COVID-19 has presented many challenges to those working in health care settings. One of those challenges is how to deal with emergencies in residents with known or suspected COVID infections.

During this presentation we will discuss the risks of exposure during the performance of Basic Life Support procedures (CPR), current guidelines for limiting those risks and the importance of end-of-life conversations with residents and families including a review of current and desired code status.
WHAT ARE THE EXPOSURE RISKS DURING CPR?

EXPOSURE RISKS DURING CPR

• Administration of CPR involves performance of aerosol-generating procedures including:
  – Chest compressions
  – Positive pressure ventilations
  – Establishment of an advanced airway (on-site intubation by EMS personnel)
• Resuscitation efforts require numerous personnel working in close proximity to the resident and each other
• Lapses in infection control procedures due to the emergent event and immediate needs of the resident
**Minimizing Risks**

- The American Heart Association (AHA) has updated CPR guidelines to address residents with COVID-19. These guidelines emphasize the need to reduce provider risk as unnecessary exposure can further strain the workforce.
- These guidelines addressed the following three (3) principles:
  - Minimizing provider exposure
  - Oxygenation/ventilation strategies
  - Starting/continuing CPR

**Minimizing Provider Exposure**

- All rescuers should don personal protective equipment (PPE) before entering the scene to protect against airborne and droplet particles
- Personnel should be limited to those essential to resident care
- Rescuers should consider replacing manual chest compressions with mechanical CPR (not available in LTC setting)
- COVID-19 status should be communicated to all new providers before arrival on scene or when transferring the resident to a second setting, e.g. acute care
If available, attach a HEPA filter in the path of exhaled gas for manual devices before administering any breathes.

Consider manual ventilation, if intubation is delayed, with a bag-valve mask with a HEPA filter (EMS/hospital settings).

For adults, consider passive oxygenation with non-rebreathing mask covered by a surgical mask as an alternative to bag-valve mask for short periods.
Memorandum Summary

- **Initiation of CPR** - Prior to the arrival of emergency medical services (EMS), nursing homes must provide basic life support, including initiation of CPR, to a resident who experiences cardiac arrest (cessation of respirations and/or pulse) in accordance with that resident’s advance directives or in the absence of advance directives or a Do Not Resuscitate (DNR) order. CPR-certified staff must be available at all times.
- **Facility CPR Policy** - Some nursing homes have implemented facility-wide no CPR policies. Facilities must not establish and implement facility-wide no CPR policies.
- **Surveysor Implications** - Surveyors should ascertain that facility policies related to emergency response require staff to initiate CPR as appropriate and that records do not reflect instances where CPR was not initiated by staff even though the resident requested CPR or had not formulated advance directives.

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**STARTING/CONTINUING CPR**

Consider whether it’s appropriate to begin and continue CPR

- If a resident is a FULL code or there is no advance directive or a Do Not Resuscitate (DNR) order is not in effect, CPR must be started prior to the arrival of EMS personnel.
- Discuss care goals with resident and/or proxy in anticipation of the need for a increased level of care, e.g. transfer to acute care setting/hospital. Review current code status and make modifications as requested by the resident/proxy. Consider a palliative care consultation, if applicable.
- Implement policies to help healthcare personnel (HCP) determine if it is appropriate to begin CPR or terminate CPR. Identify the manner in which the resident's code status is designated in your home, e.g. green dot-full code, red dot-DNR.
BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients

Verify scene safety
• Don PPE
• Limit personnel

Victim is unresponsive. Shout for nearby help. Activate emergency response system via mobile device if appropriate. Get AED and emergency equipment (or send someone to do so).

Normal breathing, has pulse
• Provide rescue breathing using bag-mask device with filter and tight seal.
• 1 breath every 5-6 seconds, or about 10-12 breaths/min.
• Activate emergency response system if not already done after 2 minutes.
• Continue rescue breathing check pulse about every 2 minutes. If no pulse, begin CPR (go to "CPR" box).
• If possible opioid overdose, administer naloxone if available per protocol.

No breathing or only gasping, no pulse

Normal breathing, has pulse

Look for no breathing or only gasping and check pulse (simultaneously). Is pulse definitely felt within 10 seconds?

No normal breathing, has pulse

Monitor until emergency responders arrive.

By this time in all scenarios, emergency response system or backup is activated, and AED and emergency equipment are retrieved or someone is retrieving them.

CPR

Begin cycles of 30 compressions and 2 breaths using bag-mask device with filter and tight seal OR continuous compressions with passive oxygenation using face mask. Use AED as soon as it is available.

AED arrives.

Check rhythm. Shockable rhythm?

Yes, shockable

Give 1 shock. Resume CPR immediately for about 2 minutes (until prompted by AED to allow rhythm check). Continue until ALS providers take over or victim starts to move.

No, nonshockable

Resume CPR immediately for about 2 minutes (until prompted by AED to allow rhythm check). Continue until ALS providers take over or victim starts to move.
**ADDITIONAL GUIDANCE FROM AMDA**

- Don PPE including N95 respirator mask, gown and face shield **BEFORE** initiating CPR. **Initiate CPR only after PPE is donned**
- Spread clear plastic sheet over the resident, including the resident's head
- Ensure only the minimum number of HCP with appropriate PPE present in the room during CPR
- If ventilation is to be conducted, utilize a bag-valve mask **UNDER** the plastic sheet and ensure everyone in the room is wearing an N95. If none available, perform hands-only CPR without ventilation until EMS arrives
- Close the door to the resident's room before performing CPR. Move other residents away from the area, e.g. hallways and transportation route out of the facility

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**AMBU SPUR II RESUSCITATOR WITH HEPA FILTER**

- Efficient removal of aerosolized contaminants
- Reduces risk of cross-contamination between patient and clinical staff
- HEPA
- Come complete with mask, reservoir and oxygen tubing
Resources

• www.heart.org American Heart Association BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients 2020

• www.paltc.org The Society for Post-Acute and Long Term Care Medicine CPR Guidance During the COVID-19 Pandemic

• http://lippincottsp.com/blog.entry.html/2020/04/20/cardiac_arrest_inpa-JucB.html
  “Calling the Shots” Colette Bishop Hendler, RN, MS, MA, CIC, Editor in Chief, Lippincott Solutions, Point-of-Care

  Example of bag-valve mask with HEPA filter