ACLS decision points

● Draft — pending owner review

DECISION POINTS

1. **Rhythm check: is it shockable?**
   Cardiac arrest: VF, pulseless VT, asystole and PEA:
   Yes: VF or pulseless VT | No: asystole or PEA
2. **Is the bradyarrhythmia causing any of these?** (Hypotension; Acutely altered mental status; Signs of shock; Ischemic chest discomfort; Acute heart failure)
   Bradycardia with a pulse: No | Yes
3. **Is the tachyarrhythmia causing any of these?** (Hypotension; Acutely altered mental status; Signs of shock; Ischemic chest discomfort; Acute heart failure)
   Tachycardia with a pulse: Yes: unstable | No: stable
4. **Is the QRS wide (≥ 120 ms)?**
   Tachycardia with a pulse: Wide | Narrow
5. **Is there an organized QRS to synchronize to?**
   Electrical therapy: cardioversion, defibrillation and pacing:
   No: VF, pulseless VT, polymorphic VT
   Yes: unstable SVT, AF, flutter, monomorphic VT with a pulse
6. **Symptomatic bradycardia not responding to atropine?**
   Electrical therapy: cardioversion, defibrillation and pacing: Yes | No
7. **12-lead ECG: STEMI, cardiogenic shock or a likely cardiac cause?**
   Post–cardiac arrest care: STEMI, shock or high suspicion
   No
8. **Is the patient following commands (off sedation)?**
   Post–cardiac arrest care: No, or cannot assess | Yes
9. **What does the 12-lead show?**
   Acute coronary syndromes:
   ST elevation (STEMI) or an occlusion equivalent
   ST depression or dynamic T-wave inversion
   Normal or nondiagnostic
10. **Can primary PCI happen within 120 minutes of first medical contact?**
    Acute coronary syndromes: Yes
    No, and onset within 12 hours
11. **Does imaging show hemorrhage?**
    Suspected stroke: Yes: hemorrhage | No hemorrhage
12. **Within 4.5 hours of last known well, and eligible?**
    Suspected stroke: Yes | No, or ineligible
13. **Large vessel occlusion on CT angiography?**
    Suspected stroke: Yes | No
14. **Is the person breathing normally?**
    Opioid-associated emergency: Yes | No
15. **Is there a definite pulse (check for no more than 10 seconds)?**
    Opioid-associated emergency: Yes: respiratory arrest
    No: cardiac arrest
16. **Breathing restored?**
    Opioid-associated emergency: Yes | No
17. **ROSC within the first few minutes?**
    Cardiac arrest in pregnancy: Yes | No
18. **PEA or asystole: which cause fits the clues?**
    PEA: the H's and T's: Hypovolemia | Hypoxia | Hydrogen ion (acidosis) | Hypo- or hyperkalemia | Hypothermia | Tension pneumothorax | Tamponade (cardiac) | Toxins | Thrombosis (pulmonary) | Thrombosis (coronary) | I have been through the list

REVERSIBLE CAUSES

H's	Hypovolemia, hypoxia, hydrogen ion (acidosis), hypo-/hyperkalemia, hypothermia
T's	Tension pneumothorax, tamponade, toxins, thrombosis (pulmonary), thrombosis (coronary)

ENERGIES AND DOSES

Verify against current local protocol. The full 2025 guideline text could not be opened when this page was drafted; the 2025 changes listed were confirmed from summaries of AHA's published 2025 algorithms and highlights. Drug doses are the 2020 algorithm doses, which those 2025 algorithms keep.

Defibrillation, biphasic	Manufacturer recommendation (for example, initial dose of 120–200 J); if unknown, use the maximum available. Second and later doses should be equivalent; higher doses may be considered. AHA 2020 adult algorithm
Defibrillation, monophasic	360 J AHA 2020 adult algorithm
Epinephrine IV/IO	1 mg every 3–5 minutes AHA 2020 adult algorithm
Amiodarone IV/IO	First dose 300 mg bolus; second dose 150 mg AHA 2020 adult algorithm
Lidocaine IV/IO (alternative to amiodarone)	First dose 1–1.5 mg/kg; second dose 0.5–0.75 mg/kg AHA 2020 adult algorithm
Atropine IV	First dose 1 mg bolus; repeat every 3–5 minutes; maximum 3 mg AHA 2020 adult algorithm
Dopamine IV infusion	5–20 mcg/kg per minute; titrate to patient response; taper slowly AHA 2020 adult algorithm
Epinephrine IV infusion	2–10 mcg per minute; titrate to patient response AHA 2020 adult algorithm
Synchronized cardioversion	Refer to your specific device's recommended energy level to maximize first-shock success. AHA 2020 adult algorithm
Synchronized cardioversion of AF (2025 change)	Initial energy of at least 200 J with a biphasic defibrillator AHA 2025 Guidelines, Part 9: Adult Advanced Life Support (as reported in the 2025 highlights)

Adenosine IV	First dose 6 mg rapid IV push, followed by a normal saline flush; second dose 12 mg if required AHA 2020 adult algorithm
Procainamide IV (stable wide-QRS)	20–50 mg/min until the arrhythmia is suppressed, hypotension ensues, QRS duration increases > 50% or a maximum of 17 mg/kg is given; maintenance 1–4 mg/min; avoid if prolonged QT or heart failure AHA 2020 adult algorithm
Amiodarone IV (stable wide-QRS)	First dose 150 mg over 10 minutes; repeat as needed if VT recurs; follow with a maintenance infusion of 1 mg/min for the first 6 hours AHA 2020 adult algorithm
Sotalol IV (stable wide-QRS)	100 mg (1.5 mg/kg) over 5 minutes; avoid if prolonged QT. No longer listed in the 2025 algorithm. AHA 2020 adult algorithm; removed from the AHA 2025 algorithm
Oxygen	Titrate FiO_2 to SpO_2 90–98% AHA 2025 post-cardiac arrest care algorithm
Ventilation	$PaCO_2$ 35–45 mm Hg AHA 2025 post-cardiac arrest care algorithm
Blood pressure	MAP 65 mm Hg or more (fluids, norepinephrine or epinephrine infusion) AHA 2025 post-cardiac arrest care algorithm
Temperature control	Goal 32–37.5 °C for at least 36 hours if not following commands; prevent fever AHA 2025 Guidelines, Part 11 (duration as reported in summaries; confirm)
Aspirin	162–325 mg chewed (non-enteric-coated) ACC/AHA 2025 acute coronary syndromes guideline; AHA ACLS teaching
Nitroglycerin	0.4 mg sublingual every 5 minutes, up to 3 doses, if systolic BP ≥ 90 ACC/AHA 2025 acute coronary syndromes guideline; AHA ACLS teaching
Oxygen	Only if SpO_2 < 90% ACC/AHA 2025 acute coronary syndromes guideline
Alteplase	0.9 mg/kg (max 90 mg): 10% as a bolus over 1 minute, the rest over 60 minutes AHA/ASA stroke guidelines (2019, 2026) as taught in AHA 2020 ACLS
Tenecteplase	0.25 mg/kg (max 25 mg) single bolus AHA/ASA 2026 stroke guideline (as reported); not in AHA 2020 ACLS
Blood pressure before thrombolysis	Below 185/110 mm Hg; then at or below 180/105 for 24 hours AHA/ASA stroke guidelines as taught in AHA 2020 ACLS
Naloxone intranasal	4 mg, repeat every 2–3 minutes AHA 2020 opioid-associated emergency algorithms; naloxone endorsed in the AHA 2025 guidelines
Naloxone IM/IV	0.4 mg, titrated, repeat every 2–3 minutes AHA 2020 opioid-associated emergency algorithms; naloxone endorsed in the AHA 2025 guidelines
Defibrillation and drugs	Standard adult energies and doses AHA 2025 cardiac arrest in pregnancy algorithm
Resuscitative hysterotomy	If no ROSC: aim for delivery about 5 minutes after the arrest AHA 2025 cardiac arrest in pregnancy algorithm
Calcium chloride	For hyperkalemia, calcium-channel blocker toxicity or hypermagnesemia; not routine AHA 2025 Guidelines, Part 9 (specific causes only)
Sodium bicarbonate	1 mEq/kg for hyperkalemia or sodium-channel blocker toxicity; not routine AHA 2025 Guidelines, Part 9 (specific causes only)

Follows the AHA 2020 Guidelines for CPR and ECC, adult algorithms (Part 3: Adult Basic and Advanced Life Support, Circulation 2020;142(suppl 2):S366–S468), with 2025 changes where confirmed.