Food-Based Approaches for the management of malnutrition: Experience from Positive Deviance Hearth Approach in Niger

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Background

Food-based approaches (FBA) focus on practical, sustainable actions for preventing and treating malnutrition through increased availability, access to and consumption of adequate quantities, and appropriate varieties of safe, good quality, nutritious foods (FAO 2011). With the recent release of the WHO guidelines for the prevention and management of wasting and nutritional oedema, there is a renewed interest in the role of food-based approaches to prevent and treat malnutrition. These guidelines recognize not all children with moderate wasting need specially formulated food to supplement their diet, but all children require access to a nutrient-dense home diet to meet their energy and nutrient needs.

While published literature on the effectiveness of FBA remains limited, there is a growing body of experience from communities across the globe demonstrating that FBA are both feasible and effective to address malnutrition in stable and fragile contexts.

Description of Intervention

The Positive Deviance Hearth (PDH) Approach was implemented over a 12 month period in Tahoua, Torodi, Makalondi, and Zinder regions of Niger. The program admitted children with acute malnutrition (MUAC <12.5 cm), underweight (WAZ <-2 SD), or considered at risk of malnutrition (WAZ ≥ -2 SD and <-1 SD). Children with severe acute malnutrition (SAM) with no medical complications were admitted if they passed an appetite test and referral to IMAM services was not an option.

PDH leverages local knowledge and uses social behaviour change strategies to improve nutrition outcomes. Hearth refers to a 10-12 day rehabilitation and education program designed for caregivers and their children who are underweight or wasted. The children are given an extra rehabilitation meal called "Hearth meal" that is nutrient-dense and composed of locally sourced foods. Anthropometric measurements are taken at admission, Day 12, Day 30 and at 3 Months to assess nutritional status.

Findings

2758 children aged 6-59 months with WAZ <-1.0 SD, and/or MUAC <12.5 cm were admitted to the PDH intervention. At admission, 618 children (22.4%) met the criteria for Moderate Acute Malnutrition (MAM), and 25 (0.9%) were admitted with uncomplicated Severe Acute Malnutrition (SAM), 2115 (76.7%) of children admitted had a MUAC ≥ 12.5 cm, but had a WAZ <-1 SD or below .

Following the 12-day Hearth session, among enrolled children, MAM decreased by 8.9 percentage points from 22.4% to 13.5% (p<0.001), while SAM did not decrease significantly (0.9% to 0.5%, p=0.403, probably due to small sample). At 3 months, 73% of children admitted with MAM met the graduation criteria (green MUAC and WAZ ≥-2 SD) p<0.001, while the graduation rate among children admitted with uncomplicated SAM was 97.9% (p<0.321, probably due to small sample). The overall graduation rate for all children admitted to PDH was 71.9%.

Figure 1: MUAC at admission and after 12 day Hearth session

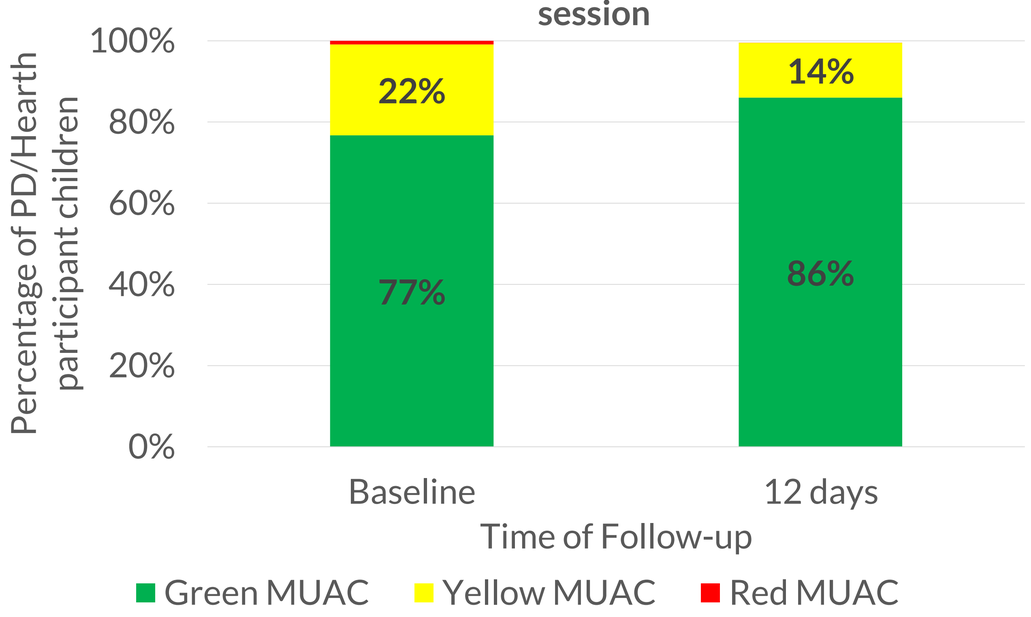
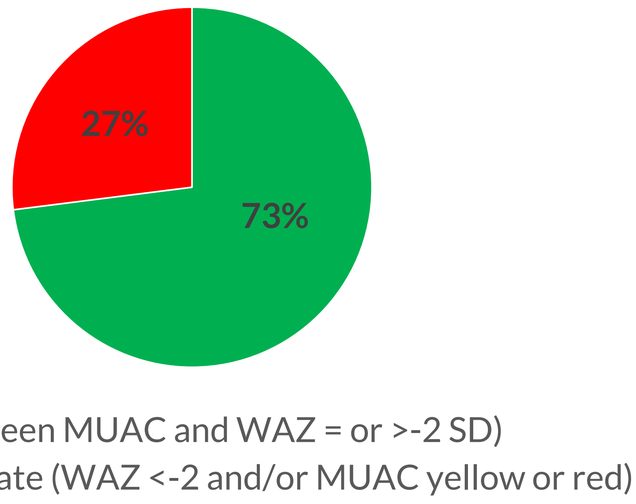


Figure 2: Percent graduation at 3 months among children admitted to PDH with MAM



PDH Feasibility Criteria

- Underweight (including 'At Risk'; WAZ < -1.0) affects more than 30% of children 6 to 36 months old or 30 underweight children between the ages of 6 and 36 months.
- Affordable food is available for 6 months of the year (can be supplemented by Food Assistance)
- Homes are in close proximity from one another
- Strong community mobilization
- Systems for identifying and tracking malnourished children exist or can be developed

Conclusion

PDH is a food-based approach that is effective in addressing malnutrition, and can be implemented in a fragile context. Where local foods are available, or can be supplemented by food assistance during a hunger period of six months or less, PDH is a feasible approach to the prevention and treatment of malnutrition.

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