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TURBO TALK: Assessing the effectiveness of targeted supplementary feeding programmes for moderate acute malnutrition in northeastern Nigeria: results of a mixed-methods study

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Introduction

In northeastern Nigeria, a region facing a sharp rise in severely malnourished children over the past 5 years and intense seasonal peaks between May and October, nutrition services have struggled to manage the patient load. In response, Médecins Sans Frontières (MSF) launched a simplified targeted supplementary feeding programme (TSFP) in Maiduguri for children younger than 5 years with moderate acute malnutrition (MAM) to prevent progression to severe acute malnutrition (SAM) and reduce inpatient care needs. We assessed the outcomes of the programme's first year of implementation.

Methods

We employed a parallel mixed-methods design combining quantitative retrospective analysis of routine data of all children (6–59 months) enrolled from May 2023 to April 2024, with a qualitative approach. We present the quantitative findings of the study, where we calculated anthropometric gain at admission and discharge, analysed outcomes (recovery, deterioration to SAM, defaulters, non-responders), compared trend of MAM and SAM admissions origin, and identified factors associated with deterioration from MAM to SAM. Descriptive and univariate analyses were done using R.

Ethics

This research was reviewed and approved by the MSF Ethics Review Board (ERB2446) and Borno State Health Research Ethics Committee (SHREC 051/2024). It was conducted with permission from Medical Director, Operational Centre Brussels, and it received permission from the local authorities.

Results

5893 children were treated for MAM. The median age was 15 months (IQR 12–24), with 71.3% (n=4199) of children younger than 2 years, and 57.8% (n=3405) being female. Most patients (62.4%, n=3676) were from the host community and mean MUAC at admission was 121 (SD 2.40) mm. The median length of stay was 27 days (IQR 14–41), with 86.1% (n=5076) exiting the programme in less than 56 days. Of 5893 children, 81.0% (n=4774) recovered, 3.9% (n=228) deteriorated to SAM, and 8.2% (n=484) were lost-to-follow-up. At discharge, mean weight gain was 0.484 kg (3g/kg/day) (SD 0.429), and mean MUAC gain was 4.82 mm (3.05). We observed a 41% reduction in SAM admissions during the 2024 low season (January–April). Children of younger age (6–8 months) and those with lower weight and MUAC at admission were more likely to deteriorate to SAM, whereas male and vaccinated children were less likely ($p < 0.05$ for all).

Conclusion

The TSFP demonstrated effectiveness in treating MAM and preventing its progression to SAM among children in Maiduguri, thus scaling up such programmes should be envisaged. The programme's success supports the scaling up of similar interventions, particularly as quantitative outcomes suggest possible improvements in managing deterioration risks and enhancing community engagement. Pending qualitative analysis will provide deeper insights to refine strategies and improve programme execution in comparable settings.

Conflicts of interest

All authors declare no competing interests.