

Hospital mortality by severe acute malnutrition diagnostic category among children aged 6-59 months, Katsina, Nigeria

Erica Simons, Epicentre, France

Background

Katsina state, in the northwest of Nigeria, has a precarious nutrition situation. Médecins Sans Frontières has been present in Katsina since 2021 after an influx of nutrition patients from Niger. According to 2006 WHO standards, severe acute malnutrition (SAM) is defined as weight-for-height z-score (WHZ) < -3 and/or mid upper arm circumference (MUAC) < 115 and/or presence of nutritional oedema. Nutrition survey results show low concordance between WHZ and MUAC measurements in the Katsina population. The Katsina project primarily uses MUAC and oedema as admission criteria in ambulatory facilities and all three criteria in the inpatient facilities.

Methods

Using routine programmatic data collected prospectively, we evaluated hospital mortality among children aged 6-59 months admitted in 2022. Case-fatality rates (CFR) and relative risks (RR) were calculated by SAM diagnostic category and stratified by age group and stunting status.

Results

We included 12,756 children. Compared to children admitted by MUAC alone, children admitted by WHZ alone had 2.2 times the risk of death and children admitted with Kwashiorkor and low WHZ more than 6 times the risk. Children 24-59 months with marasmus were at a higher risk of death than children 6-23 months old. The CFR was similar among children with and without severe stunting.

Conclusion

Children hospitalized with a combination of Kwashiorkor and low WHZ are at very high risk of death compared to other SAM diagnostic categories in the Katsina project. Our results suggest that children with low WHZ at admission are at higher risk of dying and need special considerations.

We observed high mortality among children admitted with low WHZ in the Katsina cohort, suggesting that considerations should be made for this group of children.

