PURPOSE:

This document is meant to provide updated guidance on the use of masks in a hospital setting, and establish minimum standards for Toronto Region hospitals with respect to mask use by staff (including physicians), learners, patients, visitors, vendors, contractors, and consultants in the context of the COVID-19 pandemic. Individual hospitals may choose to adopt practices beyond those which are outlined here; however, they should be cognizant that the underlying principle of stewardship of personal protective equipment (PPE) applies across the region and the system, and that the actions of one institution have implications for the supply available to all hospitals. This guidance is predicated on the current context of the COVID-19 pandemic and may require further modifications based on Toronto Region PPE supply chain, TR hospital COVID-19 patient volumes and the overall stage of the pandemic.

CONTEXT:

On March 24th, during the early stages of the pandemic, the Toronto Region Hospital Operations Table issued guidance on universal masking to ensure that a consistent application of principles were adopted by Toronto Region hospitals (See Appendix A)[1]. The document recommended the continuous or extended use of procedure masks in hospital healthcare workers, particularly prioritizing those who provided direct patient care, as an enhanced measure to prevent COVID-19 transmission and maintain safety in the hospital workforce. Since then, the evidence to support universal masking has evolved to include masking not only for healthcare workers, but also as a risk mitigation strategy for the community at large to reduce the spread of COVID-19.

Presently, hospitals are in the process of expanding the criteria for essential visitors, learners will soon be on site and increasing volumes of patients will enter the hospital as clinical ramp-up proceeds and deferred surgical and procedural care is addressed. With an increase in people entering the hospital, physical distancing will become more challenging to maintain in all areas and complementary infection prevention and control (IPAC) measures must be enhanced. The universal masking policy is now being expanded to encompass all individuals in the hospital who may not be able to maintain 2 meters of distance from others through their course in the hospital (i.e., in common spaces) or where there is unpredictability in the situation and potential for a person to become within a 2 meter distance of others (i.e., elevators, food court area)..

BACKGROUND:

The incidence of COVID-19 in Toronto is currently declining. However, as businesses in the city gradually reopen and summer is upon us, hospitals need to be prepared for possible resurgences of cases. The use of masks, along with other IPAC and public health measures, is increasingly recognized as an important intervention to reduce transmission of COVID-19. Masks include medical grade procedure/surgical masks, non-medical grade masks and homemade cloth masks. All three provide varying degrees of protection and act as barriers that can reduce the dispersion of infectious droplets from the respiratory tract of those infected with respiratory viruses (i.e. use of masks for source control).[2] There is modest but growing evidence that wearing a mask also protects people from acquiring respiratory virus infections in the general public[3]. It is now well recognized that people may transmit COVID-19 to others prior to or in the absence of symptomatic disease, limiting our ability to rapidly identify and isolate all infectious individuals based on symptom screening alone. Consequently, several expert agencies, including the World Health Organization, United States Centers for Disease Control (CDC) and Public Health Agency of Canada, now advocate for the use of masks in public areas where physical distancing may not be possible or is unpredictable[4]. Furthermore, as of July 7, 2020, masks or face coverings will be mandatory within indoor public spaces in the City of Toronto, with some exemptions (children under the age of 2 and those with medical conditions that preclude the use of mask for extended periods of time).

In hospitals, the benefits of using masks beyond what is already required for patients under additional precautions is apparent. If applied correctly, universal masking, where masks are worn continuously by individuals while in public areas or on clinical units, can significantly reduce high-risk exposures (i.e., staff to staff, general public to staff, staff to patient) to COVID-19 by ensuring that appropriate respiratory protection is always in place. It can reduce the risk of outbreaks and

maintain healthcare human resources by reducing the need for quarantine. Continuous use of masks by healthcare workers can also help to conserve PPE by limiting the number of times a mask needs to be changed during a work shift.

In considering implementation of this guidance document, hospitals should take into account the following:

- Toronto Region PPE Conservation Guidance document[5]
- Local, institutional policy on masking in hospitals
- Procedural mask supply

As the pandemic progresses and as our understanding of COVID-19 transmission evolves, these guidelines may require further updates.

RECOMMENDED APPROACH:

Universal Masking

1. All individuals (staff, physicians, ambulatory patients, visitors, learners, contractors, vendors) should wear a mask while in patient-facing and common areas of the hospital, with the notable exception of children under the age of 2 years and those who have medical conditions that preclude the use of masks for extended periods of time.
    a. **For individuals performing direct patient care,** masks are to be worn continuously, as much as possible. A mask does not need to be removed between patient interactions, even if a patient is isolated under droplet and contact precautions (i.e., the face shield provides protection of the mask).
    b. **For individuals not performing direct patient care tasks**, masks may be temporarily removed while alone in a defined area (e.g. in an office or behind a physical screening barrier) or where 2 metres of physical distance can be confidently and consistently maintained from others (e.g. meeting in a large conference room).
    If a mask is temporarily removed under the conditions identified above, the person should perform hand hygiene and follow hospital IPAC recommendations on safe storage (e.g., place on a clean surface with inner mask facing upward to avoid contamination).
    c. A mask must be removed and discarded when:
        a. It becomes visibly soiled or contaminated
        b. It becomes very moist or torn, such that the integrity of the mask is compromised
        c. When a mask touches a patient
        d. At the end of a work shift in a patient-facing area of the hospital
    d. When eating snacks or lunch, clinical staff should remove and discard their masks. A new mask should be donned prior to resuming work.
        a. Those **not** providing care to patients in clinical areas of the hospital may choose to reuse their original mask after a snack or lunch, provided it is not visibly contaminated or physically compromised. Hospital IPAC recommendations on safe storage of the mask for reuse must be followed.
2. A standardized process for mask distribution should be implemented for all those requiring masks from hospital supply. The number of masks issued to an individual will depend upon their role and the activities they perform in the hospital.
    a. Those providing direct patient care or working long shifts may require access to additional masks, beyond what is initially allocated.
3. The use of medical grade procedure masks is recommended within the hospital setting including all healthcare workers working in direct patient care areas as well as staff working outside of direct patient care areas when interacting with other healthcare workers and staff, and physical distancing cannot be maintained.[6] However, cloth, homemade and non-medical (uncertified) masks, as long as they follow the criteria outlined by Public Health Agency of Canada (PHAC https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/about-non-medical-masks-face-coverings.html)[4] may be considered as follows:
    a. **For transit of staff** from the entrance of the hospital to their destination unit or department; a hospital-issued mask must be worn once the staff member arrives in a clinical care area.
    b. **For non-patient facing roles in non-clinical areas;** however medical grade masks must be readily available in the event they are interacting with clinical staff or in a clinical areas.
    c. **By vendors,** contractors and consultants who are **not** working in patient-facing areas
    d. **By visitors**; NB – if visiting a patient under additional precautions where a procedure mask is required, visitors must remove the cloth/homemade/non-medical mask and don a hospital-issued procedure mask

e. By patients attending to ambulatory visits within the hospital
f. By hospital inpatients, when leaving their room (e.g. for diagnostic tests, physiotherapy/ambulation and for outdoor breaks)
    a. Masking of hospital inpatients presents some unique differences and challenges. Because of their underlying medical condition, clinical symptoms (e.g., pain, shortness of breath, nausea & vomiting) and responses to illness (e.g. acute confusion, anxiety, behavioural challenges), some inpatients may have difficulties tolerating or safely using a mask.
        - Consideration for masking hospital inpatients should take into consideration the patient's ability to tolerate or safely use a mask. For those patients who are unable to tolerate a mask, they should be permitted to ambulate locally on the unit without the requirement to wear a mask.
        - If the patient can tolerate wearing a mask, a medical grade procedural or cloth mask should be used when leaving their room (e.g. for diagnostic tests, physiotherapy/ambulation and for outdoor breaks).
        - Patients under additional precautions for respiratory infectious diseases (e.g., COVID-19 or non-COVID-19 related) should wear a procedural mask at all times when ambulating or leaving the unit.
        - Hospital inpatients are not required to wear a mask in their room routinely.

4. All individuals wearing masks should be educated on the proper positioning of the mask on the face, and how to safely don, doff and dispose of the mask. This includes ensuring diligent hand hygiene is performed whenever the mask is touched or adjusted.
5. Those staff who are unable to tolerate the use of a mask due to allergic reactions or medical conditions (e.g. severe asthma/respiratory illnesses) should consult with Occupational Health (for hospital staff) or IPAC (for others) regarding possible alternative options. Under certain circumstances, a disposable face shield may be used in place of a mask.[2]

Use of N95 Respirators for Healthcare Workers

N95s are required for respiratory protection during Aerosol-Generating Medical Procedures (AGMPs) on suspected or confirmed COVID-19 patients.

- A point of care risk assessment must be performed before every patient interaction to determine appropriate intervention and interaction strategies including the use of PPE.
- N95 respirator allocation should be centralized and controlled for staff doing an AGMP in known/suspected COVID-19 positive patients and high-risk scenarios (e.g. Code Blue in ED with no history available).
- Outside of healthcare workers who are performing AGMPs, N95 respirators should not be used by other healthcare workers, unless managing a patient with a suspected or confirmed communicable disease that is airborne (e.g. tuberculosis, measles, chickenpox).
- The number of healthcare workers in the room during the AGMP should be kept to the absolute minimum in order to reduce risk of exposure and minimize use of N95 respirators.
- N95 respirators once removed should be discarded.
- Extended/continuous use of N95 respirators can be implemented in areas where repeated AGMP is anticipated. If this strategy is used, N95 respirators should be removed and discarded at the same opportunities as outlined for masks in 1 c.

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N.B. Please note that this document is only providing guidance and/or recommendations to support individual planning for hospitals within the Toronto Region of Ontario Health. This document does not constitute provincial decisions, directions or guidance.

REFERENCES

1. Toronto Region COVID-19 Hospital Operations Table. Recommended Guidelines – Masking in Hospitals 24 March 2020.
2. World Health Organization. Advice on the use of masks in the context of COVID-19: Interim Guidance. 5 June 5 2020.
3. Chu, D.K., Akl, E.A., Duda, S., Solo, K., Yaacoub, S., Schunemann, H.J. et al. Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis 1 June 2020 | The Lancet. Accessed June 22 2020 https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext
4. Public Health Agency of Canada. Non-medical masks and face coverings: About. June 24, 2020. Accessed June 26 2020 https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/about-non-medical-masks-face-coverings.html
5. Toronto Region COVID-19 Hospital Operations Table. Recommended Guidelines for Personal Protective Equipment (PPE) Conservation 30 March 2020
6. Ministry of Health. COVID-19 Operational Requirements: Health Sector Restart Version 2. 16 June 2020.

APPENDIX A

Principles of Universal Masking

1. Healthcare workers with minimal or subclinical symptoms of COVID-19 could inadvertently infect patients and other staff prior to recognizing their symptoms.
2. If an exposure to a COVID-19 positive person (staff or patient) does occur, a broader healthcare worker masking policy may reduce the number of staff required to be on quarantine.
3. PPE conservation is critical and a sustainable approach is required. Although PPE is presently available, with the increase in numbers of COVID-19 patients and the duration of the pandemic response, there is a very real risk to supply lines. If we do not conserve PPE now, we will face shortages when we need it most.
4. Many of our clinical staff are using multiple procedure masks and other PPE items unnecessarily while providing care during the course of their shifts. Some non-clinical staff are using procedure masks when they are clearly not required. We believe that these guidelines will reduce our overall PPE use as an organization.
5. A standardized approach to procedure mask distribution will help align procedure mask use with best practices, and will prevent wasting, hording or even theft of PPE.