

# Using MUAC as the sole anthropometric criterion for admission and discharge during outpatient treatment for Severe Acute Malnutrition : NIGER OPERATIONAL EXPERIENCE



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## Introduction

The possibility of using mid upper arm circumference (MUAC) as the sole anthropometric criterion has been suggested due to the simplicity of the measurements, the potential for increased coverage and low cost. The transition to a single MUAC threshold for admission to therapeutic management is complicated by the fact that MUAC and WHZ identify different children. Operational experience regarding programs using MUAC as the sole criterion remains limited. Based on the potential benefits and the feasibility of programs based on MUAC, MSF-OCBA conducted this study in Madaoua, Niger (2018 – 2019)

## Methods

This non-randomized intervention study compared the operational experience of an outpatient treatment program using MUAC as the sole anthropometric criterion for admission and discharge for uncomplicated SAM (MUAC-only n=1019) to that using WHZ and/or MUAC as the combined anthropometric criteria (standard program n=824). All children presenting to the study sites were evaluated for eligibility for study enrollment.

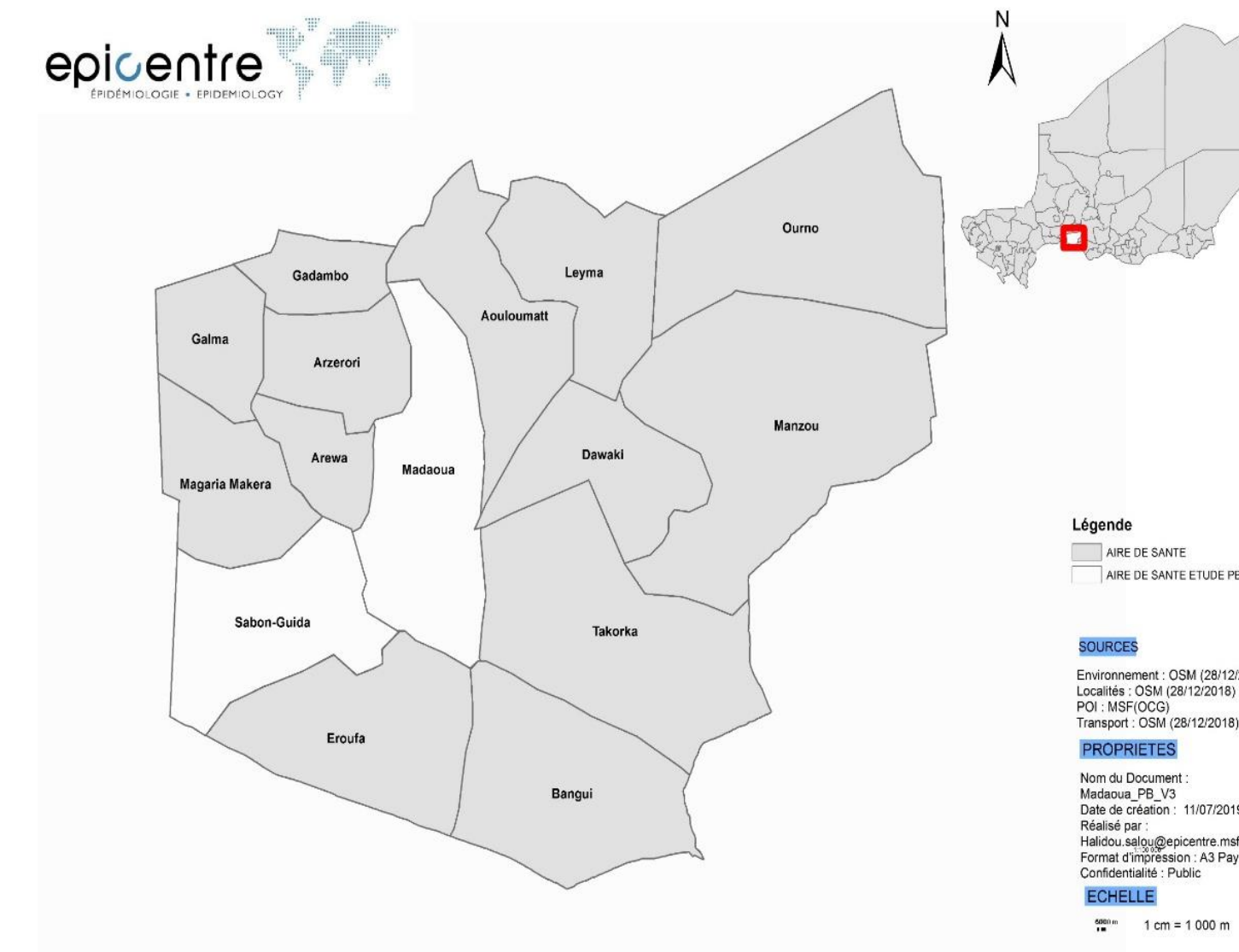
To understand the anthropometric experience of children who would have been eligible for treatment under a standard program but not eligible under a MUAC-only program, the children with MUAC ≥ 120 and WHZ < -3 (and no edema) were enrolled for at-home follow-up at 4, 8, and 12 weeks following their presentation to the outpatient center to describe their nutritional and medical status in the absence of immediate treatment.

**This operational experience with a MUAC-only model of care found overall higher recovery and a lower defaulter rate than in the standard program.**

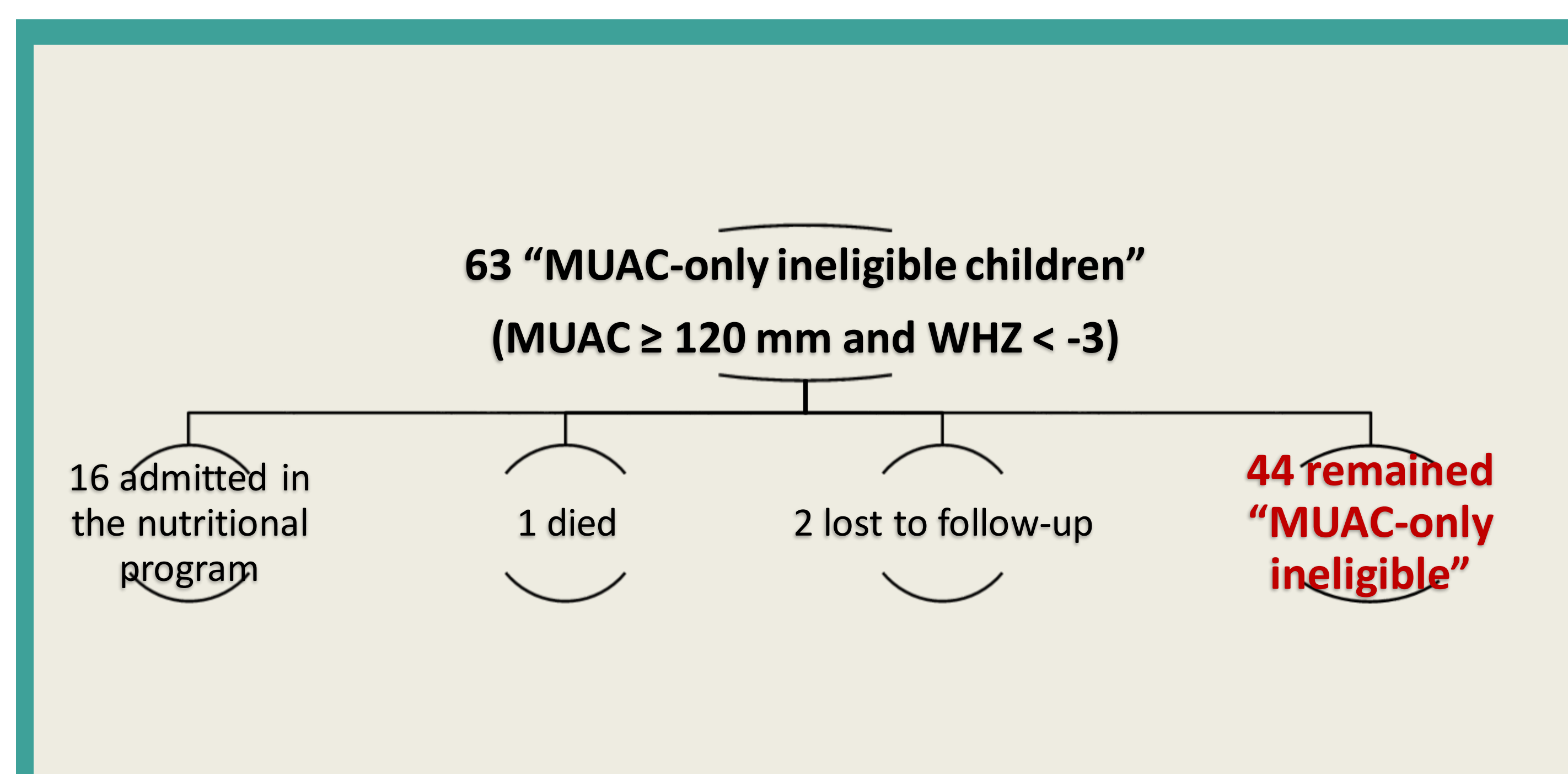
**“This study was the first operational experience of using MUAC as a sole anthropometric criterion for admission and discharge from an outpatient program in Niger”**

## Results

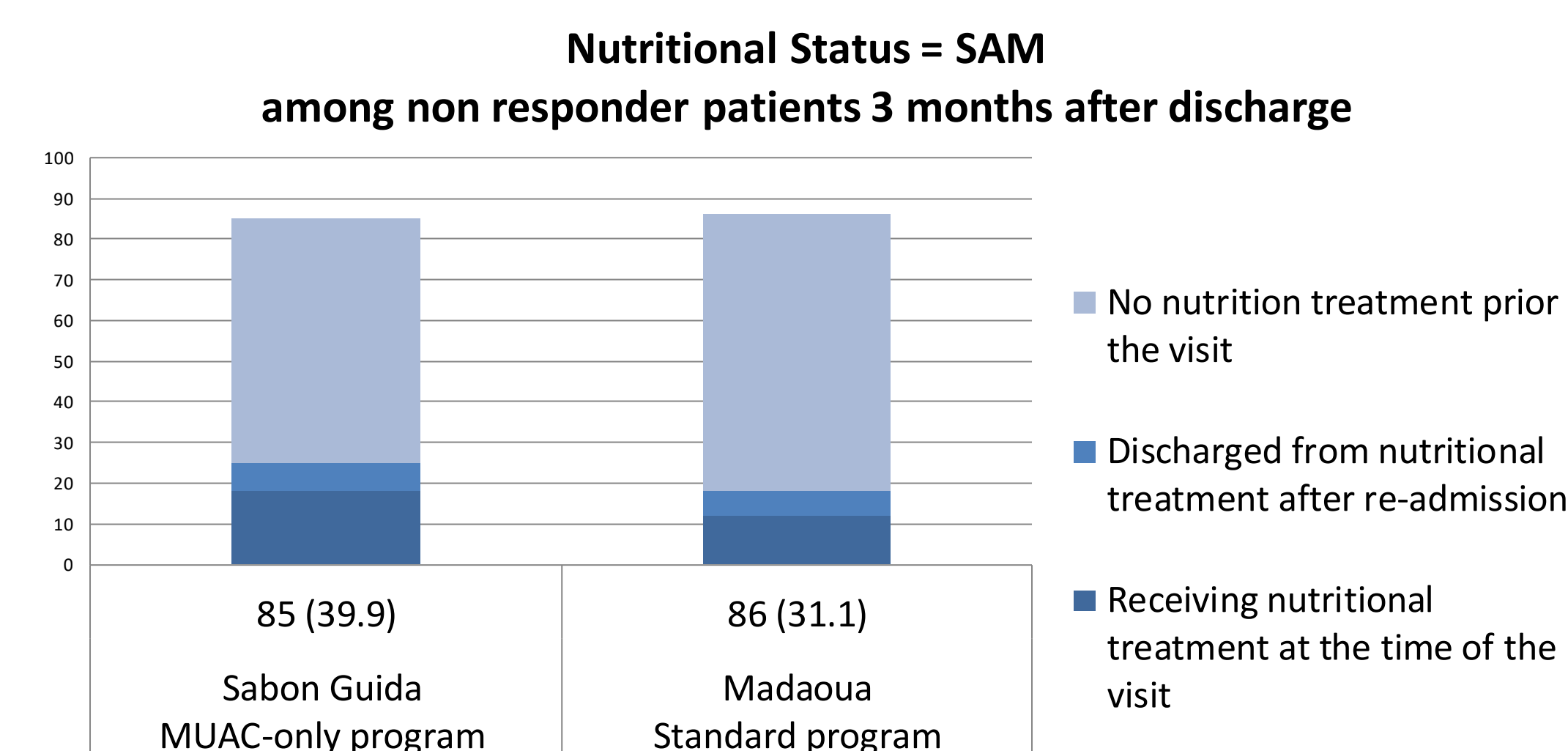
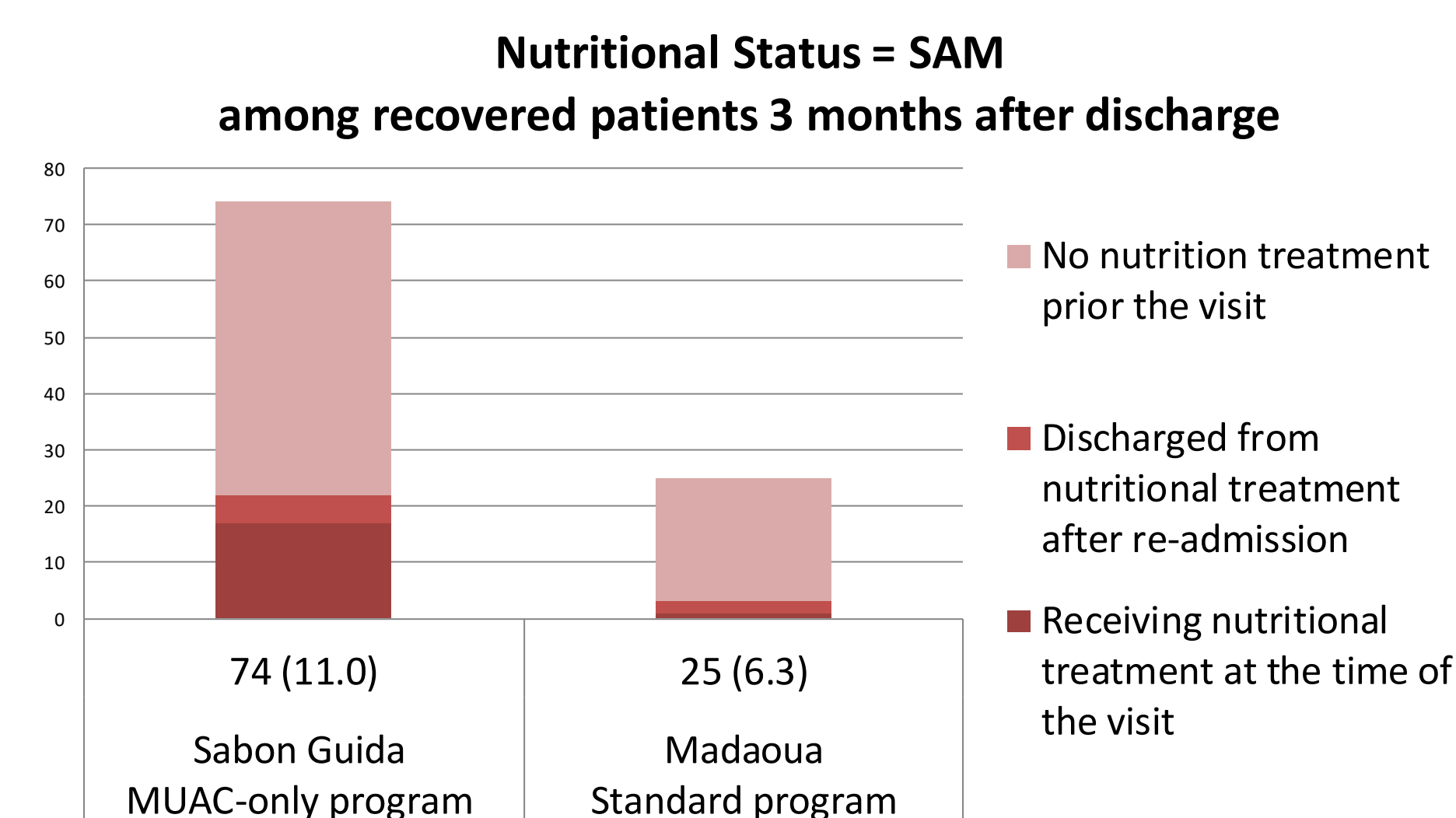
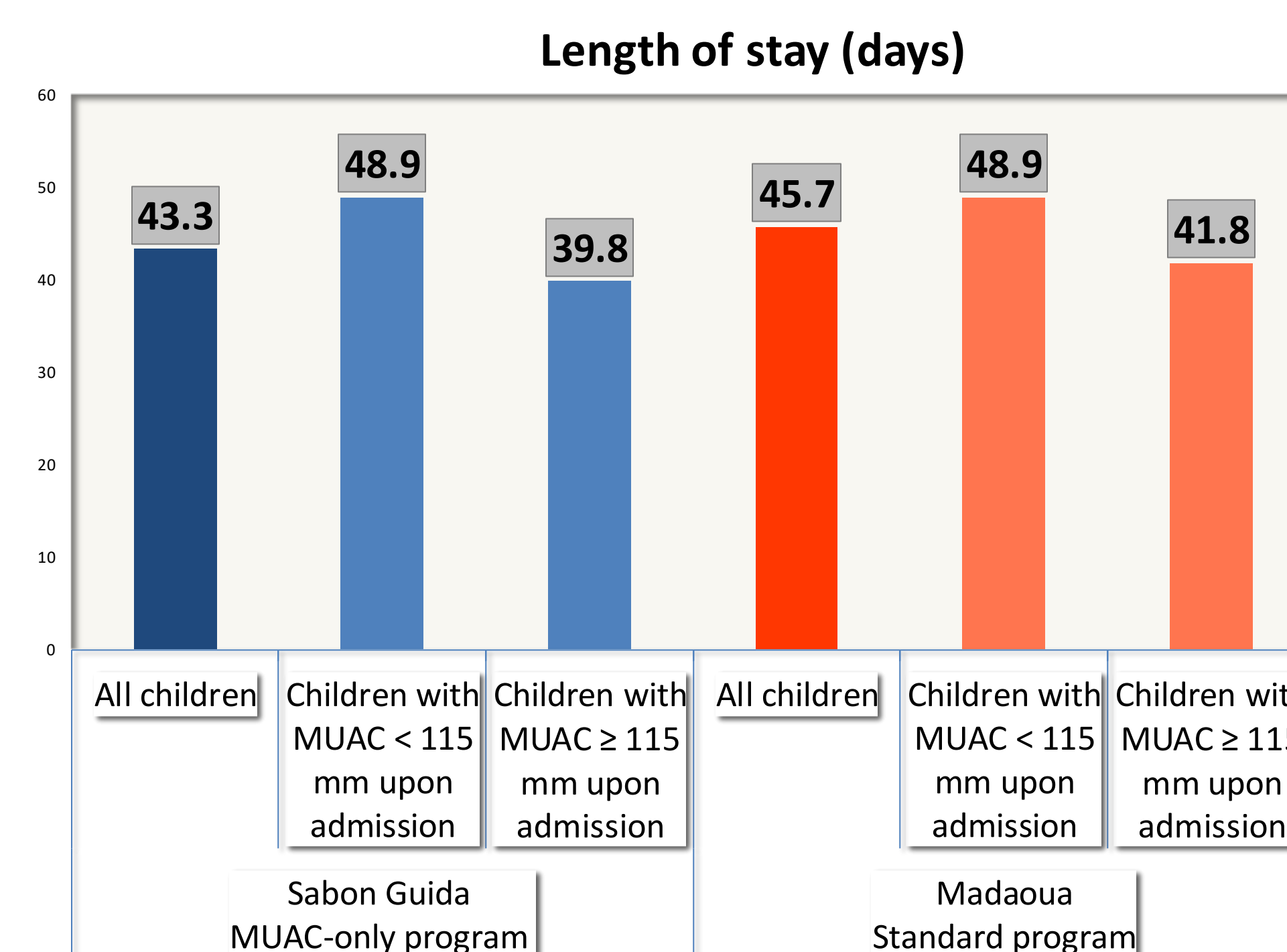
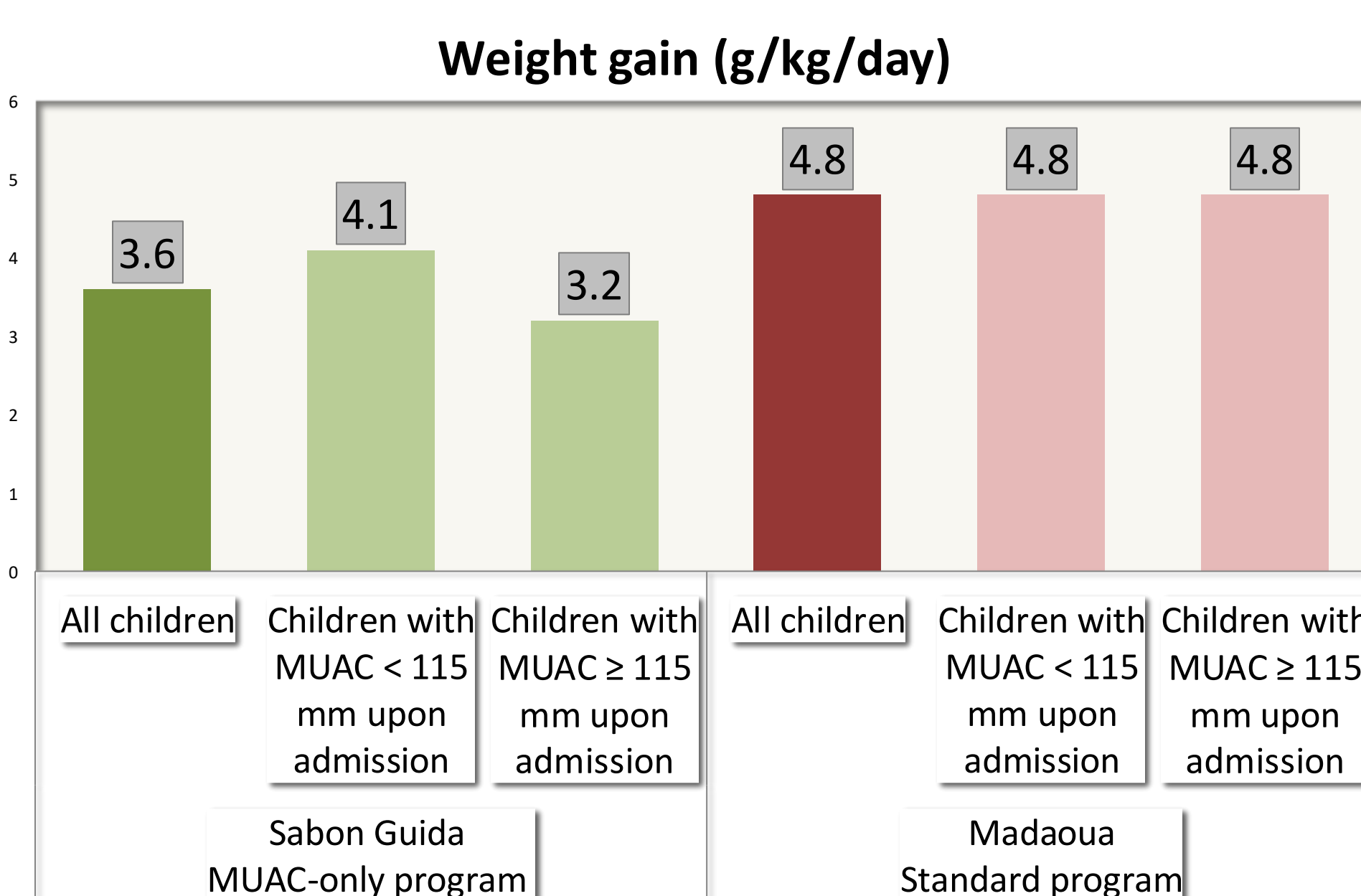
The MUAC-only program showed a higher recovery rate (70.1% vs. 51.6%; OR 2.31, 95%CI 1.79–2.98) and lower non-response and defaulter rates than in the standard program. The risk of non-response was high in both programs. The risk of death did not differ by site. Three months post-discharge, children who were recovered in the MUAC-only program had lower WHZ and MUAC measures. Very few children (63) ineligible for the MUAC-only program but eligible for a standard program (MUAC ≥ 120 mm and WHZ < -3) were followed for twelve weeks and 69.8% remained ineligible for treatment (mainly due to present a MUAC ≥ 120 mm).



Map of Madaoua health district by health area



Children ineligible in the MUAC-only program, at Sabon Guida.- Over a period of 12 months, we identified 63 children and at the end of the twelve week-follow-up, 69.8% remained “MUAC-only ineligible”



## Conclusion

The results support the consideration that MUAC-only nutritional treatment programs may provide an operational advantage to facilitate screening and enrolment and increase access to treatment. Further consideration of the appropriate MUAC-based discharge criterion as it relates to increased risk of non-response and adverse post-discharge outcomes would be prudent.

## Acknowledgements

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