THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

Seed GLOBAL HEALTH

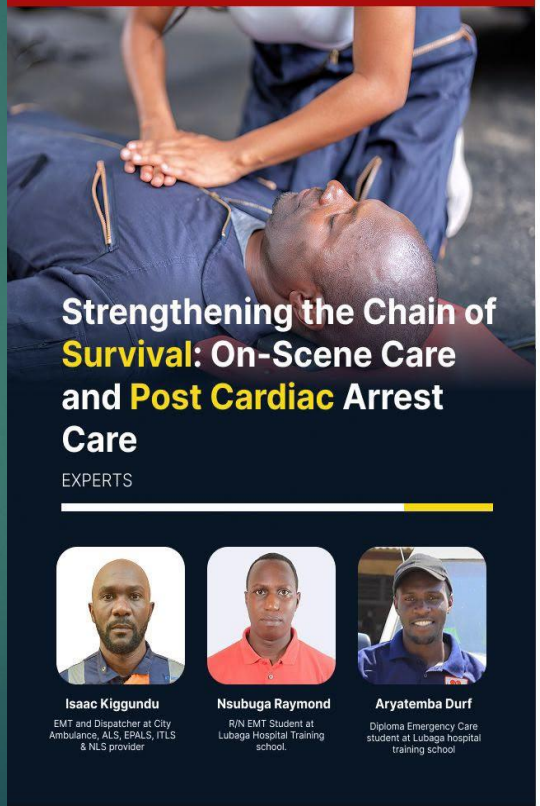
Project ECHO

STRENGTHENING THE CHAIN OF SURVIVAL

On-Scene Care and Post-Cardiac Arrest Care

EMS ECHO SESSION
25 September 2026 • 2:00–4:00 PM EAT

A practical approach for EMTs, nurses and emergency care teams



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Seed GLOBAL HEALTH · Project ECHO

The Department of Emergency Medical Services at the Ministry of Health invites you to this week's EMS ECHO Session as we talk about;

1. Early Recognition
2. Timely intervention
3. Principles of Post-Resuscitation care
4. Timely Referral and coordinated transfer
5. Common Barriers to timely Resuscitation

Scan to Register

FRIDAY
25th September 2026
2-4PM EAT
Use Link:
https://shorturl.at/LjiVN
Meeting ID: 993 1397 7536



Moderator
MIREMBE Violet Nursing
Officer In-charge HDU Mulago NRH Emergency and Critical care nurse practitioner. BEC master trainer.



Chat Questions
Amanya Brillian Sandrah
BLS, ILS, ALS, EPALS, NLS provider DEC student at Lubaga hospital training schools

ECSU

Learning objectives

By the end of the session, participants should be able to:

1. **Recognize cardiac arrest early and activate the response system without delay.**
2. **Deliver high-quality CPR, early defibrillation and coordinated on-scene resuscitation.**
3. **Describe the immediate priorities after return of spontaneous circulation (ROSC).**
4. **Coordinate safe referral, handover and transfer after resuscitation.**
5. **Identify common barriers to timely resuscitation and practical ways to reduce them.**

The Chain of Survival

Survival is a system — not a single intervention.

“The chain is only as strong as its weakest link”

1

Early recognition

Identify deterioration or cardiac arrest and call for help.

2

Early CPR & defibrillation

Maintain circulation and treat shockable rhythms rapidly.

3

Advanced resuscitation & care after ROSC

ALS, airway/ventilation, drugs and treatment of reversible causes.

4

Post-arrest recovery

Protect the brain and heart, treat the cause and support recovery.

PRE HOSPITAL

Follow up

1. Early recognition: act before arrest when possible

WATCH FOR DETERIORATION

Altered mental state
, abnormal breathing,
worsening shock,
severe respiratory distress
or rapidly changing vital signs.

RECOGNIZE ARREST

Unresponsive + absent/abnormal breathing → assess for cardiac arrest and activate the emergency response.

CALL & COORDINATE

Activate EMS/resuscitation team, bring defibrillator/AED and assign clear roles immediately.

- ❑ Do not delay CPR while searching for a perfect diagnosis.
- ❑ Use a structured primary assessment and communicate findings clearly.
- ❑ Where a patient is in cardiac arrest, resuscitation should generally occur where found if safe and effective CPR can be delivered.

2. Timely intervention: high-quality CPR + early defibrillation

HIGH-QUALITY CPR

- Start compressions promptly
- Adequate rate and depth
- Full recoil
- Minimize interruptions
- Avoid excessive ventilation

DEFIBRILLATION

- Attach AED/defibrillator early
- Analyze rhythm when indicated
- Shock shockable rhythms promptly
- Resume CPR immediately after shock

TEAM PERFORMANCE

- Compressor
- Airway/ventilation
- Defibrillator/monitor
- Medication/IV access
- Team leader + recorder

KEY PRINCIPLE: quality and continuity of CPR matter while the team prepares for definitive treatment.

3. On-scene resuscitation: work as a system

A structured approach prevents missed priorities.

1	**Safety & PPE**	Scene safety, hazards, number of patients, resources.
2	**Primary survey**	Airway, breathing, circulation; identify immediately reversible threats.
3	**Resuscitation**	CPR/defibrillation, ventilation/oxygenation and ALS interventions as indicated.
4	**Reversible causes**	Think systematically: hypoxia, hypovolemia, electrolyte/metabolic causes, temperature, thrombosis, toxins, tension pneumothorax and tamponade.
5	**Reassess continuously**	Rhythm checks, response to interventions, ROSC recognition and documentation.

Teamwork, communication and debriefing

Good resuscitation depends on people working predictably together.

CLOSED-LOOP COMMUNICATION

Leader gives a clear task
→ team member repeats it
→ task is completed
→ completion is reported back.

ISBAR HANDOVER

- Identify
- Situation
- Background
- Assessment
- Recommendation.

Include arrest time,
interventions, rhythm, ROSC and response.

DEBRIEF

- What went well?
- What could improve?
- Were delays or equipment gaps identified?
- Record actions for quality improvement.

- ❖ Use one team leader and defined roles.
- ❖ Keep a visible timeline of key events and interventions.
- ❖ Treat debriefing as a quality-improvement and team-support activity.

4. ROSC: the resuscitation is not over

Return of spontaneous circulation begins a new phase of care.

A — Airway

- Confirm airway patency;
- secure airway when indicated.

B — Breathing

- Ventilate lungs to achieve normocapnia;
- Avoid both hypoxemia and hyperoxemia.
- Titrate inspired Oxygen to Maintain an SPO2 of 94 %- 98%

C — Circulation

- Monitor SBP >100mmhg and mean Arterial pressure of 60-65mmhg
- Obtain a 12-lead ECG,
- establish/maintain access and treat shock.
- Prioritize immediate coronary angiography for patients with ST elevation.

D — Disability

- Assess neurological status and pupils
- Maintain normoglycemia
- manage any seizures/myoclonus.

E — Exposure / cause

- Maintain a normothermia and keep the patient with temperature below 37.5
- check for injuries and complications;
- prevent further harm.

Post-cardiac arrest care: immediate priorities

Apply the current resuscitation guideline

OXYGENATION & VENTILATION

After ROSC, use 100% oxygen initially until reliable measurement is available; then titrate to avoid hypoxemia and hyperoxemia. Avoid hypo- and hyperventilation.

BLOOD PRESSURE & PERFUSION

Avoid hypotension. The 2025 AHA guideline recommends maintaining MAP at least 65 mm Hg in adults after ROSC.

DIAGNOSE THE CAUSE

Obtain a 12-lead ECG as soon as feasible; consider appropriate imaging/echo/POCUS and investigate the cause and complications. (IN HOSPITAL AND CONSIDERING SCOPE)

- ❑ The post-resuscitation phase starts at the location where ROSC is achieved but, once stabilized, the patient is transferred to the most appropriate area of high-level care (e.g., emergency room, cardiac catheterization laboratory or intensive care unit (ICU)) for continued diagnosis , monitoring and treatment. Continue close monitoring and reassessment.
- ❑ Treat the underlying cause — cardiac, respiratory, metabolic, toxicological or traumatic as appropriate.
- ❑ Transfer Patient Immediately After ROSC avoid unnecessary delay.

Neuroprotection and recovery after ROSC

TEMPERATURE CONTROL

- For adults who remain unresponsive to verbal commands after ROSC the 2025 AHA guideline recommends maintaining temperature control (less or equal to 37.5) for at least 36 hours.

NEUROLOGICAL CARE

- Monitor neurological status, identify and manage seizures when present, and avoid secondary brain injury from hypoxia or hypotension.

SURVIVOR SUPPORT

- Recovery can extend beyond hospital discharge. Consider communication with family, rehabilitation needs and follow-up after cardiac arrest.

IMPORTANT: prognostication after cardiac arrest should be multimodal and appropriately timed; early neurological appearance alone should not determine outcome.

5. Timely referral and coordinated transfer

1	**Stabilize**	Continue resuscitation/post-ROSC priorities while preparing for transfer.
2	**Choose destination**	Match the patient's needs to the receiving facility and available capability.
3	**Pre-alert**	Communicate early so the receiving team can prepare.
4	**Handover**	Give a concise clinical summary with timeline, treatments, response and current status use the ISBAR approach.
5	**Transfer safely**	Ensure monitoring, oxygen/ventilation, equipment, drugs and appropriately trained personnel.

Common barriers to timely resuscitation

These should be used as targets for system improvement.

Recognition

- ❑ Delayed recognition of deterioration or arrest.

Activation

- ❑ Unclear emergency activation process or delayed dispatch.

Equipment

- ❑ AED/defibrillator,
- ❑ oxygen, airway or monitoring equipment not immediately available.

Skills

- ❑ Variable CPR quality
- ❑ limited simulation practice or role uncertainty.

Transport

- ❑ Heavy Traffic,
- ❑ Ambulance availability or delayed destination coordination.
- ❑ Poor roads

Communication

- ❑ Incomplete handover
- ❑ unclear referral pathway
- ❑ poor documentation.

Take-home messages

Five actions that strengthen the chain.

RECOGNIZE

Recognize deterioration and cardiac arrest early.

RESPOND

Start high-quality CPR and activate the response system immediately.

DEFIBRILLATE

Use a defibrillator /AED as soon as indicated.

PROTECT

After ROSC, protect the brain and heart while Finding and treating the cause.

CONNECT

Coordinate referral, handover, transfer and follow-up as one continuous process.

Every link depends on the one before it — and every team member strengthens the chain.

Key references

Guidance used for this presentation

- European Resuscitation Council. Guidelines 2025: Adult Basic Life Support, Adult Advanced Life Support and Post-Resuscitation Care.
- American Heart Association. 2025 Guidelines for CPR and ECC: Adult Basic Life Support.
- American Heart Association. 2025 Guidelines for CPR and ECC: Adult Advanced Life Support.
- American Heart Association. 2025 Guidelines for CPR and ECC: Post–Cardiac Arrest Care.

Guideline note: ERC 2025 and AHA 2025 are evidence-based frameworks; local laws, resources, scope of practice and EMS protocols must guide implem

Thank you


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