



## AHA updates guidance for CPR of children with suspected, confirmed COVID-19

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Use of personal protective equipment (PPE) and vaccination against SARS-CoV-2 are critical safety measures for health care professionals who provide basic and advanced life support to children and neonates with suspected or confirmed COVID-19, according to updated [guidance](#) from the American Heart Association (AHA).

*Guidance for Cardiopulmonary Resuscitation of Children With Suspected or Confirmed COVID-19*, published July 12 in *Pediatrics*, outlines strategies to protect health care providers performing CPR and achieve the best possible outcomes for children who are resuscitated. Updated algorithms for CPR are included in the document.

The recommendations update 2020 interim guidance that addressed cardiac life support in adults as well as children and neonates with suspected or confirmed COVID-19. The update reflects the evolving epidemiology of pediatric COVID-19, increased understanding of transmissibility, the development of vaccines and differences in resuscitation priorities for children and neonates compared to adults.

Up to 30% of children hospitalized for COVID-19 are admitted to intensive care units, and 5%-15% require mechanical ventilation. Additionally, cardiac arrest due to non-COVID-19 related reasons may occur in children with incidental positive SARS-CoV-2 tests.

Patients with cardiac arrest are at considerable risk for death or poor neurologic outcomes when CPR is withheld, delayed or otherwise compromised. Therefore, children and neonates with suspected or confirmed

COVID-19 should receive prompt, high-quality CPR in accordance with evidence-based guidelines, according to the AHA.

### **Reducing risk to providers**

The AHA strongly encourages all health care providers to receive COVID-19 vaccines and boosters to reduce their risk of SARS-CoV-2 and severe COVID-19.

Because infections can occur in vaccinated individuals, providers who are resuscitating a patient with suspected or confirmed COVID-19 should always use appropriate PPE regardless of their vaccination status. Initial responders who are not wearing appropriate PPE should don it immediately and begin CPR.

Transmission of SARS-CoV-2 generally occurs from inhalation of respiratory particles when individuals are within 6 feet. Transmission through aerosolized particles also can happen at greater distances, particularly in poorly ventilated spaces during aerosol-generating procedures (AGPs).

CPR and bag-mask ventilation are considered AGPs. Therefore, providers should use N95 or positive pressure respirators, eye protection, gowns and gloves when resuscitating patients with suspected or confirmed SARS-CoV-2. High-efficiency particulate air (HEPA) filters should be utilized with both invasive and noninvasive ventilatory interfaces and during manual and mechanical ventilation.

Following are strategies to reduce risk during CPR:

- Use an N95 respirator and eye protection when a patient's COVID-19 status is unknown.
- Limit the number of resuscitation providers to those required for providing high-quality care.
- Ensure resuscitation providers are trained and prepared to don PPE and that PPE is appropriately stocked and optimally located.
- Additional personnel for chest compressions may be required due to increased fatigue or the potential for N95 respirator slippage while providing chest compressions.
- A HEPA filter should be attached securely to the ventilation device.

### **Resources**

- [Neonatal Resuscitation Program](#)
- [AHA guidelines on pediatric basic and advanced life support](#)
- [AHA guidelines on neonatal resuscitation](#)