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## Aetiology and clinical features associated with blood culture positivity among neonates with clinical sepsis admitted at Dodoma Regional Referral Hospital, Tanzania

**Background:** Effective management of neonatal sepsis is essential in reducing mortality and complications due to septicaemia, for which an accurate diagnosis remains challenging in developing countries, due to lack of well-equipped laboratories.

**Methods:** A cross-sectional study was carried out on 194 neonates admitted with clinical sepsis at DRRH, from March to June, 2017. A total of 194 blood samples for culture and sensitivity were taken according to standard aseptic procedures. Clinical and other laboratory data were analysed. Logistic regressions model was used to identify possible clinical features associated with positive blood culture.

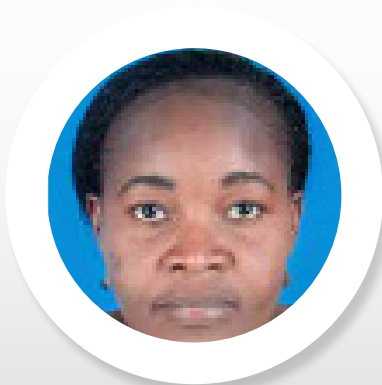
**Results:** Among the 194 study new-borns with clinical neonatal sepsis, 55 (28.40%) had blood culture positive, the most isolates were Coagulase negative Staphylococci (45.50%). Most isolates were resistant to ampicillin, whereas most of the isolates had highest sensitivity to amikacin and clindamycin. After adjusting for potential confounders, abdominal distension (AOR 0.263, 95% CI [0.088- 0.787],  $p < 0.001$ ), signs of skin infections (AOR 0.179, 95% CI [0.029-1.124],  $p < 0.01$ ), umbilical pus discharges (AOR 5.745, 95% CI [1].) were independently associated with positive blood culture.

**Conclusions:** Usage of WHO clinical criteria only for the diagnosis of neonatal sepsis may overestimate the prevalence of neonatal sepsis leading unwarranted use of antibiotics. The study has shown majority of the bacteria isolates in new-born with sepsis are resistant to first line antibiotics. Frequent research will guide the empiric treatment for neonatal sepsis.

### Biography

Evaline Maziku has completed her Diploma in Clinical Medicine, Bachelor of Science in Nursing from St. John University of Tanzania and Master of Science in Pediatric Nursing from University of Dodoma. She is the Head of Department of Pediatrics at a government hospital. Her current affiliation is with University of Dodoma as a Clinical Instructor and also a Chairperson of Clinical Practices Faculty of ECSACON (East, Central and Southern African College of Nursing).

evaziku@yahoo.com



**Evaline Maziku**

University of Dodoma, Tanzania