

ECHO Summary, 24/October/2025

Session Title: Approach to the Patient With Sepsis

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The information presented in this summary is based on the presentation given by the panelists and is intended for general informational purposes only. The authors and collaborating partners do not accept responsibility for any outcomes resulting from the implementation of treatments outlined in this document. It is strongly recommended that individuals verify the information against their national guidelines and seek professional advice before making any decisions related to the content presented herein.

Areas Covered

- National and global burden of sepsis
- Early recognition and pathophysiology of sepsis (Sepsis-3 definition, SOFA, qSOFA, NEWS2)
- Sepsis 6 bundle and one-hour management targets
- Case presentation: elderly diabetic patient with septic shock and necrotizing fasciitis
- Laboratory diagnostics availability in Uganda, AMR surveillance, and referral pathways

ECHO Session Panelists:

Experts: Dr. Charles Olaro, Dr. Susan, Dr. Caroline Nachola, Dr. Stuart Drazich Taylor, Dr. Jimmy

Patient Case Presenters: Dr. Modesto

Moderator: Dr. Sa Namu

Epidemiology

- Sepsis is a leading cause of preventable hospital deaths in Uganda, especially neonatal and maternal sepsis

- Contributes to ~11 million deaths globally per year, higher burden in LMICs
- Strong association with antimicrobial resistance (up to 40% of sepsis deaths involve resistant pathogens)
- Late presentation from rural/peripheral facilities increases mortality

Risk Factors

- Advanced age (elderly), frailty
- Poorly controlled diabetes mellitus and chronic wounds
- Immunosuppression including HIV, cancer therapy, steroid use
- Obstetric and neonatal complications
- System barriers: delays in recognition, limited diagnostics, poor IPC/WASH

Clinical features

- **AIRWAY:** Initially patent but compromised by reduced consciousness (GCS 12 → 8)
- **BREATHING:** RR 23/min with respiratory distress, SpO₂ 60% on room air → improved to 95% with oxygen, Bilateral wheezes and crackles
- **CIRCULATION:** Hypotension BP 87/44 mmHg, MAP 62, Cold extremities, CRT >3 seconds, weak pulse, Severe anemia (Hb 7 g/dL); organ dysfunction (renal + hepatic)
- **EXPOSURE:** Temp 35°C (hypothermia), Necrotic thigh wound (necrotizing fasciitis), Generalized edema
- **ADDITIONAL symptoms:** Altered mental status (uremic + septic encephalopathy), Reduced urine output (~300 ml/24 hr)

Diagnostics

- CBC: leukocytosis, neutrophilia, anemia
- CRP elevated; procalcitonin ideal but not widely available
- Renal & liver derangements; electrolyte disturbances
- Blood cultures: Gram-positive cocci (probable Staphylococcus species); limited growth due to prior antibiotics
- Wound swab: organisms on Gram stain but no culture growth
- Lactate testing emphasized as a critical prognostic marker
- Imaging: CXR, ultrasound for abscess/obstruction; CT/echo in referral facilities
- Use of SOFA/qSOFA/NEWS2 for sepsis screening and escalation

Treatment

- **Emergency Stabilization (Sepsis-6 Bundle)**
 - High-flow oxygen therapy
 - IV crystalloids (500 ml boluses with reassessment)
 - Early IV antibiotics (piperacillin-tazobactam + metronidazole; renal dose adjustment)
 - Blood cultures & baseline labs BEFORE antibiotics where possible
 - Monitor urine output and vitals hourly
 - Early senior review and escalation to HDU/ICU

- **Case-specific care**

- Noradrenaline infusion due to persistent hypotension
- Blood transfusion (Hb 7 g/dL)
- Glycemic control: insulin therapy
- Surgical consult for wound management
- Multidisciplinary decision-making (nephrology, critical care)

Complications

- Septic shock with refractory hypotension
- Multiorgan failure → kidney, liver, CNS, respiratory failure
- Risk of pulmonary edema from aggressive fluids
- DIC and severe metabolic acidosis
- High mortality risk despite optimal care → patient ultimately died

Disposition

- Rapid deterioration → transfer to High Dependency Unit (HDU)
- Continuous monitoring: vitals, GCS, I&O chart, renal/hepatic labs
- Despite escalation and multidisciplinary care → death from septic shock

Special Notes

- Sepsis is a medical emergency → treatment must begin within ONE hour to maximize potential survivability
- Recognition is critical → ABCDE, oxygen, fluids, antibiotics
- Early identification and referral from lower health centers saves lives
- Source control (e.g., drainage, debridement) is essential and often life-saving
- Blood cultures and diagnostics are available FREE through MoH/CPHL including for private facilities
- Increasing lab–clinician collaboration improves turnaround times and rational antibiotic use
- Every hour of delay in antibiotics increases mortality by ~8%
- Uganda Ministry of Health is aligning with the global sepsis agenda and committing to: Strengthening IPC/WASH and safe childbirth, Rational antibiotic use and AMR surveillance, Expanding diagnostic capacity (blood cultures, rapid tests, lactate testing, automated AST, BioFire), Integrating sepsis into national guidelines, CPD, and workforce training
- Every life matters and every minute counts → “Let every voice speak against sepsis”

Collaborating Partners

1. [Ministry of Health of the Republic of Uganda](#)
2. [Seed Global Health](#)
3. [Techies Without Borders](#)

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