

Adult Post–Cardiac Arrest Care Algorithm

Cascading numbered boxes correspond to actions the provider should perform in sequence. Each box is separated by an arrow that signifies the pathway the provider should take. Some boxes are separated by 2 arrows that lead to different boxes, meaning that the provider should take a different pathway depending on the outcome of the previous action. Pathways are hyperlinked. Boxes 1 through 3 show initial stabilization after ROSC. Boxes 4 through 13 show continued management.

Box 1

ROSC obtained

Box 2

Manage airway

Assess airway

Place or exchange an advanced airway device, as necessary.

Confirm correct airway placement.

then

Manage oxygenation and ventilation

Maintain 100% FIO₂ until SpO₂ (or PaO₂) can be measured reliably.

SPO₂ target 90% to 98% (PaO₂ 60 to 105 millimeters of mercury)

PCO₂ target 35 to 45 millimeters of mercury

then

Manage hemodynamics

Target mean arterial pressure of greater than or equal to 65 millimeters of mercury

Box 3

Early diagnostic testing

Obtain 12-lead ECG.

Consider diagnostic imaging (CT and/or ultrasound).

Box 4

Treat arrest etiologies and complications.

Consider for emergency coronary angiography and/or mechanical circulatory support.

Box 5

Assess patient off sedation and neuromuscular blockade, if able.

Box 6

Follows commands?

If Yes, proceed to [Box 12](#).

If No or unsure, proceed to [Box 7](#).

Box 7

Ongoing critical care

Box 8

Deliberate strategy for **temperature control**

Box 9

EEG

Box 10

Coronary angiography when appropriate

Box 11

Appropriately timed, multimodal **prognostication**

Box 12

Ongoing critical care

Box 13

Coronary angiography when appropriate

Sidebar

Initial Stabilization After ROSC

Resuscitation is ongoing during the post-ROSC phase, and many of these activities can occur concurrently.

Manage airway: Assess and consider placement or exchange of an advanced airway device (usually endotracheal tube or supraglottic device). Confirm correct placement of an advanced airway. This generally includes the use of waveform capnography or capnometry.

Manage oxygenation and ventilation: Titrate FiO_2 for SpO_2 90% to 98% (or PaO_2 60 to 105 millimeters of mercury). Adjust minute ventilation to target PCO_2 35 to 45 millimeters of mercury in the absence of severe acidemia.

Manage hemodynamics: Initiate or adjust vasopressors and/or fluid resuscitation as necessary for goal mean arterial pressure of 65 millimeters of mercury or greater.

Early diagnostic testing: Obtain 12-lead ECG to assess for ischemia or arrhythmia. Consider CT head, chest, abdomen, and/or pelvis to determine cause of arrest or assess for injuries sustained during resuscitation. Point-of-care ultrasound or echocardiography may be reasonable to identify clinically significant diagnoses requiring intervention.

Continued Management

Treat arrest etiologies and complications.

Consider emergency cardiac intervention:

- Persistent ST-segment elevation present
- Cardiogenic shock
- Recurrent or refractory ventricular arrhythmias
- Severe myocardial ischemia

Temperature control: If patient is not following commands off sedation and neuromuscular blockade or is unable to assess, initiate a deliberate strategy of temperature control with goal 32 °C to 37.5 °C as soon as possible.

Evaluate for seizure: Evaluate for clinical seizure and obtain EEG to evaluate for seizure in patients not following commands.

Prognostication: Multimodal approach with delayed impressions (greater than or equal to 72 hours from ROSC or achieving normothermia).

Ongoing critical care includes the following:

- Target PaO_2 60 to 105 millimeters of mercury, PCO_2 35 to 45 millimeters of mercury (unless severe acidemia); avoid hypoglycemia (glucose less than 70 mg/dL) and hyperglycemia (glucose greater than mg/dL); target mean arterial pressure of 65 millimeters of mercury or greater.
- Consider antibiotics.