

COVID-19 Pandemic: Ventilation during Basic Life Support

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We are grateful to Elkind et al.¹ for having emphasized on the role of the American Heart Association (AHA) as a catalyst for change and a convener in the global COVID-19 pandemic. The principles of emergency care should not be easily abandoned when conditions are restrictive.² Interim guidance from AHA and consensus on recommendations regarding cardiopulmonary resuscitation (CPR) from the International Liaison Committee on Resuscitation (ILCOR) suggest that lay rescuers consider chest compression-only CPR and public-access defibrillation in adult victims of cardiac arrest with have been exposed suspected or confirmed COVID-19, especially if they have been exposed as household members.^{3,4} Generally, cardiac arrest caused by hypoxemia has a poor prognosis, in particular when no respiratory support can be provided.⁵ When trained, able and willing, lay rescuers may decide to deliver rescue breaths to children in addition to chest compressions given the higher incidence of respiratory arrest in children.^{3,4}

The use of semi-transparent face shields that have included one-way valves may minimize the risk of transmission of severe acute respiratory syndrome-associated corona virus from direct contact, droplets and aerosols.⁶ For healthcare professionals performing bag-valve-mask ventilation a centrally perforated polyvinyl chloride shield tightly arranged between mask and valve helps avoid contact with mucous membranes of the patient and to diminish exposure to air-borne virus by drainage and adhesion (Fig.1). This might be particularly helpful when rescuers cannot abstain from preceding bag-valve-mask ventilation prior to rapid airway management. Connection to a ventilator with a high-efficiency particulate air filter in the path of exhaled gas further diminishes exposure.³ Self-protection is vital during COVID-19 pandemic and infection with air-borne virus load can occur despite adequate full personal protective equipment with gowns, gloves, masks and protective goggles.⁷

Figure1. Centrally perforated 120 x 120 cm polyvinyl chloride shield arranged between respiratory mask and valve to contain droplets and aerosols and to protect from contact with mucous membranes of the patient during CPR training



Disclosures

None.

Written informed consent was obtained from the model for publication.

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