	Apply when exposure is anticipated for anyone coming into contact with influenza, blood, bodily fluids, contaminated surfaces or material(s) when: ➢ Rendering basic first aid. ➢ Performing aerosol-generating procedures (*e.g., cough induction, some dental procedures, invasive specimen collection, etc.*) ➢ Working with or providing care for known or suspected Avian or Pandemic Influenza patients. ➢ Hospital/clinic staff that must enter patients' rooms. ➢ Collecting, handling, or manipulating specimens from known or suspected infected patients or wildlife. ➢ Duties related to disinfecting and sterilization; and carcass handling or disposal. ➢ Handling harmful or hazardous liquids or chemicals.
Disposable Respirators & Filtering Face Pieces (e.g., N95, N99 and N100) Approved by the National Institute for Occupational Safety and Health (NIOSH). ➢ Reusing disposable respirators should be avoided whenever possible ➢ Non NIOSH approved dust masks are not respirators	➢ Performing aerosol-generating procedures (i.e*., some dental procedures, invasive specimen collection, etc.*) ➢ Working with or providing care for known or suspected Avian or Pandemic Influenza patients. ➢ Collecting, handling, or manipulating specimens from known or suspected infected patients. ➢ Performing OSHA Very High or High tasks. **Note:** *Fit test, medical examination, and training regarding use, storage, cleaning, and maintenance are required for mandatory-issued equipment. Employees who voluntarily wear filtering face pieces are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.*
Full and Half Face Tight Fitting Respirators and Powered Air Purifying Respirators (PAPR)	➢ Handling Avian Influenza infected animals. ➢ Carcass handling or disposal. ➢ Handling corpses or remains. **Note:** *All employees including those who voluntarily wear tight fitting are subject to the medical evaluation, cleaning, storage, and maintenance provisions of the respirator standard. Employees who wear PAPRs are not subject to fit testing.*

APPENDIX F: TELE-COMMUTING

The State of Michigan Telecommuting Guidelines requires an approved written telecommuting agreement before an employee may regularly perform officially assigned duties at home.

The guidelines address telecommuting as it relates to eligible state classified employees who request and are authorized to: 1) work partially at an assigned office and 2) work partially at home or telecommuting center located in the State of Michigan.

Where such an agreement is in place, a department may require the employees to telecommute from home during a pandemic.

Employees who do not have an approved written telecommuting agreement in place will not be permitted to telecommute; however, they may be permitted to conduct some work activities from home during a pandemic if it is determined the work can be accomplished without a special computer equipment, hardware or software, or access to secure information.

APPENDIX G: TRIGGER POINT MATRIX (TO BE COMPLETED BY DEPARTMENTS)

A list of Safe Work Practices for each of the influenza control methods should be obtained during the Job Safety Analysis process. The department's approved Trigger Point Matrix should include the appropriate type of safe work practices and methods that are suitable to meet the operational needs of the department and each specific worksite. Using the matrix permits management to prioritize and implement selected actions as the severity of the pandemic increases and service delivery declines.	
	List the appropriate safe work practices (SWP) approved by the department for each type of control method from which the department can apply as the severity of pandemic increases. **Departments should create SWP that meet their respective operational needs during the Preparing for a Pandemic Influenza Event.**
Influenza Control Methods **Lower Severity**	**Safe Work Practices** (See examples of potential SWPs in Model Trigger Point Matrix in Pandemic Influenza Safe Work Practice)
Time	
Distance (Initiate Social Distancing Behaviors)	
Shielding	
Hygiene Practices	

Higher Severity	**Safe Work Practices** (See examples of potential SWPs in Model Trigger Point Matrix in Pandemic Influenza Safe Work Practice)
Time	
Distance (Escalate Social Distancing Behaviors)	
Shielding (Increase diligence)	
Hygiene Practices (Increase diligence)	