


Impact Study Report: Comparison of PM2A and MCHN Approaches in SHOUHARDO II

By:
Judiann McNulty, DrPH
Ruth Harvey and Kathy Tilford, consultants

Contents

Acronyms

ANC	Antenatal Care
BCC	Behavior Change Communication
CHD	Comprehensive Homestead Development
CHV	Community Health Volunteer
CLTS	Community Led Total Sanitation
DRR	Disaster Risk Reduction
ECCD	Early Childhood Care and Development
EKATA	Empowerment Knowledge and Transformative Action
FF	Field Facilitator
FFP	Food For Peace
FGD	Focus Group Discussion
GMP	Growth Monitoring and Promotion (community-based)
GOB	Government of Bangladesh
HFA	Height for Age
HHN	Health Hygiene and Nutrition
IGA	Income Generating Activity
IFPRI	International Food Policy Research Institute
IPTT	Indicator Performance Tracking Table
IR	Intermediate Result
IYCF	Infant and Young Child Feeding
MCHN	Mother Child Health and Nutrition
MTR	Mid Term Evaluation
MoH&FW	Ministry of Health and Family Welfare
NGO	Non-Government Organization
PEP	Poor and Extreme Poor
PLW	Pregnant or Lactation Women
PM2A	Prevention of Malnutrition in Children under 2 Approach
PNGO	Partner Non-Government Organization
QPE	Quantitative Performance Evaluation (final evaluation)
SHOUHARDO	Strengthening Household Ability to Respond to Development Opportunities
SO	Strategic Objective
UP	Union Parishad
USAID	United States Agency for International Development
VDC	Village Development Committee
WV	World Vision

Executive Summary

The Strengthening Household Ability to Respond to Development Opportunities II (SHOUHARDO II) Program which started in June 2010, is funded through United States Agency for International Development (USAID) Food for Peace (FFP) Title II. Building on the previous phase (SHOUHARDO) which established an effective, integrated model for reducing child malnutrition while contributing to greater livelihood security and women's empowerment, the overall goal of SHOUHARDO II is to transform the lives of 370,000 Poor and Extreme Poor (PEP) households in 11 of the poorest and most marginalized districts in Bangladesh by reducing their vulnerability to food insecurity. The program's second strategic objective aimed to **improve health, hygiene and nutrition status of 176,706 children under 2 years of age** with two intermediate results (IR):

- IR2.1: "Access to" and "utilization of" health and nutrition services improved to care givers of children under 2 years of age.
- IR2.2: Care givers of children under 2 adopt improved health, hygiene and nutrition behavior and caring practices.

Under the project SHOUHARDO II, CARE conducted operations research to test and compare the impacts on child malnutrition of two different program approaches, namely Preventing Malnutrition among Children under Two (PM2A) and the approach used in the previous program referred to simply as Maternal Child Health and Nutrition (MCHN). Through a randomized controlled trial, 17.5% of villages were assigned to the PM2A program model, and the remainder followed the MCHN model. In the PM2A approach, all pregnant and lactating women with children under two years received a monthly food ration and health, hygiene and nutrition education (HHN) irrespective of economic status. In the MCHN approach, only pregnant and lactating women defined as either poor or extreme poor received the monthly food ration. In the initial design, the MCHN model did not include HHN promotion activities for non-poor. However, late in the second year of the project, the program strategy was revised and the non-poor were included in both the PM2A and MCHN for behavior change interventions (growth monitoring sessions, courtyard sessions, Community Integrated Management of Childhood Illness (C-IMCI), referrals to health services, etc).

This impact study was planned to assess the results of the operations results comparing the two approaches. The objectives of the study were to:

1. Assess which SO2 approaches, interventions and activities have proved to be most effective in Bangladesh context and why.
2. Assess which SO2 approaches, interventions and activities in the Program have proved to be least effective, together with reasons why, and that should be 'de-emphasized' or even 'dropped' in Title II programs in Bangladesh.
3. What's worked well and what can be improved needs to be detailed, with recommendations of how this can be further strengthened in such a Program.
4. Using the findings of the end-line survey, as well as any additional program data, the study should analyze and compare the impacts on child malnutrition of two different program approaches, namely PM2A and MCHN.

The impact study included review of quantitative data results in the final Quantitative Performance Evaluation (QPE) and collection of qualitative data during field visits undertaken in May, 2015. While

the QPE sampling framework was planned to include a sufficient number of children under five to determine statistically significant changes in anthropometric indicators for each approach, it was not large enough to compare other indicators which require a sample subset of children in certain age ranges. This limited the impact study as samples for most behavioral indicators such as exclusive breastfeeding and treatment of diarrhea were too small to make comparisons between MCHN and PM2A participants.

The qualitative data collection consisted of focus groups and in-depth interviews with project participants including mothers and village development committees (VDC), community health volunteers (CHV) and implementing staff, as well as other stakeholders. The study team visited 25 purposefully selected villages in all four regions.

It should be noted that because the PM2A model implemented by SHOUHARDO II was designed before release of the USAID/FANTA technical reference materials for PM2A, the model differs from that guidance in most aspects except for provision of the food ration to all pregnant and lactating women in the community. For this reason, the SHOUHARDO II approach to PM2A should not be compared to other PM2A programs such as those in Burundi and Guatemala.

Key Findings

1. Both program approaches had a significant impact on improving nutritional status.
   - The prevalence of stunting among children under two reduced significantly with both the MCHN and PM2A approaches (a reduction of 9.6 percentage points in MCHN villages and 10.4 percentage points in PM2A villages). Difference in differences analysis found both reductions to be statistically significant, and both approaches reduced stunting more than 3 times as much as the original PM2A trial in Haiti.
   - Wasting among children under two improved with both approaches, with a decrease from 16 to 12.7% in MCHN villages, and from 17.1 to 9.4 percent in PM2A villages. However the small sample size impedes statistical inference, and the influence of improvements in water and sanitation still need to be assessed.
   - Among children under five, stunting was reduced by 8.4 percentage points in MCHN villages and by 13.1 percentage points in the PM2A villages: both results are were statistically significant by the difference in differences analysis. Changes in wasting and underweight in this age group were not significantly different between the two different approaches.

2. Review of beneficiary statistics shows the potential for increased coverage of vulnerable households with MCHN. Although only 8.6% of pregnant and lactating women receiving food rations in PM2A villages were classified as non-PEP, in absolute numbers this represents 13,084 poor and extreme poor women who could have received food rations had the program applied only the MCHN approach of targeting PEP.

3. High rates of malnutrition and inadequate HHN practices among the non-poor indicate a need in these population groups as well. The SHOUHARDO II baseline survey found that although the rate of malnutrition among non-poor was not as high as among the PEP, malnutrition rates in all 3 indicators among the non-poor were still well above the WHO threshold for high public health significance, and that food insecurity was also a problem among the lower middle class. Hygiene, inadequate child care and feeding practices were equally as prevalent among non-poor as among

the PEP which further supports the importance of involvement in HHN learning activities regardless of socio-economic class.

4. Effort was required to engage the non-poor. CARE Bangladesh, through the PNGOs, VDCs, and CHVs had to invest substantial effort in getting the non-poor to participate. Through a very concerted effort, the project was able to ultimately engage 84% of non-poor women in PM2A villages. Less than 74% accepted food.

Conclusions related to impact study objectives

- Both the MCHN approach targeting PEP and the PM2A approach proved very effective in reducing stunting in the Bangladesh context. Greater reductions in stunting, and in wasting among children 6-23 months were achieved in the PM2A villages than in the MCHN villages. This may have been due to the higher participation of non-poor women in the learning sessions and GMP in the PM2A communities. The PM2A approach was reported to lead to greater social cohesion and a sense of equity in villages along with a common understanding of optimal health, hygiene, and nutrition practices.

- The principal advantage of SHOUHARDO II's PEP targeting with the MCHN approach is increased coverage of the most vulnerable.

- Among the SO2 approaches, interventions and activities in the program, the only one which was least effective, and that should be 'de-emphasized' or even 'dropped' in Title II programs in Bangladesh is the insistence on the non-poor accepting food rations. Receipt of food rations should be optional for those families who are not in need, but maximum participation of both poor and non-poor in HHN learning activities should be maintained since it is for the benefit of all families.

- Interventions and activities which worked well were the courtyard sessions, cooking and feeding demonstration sessions, GMP, and home visits. These were all found to be useful to program participants and of high quality as evidenced by the knowledge of the mothers interviewed and by the overall improvements of HHN practices in the QPE report. All indicators exceeded targets except for exclusive breastfeeding. The training and materials provided to CHVs for conducting the HHN activities appear to be very effective. Access to and relations with health service providers had been improved, and the food distribution system seemed to be very effective and efficient with beneficiaries fully understanding food rations as a temporary measure. Overall, the study team did not see need for major improvements in the implementation strategy.

- Analysis of the impacts on child malnutrition of the two program approaches, based on quantitative data show that from baseline to final surveys as stated above:
  - The prevalence of stunting among children under two reduced significantly with both the MCHN and PM2A approaches (a reduction of 9.6 percentage points in MCHN villages and 10.4 percentage points in PM2A villages). Difference in differences analysis found both reductions to be statistically significant, and both approaches reduced stunting more than 3 times as much as the original PM2A trial in Haiti.
  - Wasting among children under two improved with both approaches, with a decrease from 16 to 12.7% in MCHN villages, and from 17.1 to 9.4 percent in PM2A villages. However the small sample size impedes statistical inference, and the influence of improvements in water and sanitation still need to be assessed.

- Among children under five, stunting was reduced by 8.4 percentage points in MCHN villages and by 13.1 percentage points in the PM2A villages, are were statistically significant by the difference in differences analysis. Changes in wasting and underweight in this age group were not significantly different between the villages in the two different approaches.

Recommendations

1. An adapted model is recommended for Bangladesh: Considering the high level of food insecurity among PEP families found in the SHOUHARDO II baseline survey (40% experienced moderate or severe hunger), there would seem to be a need to target food rations to as many of these families as possible who have pregnant women or lactating women with children under 23 months of age, that is, the 1000 days period.

   Since the non-poor children also have high levels of malnutrition and their families benefit greatly from the HHN, they too should be all be engaged in the learning activities from the outset. Their engagement will be much easier to achieve if the HHN activities are perceived to be open to all rather than connected to the PEP and to food rations. **Therefore, the HHN learning activities and GMP should be started two to three months before the food distribution starts and kept completely separate.**

   With sufficient mobilization and using many of the effective strategies applied by the CHVs in PM2A villages, all non-PEP and PEP women (with children under two or pregnant) can be motivated to attend the learning sessions and growth monitoring. Involvement of influential community leaders besides the VDC will be helpful in persuading all families to participate. This adapted model will improve nutritional status of children across the community, not just among the PEP and will change social norms regarding HHN practices in the whole community.

2. In addition to the recommendations above for an adapted MCHN model, the impact study team has only a few minor recommendations for further strengthening HHN interventions and activities to add to the more comprehensive recommendations possibly coming from the third party evaluation underway by the Tuft's team.

Introduction

The Strengthening Household Ability to Respond to Development Opportunities II (SHOUHARDO II) Program is funded through United States Agency for International Development (USAID) Food for Peace (FFP) Title II, which started in June 2010. The five-year Multi-Year Assistance Program (MYAP) builds on the previous phase (SHOUHARDO) which established an effective, integrated model for reducing child malnutrition while contributing to greater livelihood security and women's empowerment. Funded by the USAID, Government of Bangladesh (GoB) and CARE USA for approximately USD 130 million, SHOUHARDO II is one of the world's largest non-emergency food security programs and plays an influential role in Bangladesh's poverty alleviation efforts. The program is being implemented in four regions (North Char, Mid-Char, Haor and Coastal), reaching 11 districts, 31Upazilas, 172 Unions and 1,573 villages.

The overall goal of SHOUHARDO II is to transform the lives of 370,000 Poor and Extreme Poor (PEP) households in 11 of the poorest and most marginalized districts in Bangladesh by reducing their vulnerability to food insecurity.

Sixteen Partner NGOs (PNGOs) were responsible for 90 percent of the program implementation, while CARE Bangladesh implemented the remaining 10 percent through direct delivery. CARE provided significant administrative and technical support to strengthen or equalize capacity among PNGOs. The sub-contracts to the PNGOs ended in February 2015, with CARE continuing support to phased exiting communities through September, 2015.

In order to achieve the SHOUHARDO II goal, USAID, CARE-Bangladesh, and PNGOs have established the following Strategic Objectives (SO) and Intermediate Results (IR):

SO1: "Availability of" and "access to" nutritious foods enhanced and protected for 370,000 PEP households.

- IR1.1: Improved and diversified agriculture systems developed and linked with private and public services.
- IR1.2: Increased household income among PEP in the target communities.

SO2: Improved health, hygiene and nutrition status of 176,706 children under 2 years of age.

- IR2.1: "Access to" and "utilization of" health and nutrition services improved to care givers of children under 2 years of age.
- IR2.2: Care givers of children under 2 adopt improved health, hygiene and nutrition behavior and caring practices.

SO3: PEP women and adolescent girls empowered in their families, communities and Union Parishad.

- IR3.1: Influence of PEP women and adolescent girls in decision making increased.
- IR3.2: Local support systems strengthened to reduce violence against women.

SO4: Local elected bodies and government service providers' responsiveness and accountability to the PEP increased.

- IR4.1: Nation Building Departments (NBD) and Union Parishads proactively work to address the needs of the PEP, especially women.
- IR 4.2: PEP access to entitlements and services increased, including safety nets and natural resources.

SO5: Targeted community members and government institutions are better prepared for, mitigate, and respond to disasters and adapt to climate change.
- IR5.1: Disaster contingency systems in place and functioning.
- IR5.2: Influence local and national humanitarian assistance initiatives.

Under SO2, the SHOUHARDO II health, hygiene and nutrition (HHN) package is evidenced-based and incorporates Government of Bangladesh priorities, national/regional initiatives, and UN (UNICEF, WHO) and donor priorities. The package prioritizes children under age 2 and pregnant and lactating women; this is in line with global best practices of targeting the first 1,000 days of life to achieve sustained impact on nutrition indicators.

The SO2 health, hygiene, and nutrition education consisted of two types of monthly learning sessions. 1) The trained community health volunteer (CHV) facilitated courtyard sessions using flip charts provided by the project. These sessions covered a range of HHN topics relevant to pregnant women and mothers of children under two. 2) In the community cooking and feeding sessions[1] (called *khichuri* sessions), mothers brought ingredients and actively learned how to hygienically prepare rice and lentil porridges enriched with a variety of nutrient dense vegetables and oil. They practiced responsive feeding to encourage the children to eat.

In addition, the CHV conducted community-based monthly growth monitoring and promotion (GMP) sessions. The CHVs made frequent home visits to promote hygiene, sanitation, improved child feeding and caring practices, and to follow-up children who were ill or growth faltering. They also counseled pregnant women and visited newborns to record a birth weight and promote immediate breastfeeding.

Comparison of Approaches for SO2

At the time the proposal for SHOUHARDO II was prepared, USAID Food for Peace (FFP) was requesting that programs apply a specific preventive approach called Preventing Malnutrition in Children under Two Approach (PM2A) which had been shown to reduce the prevalence of stunting by about four percentage points over 3 years in a research trial in Haiti. SHOUHARDO I had just achieved a 15.5 percentage point reduction in stunting among the project participants who received food rations using a preventive approach during 3.5 years. Therefore, CARE Bangladesh proposed conducting operations research to compare the two approaches within the new MYAP.

Randomized Control Trial

CARE Bangladesh originally proposed implementing PM2A in only one district to compare results to other districts. Since that would have involved controlling for may differing socio-economic factors between districts, the plan evolved to a Randomized Controlled Trial (RCT). Approximately 17.5% of villages across the districts were randomly chosen as PM2A villages and all others were assigned to the MCHN approach of targeting only the poor and extreme poor (PEP). Randomization was not perfect. There were slightly more PM2A villages in the Coast and less in North Char. According the QPE data, PM2A villages may have been slightly better off, but were also more remote. Ultimately, these details are not major confounders.

[1] In SHOUHARDO II documents, these are sometimes called cooking and feeding *demonstration* sessions, however, in actual implementation, these were not demonstration sessions, rather the mothers were actively engaged in preparing food and feeding their children, which is more effective in promoting behavior change.

The survey samples were calculated to be large enough, with approximately equal sample sizes for each approach, to allow for comparison between the two approaches. The design of the RCT and the survey sampling did not include control villages with no intervention.

There was one drawback of the RCT with villages scattered across target areas. Non-poor women in MCHN villages were sometimes aware that non-poor women in a neighboring village were receiving food rations and expressed resentment. Implementing staff struggled to explain that this was a planned trial.

PM2A

Background

The Preventing Malnutrition in Children under Two Approach (PM2A) arose from the findings of a well-designed research project of the International Food Policy Research Institute (IFPRI) and Cornell University in Haiti in the context of a World Vision (WV) Title II program in Haiti[2]. The WV Development Assistance Program (DAP) had previously used a recuperative approach; that is, targeting food rations to children under two who were malnourished based on weight for age. The study provided food rations to all mothers who were pregnant or had children under two in a subset of similar villages, along with nutrition and health education, and a package of health and nutrition services. The impact on stunting, wasting, and underweight was compared after 3 years between the preventive and recuperative approach, showing that the preventive approach had a much greater impact.

Based on this research, the USAID Food for Peace Office recommended that newly-funded programs adopt this particular preventive approach known as PM2A[3]. Technical reference materials to guide programs were released in 2009 and revised in 2010[4].

Implementation under SHOUHARDO II

The model of PM2A implemented under SHOUHARDO II varies in two important ways from the version recommended by the Technical Reference Material (TRM) on PM2A published by the FANTA Project in 2010. The following table summarizes the similarities with the differences shown in the shaded areas.

Table 1. Comparison of PM2A Model of SHOUHARDO II with FANTA Recommendations

FANTA recommendations for PM2A	SHOUHARDO II version of PM2A
Target all households in the community with pregnant women or children under two	All households with children under two or pregnant and lactating women were targeted in the PM2A communities
Individual ration for pregnant and lactating women and for children plus a family ration	A single family-size ration was given. (60% of the ration was calculated for the primary target, the PLW, and about 40% of the ration was considered for other household members.
Conditional food ration to ensure full participation. (Receiving the monthly food ration is contingent on participation in educational activities and health services.)	Participation in BCC, GMP or other health services was not a requisite for receiving food. Social mobilization and intense persuasion by staff and volunteers were used to get food recipients to attend learning activities and growth

[2] Ruel, M., et al. Age-Based Preventive Targeting of Food Assistance and Behavior Change and Communication for Reduction of Childhood Undernutrition in Haiti: A Cluster Randomized Trial (The Lancet, 2008)

[3] http://www.fantaproject.org/research/comparing-preventive-recuperative-approaches-child-undernutrition

[4] http://www.fantaproject.org/sites/default/files/resources/TRM_PM2A_RevisedNov2010_ENGLISH.pdf

	monitoring and to access services.
Preventive and curative health services for women and children under two provided.	This was included through building strong links between service providers and communities to improve access and the learning activities to increase demand.
Behavior change communication that is well-designed, age-appropriate and timely.	Behavior change communication was a very strong component and learning activities were adapted locally to ensure that women got the messages at the appropriate time.

MCHN PEP

Background

The large majority of CARE food assistance programs were applying a preventive approach by the mid-1990s, targeting pregnant women and families of children under two with supplemental food rations and nutrition and health education. CARE most often provided "blanket rations" which meant including all families with pregnant women or children under two in a target community that was selected based on poverty and food insecurity data. CARE programs distributed sufficiently large rations to compensate for "dilution" or sharing among the family.

In the SHOUHARDO DAP proposal of 2004, CARE Bangladesh proposed a new modality to target only the poor and extreme poor (PEP) who were identified in well-being (wealth ranking) exercises conducted with each target community. Operating across 18 districts in four diverse regions of Bangladesh, SHOUHARDO implemented an integrated program for PEP households that included livelihoods, disaster risk reduction, governance, women's empowerment (in a limited number of communities), water and sanitation, early childhood development, and maternal child health and nutrition (MCHN). Due to some logistical delays, food rations were distributed to the MCHN participants over a period of 3.5 years. The final survey, which included only children 6 to 23 months old of project participants that had received food rations showed a 15.5 percentage point reduction in stunting.

Implementation under SHOUHARDO II

Food rations were distributed monthly to PEP families with a pregnant woman or a lactating woman with a child under two. (SHOUHARDO II referred to food recipients as "pregnant and lactating women".) Women could receive rations for a maximum of 30 months, which nearly covered the "1000 days" since most enrolled in their 3rd or 4th month of pregnancy. Food was distributed from June 2011 through November 2014. No new beneficiaries were enrolled after May, 2014. The PEP families were also eligible to participate in the other SHOUHARDO II components to improve agriculture, income, water and sanitation, disaster mitigation, and in some communities, in women's empowerment and early child development.

Women receiving food rations were strongly encouraged to participate in the BCC activities, but were not required to do so in order to receive the food. They were also encouraged to seek all needed health services, and the project strengthened linkages between government health services and the communities to increase access. Initially the learning activities were only for the PEP food recipients, but in the second year of the project, CARE followed a recommendation from USAID to invite all women in the community who were pregnant or had a child under two. CHVs and the Village Development Committees went house-to-house to invite the additional women and increased the number of monthly learning sessions in some communities to accommodate the additional women who began to attend.

According to the QPE data, 31% of non-PEP women in the target villages eventually participated in either the learning sessions or in GMP or both activities.

Variations in the models

The principal difference between the SHOUHARDO II versions of MCHN and PM2A was in targeting of food rations for PLW and BCC to only PEP in MCHN villages but to all households in PM2A villages. As can be seen in the table below, the rations, links to health services, and BCC strategy were essentially identical. Another difference, not shown in the table, was the level of effort made by staff and CHVs to persuade the non-poor families in PM2A villages to accept the rations and to participate in the learning sessions and GMP. Staff and volunteers estimate that this may have required an additional 25% effort on their part. While non-PEP women in the MCHN villages were invited to participate in the learning sessions and GMP starting late in the second year, there was not such an intense effort to assure that they participated or, if participating, attended regularly.

Table 2. Summary of differences between the SHOUHARDO II approaches for MCHN and PM2A

SHOUHARDO II MCHN	SHOUHARDO II version of PM2A
Targeted only the households with pregnant women or children under two identified by the community as poor or extreme poor.	All households with children under two or pregnant and lactating women were targeted in the PM2A communities regardless of wealth ranking.
A monthly family ration of 10kg wheat, 1 kg of oil, and 0.5 kg of yellow split peas. Given to each recipient for a maximum of 30 months.	A monthly family ration of 10kg wheat, 1 kg of oil, and 0.5 kg of yellow split peas. Given to each recipient for a maximum of 30 months.
Participation in BCC, GMP or other health services was not a condition for receiving food, although participation of PEP women was monitored. Social mobilization was used encourage participation of PEP and non-PEP women.	Participation in BCC, GMP or other health services was not a condition for receiving food. Social mobilization and intense persuasion by staff and volunteers were used to get food recipients to attend learning activities and growth monitoring and to access services.
The project built strong linkages between service providers and communities to improve access. The learning activities increased demand for services.	The project built strong links between service providers and communities to improve access. The learning activities increased demand for services.
The behavior change strategy included 2 types of learning sessions (courtyard sessions and cooking and feeding sessions), counseling with GMP, and home visits. This combination resulted in approximately 3 contacts per month with PEP women and interested non-PEP women.	The behavior change strategy included 2 types of learning sessions (courtyard sessions and cooking and feeding sessions), counseling with GMP, and home visits This combination resulted in approximately 3 contacts per month. Non-poor women who refused to attend learning sessions sometimes received counseling at home.

Limitations in making comparisons between the two SO2 approaches in SHOUHARDO II

As can be seen in Table 2 above, the only significant difference between the two approaches as implemented by CARE Bangladesh was in targeting of food rations. In essence, this operations research study is comparing "blanket" food supplementation with high coverage of BCC activities to food supplementation targeted to poor and extreme poor families with identical BCC activities for these and other interested women in the community.

Because SHOUHARDO II does not include all elements of PM2A as described by the FANTA TRM, we cannot generalize the results of this PM2A approach to PM2A as implemented in Haiti, Guatemala, and Burundi.

SHOUHARDO II staff decided to give priority to PM2A villages as sites for implementing EKATA, the women's empowerment groups. The rationale for this was to engage more non-PEP women who might be more influential in advocating with government.

Purpose and methodology of the comparative study

Impact Study objectives

1) Assess which SO2 approaches, interventions and activities have proved to be most effective in Bangladesh context and why.

2) Assess which SO2 approaches, interventions and activities in the Program have proved to be least effective, together with reasons why, and that should be 'de-emphasized' or even 'dropped' in Title II programs in Bangladesh.

3) What's worked well and what can be improved needs to be detailed, with recommendations of how this can be further strengthened in such a Program.

4) Using the findings of the end-line survey, as well as any additional program data, the study should analyze and compare the impacts on child malnutrition of two different program approaches, namely PM2A and MCHN.

NOTE: There was originally another objective in the Terms of Reference stating "Conduct an output assessment at the IR level to map how effective SHOUHARDO II was in implementing its activities and reaching IPTT targets related to SO2. Per agreement with CARE Bangladesh and TANGO, this objective was removed from the TOR and covered by TANGO in the Final Quantitative Performance Evaluation report[5] (see page 15 and Annex 5 of that report.)

Methodology

Data sources

Quantitative data

The quantitative data on impact and outputs used in the study was derived from the final Quantitative Performance Evaluation (QPE) survey conducted for USAID by TANGO International from November to December, 2014. The survey employed the same instrument as the project baseline and was conducted in the same season of the year which facilitates comparison of data to the baseline. TANGO has fully described their sampling methodology in the final report which was accepted by CARE and USAID.

The analysis of the data used in this comparative study varies from the data in the QPE report in that, for the purposes of this study, it was essential to have equal-sized, cross-sectional *population-based* samples; that is, the samples should include all PEP and non-PEP in each type of community. In addition, the results of this analysis are not disaggregated by region because the sample size is not large enough to capture statistically significant changes by both the program type and region. Complete details of the survey methodology are given in the QPE report,[5] with further explanation of the decision to exclude

[5] TANGO International, Inc. SHOUHARDO II Final Quantitative Performance Evaluation, March 2015.

non-PEP households in MCHN villages from analysis in the MTR report.[6] The final QPE survey sample was calculated with sufficient size to enable statistical comparison of outcomes (principally stunting among children 6-59 months) between the PM2A and MCHN approaches.

Limitations of the quantitative data

The QPE analysis framework used a subset of the total HH sample to measure outputs and impact for SO2. The primary subset, as required by Food for Peace, was children 6 – 59 months of age to measure stunting, wasting and underweight. For PM2A, the subset of children 6-23 months is suggested. Then, for specific output indicators such as diarrhea treatment, exclusive breastfeeding, other IYCF practices and children's dietary diversity, smaller subsets were used. While the initial calculation of needed sample size of children 6-59 months is accurate, this did not take into account the various subsets of children needed for different indicators. Therefore, the resulting sample sizes for subsets were too small to allow valid statistical comparison between the outcomes of the two approaches. For example, no valid comparisons can be made about the impact of PM2A versus MCHN approaches on some of the SO2 indicators, and sample sizes are too small for regional comparisons by program type. TANGO mentions this limitation for measuring indicators for under-two children at the top of page 7 of the Final QPE report, and expands discussion of this limitation at the bottom of page 7 of the Final QPE report.

For SO2 results, the QPE analysis removed non-PEP children from analysis of results in MCHN communities which reduced sample size further, also creating an imbalance with the size of the PM2A sample. More importantly, this manner of exclusive analysis of only PEP children annulled the population-based sample. (See page 6 of the QPE report.)

The only population-based results available for the analysis needed for this impact study were those presented in Section 3 of the QPE report which included rates of participation in interventions and population based anthropometry results presented in Table 6. At the request of consultants, additional results were generated including participation in specific SO2 activities, and disaggregation of anthropometric results in Table 6 by program type, age and PEP and non-PEP participants. Further analyses of other SO2 indicators on HHN practices using the full population-based samples were not available. Therefore, comparisons of changes in practices between the two approaches is not presented in our report.

Qualitative data collection

The qualitative study was conducted by a two-person team of external nutrition consultants with prior experience in doing evaluations in Bangladesh. The team leader has extensive experience with evaluations of Title II food programs in various contexts, and is knowledgeable about the PM2A approach in other contexts. Originally scheduled for January and February, security issues in the country caused a delay until May, 2015. Data was collected over a period of two weeks in all regions.

Qualitative study design

The study employed focus group discussions with project beneficiaries, and in-depth interviews with community health volunteers (CHV), and implementing staff at all levels from CARE, two MoH&FW officials, and one partner NGO.

[6] CARE Bangladesh SHOUHARDO II Mid-Term Review, Volume 1, Main Report, p.17

The following table shows the number of interviews and focus groups that were conducted across all four regions. Note that in-depth interviews were not always individual but often small groups or pairs.

Table 3. Summary of Qualitative Methods and Participants

Method	Number events	Number of participants
Focus groups with food recipients in MCHN	14	124
Focus groups with food recipients in PM2A	12	96
Focus groups with non-recipients of food in either approach	6	16
Focus group with husbands of food recipients	4	10
In-depth interviews of community health volunteers		22
In-depth interviews of implementing staff		48
In-depth interview with upazilla health officer of MoH&FW	2	2
Group interview with Village Development Committee	22	53
Total number of communities visited:	25	

Site selection

The lead consultant selected the communities to visit using the list of SHOUHARDO II communities with the project interventions and a map of project locations supplied by CARE. Two communities were selected from each Union Parishad, one for MCHN and one for PM2A, which resulted in over-sampling PM2A communities since they make up only 17% of project communities. Communities were purposefully selected to include representation of communities with women's empowerment component (EKATA) in relation to the total number of SHOUHARDO II communities with this component. The number of communities selected was proportionate to total number of project communities in the region. An effort was made to visit communities of different implementing partners or CARE direct implementation. The table in Annex A lists the communities that were visited and gives details about project approach, components, and implementing partners.

Focus group participants were convened by the Village Development Committee (VDC) or CHV at the request of the local CARE program office. This was a convenience sample, depending on who was available. After the pre-test in the first region, instructions to the VDCS and CHVs were clarified to limit the number of participants to around eight, but often, additional people came. VDC participants were comprised of individuals who were available at the time of the visit. As with the focus groups of men, the intensity of the rice harvest played a role in deciding to minimize the VDC interviews.

Instruments

The guides for the focus groups and interviews were drafted before arrival in-country. They were pre-tested in the first region, and modified to focus more clearly on the evaluation questions. After the first region, the team decided not to pursue interviews with government health personnel nor husbands of participants since they did not provide information to distinguish between the approaches. Copies of the focus group discussion guides and interview guides are found in Annex B.

Limitations of the study implementation

1. Involvement of implementing partners ended in February, 2015. CARE staff, sometimes transferred from another region, took over the phase-out activities. Staff from most of the NGO partners quickly moved on to other employment; therefore, with the exception of the Coastal region, there was no opportunity to interview the PNGO staff.

2. Early seasonal rains accelerated the rice harvest in Mid-Char, North Char, and the Haor regions. This made it difficult to convene men from the communities. FGDs for men were dropped after Mid-Char and the participants in discussions with VDCs were largely female in all regions.

3. In three communities, the CHVs had left for other pursuits and were unavailable.

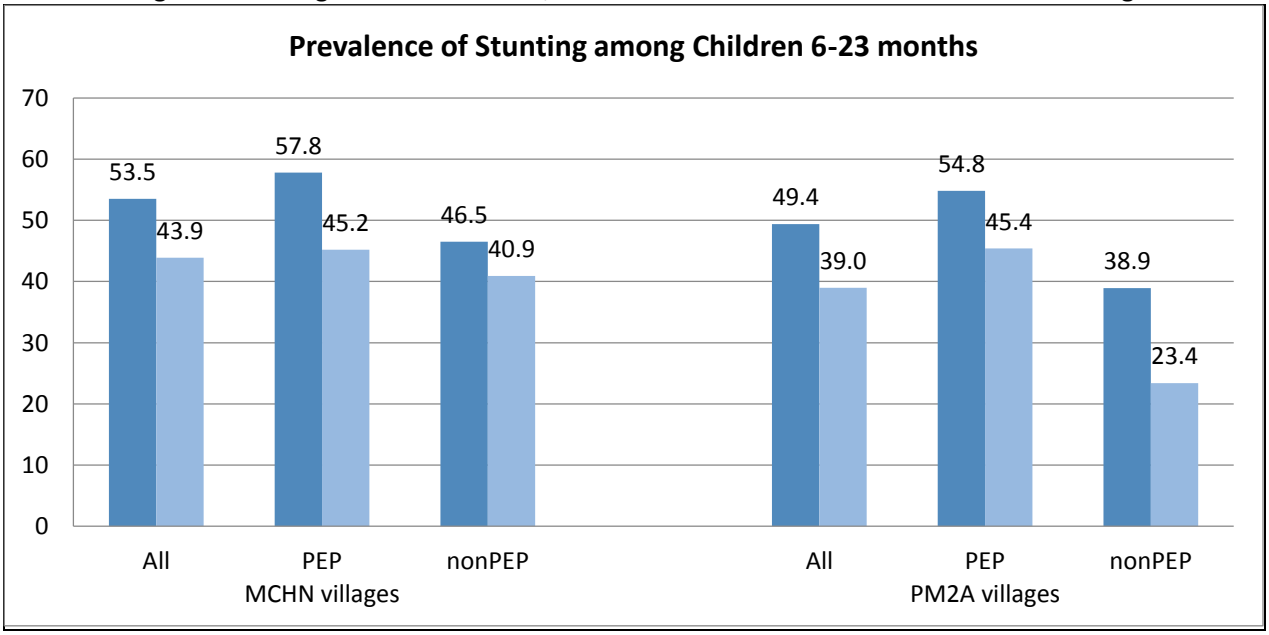
Findings

Impact on Nutritional Status

From baseline to final survey, the prevalence of stunting among children under two reduced significantly with both the MCHN and PM2A approaches. For MCHN there was a reduction of 9.6 percentage points and for PM2A, there was a reduction of 10.4 percentage points. The difference in differences between the two approaches is statistically significant. Both approaches reduced stunting more than 3 times as much as the original PM2A trial in Haiti.

The following graphs show the changes in stunting for children 6-23 months and for 6 -59 months.

Changes in Stunting for all children <2, PEP and non-PEP in both MCHN and PM2A villages

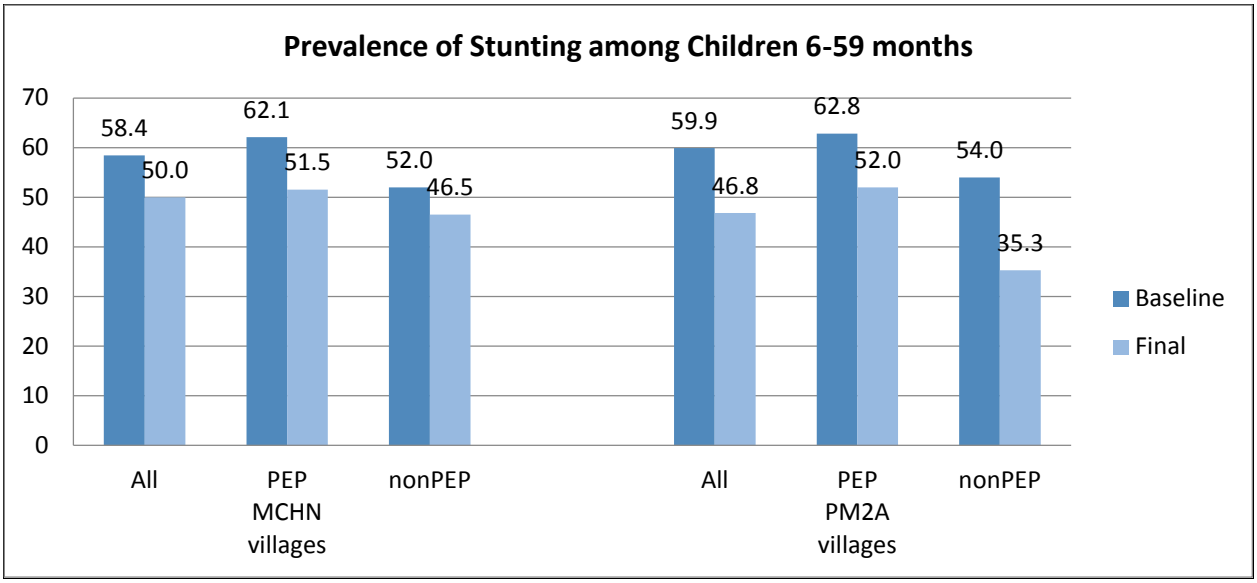


As mentioned in the limitations of the quantitative data, the overall QPE sample from which this data comes, is small. The sample included 442 children under two in MCHN villages and 488 in PM2A villages. As can be seen in the chart below, the sample of non-PEP children in MCHN and PM2A villages was 137 and 136 respectively. With such small sample size, it is not possible to find statistically significant differences in the change in stunting between the poor and non-poor.

Table 4. Final QPE Survey Sample Sizes for Anthropometric Analysis

	MCHN		PM2A		QPE Total Sample		
Sample size for Anthropometry (6-23 months)	PEP	Non-PEP	PEP	Non-PEP	MCHN	PM2A	Total
	305	137	352	136	442	488	930

Wasting improved with both approaches. In MCHN villages, wasting dropped from 16 to 12.7% and in PM2A villages wasting dropped from 17.1 to 9.4 percent. As with stunting, the small sample size impedes statistical inference. Wasting may have reduced more in PM2A villages however before reaching a conclusion, it would be necessary to ascertain whether those households might have seen related improvements in water and sanitation that would influence the change.



As shown in the graph above, stunting among children under five was reduced by 8.4 percentage points in MCHN villages and by 13.1 percentage points in the PM2A villages. The difference in differences analysis found both these reductions to be statistically significant. Changes in wasting and underweight in this age group were not significant different between the villages in the two different approaches.

Potential for increased coverage with MCHN

The following table shows data taken from the SHOUHARDO II management information system on total numbers of women who received food in either the MCHN or PM2A approach in each region. By studying these numbers, we calculated the potential number of increased PEP beneficiaries if all food had been given to them instead of to non-PEP families in PM2A villages.

Table 5. Beneficiary numbers by approach and PEP or Non-PEP

Region	MCHN		PM2A		Total food recipients
	PEP	Non-PEP	PEP	Non-PEP	
Siranjganj	19,945	0	4,085	2,159	26,189
Rangpur	35,417	0	5,836	4,049	45,302
Mymensingh	54,089	0	11,245	6,014	71,348
Cox's Bazaar	6,436	0	4,182	862	11,485
Total numbers	**115,887**	**0**	**25,348**	**13,084**	**154,319**
% of all food recipients	**75%**	**0**	**16.4%**	**8.6%**	**100%**

As can be seen in the table above, only 8.6% of pregnant and lactating women receiving food rations were classified as non-PEP. However, in absolute numbers this represents 13,084 poor and extreme poor women who could have received food rations had the program applied only the MCHN approach

of targeting PEP. This might have enabled SHOUHARDO II to enter additional highly vulnerable communities providing rations to poor and extremely poor women.

> "In our country there are so many very poor women who are truly hungry, it seems unethical to give food to those who already have enough." *CARE regional manager*

According to the data in the SHOUHARDO II management information system, approximately 6.3% or 980 food recipients were classified by the well-being exercise as rich. While intra-household food distribution in some rich families may not be equitable, leaving some pregnant and lactating women at risk, we can assume that the poor, particularly the extreme poor women, are at a much higher risk of inadequate food intake during pregnancy and lactation, and often lacking food resources to initiate proper complementary feeding.

High rates of malnutrition and inadequate HHN practices among the non-poor

> "Before, I didn't really know how to use food properly for my family. I have learned about the importance of giving more than rice, that dal and vegetables and egg are important for my growing child. And I've learned how to feed my child well. I also now know the importance of health visits. With this child, I went. And also about growth monitoring. It makes me feel good to see my child growing well." *Non-PEP mother*

The SHOUHARDO II baseline survey analyzed nutritional status for the five "well-being" categories in the target communities. Among children under five, the rate of malnutrition among non-poor was not as high as among the PEP, but, for all three measures, malnutrition among the non-poor falls above the WHO threshold for high public health significance with stunting at 52.3%, underweight at 34.5%, and wasting at 12.4%. In the same baseline survey, nearly half of households in the lower middle category were classified as either moderately or severely food insecure. Moreover, the baseline shows that hygiene, inadequate child care and feeding practices vary little between many non-poor and PEP. This finding was repeatedly reinforced by the CHVs during the interviews.

Effort required to engage the non-poor

CARE Bangladesh, through the PNGOs, VDCs, and CHVs had to invest substantial effort in getting the non-poor to participate. Some never accepted the food and most initially were not interested in attending the learning activities or GMP. Through a very concerted effort, the project was able to ultimately get 84% of non-poor women in PM2A villages, as shown in the table below. Less than 74% accepted food.

Table 6. SO2 participation by approach and PEP or Non-PEP

Percent of eligible households participating				
	MCHN/PEP		**PM2A**	
	PEP	**Non-PEP**	**PEP**	**Non-PEP**
Any MCHN Intervention	87.7	30.9	90.4	84.1
Received a food ration	75.1	6.5	79.1	73.8

Extracted from Table 3 in Impact Evaluation Report p.24

Many initial refusals to participate were based on concerns about social status. The better-off families did not want to associate with the poor or a program they perceived as targeting only the poor. When they did participate, some wanted the CHV to weigh their children at home, or insisted on being allowed to be the first in line to receive rations. Some sent their servants to collect the ration or passed it up on the months when there was no one to send in their place. These attitudes placed a burden on program

staff to resolve these types of problems. Implementing staff estimate that it required an extra 25% level of effort to get the non-poor to participate in PM2A communities.

The CHVs used creative methods, such as home visits to show the range of topics in the flip charts, to persuade them to participate in learning activities. When this was not successful, they often had to call upon the project staff, VDC members or another type of community leader to visit homes of the non-poor to convince them of the advantages of participation. Ultimately, after they began attending, many non-poor mothers were so interested in what they were learning that they started bringing their friends and relatives to the learning sessions. In some cases, in PM2A villages where the non-PEP women never attended the learning sessions, the CHVs took it upon themselves to make home visits to provide the nutrition and health messages. This added to the labor intensity required for the PM2A approach.

Although food was not specifically used as an incentive, some CHVs and staff felt that the provision of food rations was an enticement for non-poor who wanted the food to also participate in the learning sessions and GMP.

In MCHN communities, starting late in the second year of the project, CHVs invited non-poor women to join the learning sessions and growth monitoring. As can be seen in Table 6 above, far fewer participated than in the PM2A villages. This was because the staff and CHVs did not feel obligated to engage them. In many cases, they issued the invitation, followed up with a home visit and did not otherwise persist. Some implementing partners did make more effort through the CHVs to engage the non-poor, with CHVs taking growth monitoring and counseling to the non-poor families in their homes or neighborhoods. Interestingly, many CHVs in MCHN villages tracked attendance only of the PEP mothers, not the non-poor.

> "When we added the non-PEPs [second year in MCNH villages], it was really challenging. They were reluctant to come because they had been excluded at the start of the program. Gradually we were able to get them to come. It would have been easier if we had included them in activities from the beginning." CARE *Field Facilitator from Rangpur now in Siranjganj*

When the sessions were opened up to non-food recipients, other women who were not pregnant or did not have very small children sometimes participated regularly. This included some mothers-in-law. The numbers in the table above would not reflect these additional participants.

In both MCHN and PM2A communities, the CHVs reported that the non-poor were generally more interested in growth monitoring than courtyard sessions because they liked to see their child's status. The mothers who participated in the focus groups; however, all said that the courtyard sessions were the most beneficial aspect of the HHN activities due to the range of topics covered beyond child feeding.

Perceived advantages of including the non-poor

Staff at all field levels interviewed by the study team were mostly unanimous in saying that there are many advantages in including the non-poor. In fact, all but one, said they preferred the PM2A approach. They cited a number of reasons, most of which were also expressed by the CHVs.

1. Community cohesion is promoted by the PM2A approach where all families with pregnant women or children under two receive rations and the same opportunities to learn to improve HHN practices. Staff felt that getting the poor and non-poor to "sit together" helped develop a feeling of solidarity among community women when they realized they shared similar problems in their health, and their children's

health and nutrition and that they all had similar aspirations for the future of their children and their community.

2. CHVs found that the non-poor most often had the same need to improve HHN practices as the poor. However, the non-poor learned more quickly, perhaps because of higher education levels or more exposure to health services and access to resources. Some began to help the CHV facilitate small discussion groups during the courtyard sessions, led the cooking and feeding sessions, or made home visits to new mothers to support breast feeding. The PEP wanted to emulate these women and were inspired to also adopt the improved HHN practices. From the non-PEP they heard about health services procedures and where to go, had myths about ANC and institutional deliveries wiped away, and the learned about other women's health issues.

> "When the PEP see the non-poor adopting new practices, they want to be like them. *Asam, field facilitator in North Char region.*

> "PEP women were afraid to go to ANC. They thought they would be touched by a man. The non-poor women explained that it is only the female health assistant who conducts ANC and then, the PEP decided to go." *CHV, Mid Char Region*

3. An unexpected and somewhat rare result of the integration was the engagement of non-poor in solving community problems and in taking an interest in their poorer neighbors. Some notable examples follow:

- In Rangpur district, when women learned together with the poor that lack of sanitation affects the health of all, "rich" women provided building materials and money for the extreme poor to construct latrines.

- In the Coast, a "rich" man learned about the Early Child Care for Development (ECCD) program from his wife who learned about it from the courtyard session. He decided to pay for the ECCD center. He went on to contribute to other projects of the VDC.

- In one community, a non-poor participant offered a very poor woman a loan when there was a medical emergency.

4. CARE staff in regional offices as well as field staff and many CHVs mentioned that providing food rations and including all mothers of young children in the learning sessions was more equitable and just. They had concerns about the strategy of targeting only PEP with the food rations being discriminatory, pointing out that many non-poor are only marginally better-off that those identified as PEP.

Disadvantages of mixing the poor and non-poor in HHN activities

CHVs and staff did not identify problems with combining the poor and non-poor in learning sessions. The study team, however, observed that the non-poor sometimes dominated the discussions, sitting close-by while the PEP sat farther away. Skills for managing this situation could be added to the CHV training.

In many MCHN villages, some non-poor expressed resentment about not receiving food rations. Not all women were aware of the community process that identified the PEP. Staff, VDCs, and CHVs had to invest effort in explaining to families. In most cases, this was smoothed over, but the connection of courtyard sessions and GMP to food rations persisted because the PEP receiving rations were involved

first and there was discussion about ration distribution. This connection of food rations to the learning sessions inhibited some non-poor from participating.

Relationship of SO2 outcomes to women's empowerment activities

A possible confounding factor in the comparison of outcomes between PM2A and MCHN is the fact that the project deliberately focused EKATA, the women's empowerment activity, on more PM2A villages than on MCHN villages. The QPE report asserts that this had an effect on the outcomes, but does not present specific analysis to show the relationship.

The study team requested additional analysis of women's participation in SO2 and SO3 activities, which is presented in the table in Annex C. In reviewing the data carefully, only 9% of women with children under two participated in EKATA in PM2A villages and 5% participated in EKATA or other women's empowerment activity in MCHN villages.

The relationship of improved nutrition and health status to women's empowerment is based on women being able to make decisions for themselves and their children about seeking health care, choice of food crops to plant, choice of food consumed by the household, etc[7]. The QPE shows that women's decision-making improved slightly from the baseline.

Mobility also improved according the QPE. The women and CHVs interviewed attributed this to the HHN activities. They reported that when women were allowed to attend the courtyard sessions, GMP, and ration distribution, the communities began to accept increased mobility and women can now go to the health center or visit their parents, or go shopping.

> "I have worked in this [conservative] area for ten years and I have seen a great improvement in the lives of the women in recent years. They have much greater mobility. This [change] is due to them attending the courtyard sessions and GMP. Their families began to see that positive things come from their going out. *CARE*

Altogether, the gains reported by the QPE in women's empowerment would not seem large enough to have influenced the outcomes in nutrition status. Rather, the very significant changes among PEP families in income, food security and dietary diversity that were shown in the QPE might be expected to offset PM2A participation in women's empowerment. The QPE final survey report lacks the needed analysis to discern the associations between these SO1 improvements and stunting.

Conclusions

The PM2A approach implemented by CARE did not follow the technical guidelines for PM2A, which were issued late the year the proposal was developed. In the CARE version, the ration size was the same for both the PM2A and MCHN approaches. The behavior change activities were the same and of the same high quality under both approaches and included both PEP and non-PEP women. Food was not used as an incentive to ensure that women participated in the learning sessions and GMP. Efforts to improve access to services were the same in both PM2A and MCHN communities. The main difference between the two approaches as implemented by SHOUHARDO II is that in the MCHN approach only PLW of PEP households received food rations whereas in PM2A communities all pregnant women and lactating women with a child under two were eligible to receive the food rations.

[7] Shroff, M. R., P. L. Griffiths, C. Suchindran, B. Nagalla, S. Vazir, and M. E. Bentley. 2011. "Does Maternal Autonomy Influence Feeding Practices and Infant Growth in Rural India?" Social Science & Medicine 73 (3): 447–455.

There is a trade-off in implementing MCHN with food rations for the poor and extreme poor versus giving food rations to all PLW women in a community. The following points explain the trade-off of more coverage of PEP eligible women with the benefits of targeting all poor and non-poor women with food rations and education.

1. The principal advantage of SHOUHARDO II's PEP targeting with the MCHN approach is increased coverage of the most vulnerable. By targeting only the poor and extreme poor with food rations, it would have been possible to give food rations to approximately 13,000 more poor and extreme poor women who are truly at risk of nutritional deficiency, both for themselves and for children under two.

2. The QPE analysis of data on changes in indicators of malnutrition shows more improvement under the PM2A approach than under the MCHN approach. This was not due to size of food ration, or the use of the food as an incentive, but most probably due to much higher participation of non-PEP women in PM2A villages in the HHN learning activities. Project staff and volunteers invested much more effort in getting the non-PEP women to participate in the PM2A villages than they did in the MCHN villages, where non-PEP women were invited to participate, but there was little or no insistence on their full participation. Volunteers and implementing staff reported that the non-PEP women were much quicker to learn and adopt desired practices, possibly because of higher education levels, previous exposure to health services, and better access to a variety of food.

A program design hypothesis, as explained in the MTR report, was that targeting only PEPs under SO2 would result in greater reduction of stunting among PEP children. The final QPE data for children 6-59 months comparing reduction in stunting between PEP children in MCHN villages to reductions in PM2A villages revealed nearly equivalent changes. (See graphs on p. 13 and 14.)

3. There were additional advantages to engaging the non-PEP identified by staff and CHVs. These included developing social cohesion and a sense of equity in the village and mobilizing non-PEP to become involved in solving community health issues and other problems.

4. Perhaps most importantly, the non-PEP were given the opportunity to learn, supported to adopt improved HHN practices, and improved the nutritional status of their children, and thus, of the whole community not just the PEP. Their influence as role models for continued improved practices cannot be underestimated. Once involved in the sessions, the non-PEP exhibited great interest in learning.

Conclusions related to impact study objectives

- Assess which SO2 approaches, interventions and activities have proved to be most effective in Bangladesh context and why.

Both the MCHN approach targeting PEP and the PM2A approach were very effective in reducing stunting in the Bangladesh context. Greater reductions in stunting, and in wasting among children 6-23 months were achieved in the PM2A villages than in the MCHN villages. This may have been due to the higher participation of non-poor women in the learning sessions and GMP in the PM2A communities.

However, the SHOUHARDO II MCHN approach reduction in stunting was comparable to that achieved in the other Title II programs in Bangladesh, both of which used a PM2A approach[8].

- Assess which SO2 approaches, interventions and activities in the Program have proved to be least effective, together with reasons why, and that should be 'de-emphasized' or even 'dropped' in Title II programs in Bangladesh.

The only intervention that should be de-emphasized or dropped is the insistence on the non-poor accepting food rations. Receipt of food rations should be optional for those families who are not in need, but maximum participation of both poor and non-poor in HHN learning activities should be maintained since it is for the benefit of all families.

The term "positive deviant" mother is misleading since these women were selected as role models rather than through the process of conducting a positive deviance inquiry, which is very different. Their title could be changed to "leader mother" or "HHN promotor". Their role was more useful in certain communities, particularly larger ones, and the concept of these helpers of CHVs should continue, simply changing the name.

- What's worked well and what can be improved needs to be detailed, with recommendations of how this can be further strengthened in such a Program.

Overall, the SO2 implementation strategy appears to have worked very well. Project participants felt that the courtyard sessions, cooking and feeding sessions, GMP, and home visits were all useful. These activities were obviously of high quality as evidenced by the knowledge of key messages among the mothers interviewed and by the overall improvements of HHN practices in the QPE report, which shows that all indicators exceeded targets except for exclusive breastfeeding. The training and materials provided to CHVs for conducting the HHN activities appear to be very effective.

> "Non-PEP also joined in the khichuri sessions. They came to learn how to cook nutritious food. Mothers noticed that when children sit together, poor or rich it didn't matter. They encouraged each other eat. It is a festival type of event that they all enjoy." *VDC member in Mymensingh*

Participants, CHVs and VDCs all mentioned the benefits of improved access to and relations with health service providers. The SHOUHARDO II methodology for building these improved linkages seems to be not only effective but mutually appreciated by bot the service providers and the families. Service providers mentioned the importance of the support they are receiving from the CHVs to increase coverage of immunizations and ANC. Naming a focal point for health in the VDCs seems to facilitate communication between health service providers and the community.

The food distribution system seemed to be very effective and efficient. It is particularly notable that the beneficiaries fully understood that the food rations were a temporary measure and expressed no dependence on the ration for either food security or nutrition of women and children. No one interviewed asked for the food distribution to continue which is admirable.

[8] TANGO International. Presentation: Quantitative Final Evaluation of Title II Programs in Bangladesh – Sharing Study Findings with FFP/ USAID, April 29, 2015

Recommendations for strengthening SO2 are given in the next section of this report. Overall, the study team did not see need for major improvements in the implementation strategy.

- Using the findings of the end-line survey, as well as any additional program data, the study should analyze and compare the impacts on child malnutrition of two different program approaches, namely PM2A and MCHN.

From baseline to final survey, the prevalence of stunting among children under two reduced significantly with both the MCHN and PM2A approaches. For MCHN there was a reduction of 9.6 percentage points and for PM2A, there was a reduction of 10.4 percentage points. The difference in differences between the two approaches is statistically significant. Both approaches reduced stunting nearly 3 times as much as the original PM2A trial in Haiti.

Wasting among children under two improved with both approaches. In MCHN villages, wasting dropped from 16 to 12.7% and in PM2A villages wasting dropped from 17.1 to 9.4 percent. As with stunting, the small sample size impedes statistical inference. Wasting may have reduced more in PM2A villages however before reaching a conclusion, it would be necessary to ascertain whether those households might have seen related improvements in water and sanitation that would influence the change.

Stunting among children under five was reduced by 8.4 percentage points in MCHN villages and by 13.1 percentage points in the PM2A villages. The difference in differences analysis found both these reductions to be statistically significant. Changes in wasting and underweight in this age group were not significantly different between the villages in the two different approaches.

Recommendations

An adapted model for Bangladesh

Considering the high level of food insecurity among PEP families found in the SHOUHARDO II baseline survey (40% experienced moderate or severe hunger), there would seem to be a need to target food rations to as many of these vulnerable families as possible who have pregnant women or lactating women with children under 23 months of age, that is, the 1000 days period.

Since the non-poor children also have high levels of malnutrition and their families benefit greatly from the HHN, they should be all be engaged in the learning activities, insofar as possible. Their engagement will be much simpler and require less intensive effort to persuade them if they perceive the HHN activities as open to all to learn rather than connected to the PEP and to food rations. **Therefore, the HHN learning activities and GMP should be started two to three months before the food distribution starts and kept completely separate.** If announcements about food distribution need to be made to the PEP, this can be done at a separate meeting or house-to-house.

With sufficient mobilization and using many of the effective strategies applied by the CHVs in PM2A villages, all non-PEP and PEP women (with children under two or pregnant) can be motivated to attend the learning sessions and growth monitoring from the onset. Involvement of influential community leaders besides the VDC will be helpful in persuading all families to participate. Where possible, it may be beneficial to recruit CHVs with slightly higher education and status to work more easily with the non-PEP.

This adapted model will improve nutritional status of children across the community, not just among the PEP and will change social norms regarding HHN practices in the whole community. There is a risk, if the non-poor do not have the same learning opportunities, that they will continue inadequate practices. This will undermine the learning of the poor who are conscious of the behavior of those they perceive as more advantaged.

Strengthening HHN interventions and activities

The third party evaluation being conducted by the Tufts team will provide more comprehensive recommendations to improve the HHN interventions and activities. The impact study team has only minor recommendations aside from those given above for the adapted MCNH model. These include:

a. Track participation of non-PEP in the CHV records of activities. This will enable the CHV and VDC to identify and visit households where a woman is not participating regularly and work with the family to encourage regular participation.

b. Since a complete census of households exists, the M&E system should be able to track all SOs and activities under the SOs in which each household participates.

c. Support the CHVs to keep groups limited to about 10 – 12 women at the courtyard sessions and the cooking and feeding sessions. When groups are larger, the level of learning goes down.

d. Investigate the strategy used by PROSHAR which resulted in a significant increase in exclusive breastfeeding. SHOUHARDO II participants in the focus groups have the knowledge about exclusive breastfeeding indicating that an additional activity or intervention is needed to increase practice.

Annex A. Sites included in the qualitative study

Region Name	Implementer	District Name	Upazila Name	Union Name	Village Name	Approach	Village Vulnerability	EKATA Non-EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Teknaf	Baharchara	Noakhali Para	MCHN	HV	Non-EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Teknaf	Hnila	Dargah Para	MCHN	EHV	Non-EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Teknaf	Hnila	Rangi Khali	PM2A	EHV	EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Ukhia	Haldia Palong	Moddho Haludia	PM2A	EHV	EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Ukhia	Palong Khali	Thayang Khali*	PM2A	EHV	Non-EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Ukhia	Palong Khali	Dhamon Khali	PM2A	EHV	Non-EKATA Village
Cox's Bazar	SHED	Cox's Bazar	Ukhia	Palong Khali	Mochar Khola	MCHN	EHV	Non-EKATA Village
Mymensingh	DAM	Mymensingh	Nandail	Jahangirpur	Barilla	PM2A	EHV	Non-EKATA Village
Mymensingh	DAM	Mymensingh	Nandail	Jahangirpur	Dhitpur	MCHN	EHV	Non-EKATA Village
Mymensingh	DAM	Mymensingh	Tarakanda	Kamargaon	Pongdarikal	MCHN	HV	Non-EKATA Village
Mymensingh	DAM	Mymensingh	Tarakanda	Kamaria	Kodalia	PM2A	HV	EKATA Village
Mymensingh	SARA	Mymensingh	Haluaghat	Kaichapur	Jomgora	MCHN	EHV	Non-EKATA Village
Mymensingh	SARA	Mymensingh	Haluaghat	Kaichapur	Dhara*	MCHN	HV	Non-EKATA Village
Rangpur	CARE	Rangpur	Kaunia	Shahidbagh	Bir Sabdi	MCHN	EHV	EKATA Village
Rangpur	CARE	Rangpur	Kaunia	Shahidbagh	Sadhu	PM2A	HV	EKATA Village
Rangpur	JSKS	Nilphamari	Dimla	Bala Para	Chak Dabas	MCHN	HV	EKATA Village
Rangpur	JSKS	Nilphamari	Dimla	Bala Para	Khutir Danga	PM2A	EHV	EKATA Village
Rangpur	RIC	Dinajpur	Ghoraghat	Palsa	Amra	MCHN	HV	EKATA Village
Rangpur	RIC	Dinajpur	Ghoraghat	Palsa	Kochmardan	PM2A	HV	Non-EKATA Village
Sirajganj	CARE_DD_S	Sirajganj	Ullapara	Boro Pangashi	Dogasi	MCHN	HV	Non-EKATA Village
Sirajganj	CARE_DD_S	Sirajganj	Ullapara	Mohonpur	Ag Mohonpur	PM2A	HV	EKATA Village
Sirajganj	GBS	Bogra	Sonatola	Madhupur	Char Madhupur	PM2A	EHV	EKATA Village
Sirajganj	GBS	Bogra	Sonatola	Madhupur	Gozaria	MCHN	EHV	Non-EKATA Village
Sirajganj	NDP	Pabna	Bera	Jatshakhini	Krisnopur	MCHN	HV	Non-EKATA Village
Sirajganj	NDP	Pabna	Bera	Jatshakhini	Rani Gram	PM2A	HV	Non-EKATA Village

* The CHV from village was interviewed. The village was not visited. HV – Highly vulnerable EHV – Extremely Highly Vulnerable

Annex B. Guides for Qualitative Data Collection

Questionnaire for implementing staff

How many years or months have you been working with SHO II?

What part of your work did you like best?

What part was most challenging?

We know that in PM2A communities all mothers with children under two and all pregnant women and their families were given food.

Were there some families who refused the food?

Any who took the food but didn't use it properly?
Did all the women come to the courtyard sessions every month? Were they required to come?

Were there any advantages to have non-poor women mixed with the very poor women in the sessions?

Any disadvantages?

Did all women come to GMP every month? Were they required to come?

Were non-poor women more interested in coming to courtyard sessions or GMP? If not, what measures were taken and by whom to encourage them to participate?

Initially, in MCHN communities, only PEP women were invited to courtyard sessions and to GMP. Later, all women were invited.

Did many additional non-PEP women start attending? Why or why not? Was anything done by you or others to encourage them to come?

Did this create any challenges for CHEs? How did they solve these challenges?

Was there any jealously from non-poor women because they weren't receiving food?

How was that resolved?

In your opinion, which is better/ easier to implement MCHN or PM2A approach? Why?

Questionnaire for community volunteers

How many years or months have you been a volunteer with SHO II?

Please describe to me your responsibilities in SHOU II? Probe about time spent on activities.

Activity	✓	Time
Home visits to remind about activities		
Home visits to counsel/teach women		
Courtyard sessions		
Kitchiri sessions		
GMP		
Food distribution		
Record keeping		
Referrals		
Support to health staff for immunization, etc.		

What part of your work did you like best? What part was most challenging?

What changes have you observed in your community as a result of SHOU II?

For those in PM2A communities: We know that in this community all mothers with children under two and all pregnant women and their families were given food. How often?
Were there some families who refused the food? Any who took the food but didn't use it properly?

Did all the women receiving food come to the courtyard sessions every month? Did non recipients come?

How many women were included in each courtyard session?

Were there any advantages to have better-off women mixed with the very poor women in the sessions?

Any disadvantages?

For those in MCHN communities: At the beginning of the project how many PEP families were identified to receive food and project activities?

How many women were coming to each courtyard session?

Later, you were asked to invite all women with children under two and pregnant women to come to the courtyard sessions. Approximately, how many additional women was this in each community? (lots, few)
Did these women come willingly? If not, what did you have to do to persuade them?
How did you accommodate the additional women in the courtyard sessions?
Did they actively participate? (or dominate?)
Did they come regularly? [review attendance records]

What did these women think about coming to activities, but not receiving any food rations?
What did their husbands or other family members think about this?

When you added the extra women to the activities, what adjustments did you have to make to your schedule? Your work load?

Women participating in SHOUHARDO II

For how many months/years did you participate in SHOUHARDO II?

How often each month did a community health volunteer meet with you?
___to conduct courtyard sessions
___cooking and feeding session (*probe to learn more about how these were conducted*)
___growth monitoring and promotion

Did she ever visit you in your home? How often? For what purpose?

Which of these activities was most useful/beneficial to you?

Did you or your family participate in other SHOU activities? Which ones?
__Ag
__IG
__VDC
__EKATA or other women's empowerment
__ECD
__DRR planning

Did your community benefit from infrastructure? What projects were undertaken?

Considering all these activities in the community, have you noticed any changes as a result of SHO II/since the project began? IF YES: What changes?

own home, family

community,

services, government

If I came back here in 1-2 years, what evidence would I see of SHOUHARDO II? How would I know your household/your community had participated in the project?

The next time you are pregnant/have a child under 2 in the home: what will you do/be able to do to ensure good nutrition for you and your child? (Want to see if she learned enough/feels confident enough to manage without rations the next time around.)

What did you learn about breastfeeding?

What makes it easy to give a child under six months only breast milk?

What makes it difficult for a mother to give a child under six months only breastmilk?

Women who were not food recipients

Who was eligible to receive rations?

Why were you not eligible to receive food?

How often did you participate in?
___ courtyard sessions
___cooking and feeding session (*probe to learn more about how these were conducted*)
___growth monitoring and promotion

Did the CHV ever visit you in your home? How often? For what purpose

Which of these activities was most useful/beneficial to you?

Did you or your family participate in other SHOU activities? Which ones?
__Ag
__IG
__VDC
__EKATA or other women's empowerment
__ECD
__DRR
__Infrastructure

Did you learn anything that will help you have a healthier pregnancy? A healthier child? A healthier family?

What did you learn about breastfeeding?

What makes it easy to give a child under six months only breast milk?

What makes it difficult for a mother to give a child under six months only breastmilk?

Men whose families participated in SO2

Knowledge of the project/Participation in project

Please tell me what you know about the health and nutrition activities for the SHOUHARDO II project. What was the project trying to achieve with this component? What were the main activities that your wife participated in?

Did your wife's participation in the health/nutrition activities help it in any way? (What does your/your family do now that you didn't do before?)

IF YES: How? Please give some examples.

Did you or your family participate in other SHOU activities? Which ones?

__Ag
__Income generation
__VDC
__EKATA or other women's empowerment
__ECD
__DRR
__Infrastructure

Effects/impact/sustainability of SHOUHARDO II

Have you noticed any changes as a result of SHO II/since the project began?

IF YES: What changes? (*Probe: Your household – what do you/your wife do differently? Illness/disease rates for women and young children? Community-level improvements?*)

- own home, family

- community, health center, services

Which changes do you think will continue? Why? (Another way to formulate this question: If I came back here in 1-2 years, what evidence would I see of SHOUHARDO II? How would I know your household/your community had participated in the project?

Which changes may not be sustained? Why? (*Probe: What would be needed to sustain the change? What could the project have done to ensure the changes were sustained?*

VCD

Did all women eligible to receive food participate in SHOU?

What results can you see from participation of PLW in the courtyard sessions, cooking and feeding sessions, or the GMP?

In PM2A communities: Did some non-poor women refuse the food?

Did many non-poor women willingly attend courtyard sessions?
GMP?
Cooking and feeding sessions?

What was done to encourage their participation?

In MCHN communities:

Did many non-poor women willingly attend courtyard sessions?
GMP?
Cooking and feeding sessions?

What motivated them to participate?

Was there any jealousy because they did not receive food?

Annex C. Final survey results for participation of mothers

Annex C: Participation in HHN and empowerment activities by mothers having child under two years of age

Indicator/Question	MCHN				PM2A			
	PEP		Non-PEP		PEP		Non-PEP	
	Yes	No	Yes	No	Yes	No	Yes	No
Have you attended a SHOUHARDO II courtyard session (UthanBoithok) with other mothers on the health and nutrition of mothers and children?	401 (75.9%)	127 (24.1%)	41 (20.6%)	158 (79.4%)	384 (80%)	96 (20%)	135 (67.5%)	65 (32.5%)
How many times did you take your child/children to be weighed and measured in the last year? (responses for at least once.)	402 (76.1%)	126 (23.9%)	47 (23.6%)	152 (76.94%)	360 (75.0%)	120 (25.0%)	126 (63.0%)	74 (37.0%)
Have you attended a SHOUHARDO II cooking and feeding demonstration (khichuri) session?	364 (68.9%)	164 (31.1%)	41 (20.6%)	158 (79.4%)	348 (72.5%)	132 (27.5%)	112 (56%)	88 (44%)
Are you a member of an EKATA group?	37 (7%)	491 (93%)	1 (.5%)	198 (99.5%)	53 (11%)	427 (89%)	9 (4.5%)	191 (95.5%)
Did you ever receive a food ration?	388 (73.5%)	140 (26.5%)	19 (9.5%)	180 (90.5%)	378 (78.8%)	102 (21.3%)	132 (66.0%)	68 (34.0%)