1. Introduction
   1.1. Respirators, masks and eye protection shall be worn:
   1.1.1 By health care providers, patients and visitors to protect the mucous membranes of the mouth, nose and eyes, when indicated.
   1.1.2 To reduce the risk of transmission of droplet and airborne spread illnesses due to infectious agents.

2. Policy statement
   2.1 Respirators, masks and protective eyewear must be available in all patient care areas of the hospital for use when conducting a risk assessment, or when additional precautions are in place.
   2.2 A mask with attached visor or mask with protective eyewear must be used within 2 metres of a patient:
   2.2.1 When there is a risk of splash or spray with blood or other body fluids, secretions or excretions including cough-producing and droplet-generating procedures.
   2.2.2 Suspected or known to have a droplet transmitted virus or microorganism (e.g. Acute Respiratory Infection (ARI), Pertussis, Meningococcal disease) (see Infection Prevention and Control Manual, Policy 3-17 Droplet Precautions).

   2.3 An N95 respirator with eye protection must be worn to enter the room with a patient suspected or known to have:
   2.3.1 A communicable airborne disease (e.g. Tuberculosis) (see Infection Prevention and Control Manual, Policy 3-20 Airborne Precautions)
   2.3.2 A virulent respiratory disease (e.g. novel respiratory pathogen).

   2.4 Staff requiring N95 respirator will be fit-tested, and are required to use the model of respirator with which they have been successfully fit-tested in accordance with the respective hospital’s Occupational Health Respiratory Protection policies (see Administrative Policy Manual, Policy Safety and Security, 02-091 Respirator Protection Program).

   2.5 Staff with a beard, scarf or other headgear cannot achieve a seal and must not enter an Airborne Precautions room.

3. Definitions
   3.1. Acute Respiratory Infection (ARI): Any new onset acute respiratory infection that could potentially be spread by the droplet route (either upper or lower respiratory tract), which presents with symptoms of a fever greater than 38°C and a new or worsening cough or shortness of breath (formerly known as febrile respiratory illness, or FRI). It should be noted that elderly people and people who are immunocompromised may not have a febrile response to a respiratory infection.
3.2. **Aerosol**: Small droplet (<5 µm (or micron)) of moisture that may carry microorganisms. Aerosols may be light enough to remain suspended in the air for short periods of time, allowing inhalation of the microorganism.

3.3. **Airborne Infection Isolation Room**: a single patient room with negative airflow (air is drawn into the room and exhausted outdoors without being recirculated).

3.4. **Airborne Precautions**: (see Infection Prevention and Control Manual, Policy 3-20 Airborne Precautions) An N95 Respirator, eye protection and a negative pressure room are used to prevent inhalation of small particles that may contain infectious agents transmitted via the Airborne route. Examples of organisms include Ebola, Smallpox, Tuberculosis, Chickenpox (for non-immune) and Measles (for non-immune). Certain high-risk Respiratory procedures may require Airborne Precautions and the use of an N95 Respirator and eye protection such as diagnostic bronchoscopy or sputum induction.

3.5. **Droplet Precautions**: Procedure mask with eye protection are used in addition to Routine Practices for patients known or suspected of having an infection that can be transmitted by large infectious droplets (see Infection Prevention and Control Manual, Policy 3-17 Droplet Precautions). Examples would include Influenza, bacterial meningitis, acute respiratory infection, etc.

3.6. **Droplet/Spray**: Small droplets of moisture that may carry microorganisms that are larger in nature (> 5 microns in size). Aerosols may remain suspended in the air for short periods of time, but typically travel no farther than 2 metres before they fall to surfaces or the floor. Persons and surfaces within 2 metres of the source (coughing patient, spray from a procedure) may become contaminated.

3.7. **Eye Protection**: Eye protection protects the mucous membranes of the eyes from splashes, sprays and droplets as part of Routine Practices, or Additional Precautions. Prescription eyeglasses and contact lenses do not provide adequate protection. Examples of approved eye protection include: goggles, mask with integrated face shield, or a face shield.

3.8. **High Risk Respiratory Procedure**: Certain respiratory procedures may generate droplets/aerosols that may expose facial mucous membranes of staff to respiratory pathogens and therefore are considered to be a potential risk for staff and others in the area. Procedures generating droplets/aerosols should be performed in a single room with the door closed. Some procedures may require negative pressure room and airborne precautions (see 4.2.5)
3.9. **N95 Respirator:** A personal protective device that is worn on the face and covers the nose and mouth to reduce the wearer’s risk of inhaling airborne particles. The “N” means “Not resistant to Oil”. An OSHA-certified N95 Respirator filters particles one micron in size, has a filter efficiency of 95% or greater against aerosols free of oil and provides a tight facial seal with less than 10% leak if appropriate fit-tested respirator is worn and appropriate seal checks are performed. This respirator is worn for Airborne Precautions and certain high-risk respiratory procedures.

3.10. **Procedure Mask:** A personal protective device that covers the nose and mouth, and has elastic loops that attaches over the ears. A mask is to be used by health care providers to protect the mucous membranes of the nose and mouth. Masks are worn with separate eye protection, or as a single combined style of mask with integrated eye shield. Ill patients producing respiratory droplets wear a mask without eye protection.

3.11. **Respiratory (Cough) Etiquette:** Personal practices that help prevent the spread of bacteria and viruses that cause acute respiratory infections (e.g. coughing into one’s sleeve, wearing a mask, covering the mouth while coughing, careful disposal of used tissues, and performing hand hygiene).

3.12. **Routine Practices:** (see Infection Prevention and Control Manual, Policy 2-10 Routine Practices) Mask with eye protection must be worn when there is a risk of the wearer’s mucous membranes (mouth, nose, eyes) becoming contaminated by blood, body fluids, excretions or secretions during procedures where splashes or sprays are likely to be generated (e.g. arterial punctures, central line insertion, irrigating wounds, intubation, lumbar punctures, during surgery, etc.). Application of gowns and gloves may be required to protect clothing from splashes as well based on the risk assessment.

4. **Indications for Use**

4.1. **Fluid Resistant Procedure Mask with attached visor and Protective Eyewear to be worn:**

4.1.1 By staff & visitors within 2 metres of any patient on **Droplet Precautions** (see Infection Prevention and Control Manual, Policy 3-17 Droplet Precautions and 3-22 Acute Respiratory Infection (ARI)) or undiagnosed ARI (see Infection Prevention and Control Manual, 2-10 Routine Practice).

4.1.2 A fluid resistant procedure or surgical mask should be worn by healthcare provider when engaged in procedures requiring sterile/aseptic technique to protect patients from exposure to infectious agents carried in a healthcare provider’s mouth or nose.

4.1.3 To protect the mucous membranes of the eyes, nose, and mouth during procedures (including respiratory procedures generating droplets/aerosols) and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.
4.2. **N95 Respirator AND Protective Eyewear to be worn:**

4.2.1 By persons entering the room of a patient on Airborne Precautions (see Infection Prevention and Control Manual, Policy 3-20 Airborne Precautions).

4.2.2 During all autopsy procedures.

4.2.3 In an airborne infection isolation room where a diagnostic bronchoscopy or sputum induction for the purpose of obtaining respiratory secretions from patients suspected or confirmed tuberculosis.

4.2.4 By designated staff inspecting areas where mould is suspected or found.

4.2.5 Worn by staff when performing or assisting with the following **high risk respiratory procedures when used for diagnostic purposes:**

4.2.5.1. Sputum induction*,

4.2.5.2. Bronchoscopy or upper airway endoscopy.*

*Where these are performed for diagnostic purposes an airborne isolation room MUST be utilized.

5. **Procedure (see Appendix A: Donning and Doffing of PPE)**

5.1. **Procedure Mask with integrated eye protection (or procedure mask with goggles)**

5.1.1 Perform hand hygiene.

5.1.2 Adjust mask over nose and mouth, mold to the contours of the face and secure.

5.1.3 Change mask if it becomes damaged, moist or soiled and between patients.

5.1.4 In the operating room, masks should be changed between cases.

5.1.5 Remove gloves and gown (if worn) and perform hand hygiene immediately before removing mask.

5.1.6 Remove mask carefully to avoid re-contamination. The front of a mask, goggles and/or face shield is considered contaminated. The ties, earpieces and/or headband used to secure the equipment are considered “clean” and therefore safe to touch with bare hands.

5.1.7 Discard mask after use in regular waste and perform hand hygiene, again.

5.2. **N95 Respirator**

5.2.1 Wear the type of respirator for which you have been fit-tested.

5.2.2 Apply according to the instructions received during fit testing as defined by Occupational Health policy (see Administrative Policy Manual, Policy Safety and Security, 02-091 Respirator Protection Program).

5.2.3 Adjust the respirator to ensure a snug facial seal. Perform user seal check. Breathing in should draw air through the respirator, not around it.

5.2.4 Change the respirator if it becomes damaged, soiled, moist, if the seal is broken, and between patient rooms.

5.2.5 Do not use a single respirator for more than 8 hours at a time.

5.2.6 Respirators should not be re-used.

5.2.7 Remove gloves, gown and perform hand hygiene.
5.2.8 Remove eye protection first and then respirator carefully to avoid re-contamination.

5.2.9 Discard respirator after use in regular waste and perform hand hygiene again.

5.3. **Protective Eyewear/Face Shield/Goggles**

5.3.1 Wear eye protection (i.e. goggles) in addition to mask/respirator, when there is not an integrated eye shield. Prescription eye glasses do not provide adequate eye protection.

5.3.2 Face shields are disposable.

5.3.3 Goggles may be washed after use with soap and water and then a hospital grade disinfectant.

5.3.4 Discard goggles that are grossly soiled or scratched.

6. **Indications for Patient Use**

6.1. **Procedure Mask for patients**

6.1.1 **Worn at all times by patients** on Airborne Precautions if transportation outside the airborne infection isolation room is necessary (see Infection Prevention and Control Manual, Policy 3-20 Airborne Precautions).

6.1.2 Patients requiring oxygen via nasal prongs may be assisted with wearing a mask.

6.1.3 Patients on Droplet or Contact/Droplet precautions should wear a procedure mask during transport if tolerated. If the patient is unable to tolerate, they should be encouraged to use coughing etiquette, use a tissue to cover their mouth when coughing and perform hand hygiene, have curtain drawn, and be kept more than 2 metres from any other person.

7. **References**


2. Hotel Dieu Hospital – Occupational Health Policy - Respiratory Protection Program

3. Kingston General Hospital- Occupational Health Policy- Respiratory Protection Program


Subject: RESPIRATORS, MASKS, EYEWEAR: INDICATIONS & PROCEDURE

Prepared by: Kingston Health Sciences Centre (KHSC)
Infection Prevention & Control Services

Reviewed by: Infection Prevention & Control Committee

Issued by: Medical Advisory Committee


8. Related Documents

1. Infection Prevention and Control Manual
   Policy 2-10 Routine Practices
   Policy 3-17 Droplet Precautions
   Policy 3-20 Airborne Precautions
   Policy 3-25 Methicillin Resistant Staphylococcus aureus (MRSA)
   Policy 3-60 Creutzfeldt Jakob Disease (CJD)
   Policy 3-65 Tuberculosis

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Appendix A

Donning and Doffing of PPE

Donning PPE

1. **Perform Hand Hygiene (15 seconds minimum)**
   - With alcohol based hand rub, or if hands are visibly soiled use soap and water instead.

2. **Put on Gown**
   - Tie neck and waist ties securely at back of neck and back of waist.

3. **Put on Mask/N95 Respirator**
   - Place mask over nose and under chin.
   - Secure ties, loops or straps.
   - Mold metal piece to your nose bridge.
   - **For N95 respirator**, perform seal-check.

4. **Put on Protective Eyewear (if not already attached to mask)**
   - Put on eye protection and adjust to fit.
   - If wearing an N95 respirator, you will need to add eye protection

5. **Put on Gloves**
   - Put on gloves, taking care not to tear or puncture glove.
   - If a gown is worn, the glove fits over the gowns cuff.
### Doffing PPE

<table>
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<tr>
<th>Step</th>
<th>Description</th>
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| 1. | **Remove Gloves**  
|   | - Remove gloves using a glove-to-glove/skin-to-skin technique.  
|   | - With one gloved hand, grasp the other gloves outside edge near the wrist and peel away, removing the glove inside-out.  
|   | - With bare finger, reach under the second glove and peel away, removing it inside-out.  
|   | - Discard immediately into waste receptacle. |
| 2. | **Remove Gown**  
|   | - Remove gown in a manner that prevents contamination of clothing or skin.  
|   | - Start by untying the gown at the waist and neck.  
|   | - Starting at the neck ties, the outer, “contaminated”, side of the gown is pulled forward and turned inward, then rolled off the arms into a bundle.  
|   | - Discard immediately into dirty laundry hamper in a manner that minimizes air disturbance. |
| 3. | **Perform Hand Hygiene (15 seconds minimum)**  
|   | - With alcohol based hand rub, or if your hands are visibly dirty use soap and water instead. |
| 4. | **Remove Eye Protection**  
|   | - Arms of goggles are considered to be “clean” and may be touched with the hands.  
|   | - The front of the goggles is considered to be “contaminated”.  
|   | - Remove eye protection by handling arms of goggles only.  
|   | - Discard into receptacle or somewhere appropriate to be cleaned  
|   | - Eyewear must be cleaned by the individual after each use. |
| 5. | **Remove Mask/N95 Respirator**  
|   | - Ear loops/straps are considered “clean” and may be touched with hands.  
|   | - The front of the mask/respirator is considered to be “contaminated”.  
|   | - Grasp straps or loops and pull forward off the head, bending forward to allow mask/respirator to fall away from the face.  
|   | - Discard immediately into waste receptacle. |
| 6. | **Perform Hand Hygiene (15 seconds minimum)**  
|   | - With alcohol based hand rub, or if your hands are visibly dirty use soap and water instead. |