Title: Management of Novel Respiratory Infections	☒ **Policy** ☒ **Procedure** ☐ **SOP**
Category: Patient Care Services **Dept/Prog/Service:** Infection Prevention and Control	**Distribution:** All Patient Care Areas, Environmental Services, Laundry, Laboratory, Nutrition and Food Services, Funeral Homes
Approved: EVP, Regional Programs, Clinical Supports and Medical Affairs **Signature**:	**Approval Date:** Mar. 19, 2020 **Reviewed/Revised Date:** Apr. 02, 2020 **Next Review Date:** Apr. 02, 2021

CROSS REFERENCES: (IPC-2-10) Screening at Entrances During Outbreaks

1. PURPOSE

Provides direction for the prevention, surveillance, and management of novel respiratory infections.

2. POLICY STATEMENT

Effective routine acute respiratory infection (ARI) surveillance programs ensure that health care settings are able to detect any novel respiratory infection quickly, and take steps to prevent and control the spread of the agent of a novel respiratory infection. Most respiratory infections are droplet/contact spread, however, using a precautionary approach that combined Airborne Precautions and Droplet/Contact Precautions should be observed until the epidemiology of the novel agent is established.

3. SCOPE

Any person carrying on activities in the Hospital including staff, professional staff, learners, volunteers, and contract employees.

4. DEFINITIONS

Direct exposure: Those persons who were within two meters of a symptomatic patient without the use of appropriate Additional Precautions.

Indirect exposure: Those persons who were on the same unit as a symptomatic patient before appropriate Additional Precautions were implemented.

Health care setting: Any location where health care is provided, including, but not limited to settings where emergency care is provided, hospitals, and outpatient clinics.

Novel respiratory infection: an illness that causes respiratory symptoms (e.g., fever, cough) where the etiologic agent and/or epidemiology of the disease is/are not yet known, and the morbidity and mortality is presumed to be severe. In these cases the epidemiology, severity, and clinical presentation are different from what might be expected from usual seasonal outbreaks and may involve a travel history or epidemiological link (e.g. Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), or Coronavirus Disease (COVID-19)).

Point of Care Risk Assessment: Prior to each interaction with a patient or their environment, the patient's status and the health care worker's personal risk are assessed to determine what interventions and controls are required to prevent the spread of infection.

Additional Precautions: Infection prevention and control measures identified by the Chief Medical Officer of Health (CMOH or the local Ministry of Health (MOH) that are applied in combination with routine practices when interacting with a patient or environment known or suspected to be infected with an agent transmitted through the contact, droplet, and/or airborne route.

5. PROCEDURE

5.1. Surveillance

Passive Screening: Passive surveillance may detect cases of ARI as individuals enter the health care setting. Signage is posted at entry points and at triage areas prompting those entering the site to self-identify if they are at risk of having an ARI.

COVID-19 Surveillance: Refer to the COVID-19 section on the Infection Prevention and Control Department page on the Hospital's Intranet for COVID-19 Patient and Visitor Passive Screening signs.

Active Screening: On the advice of the Chief Medical Officer of Health (CMOH) or the local Ministry of Health (MOH), the Hospital augments active ARI surveillance program to include the following:

- All patients entering the health care setting are screened for infection using standard ARI case finding/surveillance protocol until screening tools specific to the novel infection have been developed by the CMOH and MOH, in consultation with Public Health Ontario (PHO). Refer to the COVID-19 section on the Infection Prevention and Control Department page on the Hospital's Intranet for the Screening and Patient Management Algorithm for Novel Respiratory Infection.
- Anyone accompanying a patient entering a health care setting who screens positive will also be screened.
- Visitors will be screened when directed to do so by the local MOH and/or CMOH.
- Patients and staff already in the health care setting must be monitored for signs of acquired infection.

Screening at Entrances: Refer to Screening at Entrances During Outbreaks IPC-2-10.

Staff Screening: All staff and volunteers are instructed to self-screen at home. Those with symptoms of an ARI must not come to work and must report their symptoms to Occupational Health and Safety (OHS) Department. If exposure to, or transmission of, the novel agent has occurred, active staff screening must be implemented.

5.2. Positive Screens

Anyone who screens positive is instructed to implement appropriate precautions (e.g., hand hygiene, mask, and wait in a designated separate area). Staff must use appropriate Routine Practices and Additional Precautions within the patient's environment. Patients are referred for medical assessment (see Assessment section below). If the patient meets the screening criteria, follow appropriate reporting process (see Reporting below). Non-urgent appointments are rescheduled and patients are instructed to self-monitor or self-isolate. If appointments cannot be rescheduled due to urgency, carry out the appointment using appropriate Routine Practices and Additional Precautions. See Routine Practices and Additional Precautions section below for details.

COVID-19 Positive Screens: Refer to the COVID-19 section on the Infection Prevention and Control Department page on the Hospital's Intranet for guidance on How to Self-Monitor and How to Self-Isolate and for the COVID-19 Case Definition.

5.3. Reporting

Infection Control: Staff must notify Infection Prevention and Control (IPAC) promptly:

- Of any case or cluster of respiratory infection in patients or staff.
- When daily ARI surveillance indicates ARI cases.
- When a person under investigation (PUI) has been tested.

Occupational Health and Safety: Staff members who develop symptoms of respiratory infection must report their condition to OHS or delegate. IPAC and OHS will collaborate about any case or cluster of respiratory infections in patients or staff.

Public Health Unit (PHU): Health care settings must immediately report to PHUs (using a standard format provided by PHUs):

- Any suspect or confirmed case of infection with the novel agent in a patient or staff member.
- Any possible exposure to a suspect or confirmed case of the novel infection in the health care setting of staff or visitors.

5.4. Assessment

Assessment can occur in any area designated for that purpose by the health care setting in consultation with infection control practitioners (ICPs) (e.g., emergency department, screening clinic). Areas designated for that purpose must have someone available to triage people and identify/direct those who need immediate care, and appropriate PPE must be worn.

5.5. Routine Practices and Additional Precautions

Anyone diagnosed with suspect or confirmed respiratory infection with the novel agent is managed using appropriate infection prevention and control (IPAC) precautions and reassessed daily. Precautions are maintained until the period of communicability of the disease, if known, is over. Health care providers at risk of direct exposure to patient with suspect or confirmed infection with the novel respiratory agent must consistently use Routine Practices plus Airborne Precautions and Droplet/Contact Precautions unless directed otherwise by the CMOH. Health care workers perform a point of care risk assessment for every patient encounter, and apply the Four Moments of Hand Hygiene.

COVID-19 Additional Precautions: Recommendations are Droplet/Contact Precautions in addition to Routine Practices for the routine care of patients with suspected or confirmed COVID-19. Refer to the COVID-19 section on the Infection Prevention and Control Department page on the Hospital's Intranet for the Additional Precautions sign for Droplet/Contact Precautions. See Table 1 below for Personal Protective Equipment (PPE) recommendations.

Table 1: PPE recommendations for suspected or confirmed COVID-19

Individual	**Activity**	**Type of PPE or procedure**
Screeners at points of active screening (e.g., triage, entrance points)	Preliminary screening not involving direct contact	If able to maintain spatial distance of at least 2 m or separation by physical barrier: • No PPE required Otherwise, Droplet and Contact precautions, including: • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield) •
Health care workers in outpatient or inpatient unit settings (**excluding ICU/IMCU**)	Providing direct care (including nasopharyngeal swab collection)	Droplet and Contact precautions, including: • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
Health care workers in **ICU/IMCU**	Providing direct care (including nasopharyngeal swab collection)	**Airborne**, Droplet and Contact precautions, including: • N95 respirator (fit-tested, seal checked) • Isolation gown • Gloves • Eye protection (goggles or face shield)

Health care workers in any direct patient care area	Performing known or potential aerosol-generating medical procedures (AGMP), excluding inbutation (see below)	**Airborne**, Droplet and Contact precautions, including: • N95 respirator (fit-tested, seal checked) • Isolation gown • Gloves • Eye protection (goggles or face shield) • Negative pressure room, if available. If not, use a single room with the door closed.
Health care workers in any direct patient care area	Performing endotracheal intubation, including during cardio-pulmonary resuscitation	Enhanced **Airborne**, Droplet and Contact precautions,including: • Kleengard A60 suit, 1 size larger than body size • Bouffant • N95 respirator (fit-tested, seal checked) • Eye protection (face shield) • Nitrile gloves, 12" long (one under) • Nitrile gloves (patient care), 1 size larger than what is normally worn
Transporting staff	Transporting the patient	Contact precautions, including: • Gloves • Gown if skin or clothing will come into contact with the patient or their environment *Patient to wear a surgical/procedure mask, if tolerated.* If mask is not tolerated, staff also apply Droplet precautions, including: • Surgical/procedure mask • Eye protection (goggles or face shield)
Environmental service workers	Entering the patient room or environment	Droplet and Contact precautions, including: • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
Visitors/ Care Partners	Entering the patient room or environment	Droplet and Contact precautions, including: • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
Anyone in non-patient care areas and non-active screening areas (e.g., corridor, main ward areas, administrative areas)	Anything that does not involve contact with the patient	Routine Practices and any Additional Precautions based on risk assessment
Symptomatic patients with suspected or confirmed COVID-19	Any	• Wear surgical/procedure mask • Move to a single patient room or separate area away from others; if this is not feasible, ensure spatial distance of at least 2 m from other patients in a designated separate area
Non-symptomatic patients with suspected COVID-19 who require immediate medical attention	Any	• Wear surgical/procedure mask • Wait in the department's waiting area

5.6. Inpatient Accommodation

Patient with suspect or confirmed infection with the novel respiratory agent should be placed in (in order of preference) unless otherwise directed by the CMOH, the MOH, or PHO:

- Negative pressure room (i.e., Airborne Infection Isolation Room (AIIR))
- Single/private room
- If sufficient single rooms are not available, cohorting of individuals with laboratory-confirmed novel respiratory agent may be considered in consultation with the IPAC team

During an outbreak of a novel respiratory infection, hospitals may be asked by the CMOH and MOH to establish units for those with suspect or confirmed infection with the purpose of confining and containing patients who are infected and make it easier to provide consistent care.

COVID-19 Inpatient Accommodation: Patients with suspected or confirmed COVID-19 should be cared for in a single room. If cohorting is necessary due to pressure for beds, patients who are confirmed to have COVID-19 may be cohorted in consultation with IPAC. Additional cohorting criteria may be included as bed pressures increase and will be done under direction from the CMOH, the MOH, or PHO and in consultation with IPAC.

5.7. Testing

Laboratory testing should be performed as clinically indicated to determine the specific pathogen and to rule out more common etiologies for respiratory symptoms (e.g., influenza), where possible. Consult with the hospital laboratory's medical microbiologist and/or Public Health Ontario Laboratory regarding the submission of specimens specific to the novel agent.

5.8. Managing Exposures

The IPAC team in collaboration with Occupational Health and Safety and PHUs will work together to determine what constitutes an exposure and who will be followed up.

<u>Emergency Department (ED) or other ambulatory setting:</u>

If the patient was seen without the use of precautions considered adequate to prevent transmission of the agent:

- Implement daily surveillance of all exposed staff. This should continue for the incubation period of the novel agent, if known.
- Any exposed person who develops symptoms consistent with the novel respiratory infection during the incubation period must be assessed:
    - admitted patients would be assessed by their health care providers
    - staff would be assessed by Occupational Health and Safety
    - patients who have been sent home, or visitors, would be assessed by the PHU
- Notify the PHU to follow exposed patients who have been discharged home.
- Notify receiving health care settings if exposed patients were transferred to their facility.

<u>Inpatient Unit setting:</u>

If the patient was admitted without the use of appropriate precautions:

- Close the unit to admissions, discharges and transfers unless the transfer is medically necessary, e.g., transfer to critical care unit. If transfer is medically necessary, notify the receiving unit or health care setting about required Additional Precautions.
    - The unit will reopen only in consultation with IPAC, PHU, and Senior Leadership if there are no new cases after the incubation period (if known); however, based on hospital capacity and impact to patient flow, or necessity of patient treatment on the specific unit, patients may be admitted on a case-by-case basis in consultation with IPAC and Senior Leadership.
- Immediately assess all patients on the unit for symptoms consistent with the novel respiratory infection.

- Implement appropriate Additional Precautions for patients who have symptoms consistent with the novel respiratory infection. These patients should remain accommodated on the affected unit. If sufficient AIIRs are not available, see Inpatient Accommodation section above.
- Consider all patients on the unit while the patient was symptomatic and not on precautions to be potentially exposed.
- Within the closed unit, cohort exposed patients and ill patients in geographically separated areas, if possible, together with their respective care givers.
- Determine if there were exposed patients who have been transferred to another unit or health care setting. Notify the receiving unit or health care setting about the patient's exposure to the novel respiratory agent. Notify local PHU to follow any exposed patients on the unit who were discharged home.
- Notify PHU for follow-up if there were any visitors to the patient.
- Implement daily surveillance on the unit. Refer to the COVID-19 section on the Infection Prevention and Control Department page on the Hospital's Intranet for the ARI screening tool. Surveillance is to continue for the duration of the incubation period, if known.
- Implement appropriate Additional Precautions immediately for patients who have symptoms consistent with the novel respiratory infection.
- Notify other area health care settings about the novel agent so that they will be prepared if cases present to their facility.
- Continue ARI surveillance after the unit re-opens.

Inadvertent exposure: If the staff member's exposure to the patient was less than 15 minutes, and a distance of at least 2 meters was maintained, the risk of contracting infection is substantially reduced. If exposure was greater than 15 minutes and/or distance was not maintained, contact OHS.

Indirect exposure: Staff members who have worked on an affected patient's unit but were not directly exposed, are cohorted on the unit and actively assessed daily for signs and symptoms of infection. They must not work on other units or in other health care settings. To determine the degree of exposure of staff to a patient infected with the novel respiratory agent, a risk assessment will be conducted by an appropriate infection prevention and control, occupational health or public health professional to determine the need for, and degree of, follow-up and surveillance of a worker.

Direct exposure: Only essential staff work in areas affected by exposure(s). These staff members must work in the affected area only and cannot work in other health care settings. Staff members who have a direct exposure to the novel respiratory agent, or are a household contact of a case are sent home and reported to the PHU. At a minimum, they must self-monitor for symptoms, remain at home for the incubation period (if known) and notify OHS and the PHU if symptoms develop. Staff must consult with OHS before returning to work. Precautions will be maintained at home until the period of communicability, if known, has passed or until symptoms are resolved.

5.9. Cleaning Practices

Health care settings must thoroughly clean surfaces in care areas, and in public areas identified by Infection Control Practitioners (ICPs) as high risk, such as emergency departments, triage areas and waiting areas. Particular attention should be paid to frequently touched surfaces. Cleaning should be done using a facility-approved, hospital grade disinfectant cleaner that has virucidal and bacteridical properties and a drug identification number (DIN).

COVID-19 Cleaning Practices: Acute care settings must clean and disinfect any areas that the patient occupied. Equipment used to clean and disinfect contaminated areas should be disposable.

5.10 Aerosol-Generating Medical Procedures (AGMP)

AGMPs include but are not limited to:

- Intubation and related procedures (manual ventilation, open endotracheal suctioning)
- Cardio-pulmonary resuscitation during airway management
- Open respiratory/airway suctioning
- Bronchoscopy (Diagnostic or Therapeutic)
- Sputum induction (Diagnostic or Therapeutic)
- Non-invasive positive pressure ventilation for acute respiratory failure (CPAP, BiPAP3-5)
- High flow oxygen therapy (e.g., ARVO, optiflow)
- High frequency oscillatory ventilation
- Tracheostomy care
- Nebulized therapy/aerosolized medication administration
- Autopsy

Elective AGMPs: should be postponed until the illness is resolved. Assess the patient's condition regularly in order to anticipate their care needs, so if an urgent AGMP is required, it can be carried out under optimal conditions.

Non-elective AGMPs: should be performed using processes and practices designed to avoid generating aerosols, including:

- Perform the procedure in an AIIR with the door closed, whenever possible.
- Keep the number of people in the room during the procedure to a minimum. Have only highly experienced staff perform the procedure.
- Wear appropriate PPE and ensure you have been instructed on its use. PPE includes a fit-tested, seal-checked N95 respirator, face/eye protection, gloves, gown, and hand hygiene. The use of PPE extends to family members who are there on compassionate grounds.
- Use equipment and techniques that minimize exposure to respiratory pathogens.

5.11 Patient Transfer and Discharge

Within the health care setting: Movement of patients with suspect or confirmed infection with the novel respiratory agent is restricted to essential tests and procedures and time spent outside the room should be minimized. When movement is required:

- The patient must wear a surgical mask when outside his or her room or the care area and perform hand hygiene on exiting the room.
- Staff must maintain appropriate precautions and use the appropriate PPE at all times.

Between health care settings: The transfer of patients with suspect or confirmed infection with the novel agent from one facility to another is avoided until more is known about the agent. If transport is medically necessary, the receiving setting is notified of the patient's health status and the transporting setting's outbreak status and ability to appropriately accommodate the patient before the transfer is initiated. All patients coming from a unit in another health care facility where exposure or transmission of the novel agent has occurred is managed using appropriate precautions until the diagnosis is excluded and the incubation period has passed.

Discharges to home/community: Patients with the novel respiratory infection who are to be discharged from the Hospital are assessed for the stage of their exposure or disease:

- Plans for discharge home should be made in consultation with the PHU for those that require Additional Precautions or monitoring. The need for isolation, quarantine and follow-up of people who have been exposed or infected will be determined at the provincial level based on the characteristics of the novel infection.
- Additional measures may be put into place, such as self-monitoring and/or self isolation.

5.12 Hospital Access and Visitor Restriction

Access points: Health care settings where exposure, with or without transmission, has occurred will restrict the number of available entrances into the setting.

Visitor restriction: It may be necessary for health care settings to discontinue or restrict visitors to patients who require precautions for the novel agent. Refer to Screening at Entrances During Outbreaks IPC-2-10

Visitor management: Visitors who do not comply with IPAC requirements are assumed to have been exposed to the novel agent, and the Hospital will report them to the PHU as new contacts. Visitors wear PPE including gown, gloves, eye protection, and a well-fitting mask. If visitors to a patient, who requires precautions for the novel agent, develop symptoms they must report to their local PHU and inform the health care setting's ICP. The health care setting's ICP reports these visitors to PHU as potential contacts. PHUs will be responsible for determining precautions and contact tracing.

5.13 Staff Deployment

Staff working in settings where no exposure to the novel agent has occurred may work in other settings where no exposure has occurred and in unaffected areas of settings where exposure has occurred. In the setting of a highly communicable respiratory infection, Senior Leadership Council will decide whether non-essential staff (e.g., volunteers, learners, research staff, consultants, contractors, delivery personnel, couriers, gift shop staff) will not enter areas where there are cases of the novel respiratory infection.

COVID-19 Staff Deployment: Health care workers providing direct patient care will be cohorted to care for patients with suspected or confirmed COVID-19.

6. REFERENCES

Public Health Ontario (February 2020) Prevention, Surveillance and Infection Control Management of Novel Respiratory Infections. Available at https://www.publichealthontario.ca/-/media/documents/bp-novel-respiratory-infections.pdf?la=en

Ministry of Health (February 2020) Novel Coronavirus (COVID-19) Guidance for Acute Care. Version 2. Available at http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_acute_care_guidance.pdf

Public Health Ontario (March 2020) Updated IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19 Available at https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en