

MORTALITY, RELAPSE, MORBIDITY AND GROWTH OF SEVERE ACUTELY MALNOURISHED CHILDREN IN THE SIX MONTHS FOLLOWING DISCHARGE

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ABSTRACT

Background

Data on outcomes of children with severe acute malnutrition (SAM) following treatment are scarce with none described from any upper-middle-income country. This study established mortality, clinical outcomes and anthropometric recovery of children with SAM six months following hospital discharge.

Methods

A prospective cohort study was conducted in children aged 3-59 months enrolled on discharge from two hospitals in the Tshwane district of South Africa between April 2019 and January 2020. The primary outcome was mortality at six months. An analysis was undertaken of factors associated with persistent malnutrition.

Results

Forty-three children were enrolled with 86% of participants followed up to six months. Only a third of the participants had normal anthropometry at discharge – a quarter still had ongoing SAM. There were no deaths, although four children (9%) were re-hospitalised (including two for complicated SAM). Mean weight-for-length z-scores (WLZ) and wasting rates improved at one month but deteriorated by three months. At three months, six children (14%) either had ongoing or relapsed SAM – a SAM incidence rate of 20 per 1000 person-months. Almost half (46%) of children had persistent malnutrition, despite more than half of the participants still receiving

nutritional supplements at the time. Factors associated with persistent malnutrition included a low WLZ on admission (relative risk [RR] 3.3, 95% confidence interval [95%CI] 1.2-9.2), failing to meet WHO discharge criteria (RR 5.3, 95%CI 1.3-14.8) or having any illness by three months (RR 8.6, 95%CI 1.3-55.7).

Conclusion

Post-discharge mortality and morbidity was lower than in other less resourced settings. However, anthropometric recovery was poorer than expected. Modifying discharge criteria, optimising the use of available nutritional supplements and better integration with community-based health and social services may improve outcomes for children with SAM post-hospitalisation.