

Secondary Growth Analysis and Dissemination of findings from the Mama Aweza Trial



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BACKGROUND

Childhood wasting impacts 52 million children worldwide and contributes to 30% of mortality in children under five. Community Management of Malnutrition (CMAM) programs play a crucial role in identifying and treating wasting, defined by specific measurements like mid-upper arm circumference (MUAC) and weight-for-height z-score (WHZ). While standard CMAM interventions keep fatality rates below 2%, severely wasted children with additional health complications face much higher mortality rates. Currently, only a small fraction of children with wasting receive timely CMAM interventions.

Innovative approaches, such as training caregivers in MUAC monitoring and integrating two-way short message service (SMS) platforms, show promise in early detection and management of wasting. These strategies can potentially enhance health literacy, improve access to care, and align with the Sustainable Development Goals for 2030.

THE MAMA AWEZA TRIAL

The Mama Aweza randomized trial in rural Kenya (Homa Bay and Migori County) evaluated the effectiveness of the Maternally Administered Malnutrition Monitoring System (MAMMS). This Family MUAC intervention, supported by a two-way SMS platform, was compared with standard community health worker screenings for early identification of moderate child wasting among 5 to 12-month-old children in these agriculturally productive areas, where child wasting prevalence is estimated at 2%.

MAMA AWEZA TRIAL OBJECTIVES

- Determine if MAMMS leads to earlier identification and recovery from childhood wasting.
- Demonstrate the accuracy of maternal administered MUAC assessments compared with trained field workers.
- Evaluate the acceptability, feasibility, and fidelity of MAMMS relative to standard-of-care nutrition programs.

METHODS

- ❖ Developed of dissemination materials of the key findings of the Mama Aweza trial or county officials, relevant organizations and networks and caregivers who participated in the study.
- ❖ Conducted a secondary analysis of the Mama Aweza trial to examine the impact of the MAMMS on children's growth specifically, did the intervention improve anthropometric measurements (e.g., height for age, weight for age, weight for height, and MUAC) for all or some children and was the improvement limited to specific measurements like MUAC?

MAMA AWEZA PRIMARY RESULTS

- ❖ Among 1,200 enrolled children, the incidence of the primary outcome (confirmed wasting) was 37% lower in the MAMMS arm (hazard ratio: 0.63, 95%CI: 0.42-0.94, p=0.022).
- ❖ Among children with wasting, the median number of days-to-diagnosis was similar between study arms (MAMMS: 63 days [interquartile range (IQR): 23-92], SOC: 58 days [IQR: 22- 94]).
- ❖ There was some evidence of higher treatment coverage in the MAMMS (83.3%, 95%CI: 39.9-).
- ❖ The study found high uptake of the MAMMS intervention. Out of the 599 participants in the MAMMS arm, 563 (94%) responded to at least one text during the 6-month follow up period. At the end of the study, 94% of caregivers reported being very comfortable using the MUAC tapes

PRACTICUM DELIVERABLES

Data Management & Analysis
❖ Descriptive statistics

	MAMMS	SOC
	599 (49.9%)	601 (50.1%)
CHILDREN		
Female	322 (53.8%)	334 (55.6%)
Child age		
Age (Continuous)	7.49 (SD = 1.85)	7.69 (SD = 1.97)
Age (months)		
<6	290 (48.4%)	265 (44.1%)
6-9	227 (37.9%)	234 (38.9%)
>9	82 (13.7%)	102 (17%)
Currently breastfeeding		
No	24 (4%)	43 (7.2%)
Partial ^a	502 (83.8%)	493 (82%)
Exclusive	11.5 (11.5%)	60 (10%)
Growth		
MUAC (median,(25%, 75%))	13(13-13)	13(13-13)
Underweight(WAZ <-2 SD)	1200(200.3%)	1200(199.7%)
Stunting(LAZ <-2 SD)	1200(200.3%)	1200(199.7%)
HIV status		
Infected	5 (0.8%)	0 (0%)
Exposed Uninfected	185 (30.9%)	191 (31.8%)
Unexposed	405 (67.6%)	407 (67.7%)
Unknown	4 (0.7%)	3 (0.5%)
Previous clinic visit^b	353 (58.9%)	390 (64.9%)
CAREGIVER		
BMI		
Underweight (<18.5 kg/m ²)	28 (4.7%)	32 (5.3%)
Obese (>30 kg/m ²)	69 (11.5%)	81 (13.5%)
MUAC		
Moderate malnutrition	588(98.2%)	592(98.5%)
Normal	11(1.8%)	9(1.5%)
Severe malnutrition ^c	0(0%)	0(0%)
Age (years)		
<=24	208 (34.7%)	206 (34.3%)
25-35	318 (53.1%)	334 (55.6%)
>35	73 (12.2%)	61 (10.1%)
Education		
No formal education ^d	63 (10.5%)	95 (15.8%)
Any Primary ^e	132 (22%)	123 (20.5%)
Any secondary and above ^f	404 (67.4%)	383 (63.7%)
Shared Phone	142 (23.7%)	160 (26.6%)
Help sending SMS	20 (3.3%)	40 (6.7%)
Married	485 (81%)	505 (84%)
Employed	304 (50.8%)	306 (50.9%)
HOUSEHOLD		
Crowding (≥3 people/room)	177 (29.5%)	180 (30%)
Time to clinic (minutes)	25(15-30)	30(15-30)
Improve sanitation	182 (30.4%)	167 (27.8%)
Owns Animals^g	389 (64.9%)	361 (60.1%)
Food insecurity		
Secure/Mild	250 (41.7%)	257 (42.8%)
Moderate	216 (36.1%)	216 (36.1%)
Severe	126 (21%)	150 (25%)

Dissemination of Mama Aweza Findings

- ❖ Drafted a comprehensive dissemination strategy detailing key stakeholders and the appropriate materials for each.
- ❖ Prepared a flyer, press release, PowerPoint presentation, Newsletter, Social media materials tailored to nutrition networks, global health organizations, county officials, health workers, hospital clinicians, and members of the community

DEVELOPING LOW-COST UNIVERSAL MALNUTRITION SCREENING FOR LOW INCOME COUNTRIES – THE MAMMS TRIAL

[Date]
[Name and title of Presenter]

CONCLUSION

Family MUAC supported by SMS was associated with a 37% reduction in wasting among young children. Empowering caregivers to monitor their child's nutritional status at home may prevent a substantial proportion of moderate wasting.

PROJECT FUTURE

- ❖ The dissemination materials will be customized to suit local needs
- ❖ Local dissemination of findings to health workers, clinicians, advisory board, county officials, and community members in Homa Bay and Migori County.
- ❖ Continuation of secondary growth analysis of the Mama Aweza trial

