

**Interim Guidance for Basic and Advanced Life Support in Adults, Children, and Neonates With Suspected or Confirmed COVID-19:**  
**From the Emergency Cardiovascular Care Committee and Get With the Guidelines®-Resuscitation Adult and Pediatric Task Forces of the American Heart Association in Collaboration with the American Academy of Pediatrics, American Association for Respiratory Care, American College of Emergency Physicians, The Society of Critical Care Anesthesiologists, and American Society of Anesthesiologists:**  
**Supporting Organizations: American Association of Critical Care Nurses and National EMS Physicians**

**Running Title:** *Edelson et al.: Interim Guidance for Life Support for COVID-19*

Dana P. Edelson, MD, MS<sup>1</sup>; Comilla Sasson, MD, PhD<sup>2</sup>; Paul S. Chan, MD, MS<sup>3</sup>; Dianne L. Atkins, MD<sup>4</sup>; Khalid Aziz, MBBS, BA, MA, Med (IT)<sup>5</sup>; Lance B. Becker, MD<sup>6</sup>; Robert A. Berg, MD<sup>7</sup>; Steven M. Bradley, MD, MPH, FAHA<sup>8</sup>; Steven C. Brooks, MD, MHSc<sup>9</sup>; Adam Cheng, MD, FRCPC, FAAP<sup>10</sup>; Marilyn Escobedo, MD<sup>11</sup>; Gustavo E. Flores, MD, NRP<sup>12</sup>; Saket Girotra, MD, SM<sup>4</sup>; Antony Hsu, MD<sup>13</sup>; Beena D. Kamath-Rayne, MD, MPH<sup>14</sup>; Henry C. Lee, MD<sup>15</sup>; Rebecca E. Lehotsky, PhD<sup>2</sup>; Mary E. Mancini, RN, PhD, NE-BC<sup>16</sup>; Raina M. Merchant, MD, MSHP<sup>17</sup>; Vinay M. Nadkarni, MD, MS<sup>7</sup>; Ashish R. Panchal, MD, PhD<sup>18</sup>; Mary Ann R. Peberdy, MD<sup>19</sup>; Tia T. Raymond, MD<sup>20</sup>; Brian Walsh, PhD, RRT<sup>21</sup>; David S. Wang, MD<sup>22</sup>; Carolyn M. Zelop, MD<sup>23</sup>; Alexis Topjian, MD, MSCE<sup>7</sup>

<sup>1</sup>University of Chicago, Chicago, IL; <sup>2</sup>American Heart Association, Dallas, TX; <sup>3</sup>Mid America Heart Institute and the University of Missouri-Kansas City, Kansas City, MO; <sup>4</sup>Carver College of Medicine, University of Iowa, Iowa City, IA; <sup>5</sup>University of Alberta, Edmonton, Alberta, Canada; <sup>6</sup>Donald and Barbara Zucker School of Medicine at Hofstra Northwell, Hempstead, NY; <sup>7</sup>The Children's Hospital of Philadelphia, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>8</sup>Minneapolis Heart Institute, Healthcare Delivery Innovation Center, Minneapolis, MN; <sup>9</sup>Queen's University, Kingston, Ontario, Canada; <sup>10</sup>Alberta Children's Hospital, University of Calgary, Calgary, Alberta, Canada; <sup>11</sup>University of Oklahoma, Norman, OK; <sup>12</sup>Emergency & Critical Care Trainings, San Juan, Puerto Rico; <sup>13</sup>St Joseph Mercy, Ann Arbor, MI; <sup>14</sup>Global Newborn and Child Health American Academy of Pediatrics, Itasca, IL; <sup>15</sup>Stanford University, Stanford, CA; <sup>16</sup>The University of Texas at Arlington, Arlington, TX; <sup>17</sup>University of Pennsylvania, Philadelphia, PA; <sup>18</sup>The Ohio State University Wexner Medical Center, Columbus, OH; <sup>19</sup>Virginia Commonwealth University, Richmond, VA; <sup>20</sup>Medical City Children's Hospital, Dallas, TX; <sup>21</sup>Liberty University, Lynchburg, VA; <sup>22</sup>Columbia University Irving Medical Center, New York, NY; <sup>23</sup>NYU School of Medicine, New York, NY

**Address for Correspondence:**

Comilla Sasson, MD, PhD  
 12401 E. 17th Ave., B215, Leprino Building  
 Dallas, TX 80045  
 Tel: 847-502-2341  
 Email: Comilla.sasson@heart.org



## Background

Existing American Heart Association (AHA) cardiopulmonary resuscitation (CPR) guidelines do not address the challenges of providing resuscitation in the setting of the COVID-19 global pandemic, wherein rescuers must continuously balance the immediate needs of the victims with their own safety. To address this gap, the AHA, in collaboration with the American Academy of Pediatrics, American Association for Respiratory Care, American College of Emergency Physicians, The Society of Critical Care Anesthesiologists, and American Society of Anesthesiologists, and with the support of the American Association of Critical Care Nurses and National EMS Physicians, has compiled interim guidance to help rescuers treat victims of cardiac arrest with suspected or confirmed COVID-19.

Over the last 2 decades, there has been a steady improvement in cardiac arrest survival occurring both inside and outside of the hospital.<sup>1</sup> That success has relied on initiating proven resuscitation interventions, such as high-quality chest compressions and defibrillation, within seconds to minutes. The evolving and expanding outbreak of SARS-CoV2 infections has created important challenges to such resuscitation efforts and requires potential modifications of established processes and practices. The challenge is to ensure that patients with or without COVID-19 who experience cardiac arrest get the best possible chance of survival without compromising the safety of rescuers, who will be needed to care for future patients. Complicating the emergent response to both out-of-hospital and in-hospital cardiac arrest is that COVID-19 is highly transmissible, particularly during resuscitation, and carries a high morbidity and mortality.

Approximately 12%-19% of COVID-positive patients require hospital admission and 3%-6% become critically ill.<sup>2-4</sup> Hypoxemic respiratory failure secondary to acute respiratory distress syndrome (ARDS), myocardial injury, ventricular arrhythmias, and shock are common among critically ill patients and predispose them to cardiac arrest,<sup>5-8</sup> as do some of the proposed treatments, such as hydroxychloroquine and azithromycin, which can prolong the QT.<sup>9</sup> With infections currently growing exponentially in the United States and internationally, the percentage of cardiac arrests with COVID-19 is likely to increase.

Healthcare workers are already the highest risk profession for contracting the disease.<sup>10</sup> This risk is compounded by worldwide shortages of personal protective equipment (PPE). Resuscitations carry added risk to healthcare workers for many reasons. First, the administration of CPR involves performing numerous aerosol-generating procedures, including chest compressions, positive pressure ventilation, and establishment of an advanced airway. During those procedures, viral particles can remain suspended in the air with a half-life of approximately 1 hour and be inhaled by those nearby.<sup>11</sup> Second, resuscitation efforts require numerous providers to work in close proximity to one another and the patient. Finally, these are high-stress emergent events in which the immediate needs of the patient requiring resuscitation may result in lapses in infection-control practices.

In arriving at this interim guidance, we reviewed existing AHA CPR recommendations in the context of the COVID-19 pandemic and considered the unique pathophysiology of COVID-19 with reversal of hypoxemia as a central goal. We sought to balance the competing interests of providing timely and high-quality resuscitation to patients while simultaneously protecting



rescuers. This statement applies to all adult, pediatric, and neonatal resuscitations in patients with suspected or confirmed COVID-19 infection unless otherwise noted. The guidance contained herein is based on expert opinion and needs to be adapted locally based on current disease burden and resource availability.

## General Principles for Resuscitation in Suspected and Confirmed COVID-19 Patients

### Reduce provider exposure to COVID-19

- Rationale: It is essential that providers protect themselves and their colleagues from unnecessary exposure. Exposed providers who contract COVID-19 further decrease the already strained workforce available to respond and have the potential to add additional strain if they become critically ill.
- Strategies:
  1. Before entering the scene, all rescuers should don PPE to guard against contact with both airborne and droplet particles. Consult individual health or emergency medical services (EMS) system standards as PPE recommendations may vary considerably on the basis of current epidemiologic data and availability.
  2. Limit personnel in the room or on the scene to only those essential for patient care.
  3. In settings with protocols and expertise in place for their use, consider replacing manual chest compressions with mechanical CPR devices to reduce the number of rescuers required for adults and adolescents who meet the manufacturers height and weight criteria.
  4. Clearly communicate COVID-19 status to any new providers before their arrival on the scene or receipt of the patient when transferring to a second setting.

### Prioritize oxygenation and ventilation strategies with lower aerosolization risk.

- Rationale: While the procedure of intubation carries a high risk of aerosolization, if the patient is intubated with a cuffed endotracheal tube and connected to a ventilator with a high-efficiency particulate air (HEPA) filter in the path of exhaled gas and an in-line suction catheter, the resulting closed circuit carries a lower risk of aerosolization than any other form of positive-pressure ventilation.<sup>12</sup>
- Strategies:
  5. Attach a HEPA filter securely, if available, to any manual or mechanical ventilation device in the path of exhaled gas before administering any breaths.
  6. After healthcare providers assess the rhythm and defibrillate any ventricular arrhythmias, patients in cardiac arrest should be intubated with a cuffed tube, at the earliest feasible opportunity. Connect the endotracheal tube to a ventilator with a HEPA filter, when available.
  7. Minimize the likelihood of failed intubation attempts by
    - a) Assigning the provider and approach with the best chance of first-pass success to intubate
    - b) Pausing chest compressions to intubate
  8. Video laryngoscopy may reduce intubator exposure to aerosolized particles and should be considered, if available.

9. Before intubation, use a bag-mask device (or T-piece in neonates) with a HEPA filter and a tight seal, or, for adults, consider passive oxygenation with nonrebreathing face mask (NRFM), covered by a surgical mask.
10. If intubation is delayed, consider manual ventilation with a supraglottic airway or bag-mask device with a HEPA filter.
11. Once on a closed circuit, minimize disconnections to reduce aerosolization.

Consider the appropriateness of starting and continuing resuscitation.

- Rationale: Cardiopulmonary resuscitation is a high-intensity team effort that diverts rescuer attention away from other patients.<sup>13</sup> In the context of COVID-19, the risk to the clinical team is increased and resources can be profoundly more limited, particularly in regions that are experiencing a high burden of disease. While the outcomes for cardiac arrest in COVID-19 are as of yet unknown, the mortality for critically ill COVID-19 patients is high and rises with increasing age and comorbidities, particularly cardiovascular disease.<sup>2, 5-8</sup> Therefore, it is reasonable to consider age, comorbidities, and severity of illness in determining the appropriateness of resuscitation and balance the likelihood of success against the risk to rescuers and patients from whom resources are being diverted.<sup>14</sup>
- Strategies:
  12. Address goals of care with COVID-19 patients (or proxy) in anticipation of the potential need for increased levels of care.
  13. Healthcare systems and EMS agencies should institute policies to guide front-line providers in determining the appropriateness of starting and terminating CPR for patients with COVID-19, taking into account patient risk factors to estimate the likelihood of survival. Risk stratification and policies should be communicated to patients (or proxy) during goals of care discussions.
  14. There is insufficient data to support extracorporeal cardiopulmonary resuscitation (E-CPR) for COVID-19 patients.

(Figure 1)

**Algorithms With Key Changes**

Figures 2-6 reflect COVID-19 specific updates to the current Basic Life Support (BLS), Advanced Cardiovascular Life Support (ACLS), Pediatric Basic Life Support, and Pediatric Cardiac Arrest algorithms and are meant to replace the standard algorithms in patients with suspected or confirmed COVID-19 disease. In COVID-19 negative patients, or where COVID-19 is not suspected, cardiac arrest resuscitations should proceed according to the standard algorithms. New boxes specific to COVID-19 are in yellow, and new guidance specific to COVID-19 is bolded and underlined.

(Figure 2)

(Figure 3)



(Figure 4)

(Figure 5)

(Figure 6)

## Situation- and Setting-Specific Considerations

### Out-of-Hospital Cardiac Arrest (OHCA)

Below are specific considerations for cardiac arrest in victims with suspected or confirmed COVID-19 occurring outside of the hospital. Depending on local prevalence of disease and evidence of community spread, it may be reasonable to suspect COVID-19 in all OHCA, by default.

- Lay rescuers:
 

Bystander CPR has consistently been shown to improve the likelihood of survival from OHCA, which decreases with every minute that CPR and defibrillation are delayed.<sup>15-17</sup> Rescuers in the community are unlikely to have access to adequate PPE and, therefore, are at increased risk of exposure to COVID-19 during CPR, compared to healthcare providers with adequate PPE. Rescuers with increasing age and the presence of comorbid conditions, such as heart disease, diabetes, hypertension, and chronic lung disease,<sup>4</sup> are at increased risk of becoming critically ill if infected with SARS-CoV2. However, when the cardiac arrest occurs at home (as has been reported in 70% of OHCA<sup>17</sup> before the recent wide-spread shelter-at-home ordinances) lay rescuers are likely to already have been exposed to COVID-19.

  - Chest compressions
    - **For adults:** Lay rescuers should perform at least hands-only CPR after recognition of a cardiac arrest event, if willing and able, especially if they are household members who have been exposed to the victim at home. A face mask or cloth covering the mouth and nose of the rescuer and/or victim may reduce the risk of transmission to a non-household bystander.
    - **For children:** Lay rescuers should perform chest compressions and consider mouth-to-mouth ventilation, if willing and able, given the higher incidence of respiratory arrest in children,<sup>17</sup> especially if they are household members who have been exposed to the victim at home. A face mask or cloth covering the mouth and nose of the rescuer and/or victim may reduce the risk of transmission to a non-household bystander if unable or unwilling to perform mouth-to-mouth ventilation.
  - Public access defibrillation
    - Because defibrillation is not expected to be a highly aerosolizing procedure, lay rescuers should use an automated external defibrillator, if available, to assess and treat victims of OHCA.
- EMS



- Telecommunication (Dispatch):
  - o Telecommunicators, consistent with local protocols, should screen all calls for COVID-19 symptoms (eg, fever, cough, shortness of breath) or known COVID-19 infection in the victim or any recent contacts, including any household members.
    - For lay rescuers, telecommunicators should provide guidance about risk of exposure to COVID-19 for rescuers and instructions for compression-only CPR, as above.
    - For EMS, telecommunicators should alert dispatched EMS teams to don PPE if there is any suspicion for COVID-19 infection.
- Transport
  - o Family members and other contacts of patients with suspected or confirmed COVID-19 should not ride in the transport vehicle.
  - o If return of spontaneous circulation (ROSC) has not been achieved after appropriate resuscitation efforts in the field, consider not transferring to hospital given the low likelihood of survival for the patient,<sup>17</sup> balanced against the added risk of additional exposure to prehospital and hospital providers.

#### In-Hospital Cardiac Arrest (IHCA)

Below are specific considerations for patients with suspected or confirmed COVID-19 in the hospital setting. These interim guidelines do not apply to patients who are known to be COVID-19 negative. Those patients should receive standard basic and advanced life support. However, it may be reasonable to reduce personnel in the room for all resuscitations during the pandemic for social distancing purposes.

- Prearrest
  - o Address advanced care directives and goals of care with all suspected or confirmed COVID-19 patients (or proxy) on hospital arrival and with any significant change in clinical status, such as an increase in level of care.
  - o Closely monitor for signs and symptoms of clinical deterioration to minimize the need for emergent intubations that put patients and providers at higher risk.
  - o If the patient is at risk for cardiac arrest, consider proactively moving the patient to a negative pressure room/unit, if available, to minimize risk of exposure to rescuers during a resuscitation.
- Close the door, when possible, to prevent airborne contamination of adjacent indoor space.
- Intubated patients at the time of cardiac arrest
  - o Consider leaving the patient on a mechanical ventilator with HEPA filter to maintain a closed circuit and reduce aerosolization.
  - o Adjust the ventilator settings to allow for asynchronous ventilation (time chest compressions with ventilation in newborns). Consider the following suggestions:
    - o Increase the  $\text{FiO}_2$  to 1.0.
    - o Change mode to Pressure Control Ventilation (Assist Control) and limit pressure as needed to generate adequate chest rise (6 mL/kg ideal body weight is often targeted, 4-6 mL/kg for neonates).



- Adjust the trigger to Off to prevent the ventilator from auto-triggering with chest compressions and possibly prevent hyperventilation and air trapping.
- Adjust respiratory rate to 10/min for adults and pediatrics and 30/min for neonates.
- Assess the need to adjust positive end-expiratory pressure level to balance lung volumes and venous return.
- Adjust alarms to prevent alarm fatigue.
- Ensure endotracheal tube/tracheostomy and ventilator circuit security to prevent unplanned extubation.
- If return of spontaneous circulation is achieved, set ventilator settings as appropriate to patients' clinical condition.
- **Proned patients at the time of arrest**
  - For suspected or confirmed COVID-19 patients who are in a prone position without an advanced airway, attempt to place in the supine position for continued resuscitation.
  - While the effectiveness of CPR in the prone position is not completely known, for those patients who are in the prone position with an advanced airway, avoid turning the patient to the supine position unless able to do so without risk of equipment disconnections and aerosolization. Instead, consider placing defibrillator pads in the anterior-posterior position and provide CPR with the patient remaining prone with hands in the standard position over the T7/T10 vertebral bodies.<sup>18</sup>
- **Post-arrest patients**
  - Consult local infection control practices regarding transport after resuscitation.

### Maternal and Neonatal Considerations

**Neonatal resuscitation:** Every newly born baby should have a skilled attendant prepared to resuscitate irrespective of COVID-19 status. Although it remains unclear if newly born babies are infected or likely to be infectious when mothers have suspected or confirmed COVID-19, providers should don appropriate PPE. The mother is a potential source of aerosolization for the neonatal team.

- **Initial steps:** Routine neonatal care and the initial steps of neonatal resuscitation are unlikely to be aerosol-generating; they include drying, tactile stimulation, placement into a plastic bag or wrap, assessment of heart rate, placement of pulse oximetry and electrocardiograph leads.
- **Suction:** Suction of the airway after delivery should not be performed routinely for clear or meconium-stained amniotic fluid. Suctioning is an aerosol-generating procedure and is not indicated for uncomplicated deliveries.
- **Endotracheal medications:** Endotracheal instillation of medications, such as surfactant or epinephrine, are aerosol-generating procedures, especially via an uncuffed tube. Intravenous delivery of epinephrine via a low-lying umbilical venous catheter is the preferred route of administration during neonatal resuscitation.



- Closed incubators: Closed incubator transfer and care (with appropriate distancing) should be used for neonatal intensive care patients when possible but do not protect from aerosolization of virus.

Maternal cardiac arrest: The tenets of maternal cardiac arrest are unchanged for women with suspected or confirmed COVID-19.

- The cardiopulmonary physiological changes of pregnancy may increase the risk of acute decompensation in critically ill pregnant patients with COVID-19.
- Preparation for perimortem delivery, to occur after 4 minutes of resuscitation, should be initiated early in the resuscitation algorithm to allow the assembly of obstetrical and neonatal teams with PPE even if ROSC is achieved and perimortem delivery is not required.

## Disclosures

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DLA: None

KA reports 1. Past chair and member (academic role, without remuneration) of the Alberta coordinating committee for NRP and ACoRN that oversees neonatal life support education for perinatal sites in Alberta. 2. Just completed term as member of the ILCOR Neonatal Task Force.

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RAB: None

SMB: None

SCB reports non-financial support from Action First Aid and SaveStation outside the submitted work; in addition, Dr Brooks has a patent to A SYSTEM AND METHOD FOR AN EMERGENCY COMMUNICATION AND REMOTELY ACTIVATED EMERGENCY ASSISTANCE DEVICE pending.

AC: None

ME: None

GEF: None

SG: None

AH: None

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HL: None

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ARP: None

MARP: None

TTR: None

BW: None

DSW: None

CMZ reports personal fees from uptodate outside the submitted work.

AT: None



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## **Figure Legends**

**Figure 1. Summary of adjustments to CPR algorithms in suspected or confirmed COVID-19 patients.**

**Figure 2. BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients**

**Figure 3. ACLS Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients**

**Figure 4. BLS Healthcare Provider Pediatric Cardiac Arrest Algorithm for the Single Rescuer for Suspected or Confirmed COVID-19 Patients**

**Figure 5. BLS Healthcare Provider Pediatric Cardiac Arrest Algorithm for 2 or More Rescuers for Suspected or Confirmed COVID-19 Patients**

**Figure 6. Pediatric Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients**

**Figure 1. Summary of adjustments to CPR algorithms in suspected or confirmed COVID-19 patients.**

Reduce provider exposure

- Don PPE before entering the room/scene
- Limit personnel
- Consider using mechanical CPR devices for adults and adolescents who meet height and weight criteria
- Communicate COVID-19 status to any new providers

Prioritize oxygenation and ventilation strategies with lower aerosolization risk

- Use a HEPA filter, if available, for all ventilation
- Intubate early with a cuffed tube, if possible, and connect to mechanical ventilator, when able
- Engage the intubator with highest chance of first-pass success
- Pause chest compressions to intubate
- Consider use of video laryngoscopy, if available
- Before intubation, use a bag-mask device (or T-piece in neonates) with a HEPA filter and a tight seal
- For adults, consider passive oxygenation with nonrebreathing face mask as alternative to bag-mask device for short duration
- If intubation delayed, consider supraglottic airway
- Minimize closed circuit disconnections

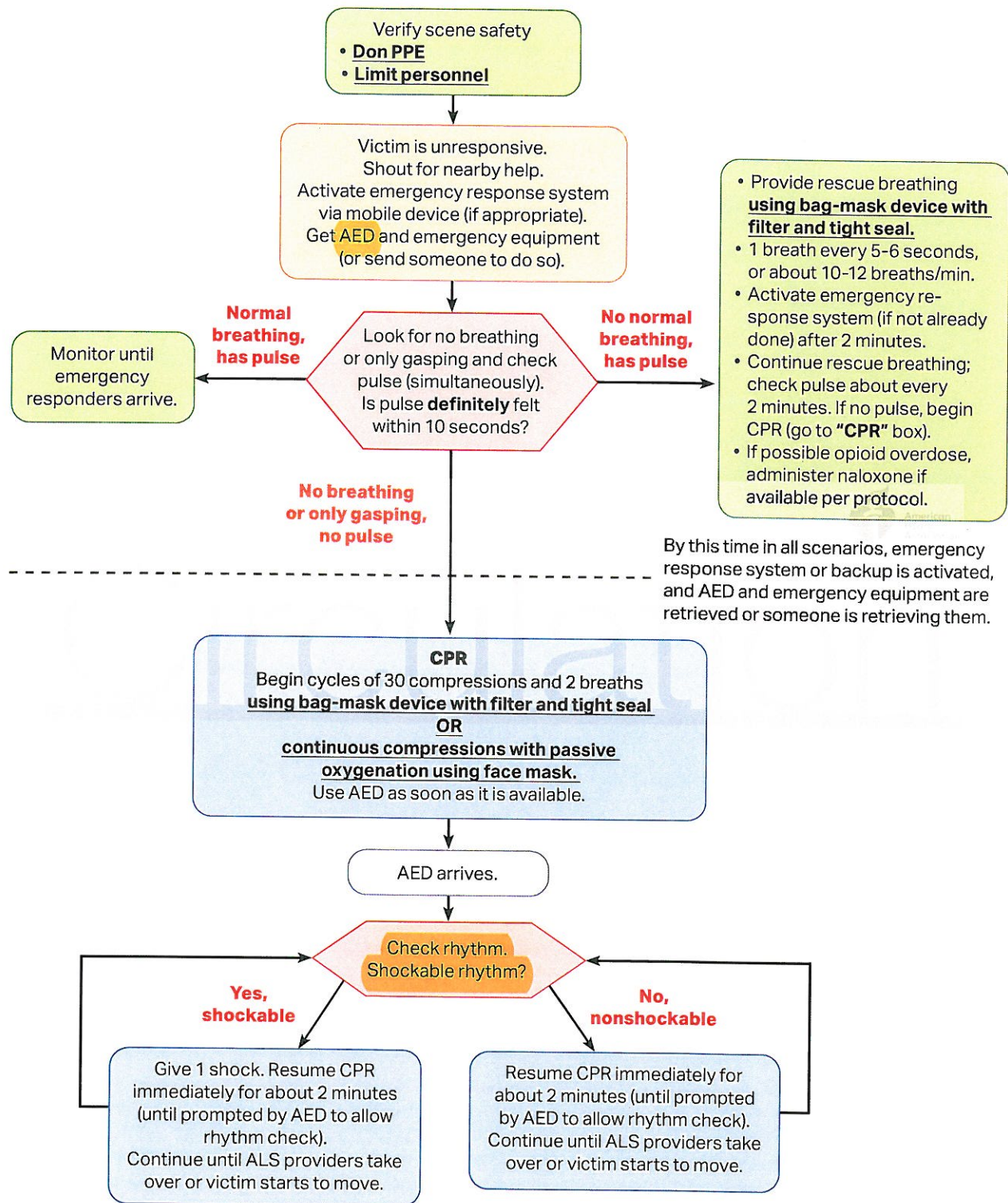
Consider resuscitation appropriateness

- Address goals of care
- Adopt policies to guide determination, taking into account patient risk factors for survival



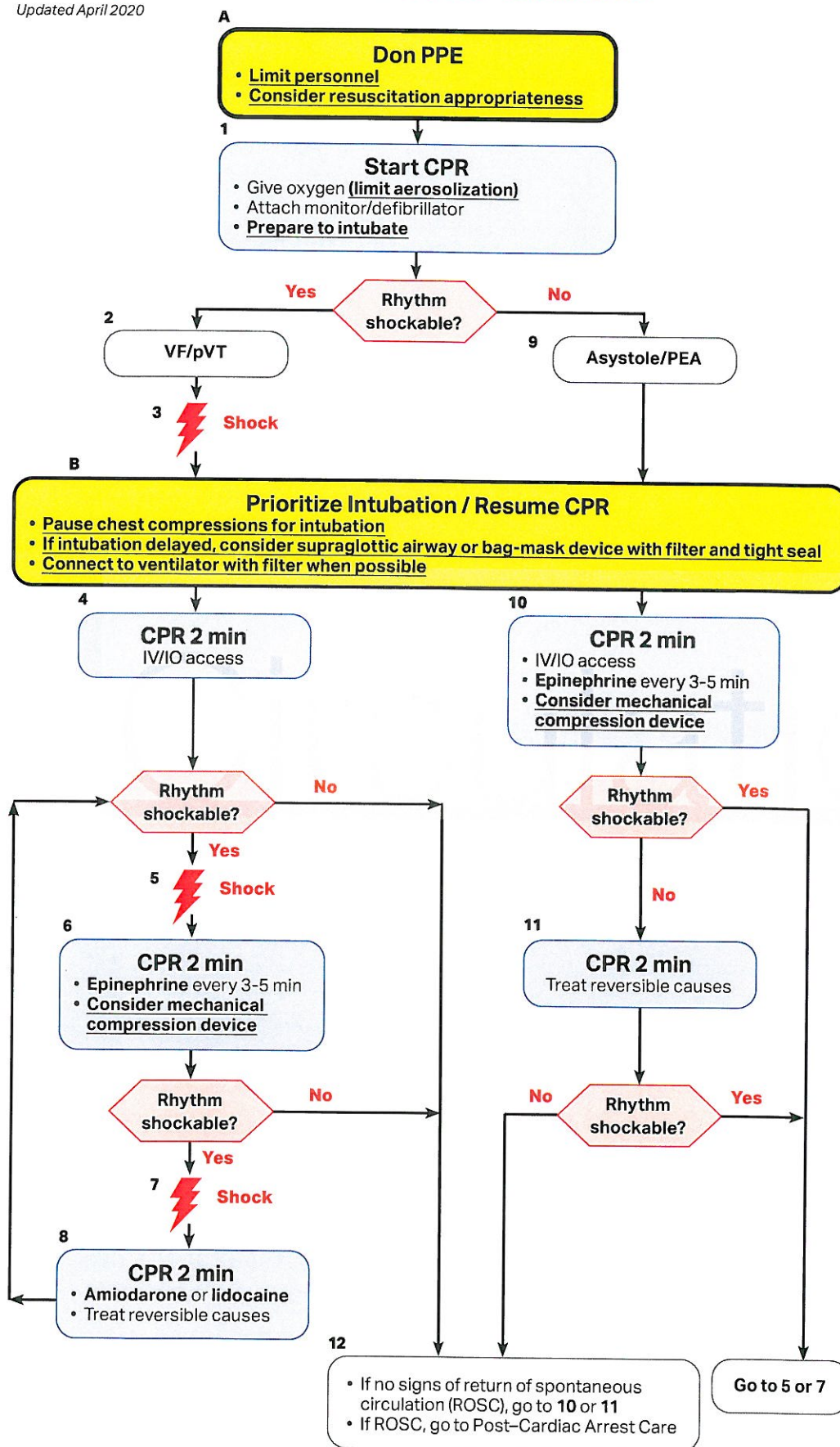
# BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients

Updated April 2020



# ACLS Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients

Updated April 2020



## CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If PETCO<sub>2</sub> <10 mm Hg, attempt to improve CPR quality.
- Intra-arterial pressure
  - If relaxation phase (diastolic) pressure <20 mm Hg, attempt to improve CPR quality.

## Shock Energy for Defibrillation

- **Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic:** 360 J

## Advanced Airway

- **Minimize closed-circuit disconnection**
- **Use intubator with highest likelihood of first pass success**
- **Consider video laryngoscopy**
- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

## Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg.
- or
- **Lidocaine IV/IO dose:** First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

## Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in PETCO<sub>2</sub> (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

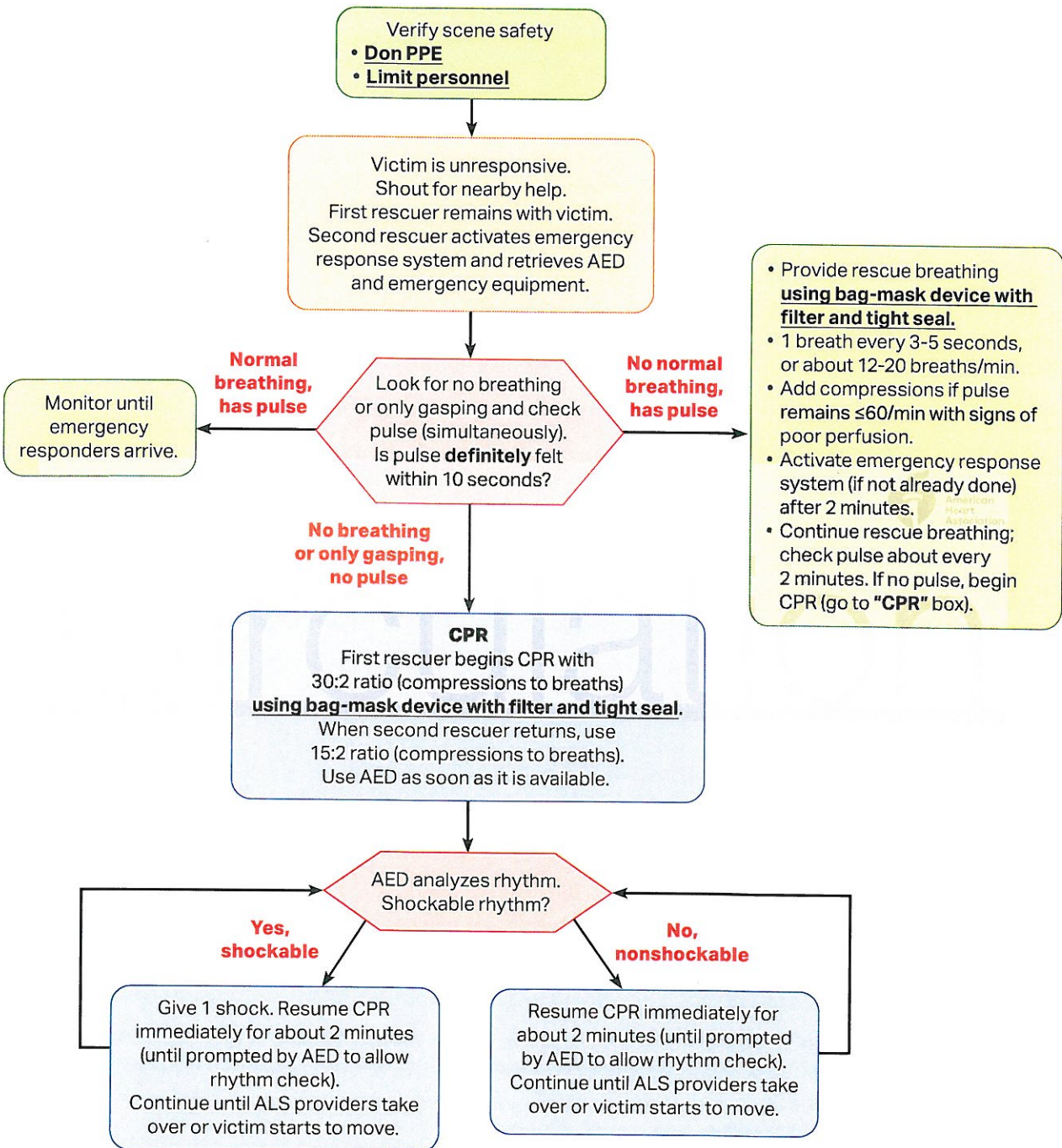
## Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary



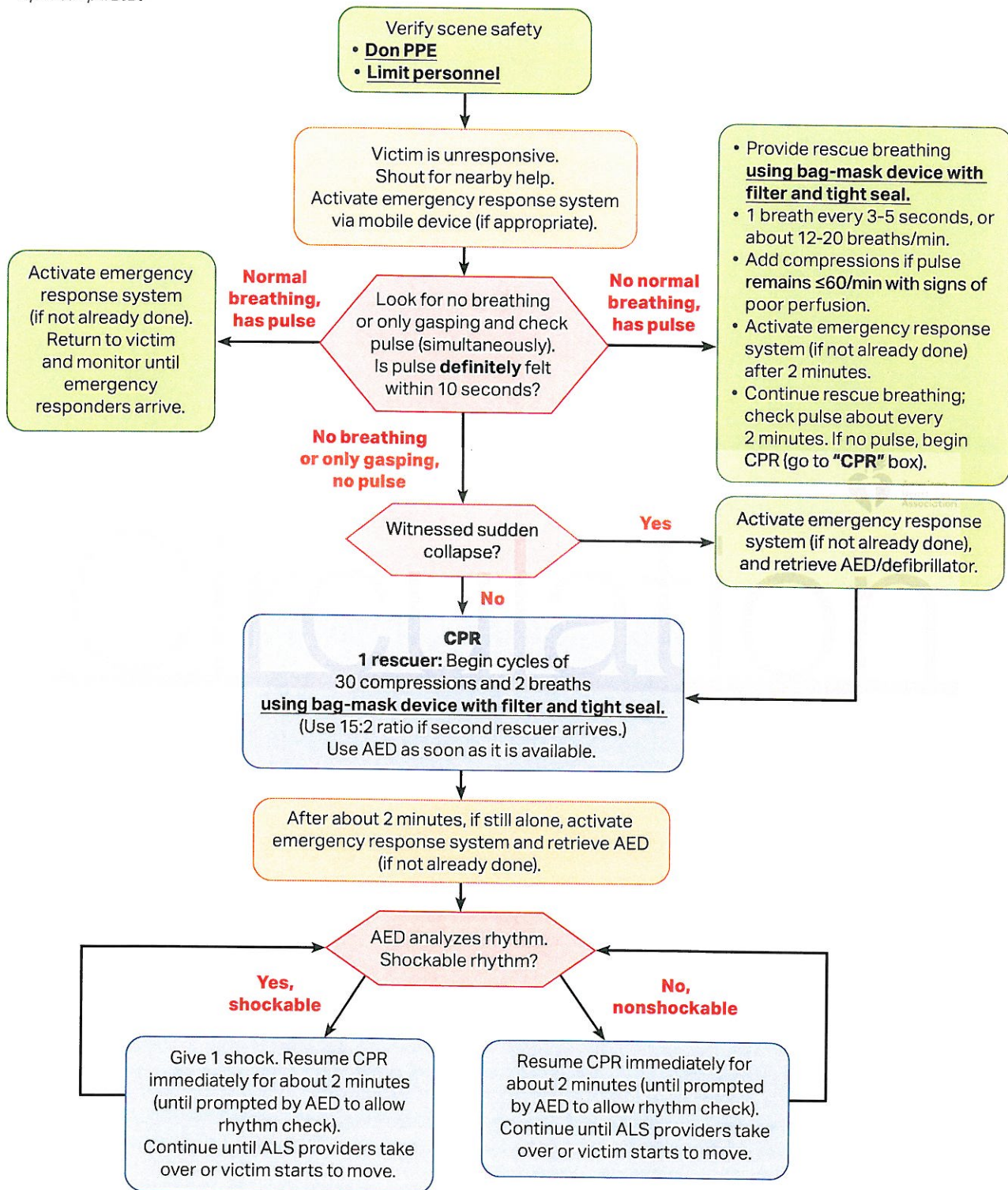
# BLS Healthcare Provider Pediatric Cardiac Arrest Algorithm for 2 or More Rescuers for Suspected or Confirmed COVID-19 Patients

Updated April 2020



# BLS Healthcare Provider Pediatric Cardiac Arrest Algorithm for the Single Rescuer for Suspected or Confirmed COVID-19 Patients

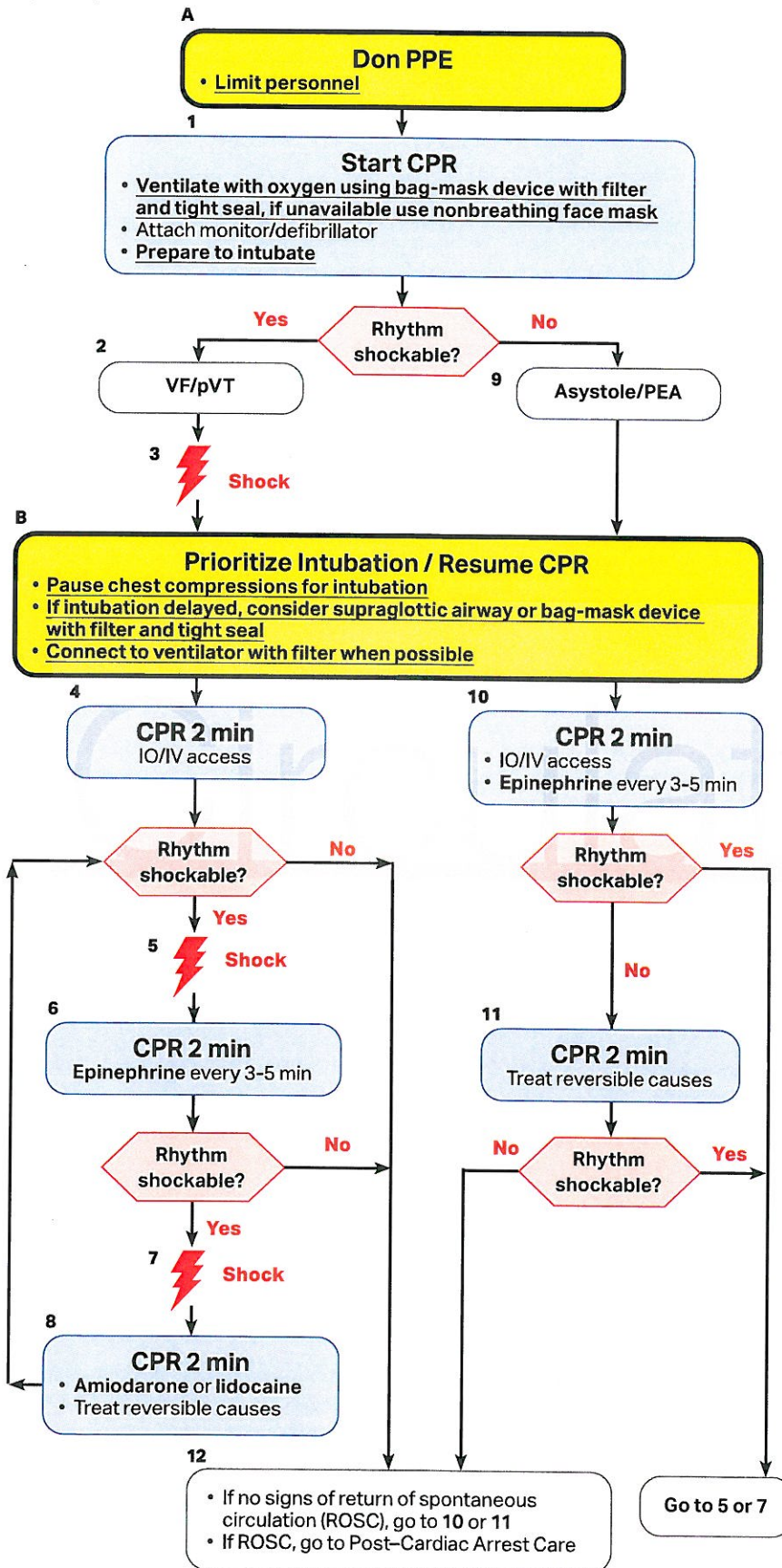
Updated April 2020





# Pediatric Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients

Updated April 2020



## CPR Quality

- Push hard ( $\geq 1/3$  of anteroposterior diameter of chest) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 15:2 compression-ventilation ratio.

## Shock Energy for Defibrillation

First shock 2 J/kg, second shock 4 J/kg, subsequent shocks  $\geq 4$  J/kg, maximum 10 J/kg or adult dose

## Advanced Airway

- Minimize closed-circuit disconnection
- Use intubator with highest likelihood of first pass success
- Consider video laryngoscopy
- Prefer cuffed endotracheal tube if available
- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

## Drug Therapy

- Epinephrine IO/IV dose:** 0.01 mg/kg (0.1 mL/kg of the 0.1 mg/mL concentration). Repeat every 3-5 minutes.
- Amiodarone IO/IV dose:** 5 mg/kg bolus during cardiac arrest. May repeat up to 2 times for refractory VF/pulseless VT.
- Lidocaine IO/IV dose:** Initial: 1 mg/kg loading dose. Maintenance: 20-50 mcg/kg per minute infusion (repeat bolus dose if infusion initiated >15 minutes after initial bolus therapy).

## Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Spontaneous arterial pressure waves with intra-arterial monitoring

## Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypoglycemia
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

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Franklin, IN 46131

Attn: **Matt Culp**

email: [mculp@franklin.in.gov](mailto:mculp@franklin.in.gov)

Tel: 317-736-0063

**QUOTATION 356532 V:1**

DATE: September 15, 2020

TERMS: Net 30 Days

FOB: Shipping Point

FREIGHT: Prepay and Add

ITEM	MODEL NUMBER	DESCRIPTION	QTY.	UNIT PRICE	DISC PRICE	TOTAL PRICE
1	601-2231411-01	<p><b>X Series ® Manual Monitor/Defibrillator</b> with 4 trace tri-mode display monitor/ defibrillator/ printer, comes with Real CPR Help®, advisory algorithm, advanced communications package (Wi-Fi, Bluetooth, USB cellular modem capable) USB data transfer capable and large 6.5"( 16.5cm) diagonal screen, full 12 ECG lead view with both dynamic and static 12-lead mode display.</p> <p><b>Accessories Included:</b></p> <ul style="list-style-type: none"><li>• MFC cable</li><li>• MFC CPR connector</li><li>• A/C power adapter/ battery charger</li><li>• A/C power cord</li><li>• One (1) roll printer paper</li><li>• 6.6 Ah Li-ion battery</li><li>• Carry case</li><li>• Declaration of Conformity</li><li>• Operator's Manual</li><li>• Quick Reference Guide</li></ul> <p>• One (1)-year EMS warranty</p> <p><b>Advanced Options:</b> <b>Real CPR Help Expansion Pack</b> CPR Dashboard quantitative depth and rate in real time, release indicator, interruption timer, perfusion performance indicator (PPI)</p> <ul style="list-style-type: none"><li>• See - Thru CPR artifact filtering</li></ul> <p><b>ZOLL Noninvasive Pacing Technology:</b></p>	4	\$41,015.00	\$31,581.55	\$126,326.20 *

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Justen Spirk  
EMS Territory Manager  
937-475-9198





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ITEM	MODEL NUMBER	DESCRIPTION	QTY.	UNIT PRICE	DISC PRICE	TOTAL PRICE
		<b>Masimo Pulse Oximetry</b> <b>SP02&amp; SpCO</b> <ul style="list-style-type: none"><li>• Signal Extraction Technology (SET)</li><li>• Rainbow SET ( for SpCO &amp; SpMet)</li></ul> <b>NIBP Welch Allyn includes:</b> <ul style="list-style-type: none"><li>• Smartcuff 10 foot Dual Lumen hose</li><li>• SureBP Reusable Adult Medium Cuff</li></ul> <b>End Tidal Carbon Dioxide monitoring (ETCO2)</b> <b>Oridion Microstream Technology:</b> Order required Microstream tubing sets separately <b>Interpretative 12- Lead ECG:</b> <ul style="list-style-type: none"><li>• 12-Lead one step ECG cable- includes 4- Lead limb lead cable and removable precordial 6- Lead set</li></ul> <b>Two Temperature monitoring channels with digital displays:</b> Order Temperature probes separately				
2	8 000 - 001392	Rainbow, RC-4, 4FT, Reusable EMS Patient Cable	4	\$245.00	\$196.00	\$784.00 *
3	8 000 - 000371	SpO2/SpCO/SpMet Rainbow DCI Adult Reusable Sensor with connector (3 ft)	4	\$845.00	\$676.00	\$2,704.00 *

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ITEM	MODEL NUMBER	DESCRIPTION	QTY.	UNIT PRICE	DISC PRICE	TOTAL PRICE
4	8000-002005-01	Cable Sleeve, Propaq / X Series, ZOLL Blue	4	\$52.45	\$41.96	\$167.84 *
5	8000-0895	Cuff Kit with Welch Allyn Small Adult, Large Adult and Thigh Cuffs	4	\$157.50	\$126.00	\$504.00 *
6	8000-0580-01	Six hour rechargeable Smart battery	8	\$519.75	\$415.80	\$3,326.40 *
7	8200-000100-01	Single Bay Charger for the SurePower and SurePower II batteries.	4	\$992.25	\$793.80	\$3,175.20
8	8400-110043	CaseReview Premium Subscription, X Series, 3 Year- Hosted. Provides detailed post-case information, including CPR quality on compression depth, rate, pause time and release velocity, as well as ECG, shocks, EtCO2 and SpO2 vital signs.	4	\$1,345.00	\$1,345.00	\$5,380.00
9	8300-000676	OneStep Cable, X Series	4	\$446.25	\$357.00	\$1,428.00 *

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ITEM	MODEL NUMBER	DESCRIPTION	QTY.	UNIT PRICE	DISC PRICE	TOTAL PRICE
10	8009-0020	CPR-D Padz and CPR Stat Padz Connector for R Series	4	\$393.75	\$315.00	\$1,260.00 *
11	8900-000220-01	OneStep Pediatric CPR Electrode (8 per case)	1	\$682.50	\$546.00	\$546.00 *
<p>*Reflects Discount Pricing.</p> <p><u>Line Item 8 will be governed by Terms &amp; Conditions listed on <a href="http://www.zoll.com/SSTC">http://www.zoll.com/SSTC</a>. All other items will be governed by Terms &amp; Conditions listed on <a href="http://www.zoll.com/GTC">http://www.zoll.com/GTC</a></u></p>						

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TOTAL **\$145,601.64**

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## Software Solutions Master Application Service Provider Agreement

1. **Orders.** ZOLL Data Systems, Inc. ("ZOLL") shall provide the ASP Services, Implementation Services and Support Services identified in any order or contract ("Order") between ZOLL and another party ("Customer") incorporating this Software Solutions Master Application Service Provider Agreement (together with each such Order, the "Agreement"). ASP Services are further defined in Section 3. Implementation Services are further defined in Section 4. Support Services are further defined in Section 5. The ASP Services, Implementation Services, and Support Services are each, and are collectively, "Services".

2. **Payment.** Customer shall pay fees to ZOLL for Services as provided in any Order and this Agreement ("Fees"). Unless otherwise provided in the applicable Order, Customer will pay ZOLL all Fees due under this Agreement within thirty (30) days after the date of ZOLL's invoice. Fees are non-refundable other than as expressly set forth herein. Amounts not paid when due will accrue interest at the rate of 1.5% per month, or the maximum allowed by law, whichever is less. Customer shall pay all expenses (including reasonable attorney's fees) incurred by ZOLL in connection with collection of late payments. Any amounts not paid by Customer when due may result in the forfeiture by Customer, in ZOLL's sole discretion, of any discounts previously offered by ZOLL. In addition, ZOLL may cease providing any or all of the Services if any invoice is not paid in a timely manner, in which event ZOLL will not be liable to Customer for any damages caused by such cessation. Payment terms are subject to ZOLL's credit approval. Fees exclude all applicable sales, use and other taxes and all applicable export and import fees, customs duties and similar charges ("Taxes").

3. **ASP Services.** "ASP Services" means the hosting and maintenance of ZOLL software, as modified, updated, and enhanced (the "Underlying Software"), for remote electronic access and use by Registered Users on the website with a unique URL to be provided by ZOLL to Customer (the "ZOLL Site") in substantial conformity with the instructions for use, documentation and users manuals from time-to-time provided by ZOLL (the "Documentation"), as listed in any Order, on and after the Implementation Date (defined below) for such services and before that Order has expired or been terminated in accordance with the Agreement. Customer acknowledges that the ASP Services are only compatible with ZOLL equipment that has been enabled and configured for use with the ASP Services in accordance with the Documentation and only with the browser and other technical environment that supports the use of the ASP Services in accordance with the Documentation.

3.1. **Provision of ASP Services.** Subject to the terms and conditions of the Agreement, ZOLL will use commercially reasonable efforts to make the ASP Services available to Customer and Customer's employees, directors, principals, partners, consultants and agents authorized to use ASP Services on behalf of Customer and registered through the ZOLL Site for such use ("Registered Users") through the ZOLL Site over normal network connections in accordance with the Documentation, excepting downtime due to necessary maintenance and troubleshooting. Customer, not ZOLL, shall be responsible for controlling Registered Users and protection of confidentiality of its login identifications and passwords. Customer acknowledges that (i) it is responsible for maintaining its interface and connectivity to the ASP Services and (ii) any facilities used for provision of the ASP Services may be owned or operated by ZOLL, or a ZOLL affiliate or a third party, or any combination of such facilities, as determined by ZOLL. Customer acknowledges that ZOLL may modify and upgrade the ASP Services, on an ongoing basis, to improve or adapt the ASP Services. Without limiting the foregoing, ZOLL will have the right, in its sole discretion, to develop, provide and market new, upgraded or modified ASP Services to Customer, including adding, removing or modifying the functionality or features of the ASP Services accessible by Registered Users. ZOLL will use commercially reasonable efforts to notify Customer within a reasonable period of time prior to the implementation of such changes so that Customer is reasonably informed of alterations to the ASP Services that will affect the ASP Services and Customer's use of them. Notwithstanding anything to the contrary in the Agreement, ZOLL may cease providing any ASP Services upon at least six months advance notice to Customer.

3.2. **Access Software.** Subject to the terms and conditions of this Agreement, ZOLL grants to Customer, during the Term, a non-exclusive, non-transferable, non-sublicensable license for Registered Users to access and use the ASP Services using the ZOLL software that Registered Users may download at the ZOLL Site to access the ASP Services, as modified, updated and enhanced (the "Access Software"), each as made available to Customer through the ZOLL Site, solely for Customer's internal business purposes and solely in accordance with the Documentation. Access Software and Underlying Software are, collectively, the "Software".

3.3. **Restrictions.** Customer shall not, and shall not permit any third party to: (a) use, reproduce, modify, adapt, alter, translate or create derivative works from the ASP Services, Software or Documentation; (b) merge the ASP Services, Software or Documentation with other software or services; (c) sublicense, distribute, sell, use for service bureau use, lease, rent, loan, or otherwise transfer or allow access to the ASP Services, Software or the Documentation to any third party; (d) reverse engineer, decompile, disassemble, or otherwise attempt to alter or derive the Source Code for the ASP Services or Software; (e) remove, alter, cover or obfuscate any copyright notices or other proprietary rights notices included in the ASP Services, Software or Documentation; or (f) otherwise use or copy the ASP Services, Software or Documentation in any manner not expressly permitted by the Agreement. Customer agrees not to use the ASP Services in excess of its authorized login protocols. Customer shall immediately notify ZOLL of any unauthorized use of Customer's login ID, password or account or other breach of security. If Customer becomes aware of any actual or threatened activity contemplated by the restrictions on use set forth in this section, Customer will, and will cause Registered Users to, immediately take all reasonable measures necessary to stop the activity or threatened activity and to mitigate the effect of such activity including: (i) discontinuing and limiting any improper access to any data; (ii) preventing any use and disclosure of improperly obtained data; (iii) destroying any copies of improperly obtained data that may have been made on their systems; (iv) otherwise attempting to mitigate any harm from such events; and (v) immediately notifying ZOLL of any such event so that ZOLL may also attempt to remedy the problem and prevent its future occurrence.

### 3.4. Service Level Agreement.

3.4.1. **Downtime.** "Downtime", expressed in minutes, is any time the ASP Services are not accessible to Registered Users.

3.4.2. **Planned Downtime.** "Planned Downtime" is Downtime during which ASP Services may not be available in order for ZOLL to continue to provide commercially reasonable services, features and performance to its customers. Planned Downtime includes, but is not limited to: (a) Standard Maintenance; and (b) Emergency Maintenance. "Standard Maintenance" is performed when upgrades or system updates are desirable. "Emergency Maintenance" is performed when a critical system update must be applied quickly to avoid significant Downtime. Standard Maintenance may be performed weekly on Monday and Wednesday between the hours of 7 p.m. to 11 p.m. in Broomfield, Colorado. ZOLL will provide Customer with notice at least 24 hours in advance of Standard Maintenance.

3.4.3. **Excused Downtime.** "Excused Downtime" time is Downtime caused by: (a) services, software or hardware provided by anyone or any entity other than ZOLL, (b) software, services or systems operating outside of a ZOLL Site, including any software or systems operating on a Customer's premises (including ZOLL software); (c) a Force Majeure Event or (d) Customer's failure to comply with its obligations under the Agreement or use of the ASP Services in ways that were not intended.

3.4.4. **Unplanned Downtime.** Unplanned Downtime in a calendar month is expressed as a percentage calculated as follows:

$$\frac{(\text{Downtime} - (\text{Planned Downtime} + \text{Excused Downtime}))}{\text{Total number of minutes in the calendar month}} \times 100 = x\%, \text{ where "x" is Unplanned Downtime.}$$

3.4.5. **Unplanned Downtime Goal.** ZOLL shall provide the ASP Services such that there is less than 1% of Unplanned Downtime in a calendar month (the "Unplanned Downtime Goal"). The ASP Services covered by the Unplanned Downtime Goal are those for which Customer has paid all Fees when due and is using in the course of carrying out its normal business operations in accordance with the Agreement.

3.4.6. **Revocation of Administrative Rights.** Notwithstanding anything to the contrary in the Agreement, ZOLL may revoke administrative rights, including database access rights, if the use of any such rights results in Downtime.

### 3.4.7. Customer Content; Security; Backup.

3.4.7.1. **Customer Content.** As between ZOLL and Customer, and without limiting the rights of any patient, Customer will retain all right, title and interest in and to all data, information or other content provided by Customer in its use of the ASP Services ("Customer Content"); provided, however, that ZOLL may de-identify and use Customer Content for any lawful purpose consistent with all applicable law.



**3.4.7.2. Security.** Subject to Customer's obligations under this Agreement, ZOLL will implement commercially reasonable security measures within the ASP Services in an attempt to prevent unlawful access to Customer Content by third parties. Such measures may include, where appropriate, use of updated firewalls, commercially available virus screening software, logon identification and passwords, encryption, intrusion detection systems, logging of incidents, periodic reporting, and prompt application of current security patches and virus definitions.

**3.4.7.3. Backup of Customer Content (Not Applicable to Remote View).** Although ZOLL will use commercially reasonable efforts to maintain the integrity of the Customer Content, to back up the Customer Content, and to provide full and ongoing access to the ASP Services, loss of access to the ASP Services and loss of Customer Content may occur. Customer will make provision for additional back-up storage of any critical Customer Content and shall be responsible for compliance with all records retention requirements applicable to Customer. ZOLL will not be responsible for any loss, corruption of or inaccessibility of the Customer Content due to interruption in the ASP Services or otherwise arising out of circumstances not within ZOLL's control.

**3.4.7.4. Availability of Customer Content (Not Applicable to Remote View).** It is Customer's responsibility to maintain any Customer Content that it requires for archival purposes, ongoing management of its operations and compliance with applicable records retention requirements. Unless specified otherwise in the Agreement, ZOLL will store Customer Content, other than Inactive Customer Content as defined below (the "**Active Customer Content**"), in ZOLL's working data set until the earlier of (i) five years (calculated from the date of creation of such Customer Content, or ZOLL's receipt of such Customer Content, whichever is later) or (ii) the expiration or termination of this Agreement or the Order under which such Active Customer Content was stored (the "**Active Retention Period**"). Upon the expiration of the Active Retention Period, ZOLL will notify Customer in writing and will provide Customer the option, which Customer shall exercise by informing ZOLL in writing, within 30 days of receiving the notice, that either (a) Customer wishes to receive Active Customer Content in a database determined by ZOLL in its sole and absolute discretion (a "**Database**"), or (b) Customer will pay ZOLL, at ZOLL's then-current storage rates and upon ZOLL's then-current terms and conditions, to continue to store the Active Customer Content. If Customer fails to exercise one of the foregoing options within such 30-day period, ZOLL will have the right to destroy the Active Customer Content. During the time ZOLL stores Customer Content for Customer hereunder, ZOLL may periodically identify Customer Content that has had no activity associated with it for at least 180 days ("**Inactive Customer Content**") and will notify Customer in writing of its intent to remove the Inactive Customer Content from ZOLL's working data set and destroy such data, unless Customer requests, in writing, within 30 days of receiving the notice from ZOLL, that either (z) Customer wishes to receive the Inactive Customer Content in a Database, or (y) Customer will pay ZOLL, at ZOLL's then-current storage rates and upon ZOLL's then-current terms and conditions, to continue to store such Inactive Customer Content. If Customer fails to exercise one of the foregoing options within such 30-day period, ZOLL will have the right to destroy the applicable Inactive Customer Content in its possession or under its control. Except for this Section 3.4.7.4, the terms of Section 3.4 (including, without limitation, the Unplanned Downtime Goal) do not apply to Customer's access of Inactive Customer Content. Customer represents, warrants and agrees that it (A) is solely responsible for determining the retention period applicable to it with respect to Customer Content maintained by ZOLL; (B) has consulted with or has had the opportunity to consult with legal, information governance or records management professionals; and (C) is not relying upon ZOLL to assist with determining the records maintenance or retention requirements applicable to it.

**3.4.8. Remedies.** A "**Service Credit**" means a percentage of the monthly Fee to be credited to Customer (subject to Customer's written request therefor and ZOLL's verification thereof) for any ASP Service for which the Unplanned Downtime Goal is exceeded in a calendar month. For any calendar month where the aggregate total of Unplanned Downtime for any ASP Service exceeds one percent ZOLL will provide a 10% Service Credit towards Customer's monthly Fee for such ASP Service that was affected; *provided, that* Customer (i) requests such Service Credit in writing within 30 days of the end of the calendar month in which such Unplanned Downtime occurred, (ii) includes in such request the nature of, and date and time of such Unplanned Downtime and (iii) such Unplanned Downtime is verified by ZOLL. Such Service Credit will be applied to a future month's invoice for such ASP Services, which typically is two months later. Failure to submit a written request for Service Credit as provided in this Section 3.4.8 shall constitute a waiver of such Service Credit by Customer. Further, Service Credits shall not be issued if Customer is not current on all Fees due and payable. The remedy set forth in this Section 3.4.8 shall be the Customers' sole and exclusive remedy with respect to ZOLL exceeding the Unplanned Downtime Goal.

**3.4.9. Modifications.** Changes to this Section 3.4 may be made from time to time at ZOLL's sole discretion. Customer will be notified of any such changes that are material.

**4. Implementation Services.** ZOLL shall provide ASP Services implementation, training and any related services identified in an Order (the "**Implementation Services**"). Customer shall, in a timely manner and at its own expense, cooperate and provide or make available to ZOLL access to the Customer's premises, systems, telephone, terminals and facsimile machines and all relevant information, documentation and staff reasonably required by ZOLL to enable ZOLL to perform the Implementation Services. Customer acknowledges that any time frames or dates for completion of the Implementation Services set out in an Order are estimates only and the ability to meet them is influenced by a range of factors including, without limitation, response times and level of cooperation of Customer. Any obligations as to time are therefore on a "reasonable efforts" basis only and ZOLL shall not be liable for failure to meet time frames or completion dates unless solely due to ZOLL's negligence.

**5. Support Services.** ZOLL shall provide the following Support Services for ASP Services without any additional Fees, except that ZOLL will have no obligation to provide such Support Services if any Fees for ASP Services are past due.

**5.1. Support.**

**5.1.1. Emergency Support.** ZOLL shall provide telephone support to Customer for 24 hours a day, 7 days a week, to address Errors that prevent Customer from using Supported ASP Services for a purpose for which Customer has an immediate and material need. "**Supported ASP Services**" means the ASP Services for which Customer has paid the then-current Fees. "**Supported Environment**" means a browser and other technical environment that supports the use of the ASP Services in accordance with the Documentation. "**Error**" means a reproducible defect in the Supported ASP Services when operated in accordance with the Documentation in a Supported Environment that causes the Supported ASP Services not to operate substantially in accordance with such Documentation.

**5.1.2. Technical Support.** ZOLL shall provide telephone support to Customer during 6 a.m. to 6 p.m. Eastern Time, Monday to Friday, excluding ZOLL holidays ("**Business Hours**") to address all other Errors relating to any Supported ASP Services. Such telephone support will include (i) clarification of functions and features of the Supported ASP Services; (ii) clarification of the Documentation; (iii) guidance in operation of the Supported ASP Services; (iv) assistance in identifying and verifying the causes of suspected Errors in the Supported ASP Services; and (v) advice on bypassing identified Errors in the Supported ASP Services, if reasonably possible. Responses to such reporting shall be provided at a minimum within twenty-four (24) hours during Business Hours.

**5.1.3. Resolution.** ZOLL shall use commercially reasonable efforts to provide a modification or workaround to Supported ASP Services that resolves an Error in all material respects ("**Resolution**").

**5.1.4. Expenses.** Support Services provided hereunder shall be provided from Chelmsford, Massachusetts or Broomfield, Colorado, as determined in ZOLL's sole discretion. Should Customer request that ZOLL send personnel to Customer's location to resolve any Error in the Supported ASP Services, ZOLL may charge Customer a fee of \$2,500 for each day ZOLL personnel is at Customer's location.

**5.1.5. Exceptions.** ZOLL shall have no responsibility under this Agreement to fix any Errors arising out of or related to the following causes: (a) Customer's modification or combination of the Access Software (in whole or in part), (b) use of the Supported ASP Services in an environment other than a Supported Environment; or (c) accident; unusual physical, electrical or electromagnetic stress; neglect; misuse; failure or fluctuation of electric power, air conditioning or humidity control; failure of media not furnished by ZOLL; excessive heating; fire and smoke damage; operation of the Supported ASP Services with other media and hardware, software or telecommunication interfaces; or causes other than ordinary use. Any corrections performed by ZOLL for such Errors shall be made, in ZOLL's reasonable discretion, at ZOLL's then-current time and material charges. ZOLL will provide the Support Services only for the most current release and the one immediately preceding major release of any Access Software. Notwithstanding anything to the contrary in the Agreement, (i) ZOLL may cease providing Support Services for any ASP Services upon at least six (6) months advance notice to Customer of such cessation and (ii) Support Services do not cover Third Party Products or Services (defined below).



**5.2. Conditions and Limitations.** Customer shall provide ZOLL with access to Customer's personnel and its equipment. This access must include the ability to remotely access the equipment on which the Supported ASP Services are operating and to obtain the same access to the equipment as those of Customer's employees having the highest privilege or clearance level. ZOLL will inform Customer of the specifications of the remote access methods available and associated software needed, and Customer will be responsible for the costs and use of said equipment. Fees for third party software and services are set by the owner of such software.

## **6. Warranties.**

**6.1. Implementation Services and Support Services.** Subject to Customer's payment of the Fees, ZOLL warrants that any Implementation Services or Support Services provided to Customer will be performed with due care in a professional and workmanlike manner. ZOLL shall, as its sole obligation and Customer's sole and exclusive remedy for any breach of the warranty set forth in this Section 6.1, perform again the Implementation Services or Support Services that gave rise to the breach or, in the case of Implementation Services, at ZOLL's option, refund the Fees for such Implementation Services paid by Customer for the Implementation Services which gave rise to the breach. The availability of any remedy for a breach of the warranty set forth in this Section 6.1 is conditioned upon Customer notifying ZOLL in writing of such breach within thirty (30) days following performance of the defective Implementation Services or Support Services, specifying the breach in reasonable detail.

**6.2. ASP Services and Access Software.** Subject to Customer's payment of the Fees, ZOLL represents and warrants with respect to any ASP Services that (i) ZOLL has the right to license the Access Software and Documentation and make the ASP Services available to Customer pursuant to this Agreement and (ii) the ASP Services, when used as permitted and in accordance with the Documentation, will materially conform to the Documentation. ZOLL does not warrant that Customer's use of the ASP Services will be error free or uninterrupted. Customer will notify ZOLL in writing of any breach of this warranty with respect to any ASP Services prior to the expiration or termination of the Order for such ASP Services. If ZOLL is unable to provide a correction or work-around pursuant to the terms governing the provision of the ASP Services after using commercially reasonable efforts, ZOLL may terminate such Order upon written notice to Customer. Any such correction or work-around shall not extend the term of such Order. This Section 6.2 sets forth Customer's exclusive remedy, and ZOLL's entire liability, for breach of the warranty for the ASP Services contained herein.

**6.3. Warranty Disclaimers.** The warranties for the Software and Services are solely and expressly as set forth in Section 6.1 and Section 6.2 and are expressly qualified, in their entirety, by this Section 6.3. EXCEPT AS EXPRESSLY SET FORTH IN SECTION 6.1 AND SECTION 6.2, (A) THE SOFTWARE AND SERVICES ARE PROVIDED STRICTLY "AS IS", WITHOUT ANY WARRANTIES OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY, WRITTEN OR ORAL; (B) ZOLL DOES NOT PROMISE THAT THE SOFTWARE OR SERVICES WILL BE SECURE, UNINTERRUPTED OR ERROR-FREE OR THAT THEY ARE SUITABLE FOR THE PARTICULAR NEEDS OF CUSTOMER, REGISTERED USERS OR ANY THIRD PARTY; AND (C) ZOLL SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON INFRINGEMENT, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR COURSE OF PERFORMANCE OR USAGE IN TRADE. CUSTOMER ACKNOWLEDGES THAT IT HAS RELIED ON NO WARRANTIES OTHER THAN THE EXPRESS WARRANTIES IN THIS AGREEMENT, AND THAT NO WARRANTIES ARE MADE BY ANY OF ZOLL'S LICENSORS OR SUPPLIERS WITH RESPECT TO THIRD PARTY PRODUCTS OR SERVICES. Customer acknowledges and agrees that, in entering into this Agreement, it has not relied upon the future availability of any new or enhanced feature or functionality, or any new or enhanced product or service, including, without limitation, updates or upgrades to ZOLL's existing products and services. ZOLL's performance obligations hereunder are limited to those expressly enumerated herein, and payment for ZOLL's performance obligations shall be due as described herein.

**7. Confidentiality.** Neither party will use any trade secrets, information, or other material, tangible or intangible, that relates to the business or technology of the other party and is marked or identified as confidential or is disclosed in circumstances that would lead a reasonable person to believe such information is confidential ("Confidential Information") for any purpose not expressly permitted by this Agreement, and will further disclose the Confidential Information of the party disclosing it ("Disclosing Party") only to the employees or contractors of the party receiving it ("Receiving Party") who have a need to know such Confidential Information for purposes of this Agreement and who are under a duty of confidentiality no less restrictive than the Receiving Party's duty hereunder. The Receiving Party will protect the Disclosing Party's Confidential Information from unauthorized use, access, or disclosure in the same manner as the Receiving Party protects its own confidential or proprietary information of a similar nature and with no less than reasonable care. The ASP Services, Software and Documentation shall be ZOLL's Confidential Information (including without limitation any routines, subroutines, directories, tools, programs, or any other technology included in the Software), notwithstanding any failure to mark or identify it as such. The Receiving Party's obligations under this Section 7 with respect to any Confidential Information of the Disclosing Party will terminate when and to the extent the Receiving Party can document that such information: (a) was already lawfully known to the Receiving Party at the time of disclosure by the Disclosing Party; (b) is disclosed to the Receiving Party by a third party who had the right to make such disclosure without any confidentiality restrictions; (c) is, or through no fault of the Receiving Party has become, generally available to the public; or (d) is independently developed by the Receiving Party without access to, or use of, Confidential Information. In addition, the Receiving Party may disclose Confidential Information of the Disclosing Party to the extent that such disclosure is: (i) necessary for the Receiving Party to enforce its rights under this Agreement in connection with a legal proceeding; or (ii) required by law or by the order of a court or similar judicial or administrative body, provided that the Receiving Party notifies the Disclosing Party of such disclosure in writing prior to making such disclosure and cooperates with the Disclosing Party, at the Disclosing Party's reasonable request and expense, in any lawful action to contest or limit the scope of such disclosure.

## **8. Indemnification.**

**8.1. By ZOLL.** ZOLL will defend, at its own expense, any action against Customer or its or any of its agents, officers, director, or employees ("Customer Parties") brought by a third party alleging that any Software or Services infringe any U.S. patents or any copyrights or misappropriate any trade secrets of a third party, and ZOLL will pay those costs and damages finally awarded against the Customer Parties in any such action that are specifically attributable to such claim or those costs and damages agreed to in a monetary settlement of such action. The foregoing obligations are conditioned on Customer: (a) notifying ZOLL promptly in writing of such claim or action; (b) giving ZOLL sole control of the defense thereof and any related settlement negotiations; and (c) cooperating with ZOLL and, at ZOLL's request and expense, assisting in such defense. If any of the Software or Services become, or in ZOLL's opinion is likely to become, the subject of an infringement claim, ZOLL may, at its sole option and expense, either: (i) procure for Customer the right to continue using such Software or Services; (ii) modify or replace such Software or Services with substantially similar software or services so that such Software or Services becomes non-infringing; or (iii) terminate this Agreement, in whole or in part. Notwithstanding the foregoing, ZOLL will have no obligation under this Section 8.1 or otherwise with respect to any infringement claim based upon: (1) use of any of the Software or Services not in accordance with this Agreement; (2) any use of any Software or Services in combination with products equipment, software, services or data not supplied by ZOLL if such infringement would have been avoided but for the combination with other products, equipment, software, services or data; (3) the failure of Customer to implement any replacements, corrections or modifications made available by ZOLL for any Software or Services including, but not limited to, any use of any release of the Software other than the most current release made commercially available by ZOLL; (4) any Customer Content; or (5) any modification of any Software or Services or use thereof by any person other than ZOLL or its authorized agents or subcontractors. This Section 8 states ZOLL's entire liability and the exclusive remedy for any claims of infringement.

**8.2. By Customer.** Customer shall indemnify, defend and hold ZOLL and its agents, officers, directors and employees (the "ZOLL Parties") harmless from and against any and all liabilities, losses, expenses, damages and claims (collectively, "Claims") that arise out of the following except to the extent the Claims are due to the gross negligence, intentional misconduct or breach of this Agreement by the ZOLL Parties: (i) information provided to any of the ZOLL Parties by any of the Customer Parties; (ii) any of the Customer Parties' use or misuse of any of the Software or Services, including without limitation in combination with Customer's software or services or third party software or services; (iii) any modifications made by any of the Customer Parties to any of the Software or Services; (iv) infringement by any of the Customer Parties of any third party intellectual property right; (v) Taxes (other than taxes based on ZOLL's net income) and any related penalties and interest, arising from the payment of the Fees or the delivery of the Software and Services to Customer; and (ix) any violation of laws or regulations, including without limitation applicable export and import control laws and regulations in the use of any of the Software or Services, by any of the Customer Parties.



**9. Limitation of Liability.** NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, IN NO EVENT WILL ZOLL OR ITS AFFILIATES, SUBCONTRACTORS OR SUPPLIERS, OR ANY OF THEIR OFFICERS OR DIRECTORS, BE LIABLE, EVEN IF ADVISED OF THE POSSIBILITY, FOR: (i) SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES OF ANY KIND, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE), (ii) LOSS OF PROFIT, DATA, BUSINESS OR GOODWILL, COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES OR (iii) ANY LOSSES, COSTS OR DAMAGES ASSOCIATED WITH CUSTOMER'S PRODUCTS OR OTHER ELEMENTS INCORPORATED OR USED THEREWITH WHICH WERE NOT PROVIDED BY ZOLL OR WITH RESPECT TO ANY MODIFICATIONS MADE TO THE SOFTWARE OR SERVICES OR MISUSE OF THE SOFTWARE OR SERVICES. ZOLL'S TOTAL CUMULATIVE LIABILITY IN CONNECTION WITH THIS AGREEMENT, WHETHER IN CONTRACT OR TORT OR OTHERWISE, WILL NOT EXCEED THE AMOUNT PAID TO ZOLL BY CUSTOMER FOR THE SOFTWARE AND SERVICES PROVIDED UNDER THIS AGREEMENT DURING THE 12-MONTH PERIOD PRECEDING THE EVENTS GIVING RISE TO SUCH LIABILITY. Customer acknowledges that these limitations reflect the allocation of risk set forth in this Agreement and that ZOLL would not enter into this Agreement without these limitations on its liability. Customer agrees that these limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. The remedies in this Agreement are Customer's sole and exclusive remedies. In addition, ZOLL disclaims all liability of any kind of ZOLL's licensors and suppliers, for third party products or services, and for the actions or omissions of Customer's representatives.

**10. Ownership.** All right, title and interest, including but not limited to all existing or future copyrights, trademarks, service marks, trade secrets, patents, patent applications, know how, moral rights, contract rights, and proprietary rights, and all registrations, applications, renewals, extensions, and combinations of the foregoing, in and to the following are the exclusive property of ZOLL (or, as the case may be, its subsidiaries, licensors and suppliers): (i) ASP Services, Software, Documentation, and all proprietary technology used by ZOLL to perform its obligations under this Agreement; (ii) all software, tools, routines, programs, designs, technology, ideas, know-how, processes, techniques and inventions that ZOLL makes, develops, conceives or reduces to practice, whether alone or jointly with others, in the course of performing the Services; (iii) the fully compiled version of any of the foregoing software programs that can be executed by a computer and used without further compilation (the "Executable Code"); (iv) the human readable version of any of the foregoing software programs that can be compiled into Executable Code (the "Source Code"); and (v) all enhancements, modifications, improvements and derivative works of each and any of the foregoing (the "ZOLL Property"). If any derivative work is created by Customer from the Software or Services, ZOLL shall own all right, title and interest in and to such derivative work. Any rights not expressly granted to Customer hereunder are reserved by ZOLL (or its licensors and suppliers, as the case may be).

**11. Term and Termination.**

**11.1. Term.** The term of this Agreement ("Term") begins on the effective date of the first Order incorporating this Agreement and continues until it is terminated. The term of each Order begins on the effective date of such Order and continues until it expires or is terminated; *provided, however*, that such term (and any extension thereof) shall automatically renew for an equivalent period at ZOLL's then current list pricing unless either party notifies the other party in writing of an intent to not renew such term at least ninety (90) days prior to the expiration of such term. "Implementation Date" for any ASP Services means the earlier of (a) the date upon which the activation of such ASP Services is complete and such ASP Services are able to function as described in the warranty for such ASP Services, regardless of whether Customer uses such ASP Services or (b) one hundred eighty (180) days following the shipment of the monitor/defibrillators in connection with which such ASP Services are to be used, unless a delay in the activation of such ASP Services is caused by ZOLL, in which case the Implementation Date shall be postponed by a number of days equal to the delay that ZOLL has caused; or (c) if Customer does not use Implementation Services to activate such ASP Services, the date of the Order for such ASP Services.

**11.2. Termination.** Either party may terminate this Agreement or any Order without cause on thirty (30) days' prior written notice to the other party. Either party may terminate this Agreement or any Order if the other party materially defaults in the performance of any of its obligations hereunder and fails to cure such default within twenty (20) days after written notice from the non-defaulting party.

**11.3. Effects of Termination.** Upon expiration or termination of this Agreement or any Order for any reason: (a) all amounts, if any, owed to ZOLL under this Agreement or the Order that has expired or been terminated (the "Expired or Terminated Document") before such termination or expiration will become immediately due and payable; (b) Customer's right to access the ASP Services, and all licensed rights granted, in the Expired or Terminated Document will immediately terminate and cease to exist; and (c) Customer must (i) promptly discontinue all use of any ASP Services provided under the Expired or Terminated Document (ii) erase all copies of Access Software from Customer's computers and the computers of its customers and return to ZOLL or destroy all copies of such Access Software and related Documentation on tangible media in Customer's possession and (iii) return or destroy all copies of the Documentation in Customer's possession or control; (d) each party shall promptly discontinue all use of the other party's Confidential Information disclosed in connection with the Expired or Terminated Document and return to the other party or, at the other party's option, destroy, all copies of any such Confidential Information in tangible or electronic form. Additionally, if any Order for ASP Services is terminated by ZOLL for a material default or by Customer without cause, then Customer immediately shall pay ZOLL an early termination fee equal to the amount of (x) the Fees for such ASP Services otherwise payable during the initial term of such Order had such Order not been terminated during such term minus (y) the sum of such Fees paid by Customer to ZOLL prior to the date of termination. Upon ZOLL's request, Customer will provide a written certification (in a form acceptable to ZOLL), certifying as to Customer's compliance with its post-termination obligations set forth in this Section 11.3.

**12. General Provisions.**

**12.1. Compliance with Laws.** Customer shall comply with all applicable laws and regulations, and obtain required authorizations, concerning its use of the ASP Services, including without limitation if applicable all export and import control laws and regulations. Customer will not use any ASP Services for any purpose in violation of any applicable laws. ZOLL may suspend performance if Customer violated applicable laws or regulations.

**12.2. Audits and Inspections.** Upon written request from ZOLL, Customer shall furnish ZOLL with a certificate signed by an officer of Customer stating that the ASP Services are being used strictly in accordance with the terms and conditions of this Agreement. During the Term and for a period of six months following the termination or expiration of this Agreement, upon prior written notice, ZOLL will have the right, during normal business hours, to inspect, or have an independent audit firm inspect, Customer's records relating to Customer's use of the ASP Services to ensure it is in compliance with the terms of this Agreement. The costs of the audit will be paid by ZOLL, unless the audit reveals that Customer's underpayment of Fees exceeds five percent. Customer will promptly pay to ZOLL any amounts shown by any such audit to be owing (which shall be calculated at ZOLL's standard, non-discounted rates) plus interest as provided in Section 2 above.

**12.3. Assignments.** Customer may not assign or transfer, by operation of law or otherwise (including in connection with a sale of substantially all assets or equity, merger or other change in control transaction), any of its rights under this Agreement or any Order to any third party without ZOLL's prior written consent. Any attempted assignment or transfer in violation of the foregoing will be null and void. ZOLL shall have the right to assign this Agreement or any Order to any affiliate, or to any successor to its business or assets to which this Agreement relates, whether by merger, sale of assets, sale of stock, reorganization or otherwise, and to contract with any third party to provide part of any of the Software and Services, and to delegate performance of this Agreement or any Order to any of its subsidiaries.

**12.4. U.S. Government End Users.** If Customer is a branch or agency of the United States Government, the following provision applies. The Software and Documentation are composed of "commercial computer software" and "commercial computer software documentation" as such terms are used in 48 C.F.R. 12.212 (SEPT 1995) and are (i) for acquisition by or on behalf of civilian agencies, consistent with the policy set forth in 48 C.F.R. 12.212; or (ii) for acquisition by or on behalf of units of the Department of Defense, consistent with the policies set forth in 48 C.F.R. 227.7202 1 (JUN 1995) and 227.7202 3 (JUN 1995).

**12.5. Notices.** All notices, consents, and approvals under this Agreement must be delivered in writing by electronic mail, courier, electronic facsimile, or certified or registered mail (postage prepaid and return receipt requested) to the other party at the address set forth in the most recent Order (or to such other address or person as from time to time provided by such party in accordance with this Section 12.5), and will be effective upon receipt or three (3) business days after being deposited in the mail as required above, whichever occurs sooner.

**12.6. Governing Law and Venue; Waiver of Jury Trial.** This Agreement will be governed by and interpreted in accordance with the laws of the State of Colorado without reference to its choice of law rules. The United Nations Convention on Contracts for the International Sale of Goods does not apply to this Agreement. Any action or proceeding arising from or relating to this Agreement shall be brought in a federal or state court in the State of Colorado, and each party irrevocably submits to the



jurisdiction and venue of any such court in any such action or proceeding. EACH PARTY HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT.

**12.7. Remedies.** Except as otherwise expressly provided in this Agreement, the parties' rights and remedies under this Agreement are cumulative. Customer acknowledges that the Software and Services are built on valuable trade secrets and proprietary information of ZOLL, that any actual or threatened breach hereof will constitute immediate, irreparable harm to ZOLL for which monetary damages would be an inadequate remedy, and that ZOLL will be entitled to injunctive relief for such breach or threatened breach. Customer further agrees to waive and hereby waives any requirement for the security or the posting of any bond in connection with such remedies. Such remedies shall not be considered to be the exclusive remedies for any such breach or threatened breach, but shall be in addition to all other remedies available at law or equity to ZOLL.

**12.8. Waivers.** Any waiver or failure to enforce any provision of this Agreement on one occasion will not be deemed a waiver of any other provision or of such provision on any other occasion.

**12.9. Severability.** If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable, such provision will be changed and interpreted to accomplish the objectives of such provision to the greatest extent possible under applicable law and the remaining provisions of this Agreement will continue in full force and effect. In any event, the unenforceability or invalidity of any provision shall not affect any other provision of this Agreement, and this Agreement shall continue in full force and effect, and be construed and enforced, as if such provision had not been included, or had been modified as above provided, as the case may be.

**12.10. Independent Contractors.** The parties are entering into, and will perform, this Agreement as independent contractors. Nothing in this Agreement will be construed to make either party the agent of the other for any purpose whatsoever, to authorize either party to enter into any contract or assume any obligation on behalf of the other or to establish a partnership, franchise or joint venture between the parties.

**12.11. Third Parties.** Customer is solely responsible for, and none of the fees set forth herein shall be deemed to cover, any amounts owed to third parties in connection with the use of the ASP Services. If Customer engages a third-party provider ("**Third Party Provider**") to deliver products or services, including without limitation software, integrated into or receiving data from or accessing the ASP Services ("**Third Party Products or Services**"), Customer represents, warrants and agrees that: (i) ZOLL shall have no liability, and makes no representation, with respect to such Third Party Products or Services; and (ii) the Third Party Provider shall not be an agent of ZOLL. To the extent the ASP Services or Software contains software owned by a third party for which ZOLL has a license agreement with a third party, the ASP Services and Software and all rights granted hereunder are expressly limited by and subject to any license agreements ZOLL may have for such software.

**12.12. Force Majeure.** Neither party shall be liable for damages for any delay or failure of performance hereunder (other than payment obligation) arising out of causes beyond such party's reasonable control and without such party's fault or negligence, including, but not limited to, failure of its suppliers to timely deliver acceptable parts or services, any act or omission of Customer that interferes with or impedes ZOLL's performance hereunder, acts of God, acts of civil or military authority, fires, riots, wars, embargoes, Internet disruptions, hacker attacks, or communications failures (a "**Force Majeure Event**").

**12.13. Entire Agreement; Amendment; No Third Party Beneficiaries; Survival.** This Agreement, which may be accepted by performance, constitutes the entire agreement between the parties regarding the subject hereof and supersedes all prior or contemporaneous agreements, understandings, and communication, whether written or oral, except agreements at zollonline.com. Any other representation or agreement, whether written or oral, including but not limited to any purchase order issued by Customer, shall be wholly inapplicable to the Software and Services and shall not be binding in any way on ZOLL. This Agreement may not be amended or changed or any provision hereof waived except in writing signed by both parties. Any different or additional terms in any purchase order, confirmation or similar form issued or otherwise provided by Customer but not signed by an authorized representative of ZOLL shall have no force or effect. There are no third party beneficiaries of this Agreement. Those provisions of this Agreement that may be reasonably interpreted as surviving termination of this Agreement or the survival of which is necessary for the interpretation or enforcement of this Agreement shall continue in full force and effect in accordance with their terms notwithstanding the termination hereof including, but not limited to, Section 7 (Confidentiality), Section 8 (Indemnification), Section 9 (Limitation on Liability), Section 10 (Ownership), Section 11.3 (Effects of Termination) and Section 12 (General Provisions). This Agreement may be executed in counterparts, each of which will be considered an original, but all of which together will constitute the same instrument.

**13. HIPAA.** This Section 13 applies if and to the extent that ZOLL creates, receives, maintains or transmits, directly or indirectly, any protected health information of Customer ("**PHI**") in the course of providing Software or Services to Customer. Capitalized terms used but not defined in this Section 13 have the meanings assigned to them elsewhere in the Agreement or, if not defined therein, as defined in the Health Insurance Portability and Accountability Act of 1996 (P.L. 104 191), 42 U.S.C. Section 1320d, et seq., and regulations promulgated thereunder, as amended from time to time (such statute and regulations collectively referred to as "**HIPAA**"). "**Covered Entity**" as used herein means Customer. "**Business Associate**" as used herein means ZOLL. The purpose of this Section 13 is to comply with 45 C.F.R. §164.502(e) and §164.504(e), governing PHI and business associates under HIPAA.

**13.1. Applicability.** This Section 13 applies if and to the extent that Business Associate creates, receives, maintains or transmits, directly or indirectly, any PHI in the course of providing Software or Services to Covered Entity.

**13.2. Compliance and Agents.** Business Associate agrees that, to the extent it has access to PHI, Business Associate will fully comply with the requirements of this Section 13 with respect to such PHI. Business Associate will ensure that every agent, including a subcontractor, of Business Associate to whom it provides PHI received from, or created or received by Business Associate on behalf of, Covered Entity will comply with the same restrictions and conditions as set forth herein.

**13.3. Use and Disclosure; Rights.** Business Associate agrees that it shall not use or disclose PHI except as permitted under this Agreement, and in compliance with each applicable requirement of 45 CFR Section 164.504(e). Business Associate may use or disclose the PHI received or created by it, (a) to perform its obligations under this Agreement, (b) to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in the Agreement, or (c) to provide data aggregation functions to Covered Entity as permitted by HIPAA. Further, Business Associate may use the PHI received by it in its capacity as Business Associate, if necessary, to properly manage and administer its business or to carry out its legal responsibilities. Business Associate may disclose the PHI received by it in its capacity as Business Associate to properly manage and administer its business or to carry out its legal responsibilities if: (a) the disclosure is required by law, or (b) the Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will be held confidentially and used or further disclosed only as required by law or for the purpose for which it is disclosed to the person and the person notifies Business Associate of any instances of which it is aware that the confidentiality of the information has been breached. Covered Entity shall not request Business Associate to use or disclose PHI in any manner that would not be permissible under HIPAA if done by Covered Entity.

**13.4. Safeguards.** Business Associate agrees to develop, document, use, and keep current appropriate procedural, physical, and electronic safeguards, as required in 45 C.F.R. §§164.308 - 164.312, sufficient to prevent any use or disclosure of electronic PHI other than as permitted or required by this Agreement.

**13.5. Minimum Necessary.** Business Associate will limit any use, disclosure, or request for use or disclosure to the minimum amount necessary to accomplish the intended purpose of the use, disclosure, or request.

**13.6. Report of Improper Use or Disclosure.** Business Associate shall report to Covered Entity any information of which it becomes aware concerning any use or disclosure of PHI that is not permitted by this Agreement and any security incident of which it becomes aware. Business Associate will, following the discovery of a breach of "**unsecured protected health information**," as defined in 45 C.F.R. § 164.402, notify Covered Entity of such breach within 15 days. The notice shall include the identification of each individual whose unsecured protected health information has been, or is reasonably believed by Business Associate to have been, accessed, acquired, or disclosed during such breach. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a use or disclosure of PHI by Business Associate in violation of this Agreement.



**13.7. Individual Access.** In accordance with an individual's right to access to his or her own PHI in a designated record set under 45 CFR §164.524 and the individual's right to copy or amend such records under 45 CFR §164.524 and §164.526, Business Associate shall make available all PHI in a designated record set to Covered Entity to enable the Covered Entity to provide access to the individual to whom that information pertains or such individual's representative.

**13.8. Amendment of and Access to PHI.** Business Associate shall make available for amendment PHI in a designated record set and shall incorporate any amendments to PHI in a designated record set in accordance with 45 CFR §164.526 and in accordance with any process mutually agreed to by the parties.

**13.9. Accounting.** Business Associate agrees to document such disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to an individual's request for an accounting of disclosures of their PHI in accordance with 45 CFR §164.528. Business Associate agrees to make available to Covered Entity the information needed to enable Covered Entity to provide the individual with an accounting of disclosures as set forth in 45 CFR §164.528.

**13.10. DHHS Access to Books, Records, and Other Information.** Business Associate shall make available to the U.S. Department of Health and Human Services ("DHHS"), its internal practices, books, and records relating to the use and disclosure of PHI received from, or created or received by Business Associate on behalf of, Covered Entity for purposes of determining the Covered Entity's compliance with HIPAA.

**13.11. Individual Authorizations; Restrictions.** Covered Entity will notify Business Associate of any limitation in its notice of privacy practices, any restriction to the use or disclosure of PHI that Covered Entity has agreed to with an individual and of any changes in or revocation of an authorization or other permission by an individual, to the extent that such limitation, restriction, change, or revocation may affect Business Associate's use or disclosure of PHI.

**13.12. HITECH Act Compliance.** Covered Entity and Business Associate agree to comply with the amendments to HIPAA included in the Health Information Technology for Economic and Clinical Health Act (the "HITECH Act"), including all privacy and security regulations issued under the HITECH Act that apply to Business Associate.

**13.13. Breach; Termination; Mitigation.** If Covered Entity knows of a pattern of activity or practice of Business Associate that constitutes a material breach or violation of Business Associate's obligations under this Section 13, Covered Entity and Business Associate shall take any steps reasonably necessary to cure such breach and make Business Associate comply, and, if such steps are unsuccessful, Covered Entity may terminate this Agreement. Business Associate shall take reasonable actions available to it to mitigate any detrimental effects of such violation or failure to comply.

**13.14. Return of PHI.** Business Associate agrees that upon termination of this Agreement, and if feasible, Business Associate shall (a) return or destroy all PHI received from Covered Entity, or created or received by Business Associate on behalf of Covered Entity, that Business Associate has continued to maintain in any form or manner and retain no copies of such information or, (b) if such return or destruction is not feasible, immediately notify Covered Entity of the reasons return or destruction are not feasible, and extend indefinitely the protection of this Section 13 to such PHI and limit further uses and disclosures to those purposes that make the return or destruction of the PHI not feasible.

**13.15. De-identified Health Information.** Business Associate may de-identify any and all PHI and may create a "Limited Data Set" in accordance with 45 C.F.R. § 164.514(b) & (e). Covered Entity acknowledges and agrees that de-identified information is not PHI and that Business Associate may use such de-identified information for any lawful purpose. Use or disclosure of a Limited Data Set must comply with 45 CFR 164.514(e).

**13.16. Survival.** All representations, covenants, and agreements in or under this Section 13 shall survive the execution, delivery, and performance of this Agreement.

**13.17. Further Assurances; Conflicts.** Each party shall in good faith execute, acknowledge or verify, and deliver any and all documents which may from time to time be reasonably requested by the other party to carry out the purpose and intent of this Section 13. The terms and conditions of this Section 13 will override and control any expressly conflicting term or condition of the Agreement. All non-conflicting terms and conditions of the Agreement shall remain in full force and effect. Any ambiguity shall be resolved in a manner that will permit Covered Entity to comply with HIPAA. For the avoidance of doubt, a limitation on liability in the Agreement does not conflict with this Section 13.

**13.18. Applicable Law.** The parties acknowledge and agree that HIPAA may be amended and additional guidance or regulations implementing HIPAA may be issued after the date of the execution of this Agreement and may affect the parties' obligations hereunder. The parties agree to take such action as is necessary to amend this Agreement from time to time in order as is necessary for Covered Entity to comply with HIPAA.

By signing below, the Customer acknowledges and agrees to those terms and conditions. The person signing below represents and warrants that she or he has the authority to bind the Customer to those terms and conditions.

**Customer**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Company Address: \_\_\_\_\_

Date: \_\_\_\_\_



TO: **Franklin Fire Department**  
1800 Thornburg  
Franklin, IN 46131

Attn: **Matt Culp**

email: [mculp@franklin.in.gov](mailto:mculp@franklin.in.gov)

Tel: 317-736-0063

**ZOLL Medical Corporation**

Worldwide HeadQuarters  
269 Mill Rd  
Chelmsford, Massachusetts 01824-4105  
(978) 421-9655 Main  
(800) 348-9011  
(978) 421-0015 Customer Support  
FEDERAL ID#: 04-2711626

**QUOTATION 356537 V:1**

DATE: September 15, 2020

TERMS: Net 30 Days

FOB: Shipping Point

FREIGHT: Prepay and Add

ITEM	MODEL NUMBER	DESCRIPTION	QTY.	UNIT PRICE	DISC PRICE	TOTAL PRICE
1	6008-9901	<b>ZOLL X Series Trade-In</b>	3		(\$6,888.00)	(\$20,664.00) *
2	8778-89044-PP	Precision Service Plan, 4 Years, On-Site. Includes: Annual preventive maintenance, 24% discount on new cables, 24% discount on lithium SurePower Batteries, discount on parameter upgrades, and parts & labor on normal wear and tear. Shipping and use of a Service Loaner during repairs, no charge shipping. Extended warranty is a continuation of the EMS One Year Product Limited Warranty.	4	\$5,740.00	\$5,166.00	\$20,664.00 **

To the extent that ZOLL and Customer, or Customer's Representative have negotiated and executed overriding terms and conditions ("Overriding T's & C's"), those terms and conditions would apply to quotation. In all other cases, this quote is made subject to ZOLL's Standard Commercial Terms and Conditions ("ZOLL T's & C's") which for capital equipment, accessories and consumables can be found at <http://www.zoll.com/GTC> and for software products can be found at <http://www.zoll.com/SSPTC> and for hosted software products can be found at <http://www.zoll.com/SSHTC>. Except in the case of overriding T's and C's, any Purchase Order ("PO") issued in response to this quotation will be deemed to incorporate ZOLL T's & C's, and any other terms and conditions presented shall have no force or effect except to the extent agreed in writing by ZOLL.

1. DELIVERY WILL BE MADE 60-90 DAYS AFTER RECEIPT OF ACCEPTED PURCHASE ORDER.
2. PRICES QUOTED ARE VALID FOR 60 DAYS.
3. APPLICABLE TAX, SHIPPING & HANDLING WILL BE ADDED AT THE TIME OF INVOICING.
4. ALL PURCHASE ORDERS ARE SUBJECT TO CREDIT APPROVAL BEFORE ACCEPTABLE BY ZOLL.
5. FORWARD PURCHASE ORDER AND QUOTATION TO ZOLL CUSTOMER SUPPORT AT [esales@zoll.com](mailto:esales@zoll.com) OR FAX TO 978-421-0015.
6. ALL DISCOUNTS OFF LIST PRICE ARE CONTINGENT UPON PAYMENT WITHIN AGREED UPON TERMS.
7. PLACE YOUR ACCESSORY ORDERS ONLINE BY VISITING [www.zollwebstore.com](http://www.zollwebstore.com).

Adam Britt  
EMS Territory Manager  
901-212-9677





TO: Franklin Fire Department  
1800 Thornburg  
Franklin, IN 46131

Attn: Matt Culp

email: [mculp@franklin.in.gov](mailto:mculp@franklin.in.gov)

Tel: 317-736-0063

## ZOLL Medical Corporation

Worldwide HeadQuarters  
269 Mill Rd  
Chelmsford, Massachusetts 01824-4105  
(978) 421-9655 Main  
(800) 348-9011  
(978) 421-0015 Customer Support  
FEDERAL ID#: 04-2711626

QUOTATION 356537 V:1

DATE: September 15, 2020

TERMS: Net 30 Days

FOB: Shipping Point

FREIGHT: Prepay and Add

ITEM	MODEL NUMBER	DESCRIPTION	QTY.	UNIT PRICE	DISC PRICE	TOTAL PRICE
		<p style="text-align: center;">**Reflects Discount Pricing.</p> <p style="text-align: center;">*Trade-In Value valid if all equipment purchased is in good operational and cosmetic condition, and includes all standard accessories. Customer assumes responsibility for shipping trade-in equipment to ZOLL Chelmsford within 60 days of receipt of new equipment. Customer agrees to pay cash value for trade-in equipment not shipped to ZOLL on a timely basis.</p>				
TOTAL						\$0.00

To the extent that ZOLL and Customer, or Customer's Representative have negotiated and executed overriding terms and conditions ("Overriding T's & C's"), those terms and conditions would apply to quotation. In all other cases, this quote is made subject to ZOLL's Standard Commercial Terms and Conditions ("ZOLL T's & C's") which for capital equipment, accessories and consumables can be found at <http://www.zoll.com/GTC> and for software products can be found at <http://www.zoll.com/SSPTC> and for hosted software products can be found at <http://www.zoll.com/SSHTC>. Except in the case of overriding T's and C's, any Purchase Order ("PO") issued in response to this quotation will be deemed to incorporate ZOLL T's & C's, and any other terms and conditions presented shall have no force or effect except to the extent agreed in writing by ZOLL.

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7. PLACE YOUR ACCESSORY ORDERS ONLINE BY VISITING [www.zollwebstore.com](http://www.zollwebstore.com).

Adam Britt  
EMS Territory Manager  
901-212-9677



269 Mill Road  
Chelmsford, Massachusetts 01824-4105  
978-421-9655 (main)  
978-421-0025 (fax)  
www.zoll.com

September 15, 2020

City of Franklin Fire Department  
ATTN Matt Culp, Chief  
1800 Thornburg Lane  
Franklin, IN 46131

Dear Chief Matt Culp,

We appreciate your selection of ZOLL® products for City of Franklin Fire Department. This letter serves as confirmation that ZOLL® Medical Corporation at 269 Mill Road in Chelmsford, Massachusetts, is the sole manufacturer and source of X Series® Defibrillators for the EMS Market. ZOLL® or Debbie Sizemore, Regional Manager, will not sell an X Series® Defibrillator to City of Franklin Fire Department, through any vendor or dealer.

Should you have any questions or require additional information please contact me at 800-348-9011 x 9657

Sincerely,

A handwritten signature in cursive script that reads "Nancy Branco". The ink is dark and the signature is fluid.

Nancy Branco  
Local Contracts Specialist





## Federal Coronavirus Pandemic Response Available Funds for Equipment

This document is intended to help you determine whether there is a federal program that will reimburse your entity for the purchase of ZOLL equipment. This information does not provide a guarantee from ZOLL Medical that funding will be approved.

FEMA grant programs fund equipment on the Authorized Equipment List (AEL). The AEL is available at <http://www.fema.gov/authorized-equipment-list>. The following items of interest are listed on the AEL:

09ME-02-VENT	Ventilators
09ME-03-DEAE	Defibrillator, Automated External
09ME-03-DEMP	Defibrillator/Cardiac Monitors/Pacing
09ME-03-MCCD	Device, Mechanical Chest Compression

Some equipment items require prior approval from DHS/FEMA before obligation or purchase of the items. Please reference the grant notes for each equipment item to ensure prior approval is not required or to ensure prior approval is obtained if necessary.

**FEMA Public Assistance Program:** The FEMA Public Assistance Program provides federal grant assistance to help communities quickly respond to and recover from major disasters or emergencies declared by the President. To be eligible, you must be a non-federal entity – including state, territorial, tribal, and local government or private non-profit). Generally, the FEMA Public Assistance program can be used for emergency protective measures that are NOT funded by another federal agency.

A Fact Sheet can be found [here](#), and FEMA's simplified application for the Public Assistance program can be found [here](#). If you believe your organization may be eligible for FEMA Public Assistance Program funding visit <http://www.fema.gov/disaster> to determine the local agency responsible for working with applicants to submit grants to confirm eligibility and the process.

**Assistance for Firefighter Grants (AFG):** *The Assistance to Firefighters Grant (AFG) program is currently not accepting applications (as of July 31, 2020), but there will be a new round of funding for the coming year, and now is a good time to get your application ready.*

**AFG is a competitive grant program** that provides funding for an array of equipment. Eligible entities include fire departments, non-affiliated EMS organizations, regional applicants (including multiple fire and/or EMS departments), and state-level fire training academies.

Generally, the AFG program can be used to obtain critically needed equipment, protective gear, emergency vehicles, training, and other resources necessary for protecting the public and emergency personnel from fire and related hazards. \*Information on the Assistance to Firefighter Grants program can be found [here](#).

**State Homeland Security Program:** The State Homeland Security Program supports the implementation of risk-driven, capabilities-based state homeland security strategies to address targets set in urban, state, and regional Threat and Hazard Identification and Risk Assessments.

Eligible entities are State Administrative Agencies in all 50 states, DC, Puerto Rico, American Samoa, Guam, Northern Mariana Islands and the U.S. Virgin Islands. Generally, this program provides funding to support the implementation of risk-driven, capabilities-based State Homeland Security Strategies to address capability targets. To participate in this program, contact your State Administrative Agency.

**Urban Area Security Initiative (UASI):** This program provides funding to enhance regional preparedness and capabilities in designated high-threat, high-density areas. The State Administrative Agency (SAA) is the only entity eligible to submit HSGP applications to DHS/FEMA, including those applications submitted on behalf of UASI.

Generally, UASI grants enhance regional preparedness and capabilities in 32 high-threat, high-density areas. This grant provides grantees with the resources required for implementation of the National Preparedness System and working toward the National Preparedness Goal of a secure and resilient nation. To participate in this program, contact your State Administrative Agency.

**CARES Act Provider Relief Fund (HHS):** The Provider Relief Fund is a discretionary of \$175 billion HHS is distributing to hospitals and healthcare providers on the front lines of the coronavirus response. **These are grants, not loans**, and do not have to be repaid. To be eligible, an entity must be a healthcare provider and have provided, after January 31, 2020, diagnoses, testing, or care for individuals with possible or actual cases of or prevented in the spread of COVID-19.

**Generally, the Provider Relief Fund can be used for** health care related expenses attributable to coronavirus. This may cover a range of items and services purchased to prevent, prepare for, and respond to coronavirus, including supplies or equipment used to provide healthcare services for possible or actual COVID-19 patients; and acquiring additional resources, including facilities, equipment, supplies, healthcare practices, staffing, and technology to expand or preserve care.

**To obtain reimbursement/funding under the Provider Relief Fund** providers must determine the appropriate [provider portal](#) to sign an attestation, accept or return the funds, agree to Terms and Conditions, submit revenue information. There is no definitive list of covered equipment to date, but the Provider Relief Fund is intended to be very flexible. More information on reporting requirements is available [here](#).