

# Mother-led MUAC in Mauritania

*Screening and diagnostics of  
malnutrition by mothers*

*.... to reduce morbidity and mortality  
associated with malnutrition*

April 2017

# Mother-led MUAC – a sustainable approach

*Mother in Mauritania verifying the nutritional status of her child through measurement of mid-upper arm circumference or MUAC.*



The fight against malnutrition and its negative impact on the population of under 5 children requires a participatory approach and strong engagement from beneficiary communities.

Mother-led MUAC is a community-based approach used by World Vision with financial and technical support of the European Union and involvement of the Ministry of Health in Mauritania.

# Project setting

- Intervention Zone: Assaba Region  
Health Districts Boumdeid, Kankossa and Guerou
- Timeframe: 11 months (July 2016 to May 2017)
- Funding: 90% European Union  
10% World Vision Germany
- Chronic nutritional emergency context
- Project supports the MOH OTP services and community mobilization using Mother-led MUAC
- 100 community health workers (CHWs) have been trained on Mother-led MUAC and equipped with MUAC tapes in order to train mothers

# Advocacy

- A two-page brochure in French and Arabic on Mother-led MUAC that explained the methodology, efficiency and benefits for the population was shared at the beginning of the project.
- Sensitized health authorities (regional health authorities, leading doctors, nurses, etc.) and community stakeholders such as village chiefs and Imams about the approach orally, and using the two-page brochure.



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مذكرة الكشف النشط بالمحيط العضدي

المحيط العضدي للأمم - مقارنة التهيئة الجماعية  
مستوحى لنقص نسبة الوفيات لدى الأطفال أقل من 5 سنوات في مقاطعات: بومديد - كرو  
و كركوص



حلقة تطبيقية خلال تكوين للمساعدين الجماعيين -  
النساء تقسن وتأخذن المحيط العضدي للأطفالهن مع شريط ميك

العصاية - سبتمبر 2016

المحيط العضدي للأمم عينة عن مقارنة للكشف التشخيصي لسوء التغذية من طرف الأمهات  
باستخدام شريط ميك الذي يقيس المحيط العضدي بإعطاء القدرات للأمهات لكشف أعراض سوء  
التغذية لدى الأطفال.

- الأمهات تشاركن و تستفدن من حلقات تكوينية و تعليمية داخل مجموعات على مستوى القرية  
بلقاءات مع النساء النظيرات و المربيات على مستوى الأسرة .

- حلقات تعليمية مقدمة من طرف المساعدين الجماعيين مرفقين بمسهلين جماعيين للمشروع و  
لكن أيضا بالتعاون مع عمال الصحة .

- مساعدون جماعيون يقومون بإجراء اختبارات في المنازل خلال عدة أسابيع بعد التكوين  
الأولي و يقومون بتحسين خبرات إن كانت 25 بالمائة من التقييمات غير مرضية.

# Resistance to Mother-led MUAC?

- No resistance to the approach from the communities
- Initial concerns from certain nurses who were reticent to empower mothers to use MUAC tapes, as they felt there was a risk of being replaced
  - Advocacy and sensitization reassured stakeholders that the approach would be beneficial for their performance and for the malnourished children who could be screened more regularly
- The project staff were tempted to shift back to the conventional approach of screening via CHWs, an approach they knew from previous work experiences. Careful follow up on their activities during the initial phase of the project allowed them to effectively shift to Mother-led MUAC

# Training of mothers

## Community Health Workers as trainers

- Previous and new CHWs
- CHWs setting their own monthly objectives on numbers of mothers to train depending on their capacity, time and village size – this estimation determined the number of MUAC tapes given to each CHW
- An average of 15 to 20 mothers trained per month per CHW
- Most villages with 1 CHW, some bigger villages with 2
- Supervision of trainings done by project facilitators

**CHWs continue to play an important role in the community. It is more efficient to train them to teach mothers, rather than screening children themselves.**

# Training of mothers

## *Who was trained?*

- Mothers of 6 to 59 month old children
  - Ideally, all mothers with children 6–59 months would be trained, which was feasible in smaller villages but more complicated in bigger ones.
  - The bigger villages need several CHWs to ensure the training and monitoring of a larger number of mothers

## *Training place*

- The training of mothers took place in their own villages
- Training and refresher training of CHWs was done at health district capitals

# Training of mothers

## **Objective**

- Mothers are trained on screening techniques
- After practical demonstrations on how to use MUAC tapes and identify oedema, mothers try doing it themselves

## **Content**

- What is malnutrition (using photos of malnourished children)
- How to diagnose (the significance of green, yellow and red MUAC results, as well as oedema)
- What to do in case of yellow or red MUAC result
- Introducing into treatment

## **Field Experience**

- CHWs are motivated and appreciate the approach
- Mothers showed that they can carry out the screening during the training

**Simple and clear  
key messages in  
the local language**



# Training of mothers

- ‘Small trainings’ at village level take 30 minutes to one hour of time as the approach is simple, and avoids the need for logistics, per diems, etc.
- Job aid with photos on types of malnutrition, a MUAC tape with explanation of colours and utilization, oedema test
- Initial trainings and then weekly follow-up trainings
- 5 to 10 mothers per training session
- The newly-trained mothers and those already trained attend the trainings together
- Practical tests on screening are done at the beginning of each session
- Trained mothers perform mass screening under supervision of CHWs, who document the data at the same time – good exercise for the mothers

# Implementation

## What does a mother need to do if she finds her child has yellow or red MUAC or oedema?

- Mothers who live close to a health centre bring their child directly to the centre where health centre staff confirm the screening result. The child receives treatment immediately after confirmed screening at health centre level.
- Mothers who live far from health centres asked to bring their child to the CHW first for verification of the screening result to avoid a long trip if there is an incorrect measurement

## What happens at the health centre?

- Normal admission procedures according to CMAM protocol
- Documentation on who has screened (mother, CHW, other), verification
- Treatment begins if health centre staff confirm that child is SAM according to MUAC or weight-for-height, cases with complications are being referred to SC
- MAM cases receive nutrition counselling

# Implementation

## Were the mothers' measurements accurate?

- During the trainings, mothers were able to attain quality criteria. If not, they continued practicing, with support from the CHW.
- The accuracy of mothers' measurement is verified through CHWs and at health centre level

## Do CHWs continue to screen?

- No, CHWs have stopped screening, and they now supervise trained mothers.
- The bi-monthly mass screening is executed by trained mothers, supervised by CHWs, who document screening results

## Cost

- Cost of mother-led MUAC is comparable to cost of the conventional approach based on CHW screening
- The training of mothers at village level doesn't require payment of per diems, rental of a training facility, or catering.

## Workload/Human Resources

- Using Mother-led MUAC for the first time means an increased workload for the project manager, taking into account the development of tools and materials for the training, as well as intensive monitoring and advocacy
- Both the workload for facilitators and requirements for human resources are similar to the conventional approach

# Acceptability at community level

- Mothers were empowered and glad to be able to measure the nutritional status of their children themselves
- There were no objections shared or resistance shown from other community members



# Conclusion and lessons learned

- Mother-led MUAC can be applied and is appreciated in the Mauritanian context
- Approach is sustainable, does not require monetary motivation of mothers; however, it does require a certain level of supervision
- Need to have enthusiastic staff to assure a successful first use of the approach:
  - Project Manager needs to closely follow implementation since temptation is for staff to return to the way it was done previously
  - Motivated facilitators who believe in the approach provide close monitoring at the field level, ensuring the approach continues and that adequate sensitization is provided
  - Advocacy required in interaction with local leaders to gather their buy-in
- Acceptability of approach at health centre level can be a challenge. This could be handled with prior communication reassuring staff that the approach recognizes the value of their work and that mothers are able to screen properly
- Recommend putting a string on the MUAC tape so it can be hung in mother's house or on their person so they don't lose or fold it.

# Monitoring and evaluation of the Mother-led MUAC approach

# Monitoring and evaluation

## Monitoring approach on two levels

1. **Community level:** CHWs receive a register to document names of trained mothers and the date of each training in which they participated – if a mother took part in several training sessions, then each date is documented
2. **Health centre level:** using Alima's approach, every mother who brings her child is asked if she has been trained on Mother-led MUAC and if she has screened her child herself; then verification of the screening is done by health centre staff and documented using a specific tool developed by WV (monthly monitoring data collection at project level)
  - Mothers who did not screen properly are retrained by health centre staff/CHW



# Monitoring data: Mother-led MUAC training sessions and trained mothers

ACTIVITY	BOUMDEID	KANKOSSA	GUEROU	TOTAL
Number of Mother-led MUAC training sessions held by facilitator and CHW	81	75	40	<b>196</b>
Number of mothers trained on Mother-led MUAC and equipped with MUAC tape	145	769	918	<b>1832</b>
Number of mother-to-mother support groups trained on Mother-led MUAC and equipped with MUAC tapes	57	32	19	<b>108</b>

# Monitoring data: Community-level screening

ACTIVITY	Boumdeid	Kankossa	Guerou	TOTAL
Number of mass screening sessions conducted by the mothers	57	73	39	<b>169</b>
Number of girls screened	960	2527	1016	<b>4503</b>
Number of boys screened	970	2061	1180	<b>4211</b>
Number of SAM children	24	9	33	<b>66</b>
Number of MAM children	79	128	407	<b>614</b>
Numbers of SAM cases referred and confirmed at health centre level	24	9	20	<b>53</b>

# Monitoring at health centre

## Data from October 2016 for Boumdeid

- 46% of admitted cases through trained mothers (at the start of the project, many cases were found through initial mass screening)
- 83% of trained mothers screened for MUAC and oedema before bringing their child to the health centre
- For 100% of mothers who screened their child before coming to the health centre, the health centre staff confirmed their screening results on MUAC and oedema

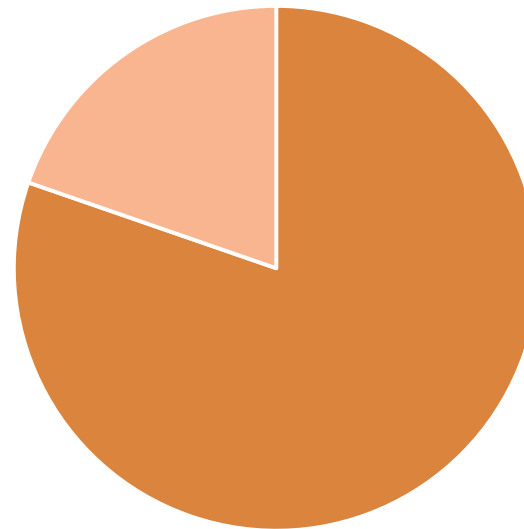
# Community-level screening: Confirmation of SAM cases referred by their mothers

*As of 28 February 2017, **8714** children 6–59 months have been screened (mass screening).*

***66** suspected SAM cases referred, out of which **53** cases were confirmed by health centre staff*

## Percentage of confirmation of suspected cases at OTP level

- 80% suspected and confirmed SAM cases
- 20% suspected and not confirmed SAM cases



# Baseline evaluation

## Baseline qualitative results (October 2016)

- Focus group discussions with mothers of 6 to 59 month old children
- Questions about malnutrition (Kwashiorkor and Marasmus to be identified on photos, causes, consequences), screening with MUAC tapes

# Baseline evaluation

## Results

Question	Trends
Showing a photo of a child 6–59 months with Kwashiorkor and one with Marasmus.	100% of participants have seen such children in their communities
Ask if the mothers know this condition? What do they see?	Condition more or less neglected in the communities
Causes of this condition?	Lack of hygiene, disease, malnutrition
Consequences for children	Death
What to do, if the child is in this state?	To refer to health centre
What could be done with those children at health centre level?	Feed children, hospitalization
Show a MUAC tape – Has the mother already seen this?	Yes, they have seen it
During the last month, did a CHW pass by and measure MUAC of their 6–59 month old children?	No MUAC screening during the last month

# Baseline evaluation

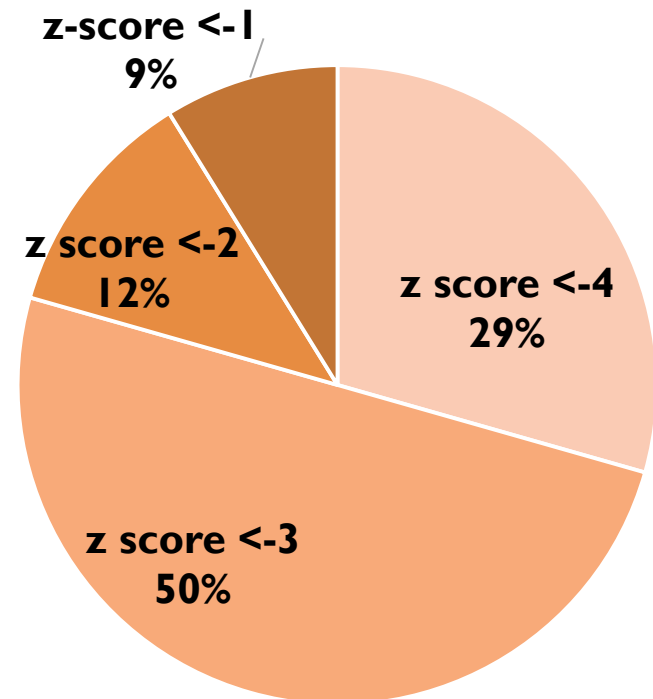
## Quantitative baseline study

- Data on MUAC and weight-for-height (z-score) at admission and % of cases with complications referred to SC

## Results for Kankossa, September 2016

- Weight-for-height – see pie chart
- MUAC at admission was an average of 113.8 mm during baseline
- 3% of cases with complications were detected and referred to SC

Weight for height at admission in Kankossa, September 2016



# Endline Evaluation

## Endline quantitative

- The quantitative survey will be done the same way as at baseline: MUAC data collected in mm and weight-for-height (z-score) at admission and % of cases with complications referred to SC



Comparison between baseline and endline of the project



Expectation: Earlier admission with Mother-led MUAC and less cases with complications

## Endline qualitative

- Focus-group discussions with mothers of 6 to 59 month old children, testing their practices and knowledge on malnutrition and MUAC tapes – screening and referring





**Thank You!**