

ABSTRACT

Children with complicated severe acute malnutrition (SAM) are at a high risk for mortality and morbidity in the time after hospital discharge, and those with HIV are particularly vulnerable. What is not known is whether this higher risk for poor outcomes in children with HIV has improved in the era of treating all who are infected. The thesis' main aim was to characterize the 52-week outcomes of children aged 1 to 59 months who were hospitalized for complicated SAM and to identify the characteristics present at hospital discharge that were most predictive of these outcomes. The thesis utilised the HOPE SAM study, an observational cohort established in Zimbabwe and Zambia that enrolled children hospitalised for complicated SAM and followed them up for one year after discharge from hospital. The study outcomes were death, morbidity, nutritional recovery and body composition assessed using skinfold thickness and bioelectrical impedance analysis. There were 3 main findings from the thesis; nearly 1 in 10 children treated for SAM died and the risk of dying continued throughout the one year following discharge. Children living with HIV had an almost 4-fold higher mortality compared to those without HIV regardless of whether they were receiving antiretroviral therapy or not; wasted children and those with ongoing SAM had a 2-fold higher mortality compared to those who had oedema on admission; and cerebral palsy was associated with a nearly 6-fold higher mortality risk. Similar risk factors, with the exception of HIV infection and addition of stunting were associated with impaired anthropometric recovery and increased hospital readmission. In this cohort, the time to hospital readmission was correlated with low peripheral fat mass and low lean mass. Overall, this thesis emphasizes the vulnerability of children treated for SAM even after they are released from the hospital and identifies high-risk populations that require focused interventions to enhance outcomes.