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 the Initial Stabilization Phase. Boxes 4 through 8 show Continued Management and Additional Emergent Activities.

Box 1

ROSC obtained

Box 2

Manage airway

Early placement of endotracheal tube

then

Manage respiratory parameters

Start 10 breaths per minute

SpO_2 92% to 98%

$PaCO_2$ 35 to 45 millimeters of mercury

then

Manage hemodynamic parameters

Systolic blood pressure greater than 90 millimeters of mercury

Mean arterial pressure greater than 65 millimeters of mercury

Box 3

Obtain 12-lead ECG

Box 4

Consider for emergent cardiac intervention if

- STEMI present
- Unstable cardiogenic shock
- Mechanical circulatory support required

Box 5

Follows commands?

If Yes, proceed to Box 7.

If No, proceed to Box 6.

Box 6

Comatose

- TTM
- Obtain brain CT
- EEG monitoring
- Other critical care management

Proceed to Box 8.

Box 7

Awake

Other critical care management

Proceed to Box 8.

Box 8

Evaluate and treat rapidly reversible etiologies

Involve expert consultation for continued management

Sidebar

Initial Stabilization Phase

Resuscitation is ongoing during the post-ROSC phase, and many of these activities can occur concurrently. However, if prioritization is necessary, follow these steps:

- Airway management:
  Waveform capnography or capnometry to confirm and monitor endotracheal tube placement
- Manage respiratory parameters:
  Titrate F_{IO_2} for Spo_2 92% to 98%; start at 10 breaths per minute; titrate to Pa_{CO_2} of 35 to 45 millimeters of mercury
- Manage hemodynamic parameters:
  Administer crystalloid and/or vasopressor or inotrope for goal systolic blood pressure greater than 90 millimeters of mercury or mean arterial pressure greater than 65 millimeters of mercury

Continued Management and Additional Emergent Activities

These evaluations should be done concurrently so that decisions on targeted temperature management (TTM) receive high priority as cardiac interventions.

- Emergent cardiac intervention:
  Early evaluation of 12-lead electrocardiogram (ECG); consider hemodynamics for decision on cardiac intervention
- TTM: If patient is not following commands, start TTM as soon as possible; begin at 32 to 36 degrees Celsius for 24 hours by using a cooling device with feedback loop
- Other critical care management
  - Continuously monitor core temperature (esophageal, rectal, bladder)
  - Maintain normoxia, normocapnia, euglycemia
  - Provide continuous or intermittent electroencephalogram (EEG) monitoring
  - Provide lung-protective ventilation

H's and T's

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