ESSENTIAL PROGRAM ELEMENTS TO SCALE UP THE USE OF ZINC AND ORS IN CHILDHOOD DIARRHEA: TREATMENT PROGRAM: EXPERIENCES FROM ASIA

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ABSTRACT

The Micronutrient Initiative (MI) supported the implementation of effective program strategies in three countries, namely Afghanistan, Bangladesh and Indonesia, to strengthen the use of zinc supplements and ORS (Zn-ORS) in the treatment of diarrhea in children under five through the public health system during 2012-2014. This study was designed to analyze the results of this project and identify the program elements that could facilitate scaling up such projects. Pre-post intervention-comparison design was adopted in Bangladesh, and post-intervention assessments in Afghanistan and Indonesia were compared to large-scale surveys in respective countries near program beginning. We found apparent improvements in coverage and adherence to Zn-ORS in program areas. In Afghanistan, the coverage and adherence for Zn-ORS increased by 49% points and 38% points respectively, compared to only 22% points increase for both coverage and adherence in the comparison districts. In rural areas of Afghanistan, coverage and adherence were 55% and 82% respectively, vis-a-vis 5.3% prior coverage by UNICEF’s Multiple Indicator Cluster Survey, 2010-11. Similarly, in Indonesia’s intervention sites, Zn-ORS coverage was 35% compared to 2012 Demographic and Health (DHS) coverage, 1%, and adherence, 27%. The positive findings for this program package across three country settings demonstrate its replicability.

BACKGROUND

MI supported the governments of Afghanistan, Bangladesh and Indonesia to demonstrate effective strategies to strengthen the use of zinc supplements and oral rehydration solution (Zn-ORS) in the treatment of diarrhea to reduce morbidity and mortality in children under five through the public health system during 2012-2014. The hypothesis of the demonstration programs by MI is that focused training, strengthening supply chain, monitoring and supervision and regular interpersonal counselling through the public sector health system would result in increased coverage and adherence rates for use of Zn-ORS as treatment of diarrhea among young children.

In Bangladesh, MI partnered with Primary Health Care (PHC), Directorate General of Health Services (DGHS) to demonstrate a program model on Zn-ORS distribution among children 6-59 months of age suffering from diarrhea in two selected districts (i.e. Faridpur and Gaibandha) through public health facilities, such as community clinics, sub-centres, union health and family welfare centres, upazilla health complex and district hospitals.

In Afghanistan, MI worked with the MoPH and Basic Package Health Services (BPHS) delivery NGOs in 10 districts of two provinces, Samangan and Saripul, to demonstrate a comprehensive Zn-ORS program for treatment of childhood diarrhea through support to the Community Health Workers.

In Indonesia, MI worked in close coordination with the Ministry of Health, SEAMEO-RECFOG, and other partners of Zn-ORS distribution for childhood diarrhea program in 2 districts, East Lombok and West Lombok in West Nusa Tenggara Province that had high under-five mortality.

OBJECTIVES

The general objective of this poster is to describe results of these projects that demonstrate providing a comprehensive package of focused training, strengthened supply chain, monitoring and supervision and regular interpersonal counselling through the public sector health system resulted in increased coverage and adherence for use of Zn-ORS in treatment of childhood diarrhea.

The specific objective is to identify the essential program elements that have to be emphasized while scaling up the project to other target geographies.

METHODS

MI implemented a program package in all three countries that focused on advocacy with governments for adequate planning and budgeting, strengthening supply chain management including initial provision of zinc, capacity building of health staff, strengthening Behavior Change Interventions with a focus on interpersonal counselling, modifying the Health Management Information System to track stocks and coverage, and improving supportive supervision. Pre-post intervention-comparison design was adopted in Bangladesh, and post-intervention assessments in Afghanistan and Indonesia were compared to large-scale surveys near beginning of projects.

RESULTS

Each of the demonstration programs showed improvements in the coverage of and adherence to the use of Zn-ORS to treat diarrhea.

In Bangladesh the use of Zn-ORS for treatment of childhood diarrhea through the public sector increased by 49 percentage points compared to only 22 percentage points increase in comparison districts, while adherence among caregivers increased by 38 percentage points in intervention districts, compared to 22 percentage points in comparison districts. The district specific results are presented in Figure 2 and Figure 3.

In Afghanistan, coverage through public sector was measured at 55% compared to 5.3% as per Multiple Indicator Cluster Survey, 2010-11 and adherence was at 62% in the 10 selected districts of the two provinces as illustrated in Figure 4.

In Indonesia, the use of Zn-ORS in public sector was measured at 35% in the two MI program districts East Lombok and West Lombok compared to 1% at national level as per DHS 2012 and the adherence to full course of zinc and ORS was 27% (Figure 5).

Improvements in the knowledge of caregivers on benefits and duration of intake of zinc were observed in intervention districts compared to comparison districts in all program areas. This was also found to be positively associated with improved adherence in intervention districts compared to comparison districts.

CONCLUSIONS

These positive findings demonstrate that the approach was successfully replicated across different country contexts, and thus replicability is promising for broader settings.

Considering the feasibility of the program models and the positive results these programs are being scaled up in a phased manner to 27 districts in Bangladesh, 13 provinces in Afghanistan and three provinces in Indonesia by the national and provincial governments with minimal support from external sources.

A more thorough cross-country analysis would be useful to further elucidate approaches in these strategies that would better inform this scale-up.

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REFERENCES


FIGURE 1. Program strategy

FIGURE 2. Coverage in Bangladesh: Percent of children with diarrhea who sought treatment in the public sector and received both zinc and ORS.

FIGURE 3. Adherence in Bangladesh: Percent of children with diarrhea who sought treatment in the public sector and consumed zinc supplements as per recommendation.

FIGURE 4 and 5. Coverage in Afghanistan and Indonesia: Percent of children with diarrhea who sought treatment in the public sector and received both zinc and ORS (post intervention survey)