

# Evaluation of the MNP Pilot Intervention in Kwazulu-Natal, South Africa

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### Key messages

- The Kwazulu-Natal (KZN) Department of Health implemented a micronutrient powder pilot intervention program targeting children aged 6–24 months.
- The purpose of this intervention was to assess the acceptability and feasibility of introducing the micronutrient powder pilot intervention program into the current health system.
- Overall, micronutrient powders were accepted by the healthcare workers and by the mothers/caregivers.
- The KZN Province subsequently decided to implement the recommendations from the evaluation report in three districts to ensure proper alignment with current health systems.

### The need to address inadequate micronutrient intakes

Optimum nutrition during the first 1,000 days is critical for child survival. Poor nutrition during this period is linked to poor child

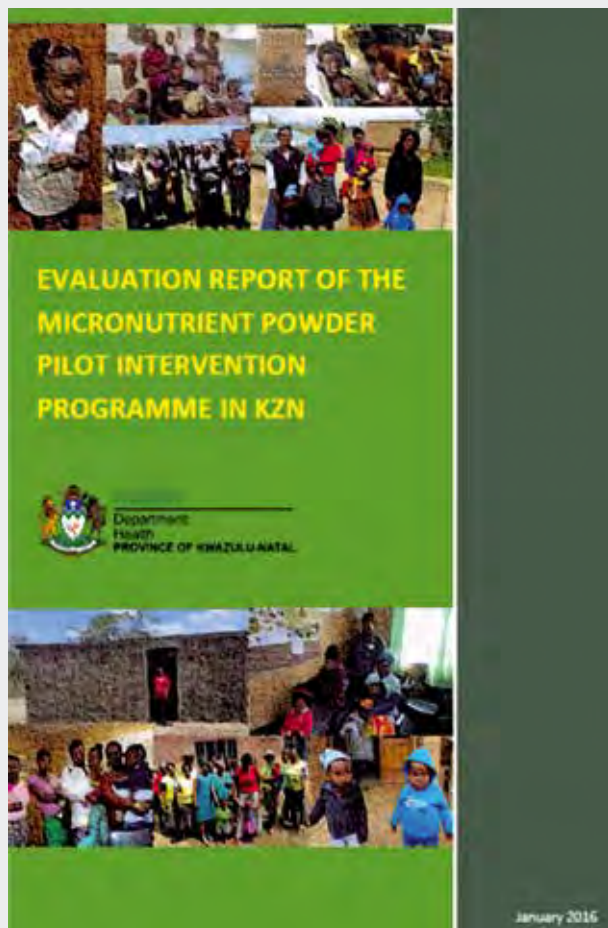
health outcomes. Children are more vulnerable to micronutrient malnutrition due to rapid growth and development.<sup>1</sup> The National Food Consumption Survey (NFCS-FB) 2005 demonstrated that South African children's intakes of micronutrients were below 67% of the RDAs for calcium, iron, zinc, selenium, vitamin A, vitamin D, vitamin C, vitamin E, riboflavin, niacin, folic acid and vitamin B<sub>6</sub>.<sup>2</sup> Factors contributing to poor micronutrient intake and stunting in children in South Africa include the early introduction of solid foods, low rates of exclusive breastfeeding, lack of dietary diversity, and complementary foods based on maize but low in animal foods, vegetables and fruits.<sup>3,4</sup>

The KZN Department of Health took action by implementing the micronutrient powder pilot intervention program targeting children aged 6–24 months. The purpose of this intervention was to improve the nutrient adequacy of complementary foods, to promote and strengthen appropriate complementary feeding practices and to assess the acceptability and feasibility of introducing the micronutrient powder pilot intervention program into the current health system.

Each 1 g sachet of MNP provided 15 micronutrients at 100% of the Recommended Nutrient Intake for children aged 6–59 months. Mothers and caregivers of children aged 6–24 months in 169 poor wards were targeted for distribution through clinics, households and Phila Mntwana centers (community-based structures). The poor wards were identified by the KZN Premier as part of the Poverty Eradication Master Plan and based on economic deprivation indicators. The identified poor wards were targeted as it was assumed that micronutrient deficiency would be higher in these wards. In order to facilitate an informed decision on the feasibility and overall sustainability of this pilot intervention and next steps, an evaluation was undertaken post pilot implementation, to assess how well this worked within the current health system and identify the barriers/challenges to adoption. Fifty percent of the piloted districts were targeted for more detailed feedback (5 out of 10 districts).

Districts with the greatest number of MNP sachets received during the pilot were prioritized for sampling because it was felt that these would best reflect the issues faced. For each of the

**FIGURE 1:** Front cover of the *Evaluation report of the micronutrient powder pilot intervention program in KZN*



five selected districts, the three most populous wards in terms of children aged 6–24 months were selected from the list of poor wards targeted. In each of the selected wards, implementers from all clinics in the ward were interviewed. A focus group interview with recipients was also undertaken for each selected ward in each of the five districts.

### Objectives of the evaluation

The objectives of this evaluation were to assess the acceptability and feasibility of this intervention in the current healthcare system by interviewing the implementers, and to assess the acceptability and use of the MNPs by the recipients.

### Methodology

A mixed method study was conducted. The study was led by an independent consultant together with three nutrition professionals who were field workers. Fifty percent (n=5) of the piloted districts were targeted for participation. Pre-tested, semi-structured questionnaires were administered to healthcare

workers by means of interviews. Fifty (n=50) interviews were held with healthcare workers, 18 group interviews with community care givers (CCGs) were held, and 18 focus group discussions were held with mothers and caregivers. Data was analyzed using a specifically designed MS Excel spreadsheet.

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**“Overall, mothers/caregivers were enthusiastic about the positive effects experienced by their children on using MNP”**  
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### Findings

#### Acceptability

Sixty-three out of 68 (93%) of the healthcare workers indicated that the micronutrient powders were important to improve the health of the child. Overall, mothers/caregivers accepted the intervention well and were enthusiastic about the positive effects experienced by their children using MNP.

#### Feasibility

Sixty out of 64 (94%) healthcare workers interviewed indicated that the MNP intervention fitted in well and easily with other nutrition and child health interventions. Over 70% of healthcare workers experienced no problems with regard to delivery, storage, distribution, stock control and reporting. About 30% of the healthcare workers indicated that communication on delivery, distribution, and storage space could be improved.

#### Training

Just over half (56%) of the healthcare workers interviewed reported satisfaction with the training and support provided prior to the implementation of the MNP pilot intervention, while 51% indicated that they made reference to the standard operating procedure. Eighteen percent (n=8) of the healthcare workers recalled having discussed appropriate feeding of the child with the mothers/caregivers. The feeding advice only focused on adding the MNP to porridge.

#### Conclusion

The findings in this evaluation compare with the literature in terms of acceptability among mothers/caregivers and recognition of the benefits to the child.<sup>5</sup> Overall, micronutrient powders were accepted by the healthcare workers and by the mothers/caregivers. However, logistical arrangements require attention for future implementations. In order to address challenges and concerns that emanated from the evaluation process, the KZN Province subsequently decided to implement the recommen-

**FIGURE 2:** Standard operating procedures for issuing and administering of micronutrient powders to children 6–24 months by healthcare workers

**PURPOSE**

- To improve micronutrient intake of preschool aged children between 6-24 months through addition of micronutrient powders at the point of food intake
- To clarify the nutritional requirements, monitoring, evaluation and support for the targeted group
- To inform and educate mothers and caregivers on infant and young child feeding including introduction of appropriate complementary foods

**BEFORE GIVING MICRONUTRIENT POWDERS**

- Ask for the Child's Weight to be measured (ITHB), if the child under 5 years does not have a PHEM
- Follow these procedures to ensure that the child is issued with a PHEM
- Find out the services for which the ex-manufacturer has come to the clinic
- Weigh the child and record on the ITHB
- Measure the length or height of the child and record on the ITHB
- Measure MUAC for children 6-24 months and record on the PHEM
- Plot the weight on the weight-for-age growth chart
- Plot the height or length on the weight-for-length (weight-for-height) growth chart
- Observe malnourished, wasted, stunted and give support in the routine or emergency

**ISSUING OF MICRONUTRIENT POWDERS**

- Explain to the mother the purpose of this intervention
- Make sure you explain from 6-18 months of age that the food should always contain and means to eat particular foods, Micronutrient Powders (MNP) that will help your child grow and stay healthy and strong

**HOW TO GIVE MICRONUTRIENT POWDERS TO A CHILD BETWEEN 6-24 MONTHS**

1. TEAR SACHET OPEN
2. ADD INTO CONTAINER TO 1 SMALL MEAL
3. MIX WELL
4. LET INFANT FEED WITH 20 MINUTES

**RECORDING OF MICRONUTRIENT POWDERS ON THE ITHB AND REGISTER**

- Record on the ITHB after issuing the supply of micronutrients: "Micronutrient Powder Issued" and the quantity given
- Record the date and sign
- Record on the Micronutrient Register the following:
  - Child's name, age, home address, contact number, weight, height, MUAC, nutritional status
  - L.E. MAM or SAM and the number of micronutrient packets issued

dations from the evaluation report in three districts to ensure proper alignment with current health systems.

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