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# **Final Evaluation**

## **The Healthy Child and Mother Project**

**September, 2014**

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*Grace Kreulen, External evaluator*

**Front-cover photo:** People's Institution primary group member, Sheuli Rani Borman, with her infant son, Shoristala village, Durgapur, Bangladesh (Kohima Daring, photographer).

# **The Healthy Child and Mother Project Final Evaluation: Reducing mortality and improving health status among mothers and newborns through building public and private partnerships in Bangladesh**

September 30, 2009 to September 29, 2014

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## **DISCLAIMER**

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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## ACRONYMS

|          |  |
|----------|--|
| ADS      | Automated Directives System  |
| ANC/PNC  | Antenatal care/postnatal care  |
| CC       | Community Clinic (ward level)  |
| CCC      | Central Cooperative Committee (middle tier of PI structure, also known as Union Committee) |
| CHT      | Community health trainer (SUSOMA staff)  |
| CHV      | Community health volunteer   |
| CHW      | Community health worker  |
| CSBA     | Community skilled birth attendant  |
| CSSA     | Child Survival Sustainability Assessment   |
| DDFP     | District Director of Family Planning   |
| DEC      | Development Experience Clearinghouse   |
| DTAC     | District Technical Advisory Committee  |
| EHF      | Emergency health funds   |
| EPI      | Expanded program for immunization  |
| FWC      | Family Welfare Center (union level)  |
| FY       | Fiscal Year  |
| GOB      | Government of Bangladesh   |
| HMIS     | Health ministry information system   |
| ICDDR,B  | International Centre for Diarrhoeal Disease Research, Bangladesh                           |
| IGA      | Income generation activities   |
| ISP      | Informal service provider (village doctor)   |
| KPC      | Knowledge, practices, and coverage survey  |
| LAMB     | Lutheran Aide to Medicine in Bangladesh  |
| LQAS     | Lot Quality Assurance Sampling   |
| MNC/MNCH | Maternal newborn care / Maternal newborn child health                                      |
| MOHFW    | Ministry of Health and Family Welfare  |
| NHD      | National health days   |
| NID      | National immunization day  |
| OR       | Operations Research  |
| PG       | Primary group (bottom tier of PI structure)  |
| PI       | Peoples Institution (top tier of PI structure)   |
| PICI/CCI | People's Institution Capacity Indicators/Community Capacity Indicators                     |
| PPP      | Public-Private Partnership   |
| RD       | Rural Dispensary (union level)   |
| RHFA     | Rapid Health Facility Assessment survey  |
| SOW      | Scope of Work  |
| TOT      | Train the trainer  |
| TTBA     | Trained traditional birth attendant  |
| UFPO     | Upazilla family planning officer   |
| UH&FPO   | Upazilla health and family planning officer  |
| UHC      | Upazila health complex   |
| USAID    | U.S. Agency for International Development  |
| UTAC     | Upazila Technical Advisory Committee   |
| WRA      | Women of reproductive age  |



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## The Healthy Child and Mother Project Final Evaluation: Executive Summary

*This project was funded by the U.S. Agency for International Development through the Child Survival and Health*

**September, 2014**

### Evaluation, Purpose, and Evaluation Questions

The overarching purpose of the evaluation is to determine the extent to which the Healthy Child and Mother Project that was implemented by World Renew and its local partners from 2009-2014 accomplished the intended results. The evaluation describes key factors that contributed to what worked or did not work and shares project learnings. The findings can be used by the government and NGOs in Bangladesh and elsewhere to inform decisions related to best strategies for enhanced maternal and newborn health care in developing communities. The evaluation answers the following questions: 1) To what extent and in what ways did project interventions contribute to improved MNC household and community behaviors and the utilization, availability and quality of health services? 2) What challenges were faced and how were they overcome? 3) What project strategies have the potential to be sustained or expanded? 4) Did the operations research provide evidence that supports attribution of results to the project innovation?

### Project Background

Neonatal and maternal mortality in the rural districts of Bangladesh remains high, especially in remote areas where health facilities are few and critical child and maternal health indicators are consistently lower than the national average. The purpose of this project was to contribute to reducing mortality and improving health status among mothers and newborns through building public private partnerships in the Netrokona district in northern Bangladesh. The project used a maternal newborn intervention package focused on promotion of essential newborn care, appropriate care-seeking behavior and key family practices, which was intentionally integrated into the GOB C-IMCI strategy (expanded to include newborns) and delivered by a cadre of trained CHWs at household and community levels. The project innovation is the People's Institution (PI) community mobilization model, adapted to empower the poor and marginalized to collaborate with the public health sector to promote maternal newborn health. The operations research study measured PI model effectiveness, equitability, cost-effectiveness, performance, and impact on social capital.

### Evaluation Design, Methods, and Limitations

The final evaluation team used a comprehensive participatory approach to determine project accomplishments and challenges, the sustainability of project results, and the impact of project interventions. Quantitative and qualitative data from a variety of sources informed the evaluation. These include project

Peoples Institution group member with infant son  
(Photographer, Kohima Daring)

### Key Findings:

- **493 poor communities with locally lead CBO in PPP for MNC**
- **78% CBOs have EHF**
- **1,078 trained volunteer community-based providers promoting MNC & supporting GOB health workers**
- **CBOs managing local health clinics/making decisions for MNC with MOH officials**
- **Active referral and EHF systems providing access to care for poor**
- **Significant gains in MNC practices**

- ⇒ **4+ ANC ↑ 2.6 times**
- ⇒ **Inst delivery ↑ 2.4 times**
- ⇒ **SBA delivery ↑ 2.4 times**
- ⇒ **NB PNC ↑ 2.2 times**
- ⇒ **Immediate BF ↑ 1.5 times**
- ⇒ **Thermal care ↑ 4.2 times**
- ⇒ **Clean birth kit use ↑ 7.6 times**

documents and M&E/HMIS data, the OR study, KPC surveys (with a comparison group), and RHFA surveys. Stakeholder interviews were conducted over a 3-day period to gain a broader understanding of the how and why of project accomplishments. The evaluation team was limited by difficulties encountered by the operations research (OR) study team in finalizing KPC and OR data and reports.

## Findings and Conclusions

The project effectively mobilized women and men for maternal newborn health and involvement with the health system in a strong PPP by founding the People's Institution Model with marginalized people. A 3-tiered functional PI system was established within 2-years that served as the foundation for public private partnership development, enhanced health services, trained volunteer community-based providers, emergency health funds, and MNC gains. The project strengthened public private health system collaboration with memos of understandings, a referral system, and participatory health committee structures in which the poor are active MNC advocates with the government and government officials and health workers are meeting with them to make policies and decisions to meet community needs. Significant ( $p \leq 0.05$ ) gains seen from baseline to endline in the intervention group include: 4+ ANC visits increased from 5% to 14%, quality of ANC increased from 0% to 5%, institutional delivery from 8% to 19%, SBA delivery from 9% to 22%, thermal care of newborn from 10% to 45%, clean cord care from 55% to 65%, postnatal newborn care from 8% to 19%, and handwashing practices from 22% to 39%. Of these, gains in ANC visits, quality of ANC, SBA delivery, contraceptive use, and handwashing practices were significantly greater in the intervention versus comparison groups. In addition, the availability of weekly ANC services at health facilities increased from 60% to 90%, and 24/7 facility-based delivery services from 3% to 17%. OR findings show that in 2014 over 60% of WRA in the intervention area were active members of the PI groups and PI group members were significantly more likely to have higher levels of social capital than non group members. Qualitative data supports attribution of growth in social capital and improvements in MNC to the PI model intervention. The average cost for the intervention per woman of reproductive age is USD 9.73 and per community volunteer is USD 1,045. Scaling up a similar program with a population of 1.5 million is estimated cost USD 3.6 million.

Best practice for the global and Bangladesh health community to consider in promoting maternal newborn health care in marginalized communities include:

1. The PI Model delivery platform of empowerment and local governance to increase social capital of marginalized women and improve community-based MNC and health practices in partnership with MOH officials and health facilities/providers.
2. Community-supported and managed emergency health funds to promote access to care for the poor.
3. The public-private partnership (PPP) based referral system with which poor mothers and children get priority access to care.
4. A volunteer system of trained village-based health providers working in collaboration with health facility providers to promote ANC, safe deliveries, newborn care, and PNC.
5. CBO (PI) involvement in the management and operations of local clinics to increase quality of care.
6. HMIS matching meetings between PI and government providers/officials for accurate data to address MNC needs.
7. Using Theater for Development for strategic MNC messaging at the community level.
8. Grantee working through local NGO partners (civil society) to increase local organizational capacity.

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*For more information about SUSOMA contact [www.worldrenew.net](http://www.worldrenew.net)*



# EVALUATION PURPOSE AND EVALUATION QUESTIONS

## EVALUATION PURPOSE

This document presents the final performance evaluation (FE) for the Healthy Child and Mother Project (SUSOMA) funded by USAID's Child Survival and Health Grants Program (CSHGP) *GHS-A-00-09-00009-00* that was implemented by World Renew and its local partners from September 30, 2009 to September 29, 2014 in Netrokona, Bangladesh. USAID's CSHGP supports community-oriented projects implemented by U.S. nongovernmental organizations (NGOs) and their local partners. The purpose of this program was to contribute to reducing mortality and improving health status among mothers and newborns. USAID reviewed and approved the FE Scope of Work (SOW) and approved the final evaluator. Grace J. Kreulen, PhD, was hired with project funds as an independent consultant to serve as the FE team leader. The evaluation was conducted in a manner protective of the evaluator's independence and neutrality. The draft report was directly submitted to USAID simultaneously by the evaluator at the time it was provided to the grantee.

The primary aim of the FE is to determine the extent to which the project accomplished the intended results, to describe key factors that contributed to what worked or what did not work, and to demonstrate strategies directly relevant to improving MOH policies/practices and to global learning. In addition the impact of the innovation, the People's Institution model, was assessed as part of the operations research study.

The FE provides an opportunity for all project stakeholders to take stock of accomplishments to date and to listen to the beneficiaries at all levels, including mothers and caregivers, other community members and opinion leaders, health workers, health system administrators, local partners, other organizations, and donors. The following audiences will use the FE report as a source of evidence to help inform decisions about future maternal newborn care program designs and policies, especially programs desiring to utilize public-private partnerships to enhance maternal newborn health:

1. In-country partners at national, regional, and local levels, including the GOB MOHFW and other relevant ministries, district officials and health providers, local organizations, and communities.
2. USAID (CSHGP, Global Health Bureau, USAID Mission in Bangladesh) and other CSHGP grantees.
3. The international global health community. The FE report will be posted the USAID Development Experience Clearinghouse <https://dec.usaid.gov>.

## FINAL EVALUATION QUESTIONS

| Primary Questions   | Related Sub-Questions   |
|---|---|
| 1. To what extent did the SUSOMA project contribute to improved MNCH-related household and community behaviors, availability and utilization of quality services? | <ol style="list-style-type: none"><li>a) To what extent and in what ways did the local NGO's (SATHI and PARI) effectively engage communities to strengthen private/public partnerships in support of MNCH?</li><li>b) How did community engagement and mobilization strategies using the PI model impact public-private collaboration, allocation of resources for health (local EHF, community and facility-based care), local government capacity for facility services, and policy advocacy?</li><li>c) To what extent and in what ways did the utilization of volunteer CHWs contribute to improved MNCH practices and increased coverage and utilization of ANC, assisted delivery, and post partum care?</li><li>d) To what extent and in what ways were community health system enhancement strategies effective? Did the Quality Improvement System improve services at the village level? Did engaging the informal health system reduce harmful practices? What was the impact of the referral process for mothers and sick newborns?</li></ol> |
| 2. What strategies and factors (both planned and unplanned) lead to achievement of key  | <ol style="list-style-type: none"><li>a) Was the project implemented as designed, including the incorporation of key partners outlined in the DIP? What changes were made to the implementation plan and why?</li><li>b) What is the quality of the data and of the system for measuring project results? Did the</li></ol>   |

critical results? What challenges/ barriers were faced and how were they overcome?

3. Which project strategies have potential be sustained or expanded? What are the promising practices and lessons learned?

4. Did the operation research provide evidence that supports attribution of project results to the PI model? How could scale-up of the PI model impact MNCH in Bangladesh?

quantitative and qualitative indicators provide useful evidence for decision-making?

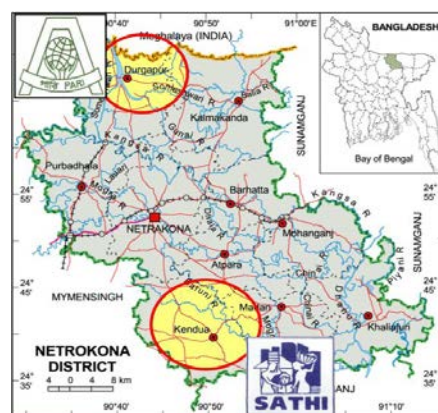
- c) How did consideration of socioeconomic factors and gender affect implementation and outcomes? Were females and males appropriately engaged in the PI model strategy? Did the project effectively unify the socially and economically underprivileged and create opportunities and resources for MNCH not usually available to these individuals/groups?
  - d) What synergy/integration occurred between strategies that impacted results?
- a) What evidence is there that SATHI and PARI have become more sustainable as organizations able to support community engagement and mobilization?
  - b) To what extent and in what ways has the project developed an enabling and learning environment to support sustainable capacity and advocacy for quality MNCH care?
  - c) What aspects of the program can be or are being scaled-up to benefit more people and to foster lasting policy/program development? What factors influence the success of scale-up efforts?
  - d) What resources would be required to institutionalize or scale up key intervention components (cost analysis)?
- a) What role did the OR study have in evaluating and improving the impact of the PI model on MNCH outcomes at the community level? To what extent did OR results provide evidence that the PI model of community mobilization (vs other confounding factors):
    - 1) Promotes equity by engaging the poor and marginalized to have power to make decisions in health and care-seeking
    - 2) Builds local capacity to identify and address community needs, provide quality services, raise social capital (SC) and contribute to desired MNCH outcomes
    - 3) Enables the community to establish linkages with health facilities to improve quality and access to health services and to advocate for policy changes
  - b) How were results of the OR study used for informed decision making and improvement of the PI model?

## PROJECT BACKGROUND

### PROJECT AND OR DESIGN

Despite recent overall improvements, neonatal and maternal mortality in Bangladesh remain high (53/1000 live births and 194/1000 live births, respectfully), especially in remote rural areas where health facilities are few and critical child and maternal health indicators are poor and consistently lower than the national average.<sup>1</sup> The Netrokona district in northern Bangladesh is a priority district of USAID and one of the 14 GOB low performing districts.<sup>2</sup> The main causes of neonatal deaths are birth asphyxia, low birth weight, severe infection, and acute respiratory infection. Maternal deaths primarily occur due to hemorrhage, sepsis, and obstructed or prolonged labor.<sup>3</sup> A skilled birth attendant attends only 26.5% of births in Netrokona.<sup>4</sup>

For the CSHGP SUSOMA<sup>5</sup> project, World Renew worked with local partners, SATHI and PARI, in two rural sub-districts or



<sup>1</sup> Bangladesh Demographic and Health Survey, 2011; Bangladesh Maternal Mortality and Health Care Survey, 2010, Multiple Indicator Cluster Survey, Bangladesh, 2006.

<sup>2</sup> UNICEF, 2007

<sup>3</sup> World Health Organization (WHO), 2005. World Health Report 2005: Make every mother and child count

<sup>4</sup> National Institute of Population Research (NIPORT), 2011. Bangladesh maternal mortality and health care survey 2010: Summary of key findings and implications.

upazilas in Netrokona: Kendua with 13 unions and Durgapur with 7 unions.

Durgapur is close to the border of India, very remote with limited roads and electricity, and has large Garo and Hajong populations. In Kendua there is very limited access to health services. At the inception of the project, both sub-districts had a large population of women of reproductive age (WRA), infants and children (Table 1). The total population in these two sub-districts (upazilas) is 484,920. The project benefitted 96,571 children under five and 124,313 WRA.

The goal of the SUSOMA project in Bangladesh was to reduce mortality and improve health status among the most marginalized mothers and newborns in two sub-districts of Netrokona: Kendua and Durgapur. The project's overarching objective was improved household and community MNC-related behaviors and increased utilization of quality MNC services for hard to reach families and communities. The project specifically sought to mobilize communities for MNC utilizing the People's Institution model strategy to establish community-based organizations and public-private partnership structures for ongoing MNC gains.

The SUSOMA project devoted 100% effort to a maternal and newborn intervention package focused on promotion of essential newborn care, appropriate care-seeking behavior and key family practices that was intentionally integrated into the GOB C-IMCI strategy (expanded to include newborns) and delivered by a cadre of trained volunteer community health workers (CHVs and TTBA) at household and community levels. The project worked closely with the GOB IMCI Program Manager in Dhaka to address the GOB's goal of decreased maternal newborn mortality, and supported GOB priorities and strategies articulated in the National Health Policy, the National Neonatal Health Strategy, and the Maternal, Neonatal, and Child Survival Programme<sup>6</sup>. The project innovation is the People's Institution (PI) community mobilization model, adapted to empower the poor and marginalized to interact and collaborate with informal service providers (village doctors), private providers, and the public health sector (MOHFW) to promote maternal newborn health. World Renew has 18-years of experience implementing the PI model successfully in Bangladesh to help poor communities form independent, self-sustaining community-based organizations.

World Renew contracted with ICDDR,B to conduct operations research (OR) to measure PI model effectiveness, equitability, cost-effectiveness, performance, and its impact on social capital. The PI model innovation was evaluated with a mixed method quasi-experimental operations research design that included a) quantitative appraisal of program effects utilizing baseline and endline KPC survey data, b) qualitative process documentation of SUSOMA PI model implementation, and c) measurement of social capital as it relates to participation in the PI model.

The project detailed implementation plan (DIP) specified project goals, objectives, intended results, and intervention mechanisms in a manner that facilitated project implementation and evaluation. Table 2 presents the project results framework and mechanisms utilized to meet the project strategic objective. To strengthen a public/private partnership, project staff established and built capacity of 3-tiers of PI groups for management of local MNC, linkages with the public health sector, health facility collaboration, and emergency health funds. To promote MNC practices, key MNC behavior change communication

**Table 1: Beneficiaries Population in Kendua and Durgapur**

| Beneficiary Population | Kendua  | Durgapur | Total   |
|------------------------|---------|----------|---------|
| Infants 0-11 mos.      | 11,253  | 8,061    | 19,314  |
| Children 12-23 mos.    | 11,253  | 8,061    | 19,314  |
| Children 24-59 mos.    | 33,759  | 24,184   | 57,943  |
| Children 0-59 mos.     | 56,265  | 40,306   | 96,571  |
| Women 15-49 yrs.       | 73,312  | 51,001   | 124,313 |
| Total Population       | 286,594 | 198,326  | 484,920 |

Source: Population Census, Netrokona. Bangladesh Bureau of Statistics and Health Demographic Surveillance. 2001

<sup>5</sup> The project name is formed from the Bangla words Shusto Sontan O Ma, which means 'healthy child and mother'

<sup>6</sup> IMCI, target high poverty areas, use informal health sector and community-based service providers, mobilize women/families/opinion leaders, establish public-community linkages.

(BCC) messages were delivered by volunteer CHWs to households, PI groups, and communities. To improve quality of care, a cadre of community-based volunteers (CHVs, TTBAAs), ISPs, and MOHFW staff received C-IMCI-based training focused on ANC, safe delivery, essential newborn care actions (ENC), and PNC. Additionally, a referral system and structures to support care quality in local clinics were effectively established. To increase capacity of local NGOs, World Renew trained and mentored local implementing NGOs, PARI and SATHI, as they networked with the MOHFW and built the capacity of the four local PIs, who have become GOB licensed NGOs and are capable of continuing PI strategies for MNC. An enabling environment for MNC was strengthened both in Netrokona and nationally through public-private partnership activities, such as HMIS data collaboration, learning circles, and MNC advocacy for the marginalized.

**Table 2: Project Results Framework**

|  |   |  |   |   |  |
|--|---|--|---|---|--|
| <b>Goal/Impact</b>                     | To reduce mortality and improve health status among the most marginalized mothers and newborns in two sub-districts of Netrokona: Kendua and Durgapur   |  |   |   |  |
| <b>Strategic Objective</b>             | Improved household and community MNC-related behaviors and increased utilization of quality services for hard-to-reach families and communities   |  |   |   |  |
|  | <b>1</b>  | <b>2</b>   | <b>3</b>  | <b>4</b>  | <b>5</b>   |
| <b>Results/Outcomes</b>                | Strengthened private (civil society)/public partnerships in support of MNC  | Improved MNC practices of marginalized mothers and families  | Increased quality of MNC services   | Increased NGO capacity to support People's Institutions   | Enhanced enabling environment  |
| <b>Intermediate Results/Mechanisms</b> | <p>1 Increase community capacity for management of health and the health system (via PI model).</p> <p>2 Establish public/private health system collaboration with mechanisms for CBO feedback on health facilities.</p> <p>3 Increase community access to health services through community-based financing scheme, the Emergency Health Fund.</p> | <p>1 Improve knowledge of pregnancy, childbirth and postpartum danger signs.</p> <p>2 Increase coverage and utilization of quality ANC services.</p> <p>3 Equitable access to delivery by skilled personnel.</p> <p>4 Increase training and coaching of mothers and communities on essential newborn care actions</p> <p>5 Increase promotion of key MNC-related behaviors</p> | <p>1 Increase engagement community-based providers in provision quality MNC care.</p> <p>2 Improve referral of mothers and newborns.</p> <p>3 Decrease harmful practices of informal service providers.</p> <p>4 Establish quality improvement system between public health facilities and community sectors.</p> <p>5 Improve capacity of MOHFW to provide MNC services.</p> | <p>1 Increase capacity of NGOs to assist PIs in implementing and monitoring their own activities.</p> <p>2 Strengthen capacity of local NGOs to work with MOHFW at district and national levels.</p> <p>3 Develop capacity of local NGO partners to train community-based providers in advocacy and networking with local government within the CBO (PI) model.</p> | <p>1 Strengthen and sustain community and local government capacity in MNC.</p> <p>2 Improve ability of CBOs to advocate for local level policies that benefit the health status of the poor.</p> <p>3 Establish partnerships with key services and programs to advance awareness of the MNC needs of marginalized citizen and to improve social and policy environment for MNC.</p> |

| USAID theme | Community engagement | Service delivery/equity | Service delivery/quality | Scale-up/sustainability | Learning/adaptation |
|-------------|----------------------|-------------------------|--------------------------|-------------------------|---------------------|
|-------------|----------------------|-------------------------|--------------------------|-------------------------|---------------------|

## PARTNERSHIPS/COLLABORATION

The project was highly aligned with in-country partners at national, regional, and local levels (See Table 3). There was close collaboration with the USAID Mission in Bangladesh and project achievements contributed to the Mission's overall health objectives.

**Table 3. Project Partnerships and Alignment**

| Partner                      | Alignment  | Collaboration Activities  |
|------------------------------|--|---|
| USAID Mission Bangladesh     | USAID Bangladesh Strategic Statement FY2007-2010 (2005), Program components 1, 2, & 4. USAID Bangladesh Country Development Cooperation Strategy FY 2011-2016 (2011), Development objective: IR 3.2, 3.3.  | World Renew provides quarterly updates and gets advice; works closely with Dr. Umma Meena/others; attends annual Mission partner's meeting.   |
| MCHIP Bangladesh             | ACCESS family planning project, 2006-2009; MaMoni project (Save the Children in Sylhet and Habiganj, 2009-2014).   | SUSOMA consulted with MCHIP, focused training on 10 MaMoni low-cost, high-impact community maternal newborn interventions.  |
| MOHFW National--             | National Health Plan, 2008; Maternal Health Strategy, Health and Population Sector Programme; Community-Integrated Management of Childhood Illness (C-IMCI) strategy; IMCI Working Group; Neonatal Technical Group; endorsement of SUSOMA training materials                         | SUSOMA results framework and training linked with GOB priorities. World Renew maintains ongoing alignment via participation in national-level groups and regular meetings with Dr Altaf, IMCI Bangladesh. |
| Netrokona--                  | District and upazilla officials and health facilities, (Community Clinics, Family Welfare Centers and Upazila Hospitals); Monthly community clinic management and UTAC meetings; quarterly DTAC meetings   | SUSOMA facilitated the building of a strong public-private partnership with collaborative working relationships between PI groups, officials and facilities.  |
| PARI and SATHI               | SUSOMA implementing partners for all project activities within their respective sub-district.  | World Renew provided technical support for capacity of local NGOs in PI model.  |
| LAMB and Joyramkura          | Training Institutions for TOT of project and health facility staff; training of CHVs & TTBA's using adapted MaMoni/Saving Newborn Lives/SAVE materials   | Excellent collaboration in adaptation of existing training materials and in timely completion and follow-up of training programs.   |
| ICDDR,B                      | Principal Investigator for the Operations Research study, including the KPC surveys, process documentation of PI model, and investigation of social capital and PI model.  | Good collaboration with project, however, partner delayed in getting KPC and OR study reports completed.  |
| Communities in project area  | PI groups with PPP MOUs and referral system; community-based providers and ISPs linked with health facilities; elite community members; private providers.   | Working together to overcome deficiencies in services and enhance MNC quality.  |
| Other NGO program affiliates | Smiling Sun Franchise<br>White Ribbon Alliance<br>Obstetrics and Gynecological Society of Bangladesh-salter scale training<br>GBC (Garo Baptist Convention)--MNCH care private provider in program area<br>DSK (Dushtha Shasthya Kendra)— MNCH care private provider in program area |   |

Other NGO programs that were being implemented within the program area are:

| Upazila | NGO      | Intervention focus | Upazila  | NGO  | Intervention focus |
|---------|----------|--------------------|----------|------|--------------------|
| Kendua  | BRAC     | Children's schools | Durgapur | BRAC | Children's schools |
|         | Swablami | Credit             |          | DSK  | Health clinics     |

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|          |                |                               |  |              |                    |
|----------|----------------|-------------------------------|--|--------------|--------------------|
| Durgapur | Damien Fdn     | Leprosy control               |  | GBC          | Health clinics     |
|          | Red Crescent   | Blood work, hospital support  |  | YMCA         | Training center    |
|          | ASA            | Microfinance                  |  | Damien Fdn   | Leprosy control    |
|          | Caritas Bgdesb | Integrated development/credit |  | World Vision | HIV/AIDS awareness |

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## EVALUATION METHODS AND LIMITATIONS

The 15-member final evaluation team used a participatory approach to determine project accomplishments and challenges/inputs, the sustainability of project results, lessons learned, and the impact of the project innovation on health outcomes. Both quantitative and qualitative data from varied sources were obtained and reviewed to provide a comprehensive evaluation of the project. These include 1) review of key project documents, 2) analysis of quantitative and qualitative assessment study reports, 3) cost analysis, and 4) stakeholder interviews. A more detailed description of evaluation methods and limitations is in Annex IX. Data collection instruments are in Annex X.

*Review of key project documents.* A comprehensive review of project reports and documents was conducted to confirm project implementation and/or revision of planned activities and to understand the environment/context in which the project was conducted. A complete listing of sources of information is in Annex XI.

*Analysis of quantitative and qualitative assessment study reports.* Multiple assessments that provided key data for interpreting the effects of the project on project outcomes were reviewed and analyzed: Operations Research Study (OR) Reports, Knowledge Practices and Coverage Survey (KPC) Reports, Rapid Health Facilities Assessment Reports (RHFA), and the Child Survival Sustainability Assessments (CSSA).

*The Operations Research Study* was done by ICDDR,B, DM Emdadul Hoque, Principal Investigator. The stated objectives of the OR study are to: 1) Evaluate the performance of the Primary Groups and PI model in reaching marginalized and poor populations and effects on maternal, newborn and child health. 2) Assess PI model effects on MNC, care-seeking for maternal, neonatal and childhood illnesses, and on compliance with referral. 3) Assess PI model effects on quality of care and utilization of maternal, neonatal, and childhood services by health workers. 4) Measure incremental intervention costs, cost-efficiency and equity aspects of the PI model and its ability in reaching marginalized population. 5) Undertake process evaluation of the implementation of the PI model. 6) Measure social capital. Objectives 1-4 are addressed in by the KPC study and 5-6 by the operations research study.

Expanded KPC surveys were done at baseline (October 2009) and endline (July 2014) by ICDDR,B as part of the SUSOMA OR study to explore the effectiveness, equity, and cost-effectiveness of the project intervention package. A 211-item questionnaire with 4-modules indexed 1) socio-economic status and PI group involvement, 2) maternal newborn care (MNC), 3) cost of care, and 4) child health care. Respondents were women who had a birth in the one year preceding the survey for the MNC and cost modules, and mothers of children 0-2 years for the child health modules. A total of 4,079 households were surveyed at baseline (2,038 intervention group, 2,041 comparison group) and 4,502 at endline (2,206 intervention, 2,296 comparison) from a listing of over 6,800 households. Sample size was calculated using standard formulas based on normal distribution, confidence levels of 95%, 80% power, and design effect of 1.5 (to allow for clustering). Randomized cluster sampling was used in which 40 clusters were selected, 20 for the intervention group from the two-upazila intervention area (Durgapur, Kendua) and 20 for a comparison group from two nearby upazilas with usual GOB services (Barhatta, Kalmakanda). Data was analyzed with the statistical software STATA 12. Forty-three maternal newborn and child health variables were calculated for baseline and endline, in addition to the cost and equity/wealth quintile indicators. The *Final KPC Report* and *Baseline KPC Report* are in Annex VI.

Two final *operations research study reports* were produced. The first focuses on documenting the process of implementing the PI model and measuring social capital and is herein called the *Final Operations Research Qualitative and Social Capital Study Report*. The qualitative process evaluation utilized nonproportional quota and snowball sampling at baseline (2011) and endline (2014) for in-depth interviews of PI group members (n=22), non-members (22), CHVs (8) and TTBA's (4). It also included focus group discussions with members (9) and non-members (8), social mapping and organizational profiling, and observations of group formation. The quantitative measurement of social capital used an adapted World Bank tool with data obtained from randomly selected samples of approximately 300 PI



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group members and non-members, all poor women of reproductive age (WRA). The baseline OR measurement of social capital occurred in 2012, halfway through the project, and the endline in 2014. Analysis of qualitative data was done manually. Quantitative data analysis used SPSS for frequencies, reliability analysis to derive a social capital scale for baseline and endline, and ANOVA for testing the association between social capital and group membership/residence. The *Final Operations Research Qualitative and Social Capital Study Report* is in Annex XIXe.

The second OR report brings together findings from the qualitative process evaluation and measurement of social capital from the *Final Operations Research Qualitative and Social Capital Study Report* with the quantitative program evaluation from the KPC and RHFA reports. It seeks to address all of the OR objectives in one document utilizing the USAID OR report template and is herein called the *Final Operations Research Summary Report*. It is in Annex XV.

The RHFA was done at baseline (November 2009) and endline (June 2014) using existing standard tools and analysis approaches to index 12 key indicators and five optional indicators of health services delivery quality and access. The RHFA provided comparable data about MNCH services in the three levels of public health facilities in the project area (upazilla health complex (UHC) outpatient department, union family welfare center (FWC)/rural dispensary (RD), and ward community clinic (CC)) and in private/NGO clinics. Data was collected from a systematic random sample of 30 health facilities and CHWs. Data collection included a health facilities checklist, health worker interviews, child sick care observations and exit interviews of child caregivers (63 cases at baseline, 141 at endline), and CHW/CSBA assessments (13 at baseline, 20 at endline). The final RHFA report is in Annex XIXa.

The CSSA is an emerging capacity monitoring tool with roots in the community mobilization work of World Renew in Bangladesh. Using selected indicators from multiple data sources, the tool is compiled on a six-month basis to monitor change in community capacity to sustain health gains. The CSSA was completed seven times during the project and indexed six components of sustainability: health outcomes (10 MNC indicators), health services (8 indicators), organizational capacity (9 indicators), organizational viability (5 indicators), community capacity (5 indicators), and environment (5 indicators). Indicator data was obtained from multiple sources: LQAS and KPC data, project M&E system, HMIS data, and PICI/CCI (PI and Community Capacity Indicator self-monitoring done by PI groups). The CSSA summary dashboard and indicator information is in Annex XIXb.

**Cost analysis.** A cost analysis was done by World Renew to determine what resources would be required to institutionalize or scale-up the intervention components. It estimates the average project cost per woman of reproductive age, and cost to support each community volunteer. The cost analysis report is available in Annex XIXd.

**Stakeholder Interviews.** In-depth qualitative interviews were conducted with SUSOMA stakeholders to gain a broader understanding of the how and why of project accomplishments and challenges. Interviews occurred as part of the final evaluation over a 3-day period at the district health complex and SUSOMA office in Netrokona, the health complexes and partner NGO offices in Kendua and Durgapur, throughout the intervention upazilas, and in Dhaka. Stakeholders to be interviewed were categorized into 6 groups: 1) government officials, 2) SUSOMA and NGO staff, 3) government health facilities and providers, CHVs, TTBA and ISPs, 4) PI groups (PI, CCC, PGs) at varied functional levels, 5) beneficiaries (pregnant women, mothers, husbands, in-laws), and 6) training institution directors. Interview questionnaires, developed to target each of the six stakeholder groups, were derived from the final evaluation questions and categorized using the A-C-S-I mnemonic:

- **Accomplishments:** What results were achieved? How did interventions contribute to results?
- **Challenges & Inputs:** What factors contributed to/detracted from critical results and why?
- **Sustainability:** What strategies can be sustained, scaled-up, shared globally?
- **Impact:** What evidence links project results with the PI model?

More information about stakeholder interviews is in Annex IX.

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## Data Quality and Use

The evaluation team had an appropriate mix of information to inform the final evaluation report, however, multiple issues related to quality of the KPC data/report and operations research report existed. These are described in Annex IX and resolution of these issues is summarized below. In terms of other information, the RHFA presents valuable comparable data about the health services in the intervention area at baseline and endline, however, interpretation of some indicators is limited due to lack of clarity related to clinic staffing levels and lack of access to CHW health registers at the time of the interviews. The CSSA is a self-monitoring tool that portrays progress overtime in the development of local capacity for health from the perspective of the PI groups. It provides valuable subjective data. The stakeholder interviews conducted by the evaluation team provide insights into stakeholder and partner opinions of the importance of the project, the effectiveness of the overall project strategy, contextual factors that changed over the life of the project, sustainability, and lessons learned. Data from all sources aligned to support and explain project achievements during the data triangulation phase of the final evaluation.

*The Final KPC Report* and a revised *Baseline KPC Report* were received from ICDDR,B on October 30, 2014 along with data tables of results for maternal newborn child health indicators at baseline and endline for the intervention and comparison groups, including cost and wealth quintile data. A revised baseline report with MNC and cost module data limited to women who had a birth in the one year preceding the survey was required so that data presented was comparable to the data collected for the final KPC. The final KPC report was of adequate quality to utilize in writing the final report with one exception: All data comparisons in the report are observational only. There is no statistical comparison of differences between groups from baseline to endline and between intervention and controls, such as confidence intervals, chi square tests, t-tests, or ANOVA. To better understand KPC findings and be able to apply them to analysis of project accomplishments, the final evaluator utilized the data available and computed percentage change in variables from baseline to endline as well as 95% confidence intervals using an online calculator.<sup>7</sup>

The external evaluator has some concern about the selected comparison group. ICDDR,B states that they selected the KPC survey comparison upazilas in Netrokona because they had “usual GOB services” (Final KPC Report, p. 20). However, during the life of the SUSOMA project, donor health projects were occurring in the comparison areas. PARI was conducting a large maternal newborn health project (EDM Switzerland funded) in four unions in Kalmakanda upazila and was working with a PI system in Barhatta in integrated programming. These activities in the comparison upazilas have the potential to confound estimation of SUSOMA program effects and must be considered in comparing intervention and comparison group findings.

The *Final Operations Research Qualitative and Social Capital Study Report* was received from ICDDR,B on November 3, 2014. This report was of adequate quality to utilize in writing the final report. However, because the report did not follow the USAID/Evidence Project Operations Research Report guidance, World Renew requested an additional summary report be written that brought together all aspects of the operations research study. The draft *OR Final Summary Report* was received from ICDDR,B on November 21. World Renew finalized this report with assistance from external evaluator and it is in Annex XV.

## FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

### FINDINGS

SUSOMA addressed the project strategic objective (SO) of improved household and community MNC behaviors and increased utilization of quality services for hard-to-reach families and communities through five intermediate results (IRs). Findings are summarized in Table 4 and presented in detail related to each IR, the OR study, and other influencing factors. Conclusions and recommendations follow presentation of findings.

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<sup>7</sup> <https://www.mccallum-layton.co.uk/tools/statistic-calculators/confidence-interval-for-proportions-calculator/>

SUSOMA made good use of quantitative and qualitative data in monitoring and planning during the life of the project. This includes project MIS data directly collected in the community, data from the MOHFW HMIS, and indicator data from project assessments. The partner NGO health coordinators presented updated project data in monthly and annual progress reports based on the DIP M&E and work plan. The project management and implementation teams used these data to make informed decisions. For example, when more targeted interventions related to improving ANC and assisted deliveries were indicated, additional effort was made to track these accurately at the village level on an ongoing basis. In addition, the MOHFW HMIS data system and the project's M&E data and reports were systematically used for decision-making in the public-private partnership (PPP). For example, maternal newborn data gathered at the village and union-level by CHVs and TTBAAs were discussed with health facility providers during monthly coordination meetings at the local health center and 'merged' with MOHFW data at union and upazila-level matching meetings attended by the UH&FPO, UFPO, and Health officer in charge. Data was then discussed at the district level in quarterly meetings with the Civil Surgeon, Deputy Civil Surgeon, DDFO, and Guiney Specialist during which aggregate data were analyzed collaboratively for recommended action.

**Table 4. Summary of Inputs, activities and Outputs that Contributed to Key Outcomes**

| Goal: To reduce mortality and improve health status among the most marginalized mothers and newborn.  |  |   |  |
|---|--|---|--|
| Strategic Objective: Improved household and community MNC behaviors and increased utilization of quality services for hard-to-reach families and communities. |  |   |  |
| Inputs  | Activities   | Outputs   | Outcomes   |
| <b>Intermediate Result #1 (IR1): Strengthened private/public partnerships (PPP) in support of MNC</b>   |  |   |  |
| 40 CHT staff  | Mobilized, established and built capacity of Peoples Institution model in 494 villages                           | 4 PIs, 22CCCs, and 541 PGs provide community-based management of local MNC  | All communities have active empowered PIs promoting MNC  |
| TOT training  | Formed, trained, and developed PI health sub-teams   | 4 PI health sub-teams formed, 126 health sub-team meetings held   | PI health sub-teams functioning independently to promote MNC   |
| Training materials  | Strengthened PI-health facility collaboration and feedback   | Signed PI-GOB MOUs, 3,326 coordination meetings held  | PI groups established strong functional ties w GOB for MNC   |
| Supportive supervision  | PG's supported to establish and manage EHF's   | EHF save BDT 437,004/USD 5,660. EHF records kept/shared   | 92% PGs have active EHF, 2,406 women & children used EHF   |
|   | PGs establish bank accounts and health savings accounts.   | All PGs have bank accounts, health savings = BDT 9,443,810 /USD 121,672   | PGs giving small business loans for IGA for health ( <i>unintended</i> )   |
| <b>Intermediate Result #2 (IR2): Improved practices of marginalized mothers and families regarding MNC</b>  |  |   |  |
| Monitoring, supervision   | Established BCC-based household counseling by trained CHVs and TTBAAs to promote ANC, skilled delivery/ENC, PNC. | TTBAAs counseled 73,966 pregnant mothers/20,147 newborns mothers, CHVs counseled 46,383 pregnant women/19,970 newborns mothers          | <i>Mother of 0-11 month old:</i><br>-Knowledge of pregnancy dangers increased 65% → 72%<br>-4+ ANC 5.3% → 13.6%<br>-SBA birth 9.3% → 21.9%<br>-Facility birth 8% → 19.3% |
| BCC & IEC materials   | Knowledge & skill-building of PG members re MNC, PI/CHV led community MNC promotion                              | CHV held 14,576 community group and 55,486 primary group MNC promotion meetings, PI leaders educated pregnant women in 1,083 meetings.  | -Newborn PN visit 7.9% → 18.7%<br>-Mother PNC visit 8.6% → 18.5%<br>-Contraceptive use 49% → 71%<br>-No pre-lacteal feed 59.3% → 81.6%                                   |
| Mother health cards/registry  | PI participation in NHD/NID events & Theater for Development (TfD) for influencing groups                        | 3 trained drama teams in PI system, PIs held 113 BCC drama events, PIs participated in 881 NHDs, CHVs/TTBAAs assisting with NID 2x/year | -Immediate BF 52.8% → 77.6%<br>-Exclusive BF 47.2% → 52.9%<br>-2+TT 86.9% → 80.2%  |
| Gov't training in NID   |  |   |  |

| Intermediate Result #3 (IR3): Increased quality of MNC services                       |  |   |   |
|---|--|---|---|
| TOT training  | Trained community-based and informal service providers in MNC, counseling, and referrals.                                | 537 CHVs and 541 TTBA trained to teach ANC PNC safe delivery and ENC actions, referrals, 377 ISPs trained in safe practices and referrals | 1,078 trained volunteers promoting MNC in villages:<br>-Clean cord care 54.5%→65%<br>-Clean birth kit 4.2%→32%<br>-Thermal care 9.7%→44.7%                  |
| Training materials  | Supervision of CHVs/TTBAs  |   |   |
| Supportive supervision  | Selection and training of Super CHVs   | 79 Super CHVs make weekly supervisory visits, facilitate learning, advocate with officials  | CHVs share best practices in monthly Super CHV meetings   |
| Networking  | Established SUSOMA PI referral system with health facilities & government officials with poor getting priority treatment | Coordinated referrals for ANC, delivery PNC, illness care being made by CHV, TTBA, village doctor, PI                                     | Facilities w/ I + CHV referral/month increased 37%→80%, 5,006 MNC referrals made by CHV & TTBA, 461 by ISP  |
| Pictorial HMIS registry   | Assisted PIs to monitor facility utilization and develop methods to improve quality of care                              | Tracking pregnant women and newborns in local registry, 190 PG members serve on CC management committees, 30 PI managed 'model CCs'       | 100% PGs involved in clinic decision-making & advocacy, Clinic service availability increased:<br>-ANC 4x/month 60% →90%<br>-Institutional delivery 3% →17% |
| Facilitation, training and support  | Government health worker (HW) TOT and MNC training, PI advocacy for health clinic strengthening                          | 123 facility HWs trained in MNC/ TOT, 15 in IMCI/ETAT,  | HW training increased-<br>-training child health 37%→87%<br>-training MNC 3% →37%<br>-training CSBA 31% →43%  |
| Intermediate Result #4 (IR4): Increased NGO capacity to support People's Institutions |  |   |   |
| VR training, materials & support  | Capacity building of PARI/ SATHI in implementing PI model  | PI Training Manual published  | All villages in Kendua and Durgapur have established PIs  |
|   | Established the capacity of LAMB for community-based TOT training  | Joyramkura, Pari, Sathi, GOB trainers and PIs equipped to train CHVs, TTBA, and ISPs  | Sustainable training mechanisms in place  |
| Lessons, supplies, funds  | Engagement in learning circles and exchange visits   | SATHI/PARI share project at NGO learning circle, visit MaMoni & PLAN-Bd   | NGOs linked with health NGO/government sectors  |
|   |  | PI and Super CHV participation in learning exchanges  |   |
| Facilitation and advocacy   | PI assisted to apply for registration with GOB   | All 4 PIs registered with GOB as social welfare agencies  | 4 PIs independent NGOs  |
| Intermediate Result #5 (IR5): Enhanced enabling environment                           |  |   |   |
| Networking support  | Established and strengthened PI-MOHFW HMIS system  | Monthly HMIS matching meetings between government officials and PI/CHV/TTBA   | Government MNC HMIS provides data for decision-making/ resource allocation  |
| Advocacy training   | PI establish networks with government officials at national, district, & sub-district levels                             | 712 monthly/quarterly meetings held between PI leaders and health officials for MNC   | 60 documented evidences of policy change that benefitted the poor   |
|   | Advocacy with national NGOs for MNC policies to benefit poor   | WR met 30 times with WRA and Neonatal Working Team  | GOB official for C-IMCI supporting PI efforts for MNCH  |

### IRI. Strengthened public private partnerships (PPP) in support of MNC

SUSOMA effectively built strong public private partnerships (PPP) with ties between the Kendua and Durgapur communities and government health officials and facilities by 1) mobilizing and empowering all 494 village communities in the intervention area to support maternal newborn health by forming a total

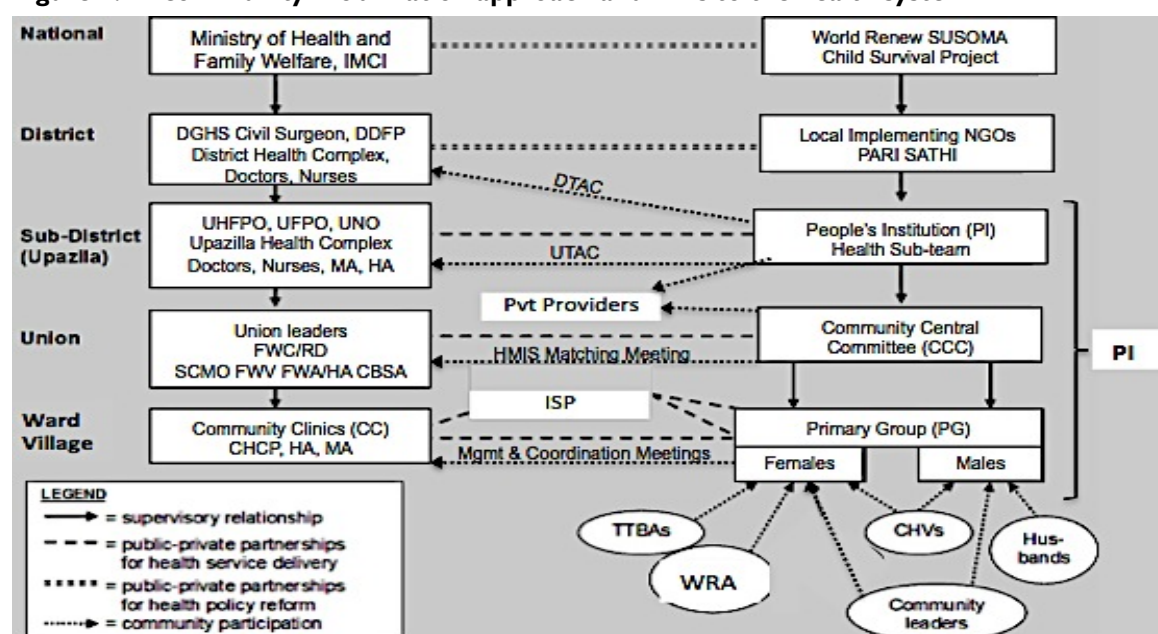
of 541 self-help primary groups (PG), 22 union-level Central Cooperative Committees (CCC), and 4 upazila-level People's Institutions (PI) utilizing the People's Institution model; 2) effectively aligning and networking these PI groups and their health sub-committees with the government health system at district, upazila, union and ward levels *and* with national MNCH priorities; and 3) establishing active emergency health funds for care of pregnant women, newborns and mothers.

**Community mobilization using the PI model strategy.** In the first two years of the project, staff community health trainers (CHTs) established and built the capacity of three tiers of community groups to mobilize poor marginalized community members for maternal newborn health (see Figure 1). Initially, CHTs went household to household in each village to build awareness and engage pregnant women and mothers in forming Primary Groups (PG) to address mother and newborn health concerns. CHTs trained PG members and supported them to work together to solve problems, to claim their rights, and to track group gains in capacity. The PGs selected local volunteers providers, CHVs and TTBA, to promote maternal newborn health in their village. Of the 541 PGs established during the project, 42% are high-level/independent functioning, 38% are medium-level, and 20% are low-level/emerging. There is at least one PG in each of the 494 villages in Kendua and Durgapur.

*"Before we did not know the problems and let people die... now we know and do"*  
The 'Friendship' PG

Initially, PG formation focused exclusively on women but since midterm efforts were made to form men's groups. Of the 541 PGs formed during the project, 22 of these are male. Stakeholder interviews confirm that poor marginalized women have become leaders and found their voice. Female leadership is accepted by husbands, in-laws and communities as fewer mothers and newborns are dying.

**Figure 1. PI community mobilization approach and links to the health system**



Once the PGs became established the CHT helped each select two representatives to form a union-level Central Cooperative Committee (CCC). The CCCs received training and were supported to become functional. Each CCC then selected six representatives to the upazila-level PI group. In the two upazillas covered by the project, 22 CCCs and 4 PIs are functioning. Each PI (with the CCC and PGs under it) has one trained health sub-team with a MNC-focus responsible for overseeing local MNC health services through maintaining PPP networks and community mobilization. With the addition of male PGs in 2012, the 22 CCCs and 4 PIs have mixed-gender leadership and enhanced MNC advocacy potential. CHTs trained the three-tiers of PI groups in leadership, management, record keeping, register, gender, local resource mobilization, M&E, sustainability, audit, advocacy, networking, and capacity measurement.



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Utilizing a TOT strategy, over 40,000 community members have received PI-related training in the intervention upazilas.

*Aligning Public-Private Partnerships.* The PGs, CCCs, and PIs have developed strong PPP networks by which they interact and collaborate with the local formal, informal and private health care systems to advocate for enhanced MNC service delivery and policy change. (See Figure 1). Active collaborative linkages formalized during the project include:

- A PPP network established between PI and health facilities committed to decreasing maternal newborn deaths and illness by improving MNC health services. The PIs have signed MOUs with local government and private (GBC, DSK) facilities in which each extends to the other support and cooperation for training, education, meeting together, improving quality of services, referrals and emergency care, and maintaining maternal newborn registries.
- PI's promote maternal newborn health as they link at the upazila and district levels with government officials and serve on the Upazila and District Technical Advisory Committees that meet quarterly (UTAC) and semi-annually (DTAC). They share progress, inform officials of needs, influence strategies to meet gaps, and participate in decision-making related to MNC.
- CCC's link at the union level to the Family Welfare Centers (FWCs) and Rural Dispensaries (RDs) and participate in clinic decision-making. They have developed a common maternal newborn HMIS data format and meet monthly with the UFPO and UH&FPO in 'HMIS matching meetings' to sync the CHV and TTBA registries with clinic staff registries (SACMO, FWV, FWA/HA, CSBA). They do microplanning to enhance quality of services and availability of supplies and drugs to meet the need.
- PG's serve and participate in decision-making at the ward level on the 60 Community Clinic (CC) Management Committees. Community-based CHVs and TTBA's trained by the project, in conjunction with ISPs, have meet monthly (3,326 times) to coordinate MNC with government health providers (CHCP, HA, MA) and set goals/strategies for local action. These providers now have improved communication channels, work together in the clinics, share data, and jointly promote local MNC through satellite clinics, national immunization and health days (NID/NHD), and other events.

*"The PI model is excellent for motivating community people in reducing maternal newborn deaths...one of the most effective approaches to bring positive change within the community."*  
Government Health Workers

Stakeholder interviews confirm that community people have become aware of and created demand for MNC services at the local health facilities and that health facility staff and government officials are working to supply those services. All PI groups have developed friendly reciprocal relationships with higher government officials, and meet quarterly for guidance and support with local elites (non-poor) who are on their PI Advisory Committees. The officials and the elites/influential expressed appreciation for the work of the CHVs/TTBAs and PIs and their desire to continue collaborating to improve MNC.

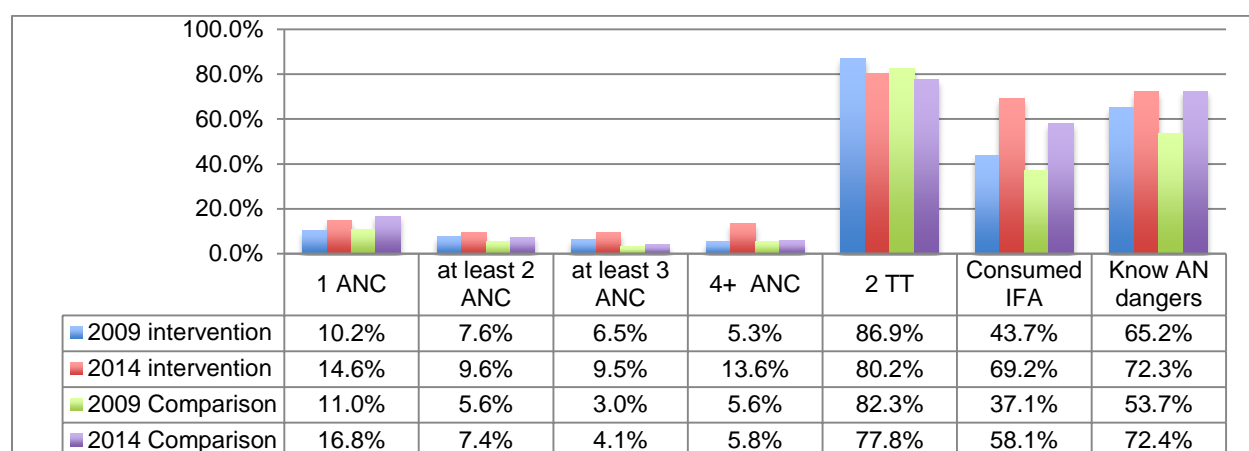
*Emergency health funds (EHF).* To provide access to emergency MNC for the poor in their community, 520 PG groups (96%) have set up, raise funds for, and actively manage EHF's with financial records, policies, and bank accounts. In addition, groups have purchased or had donated rickshaw ambulances. A total of BDT 437,004 (USD 5,660) has been saved in project-linked EHF's and 2,406 women and children have taken interest-free loans from the funds for emergency transportation and care. The EHF's are a noted access to care enhancing accomplishment of SUSOMA. An unintended but popular development in all the PGs is health savings, which have accumulated a total of BDT 9,443,810 (USD 121,672). Loans are taken from these funds for IGA, enabling parents to better feed and protect the health of their families. Group members bring 2-5 taka to the weekly meetings for these funds. The EHF's are managed at the CCC level; the health savings accounts belong to and are managed by the PGs.

*"The biggest accomplishment of SUSOMA is the EHF's" FWV-CSBA*

## IR2. Improved MNCH health practices

To achieve improved health practices among marginalized mothers and families, the project established BCC-based counseling with all pregnant women and key stakeholders in each village. Trained CHVs and TTBAAs promote ANC, safe institutional/SBA delivery, essential newborn care (ENC), kangaroo care, and PNC. Over the life of the project, these volunteer providers raised awareness and motivation for MNC through 120,349 household visits to pregnant mothers and 40,117 visits to newborn mothers. CHVs also held 14,576 educational meetings with PGs on MNC. PI leaders also taught pregnant women at 1,083 meetings and collaborated with government providers in 881 NHDs. Additionally, three trained Theater for Development (TfD) teams, which are integrated into the PI system, performed 113 community dramas to raise the awareness of MNC-related issues and overcome resistance of influencing husbands and in-laws. Stakeholder interviews confirm that these activities increased MNC awareness, health practices and utilization of health services, and created demand on the government for equitable distribution of MNC at the village level. Over time in-laws and husbands became involved in promoting MNC and facility-based deliveries. Tables 5 and 6 present data for changes in antenatal knowledge, health practices, and care utilization of women with children 0-11 months in both the intervention and comparison groups from baseline (2009) to endline (2014).

**Table 5. ANC practices of mothers with children age 0-11 months in intervention and comparison groups, 2009 baseline and 2014 endline KPC Survey.**



Over the life of the SUSOMA project, the number of health facilities offering ANC four times a month increased 50% from 60% to 90% (Final RHFA Report), with a corresponding significant increase ( $p \leq 0.05$ ) in the intervention group in receipt of four-or-more ANC from a medically trained provider (5.3% at baseline to 13.6% at endline). The number of women in the intervention group with three ANC increased by 46% and those with four-or-more ANC increased by 157% (versus 37% and 4% gains, respectively, in the comparison group). By endline, significantly more ( $p \leq 0.05$ ) women in the intervention group than in the comparison group had had three and four-or-more ANC visits despite being comparable at baseline. Increases in ANC visits occurred across both groups in all age, educational, and wealth quintile categories (Final KPC Report). In the intervention group all wealth quintiles at least doubled in the number of women receiving four-or-more ANC. Because the project educated and engaged both poor and elites in intervention strategies, it is not surprising that all quintiles in the intervention group saw increases.

Other ANC practices also improved in the intervention group during the life of the project.

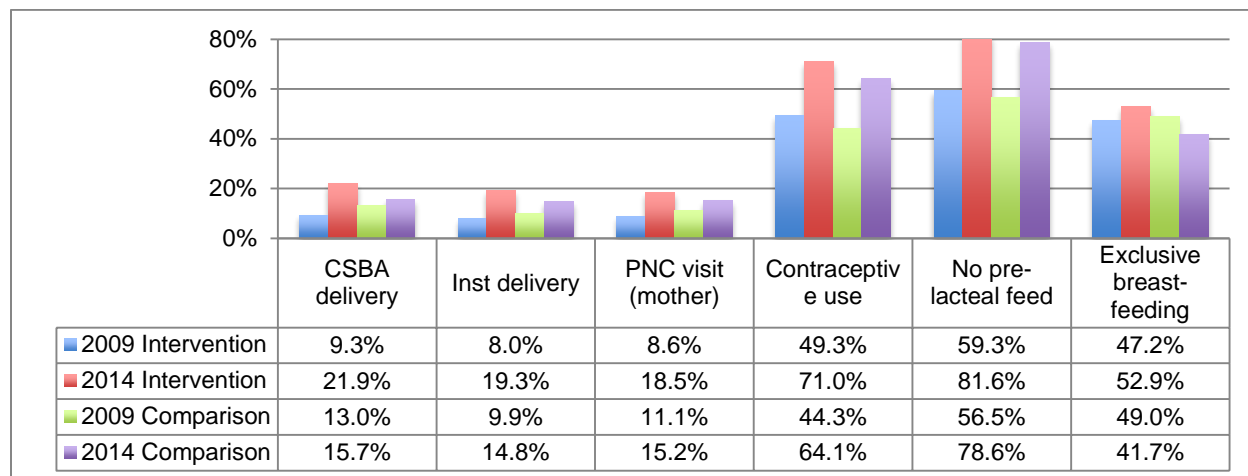
- There was a significant 58% increase ( $p \leq 0.05$ ) from baseline to endline in the number of women in the intervention group that consumed IFA (43.7% to 69.2%). The comparison group saw similar gains (37.1% to 58.1%), however, by endline the intervention group reported significantly more ( $p \leq 0.05$ ) IFA intake than the comparison group. This may reflect, in addition to the effectiveness of



the project messaging, the RHFA documented 49% increase in the availability of IFA tablets at health facilities that occurred during the project in the intervention area (67% to 100%).

- Maternal knowledge of danger signs during pregnancy (AN dangers) increased by 11% in the intervention group (65.2% to 72.3%) and by 35% in the comparison group (53.7% to 72.4%). Although knowledge of AN dangers was higher in the intervention group at baseline the comparison group saw greater gains. Similarly, knowledge of maternal danger signs during delivery was higher in the intervention group at baseline and made only small gains during the project (67.2% to 67.4%) while the comparison group saw greater gains (48.1% to 69.9%), which may reflect the effect of ongoing MNCH projects in the comparison upazilas and/or a knowledge ceiling effect in these population. Application of knowledge may be more effective in the intervention group, as it had a 42% improvement in care-seeking practices for all reported complications while the comparison group had a small 25% gain. In addition, by the end of the project 91.7% of women in the intervention group had learned about and made preparations for the birth of their youngest child (89.6% at baseline), which was similar to the comparison group.
- The percentage of women that received two tetanus toxoid injections decreased 8% in the intervention group as well as 5% in the comparison group from baseline to endline, with decreases occurring across all education and wealth quintile categories. This unexpected finding may reflect systemic issues beyond control of the project, such as the availability of tetanus toxoid and measurement timing.

**Table 6. Delivery and PNC practices of mothers with children age 0-11 months in intervention and control groups, 2009 baseline and 2014 endline KPC Survey.**



Over the life of the project, there was a 500% increase the number of facilities offering 24/7 institutional delivery services (3% to 17%, Final RHFA Report) with a significant increase ( $p \leq 0.05$ ) in institutional deliveries (8% at baseline to 19.3% at endline). While an increase in institutional deliveries occurred in both intervention and comparison groups, the 141% gain in the intervention group was three times greater than the 49% gain in the comparison group. In addition, deliveries assisted by CSBAs,<sup>8</sup> which are primarily skilled home deliveries, also increased significantly ( $p \leq 0.05$ ) in the intervention group (9.3% to 21.9%). The 135% gain in CSBA-assisted deliveries in the intervention group was six times greater than the 21% gain in the comparison group, with significantly more women ( $p \leq 0.05$ ) in the intervention group having CSBA-assisted deliveries. Together institutional

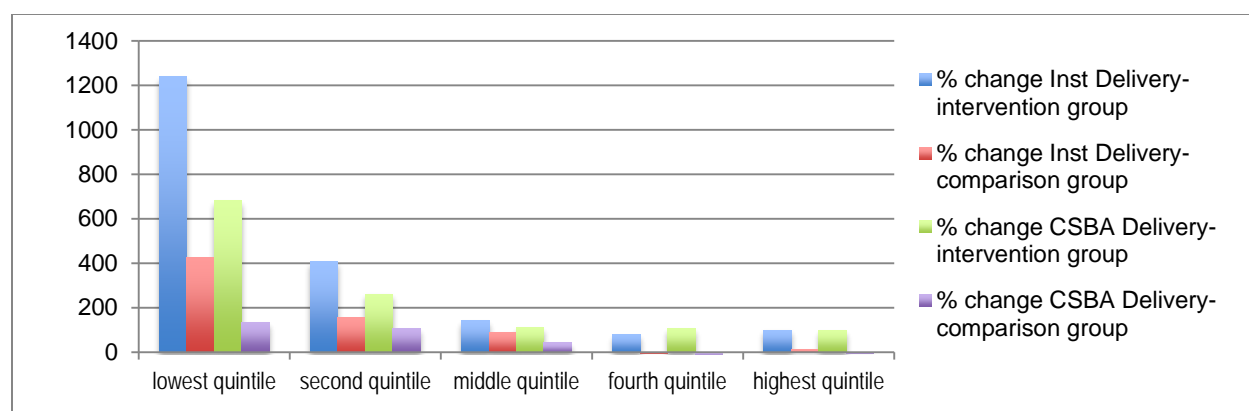
*"We have fewer deaths, more safe deliveries...hospital deliveries increase day by day" Jhinuk PI*

<sup>8</sup> CSBAs are community-based government health providers (FWV, FWA, HA) with SBA training. They do many home deliveries in the area because most health facilities in the area have not been upgraded to delivery sites.

and CBSA-assisted skilled deliveries accounted for 41.2% of all deliveries at endline in the intervention group. Examining institutional and CBSA-assisted deliveries by wealth quintiles reveals a greater increase for women in the lower poor quintiles than those in the upper richer quintiles with the greatest gains in the intervention group (see Table 7), reinforcing the effectiveness of program interventions that targeted improving equity in MNC for the poor and ultra-poor.

The number of newborns and mothers that received post-partum care from an appropriate trained health worker within two days after birth significantly increased ( $p \leq 0.05$ ) from baseline to endline in the intervention group but not in the comparison group (See Table 6). Post-partum visits to newborns in the intervention group increased 137% (10.7% at baseline to 15% at endline) and to mothers increased 135% (8.6% to 18.5%). Contraceptive use, part of project MNC messaging, increased significantly from baseline to endline in both the intervention and comparison groups, indicating that the 44% gain seen in both groups may be influenced by common factors, such as district-wide MOHFW family planning program initiatives. The use of a modern contraceptive by mothers was significantly greater ( $p \leq 0.05$ ) in the intervention group (71%) than the comparison group (64.1%) at endline. Improvements in post-partum visits were greatest in the lower as compared with the higher wealth quintiles with greater change in the intervention group. The lowest quintile in the intervention group had 5-fold and 7-fold gains against the highest quintiles for newborn and maternal post-partum visits, respectively, versus 4-fold gains in the comparison group.

**Table 7. Percentage change by wealth quintile in institutional and CSBA-assisted deliveries in the intervention group from 2009 baseline to 2014 endline.**



Breast-feeding practices also improved significantly ( $p \leq 0.05$ ) from baseline to endline, both in terms of gains in the number of newborns put to breast within one hour of delivery (52.9% to 77.6%) and children 0-23 months not receiving pre-lacteal feeds (59.3% to 81.6%). Since similar gains in these indicators occurred in the comparison group, these increases in breastfeeding may be due to district-wide breastfeeding initiatives and/or local program efforts. The intervention group also experienced a 12% increase in exclusive breastfeeding (47.2% to 52.9%), which was significantly greater than the comparison group at endline. Improvements in exclusive breastfeeding occurred relatively equally across all wealth quintiles.

Because the MNC intervention was embedded in the C-IMCI framework, MNCH program effects related to ORT use, care-seeking for pneumonia, handwashing practices, and underweight children were tracked in assessing program effects. In the intervention group ORT use for diarrhea increased significantly ( $p \leq 0.05$ ) from 73.3% at baseline to 85% at endline (15% increase), while the comparison group increased 73% (49.6% to 85.9%). Appropriate care-seeking for pneumonia had a significant ( $p \leq 0.05$ ) 42% increase (22.3% to 32.6) in the intervention group, while there was no improvement in the comparison group. Similarly, handwashing practices in the intervention group saw a

*"The PI, CHVs and TTBA's are mobilizing the marginalized for MNC." GBC Physician*

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significant ( $p \leq 0.05$ ) 82% improvement (21.6% to 39.3%) with decreases in the comparison group at endline. The percentage of underweight children decreased 18% in the intervention group (33.3% to 27.3%) and 13% in the comparison group (36% to 31.4%). Although both declines in underweight children were significant ( $p \leq 0.05$ ), the intervention group had a decline three times greater than the comparison group. The gains in ORT use, care-seeking, and fewer underweight children in the intervention group were greatest in the lower as compared with the higher wealth quintiles.

### IR3. Increased quality of MNCH services

SUSOMA improved the quality of maternal newborn care services through 1) training community-based health providers, 2) supervising PI-linked CHVs and TTBAAs, 3) establishing an active referral system, and 4) facilitating PI monitoring and support of health facility (HF) utilization and care quality.

*Training community-based health providers.* A total of 1,201 community-based volunteers (537 CHVs, 541 TTBAAs) and 123 government facility-based providers received training and refresher training in ANC, safe delivery, PNC, ENC actions, and IMCI. Of these, 79 CHVs were trained as regional Super CHVs to oversee and strengthen CHV performance. An additional 377 ISPs received training and refresher training in IMCI and referrals to reduce harmful practice. SUSOMA supported 10 local government health workers for intensive IMCI training and six for ETAT training in HBB in Dhaka. The endline RHFA revealed that 87% of government health workers reported receiving training in child health (37% baseline), 38-40% had training in maternal newborn care/ANC (0-3% baseline), and 43% had received government CSBA training (31% baseline).

The impact of this training on maternal newborn care is evidenced in the MNC gains discussed in IR2 and summarized in Tables 5 and 6 (above). The effect of training in essential newborn care actions on the quality of home delivery practices is evidenced in Table 8 (below). Significant improvements ( $p \leq 0.05$ ) from baseline to endline in the intervention group include a 661% increase in the use of clean birth kits by women during home deliveries (4.2% to 32%), a 323% increase in thermal care (immediate drying and wrapping) after home delivery (9.7% to 40.2%), a 103% increase in delaying bathing for three days after delivery (22.7% to 46.3%), and a 19% increase in clean cord care at the time of birth (57% to 69%). With the exception of clean cord care, significant increases in these birthing practices were also seen in the comparison group; however, the percentage increases in the comparison group were lower for each behavior. Stakeholder interviews confirm attribution of these gains to project-supported training in which both government health workers and community volunteers (CHVs, TTBAAs, and PG members) were empowered with greater knowledge and skills that impacted both the messaging given to women and communities (IR2) and PPP-generated improvements in quality of MNC delivery.

“There is increased ANC, knowledge of services, and trust.”  
FWA-CSBA

Quality of care saw several important gains over the life of the project that, although the endline values are low, may point towards future potential for care improvement with ongoing PPP synergies. In the intervention group, active management of the third stage of labor (AMTSL<sup>9</sup>) increased 4-fold (0.9% to 3.6%) and quality of ANC<sup>10</sup> increased 12-fold (0.4% to 4.9%). These significant ( $p \leq 0.05$ ) gains were not seen in the comparison group. At endline, quality of ANC was significantly greater ( $p \leq 0.05$ ) in the intervention (4.9%) than the comparison group (1.0%). Receipt of essential newborn care<sup>11</sup> during home delivery increased significantly ( $p \leq 0.05$ ) in both intervention and comparison groups; however, the 14.1-fold increase in the intervention group (0.9% to 12.7%) was five times greater than the 2.8-fold increase

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<sup>9</sup> AMSTL includes administering a prophylactic uterotonic, gentle cord traction, and uterine massage after delivery of the placenta.

<sup>10</sup> Quality ANC includes receipt of 4 or more ANC visits from medically trained providers with all necessary services (blood pressure and weight measurement, urine testing for proteinuria, blood testing) and advising about danger signs of pregnancy complications and their management.

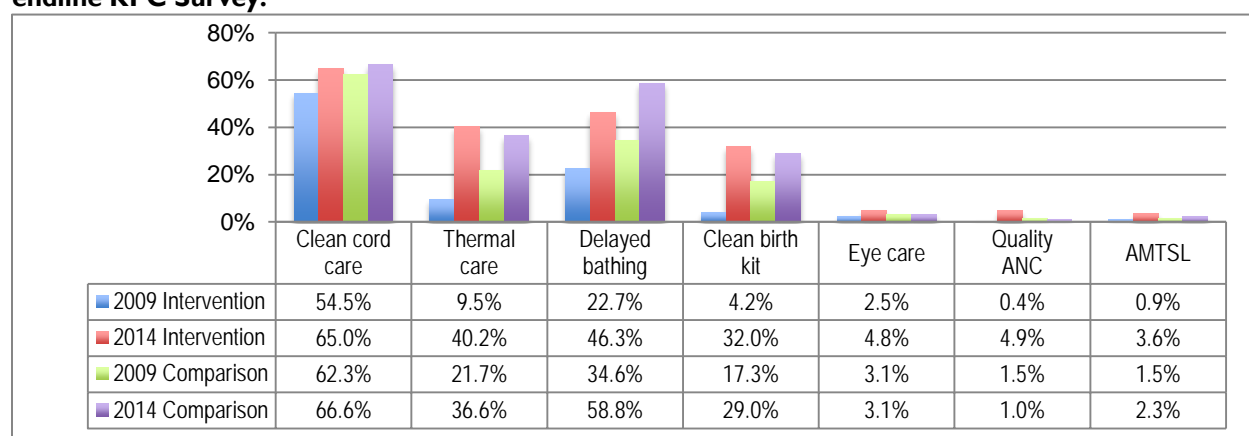
<sup>11</sup> Essential newborn care includes thermal protection (immediate drying and wrapping), clean cord care, and immediate and exclusive breastfeeding.

in the comparison group (4.8% to 13.6%). Although there was a 92% increase in prophylactic eye care in the intervention group, the fact that only 4.8% of newborns received this care at endline may reflect the lack of availability of eye ointment for CSBA-assisted home and institutional deliveries, as the RHFA found low supplies of newborn eye ointment at health facilities (33% at baseline, 27% at endline). The project may have had an impact on the small gain that was seen in prophylactic eye care, as the comparison group did not change during the project period.

Training was done effectively and efficiently utilizing a TOT strategy to train 42,610 people (4,624 male/37,986 female) over the life of the project. World Renew and SUSOMA staff developed curriculum with the LAMB Training Center who conducted TOT training with SATHI and PARI health coordinators, assistant health coordinators and CHTs, government health providers (FWVs, SACMOs, MAs, CBSAs) from district, upazila and union levels, and Joyramkura trainers. These then did training and refresher training in Kendua and Durgapur for the three-tiers of PI members, CHVs, TTBAAs, ISPs, and health providers.

*“We have learned to solve problems”  
Jhinuk Society PI*

**Table 8. Quality of care practices in intervention and comparison groups, 2009 baseline and 2014 endline KPC Survey.**



**Supervision.** Supportive supervision of volunteers to nurture and maintain quality was built into the project. Project MIS data show that project staff made 45,413 supervisory visits to CHVs and TTBAAs. MOHFW staff that are taking over this role made an additional 6,359 supervisory visits to oversee CHV and TTBA care quality. The Super CHVs also oversee CHVs and hold monthly meetings of to facilitate ongoing learning and sharing of case studies and best practices. The RHFA demonstrated that, in government facilities, supervisory visits to health workers increased over the life of the project from 7% to 87% and supervision of CSBAs increased from 23% to 30%. Stakeholder interviews confirmed that MOHFW staff and volunteers are working together to promote quality MNC.

**Referral system.** The project established a referral system collaboratively with health facilities and government officials that gives priority status to SUSOMA referrals. Marginalized poor mothers and newborns with ‘the slip’ now ‘go to the front of the line’ at health facilities. Community and facility-based providers, trained in the referral system, meet monthly at union/FWC and ward/CC levels to coordinate referral follow-up and plan care. Stakeholder interviews verify that the referral system is well established and respected, and that patients with referral slips get priority care. The referral system is used most often CHVs, TTBAAs, PI leaders, who consult by cell phone with health providers and often accompany pregnant women/newborn mothers for emergency care. During the project 5,156 SUSOMA referrals to health facilities for ANC, delivery, PNC, and illness/emergency care were made by CHVs, TTBAAs and PIs. In addition, ISPs made 461 referrals. Eighty percent of health facilities sampled in the RHFA reported receiving referrals by endline, compared with 37% at baseline (116% increase).

*“I triage by mobile with the PIs as to best care and give priority to SUSOMA referrals”  
Gyne Specialist, Sadar*

*Quality improvement of health facility care.* The primary activity to improve quality of health facility care was involvement of PGs in their local community clinics (CC, FWC, RD). Initial monitoring of clinic functioning led to active involvement of PGs in clinic management committees. All PGs are now involved in clinic decision-making and advocacy with local elites. Thirty 'Model CCs' have developed in which the PG opens the clinic, cleans it daily, assists and holds health workers accountable, and makes improvements in the clinic (stakeholder interviews). Logistical support has been provided, such as delivery kits, delivery beds, weighing scales, and BP cuffs. Since midterm, the PIs have been engaged with government on a 'Helping Workers Thrive' campaign, which has supported clinic personnel.

PG, CCC, and PI involvement in the local health facilities has enhanced the availability of clinic health services (stakeholder interviews). At baseline there were 55 CCs of which 48 were open but RHFA data collectors found them without staff or patients. At endline, there were 60 CCs and all are open, staffed, and providing care. Stakeholders attribute these improvements to the involvement of the PGs in local clinics. The MOHFW also played an important role by instituting a new cadre of government health workers, the community health care providers (CHCP), that staff the CCs six days per week. The marked improvements that occurred over the life of the project in government health facility service availability, supplies, and quality of care in the intervention area attest to the impact of the demand created by SUSOMA for quality of care (See table 8).

**Table 8. MNCH Quality improvements in government health facilities, RHFA 2009 baseline and 2014 endline**

*"Quality is increasing since SUSOMA. The PIs are improving ANC, PNC and have EHF's. We have better service in the CCs and increased CSBA deliveries. Village level motivation through the PI is encouraging mothers and children to go to clinics." Civil Surgeon, Netrokona District MOHFW*

| Child Health Summary                   | 2009 | 2014 | Maternal Newborn Summary               | 2009 | 2014 |
|--|------|------|--|------|------|
| Availability sick care                 | 60%  | 100% | ANC available 4x per month             | 60%  | 90%  |
| Availability growth monitoring         | 7%   | 20%  | Institutional delivery available daily | 3%   | 17%  |
| Availability essential care supplies   | 34%  | 66%  | Availability neonatal drugs            | 17%  | 22%  |
| Availability first line drugs          | 39%  | 63%  | Availability neonatal supplies         | 9%   | 22%  |
| Availability care guidelines           | 7%   | 21%  | Availability ANC drugs                 | 19%  | 22%  |
| Staff training in CH past 12 months    | 37%  | 67%  | Availability ANC supplies              | 9%   | 28%  |
| Appropriate treatment/diagnosis        | 23%  | 53%  | CSBA supply availability               | 31%  | 43%  |
| Supervision past 6 months              | 7%   | 57%  | CSBA drug availability                 | 15%  | 22%  |
| Facility-community collaboration       | 73%  | 90%  | Availability care guidelines           | 7%   | 21%  |
| Community referral                     | 37%  | 67%  | MNC information system                 | 14%  | 38%  |
| Infrastructure (latrine/water/privacy) | 22%  | 42%  | Staff training MNC past 12 months      | 3%   | 53%  |
| Available laboratory                   | 7%   | 10%  | Available laboratory                   | 15%  | 32%  |

#### **IR4. Increased NGO capacity to support PIs**

World Renew effectively built the capacity of local implementing partners PARI and SATHI through ongoing training and advisory support mechanisms. Training occurred both formally and informally throughout the project. It was all encompassing, including the TOT course on MNC and IMCI from LAMB, Learning that Lasts, Behave framework, communication, survey data collection, leadership and group management, financial records/audit, development, community capacity monitoring, sustainability, HMIS, and values formation. World Renew's Asia Region Health Advisor and Bangladesh Team Leader visited the field frequently, kept abreast of project activities, and served on the DTAC. The Health Advisor headed the Project Management Team (PMT, an oversight body for the project), and was



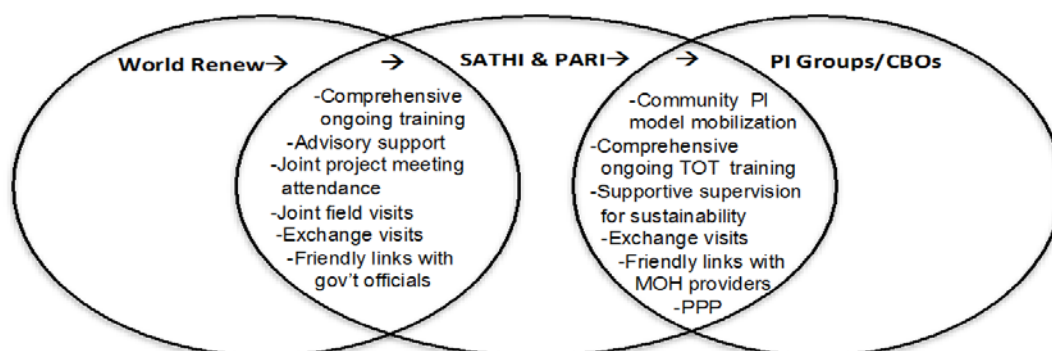
readily available by phone and email. To further increase capacity, after midterm SATHI and PARI coordinators and directors became more involved in SUSOMA activities and events, including project implementation team (PIT) meetings and field visits. During stakeholder interviews, these local NGOs confirmed that they had gained knowledge and skill in the PI model, EHF, volunteerism, MNC, reporting systems, training mechanisms, survey techniques, evaluation methodology, and grant writing.

*‘SUSOMA created a learning environment ...staff received important trainings...seeing the change in communities inspired us’ PARI & SATHI Directors/ Coordinators*

Stakeholder interviews confirm that SATHI and PARI established friendly working relationships with key government officials and health-oriented local NGOs. They held over 700 meetings with district, upazilla, and union level government officials, civil servants, and elites to facilitate the MNC-focused PPP. In addition, they attended 64 upazila and district NGO coordination meetings and have become active participants in a learning circle of 18 local NGOs engaged in community development, where they presented SUSOMA project strategies and results. They participated in exchange visits with the MCHIP MaMoni project in Habiganj, and with LAMB/PLAN-Bd to learn their approach to community clinic management. During the project PARI and SATHI were instrumental in publishing a compendium of the PI model program, entitled the *PI Manual*, with the support of the primary author, Kohima Daring, who is a PI Model expert and the Bangladesh Team Leader for World Renew.

As evidence of their increased capacity, PARI and SATHI effectively initiated, monitored, and supported community mobilization for maternal newborn health in Durgapur and Kendua. They achieved rapid uptake of the 3-tiered PI system through communication, networking, encouragement and training. As a result of their work, all villages have equipped local community leadership and established CHV/TTBA volunteers actively promoting MNCH. All four PIs have an advisory council of local elites, executive committee, development plans, data monitoring systems, and sub-committees for health, leadership/peace, justice, IGA, and networking. PI leaders have been trained in leadership role, capacity building, sustainability, capacity monitoring, and SUSOMA exit strategy planning. Learning was strengthened as exchange visits were made by PIs to other successful PIs, and the Super-CHVs made exposure visits to the partner project upazila to clarify and strengthen CHV roles, responsibilities, and supervision strategies. The PGs track capacity every six months using community capacity indicators (CCI) in the six areas of financial, management, technical, maternal newborn health, community governance, and networking. The PIs track capacity on a six-month basis using PI Capacity Indicators (PICl) on the seven areas of shared vision, leadership and management, financial capacity, resource/knowledge/skills, gender, networking, and ownership. The CSSA dashboard (Annex XIXb) summarizes the substantial growth in PI community capacity over the life of the project for six capacity components--health outcome (50% in 2009 to 95% in 2014), health services (33% to 75%), community capacity (13% to 64%), organizational capacity (15% to 70%), organizational viability (8% to 69%), and environment (2% to 77%). Figure 2 portrays the flow of capacity building that occurred during SUSOMA.

**Figure 2. Flow of capacity building during the SUSOMA project from World Renew to local implementing partners to CBOs with illustrative activities.**



Learnings from SUSOMA are being applied by these NGOs to projects in other districts and to new grant programs. SUSOMA hosted an exchange visit from the World Renew SUJIBON project in Nilfamai district in 2012. SATHI has extended their work in rural areas and is implementing a four-year child-centered community development project (EU/KNH Germany funded) and a one-year farming project (World Renew funded) using the same design in Atpara upaxila, Netrokona district. PARI shared its increased capacity with its PI-based integrated community development program in Barhatta and four-year maternal newborn health program in Kalmakanda, Netrokona (EDM Switzerland funded). World Renew, with SATHI and PARI, has applied for funding to start a three-year integrated nutrition program that will build on the established PI structures in Kendua and Durgapur upazilas.

World Renew enhanced the MNC capacity of LAMB training department to develop effective community-based TOT training, to support a local training institution (Joyramkura) in rolling out TOT strategies, and to follow-up in the field with health workers to assess training uptake. Joyramkura, PARI, SATHI, GOB trainers, and PI members are equipped to train PI groups, CHVs, TTBAAs, drama teams, and ISPs. Sustainable training mechanisms are in place.

*“LAMB has made their training systematic and organized”*  
LAMB Training Director

A capstone in the ongoing growth of PIs is that all four PIs are registered with the GOB Social Welfare Department as independent NGOs. They have begun taking loans from the government department and pregnant women and widows are receiving government allowances through the PIs.

### **IR5. Enhanced learning environment**

Stakeholder interviews confirmed that a highly valued strategy that fostered an enabling environment between the PIs, government officials and clinic providers was establishment of a joint community-government MNC HMIS system with monthly PPP matching meetings during which HMIS data is compiled and examined. Since the CHVs and TTBAAs go house to house throughout the upazilas delivering MNC, they had an accurate count of the number of pregnant women and began collecting SUSOMA data using a standardized pictorial format. In meetings with district officials, the decision was made for the CHV, TTBA, and PIs to meet monthly with officials at the union/upazila level to merge MOHFP and SUSOMA information to arrive at a complete picture of the maternal newborn situation, allowing for more informed allocation of staff and supplies. Evidence from the RHFA coupled with stakeholder inputs link this data to the enhanced ANC and delivery services, a 3-fold increase in health facilities with all essential ANC supplies (9% to 28%), 1.35-fold increase in facilities with all essential delivery and neonatal drugs (17% to 22%), and with all ANC drugs (19% to 26%). The HMIS matching meetings are evidence of the strength of the PPP and are a SUSOMA best practice.

#### MNC HMIS Indicators

- # Pregnant women
- delivery type
- newborn sex/weight
- referrals
- ANC-PNC visits
- maternal child deaths
- abortions

Advocacy, networking, and communication training provided to PI groups empowered PI members to effectively work with government officials for local level policies that met health needs of mothers and children. Over the course of the project, the PIs were at the table telling their story at a total of 712 meetings with government officials at district and upazila levels, including monthly meetings with the deputy commissioner, semi-annual DTAC, quarterly UTAC, and annual General Assembly meetings of the PIs, CHV/TTBAAs and ISPs. They documented 60 evidences of policy change as a result of these meetings that benefitted the poor. At the SUSOMA dissemination in Netrokona, the 10 district and upazila government officials in attendance each expressed appreciation for the work of the PIs and re-affirmed the commitment expressed during stakeholder interviews to support the PI-government PPP in the years ahead.

In addition, World Renew, PARI, and SATHI established and maintained key relationships at the national level to advance MNC for marginalized citizens. Project staff met 24 times with the White Ribbon Alliance, and 6 times with the Neonatal Working Team. World Renew is a member of the National



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IMCI Working Group led by the GOB and UNICEF, wherein seven NGOs<sup>12</sup> collaborate and integrate individual plans with the national yearly strategy for IMCI. In addition, World Renew has a close relationship with the national IMCI Program Manager who chairs project DTAC meetings in Netrokona and lends support to PI initiatives.

### **Operations research study: PI group development and social capital**

(Quotes in this section are from the *Final Operations Research Qualitative and Social Capital Study Report* in Annex XIX. Italicized quotes are interview data, non-italicized quotes are report narrative descriptions.)

*The qualitative process evaluation* of the OR report indicates that the PI groups in Kendua and Durgapur at baseline are “well aware of their groups’ activities, purposes, and vision” to reduce maternal child mortality, and have developed trust, solidarity, and problem-solving capabilities. The process of group formation by NGO staff, who “provide the know-how and orient potential group members on activities and goals,” takes several months and is “arduous and requires a lot of patience...to find the right persons who...have a vision of doing well for themselves and their community.” The female groups are comprised of married WRA and, although there are no set income criteria, they decide “who is poor and who can join the group.” PG members elect their leaders, choosing educated persons that can read, write and calculate, and have the time to “*run the activities of the group properly.*” At endline the PGs were working on creating health guidelines, flipcharts and books to discuss during weekly meetings, during which they also deposited money, sanctioned loans, and provided emergency assistance to mothers and children. Groups have developed confidence in their emergency and health savings, “distrust over the bank has disappeared,” and they are receiving donations from upazilla Parishid chairmen, local elites, and government officials that value the PI efforts for MNC.

The CHVs and TTBAAs are teaching PG members and households about MNC and proper care-seeking. The CHVs confirmed the training received in surveillance, MNC, and group formation from NGO staff, stating, “*we have learned a lot.*” The TTBAAs confirmed their work in promoting MNC and meeting with government health workers to share information and work. They report that previously, “*Mothers died, babies died...now you won’t find any mother dying...none of the newborns die now...few babies are born with weight less than 3 kilo...now mothers go to the hospital as they understand that delivery at the hospital would ensure good health for the mother and baby.*” The ISPs interviewed connect with the CHVs/TTBAAs and have learned about MNC. They know PG members and are making SUSOMA referrals.

Observations made of the CCCs and PIs confirm that these groups are functioning effectively to coordinate the work of the PGs for MNC, deliberate emergency issues, account for regular funds and EHF, coordinate with health personnel, and prepare for independence. Group members have capacities in MNC, record-keeping, financial management, decision-making, and team functioning and are “*confident to run the PG without NGO help*” in the future. Evidence given for group capabilities to work independently as an organization is: 1) Groups jointly discuss matters before making decisions. 2) Groups are continuing learning. 3) Groups help non-group community people with EHF, welfare for the ultra-poor, and work on MNC-related community needs, such as road repairs. 4) Groups save funds, hold bank accounts, and share ideas. 5) Groups hold monthly community and annual union-level assemblies to report about PI activities and make plans. The PGs have good respectful relations with government and know that “*our information influences government decisions.*” They provide household-level maternal child HMIS data, referrals, health teaching, and activate communities for EPI, satellite clinics, and NID/NHDs. The four PIs “are playing important roles in improving maternal care” in Kendua and Durgapur by motivating pregnant women and “sending patients to the hospitals and helping them to get timely care.” The PI members represent their communities at the upazilla and district-level meetings with health and family planning officials and have “created linkages with health service providers and reduced refusal of patients at the hospitals.”

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<sup>12</sup> ICDDR,B, JEPIEGO, CARE, PLAN, SAVE the Children, World Renew and CONCERN Worldwide

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The OR process evaluation report concludes discussing four PI model-related changes observed in the intervention community at endline: 1) Improved referrals and service provider attitudes/behaviors toward rural poor community members. 2) Overall enhanced capacity of community people, including those who are not PG members. 3) A social movement in the intervention area with active PPP collaboration with HMIS, CHV-provider linkages, and trainings. 4) Sustainable PI groups able to make decisions and expanding activities to the wider community. They go on to say: “It is prudent not to expect radical changes in a project where all is dependent on community uptake of intervention messages, group formation, and savings. All this takes a lot of time...the most important thing is that the connection between mother and child health and overall development...has been made with success.”

The *Social Capital* findings presented in the OR report from the household survey confirm that at in 2014 over 60% of WRA sampled in Kendua and Durgapur were active members of the SUSOMA PI groups, and that groups were becoming more heterogeneous in terms of religion, occupation, and ethnicity. When conflicts arose, people often work it out among themselves or with the help of a neighbor, although it was noted that at times problems lead to violence. Accessibility to health services increased from the 2012 baseline but was still problematic. Credit service accessibility also increased. Over 95% of informants expressed trust in others from their community in terms of lending or borrowing money to/from others.

Analysis of the social capital tool data focused on the relationship between social capital and two variables--PI group membership status and residence. In 2012, there was no association between social capital and residence (mean Durgapur 6.61, Kendua 6.53) but a significant relationship ( $p \leq 0.001$ ) between social capital and membership status (mean member 8.22, non-member 4.92). At endline there was a significant relationship ( $p \leq 0.001$ ) between social capital and residence (mean Durgapur 9.24 and Kendua 15.80), and between social capital and membership status (mean member 15.35 and non-member 9.99). Although different social capital scales were used at baseline and endline, these findings do suggest a relationship between engagement in PI groups and development of social capital.

### **Challenges and other influencing factors**

The final evaluation examined challenges that the project faced in achieving results and other factors that may have affected project strategies. These include the initial ramping up of the PGs and volunteers, gender barriers, illiteracy, inclusion of men in the program, religious superstitions and traditional practices, inadequate public health service infrastructure and availability of ANC, institutional delivery, and PNC services, homebirths by untrained personnel, frequent transfer of key government health officials and service providers, and lack of emergency transportation systems. An unexpected occurrence that facilitated project strategies and achievements was the rapid increase in the use of cell phones to coordinate delivery and emergency care. A key factor contributing to project successes is the 18-years of experience World Renew Bangladesh has had to refine the PI Model intervention.

Stakeholders and NGO staff related multiple initial challenges in setting up PGs and engaging community-based health volunteers. A primary gender barrier was resistance from families/husbands and communities to forming female PGs and allowing women to serve as CHV/TTBA. This was overcome by engaging community elites in the MNC cause, BCC messaging during household visits, PG group education, and community events/drama. Many of the TTBA and CHVs were illiterate and so picture cards and registries were used to time their teaching and track data. Initially only women's groups were formed and it was difficult to include men in the program. Eventually men began supporting the women, even carrying pregnant women and newborns to health facilities in emergencies. The NGOs and PG members recognized that males are essential for decision-making at family and community levels and that mixed-gender CCCs and PIs would strengthen their advocacy voice with government officials. In year four, the project formed men's PGs, initiating programs with fathers-in-law, husbands, and male health workers. Now men and women, rich and poor are working together with government to prevent maternal newborn death.

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Religious-based superstitions and traditional practices that were barriers to community engagement with the PI model were overcome as PG members met with religious leaders/IMAMs to explain MNC goals. Religious leaders now support the program, there are reduced superstition-based care decisions, and use of traditional healers, unskilled home births, and uninformed ISPs has decreased. PIs report that continuing communication is necessary to maintain the linkage with religious leaders.

Barriers were also dealt with in relation to availability of and access to quality health services. ANC was not readily available in government health facilities initially. As PG, CCC, and PI members built PPP relationships and supported local health facilities services improved. Now both ANC and facility-based deliveries are more available from trained staff at the CC and FWC/RD levels. Adequate PNC services are also available, however, PNC utilization is increasing slowly because its value is not widely appreciated. Inadequate health facility infrastructure is also an access barrier. Initially there were not enough functional clinics or health workers. Although this has improved dramatically over the life of the project, the problem of inadequate facilities, supplies, drugs and staff continues to require advocacy by the PIs. While the government plans to enhance the number of CSBA-trained health workers they will continue to do home deliveries until the FWCs are upgraded. Institutional delivery points continue to be lacking throughout both upazilas. The PPP was challenged with frequent transfer of key government officials and workers, necessitating re-building relationships with each transfer.

Transport of pregnant/ill mothers and newborns to facilities was an access problem overcome with establishment of EHF and emergency transport mechanisms coupled with the SUSOMA referral system that gave the poor person priority treatment upon arrival at the health facility. Access to care continues to be limited by poor roads that are impassible by rickshaw ambulances in rainy seasons. Because the rivers in Durgapur divide the upazila into three areas, three PIs were formed to more readily address MNC barriers. The use of cell phones by PI leaders and CHVs/TTBAs to coordinate care with doctors and health facility staff is an unexpected but welcome enhancement to the intervention strategy that occurred during the project and correlates with the rapid increase in availability of cell phones in Bangladesh since 2009. Health providers and government officials shared cell phone numbers with PI members and volunteers as they worked together to enhance maternal newborn health.

A key factor that positively influenced the project was the 18-year experience of World Renew in successfully implementing the PI model in Bangladesh. Because the model is well developed, SUSOMA PIs were well equipped to collaborate with informal and public health sectors in ways that lead to stronger, sustainable health systems and communities with greater social cohesion and empowerment.

While findings presented from the OR study confirm the process and utility of the PI model in mobilizing communities for health and in increasing social capital, the OR/KPC studies presented challenges, especially during the end of the project that are detailed in Annex IX of this report.

## CONCLUSIONS

Upon integrating and synthesizing all project findings, the FE team arrived at the following six conclusions about the SUSOMA project.

I. SUSOMA effectively increased community capacity for maternal newborn health and involvement with the health system in a PPP by establishing the People's Institution Model with marginalized people. A 3-tiered functional PI system was established within 2-years (rapid uptake) which served as the foundation for public private partnership development, enhanced MNC services, trained volunteer community-based providers, and MNC gains. Primary groups (541) were established and trained in all villages in the program area (494) after which the CCC (22) and PI (4) groups were formed. The groups developed bylaws, plans, capacity monitoring systems, EHF collections, bank accounts, and capabilities in advocacy, networking and community monitoring of maternal newborn health. All are now independent NGOs with GOB registration as a Social Welfare Society. Sustainability was integrated into the PI group model in terms of financing, monitoring capacity, continuing training for groups and volunteer health workers, and establishment of a vibrant PPP between PIs and government officials and health workers.

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2. SUSOMA staff developed social capital in marginalized women through ongoing monitoring and support using a slow compassionate approach that demonstrated values and modeled trust, listening, compassion, and teaching. They effectively empowered communities, initially women, with knowledge, skills, and finances via PI model mechanisms and changing social norms using group approaches that fostered development of a helping mentality and inclusive working together. They found that trust and love are foundational to caring and community. Trust was built first among a group before taka were donated and funds managed by the group. People built friendly relationships with each other and then learned to serve their neighbors. When they formed a group and got knowledge and skill they were seen as people of worth in the community. All involved volunteered their time and resources for MNC.

3. SUSOMA effectively established public private health system collaboration, formalized with MOUs, in which the poor are active MNC advocates with the government and government officials are awakened to their needs. Multiple approaches were utilized to establish PPP relationships. These include development of friendly working relationships around a common MNC goal, common trainings, working together on NID/NHDs, communication about referrals, sharing mobile phone numbers, and an established network of joint meetings with district, upazila, union, and local officials/health workers. The PI-based CHVs and TTBAAs built relationships with government health workers and provide ongoing MNC at ward and union level clinics. PI groups are actively involved in monitoring and supporting local clinics, helping clinic health workers to thrive and provide consistent quality MNC care, and networking and advocating with government officials to address gaps in services.

4. SUSOMA improved the MNC practices of marginalized mothers and families by increasing knowledge of danger signs and improving the health practices of mothers through health counseling by trained community volunteers (CHVs TTBAAs). They increased the demand for 4 ANC, safe delivery, and PNC services by means of targeted BCC-based household counseling and community messaging through drama and health events. Trained ISPs were empowered to follow IMCI care guidelines and increase appropriate referrals. Specific training curriculums were utilized for CHVs, TTBAAs, ISPs, and government health workers to meet project objectives. Both males and females were involved in project activities to the extent culturally possible.

5. SUSOMA increased equitable access to safe CSBA home and facility delivery by increasing demand through awareness raising and change attitudes and behaviors via house to house counseling, drama events, and engaging with influencing elites to promote ANC and institutional delivery/CSBA births. With the government they developed a new role for TTBA as an advocate to promote CSBA/facility delivery rather than doing home deliveries themselves. Key to increasing access for the poor was establishment of PI-based EHF, emergency transportation mechanisms, and referral systems.

6. SUSOMA strengthened the capacity of PARI and SATHI to support the PI model, promote rural MNC, and work with MOHFW at upazilla and district levels through extensive training and support. They increased the number and capacity of NGO health staff and mentored NGO management in rapid-uptake of the PI model, working in volume, monitoring and evaluation, grant proposal writing, tool development, carrying out research, financial management, donor communication, and networking with the MOHFW at national and local levels.

### **Sustainability of the PI model and project accomplishments**

Stakeholders interviews, project data and the OR study suggest that the PI model groups and PPP structures developed during SUSOMA are self-sustaining and will continue promoting MCH after the project ends. All PIs are registered with the GOB as independent NGOs and have advisory committees of local elites that provide support and guidance. All tiers of PI groups have strong skilled leaders and members that are equipped to continue the MNC work. Groups have bylaws, healthy bank accounts with EHF and health savings, and established capacity in the six PICI areas. They are active in planning, financial management, IGA, theater for development, and advocacy. The social capital of PI members is enriched and a culture of servant leadership for their communities established. PIs are equipped to

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conduct trainings for new PGs, and have formed 34 PGs directly without staff assistance. They are committed to forming male primary groups and achieving gender-equality in the PI system.

The PI partnership with the government is well established and characterized by networking, mutual commitment, cooperation and support. The PI groups have MOUs with health facilities and with the government and are accepted in the community and at the facility level. They are involved in decision-making related to the management of all clinics in Kendua and Durgapur. Local resources are being mobilized by the PIs for health service improvements. The referral system is established and strengthened with marginalized women and babies now getting better treatment by referral. The DDFP recognizes the important role CHVs and TTBA's have in promoting MNC, is linking them with district family planning outreach, and plans to provide them additional training.

CHVs/TTBA's are established in the community as volunteer health providers with PI supervision and the provision of mobile phones for better communication. They are motivated to continue household visits, health lessons to primary groups, meeting with government health workers, linking with health facilities and making referrals. They report needing continued training and support. The PIs are supporting the CHVs, making lists of health lessons for them to share with the community, arranging training for them, and will continue to share best practices and successes with government and their communities through established networks of relationships, meetings, and assemblies.

Gains in MNC are expected to continue as PI's continue to promote healthy mothers and babies at the grassroots level and through PPP activities. It is possible that the full impact of the PI system on maternal newborn mortality and health status may take longer to occur than can be measured during this project.

### **Cost-Analysis of resources required to institutionalize scale-up the intervention**

The 5-year project intervention using the PI model with volunteer community-based providers was completed at a cost of USD 1,207,572. The average project cost per woman of reproductive age is USD 9.73 and per community volunteer (CHV/TTBA) is USD 1,045. It is estimated that a similar program three times as large could be scaled up over 4-5 years in an area with a population of 1.5 million for a cost of USD 3.6 million. The complete cost analysis is in Annex XIXd.

### **SUSOMA's Best Practices**

After integrating all evaluation findings, the evaluation team identified the following eight SUSOMA best practices for the global community to consider in promoting maternal newborn health care in marginalized communities:

1. The delivery platform: The PI Model of empowerment and local governance that increases social capital of marginalized poor women and improves community-based MNC and health practices by coordinating with government health facilities and officials (Daring, K. The PI Manual, 2013).
2. Emergency health funds built and managed by PI groups for payment of health transport and services for the poor.
3. The PPP-based referral system established jointly and used by PI groups, CHV's TTBA's, ISPs and both government and private health facilities that gives priority access to the poor.
4. Matching meetings between PI and government providers focused on collaborative integration of HMIS, a more complete portrayal of maternal newborn data, and improved coverage.
5. The volunteer system of MNC and promotion of ANC, safe deliveries/births and PNC at the grassroots level by trained unpaid CHVs and TTBA's working in collaboration with health facilities providers.
6. PI involvement in the management and operations of community clinics to increase quality and availability of care.
7. Using theater for development (TfD) for MNC messaging at the community level.



8. WR working through local NGO partners (civil society) to increase local organizational capacity so that local NGOs have the structures and substructures for community development and are able to create and support the PIs, work with MOHFW officials and health facilities, train community-based providers, promote sustainable change and apply these learnings to other settings/projects.

## Impact

The OR provides preliminary evidence that social capital can be measured in poor women engaged in PI model groups focused on improving MNC in their community. The higher social capital scale scores found in PI group members in 2012 and 2014 compared to non-members may support attribution of project results to the increase in social capital that occurred in poor women of reproductive age engaged in the PI model.

Project findings support that the PI model was foundational to improving social capital of marginalized people and to achieving MNC gains. The PI model rapidly engaged the poor in all communities in intervention upazilas in a commitment to promoting maternal newborn health with a strong private-public partnership. It empowered women socioeconomically and with decision-making leadership capacities, and actively promoted gender-based leadership as men's groups were formed. It created a cadre of new grassroots leaders, increased communication and networking between government and PI leaders both horizontally and vertically, and increased access to government and private sector health and social services. The evaluation team appraised that involvement in the PI model brought hope and health care to the marginalized poor. Now that the PIs are GOB licensed NGOs, they can take loans from the social welfare department, secure welfare support for widows and vulnerable groups, and independently work with the government to advance community health and welfare. HMIS and project findings support that the PI model is associated with health improvements in communities. There has been a decrease in maternal and newborn deaths linked temporally with an increase in MCH service utilization and coverage, an increase in institutional and skilled deliveries, a decrease in unskilled home births, and improved practice of good health habits by pregnant women and mothers.

The poor and uneducated marginalized citizens were the focus of project interventions and they benefitted the most in terms of savings, health knowledge and practices, availability of and access to health services, referrals and emergency health funds, and enhanced capacity in leadership as well as development of a common community platform for MNC and a grassroots helping mentality.

*"Change comes through the PI, if there is no PI there is no development or change." PI Sukher*

## RECOMMENDATIONS

The evaluation team made three recommendations for extending the accomplishments of the SUSOMA project (Table 9).

**Table 9. Final evaluation team recommendations.**

| Finding   | Conclusion   | Recommendation   | Action  | Who Is Responsible                  |
|---|--|--|---|-------------------------------------|
| -Strong PPPs for MNC established between GOB and PI groups.<br>-Marginalized mothers and families have improved MNC practices.<br>-Quality of MNC | The PI model is associated with improved MNC health practices and higher quality of MNC. | 1. That the PI model receives ongoing support by GOB and NGOs and be considered for scale-up in rural poor communities with government officials interested in | -Continued sharing of the stories and accomplishments of the PI model including the best practices and learnings.<br>-Disseminate the PI Manual | World Renew<br>SATHI<br>PARI<br>GOB |

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services is increasing.

improving MNC  
health services and  
outcomes.

-The local NGOs have increased capacity to support community mobilization using the PI model.

PARI and SATHI are positioned to influence support for ongoing PI development.

2. That the PI groups established in this project continue to receive ongoing support

PARI and SATHI continue to engage the GOB with the established PIs for MNC gains

PARI  
SATHI  
GOB  
World  
Renew  
USAID  
Donors

-The OR study has the potential to explain the link between the PI intervention and program effects, and between development of social capital and PI group membership.

Quality OR data analysis and reports need to be finished as planned.

3. That the OR study be properly completed and published so that the story of successful community mobilization using the PI model can be told to the world.

-Complete OR data analysis of KPC, process data, and social capital and complete reports per guidance from USAID/ Evidence Project.  
-Use all opportunities to publish OR model.

ICDDR,B  
World  
Renew

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