Strategies for Optimizing Supplies of Isolation Gowns for Healthcare Facilities in Kansas

March 20, 2020

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

1. Facilities understand their current isolation gown inventory and supply chain
2. Facilities understand their isolation gown 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:
   o Reducing the number of patients going to the hospital or outpatient settings
   o Excluding healthcare personnel (HCP) not essential for patient care from entering their care area
   o Reducing face-to-face HCP encounters with patients
   o Excluding visitors to patients with confirmed or suspected COVID-19
   o Cohorting patients and HCP
   o 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 PPE ensemble that is used to perform job responsibilities, such as provision of patient care

Your facility has its normal supply of Isolation Gowns = Normal (conventional)

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 personal protective equipment (PPE) controls should already be implemented in general infection prevention and control plans in healthcare settings.

Use isolation gown alternatives that offer equivalent or higher protection to help persevere disposable isolation gowns for situations in which their use is most appropriate.

Several fluid-resistant and impermeable protective clothing options are available for HCP. These include isolation gowns and surgical gowns. When selecting the most appropriate protective clothing, employers should consider all of the available information on recommended protective clothing, including the potential limitations. Nonsterile, disposable isolation gowns, which are used for routine patient care in healthcare settings, are appropriate for use by HCP when caring for patients with suspected or confirmed COVID-19. In times of gown shortages, surgical gowns should be prioritized for surgical and other sterile procedures. Current U.S. guidelines do not require use of gowns that conform to any standards.

Use isolation gowns and any alternatives according to product labeling.
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 eye protection shortages.

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

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

**Shift gown use towards cloth isolation gowns.** Reusable (i.e. washable) gowns are typically made of polyester or polyester-cotton fabrics. Gowns made of these fabrics can be safely laundered according to routine procedures and reused.

- Care should be taken to ensure that HCP do not touch outer surfaces of the gown during care; if touched/adjusted, immediately perform hand hygiene.
- Laundry operations and personnel may need to be augmented to facilitate additional washing loads and cycles.
- Establish a system to routinely inspect, maintain (e.g., mend a small hole in the gown, replace missing fastening ties), and replace reusable gowns when needed (e.g. when they are thin or ripped).

**Consider the use of coveralls.** These typically provide 360° protection because they are designed to cover the whole body, including the back and lower legs, and sometimes the head and feet as well.

- HCP unfamiliar with the use of coveralls must be trained and practiced in their use prior to using during patient care.
- Ensure appropriate protective level of the product you are using; material and seam barrier properties as well as coverage provided, and closure features can all greatly affect the protective level.
- In the U.S., the NFPA 1999 standard specifies the minimum design, performance, testing, documentation, and certification requirements for new single-use and new multiple-use emergency medical operations protective clothing, including coveralls for HCP.

**Use of expired gowns beyond the manufacturer-designated shelf life for training and competency checks (i.e. ensure appropriate donning and doffing).** Most isolation gowns do not have a manufacturer-designated shelf life; however, consideration can be made to use of gowns that do and are past that date. If there is no date available on the gown label or packaging, facilities should contact the manufacturer.

**Use gowns or coveralls conforming to international standards.** Though current U.S. guidelines do not require uses of gowns that conform to any standards, in times of shortages, facilities can consider using international gowns and coveralls. These products, including EN13795 and EN14126, could be reserved for activities that may involve contact with moderate to high amounts of body fluids.
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 eye protection shortages.

Your facility has no supplies of Isolation Gowns = No other choices (crisis) use

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

Extended use of isolation gowns: the same gown is worn by the same HCP when interacting with more than one patient known to be infected with the same infectious disease and housed in the same location (e.g., COVID-19 patients residing in an isolation cohort).
- Consider only if there are no additional co-infectious diagnoses transmitted by contact (e.g., *Clostridioides difficile*) among patients.
- Remove and discard gown (as per usual practices) once it becomes visibly soiled (cloth can be reprocessed if only soiled, not damaged) or damaged.
- Acceptable for disposable or cloth gowns.

Reuse of cloth isolation gowns: the goal of this strategy is to minimize HCP exposures to diseases, not necessarily to prevent transmission between patients. Cloth gowns could potentially be untied and retied and could be considered for reuse without laundering in between. The same cloth gown would be used repeatedly by the same HCP. This cannot be done with disposable gowns as fasteners on these gowns are typically broken when doffed.
- Gowns should be visually inspected prior to use, if damage or degraded the product should be discarded.
- Risk to HCP is likely low when used repeatedly as part of Standard Precautions to protect from splash.
- Remove (as per usual practices) and discard gown once it becomes visibly soiled (reprocess if only soiled, not damaged) or damaged (repair if able, dispose if not).

Prioritize gowns to the following activities:
- Aerosol, splash, and spray generating procedures.
- Dressing, bathing/showering, transferring, providing hygiene, changing linens, changing briefs/assisting with toileting, device use or care, and wound care.
- Consider suspending use of gowns for endemic multidrug-resistant organisms (e.g., MRSA, VRE, ESBLs).
- Surgical gown should be prioritized for surgical and sterile procedures.
IF YOUR FACILITY HAS RUN OUT OF GOWNS

Consider using gown alternatives that have not been evaluated as effective.

In situations of severely limited or no available isolation gowns, the following pieces of clothing can be considered as single-use as a last resort for care of COVID-19 patients. NOTE: none of these options can be considered PPE, since their capability to protect HCP is unknown. Preferable features include long sleeves and closures (snaps, buttons) that can be fastened and secured.

- Disposable laboratory coats
- Reusable (washable) patient gowns
- Reusable (washable) laboratory coats
- Disposable aprons
- Combinations of clothing: Combinations of pieces of clothing can be considered for activities that may involve body fluids and when there are no gowns available:
  - Long sleeve aprons in combination with long sleeve patient gowns or laboratory coats
  - Open back gowns with long sleeve patient gowns or laboratory coats
  - Sleeve covers in combination with aprons and long sleeve patient gowns or laboratory coats

Reusable patient gowns and lab coats can be safely laundered according to routine procedures.

- Laundry operations and personnel may need to be augmented to facilitate additional washing loads and cycles.
- Systems are established to routinely inspect, maintain (e.g., mend a small hole in a gown, replace missing fastening ties) and replace reusable gowns when needed (e.g., when they are thin or ripped).

References: