Presentation Overview: Content

- Review general background information on N95 respirator optimization strategies
- Apply questions commonly asked of HAI Program Infection Preventionists (IPs)
- Use representative examples to illustrate considerations and strategies for optimizing N95s and other personal protective equipment (PPE)
Presentation Overview: Context

- Walk through the “how” of applying the CDC principles
- Facility-specific scenarios
- Role of facility-level consultation with leadership, medical director, director of nursing, and IP
- Department of Health Services resources for consultation and alignment
  - IPs
  - Division of Quality Assurance Regional Field Operations Directors
- CDC guidance current as of April 9, 2021
CDC PPE Optimization Framework

- Specific to each type of PPE (e.g., conventional capacity for gloves, but contingency capacity for gowns)
- Regularly evaluate current and anticipated supply
- Fluid movement between capacities as supplies change

Crisis capacity is not commensurate with U.S. standards of care and carries inherent risks.

For the health and safety of everyone, optimizing PPE cannot become the new normal.

CDC PPE Optimization Framework

Goal: Return to conventional capacity as soon as possible and stay there as long as possible.
Optimizing N95 Respirator Supplies

- Combine interventions from across the hierarchy of controls to prevent airborne transmission
- Provides an additional degree of protection, even if one intervention fails or is unavailable

www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy
Optimizing N95 Respirator Supplies

Engineering control examples

- Place patients with suspected or confirmed SARS CoV-2 infection in an airborne infection isolation room (AIIR) for aerosol-generating procedures (AGP), if possible.
- Properly maintain ventilation systems to provide air movement from a clean-to-contaminated flow direction.

Optimizing N95 Respirator Supplies

Administrative control examples

- Limit staff not directly involved in resident care (e.g., dietary, housekeeping).
- Implement source control for everyone in the facility.
- Cohort residents to group care of those infected with the same organism to one area.

www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy
## Optimizing N95 Respirators

<table>
<thead>
<tr>
<th>Conventional Capacity</th>
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<tbody>
<tr>
<td>• Implement just-in-time fit testing.</td>
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<tr>
<td>• Limit respirators during training.</td>
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<td>• Implement qualitative fit testing.</td>
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<td>• Use alternatives to N95 respirators, such as other filtering facepiece respirators, elastomeric respirators, and powered air purifying respirators.</td>
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<td>• Additional guidance</td>
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## Optimizing N95 Respirators

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<td>• Temporarily <a href="#">suspend annual fit testing</a>.</td>
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<td>• Use N95 respirators beyond the manufacturer-designated shelf life for training and fit testing.</td>
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<tr>
<td>• <a href="#">Extend the use</a> of N95 respirators by wearing the same N95 for repeated close contact encounters with several different residents.</td>
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Optimizing N95 Respirators

### Crisis Capacity

- Use respirators beyond the manufacturer-designated shelf life for health care delivery.
- Use respirators approved under standards used in other countries.
- Implement limited reuse of N95 respirators.
- During times of crisis, it may be necessary to practice limited reuse on top of extended use.
- Use additional respirators beyond the manufacturer-designated shelf life that have not been evaluated by NIOSH.
- Prioritize the use of N95 respirators and facemasks by activity.
- Additional guidance on crisis capacity strategies and reuse

Determine if Crisis Capacity Strategy is Needed
Evaluation Considerations

- Adequacy of current N95 inventory and supply chain
- Availability of other respirators in your inventory
- Extended use of N95s
- All factors, including engineering and administrative controls

Contingency Capacity: Extended Use

Extended use means wearing the same N95 respirator for repeated close contact encounters with several different residents without removing it between encounters.

Contingency Capacity: Extended Use

- Well-suited when multiple residents:
  - Have the same infectious disease diagnosis.
  - Require use of a respirator.
  - Are cohorted (e.g., housed on the same unit).

- Avoid use on a COVID-19 quarantine unit because residents don’t have the same infectious disease diagnosis.

- Discard N95 respirators after extended use whenever possible. If reuse is necessary in addition to extended use, refer to reuse section of crisis capacity strategies.
Crisis Capacity: Limited Reuse

Limited reuse is when one staff member reuses the same N95 respirator for multiple encounters with different residents, but removing it (i.e., doffing) after each encounter. This is often referred to as “limited reuse” because restrictions are in place to limit the number of times the same respirator is reused (e.g., for one shift).

Crisis Capacity: Limited Reuse

- Review [DHS Health Alert Network (HAN) message #28, Guidance for Reuse of N95 Respirators.](https://www.dhs.wisconsin.gov)
- Develop a process and training for reuse based on CDC guidance that includes details on storage, glove use, etc.
- Consider CDC guidance for prioritizing N95 respirators and well-fitting facemasks by activity type when using limited reuse strategies.
Considerations for Decision Making
Multidisciplinary Team Discussions

- Director of Nursing
- Medical Director
- Infection Preventionist
- Supply chain managers
- Maintenance
- Administration
- Frontline staff
- Others?
Discussion Point: Risks

- Have we done a thorough risk assessment?
- What is our current outbreak status?
- Do we understand what optimization strategies are appropriate to consider for our current situation per CDC guidance?
Discussion Point: Policies

- Do we have needed policies in place?
  - Are staff trained on these policies?
  - Do we have a process to audit staff practices?
  - Does our audit data support that staff are competent in the processes outlined?
- Have we reviewed the hierarchy of controls?
- Are recommended engineering and administrative controls in place?
Discussion Point: Resources

- Have we confirmed current PPE supply availability?
- Have we reached out to partners for assistance, including emergency management and our local health department?
- Are staff fit tested for the respirator that is in use?
- Will staff use face shields or goggles for eye protection?
- Have we reviewed instructions for use from the PPE manufacturers?
Example Scenario 1

- **SNF in outbreak status, 20 beds with one hallway**
  - Staff: Three COVID+, all off work for isolation period
  - Residents: Two COVID+ (one requires AGP)
  - Remaining 18 residents had unprotected exposures to COVID+ staff

- **Engineering controls**
  - HEPA filter (AGP)
Example Scenario 1

**Administrative controls**
- Inability to dedicate staff for COVID+ residents due to staffing shortages
- Inability to create dedicated COVID+ resident unit

**PPE**
- Crisis capacity for N95s (limited re-use and prioritization for all residents including COVID+ residents)
- N95 discarded after AGP
Example Scenario 2

- One unit (memory care) in outbreak status, one not (rehabilitation)
  - Residents: Two COVID+ (one with AGP)
  - Staff: Three COVID+, all off work for isolation periods
  - No shared staff between units
- Engineering controls
  - One HEPA air scrubber available, dedicated to the resident’s room with the AGP
Example Scenario 2

- **Administrative controls**
  - Units are separated by layout and staff can be dedicated to Memory Care Unit.

- **PPE**
  - Conventional capacity for N95s if all recommended COVID-19 PPE is implemented on the Memory Care Unit only
Questions?

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