



## Community-based management of severe malnutrition: SAM and SUW in the tribal area of Melghat, Maharashtra, India

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### Abstract:

Objectives:

- To achieve recovery rate of 75% in severe acute malnutrition (SAM) children and 35% in severe underweight (SUW) children, in tribal community.
- To achieve case fatality rate of <4% in SAM and SUW children in the above setting.
- To reduce current prevalence rate of SAM and SUW by at least 35% in above setting.

**Design:** Community-based prospective, single-group intervention study.

**Setting:** Primary and secondary care was given to participants from 14 villages of Melghat tribal area.

**Participants:** Severely malnourished children (SMC:734), tribal, male and female of the 6–60 months age group were enrolled and 680 children completed the study over a period of 3 years. Sample size (N = 762) was estimated considering the prevalence of severe malnutrition (SAM and SUW) in 6–60 months population as 21.5%; design effect was 3.0 and relative precision was 10%, with 95% confidence interval.

**Interventions:** LTF (local-therapeutic-food) with MN (micronutrients), treatment of infections and BCC (behaviour change communication) were given for 90 days to SMC by VHW (village health worker).

**Outcome Measures:** Rate of recovery, case fatality rate, and reduction in prevalence of SAM and SUW.

**Results:** Recovery rate of SAM is 75.9%, 77.8%, and 79.4%; and recovery rate for SUW is 37.5%, 42.7%, and 45.4%, at end of 8th, 10th, and 12th week, respectively. Case fatality rate for SAM is 0.6% and for SUW is 0.2% after 8th week. There is a significant reduction in prevalence of SAM (  $p = 0.005$ ) and SUW (  $p = 0.0001$ ) children at end of the study.



**Conclusions:** The study shows efficacy of LTF-MN and effectiveness of our community-based model in acute and chronic malnutrition. Further research is needed for deciding the exact duration of SUW therapy.

**Trial Registration:** The study is registered under Protocol Registration and Results System (PRS) (ClinicalTrials.gov ID: NCT02671786).

### Biography:

Ashish Rambhau Satav has completed his MD at the age of 26 years from Government Medical College, Nagpur, India. He is the President of the Chief functionary of MAHAN Trust and Chief medical officer at Mahatma Gandhi Tribal Hospital. He is the Member of International technical working group of Minimal Invasive Tissue Sampling. He has published 19 papers in International journals. He has actively participated in research works and received more than 38 awards from all over the world.

### Publication of speakers:

1. Schoonees, A., et al., Ready-to-use therapeutic food (RUTF) for home-based nutritional rehabilitation of severe acute malnutrition in children from six months to five years of age. The Cochrane database of systematic reviews, 2019. 5(5): p. CD009000-CD009000.
2. López-Ejeda, N., et al., Can community health workers manage uncomplicated severe acute malnutrition? A review of operational experiences in delivering severe acute malnutrition treatment through community health platforms. Maternal & child nutrition, 2019. 15(2): p. e12719-e12719.
3. Stobaugh, H.C., et al., Relapse after severe acute malnutrition: A systematic literature review and secondary data analysis. Matern Child Nutr, 2018: p. e12702.

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