

## Salmonella Bacteremia in Hospitalized Ugandan Children with Febrile Illness

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**Background:** *Salmonella* is a known cause of acute febrile illness (AFI) among children in sub-Saharan Africa; however its contribution to bacterial blood stream infections is poorly defined due to limited diagnostic capacity. To address this gap and to inform accurate patient diagnosis and treatment, improved AFI surveillance and expanded diagnostic testing is needed.

**Methods:** The Uganda AFI project conducts sentinel surveillance for causes of AFI in children <1 to 16 years old hospitalized at six regional hospitals. We evaluated preliminary demographic data, blood culture and antimicrobial susceptibility results from children hospitalized with a history of fever or documented temperature  $\geq 38^{\circ}\text{C}$  at the first three sentinel AFI sites during the first three months of this ongoing surveillance project (July 2-September 30, 2016).

**Results:** Blood cultures were performed on 498 (19%) of 2,624 children hospitalized with a history of fever. Overall, 445 (89%) yielded no growth; 12 (2%) yielded a likely contaminant, and 25 (5%) yielded a pathogen, including 11 (2%) *Salmonella* isolates. Among the *Salmonella* isolates, 10 were serogroup D, of which at least three were identified as *S. Typhi*: one was serogroup B. *Salmonella* isolates were resistant to ampicillin (90%), cotrimoxazole (45%), ciprofloxacin (9%) and ceftriaxone (9%).

Three (30%) of the children whose blood cultures yielded *Salmonella* had a positive malaria RDT (2), or a positive blood smear (1), and one had a negative malaria RDT and blood smear. The majority (90%) of *Salmonella* isolates were identified from the site with the highest malaria transmission intensity.

**Conclusions:** *Salmonella* are an important cause of bacteremia in children hospitalized with fever, even among those with a positive malaria RDT or blood smear. To improve detection and treatment, sentinel AFI surveillance will continue to characterize the serotypes of *Salmonella* causing bacteremia and their associated drug resistance patterns.