



Interim Guidelines No. 9
Safety Precautions to Avoid Influenza A (H1N1) Virus Infection
On the Job for Health Care Workers

This set of guidelines is the recommended reference for all health care workers and their supervisors and employers. It aims to minimize the likelihood that health care workers who are designated to attend to probable and confirmed cases of influenza A (H1N1) and those who are indirectly exposed to such cases because of the nature of their job become infected or carriers of the disease. The range of application of these guidelines varies from tertiary care setting to primary outpatient setting. The user of these guidelines is allowed flexibility to decide which infection control measures are appropriate in a specific health facility setting without compromising the basic principles presented herein.

Administrative Preparations

Administrators and Chiefs of hospitals and other health care facilities (hospices, infirmaries, daycare or halfway homes for chronically ill, etc.) should plan and organize how to continue their services uneventfully with the influenza A (H1N1) threat.

1. Determine which rooms and holding areas will be strictly reserved for out-patient and/or inpatient care of probable or confirmed cases.
2. Decide who among the staff are currently most skilled in infection control measures and assign them as direct care providers and/or infection control managers. Some hospitals only have to mobilize pre-designated team and protocol.
3. Ensure availability of adequate stock levels of drugs, medical supplies, materials and equipment for disinfection and decontamination and personal protective equipment (PPE).
4. Update and post critical contact referral numbers. DOH hotlines are (032)711-1001 and (032)711-1002 and email is doh_hemsopcen@yahoo.com. Include the numbers of the nearest referral (regional) hospitals in your area as well.
5. Participate actively in case reporting and surveillance. Your local government health offices and nearest DOH health facility are trained on the standard reporting and surveillance systems.

Mainstays of Influenza A (H1N1) Infection Prevention In Health Care Settings:

1. Hand hygiene
2. Personal protective equipment (PPE)
3. Respiratory hygiene
4. Cleaning and disinfection of implements and materials used by patients
5. Cleaning and disinfection of patient-care areas
6. Room use management and decontamination

The following sections will explain standard procedures for the seemingly simple tasks of hand washing, use of PPE, respiratory hygiene and other matters that are taken for granted, but which should be foremost in the mind of health care workers when new or emerging infections with uncertain consequences affect the population.

A. Points to Remember about Hand Washing

1. Do hand hygiene before and after contact with every patient is one of the most effective means of preventing spread of infection.
2. Wash hands with soap and running water when visibly dirty or contaminated with proteinaceous material.
3. Use alcohol-based product for routinely decontaminating hands, only if hands are NOT visibly soiled.
4. DO NOT use alcohol-based hand products when hands are visibly soiled.
5. DO NOT use alcohol-based hand products after exposure of non-intact skin to blood or body fluids. In these cases, wash hands with soap and water and dry.
6. Wash hands with soap and running water for about 40 to 60 seconds in the standard procedures taught in all paramedical and medical schools.

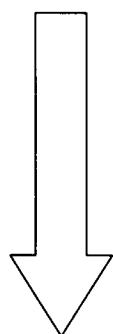
When to Perform Hand Hygiene :

- **Immediately on arrival at work**
- **Before:**
 - Direct contact with a patient
 - Putting on gloves for performing clinical and invasive procedures (e.g administering intravascular injections, intravenous injections).
 - Medication preparation
 - Preparing handling, serving or eating food
 - Feeding a patient
 - Leaving work
- **Between certain procedures** on the same patient where soiling of hands is likely
- **After:**
 - Contact with patient
 - Removal of gloves
 - Removal of other personal protective equipment
 - Contact with blood, body fluids, secretions, excretions, exudates and contaminated items
 - Contact with item/surfaces known or considered likely to be contaminated with body substances, or excretions, whether or not gloves are worn
 - Personal body functions such as using the toilet, wiping or blowing one's nose
- **Reminders:**
 - PPE should not replace proper hand hygiene.
 - The HCW must wash their hands before putting on and after removing gloves
 - Wash hands with soap and water. Alcohol-containing handwash solution may be used.
 - In the event water supply or soap is not available, 70% alcohol or alcohol-based hand rubs are alternative.

B. Pointers for the Use of PPE—Only IF the appropriate pieces of PPE are used correctly will these protect health-care workers from being exposed to certain types of infectious diseases.

- All healthcare workers should be responsible for ensuring that they are equipped with the appropriate PPE before starting work duties in A (H1N1) designated areas. The PPE include:
 - N95 masks
 - Gloves
 - Disposable solid front gowns
 - Eye protection (i.e. goggles)
 - Shoe Covers
- **General principles in the Use of PPE:**
 - Hand hygiene should always be performed despite PPE use.
 - Remove and replace if necessary any damaged or broken pieces of re-usable PPE as soon as you become aware that they are not in full working order.
 - Remove all PPE as soon as possible after completing the care and avoiding contaminating:
 - The environment outside the isolation room;
 - Any other patient or worker; and
 - Yourself
 - Discard all items of PPE carefully and perform hand hygiene immediately afterwards.
- **Remember: PPE reduces but does not completely eliminate the risk of transmission. PPE will only be effective if used properly and worn at all times whenever contact is possible.**

- The sequence for putting on and removing the PPE is as follows:



PUTTING ON PPE:

- a. Shoe Cover
- b. Disposable Gown
- c. Apron when necessary
- d. Gloves
- e. Goggles
- f. Mask

REMOVING PPE:

- Wash gloved hands
1. Shoe Cover
 2. Apron and gown
 3. Gloves and wash ungloved hands
 4. Goggles
 5. Mask
- Dispose 1-4 in yellow trash bags.
Wash hands with soap and water to elbow.

1. Guidelines for the N95 Mask:

- a) The N95 mask must be put on with clean hands.
- b) The mask must fit well over the mouth and nose area, the metallic bar adjusted over the bridge of the nose. Both elastic bands should be put behind the head to assure a snug fit over the face.
- c) The mask must be worn during entire time at the A (H1N1) area. If the HCW is going to leave the area, the mask must be placed in a clean container.
- d) Do not allow HCW to go to other hospital areas with the mask hanging around the neck.
- e) Once the mask is worn into an area with suspect or probable A (H1N1), ideally WHO recommends change of mask every 6 hours.
- f) In the event the N95 masks cannot be made available to all HCWs in a facility, the HCW who has the highest risk of having direct contact with influenza A (H1N1) patients should be given priority for the limited masks. **Plain surgical mask with snug fit is an alternative** while awaiting N95 supplies. Plain masks will act as physical barriers to transmission (versus no mask) but will not be as protective as N95 masks.

2. Guidelines for Gloves:

- a) Disposable non-sterile gloves should be worn for all patient contact.
- b) Gloves are removed and discarded in biohazard bags after patient care is completed, or when soiled or damaged.

3. Guidelines for Disposable Gowns:

- a) Disposable fluid-resistant gown should be worn for all patients care activities
- b) These should be removed when soiled and discarded in bio-hazard bags after patient care is completed, or when soiled or damaged.

4. Guidelines for Eye Protection:

- a) Goggles or face shield should be worn when working within 6 feet of the patient.
- b) Corrective eyeglasses alone are not appropriate protection.

C. Pointers on Respiratory Hygiene and Cough Etiquette—Respiratory hygiene and cough etiquette are two key ways in which the spread of infection are controlled at the source. It is **always the right time** to carry out these important infection control measures.

1. All patients , visitors and health care workers should be encouraged to adhere to cough etiquette and respiratory hygiene at all times to contain respiratory secretions.
2. When you cough or sneeze cover your nose and mouth.
3. Throw the used tissue away straight after.
4. Perform hand hygiene.
5. In health –care facilities, consider a medical mask when you are coughing.

D. Pointers in Cleaning and Disinfecting Respiratory Equipment--Any piece of equipment used in providing patient care must be handled with care, as it may be contaminated and have the potential to spread infection.

• **General Principles:**

- Avoid any contact between a used piece of equipment and the skin, mucosa or clothing, including any handles of the equipment. Also avoid splashes of water and spills which could be potentially be contaminated.
- Wear or use: rubber gloves, a gown and a rubber apron and face protection
- Re-usable equipment must be cleaned with soap and water until all visible signs of soiling are removed and must then be appropriately disinfected
- Any item designed for single use must be disposed off in an appropriate container or waste receptacle immediately after use.
- Use disposable equipment as far as practicable.

• **Reminders on Reprocessing of Re-Usable Equipment:**

1. Wash the piece of equipment with soap or detergent and water
2. Rinse
3. Disinfect
4. Rinse again if using chemicals to disinfect
5. Dry
6. Store- Keep clean and disinfected items dry and in individual packages.

E. Cleaning the Patient Care Environment--Environmental cleaning refers to the process of removing all or a significant amount of the pathogens from contaminated surfaces and items. Standard hospital disinfectants, prepared in the recommended dilutions and applied in accordance with the manufacturer’s instructions can reduce the level of environmental surface contamination.

- **General Principles:**

1. Any process of disinfection must be preceded by cleaning.
2. Only items and surfaces that have had contact with the patient's skin or mucosa or have been frequently touched by health-care workers require disinfecting after cleaning.
3. The type of disinfectant used in a health-care facility will depend on local availability and regulations. Suitable for use are: sodium hypochlorite –to be used on non-metal surfaces or equipment; alcohol-for use on smaller surfaces; phenolic compounds; quaternary ammonium compounds; and/or pyroxygen compounds.
4. All horizontal surfaces in areas where care is being provided to a patient must be cleaned everyday and whenever visibly soiled
5. If the surface has had direct contact with patients, such as an examination table or other equipment, the surface must be cleaned and disinfected between different patients.
6. All cloths used must be dampened before use. Dusting with a dry cloth or sweeping may lead to aerosolization and should be avoided.
7. Solutions, cloths and mop heads should be changed regularly and all cleaning equipment should be cleaned and dried after each use and before storage.
8. Areas around the patient should be kept clear from unnecessary equipment, supplies and clutter to allow thorough daily cleaning to take place.
9. Examination tables and surrounding equipment that have been used by patients known or suspected to be infected with influenza A (H1N1) should be wiped down with disinfectants immediately after use.
10. The health-care worker should wear: rubber gloves, a gown and a rubber apron, and resistant closed foot wear, such as boots.

It is also important to note that good ventilation of the area is necessary during and immediately after the process of disinfection, regardless of the type of disinfection used.

11. **Linen and Waste Management**-- Handle linen and waste with care to prevent contamination of surrounding surfaces or people:
 - All used linen and waste should be placed in bags or containers which can withstand transportation without being damaged.
 - Any solid matter on soiled linen should be removed and flushed down a toilet. The soiled linen should be handled carefully.
 - Health care workers should take care to avoid aerolization of matter whenever handling and disposing of the waste.
 - Transport soiled linen and waste in closed containers or bags.
 - Ensure safe handling and final treatment of waste, by classifying the waste (this is utmost importance) and using the containers or bags specified according to its classifications
 - Health-care workers must use adequate PPE whenever handling soiled linen and waste.

F. Room Management and Decontamination

1. Infection Control in the Triage Area

- All health care facilities **MUST** prepare for a triage area where patients with influenza-like illness can be screened.
- The triage area must be separate from the general Emergency Room to prevent transmission of respiratory infection to other patients and hospital staff.
- This area will be utilized to screen for suspect A(H1N1) according to the criteria for suspect cases . A minimum number of hospital personnel required to perform the screening should be assigned to this Triage Area.

- Personnel assigned to this area must be trained and properly protected with the prescribed PPE (N95 mask).
- Innovative barriers may be implemented by individual hospitals to further reduce risk of transmission to HCW's and other patients without compromising initial screening procedure.

2. Infection Control in Holding Areas—Holding areas are used for screening and initial handling of probable or confirmed case of influenza A (H1N1) infection.

a) *A suspect, probable or confirmed case of influenza A (H1N1) should be directed to the designated holding area before transfer to a designated influenza A (H1N1) referral hospital.*

b) As soon as a patient is assessed to be an A(H1N1) suspect, he or she must be made to wear at least a plain surgical mask.

c) Physical requirements of a influenza A (H1N1) Holding Areas:

- A separate room should be provided to accommodate A (H1N1) patients before transfer to the A (H1N1) referral hospital.
- The room for this use should ideally be closed area with negative pressure relative to surrounding areas. If negative pressure is not available for this area, the room must have its own independent air-conditioning unit/air supply with own exhaust or with adequate ventilation where windows open away from public places.
- This room should have a door that can be closed.
- This area should have its own sink and bathroom facilities for use of the A (H1N1) patient.
- All personnel in these areas should be properly protected with N95 masks and other barriers for direct contact prevention.
- Appendages of healthcare workers such as CELLULAR PHONES and PAGERS should be left outside the A (H1N1) designated areas. If this cannot be arranged, cover all cellular phones, pagers and telephones with yellow disposable plastic cover. Covers should be disposed before leaving A (H1N1) areas.

d) Containment procedures for the Holding Area:

- All suspect, probable and confirmed influenza A (H1N1) patients must remain within the holding area until ready for admission or transport and must wear surgical mask at all times.
- HCWs entering this area must be kept to the minimum essential to the care of the patient. Family members and other visitors cannot be allowed to enter the Holding Area.
- Materials such as stethoscope, ballpen, BP cuff, and thermometer must be left inside the holding area and not used in other hospital areas.
- Personnel leaving these areas should do careful hand hygiene before opening the exit door. All disposable PPE must be removed and disposed of.
- In addition, change of scrub suits into different set of clothing is highly recommended.

3. Infection Control in In-Patient Setting—This section is meant to guide health facilities that would be admitting probable or confirmed cases of influenza A (H1N1).

a) Physical requirements for an Influenza A (H1N1) Isolation Room or Ward:

1. All DOH-designated referral A(H1N1) hospital should identify rooms or wards beforehand which will be dedicated solely for A(H1N1) in-patients.
2. In choosing the rooms or wards for the purpose of A(H1N1) in-patient care, consider transport route from the ER to these designated rooms (i.e. Need to use elevators).
3. The doors must be closed at all times.
4. Probable and confirmed cases of influenza A (H1N1) must be admitted ONLY TO SINGLE ISOLATION ROOMS.
5. If single private rooms are not possible, cohort placement (putting several patients with the same diagnosis in one (1) area of Probable A(H1N1) in one room is an acceptable alternative. Place a screen or other forms of barriers between patients.
6. Do not mix probable influenza A (H1N1) patients with confirmed influenza A (H1N1) in the same room.
7. The designated single rooms or wards for A(H1N1) should be equipped with **negative-pressure devices**. If negative-pressure rooms are not available, single air-supply or airconditioning unit with independent exhaust is acceptable. If still not possible, well-ventilated private rooms with windows opening away from public areas should suffice. Exhaust and windows must not open to any area with public access.
8. The single isolation rooms and wards must have their own sink and bathrooms.
9. A separate area strategically located within the isolation room or ward must be designated to serve as an area for HCWs to change and dispose PPE (i.e. changing room).

b) Personnel Restrictions for an Influenza A (H1N1) Isolation Room or Ward:

1. Only health care workers with defined patient care-related activities should be allowed to enter these areas.
2. All persons entering the room should wear an N95 mask and observe standard precautions (hand hygiene, gloves, gowns and eye protection).
3. Paramedical staff such as X-ray technicians, janitors, food tray handlers and the like must be equally protected with PPE when they enter these rooms.

c) Containment Procedures for the Influenza A (H1N1) Room or Ward

1. Exposure to the A(H1N1) infected patients must be kept at the absolute minimum according to the level of care required.
2. Observe all pointers for hand hygiene, respiratory hygiene and disinfection of patient-care environment, including linen and waste management.
3. Utilities used by the A(H1N1) patient should be used solely by the patient. These include eating utensils, thermometers, BP cuff, tourniquet and the like.
4. Visitors should be absolutely discouraged. Family members who enter the room should be properly oriented to the disease and infection control precautions being observed.
5. After every patient discharge, do thorough routine cleaning of the floors, walls and furnishings with disinfectant solutions (0.1% sodium hypochlorite or phenolic agents).

G. Other Concerns:

1. Infection Control in the Use of Ventilators

- a) Discard all ventilator tubings after appropriate decontamination with the recommended disinfectants (0.1% sodium hypochlorite, or similar agents) for these devices.
- b) Do not re-use tubings and suction catheters even in areas of limited resources.

2. Infection Control While Collecting / Processing Specimens

- a) Procedures that induce coughing and encourage the production of more respiratory droplets from A(H1N1) patients such as aerosolized medications, diagnostic sputum induction, bronchoscopy, airway suctioning and endotracheal intubation should only be performed when absolute necessary.
- b) Clinical specimens should be obtained by personnel taking care of the A(H1N1) patients instead of the laboratory staff.
- c) Healthcare personnel should observe Standard, Airborne, Droplet and Contact Precautions in collecting and handling specimens. Full PPE must be worn including gown, apron, eye protection, gloves and N95 mask. Gloves must be changed between patients.
- d) Processing of laboratory specimens of A(H1N1) suspect and probable cases will be done at a reference laboratory. *Arrangements are being made to coordinate this. The reference laboratory must be informed of the plan to collect and send specimens from hospitals so that proper guidance can be given regarding the correct media to use, storage and transport of specimens.*

3. Infection Control in Handling of Human Remains of A(H1N1) Patients

- a) For autopsies and postmortem assessment of A(H1N1) patients, all personnel involved in the procedure should wear protective garments: surgical scrub suits, surgical cap, gown with full sleeve coverage, eye protection, shoe cover, double surgical gloves and N95 mask.

4. Management of Health Care Workers Exposed to Influenza A (H1N1)

- a) The hospital shall designate a health officer who will be responsible for actively monitoring and recording HCWs according to their date and type of contact to A(H1N1) cases and development of symptoms.
- b) Daily surveillance of body temperature and respiratory symptoms such as cough and difficulty of breathing must be assessed.
- c) A healthcare worker who becomes symptomatic with cough and fever must be properly evaluated by the designated hospital physician for the possibility of A(H1N1). Degree of contact with A(H1N1) patients and exclusion of other medical reasons must be considered. If the health worker is assessed to be an A(H1N1) suspect, he or she should be admitted and managed as outlined.
- d) Exclusion from duty should be continued for 10 days after the resolution of fever and respiratory symptoms. During this period, infected workers should avoid contact with persons both in the facility and in the community.
- e) **Exclusion from duty is not recommended for an exposed healthcare worker if they do not have either fever or respiratory symptoms.**
- f) Any unprotected exposure (contact without the prescribed PPE) to influenza A (H1N1) patients of any hospital personnel should also be reported to designated health officer immediately. This health care worker is at high risk for A(H1N1) infection must be vigilantly monitored.

All healthcare facility workers should be educated concerning the symptoms of A(H1N1).

Issued by the DOH Emergency Management Task Force for the Pandemic Response to Influenza A (H1N1)