

Strategies for Optimizing Supplies of Facemasks for Healthcare Facilities in Kansas

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The following contingency and crisis strategies are based upon these assumptions:

1. Facilities understand their current facemask inventory and supply chain
2. Facilities understand their facemask utilization rate
3. Facilities are in communication with local healthcare coalitions and local public health partners (e.g., public health emergency preparedness and response staff) regarding identification of additional supplies
4. Facilities have already implemented other [engineering and administrative control measures](#) including:
 - Reducing the number of patients going to the hospital or outpatient settings
 - Excluding healthcare personnel (HCP) not essential for patient care from entering their care area
 - Reducing face-to-face HCP encounters with patients
 - Excluding visitors to patients with confirmed or suspected COVID-19
 - Cohorting patients and HCP
 - Maximizing use of telemedicine
5. Facilities have provided HCP with required education and training, including having them demonstrate competency with donning and doffing, with any personal protective equipment (PPE) ensemble that is used to perform job responsibilities, such as provision of patient care

Your facility has its normal supply of Facemasks = Normal (conventional) use

Conventional Capacity Strategies: measures consist of providing patient care without any change in daily contemporary practices. This set of measures, consisting of engineering, administrative, and PPE controls should already be implemented in general infection prevention and control plans in healthcare settings.

Use facemasks according to product labeling and local, state, and federal requirements.

- FDA-cleared surgical masks are designed to protect against splashes and sprays; these should be prioritized for exposures in which these are anticipated, including surgical procedures.
- Facemasks not regulated by FDA, such as some procedure masks which are typically used for isolation purposes, may not provide protection against splashes and sprays.

Your facility has limited supplies of Facemasks = Backup plan (contingency) use

Contingency Capacity Strategies: measures may change daily standard practices but may not have any significant impact on the care delivered to the patient or the safety of HCP. These practices may be used temporarily during periods of expected facemask shortages.

Selectively cancel elective/non-urgent procedures and appointments for which a facemask is typically used by HCP.

Remove free-serve facemask stations from public areas.

- All facemasks should be placed in a secure and monitored site; especially important in high-traffic areas like emergency departments
- Continue to provide facemasks to symptomatic patients upon check-in at entry points.

Implement extended use of facemasks: the practice of wearing the same facemask for repeated close contact encounters with several different patients, without removing facemasks between patient encounters.

- Remove and discard if soiled, damaged, or hard to breathe through.
- HCP must take care not to touch their facemask. If they touch or adjust their facemask they must immediately perform hand hygiene.
- HCP should leave the patient care area if they need to remove the facemask.

Restrict facemasks to use only by HCP: rather than having patients use a facemask for source control, consider having patients with respiratory symptoms use tissues or other barriers to cover their mouth and nose.

Crisis Capacity Strategies: strategies that are not commensurate with U.S. standards of care. These measures, or a combination of these measures, may need to be considered during periods of known facemask shortages.

Cancel all elective/non-urgent procedures and appointments for which a facemask is typically used by HCP.

Use of facemasks beyond the manufacturer-designated shelf life during patient care activities.

- Devices should be visually inspected prior to use, if damage or degraded the product should be discarded.
- If there is no date available on the facemask label or packaging, facilities should contact the manufacturer to discuss.

Implement limited reuse of facemasks: the practice of using the same facemask by one HCP for multiple encounters with different patients but removing it after each encounter.

- Facemask should be removed and discarded if soiled, damaged, or hard to breathe through.
- Not all facemasks can be reused:
 - Facemasks that tie may not be able to be undone without tearing and should be considered only for extended use, rather than reuse.
 - Facemasks with elastic ear hooks may be more suitable for reuse.
- Take care not to touch outer surfaces of the mask during patient care; if touched or adjusted must immediately perform hand hygiene.
- Mask removal and replacement must be done in a careful and deliberate manner:
 - HCP should leave patient care area before removal.
 - Facemasks should be carefully folded so that the outer surface is held inward and against itself to reduce contact with the outer surface during storage.
 - The folded mask can be stored between uses in a clean sealable paper bag or breathable container.

Prioritize facemasks for selected activities such as:

- Essential surgeries and procedures
- Splash and spray generating procedures
- Prolonged face-to-face or close contact with a potentially infectious patient
- If respirators are not available, for performing aerosol-generating procedures

IF YOUR FACILITY HAS RUN OUT OF FACEMASKS

Exclude HCP at higher risk for severe illness from COVID-19 from contact with known or suspected COVID-19 patients:

- Older age
- Chronic medical conditions
- Pregnant

Designate convalescent HCP for provision of care to known or suspected COVID-19 patients. It may be possible to designate HCP who have clinically recovered from COVID-19 to be preferentially assigned to care for COVID-19 patients. Individuals who have recovered from COVID-19 infection may have developed some protective immunity, but this has not yet been confirmed.

Use a face shield that covers the entire front (that extends to the chin or below) and sides of the face with no facemask.

Consider use of expedient patient isolation rooms for risk reduction. Portable fan devices with high-efficiency particulate air (HEPA) filtration that are carefully placed can increase the effective air changes per hour of clean air to the patient room, reducing risk to individuals entering the room without respiratory protection. NIOSH has developed [guidance](#) for using portable HEPA filtration systems to create expedient patient isolation rooms. The expedient patient isolation room approach involves establishing a high-ventilation-rate, negative pressure, inner isolation zone that sits within a “clean” larger ventilated zone.

Consider use of ventilated headboards. NIOSH has developed the ventilated headboard that draws exhaled air from a patient in bed into a HEPA filter, decreasing risk of HCP exposure to patient-generated aerosol. This technology consists of lightweight, sturdy, and adjustable aluminum framing with a retractable plastic canopy. The ventilated headboard can be deployed in combination with HEPA fan/filter units to provide surge isolation capacity within a variety of environments, from traditional patient rooms to triage stations, and emergency medical shelters.

HCP use of homemade masks: In settings where facemasks are not available, HCP might use homemade masks (e.g., bandana, scarf) for care of patients with COVID-19 as a last resort. However, homemade masks are not considered PPE, since their capability to protect HCP is unknown. Caution should be exercised when considering this option. Homemade masks should ideally be used in combination with a face shield that covers the entire front (that extends to the chin or below) and sides of the face.

References:

- CDC. *Strategies for Optimizing the Supply of Facemasks*. March 17, 2020.
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/face-masks.html>.
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