

101 **USE OF MOBILE TECHNOLOGY FOR IMPROVING SCREENING ACCURACY OF ACUTE MALNUTRITION IN A COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION PROGRAM IN MUMBAI INFORMAL SETTLEMENTS**

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Background SNEHA aims to reduce malnutrition in Mumbai informal settlements through a Community-based Management of Acute Malnutrition (CMAM) program. Frontline Workers (FWs) continuously monitor the anthropometric status of children using CommCare, an mHealth mobile application developed by Dimagi, USA.

Objectives To demonstrate significant gains achieved in screening accuracy for assessing acute malnutrition (weight for height and weight for length) by switching use of the 2006 WHO field tables from a paper-based lookup table to a calculator embedded in the mobile application.

Methods Screening data of 3040 children under age three was collected by 27 FWs between August-October 2014. FWs initially used the paper tables, and then switched to the calculator based on the same WHO tables. Error rates were calculated by comparison of the FW assigned malnutrition grade to the WHO table grade each child should have received.

Result 95 (6.5%) errors were made in 1454 screenings without the calculator and 13 (0.8%) errors were made in 1586 screenings with the calculator. When comparing FWs who completed an equivalent number of screenings without and with the calculator, the error rates were 5.5% and 0.7% respectively. The calculator also significantly improved average error rates and reduced variability in FW performance.

Conclusion The calculator is an innovative solution for a challenge experienced by organizations globally. It reduces time and training costs, and improves the accuracy of WHO-approved screening methods. mHealth tools can be responsive to FW needs - error rates were found to be a consistent problem, and a technical solution was developed that was easily taken up by the users.