Performance of low-literate community health workers treating severe acute malnutrition in South Sudan

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In 2017, the global acute malnutrition prevalence reached close to 20% in Aweil South County, Northern Bahr el Ghazal State, South Sudan. Previous data had suggested that less than half of the children in that region with severe acute malnutrition (SAM) were enrolled in treatment programmes. Recognizing this common issue of low treatment coverage in many rural, low-resource settings, the International Rescue Committee (IRC) began exploring the possibility of equipping community health workers (CHW), who are already delivering treatment services as a part of integrated community case management (iCCM) of childhood illness programmes, with treatment for SAM. One major consideration is literacy; previous pilots examining the feasibility of using CHWs to deliver acute malnutrition treatment had used literate cadres, meaning that this model had not been tested where there is overall lower socioeconomic status and educational attainment, which often has higher acute malnutrition rates.

The IRC engaged in a two-year process of using user-centred design to develop job aids and tools for CHWs that were adapted to low literacy. This resulted in the following tools (Figure 1):

1. an adapted mid-upper arm circumference (MUAC) tape with the standard green (≥ 12.5 cm) and yellow (≥ 11.5 cm to <12.5 cm) zones but with a red MUAC zone that was divided into three (dark red <9.0 cm, red 9.0 cm to <10.25 cm, pink 10.25 cm to <11.5 cm) to allow CHWs with no numeracy to better assess progression and regression,

2. a weight scale decal that shows the daily ready-to-use therapeutic food (RUTF) dosage,

3. a dosage calculator to calculate the weekly RUTF dosage,

4. a patient register, and

5. a pictorial flipchart with RUTF feeding messages.

To formally test whether low-literate CHWs can use these job aids and tools to treat children accurately, the IRC conducted a pilot study in Aweil South County. Sixty existing iCCM Community-Based Distributors (CBD) with no formal education were initially recruited and trained over the course of six days to use the job aids and tools listed above, with 57 completing the training. They were then observed by supervisory staff as they independently conducted a treatment procedure on a child and were scored against a performance assessment checklist. The CBDs scored a median of 98.9 (range 67.5–100) out of 100, with 49% of CBDs receiving perfect scores.

Through the study implementation period, the CBDs received a supervision visit every 2-4 weeks, where the same performance checklist was completed. For each performance checklist completed, the last performance score of the CBD recorded by our project was higher by absolute 2.0% (95% CI: 0.3%–3.7%), showing that CBDs who received more supervision had better performance. The outcomes of the SAM children treated by the CBDs will be presented in a future article.

See Full Article:

Elburg Van Boetzelaer, Annie Zhou, Casie Tesfai, Naoko Kozuki. Performance of low-literate community health workers treating severe acute malnutrition in South Sudan. Maternal and Child Nutrition. 12 February 2019.
https://doi.org/10.1111/mcn.12716.
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Our study showed that low-literate CBDs with no formal education, when equipped with properly adapted job aids and tools, can treat severe acute malnutrition in their com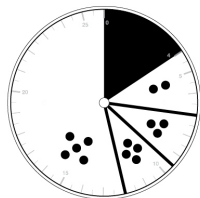munities. Our results show potential for using community health systems to reach severely malnourished children who otherwise would not have access to treatment.

Modified MUAC Tape

Moderately malnourished
≥11.5−<12.5cm

Severely malnourished
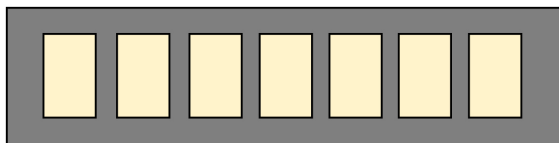**< 11.5cm**

Not malnourished
≥12.5cm
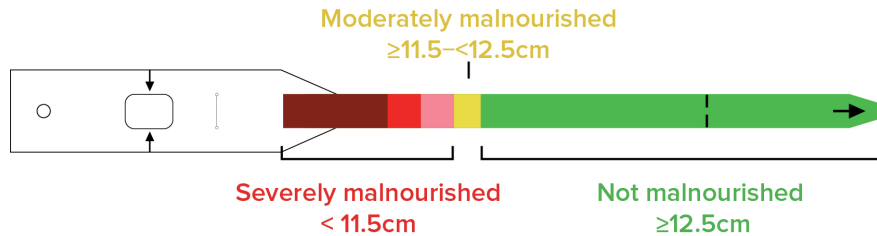
The tape is used to identify and monitor malnourished children.

Weight Scale Decal

The dots represent the daily dosage of Ready-to-Use Therapeutic Food (RUTF) for malnourished children.

RUTF Dosage Calculator

Each rectangle on the calculator represents one day of the week. The CHW places the daily dosage onto each of the seven rectangles, and the total sachets equal the weekly dosage.

Patient Register
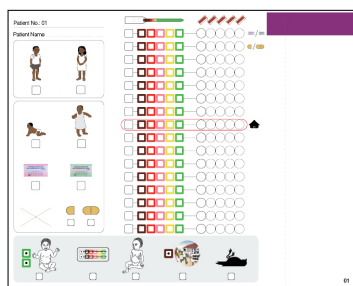
CHWs record treatment in a patient register designed with icons and colors to record sex, age category, systematic drugs, the amount of RUTF and the color of the MUAC each week.

RUTF feeding messages flipchart

At the end of the visit, the CHW gives advice to the caregiver using a flipchart on the five key messages for feeding a child RUTF.