

## **Abstract**

### *Background:*

Severe acute malnutrition (SAM) is a common problem with severe and long-lasting effects. As part of the primary health care re-engineering team, community health workers (CHWs) are well-placed to screen for and refer SAM patients at an early stage. Few studies have investigated the role of CHWs in SAM referrals and clinical outcomes in South Africa, and none in the North-West Province.

### *Aim:*

This study aimed to compare the outcomes of admission between patients referred by CHW to Potchefstroom Hospital for SAM and those by other healthcare workers.

### *Setting:*

This study was conducted in a primary healthcare setting in the JB Marks subdistrict, Tlokwe municipal area, North-West Province, South Africa

### *Methods:*

A cross-sectional study was conducted that analysed 71 medical records of children admitted with SAM from 1 April 2016 to 31 March 2018. Referral forms from outreach teams to clinics were used to establish CHW involvement in the referral of patients with SAM. The chi square, t-tests and ANOVA determined associations between referral sources and outcomes. The effect size of differences in outcome were calculated to determine the practical significance.

### *Results:*

Only five out of 71 (7.04%) SAM patient admissions were due to CHW referrals from the community. Patients referred by CHWs showed statistically significant higher haemoglobin (Hb) levels compared with other sources of referral ( $p$  0.044). No deaths were associated with CHW referral patients compared with six and three mortalities in the clinic-referral group and the other referral group respectively. Other outcomes were not statistically different.

### *Conclusions:*

This study found that CHW referrals contributed to a small proportion of SAM admissions, implying that they did not screen consistently for malnutrition in this community. The finding that more deaths occurred in other groups than the CHW group signify the need for the optimal use of this cadre for early recognition of SAM at community level, possibly through a review of how CHWs are used in this community.

*Keywords:*

Severe acute malnutrition (SAM); Primary healthcare (PHC); Community screening for malnutrition; Clinical outcomes in malnutrition; Characteristics in malnutrition; Anaemia in malnutrition; Mortality in malnutrition.