**2019 American Heart Association Guidelines Update on Adult Advanced Cardiovascular Life Support**

### Advanced Airways During CPR

#### Out-of-Hospital Advanced Airways Needed
- If high-inachemeent UF tube is available, it should be used.
- If high-volume UF tube is not available, consider a supraglottic airway.
- rotary ventilator that is compatible with the supraglottic airway should be used.
- the airway may be used as a back-up if necessary.
- the airway can be used.

#### In-Hospital Advanced Airways Needed
- If IPPV is feasible, consider an intubation.
- If a high-inachemeent UF tube is available, it should be used.
- If a high-volume UF tube is not available, consider a supraglottic airway.

### Vasopressors During CPR

**2019 Recommendation:** It is recommended that epinephrine be administered for cardiac arrest.

**Randomized controlled trials (RCTs) demonstrated improved 30-day survival and survival to discharge.**

However, epinephrine was not shown to increase rates of survival with favorable neurological outcome. Although a large study found an increase in short-term survival with unfavorable neurological outcome, this difference did not persist for more than 30 days.

The benefits of epinephrine support the recommendation for its use, despite some remaining uncertainty about overall impact on neurological outcome.

**Dose and Timing of Epinephrine Administration**

**16 observational studies**

**10 of which compared early vs late administration of epinephrine**

**2019 Recommendations**

It may be reasonable to administer epinephrine after defibrillation attempts have failed.

It is reasonable to administer epinephrine as soon as feasible.

### Extracorporeal CPR

Extracorporeal CPR refers to a cardiopulmonary bypass, which maintains organ perfusion while cardiac arrest causes are addressed.

**2019 Recommendations**

Extracorporeal CPR is not recommended for routine use in cardiac arrest.

Consider extracorporeal CPR when conventional CPR is failing if providers are skilled and can implement it quickly.

**Why?**

- **RCTs:** No published RCTs assessed EP in cardiac arrest.
- **Observational Studies:** Although results were inconsistent across studies, some found improved survival and neurological outcome in patients treated with extracorporeal CPR.

**Systemic Review**

Most studies used young, healthy patients or only included ECMO in cardiac arrest.