The Family MUAC Approach: Action Against Hunger Senegal

Action Against Hunger has been supporting the Senegalese government with the treatment of severe acute malnutrition (SAM) in children under 5 years old in the region of Matam in eastern Senegal since 2012.

In May 2016, the Action Against Hunger team trained 1,132 mothers (known as "PB Mamans" or MUAC Mothers) in eight villages in one catchment area of the region (Kobilo in the district of Thilogne) to measure the middle-upper arm circumference (MUAC) of their children, and to take them to health centres if they were malnourished. This was conducted as a trial intervention in an attempt to improve awareness of malnutrition and increase service uptake of the Community-based Management of Acute Malnutrition (CMAM) programme.

Kobilo was chosen for this trial as it was the catchment area which had registered the highest admissions in the preceding years. The Action Against Hunger team also suspected that coverage of SAM treatment service was particularly low in this catchment area as carers were often too busy to bring their children to health centres. It was hoped therefore that by training carers to monitor the nutritional status of their children on a regular basis, more SAM cases would be identified at an earlier stage in the onset of acute malnutrition.

In November 2016, a survey was conducted in the region to assess the coverage of the CMAM programme. During the survey, the team took the opportunity to conduct a small survey in and around the village of Kobilo with mothers who had been trained as "MUAC Mothers" during May. The aim of this small survey was to assess whether there had been significant changes in programme admissions and treatment coverage as a result of the pilot, and to assess the perception of the programme with mothers trained and with other stakeholders.

Key findings

In total, 199 mothers were randomly selected and then interviewed during the survey in Kobilo. Once identified, interviews were conducted by Action Against Hunger's survey team using a standardised questionnaire, which asked mothers how much of the original training topics they remembered and whether or not they still had the MUAC tapes that were given to them at the start. Each mother interviewed was also asked to demonstrate how they measured the MUAC of their child to the surveyors. The surveyors then noted if they made mistakes or not when doing so. The results indicated that a very high percentage of PB Mamans remembered the key points of the training six months previously. Analysis showed that:

- **195 (98.5%) still had the MUAC tapes which they had been given during the training.**
- **194 (97.5%) remembered at least two of the topics covered during the training**
- **176 (89.9%) measure their children at least once a week.**
- **The majority of mothers (approximately 80%) remembered at least one symptom of marasmus and oedema.**
- **More than 64% of mothers were able to check the MUAC of their child without any measurement errors.**

- A further 22% were able to demonstrate use of the MUAC but with errors.
- 195 (95%) remembered the correct actions to take if red, orange or green were indicated on the MUAC tape when measuring their child.
- 191 (96%) of mothers responded positively to the question: "Are you happy that you are able to measure the MUAC of your child?"

The survey team also looked at programme data from the area of Kobilo to establish if there had been a marked change in admissions since the training of mothers. There had been no significant change in admissions. It was in fact noted that, in comparison to the previous year, admissions had reduced slightly.

One interpretation of the reduction in admissions is that following the "PB Mamans" training, mothers in Kobilo became more conscious of the nutritional status of their children as a result of the training, and took additional steps to stop their children from becoming malnourished. Considering just five months had passed since the completion of the training, it was perhaps too early to say if the MUAC Mothers pilot had had a significant impact on programme admissions. Between June and September 2016, nine SAM cases had been referred by "MUAC Mothers" and admitted to the CMAM programme at the health centre of Kobilo. Therefore, it is hard to draw conclusions from such a limited timeframe.

While survey teams were interviewing MUAC Mothers, other teams conducted exhaustive case finding for SAM cases in all of the 8 villages of Kobilo in order to determine if treatment coverage was higher, lower or the same in the area of the pilot. The survey teams found 9 SAM cases; 4 in the programme and 5 not in the programme and a further 10 cases were enrolled in the SAM treatment programme but had not reached discharge criteria and were therefore considered "Recovering" cases. Coverage was therefore classified as "high" (greater than 50%) in Kobilo. The health district of Thilogne (where Kobilo is located) was also classified as having "high" coverage by the coverage survey completed in the district. This showed that there had been a limited impact on coverage within the area of Kobilo as a result of the MUAC Mothers initiative.

However again, this could be due to the fact that this study was conducted only six months after the roll out of the trial, and it is likely to take much longer than six months to see a significant impact on coverage.

A final part of the study included interviews with key stakeholders to gather their perceptions of the pilot study. Four interviews were conducted, three with Action Against Hunger staff and one with the "chef de poste" of the health centre in Kobilo. The key positive points to come from the interviews included:

- The training and ongoing approach helps to motivate mothers and health centre staff as mothers are taking an active role in the monitoring of the health of their children.
- The training itself was highly appreciated by the mothers who were fully engaged and interested.
- Once trained, the mothers can survey easily for SAM and MAM using MUAC tapes. However recognising the signs of oedema remained a challenge.

The key negative points included:

- In some cases the trainings were too short and there were no follow up trainings.
- The community health volunteers had been asked to provide supervision and support to mothers however they received no additional remuneration for this.
- Community health volunteers were also negative about the scheme as they receive remuneration for every child they refer and now that mothers were referring their own children, they were receiving less.
- Fathers and other men in the community were not involved in the original training.

Conclusions

The MUAC Mothers study showed that there had not been significant changes in CMAM programme admissions or coverage in Kobilo during the first six months of the pilot project. It was perhaps too early to see significant changes in admissions. However, it was clear from the interviews with the mothers that they remembered the main points from the training and that they screen their own children regularly themselves. This indicates that they are conscious and concerned about the health of their children. The majority of mothers (64%) were also able to measure the MUAC of their children without any errors.

It would be interesting to know if there has been a change in the prevalence of SAM and MAM in the villages of Kobilo as a result of the pilot. The reduction in admissions could indicate that fewer children are becoming malnourished as their mothers are monitoring their state of malnutrition note the deterioration of their health and take actions to address this.

More information

Enquête SLEAC du programme PECMAS et étude sur l'impact du projet pilote « PB Mamans » (2016)

Kadia Mamadou Diallo measures the MUAC of her son Abdoulaye (36 months) during the "MUAC mothers" study in Kobilo Diakesdes (Nov 2016)

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