



Adopting healthy maternal and child survival practices in rural Ghana

EIGHT CRS MATERNAL AND CHILD HEALTH INNOVATIONS



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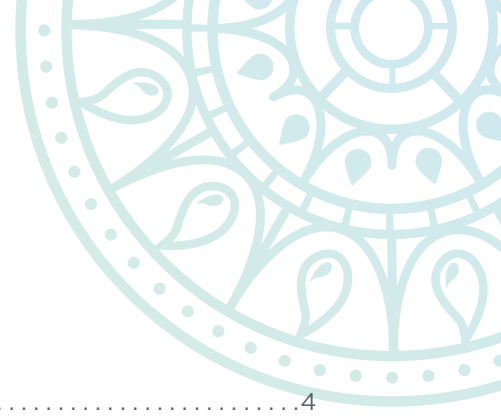
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LIST OF ACRONYMS

ANC	antenatal care	MCH	maternal and child health
C-PrES	community pregnancy surveillance and education session	MEAL	monitoring, evaluation, accountability and learning
CHPS	Community-based Health Planning and Services	MMT	modified motor tricycle
CRS	Catholic Relief Services	NGO	nongovernmental organization
DHIMS	District Health Information Management System	OR	operational research
EBF	exclusive breastfeeding	QI	quality improvement
EPPICS	Encouraging Positive Practices for Improving Child Survival	REST	Rural Emergency Health Service and Transport
GHS	Ghana Health Service	SMILER	Simple Measurement of Indicators for Learning and Evidence-based Reporting
HMNCC	Healthy Mothers and Newborn Care Committee	TBA	traditional birth attendant
IQAT	iPads for Quality Data Collection and Transmission	UDS	University for Development Studies
KPC	knowledge, practices and coverage	USAID	United States Agency for International Development
M&E	monitoring and evaluation		



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Catholic Relief Services works to prevent and treat the leading causes of maternal and child deaths in developing countries. CRS helps children and their mothers survive by implementing high-impact, evidence-based interventions that engage households, support communities and strengthen health systems.

This implementation guide provides details of eight CRS maternal and child health innovations implemented as part of the highly successful Encouraging Positive Practices for Improving Child Survival (EPPICS) project, a four-year child survival project in Ghana

funded by the United States Agency for International Development (USAID). By sharing innovation details, insights and expertise gained in the field, CRS aims to promote use of these proven strategies in other rural communities facing health challenges in hopes of improving MCH outcomes across the globe.

PURPOSE OF THE GUIDE

CRS created this implementation guide to serve as a valuable resource for health professionals, including local and international organizations, working in rural developing

communities. The guide presents eight CRS innovations used by EPPICS that led to numerous statistically significant increases in MCH indicators. Development workers can use the guide to increase their familiarity with these high-impact strategies and consider them for use in other child survival projects seeking sustainable improvement in maternal and child health in rural settings.

Part 1 of the guide shares an overview of the intervention situation in East Mamprusi district in northern Ghana at project start, followed by a high-level summary of EPPICS project activities and outcomes.

Part 2 presents a summary of EPPICS project administration, including details of:

- the project design
- coordination with key partners
- project surveys and research
- an organization chart
- a high-level implementation plan
- monitoring, evaluation, accountability and learning activities, including a pilot project to transmit health facility data more efficiently using iPad minis

Part 3 introduces each of the eight CRS MCH innovations, sharing the following information:

- problem faced
- strategic solution
- resulting outcomes
- implementation steps
- key challenges
- suggested best practices
- real-world examples from project staff, GHS staff, community partners and beneficiaries

Part 4 of the guide describes plans for expanded use of these innovations, followed by a conclusion in **Part 5** that recaps key findings and lessons learned.

CRS hopes that this implementation guide will foster increased use of these proven, community-based MCH innovations by other organizations seeking to improve health service quality and increase access to and use of formal health services in rural development settings.

PROJECT SUMMARY

When a mother chooses to deliver her baby outside of formal health facilities, she puts her own life and that of her newborn baby in jeopardy, particularly if complications arise. CRS aimed to reduce such preventable deaths through a high-impact, evidence-based child survival project in Ghana that helped to change the behavior and beliefs of pregnant women and their family members across the East Mamprusi district in the northeast part of the country.

The four-year, USAID-funded Encouraging Positive Practices for Improving Child Survival (EPPICS) project sought to improve the quality and availability of health services in all East Mamprusi communities and bridge the gaps preventing pregnant women and mothers from using these services. Thanks to the eight CRS innovations detailed in this implementation guide, the project contributed to significantly improved MCH outcomes across the district.

“ Our assisted deliveries keep increasing, and maternal and infant mortality keeps going down.”

— **Justina Alechana**, midwife, Presbyterian Health Center, Langbensi community

During the project timeframe, East Mamprusi advanced from being the worst-performing district in the Northern Region in 2010 to the best-performing district overall in the region in 2014 and the best-performing district for MCH indicators in 2015¹. Institutional maternal mortality reduced 131 percent from 295 deaths per 100,000 live births in 2011 to 81 deaths per 100,000 live births in 2015², with skilled assisted deliveries increasing from 43 percent at baseline to 76 percent at endline³. EPPICS innovations contributed significantly to these districtwide gains by moving community members away from harmful rural health practices and toward use of formal health services. The project also helped all 12 local health facilities in East Mamprusi to improve service delivery and establish strong links with each of the 240 communities, building a powerful foundation for

“ Our ideas changed four years ago because the health staff shared important health messages with us. Women don’t give birth to stillborn babies or die from pregnancy anymore.”

— Iddirisu Tahiya, community member and father-in-law, Samini village

sustaining project gains and achieving future MCH improvements.

At project start, maternal and infant mortality and morbidity was high in East Mamprusi district, largely due to limited physical access to health facilities and traditional practices that put mothers and newborns at risk. Residents live in small settlements of 200 to 500 people⁴, with 60 percent of the communities falling outside an eight-kilometer radius of the nearest health facility⁵. The long distances restrict access to the facilities and limit outreach by GHS. In addition, East Mamprusi is one of the poorest districts in the Northern Region, with an average household size of 8.6 persons per household⁶. The area also has some of Ghana’s lowest school enrollment rates, highest dropout rates and highest illiteracy rates⁷.

EPPICS faced the additional challenge of persuading some decision makers at the household level to allow women to give birth in health facilities for safer deliveries. Traditionally, Ghanaian women have little say regarding their pregnancies and childrearing. Husbands and parents-in-law make the majority of family-related decisions, including if and when to use formal health services.

A 2010 UNICEF study identified key decision makers in the use of MCH services as mothers-in-law and fathers-in-law, especially at the time of delivery and complications. The study also found that health workers’ negative attitudes contributed to households preferring TBA-assisted deliveries over use of skilled services⁸. Due to these and other contributing factors, at project inception, 43 percent of women living in East Mamprusi still opted to give birth outside of formal health facilities⁹, leading GHS regional staff to recommend East Mamprusi for the EPPICS interventions.

The EPPICS project aimed to contribute to sustainable maternal and newborn morbidity and mortality reduction in East Mamprusi district by 2015. The project’s two primary strategic objectives were to improve maternal and neonatal health outcomes and increase access to quality maternal and neonatal services for all families in the district. The project design—determined in collaboration with Ghana Health Service, research partner University for Development Studies (UDS) and community stakeholders—coupled improvements in delivery of facility-based health services with innovative community-led strategies to close the gaps preventing care-seeking at the community and household levels.

“Before EPPICS came, maternal and infant deaths were high, stillborn rates were high, skilled deliveries were very low and women were reporting late for antenatal services. Antimalarial prophylactic coverage was very low, most women weren’t practicing exclusive breastfeeding and there was low usage of insecticide-treated nets,” shares former East Mamprusi District Director of Health Services Paulina Bayiwasi. “I could tell that the EPPICS strategies would really address the problems we had.”

Areas of intervention included maternal and newborn care (60 percent), nutrition (30 percent) and malaria prevention in pregnancy (10 percent) at the health facility and community levels. Each project activity aimed to tackle one or more of the three delays contributing to preventable maternal and newborn mortalities:

1. delay in making a quick decision to seek care due to harmful cultural beliefs or an inability to recognize a problem
2. delay in reaching the point of care due to long distances and transportation challenges
3. delay in receiving appropriate and quality care due to inadequate health services, referrals or staff skills

The EPPICS project addressed these delays in two primary ways: by improving service delivery at each of the 12 health facilities in East Mamprusi district and by fostering a sense of responsibility on the part of individual community members toward contributing to positive health outcomes. More than 2,000 community volunteers helped to implement project activities, with a strong focus placed on removing cultural barriers to positive health-seeking behaviors. Project volunteers repeatedly encouraged all community members—especially parents-in-law and husbands—to choose healthier birthing practices and to include their daughters-in-law and wives in MCH decisions.

EPPICS’ two-pronged approach also served to build strong links between the health facilities and each of East Mamprusi’s 240 rural communities—relationships that promise to sustain project gains and provide a foundation for future improvements. By implementing activities districtwide, EPPICS compounded the overall impact of the eight CRS innovations:

- **Partner engagement:** The EPPICS project was led by GHS and relied on extensive community in-

volvement for lasting sustainability, with CRS serving in an advisory and facilitative role.

- **Capacity building:** Numerous trainings and continual mentoring increased the capacity of GHS district officers, frontline health workers and community volunteers, who became personally invested in the project's success.
- **Councils of Champions:** EPPICS invited community elders and leaders to form MCH councils to discuss health issues, determine needed behavior changes and use their strong community influence to sway public opinion and behaviors toward healthier beliefs and practices.
- **Traditional birth attendants repositioned as link providers:** The project trained traditional birth attendants to serve instead as link providers responsible for linking pregnant women to health facilities for MCH services and for helping women in labor to get to the nearest health facility to reduce home births and resulting maternal and neonatal deaths.
- **Modified motor tricycles as rural ambulances:** Four modified motor tricycles provided 20 of East Mamprusi's most isolated communities with readily available transportation to the local health facility for women in labor and their link providers, increasing access to health facilities for skilled assisted deliveries and subsequently reducing deaths occurring from home deliveries.

- **Community giant scoreboards:** Large walls built in prominent public spaces in each of the 240 communities continue to serve as visual awareness-raising tools that rally residents by publicly tracking community performance against key maternal and child health indicators.
- **Community pregnancy surveillance and education sessions:** EPPICS recruited model mothers to lead education sessions for pregnant women and nursing mothers to promote early antenatal visits, institutional deliveries, postnatal care, and appropriate infant and young child feeding practices.
- **Mentoring health facility staff:** Six mentors visited each of the 12 health facilities in East Mamprusi district to provide hands-on coaching and mentoring to less experienced health staff to increase their knowledge and skill levels.

Together, these strategies made powerful and lasting impacts, described in the related strategy sections of this implementation guide. EPPICS served 58,634 beneficiaries in East Mamprusi district from October 2011 to September 2015, including 30,713 women of reproductive age and 27,921 children under 5 years of age¹⁰. The project also assisted an additional 79,616 beneficiaries indirectly through assistance to family members and activities that helped to remove cultural barriers to positive health behaviors by modifying harmful practices, rituals, attitudes and beliefs.

POSITIVE RESULTS

East Mamprusi district showed statistically significant increases in numerous maternal and child health indicators from project baseline to endline¹¹.

Number 1 district—Advanced from worst-performing to best-performing district

76.7% increase in skilled assisted deliveries—from 43% to 76.7% (p<0.005)

231.8% increase in clean cord care at birth—from 22% to 73% (p<0.001)

48% increase in registration and use of antenatal care in first trimester—from 50% to 74% (p<0.001)

28% increase in four or more antenatal visits—from 63.9% to 82% (p<0.001)

156% increase in birth preparedness—from 16% to 41% (p<0.005)

50% increase in early initiation of breastfeeding—from 50% to 75% (p<0.005)

162.5% increase in postnatal care within two days of delivery—from 32% to 84% (p<0.001)

65% increase in mothers sleeping with babies under long-lasting insecticidal nets—from 42% to 71% (p<0.001)

48.9% increase in exclusive breastfeeding of infants for the first six months—from 47% to 70% (p<0.005)

41.8% increase in appropriate complementary feeding of children age 6-23 months—from 55% to 78% (p<0.001)

“ With all the projects under EPPICS, we have gained new knowledge and have now improved our health.”

— **Alhassani Dahamani**, imam, Soansobigi village

EPPICS at a glance

- October 2011 to September 2015
- \$2.2 million child survival project to improve rural maternal and child health outcomes across East Mamprusi district in Ghana
- Funded by USAID with a 25 percent CRS private cost share
- 58,634 direct beneficiaries and 79,616 beneficiaries served indirectly across all 240 East Mamprusi communities
- Implemented by Ghana Health Service as lead partner with extensive community involvement
- Baseline study and operational research conducted by University for Development Studies
- Eight key strategies led to statistically significant increases in MCH indicators:
 - » Partner engagement
 - » Capacity building
 - » Councils of Champions
 - » Traditional birth attendants repositioned as link providers
 - » Modified motor tricycles as rural ambulances
 - » Community giant scoreboards
 - » Community pregnancy surveillance and education sessions
 - » Mentoring health facility staff





Nelson Manduaya, GHS public health coordinator for Nalerigu subdistrict, says that EPPICS staff sat side by side with GHS staff to solve MCH issues together.

PROJECT DESIGN AND PARTNER COORDINATION

Relying on the experts

At the core of the EPPICS project design was an unwavering focus on delivering MCH innovations that would be led and implemented by key stakeholders in East Mamprusi district for long-term sustainability. EPPICS took a unique approach to project administration by making Ghana Health Service the lead implementer of all project interventions, with CRS project staff providing technical assistance and support. The project also fostered enormous community participation, with more than 2,000 volunteers assisting with the execution of project activities.

CRS deferred to regional experts right from the start. National GHS staff recommended the Northern Region as the target imple-

mentation area, and regional GHS staff selected East Mamprusi district due to its status as the worst-performing district in the region. This choice was based on high rates of maternal, newborn and infant mortality; chronic malnutrition; and low utilization of MCH services. Other factors included a previous positive partnership experience between GHS and CRS in the same district when implementing other MCH activities. The District Health Management Team was also very supportive of the project and its complementary nature in regard to GHS MCH goals and objectives.

CRS and the East Mamprusi district health management team developed the project design jointly with input from GHS health part-

“ We came in and worked with the communities. We started with EPPICS community sensitization activities and within two years we were able to reduce maternal mortality by 66 percent.”

— Adam Anas, East Mamprusi district health information officer

ners, including UNICEF and President’s Malaria Initiative implementing organizations at the regional Level. The decision was made to implement the innovations districtwide in hopes of maximizing their impact.

To support this broad project reach, CRS project officers sat beside GHS counterparts at the district and subdistrict levels to provide guidance and backstop support. Clear memorandums of understanding detailed the roles and responsibilities of CRS and GHS, providing a written framework to refer to if any party failed to follow through on expected actions.

EPPICS also provided sufficient resources—including motorbikes and fuel for travel on rural roads—to make sure subdistrict GHS focal persons could reach all East Mamprusi communities. By providing all of the resources needed for project implementation across the district, CRS allowed GHS staff to build strong relationships between district health facilities and each East Mamprusi community.

Just as important as building the capacity of GHS was to build capacity at the community level. CRS looked to the target communities themselves to assist with project activities for sustainability and to extend project reach down to the household level. Project staff consulted community leaders for guidance and to gain buy in. EPPICS also implemented an operational research initiative to create Councils of Champions comprised of community elders and leaders in hopes

of using their powerful sway over public opinion to move community members away from harmful health practices and toward positive MCH behaviors (see Innovation No. 3 section).

“You cannot go to a community and start imposing your strategies and interventions without involving the opinion leaders,” notes former District Director Bayiwasi. “It will not work for you. The program will fail. [The leaders] are the people the community members respect and take their instruction from.”

A key EPPICS design tenant was to leverage already existing health and civil society structures instead of creating new structures. To this end, EPPICS worked closely with accredited GHS community health volunteers and helped to revive and strengthen existing quality assurance teams at health facilities, community emergency transport committees and community health committees. EPPICS also repositioned the role of traditional birth attendants into link providers charged with helping women in labor to travel to a health facility for a skilled assisted delivery instead of conducting risky births at home.

By making community members an integral part of project implementation, the EPPICS project fostered a high sense of community ownership. Extensive community involvement also enabled community volunteers to build the skills needed to continue MCH activities after the project end.

SURVEYS AND RESEARCH

CRS Ghana worked with additional partners to conduct key surveys and operational research.

- An independent consultant supported by GHS and CRS staff conducted a **rapid health facility assessment** at eight of the existing 11 health facilities in the project area at the project start; a 12th facility was opened during project implementation.
- CRS commissioned a **baseline survey** in November 2011 to form a better understanding of the current knowledge, practices and coverage (KPC) related to maternal and child health in East Mamprusi district. The survey, also conducted by an independent consultant supported by GHS and CRS staff, established baseline statistics and set benchmarks for implementation progress and post-implementation performance.
- A **final KPC study** was conducted in June 2015 by the Navrongo Health Research Center in conjunction with CRS staff at the end of the project to measure changes since the 2011 baseline.
- The EPPICS project also contracted with UDS to conduct **operational research** for the Council of Champions innovation in Sakogu and Langbensi subdistricts (see Innovation No.3 section).

Better data for better decision-making

Project monitoring and accountability was an essential component of the EPPICS project to evaluate the progress and outcomes of CRS innovations. EPPICS monitoring, evaluation, accountability and learning (MEAL) activities included the following:

- A knowledge, practices and coverage baseline study and rapid health facility assessments at target health facilities established baseline statistics and set benchmarks for implementation progress and post-implementation performance.
- CRS, GHS and UDS stakeholders attended a workshop to discuss and agree on all project indicators, definitions and units of measurement, data sources and frequency of reporting. Workshop attendees also determined EPPICS project indicators that would be integrated with GHS indicators but avoid duplication of data reporting already being done on a regular basis by GHS. The EPPICS indicators also ensured that performance data would meet USAID’s five data quality standards of validity, integrity, precision, reliability and timeliness.
- The GHS District Health Information Management System (DHIMS) tracked the majority of MCH data, while CRS’ Simple Measurement of Indicators for Learning and Evidence-based Reporting (SMILER) system tracked EPPICS-specific activities, such as Council of Champions achievements. CRS shared SMILER data with GHS counterparts to help inform decisions related to EPPICS and other MCH programming efforts.
- A pilot project called iPads for Quality Data Collection and Transmission (IQAT) streamlined GHS data reporting by digitizing form submission through use of iPad minis. IQAT also helped to improve data quality by validating the data before allowing it to be sent electronically for entry into DHIMS (see next sidebar for more details).
- Community health volunteers collected key data on MCH indicators and project activities, sharing the information with GHS and CRS field officers to input into the DHIMS and SMILER systems respectively. Other community volunteers such as members of Councils of Champions and emer-



CHPS compound administrators like Mariama Issifu in Jawani helped to coordinate EPPICS data reporting.

gency transport committees also shared details monthly of completed activities.

- For efficiency gains, capacity building and rapid problem resolution, GHS and CRS staff jointly conducted quarterly supervision and data validation visits to health facilities and communities. These visits allowed monitoring and evaluation officers to check data quality, coach facility staff or volunteers in any needed data reporting corrections and immediately address any other M&E weaknesses.
- GHS and CRS staff also held quarterly reflection meetings with community clusters—with individual communities represented by their Healthy Mothers and Newborn Care Committee members—to elicit community feedback on EPPICS activities and address any concerns. These meetings served a dual purpose by fostering a healthy spirit of competition among communities to be recognized for top MCH performance.
- The project established an M&E working group to provide a forum to proactively address M&E issues, with representation from all stakeholders and project partners.

Thanks to these comprehensive MEAL activities, the EPPICS project helped GHS to increase both the depth and quality of MCH data collected to provide a more accurate picture of community health and better inform decision making.

EPPICS general implementation plan

PRE-IMPLEMENTATION PHASE

1. Work with key partners and stakeholders on the project proposal, designing high-impact, evidence-based interventions including sustainability strategies that promise to positively influence MCH outcomes.
2. Recruit key project staff and provide required orientation.
3. Develop a detailed implementation plan with partners and key stakeholders based on the approved proposal.
4. Organize an official project launch with all stakeholders participating, including partners and beneficiaries.
5. Conduct a project planning and implementation meeting with key partners.
6. Conduct a Simple Measurement of Indicators for Learning and Evidence-based Reporting (SMILER) exercise to determine project indicators that are integrated with GHS indicators to avoid duplication of data collection and reporting.
7. Work with GHS to select, mobilize and sensitize target communities and health facilities.

IMPLEMENTATION PHASE

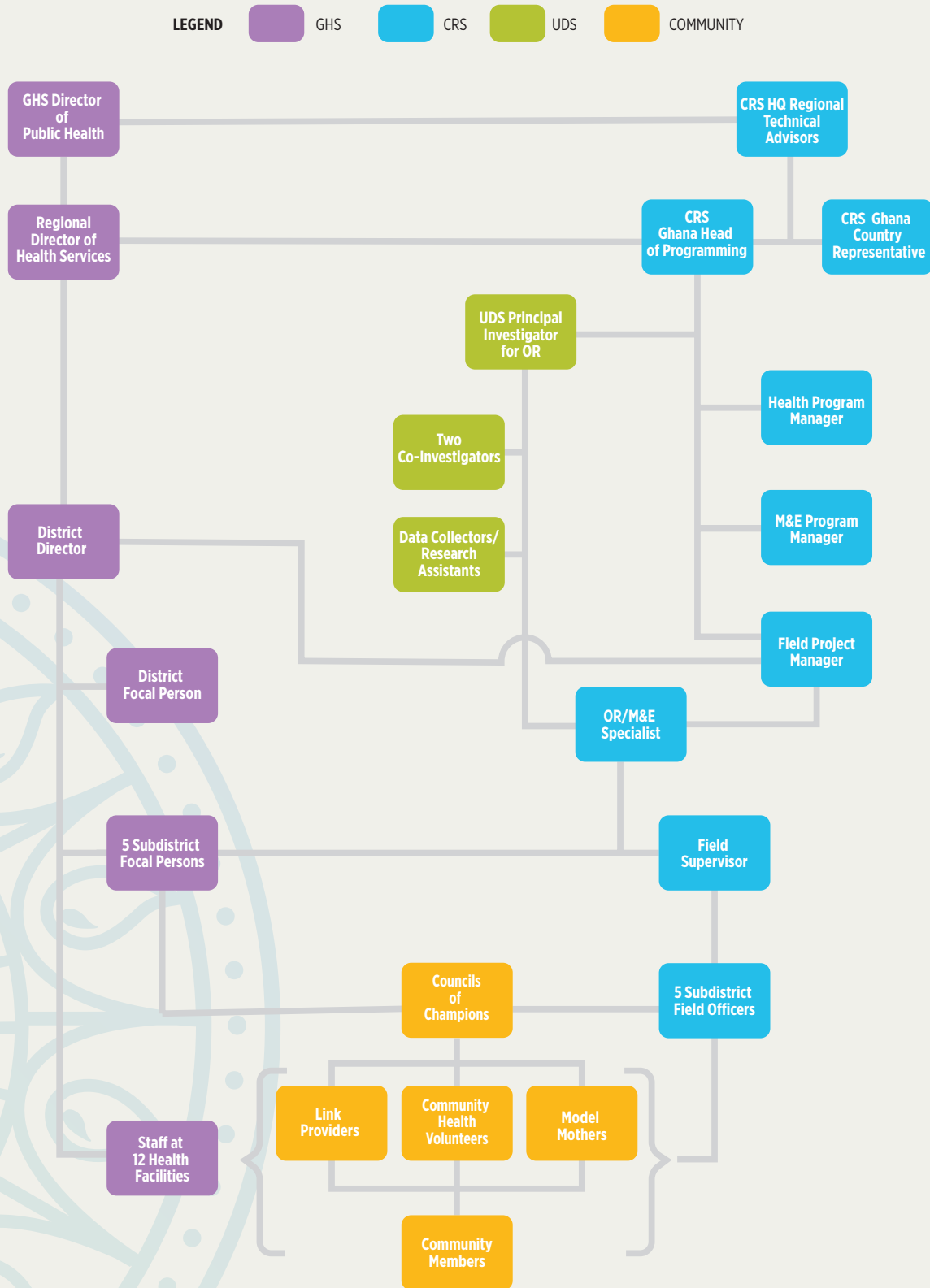
1. Review, discuss and agree on detailed work plans with each partner.
2. Undertake mobilization and awareness-raising activities in all of the target communities.
3. Select community volunteers and provide training orientations for all of the project strategies, highlighting their roles and responsibilities.
4. Conduct trainings on key project strategies for project and partner staff.
5. Conduct community and subdistrict level reflection meetings with community members and health workers respectively.
6. Provide monitoring and supervisory support visits to community volunteers and health workers.
7. Conduct quarterly and annual project performance review meetings with partners.
8. At project end, review the sustainability strategies with partners and a cross-section of community volunteers and beneficiaries to generate an action plan for ongoing execution of project activities by GHS staff and community volunteers.

POST-IMPLEMENTATION PHASE

1. Conduct a final evaluation of the project strategies and implementation activities.
2. Disseminate evaluation findings, including lessons learned and best practices.
3. Develop policy briefs from lessons learned and best practices to inform maternal and child health policies.

EPPICS ORGANIZATION CHART

EPPICS leveraged existing GHS staff and community volunteers to implement project activities. CRS staff sat next to GHS counterparts at the district and subdistrict levels to provide technical guidance and support. University for Development Studies provided valuable operational research (OR) for the Council of Champions innovation.



“ The IQAT project improved data consistency and its timeliness.”

— Adam Anas, East Mamprusi district health information officer

DIGITIZING DATA COLLECTION AND SUBMISSION

When the EPPICS project started, CRS discovered that facility staff were completing 24 different GHS forms manually on a monthly basis to submit all needed MCH data. This manual reporting consumed many staff hours, and submission of the forms required a staff member to spend an additional day or two traveling to and from the district health office to deliver them. The district health information officer would then need to verify the data before manually entering it into the District Health Information Management System, further delaying data availability and introducing the risk of data entry errors. DHIMS data then feeds into regional and national health information management systems.

In 2012, CRS worked with GHS staff to develop a pilot project called iPads for Quality Data Collection and Transmission (IQAT) to digitize data collection at the facility level for faster submission, improve data validation and streamline data entry into DHIMS. EPPICS provided each of the five GHS subdistrict focal persons with an iPad mini that had digitized versions of the GHS MCH forms. These focal persons received training on how to complete the digitized forms, with built-in validation rules prompting users to correct any data inconsistencies.

Once trained, the EPPICS subdistrict focal persons visited each facility under their purview on a monthly basis to complete the digitized forms with the facility administrator. They then sent the forms to the district health office electronically for review by the district health information officer. After checking the forms, the officer would then pass the data electronically to DHIMS, saving additional time and eliminating the risk of data entry errors. Another benefit of the electronic system was an automated ranking of facilities in terms of their performance on tracked maternal and child health indicators, which en-



couraged health facilities to take measures to improve their rankings.

In addition to speeding data transmission to the district office and improving data quality, the digitized forms reduced the amount of time patients had to wait for services when staff members were completing the forms. Absenteeism also dropped because health providers no longer had to travel long distances to submit monthly forms.

After an assessment showed great improvements in data reporting timeliness, GHS adopted a system based on the IQAT pilot that uses digitized forms on smart phones for streamlined data collection and submission. The more timely, accurate data submission allows GHS to better identify and address health challenges across the district.



“ EPPICS has helped us a lot.
There is good health now.”

— **Habiba Bukari**, link provider, Namasim village

STRATEGIC OVERVIEW

Evidence-based innovations for child survival

CRS designed the EPPICS project to take advantage of eight promising innovations for improving child survival. By implementing the strategies in a holistic manner across all East Mamprusi communities, EPPICS shared key MCH messages with community members repeatedly in hopes of effecting behavior change. The combined efforts paid off, with the strategies contributing to statistically significant increases in MCH outcomes during the project timeframe.

In the sections that follow, the guide presents each innovation in detail, sharing the prob-

lem faced, the innovative strategy rolled out to address the problem, resulting outcomes, implementation steps, key challenges and best practices that emerged from lessons learned. Each innovation section also provides real-world field examples shared by project staff, GHS staff, community volunteers and beneficiaries served.

By jointly addressing all three delays contributing to maternal and newborn mortalities from multiple fronts, the following eight EPPICS innovations helped East Mamprusi to significantly lower maternal mortality



Equipment provided by EPPICS helped health facilities to improve service delivery.

districtwide and increase uptake of MCH services:

- **Partner engagement:** The EPPICS project was led by Ghana Health Service and relied on extensive community involvement for lasting sustainability, with CRS serving in an advisory and facilitative role.
- **Capacity building:** Numerous trainings and continual mentoring increased the capacity of GHS district officers, front-line health workers, and community volunteers, who became personally invested in the project's success.
- **Councils of Champions:** As part of an operational research initiative in two subdistricts, EPPICS invited custodians of practices, rituals, attitudes and beliefs to form MCH councils to discuss health issues, determine needed behavior changes and use their strong community influence to sway public opinion and behaviors toward healthier beliefs and practices.
- **Traditional birth attendants repositioned as link providers:** The project trained traditional birth attendants to serve instead as link providers responsible for linking pregnant women to health facilities for MCH services and for helping women in labor to get to the nearest health facility to reduce home births and resulting maternal and neonatal deaths.
- **Modified motor tricycles as rural ambulances:** Four modified motor tricycles

provided 20 of East Mamprusi's most isolated communities with readily available transportation to the local health facility for women in labor and their link providers, increasing access to health facilities for skilled assisted deliveries and subsequently reducing deaths occurring from home deliveries.

- **Community giant scoreboards:** Large walls built in prominent public spaces in each of the 240 communities continue to serve as visual awareness-raising tools that rally residents by publicly tracking community performance against key maternal and child health indicators.
- **Community pregnancy surveillance and education sessions:** The project recruited model mothers to lead education sessions for pregnant women and nursing mothers to promote early antenatal visits, institutional deliveries, postnatal care, and appropriate infant and young child feeding practices.
- **Mentoring health facility staff:** Six mentors visited each of the 12 health facilities in East Mamprusi district to provide hands-on coaching and mentoring to less experienced health staff to increase their knowledge and skill levels.

"We saw an overall improvement in the health indicators," explains East Mamprusi District Health Information Officer Adam Anas. "The nature of EPPICS was to create demand at the community level and build the ability of the health facilities to meet that demand. We have seen that EPPICS has made a great impact in increasing access to MCH services in rural health facilities. The various health facilities have also built their capacity up to standard to enable them to provide the expected quality of care."

The exceptional MCH gains achieved as a result of these innovations and the hard work of GHS staff and community volunteers are expected to last well into the future. Extensive capacity building and use of existing structures provided a strong foundation for enabling EPPICS activities to continue without disruption long after the project's end.



CRS Ghana Health Program Manager Mohammed Ali worked closely with former East Mamprusi District Director of Health Services Paulina Bayiwasi to drive implementation of EPPICS innovations districtwide.

INNOVATION NO. 1 | PARTNER ENGAGEMENT

Treating partners as peers

From the conceptualization stage through project design and across field-level implementation, Ghana Health Service and community stakeholders played highly strategic roles in the EPPICS project. EPPICS placed GHS as the lead implementer for all project activities to ensure Ministry of Health buy-in and the ability for GHS staff to keep driving EPPICS innovations forward after the project end. EPPICS also leveraged existing community structures and relied heavily on community volunteers to extend the reach of the project down to the household level in all 240 East Mamprusi communities.

“Unlike many health initiatives, we put the government agency that has been mandated to deliver health services at the fore-

front of the implementation process. We built their capacity to implement all of the EPPICS innovations,” explains CRS Ghana Health Program Manager Mohammed Ali. “By giving GHS staff all of the knowledge and skills needed to implement EPPICS strategies, they will push ahead with them, especially after seeing concrete results.”

GHS led project implementation across the district, with CRS providing support and technical assistance. The project involved GHS staff and community volunteers in project activities at each level of the health infrastructure, from the district office to district health facilities and down to Community-based Health Planning and Services (CHPS) compounds. By placing communities

“ Unlike other NGOs that implemented projects themselves, with EPPICS we were doing it with CRS guidance.”

— **Paulina Bayiwasi**, former East Mamprusi district director of health services

at the forefront of health care delivery, EPPICS maximized the impact of project activities by giving everyone an essential role to play:

- Facility administrators supported health staff involvement in EPPICS innovations and helped to strengthen quality improvement teams.
- Public health nurses and midwives met regularly with link providers, Healthy Mothers and Newborn Care Committees (HMNCCs), model mothers and Councils of Champions to promote positive MCH behaviors.
- Community health nurses and community health officers worked closely with link providers, HMNCCs and community health volunteers, with less experienced staff members receiving coaching from EPPICS mentors to increase their MCH skills.

“It was difficult interacting with health facility staff because there was no relationship between village women and them,” shares Tiapoa Awuni, a mother who attends community pregnancy surveillance and education sessions in Langbensi community. “The only interaction you would have was at the health facility. Health staff then began to come and talk to us at these meetings.”

CRS and GHS staff worked side by side to the point that community members did not differentiate between them. They shared offices at both the district and sub-district level, and conducted most activities jointly, including monitoring visits with facilitative support at the 12 East Mamprusi health facilities and in all 240 communities. By sharing data and discussing any new problems together, CRS and GHS gained additional insights and efficiencies. Quarterly and annual performance review meetings provided forums for further reflection on MCH service delivery and health care delivery overall.

“The collaboration was very strong,” shares former District Director Bayiwasi. “CRS involved us in everything they were doing. We even involved EPPICS field officers in other GHS projects in the field.”

EPPICS also enabled GHS to strengthen its relationship with each East Mamprusi community. CRS staff continuously highlighted the fact that infrastructure improvements and capacity building alone are not sufficient to improve MCH indicators; facilities need to also engage directly with community members to be sure they can and want to access and use MCH services.

At project end, in interview after interview, GHS staff and community volunteers remarked on the exceptional coordination between CRS and GHS. Unlike similar health interventions by other NGO partners that typically are implemented by NGO staff, EPPICS consulted GHS at each step and asked GHS to take ownership at all levels. This led GHS staff to take great pride in the project and its accomplishments, particularly when East Mamprusi was named the best performing district in 2014—three short years after the project start.

“We did not see EPPICS as a separate organization,” explains Nelson Manduaya, public health coordinator for Nalerigu subdistrict in East Mamprusi. “They came to work with us to achieve one goal together: to maximize maternal and child health so women can successfully deliver healthy babies.”

EPPICS did face challenges. The differing policies of CRS and GHS at times created bureaucratic issues. Most project roles were also not dedicated positions, which at times affected project activities due to scheduling conflicts. GHS and CRS staff resolved these issues through open communication and diplomacy.

GHS continues to commit staff time and effort to CRS innovations begun under EPPICS:

- Nurses and midwives continue to nurture their relationships with link providers and HMNCCs .
- GHS-accredited community health volunteers collect MCH data down to the household level to share monthly with GHS focal persons.
- Twelve quality improvement teams drive continuous improvement at each of the health facilities in East Mamprusi.
- Model mothers continue to host C-PrES sessions for pregnant women and nursing mothers.
- Councils of Champions meet on a regular basis to discuss MCH issues and determine positive ways forward that they share communitywide to drive healthy behavior change.
- Modified motor tricycles keep transporting women in labor and newborn emergencies to health facilities for delivery and skilled care, with more of these innovative rural ambulances being placed into additional communities through the follow-on CRS Ghana Rural Emergency Health Service and Transport (REST) project.



A UNIQUE, FANTASTIC COLLABORATION

Adam Anas, East Mamprusi district health information officer, reflects on the unique nature of the collaboration between GHS and CRS.

I've worked in this district for eight years with GHS. I've worked with many organizations, but we never received the kind of collaboration we've had with EPPICS.

With other NGOs, they come and tell you what they want to do. You give them your consent, and you never see them again until the final evaluation even though whatever activity they are carrying out is the mandate of Ghana Health Service. It is only fair that you come and seek the technical competence of the people who should be doing the work, and if they don't have the technical competence, help them to build it. If you don't, the activity becomes unsustainable.

With CRS and the EPPICS project, we designed the EPPICS proposal together, and when they won the grant, at every step the district was involved. Because we were involved in every process, we owned it.

The collaboration with EPPICS was very unique and very fantastic. We had an agreement that GHS was the main implementer and there were certain things we were supposed to do and that

CRS was supposed to do. When we didn't know how to do something, they came in and showed us the way. In the areas where we had challenges meeting our mandate, EPPICS came in to support us in achieving our goals.

I must admit that the work can make you very tired, but at the end of the day you become motivated to do even more. When EPPICS started, we were introduced to new things and we had to work a little harder to get them done. But then we started to see amazing results and that motivated us to continue.

Another good thing EPPICS did was to utilize the already existing structures and available health staff. EPPICS eventually will leave, but those structures will still operate.

Partner engagement is an essential aspect of every project planning and implementation step. EPPICS staff made sure to consult GHS and community stakeholders in all decision making to maximize the effectiveness and sustainability of project activities.



Iddrisu Zuberu, at right, facility administrator and enrolled nurse at the Samini CHPS compound, saw many gains resulting from staff trainings, a new borehole, and the modified motor tricycle to transport women in labor.

INNOVATION NO. 2 | CAPACITY BUILDING

Building skills to save lives

A key component of health systems strengthening is to build the capacity of local partners to improve health outcomes. The EPPICS project took a two-pronged approach to capacity building: working to increase health staff skills at the 12 facilities for better service delivery and recruiting volunteers in all 240 East Mamprusi to support project activities down to the household level. By making capacity building a priority in every project activity, EPPICS contributed to a sustainable reduction in maternal and newborn morbidity and mortality in East Mamprusi district and ensured that a solid foundation is in place for continued MCH gains.

Using health system assessment and

strengthening approaches, CRS conducted a rapid health facility and training needs assessment to determine capacity strengths and skills gaps of health staff across the district. This data enabled EPPICS team members to determine both the software (health skills) and hardware (supplies and equipment) needed to improve quality of care at each rural facility.

Seven of the 12 health facilities in East Mamprusi district are CHPS compounds, integral structures in the government goal of achieving universal health coverage. CHPS compounds serve as the first point of health contact for rural villagers by providing basic primary health care and preventive care

through community education. Health staff at these compounds are often the least experienced, however, as it is difficult to retain health workers in rural posts with few social amenities and opportunities for educational advancement.

Recognizing the enormous impact capacity building efforts would have at CHPS compounds, EPPICS placed a primary focus on these facilities, including providing mentoring to less experienced staff members (see Innovation No.8 section). EPPICS project activities also allowed more experienced public health nurses and midwives from district health facilities to visit CHPS compounds to provide additional training and to work in the communities with CHPS community health officers.

GHS staff at all 12 East Mamprusi health facilities received extensive training to improve their skills in an effort to prevent and reduce maternal and neonatal deaths:

- 35 midwives, community health nurses and community health officers received training in a wide range of topics, including emergency obstetric care, essential newborn care, essential nutrition action, lactation management, infant and young child feeding and counseling skills, positive deviants as applied to maternal and child health, quality improvement methods, prevention of malaria in pregnancy strategies, and social behavior change communication.
- 584 GHS-accredited community health volunteers learned how to mobilize community members and raise awareness of EPPICS interventions. They were also taught malaria prevention strategies and trained in community-based collection and reporting of MCH data.

In addition, the project made sure that each of the 12 target health facilities had the basic supplies and equipment needed to provide quality MCH services. EPPICS procured and distributed delivery and lying-in beds, palpation couches, weighing scales, sphygmomanometers, Ambu bags, hemoglobin testing machines, delivery sets, and infection, prevention and control equipment, including sterilization drums and autoclaves. EPPICS also built water systems for 10 of the 12 facilities, providing them with water for the first time through on-site boreholes that

help increase cleanliness and reduce infections. The remaining two facilities received mechanized water system upgrades. The project also provided motorbikes and fuel to district and subdistrict offices to support rural outreach efforts.

“EPPICS gave us all of the resources—logistics, funds and even motor bikes—to carry out the strategies, which motivated the staff to give their best,” notes former District Director Bayiwasi.

“EPPICS strategies are sustainable because community members have seen that the strategies have really improved their health.”

— **Paulina Bayiwasi**, former East Mamprusi district director of health services

EPPICS staff understood that efforts focused only on improving facility infrastructures and health staff skills would fail to impact MCH indicators. These activities needed to be coupled with efforts that made sure that community members could and would use MCH services. To this end, the project also provided health workers with training in interpersonal communication and counseling skills to address widespread reports of disrespectful attitudes on the part of health workers toward women¹². For example, rural villagers reported hearing verbal judgements from health workers about family size and personal hygiene. The training helped health workers to understand that such statements amounted to verbal abuse and led villagers to not use the health services, putting maternal and child lives at risk.

The project also promoted the widespread involvement of more than 2,000 community volunteers to increase the uptake of MCH services in all 240 East Mamprusi communities. To train this army of volunteers effectively and efficiently, the project relied on training-of-trainers' methodology.

Trainings were often done in community clusters to handle the large participant numbers and reduce costs by minimizing travel distances. A wide range of community volunteers received the following training:

- 864 traditional birth attendants (TBAs) and traditional medical practitioners

TOOLS FOR SUCCESS

GHS staff and community members share the impact of EPPICS capacity building efforts on the quality of MCH service delivery and health indicators across East Mamprusi.

“EPPICS has assisted this compound and staff in so many ways. They have given us so much training and organized so many workshops. After we received the quality assurance training, we saw so many improvements. They also provided us with a borehole and a motor tricycle to help us transport pregnant women and emergency cases.”

— **Iddrisu Zuberu**, facility administrator and enrolled nurse, Samini CHPS compound

“There are no words to explain the partnership with CRS. It’s very excellent. The relationship between the communities and the health facilities was very poor and through CRS this gap has closed. Communities are now aware of health issues, and volunteers share reports. We can trace why problems are happening and come up with solutions. Previously, facility staff didn’t have the time or resources to train the volunteers.”

— **Emmanuel Amanfo**, general nurse, Presbyterian Health Center-Langbensi

“If you are not calm and talk to the community harshly, they won’t listen. Even field staff officers and GHS, they were patient with us and took their time to explain the project to us. And they told us to imitate this behavior.”

— **Shafura Mahmud**, link provider and committee member, Jawani village

“We are following the project advice, and it is making a difference. Women no longer miscarry or give birth to stillborn babies. If my daughter-in-law asks for money for traditional medicine, I say, ‘No, go to the health facility.’”

— **Doris Ama Atibila**, Namasim resident and Council of Champions community liaison

received training in home visiting techniques, dangers in pregnancy, the importance of skilled assisted deliveries and referrals, and danger signs in newborns.

- 480 TBAs repositioned as link providers received training in shifting their role from assisting with home deliveries to linking pregnant women to formal health services and helping them travel to the closest health facility when labor begins.
- 200 Council of Champions members learned about traditional practices and beliefs influencing maternal and child health; healthy MCH behaviors; the “triple A” approach of assess, analyze and agree on appropriate action; communication techniques; and home visiting techniques.
- 1,680 Healthy Mothers and Newborn Care Committee members received training in MCH community mobilization and how to manage community giant scoreboards, called Walls of Good Health in EPPICS communities.
- 480 model mothers were trained in maternal and child nutrition, nutrition behavior change communication and social behavior change communication related to MCH message delivery.

“Community members were put in charge of community health,” notes Chief Sulley Yakubu, community development officer for East Mamprusi. “Community members took the destiny of their health into their own hands by discussing their health issues. They were made to understand that you have to take care of your neighbor’s health.”

EPPICS also took on quality improvement at the health facilities to foster continuous improvement. Project staff supported the formation of a quality improvement team or the strengthening of an existing quality assurance team at each of the 12 East Mamprusi health facilities (see sidebar), providing training in quality improvement methods to all members. These teams now use data from client satisfaction surveys to determine areas of needed improvement, develop action plans and execute them to constantly improve health service delivery.

Thanks in part to all of these capacity building efforts, usage of formal health services rose dramatically in East Mamprusi during the EPPICS project timeframe. Client satisfaction also rose from 34 percent overall in 2010 to 89 percent in 2015, according to the district health information officer.

“Staff capacity increased because our midwives and community health nurses were trained in emergency obstetric care, newborn care and essential nutrition actions,” adds former District Director Bayiwasi. “Quality improvement efforts also really improved the quality of client care.”



“Clients now say that our treatment is better and that we don’t waste our clients’ time.”

—Yussif Amadu, staff nurse and quality improvement team member

SMALL CHANGES, BIG IMPACT

Continuous improvement is a critical aspect of providing high-quality health services to clients. To this end, EPPICS helped health facilities to form quality improvement teams or strengthen existing ones with the mandate of regularly identifying ways to improve service delivery. The seven-member team at the Presbyterian Health Center in Langbensi community shares their experience.

“The district health committee came out with a client satisfaction report in late 2014 that let us see where we needed improvements,” explains Samuel Achangejare, disease control officer and team member. “Our consulting rooms were congested, our records weren’t well organized, drugs were stacked on the dispensary floor, and we had no toilets.”

“Clients were opting to go to different facilities due to these issues,” adds staff nurse and team member Yussif Amadu. “We realized that service quality was declining, so we needed to form this team.”

The team began to meet regularly and made an action plan of top priorities, which included cleaning out all consulting rooms and constructing a toilet and garbage pit. The team brought the plan to the facility’s senior management and received funding to undertake the improvements, hire an additional cleaner, and also purchase a generator to provide light when the power went out. Five committee members supervised implementation activities.

“We met as a group to determine how to solve the

problems. We all shared ideas and came up with solutions, like implementing duty shifts [for 24/7 coverage],” adds Justina Alechana, midwife and team member. “We worked with cleaning staff to remove empty boxes, broken chairs, and more junk from the congested consultation rooms. The entire staff also met to decide how to improve compound cleanliness. We decided to all help clean it once a month.”

Staff behaviors also needed improvement to shorten client wait times resulting from staff lateness and absenteeism. The team developed a disciplinary procedure approved by the facility that required staff members to explain themselves any time they were late or didn’t show up for a shift. After multiple infractions, the staff member would lose a portion or all of their monthly motivation allowance provided by the Christian Health Association of Ghana.

“Now people come from other areas—even from the larger community of Walewale,” Yussif shares proudly. “Clients now say that our treatment is better and that we don’t waste our clients’ time.”

IMPLEMENTATION PLAN

INNOVATION NO. 2 CAPACITY BUILDING

KEY IMPLEMENTATION STEPS

Capacity building occurred as an integral part of each EPPICS project activity. One key focus for capacity building was the forming or strengthening of quality improvement teams at all 12 health centers in East Mamprusi to ensure that service provision met client expectations. Here are the implementation steps for forming and supporting such teams.

1. Determine quality improvement methods and a QI plan based on Ministry of Health priorities, populations served, services provided, external requirements such as accredited trainers and so on.
2. Identify accredited facilitators to conduct training in continuous quality improvement for select health staff from each target facility in consultation with the health authorities at the district level.
3. Assist trainees in forming a new QI team at their facility or strengthening a pre-existing team, providing support as needed.
4. Have each QI team develop an action plan for improving service delivery at their facility based on input from other staff members and client satisfaction surveys conducted by the Ministry of Health or the facility itself.
5. Secure commitment from senior management staff and other leadership to support execution of the action plan by providing all needed resources.
6. Encourage QI team members to meet monthly or bimonthly to identify and document all progress, problems, discussions and new issues for continuous improvement that arise when implementing the action plan.
7. Monitor the progress of the QI teams through quarterly client satisfaction surveys.
8. Use the results of the client satisfaction surveys to revise action plans as needed to support continuous improvement.
9. Encourage senior management staff and other leadership to celebrate the successes of the QI team on an ongoing basis.
10. Evaluate the work of the QI team on an annual basis to review achievements, determine areas in need of further action to deliver high-quality health services and identify any modifications needed to improve the team's future performance.

11. Share results with staff members and clients served and seek new feedback through staff meetings, staff surveys and client satisfaction surveys.
12. Update the QI plan as needed for the coming year based on any lessons learned from the annual evaluation, new feedback and current priorities.
13. Provide QI education on tools and techniques for continuous improvement to all levels of staff, including senior leadership.
14. Repeat steps 4 through 13 on an annual basis.

PRIMARY CAPACITY BUILDING CHALLENGES

- Rural health facilities often have insufficient staff resources to properly serve clients.
- Health staff attrition is high due to a lack of social amenities and educational advancement opportunities at rural posts.
- Training courses build capacity but take staff away from their health posts, reducing service availability for clients.
- Rural health facilities often lack the basic medical supplies and equipment needed to deliver quality health services.
- Some CHPS compounds fail to have delivery rooms, requiring women in labor to travel long distances for skilled assisted deliveries.

BEST PRACTICES FOR BUILDING STAFF CAPACITY

- Place the Ministry of Health as the lead implementing partner to maximize resource use, capacity building and long-term sustainability.
- Involve community members in project implementation to stretch resources, promote positive behavior changes and increase community commitment to continuing key activities after project end.
- Provide incentives and motivations for health staff to accept rural posts and remain in rural areas.
- Use retired health professionals to provide cost-effective mentoring to less experienced health staff at rural facilities.
- Advocate for GHS or other funds to expand rural health infrastructures and provide rural facilities with the supplies and equipment needed to provide high-quality services.



The Council of Champions in Soansobigi village meets two to three times a month to discuss MCH issues as well as any other community issues that arise. Instead of taking traditional concoctions, community members now go to formal health facilities for medical care and MCH services, including skilled assisted deliveries.

INNOVATION NO. 3 | COUNCILS OF CHAMPIONS

Ushering in new traditions

Traditional practices and beliefs negatively impact MCH outcomes across Ghana's Northern Region. Many households continue to place a high value on home births, which increases the risk of obstetric complications. Low institutional deliveries also have negative impacts on early initiation of breastfeeding and clean cord care¹³.

Recognizing the significant challenges involved in changing any long-held traditions, CRS developed an operational research project with University for Development Studies (UDS)—a Ghanaian research institute located in Northern Region—to test an innovation that would create a Council of Champions in each intervention community.

Comprised of village elders and community leaders that serve as the custodians of socio-cultural, traditional and religious practices, Councils of Champions would use their powerful influence to hopefully shift community members away from harmful behaviors toward positive health behaviors after learning of the health gains offered by formal MCH services. The expectation was that modifications of traditional practices would be much more likely if initiated by these highly influential council members, with the ultimate goal of improving uptake of essential MCH services and increasing skilled assisted deliveries.

"If the traditions at the household level don't

“ We have abandoned those things that killed us and accepted the things that give us long life.”

— **Mahamadu Tia**, traditional medical practitioner and Council of Champions member

change, investments in health facilities and staff simply don't matter,” explains CRS Ghana Health Program Manager Mohammed Ali. “We felt there were certain barriers to influencing key household decision makers that could be broken down most effectively by the custodians of traditional practices and beliefs.”

To determine if the Council of Champions innovation had a positive impact on MCH outcomes, UDS set up Sakogu and Langbensi subdistricts to serve as the intervention and comparison study areas respectively. Forty-four Sakogu communities formed Councils of Champions, while no councils were formed in Langbensi, a subdistrict similar to Sakogu in terms of socio-economic, demographic and health-seeking behaviors.

Councils of Champions are composed of five to seven of the most influential community members who hold sway over large groups of community members. As custodians of culture, they include community chiefs, traditional medical practitioners, traditional birth attendants, women's leaders (locally called *magazias*), and religious leaders such as pastors, imams and traditionalists. Selection criteria included the requirement for each council member to play a leadership role in the community and to not be involved in communal disputes.

The EPPICS project provided 36 hours of training to the council members to educate them about the harmful effects of traditional practices and beliefs and to share alternative, healthier MCH messages, such as the higher maternal and infant survival rates of skilled assisted deliveries and improved newborn health resulting from exclusive breastfeeding. EPPICS also trained council members in the “triple A” approach of assess, analyze and agree on appropriate action. This empowered councils to assess the current status of socio-cultural practices and recognize the links with maternal and child health outcomes, analyze collectively the causes and effects of those socio-cultural practices, and agree on actions to eliminate harmful practices, modify challenging behaviors and adopt new positive behaviors.

Once formed, the councils meet monthly to discuss health issues and determine needed behavior changes. Council members then share the MCH messaging directly with community members by holding monthly communitywide meetings, using their influence to sway public opinion toward healthier beliefs and health practices. Individual council members also share messages across their spheres of influence. Chiefs meet with compound heads, religious leaders share messages with

their congregations, and women's representatives talk with TBAs and women throughout the community. The councils also oversee monthly updates of the community giant scoreboards (see Innovation No.6 section) to track progress against MCH indicators, celebrate achievements communitywide and openly discuss any concerns if little progress was made.

“Councils of Champions are opinion leaders in the community that the community members respect so much. If council members tell them to do something, they'll really do it,” notes former District Director Bayiwasi. “For example, if a pregnant woman doesn't go to an antenatal clinic early, a member will visit the home and encourage the husband to get the wife to go.”

An important part of the Council of Champions strategy is the acknowledgement of the significant influence key household decision makers have on pregnant women and their children. In most rural Ghanaian households, women have little say regarding their pregnancies and childrearing. Husbands and parents-in-law decide if and when to use health services, including determining if the pregnant women will attend antenatal sessions and give birth at home or at a health facility. To this end, the EP-PICS project worked with the councils to make sure they reinforced positive MCH messages with fathers-in-laws, mothers-in-law, and husbands.

“In this part of the Ghana, women are not autonomous. They depend on their male counterparts to make most decisions, including decisions around their health and wellbeing,” CRS Ghana's Ali adds. “If a woman wants to go to the health facility but her husband or father-in-law says she should go to the traditional soothsayer instead, she'll have to go to him instead. Councils of Champions helped to shift the practices and beliefs of key household decision makers toward positive MCH behaviors.”

One example of a harmful practice that Councils of Champions helped to transform is the traditional ritual of keeping a pregnancy a secret until a special ceremony is done, typically during or after the fourth month. This practice prevents pregnant women from seeking early antenatal care in the first trimester, increasing health risks by delaying antenatal care until the second or third trimester. After hearing from council members about the lifesaving benefits of antenatal care—including vaccinations, learning to eat a healthy diet and sleeping under a treated mosquito net—community members slowly began to shift the timing of the ritual, according to interviews with council members.



The Council of Champions in Namasim village meets monthly and regularly shares MCH messages with all community members.

Some communities now conduct the ritual as soon as a woman misses a period, others allow pregnant women to attend ANC visits while still conducting the ritual in the fourth month, while still others have abolished the ritual completely.

Another key belief that councils helped to change is the traditional idea that breast milk doesn't contain water so infants will die of thirst if they are not given water. Councils of Champions explained to community members that breast milk does contain water in addition to other substances and nutrients that strengthen an infant's immune system and promote the greatest growth. Council members urged community members to initiate breastfeeding immediately, practice exclusive breastfeeding for the infant's first six months and to not give the infant any water until after the first six months to avoid diarrheal infections.

Certain community members took some convincing, such as those who had a practice of welcoming newborn babies into the family by giving them *tinyagakom*, water mixed with herbs that is stored on an ongoing basis in a special pot. Other Muslim community members wanted to continue a perceived protective practice of feeding newborn babies inky water resulting from soaking a piece of paper or wood with quotes from the Koran written on it by their imam. Council members patiently

explained that both types of water could easily infect an infant with bacteria and lead to death. As community members heard council members repeatedly share the warnings and saw the healthy babies of mothers who exclusively breastfed, behaviors began to change. Some families stopped the activity completely while others delayed these rituals until after the start of complementary feeding.

Other challenging practices and beliefs included:

- the belief that home births proved a woman's fidelity
- the ingestion of a local herbal concoction provided by traditional medical practitioners to women with obstructed labor that enhances contractions without dilating the cervix, increasing the risk of ruptured uteruses and stillbirths
- use of sand and clay or cow dung as an ointment for belly buttons
- keeping a newborn housebound for three weeks for boys and four weeks for girls, delaying post-natal checkups

Health staff shared statistics with council members about the dangers of such practices, including maternal and infant deaths. Councils of Champions then advocated against their continued use, and community behaviors began to change. In addition to sharing messaging in larger group meetings, council members conducted home visits, especially when they heard of households continuing to undertake an unhealthy traditional practice. In total, 200 council members across Sakogu engaged 13,632 household decision makers and visited 15,152 mothers and caregivers¹⁴.

To determine whether Councils of Champions impacted the uptake of MCH services, UDS conducted a baseline survey in February 2013 at the start of the operational research project, then conducted surveys again at mid-term and at endline in July 2015. Final research results concluded that women living in communities with a Council of Champions were 2.9 and 1.7 times more likely to use antenatal care within the first trimester and early postnatal care respectively. In addition, the research showed that each council modified or eliminated on average six key practices, rituals, attitudes and beliefs that were challenging MCH uptake.

The intervention also improved essential newborn care practices, including breastfeeding, clean cord care, optimum thermal care and improved neonatal feeding.

Generally, mothers in the intervention communities were found to be more knowledgeable about danger signs during pregnancy, delivery, postpartum and neonatal periods than their counterparts in the comparison communities. Extenuating circumstances that reduced the presence of midwives at the only health facility in the operational area prevented collection of accurate data regarding skilled assisted deliveries.

These evidence-based results clearly demonstrate that Councils of Champions positively influence household decision makers to shift away from harmful practices and beliefs toward health-seeking MCH behaviors, re-

sulting in increased usage of MCH services¹⁵. Due to the proven success of the Council of Champions innovation, CRS' follow-on REST project is forming councils in 10 additional communities in East Mamprusi district and in 50 more communities in five other districts.

All 44 Sakogu Councils of Champions continue to be active, and the regional director of health services for Northern Region directed all districts to prioritize the formation of new Councils of Champions. GHS is also working with USAID and Systems for Health to implement the Council of Champions innovation in five additional regions in Ghana.

CHANGING TRADITIONAL PRACTICES AND BELIEFS

Council members from two East Mamprusi communities share the positive impacts resulting from Council of Champions activities.

“Since forming this council, I’ve learned that my concoctions can be harmful, so I’ve stopped giving them except for snake bites. I refer people to the health facility.”

— **Alhassan Nabila**, traditional medical practitioner, Soansobigi village

“I as the imam will talk to my congregation and say that the EPPICS concepts are good to follow. With all the projects under EPPICS, we have gained new knowledge and have now improved our health.”

— **Alhassani Dahamani**, imam, Soansobigi village

“I advise my church members that any time a woman is pregnant that she should report to the health facility. We have told our fathers and elders that when a woman is in labor, they should tell us and not to consult the soothsayer and small gods. We’ll help get her to the health facility.”

— **Toridu Kulugu**, pastor, Soansobigi village

“We were only using local herbal treatments, but now we know that health facilities provide better treatment. We were in the darkness, but now we’re in the light.”

— **Abukali Bugri**, chief’s representative, Soansobigi village

“Before the Council of Champions was formed, sick children were just left helpless to their fate. Now at the least sickness, mothers rush their children to the health facility. Before EPPICS, a TBA would announce that a baby is coming when a woman is in labor and then it would arrive dead. Since the inception of this program, that no longer happens.”

— **Rachia Kasim**, women’s representative, Soansobigi village

“For first pregnancies, we used to perform a ceremony before a woman would go for antenatal care. We believed that if a woman pregnant for the first time announced the pregnancy before the ceremony she would die, but now we think that is a lie. Late antenatal care was causing deaths, with pregnant women dying. Lives are now saved with early antenatal care.”

— **Chief Salifu Nantoma**, village chief, Namasim village

IMPLEMENTATION PLAN

INNOVATION NO. 3 COUNCILS OF CHAMPIONS

KEY IMPLEMENTATION STEPS

1. Conduct a formative study of MCH barriers and opportunities related to cultural practices and beliefs within the target community.
2. Determine key criteria for Council of Champions members.
3. Identify the cultural custodians within the target community, including female representatives.
4. Select potential Council of Champion members from this group of cultural custodians based on the predetermined criteria.
5. Invite potential council members to an introductory session describing the goal and responsibilities of the proposed Council of Champions.
6. Gain the consent of each selected custodian to sit on the council.
7. Host an introductory session for the newly formed Council of Champions.
8. Provide training to the council on the Council of Champions approach and various methods of fostering positive maternal and child health at the household and community levels.
9. Organize a communitywide session to introduce the Council of Champions.
10. Help the Council of Champions to come up with an action plan for helping to influence MCH behavior, including home visits.
11. Support ongoing monthly council meetings to discuss MCH issues in the community and identify ways to resolve them.
12. Have the council host communitywide meetings monthly to update the community giant scoreboards and share MCH messages.
13. Link the Council of Champions with the community health volunteers to support collection of data bi-monthly based on meeting discussions, community meetings held and home visits conducted by individual council members.

PRIMARY CHALLENGES

- Practices and beliefs affecting maternal and child health sometimes are not openly shared or obvious.
- Due to the patriarchal culture in northern Ghana, most custodians of culture are men, creating a gender imbalance on the councils.

BEST PRACTICES

- Have project staff spend considerable time in target communities to increase trust levels and enable them to learn of less obvious practices and beliefs affecting MCH outcomes.
- Seek out additional female leaders to serve as council members.



Link provider Fatima Kulima, at left, provided guidance and advice to Azimi Wanpan, a mother in Soansobigi village, throughout her pregnancy and made sure she went to a local health facility for a skilled assisted delivery.

INNOVATION NO. 4 | TRADITIONAL BIRTH ATTENDANTS REPOSITIONED AS LINK PROVIDERS

A new role for traditional birth attendants

One of the most effective EPPICS strategies is the repositioning of traditional birth attendants (TBAs) as link providers who link pregnant women to health facilities so mothers can benefit from prenatal services, skilled assisted deliveries and other MCH services. Link providers help to address both the first and second delays by teaching expectant mothers to recognize the early signs of labor and assisting them in finding transportation to the closest health facility when labor begins. By helping thousands of

pregnant women to get to health facilities for delivery, link providers contributed significantly to the increase of skilled assisted deliveries in East Mamprusi under EPPICS from 43 percent at baseline to 76 percent at endline.

For centuries, TBAs have played an essential role by assisting pregnant women to give birth at home, particularly in remote communities far from a health facility. Even as more health facilities open across rural Gha-

na, home births continue to be common and popular. At the start of the EPPICS project, TBA-assisted deliveries were preferred in East Mamprusi in many cases because TBAs speak the same language as the client, allow expectant mothers to choose the position for delivery, treat clients with respect, accept in-kind incentives instead of charging fees, help mothers to handle the physical exertion of childbirth, and provide emotional support during and after delivery¹⁶. TBAs typically have little medical training, however, which can lead to maternal and newborn deaths when birthing complications arise, such as shoulder presentation, retained placenta, or hemorrhaging¹⁷.

“Women in this community used to suffer so much risk during labor. If the family was lucky, the woman might survive but the child might still die,” shares Adisah Yakuru-gu, a traditional birth attendant repositioned by the EPPICS project as a link provider in Jawani village. “If the family was unlucky, they both may be lost.”

A number of health initiatives in Ghana have made unsuccessful attempts to limit or even ban TBA services. The EPPICS project took the opposite approach. Recognizing the significant value offered by TBAs, Ghana Health Service and EPPICS staff worked to reposition these important community members to serve as link providers. In their new role as a partner in skilled care, the link providers’ primary responsibility is to bring women in labor to the closest health facility for a safer birth, only assisting with emergency deliveries in critical situations. To ensure acceptance of this repositioned role and increase demand for skilled deliveries, the project conducted extensive community awareness activities with community leaders and residents as part of all EPPICS strategies. As a result, families became more open to giving birth at health facilities while still valuing the link provider role and providing traditional incentives like gifts of food or cakes of soap.

The first step in repositioning the TBA role was working with local health staff and community leaders to identify two active and influential TBAs in each of the 240 East Mamprusi communities. CRS held training-of-trainer sessions for GHS focal persons, midwives, community health officers

and community health volunteers to train these 480 TBAs to serve instead as link providers. Their new responsibilities are to encourage early and frequent attendance at antenatal care facilities, promote maternal nutrition in pregnancy, help women in labor to get to a health facility, support skilled assisted deliveries and discourage home deliveries, and promote post-natal checkups at recommended periods.

To support execution of these new tasks, the project gave each link provider a flashlight, raincoat and rain boots for use during emergency transports to health facilities; a gown to wear if invited into the delivery room by facility staff or during emergencies; and a home visiting bag, which includes gloves and counseling cards. In communities with modified motor tricycles (MMTs) being used as rural ambulances (see Innovation No.5 section), the link provider rides in the MMT with the mother in labor. In communities without MMTs, the link provider helps to find a motorbike for transport, accompanying the mother to the health facility as well.

“**No women do home births now.**”
— **Habiba Bukari**, link provider, Namasim village

The EPPICS project also trained link providers to observe clean delivery procedures in emergency situations when immediate transport to a health facility wasn’t possible due to an infant’s head already presenting in the birth canal. After such an emergency birth, link providers are to travel as soon as possible with the mother and newborn to the nearest health facility for follow-up care. Link providers also travel with mothers and newborns for post-natal visits within two days after each birth for reassessment.

As part of the training, project staff encouraged the link providers to regularly visit each house in their communities to make sure they know whenever a woman becomes pregnant. Link providers also learned to share with pregnant women and family members the following key MCH messages, which were reiterated in other project interventions, including community pregnancy surveillance and education



“THERE IS GOOD HEALTH NOW”

A link provider and a mother she assisted share how birthing practices are now different in Namasim village.

“My job has changed,” says Habiba Bukari, a link provider in Namasim village. “With the old concept of TBA, a child would come with an arm or leg first and we wouldn’t know what to do. With EPPICS we now rush the women to the health facility for safe delivery. No women do home births now.”

“When I was pregnant with this child, Habiba taught me the right diet to eat—vegetables and beans and even fruit. She urged me to go to the antenatal clinics. And when I was approaching delivery time, she said I should get clean clothes, a bucket, soap, disinfectant and a rubber mat for my own safety [against infection],” adds new mother Umu Wahabu, who worked with Habiba during her second pregnancy. “When I went into labor, I called Habiba and she went to find transportation.”

When they arrived at the health facility, Umu remembers that they were received well by the midwife and that it was an easy birth.

“Any time I bring a pregnant woman to the health facility, the health staff welcome me and even invite me to be at the delivery,” Habiba reports. “Now when I meet a woman who is likely to be pregnant, I advise her to go to the health facility to confirm the pregnancy and that it’s not just sickness. I even tell nursing mothers to go to the health facility if their children are crying a lot to see if they are sick. EPPICS has helped us a lot. There is good health now.”

sessions and community meetings hosted by Councils of Champions and Healthy Mothers and Newborn Care Committees:

- go immediately to the nearest health facility for a pregnancy test after missing a period
- register early for antenatal care and attend regularly throughout the pregnancy
- eat a diet rich in proteins and vegetables during pregnancy and when breastfeeding
- call the link provider as soon as labor signs begin for immediate transport to the health facility, using a modified motor tricycle rural ambulance if available or any other available transportation method
- give birth with the assistance of skilled health workers at the local health facility
- initiate breastfeeding early within the first 30 minutes after delivery
- return to the health facility for postnatal and newborn checkups
- practice six months of exclusive breastfeeding, followed by appropriate complementary feeding

These activities helped to drive increased usage of MCH services at East Mamprusi health facilities, resulting in an improvement of health outcomes districtwide. In addition to increased numbers of skilled assisted deliveries, the following gains were achieved during the project timeframe:

- antenatal registration and attendance at health facilities within the first trimester increased from 50% at baseline to 74% at endline
- attendance of more than four antenatal visits increased from 63.9% at baseline to 82% at endline
- early initiation of breastfeeding within the first 30 minutes after delivery increased from 50% at baseline to 75% at endline
- post-natal visits within two days of delivery improved from 32% at baseline to 84% at endline

The shift in role from TBA to link provider also strengthened the link providers’ relationships with health facility staff. Health workers came to better understand the fears and needs of expectant mothers from rural areas and made adjustments to increase patient comfort and satisfaction with the delivery experience. Men and other family members began to accompany women during deliveries, health staff allowed mothers to choose their preferred delivery position and link providers helped mothers to access traditional foods after delivery.

Link providers continue to serve in their new role in all 240 East Mamprusi communities. The repositioning of other TBAs as link providers across rural Ghana has the potential to improve MCH health outcomes significantly in other districts as well.



Link provider Adisah Yakurugu, at right, has strengthened her relationship with health facility staff members, including Jawani CHPS compound administrator Mariama Issifu.

LINKING MOTHERS TO HEALTH FACILITIES

Link provider Adisah Yakurugu describes the positive impacts of her new role in the community of Jawani.

I was a TBA in the past. I can't remember sending even one mother to the health facility. During the TBA era, women would bleed profusely, and I wouldn't be able to stop it. Sometimes the worst would happen, and they would die.

When EPPICS came, they changed our name to link provider and gave us more responsibility to look after the good health of pregnant women and their children. As a link provider, we take women in labor to the health facilities to let health workers take care of whatever problems might arise. Women used to die giving birth at home, and they don't at the health facility.

I usually visit six to eight pregnant or lactating women at their homes each week. I counsel a pregnant woman to attend her antenatal checkups at the health facility or to take her antimalarial drugs to keep her and

the child from falling ill. When I am called to attend to a labor case, I prepare the woman and help her to the health facility. We now discourage deliveries at home. Whenever we have an emergency case, now we do not suffer. The motor tricycle is there to transport us quickly to the hospital. I also help out during the delivery. I stand by the midwife, assist her and observe.

I've helped bring women to the health facility more than 100 times as a link provider. I prefer being a link provider because women and babies don't lose their lives like before. We just didn't know before. It was ignorance.

My knowledge has increased as I watch the nurses work at the health facilities. And I still get the same incentives—a bar of soap and some of the special soup made for the new mother and shared with me.

IMPLEMENTATION PLAN

INNOVATION NO. 4 REPOSITIONING TBAS AS LINK PROVIDERS

KEY IMPLEMENTATION STEPS

1. Visit target communities to identify the most active and influential traditional birth attendants.
2. Introduce the project to the selected TBAs and secure their agreement to participate in the project.
3. Provide training and orientation to TBAs on their new roles and responsibilities as link providers.
4. Organize a communitywide meeting to introduce the repositioned TBAs now as link providers and share their new roles and responsibilities with community members.
5. Procure and distribute essential supplies, including flashlights, rain boots, raincoats, gowns, home visiting bags, and t-shirts printed with key messages for awareness raising.
6. Monitor and visit the link providers to learn of and address any challenges faced as part of their work.
7. Collect delivery and home visit data from the link providers on a monthly basis.
8. Hold quarterly reflection meetings with the link providers to discuss ways to further increase skilled assisted deliveries.
9. Organize an award ceremony as part of the annual maternal and child health week to publicly reward the best-performing link providers.

PRIMARY CHALLENGES

- Key household decision makers need to agree to use of health services, not just the expectant mother.
- Most link providers are illiterate, increasing the difficulty of teaching them complex concepts, such as emergency delivery procedures.
- Some of the link providers are elderly, which can make it difficult for them to travel to the health facility for every delivery.

BEST PRACTICES

- Conduct critical community awareness raising activities with the support of community elders in order to change communal beliefs and behavior surrounding maternal and child health practices.
- Develop highly visual training materials in advance as most TBAs are illiterate.
- Identify and train a younger TBA to work as a link provider assistant to travel with expectant mothers to health facilities and retain MCH knowledge in the community.



The EPPICS project modified motor tricycles to serve as rural ambulances capable of traveling rough roads to transport women in labor living in remote villages to the closest formal health facility for skilled assisted deliveries, reducing home births.

INNOVATION NO. 5 | MODIFIED MOTOR TRICYCLES AS RURAL AMBULANCES

An innovative way to address the second delay

In rural communities with few and poorly developed roads, it becomes very difficult to tackle the second delay: the inability to reach the point of care. Across rural Ghana, most roads are not paved, and many are not passable by standard sedan ambulances. As a result, many pregnant women have limited physical access to formal health care facilities.

Women in labor and other people experiencing emergency illnesses often have to rely on their feet, stretchers, bicycles or motorbikes for transportation to the closest health facility. This situation becomes untenable in communities located outside an eight-kilometer radius of a health facility, especially during the rainy

season. Compounding the problem, few families own motorbikes in remote communities or can afford to pay to use one in an emergency situation. This limited physical access to health facilities contributes to unpredictable pregnancy outcomes and negatively impacts maternal and child health across Ghana.

With 60 percent of communities in East Mamprusi located outside of an eight-kilometer radius from each health facility, CRS knew it required a highly innovative emergency transportation strategy to improve access to health facilities. Project staff worked with GHS and community advisors to come up with an effective solution:



Azimi Wanpan traveled in a modified motor tricycle to the health facility closest to her home village of Soansobigi to deliver her newest son with skilled assistance.

modifying readily accessible motor tricycles to serve as ambulances capable of traveling on undeveloped rural roads to safely transport cases to referral centers.

“Our terrain is very bad. Transportation is a problem when women are really sick,” notes former District Director Bayiwasi. “EPPICS helping with the tricycles really assisted with referrals.”

To create the MMTs, project staff first procured four standard motor tricycles—three-wheeled motorcycles with a shallow six-foot truck bed at the back. They then worked with metal workers to add a roof to each and to create an inner cabin with a metal bench for the link provider to accompany the mother in labor to the health facility and a platform that could accommodate a mattress for the mother in labor. The procured mattresses were wrapped in waterproof material to let caretakers more easily clean off any blood or other bodily fluid and apply disinfectant after each emergency transport. EPPICS staff also designed and procured canvas coverings to protect passengers from the elements and to provide privacy.

GHS and project staff consulted community clusters in East Mamprusi to determine the most appropriate communities to host each of four MMTs, with each MMT serving at least four adjoining communities. Before delivering the MMTs to the selected host communities, GHS and EPPICS staff made sure operations and management committees were in place to prevent the MMTs from falling into disrepair.

Each rural community in Ghana is supposed to have an emergency transport committee to help vulnerable and sick residents to get to the nearest health facility, but these committees are often defunct. EPPICS helped to form or revive these committees in each of the communities receiving an MMT. The committees have seven members, of whom at least three are women. These committees are responsible for operating and maintaining the MMT, including determining and collecting fees for each transport.

Once each community emergency transportation committee determined a fee structure and maintenance plan, the committee asked the community chief to call a meeting to introduce the MMT to residents and secure their approval for planned usage. In some communities, residents were at first resistant to paying the average cost of \$5 per transport. The committees fostered community acceptance of the fee by explaining how the funds were broken down to cover fuel costs, maintenance needs and a small motivation fee for the driver. In many cases, the total cost was equivalent or less than the cost of renting a motorbike or taking public transportation where available.

The committees also worked with community members to identify two volunteer drivers for each MMT who agreed to offer their services free of charge beyond a small motivation fee for each transport. These drivers and link providers in the surrounding areas then received training in standardized protocols for patient transport, including lifting mothers into the MMT, and for conducting emergency deliveries. The drivers were also given phones to reach them when emergencies arose, rain boots, raincoats, flashlights and t-shirts printed with messages that encouraged safe assisted deliveries at local health facilities.

The cost of each MMT was around \$2,250 for the tricycle, needed modifications and training for the committee, drivers and link providers. A study¹⁸ showed the average transport event cost to be about \$5, with \$3.30 covering the needed fuel, \$1 covering ongoing MMT maintenance and \$0.70 being shared between the driver and link provider as a motivation fee. The study also showed MMT maintenance costs to be between \$22 and \$35 a month, depending on the number of transport and any major service needs. These costs are covered by the fees collected for transport events. Some communities also have each household donate a small additional amount every month or every other month to have sufficient operational funds. Thanks to these measures, the MMTs continue to be used and maintained in good repair after the project end.

From April 2012 to September 2015, the four EPPICS MMTs transported 2,894 pregnant women, 3,022 mothers with their newborn or other child, and 754 other emergency medical conditions. A follow-on privately funded CRS project called REST increased the number of communities served from the original 20 in East Mamprusi to more than 200 with the placement of 50 more MMTs in Northern Region and Upper East Region. These additional MMTs have already saved many hundreds more lives by providing transportation for more than 501 deliveries and 444 emergency illnesses as of March 2016.

The EPPICS project also formed or strengthened community emergency transport committees in all of the other East Mamprusi communities that did not receive access to an MMT. These committees came up with

emergency transport plans typically based on using motorbikes and volunteer drivers to provide rapid transport for women in labor. Many of these communities are now appealing to their district assemblies to allocate common funds to purchase MMTs to serve as rural ambulances.

By making it significantly easier and faster to transport women in labor to health facilities, MMTs and community emergency transport plans contributed greatly to increasing skilled assisted deliveries in East Mamprusi from a project baseline of 43 percent to 76 percent at endline. This rural transportation innovation from CRS—which has saved thousands of lives in Ghana—holds great promise for addressing the second delay in developing communities with poor roads worldwide.

SAFE AND EASY EMERGENCY TRANSPORTATION

Afia Tia, the mother of a newborn girl and two other children, shares her thoughts on using an EPPICS-provided MMT (which she refers to as a Motorking) instead of a motorbike to reach the nearest health facility to give birth.

With this new baby, I went into labor in Samini village around 8 in the morning. I told my husband who got the link provider and they brought me to the local clinic. I was examined by the doctor, who felt the baby was quite large so said they should call the Motorking driver. They brought the mattress and some clean sheets. I got into the Motorking with the link provider and we drove about an hour to Langbensi, where the link provider got us admitted.

My previous son was also born in Langbensi, but there was no Motorking so I went on a motorbike to the health facility when I started to feel contractions. But the power was out, so the nurse referred me to Nalerigu hospital. My husband put me in a public minibus, and he and his friend joined me in Nalerigu by motorbike.

I prefer the Motorking to the motorbike. On the motorbike I can't relax, whereas in the Motorking I can. The Motorking driver also drove slowly because he was used to dealing with women in labor, whereas my husband was worried and drove the motorbike very fast. I was more scared



Afia Tia stands with her newborn, her link provider Azumapoa Wuni and her MMT driver Tanko Tiadoa in front of their community Wall of Good Health.

on the motorbike, and I couldn't push if the baby started to come when I was on the motorbike. The link provider was with me in the Motorking and would touch me from time to time to check in on me. I wasn't scared because I knew I'd be okay because the link provider was there. My husband was also with us sitting in front with the driver. He was stressed and was praying.

Because my husband had to hire two motorbikes for my previous delivery (for me and the link provider and him and his friend) and pay for the cost of the bus to Nalerigu, it cost more than the Motorking fee.

A DRIVE FOR SAVING LIVES

Members of two community emergency transport committees share thoughts about the MMT (also called a Motorking after the tricycle's manufacturer) and their responsibilities.



SOANSOBIGI VILLAGE:

“There were more deaths before. Before the tricycle, a woman would bleed profusely and the patient would die as we walked with her on a stretcher. Now it’s just a 35-minute drive.”

— **Salifu Wuni**, committee member

“Before EPPICS we didn’t have transportation but now we have the tricycles. We service the tricycles every two weeks.”

— **Alhassani Issa**, committee secretary

“You need to pick a driver who is gentle and careful to drive with care. The driver should be prepared to drive any hour of the day or night.”

— **Bugri Awudu**, MTT driver

“We will even pay for fuel if someone can’t afford it, and they will reimburse us when they can.”

— **Karim Sule**, committee member

SAMINI VILLAGE:

“The Motorking has saved so many lives. Initially community members didn’t agree about paying the fee. We had to call the community to the chief’s house and explain how the fee is used and that it would cost more to hire other transport. Now they pay instantly because they know two lives are at stake—the mother and the baby.”

— **Fataw Wuni**, chairperson

“If maintenance costs are more than we have, we call another community meeting. For example, the original tarp cover was torn in a storm, and we had to replace it.”

— **Sampa Mbatia**, committee secretary

“We are praying that it will last 30 years so our children can use it.”

— **Richard Wundow**, committee member

IMPLEMENTATION PLAN

INNOVATION NO. 5 MMTs AS RURAL AMBULANCES

KEY IMPLEMENTATION STEPS

1. Procure motor tricycles and outsource the work to modify them to serve as rural ambulances.
2. Work with subdistrict staff to map all communities that fall outside of an eight-kilometer radius from a health facility.
3. Engage subdistrict leaders to identify areas for hosting available MMTs, ensuring that each MMT can serve at least four other surrounding communities.
4. Organize meetings in each of the identified areas, inviting members of surrounding communities, and ask attendees to discuss the issue of access to health facility with them and let them propose solutions. Share the idea of a motor tricycle and ask how the community would procure, operate and maintain such a means of transport.
5. Based on responses in the area meetings, have GHS staff take the lead on identifying final host communities for the available MMTs.
6. Ask each preselected host community to identify three volunteers to be assessed and trained as MMT drivers.
7. Select the best two volunteer drivers for training in driving, transporting pregnant women and link providers, and ongoing maintenance of the MMT.
8. Form and train a gender-balanced, seven-member community emergency transport committee with at least three women to oversee the operations and management of the MMT.
9. Work with the committee to generate an action plan for the operation and management of the MMT.
10. Organize a communitywide meeting to introduce the committee, drivers and MMT to the host community and surrounding communities to be served by the MMT. Explain all roles and responsibilities for the operation and management of the MMT, as well as any agreed-upon fee or monthly donations for emergency transports.

11. Monitor and supervise the operations and maintenance of the MMT.
12. Collect quarterly reports from the community emergency transport committee that detail the number of transports completed, who was transported and why, and how the transports went.

PRIMARY CHALLENGES

- Insufficient GHS resources are available to build health facilities, resulting in many communities being located outside an eight-kilometer radius of a health center.
- MMT drivers are volunteers who need to support their families.
- At times, trained MMT drivers aren't available due to family and farming commitments.
- MMTs have a lifetime of five to seven years and will require replacement.

BEST PRACTICES

- Secure funding to ensure that a health facility or MMT is available within an eight-kilometer radius of each rural community.
- Encourage community emergency transport committees to work with community members to determine and pay a small remuneration for the driver's time and effort for each transport event.
- Train two additional drivers to ensure that a driver is always available for each emergency transport.
- Leave the key to the MMT with the chief or facility maintenance staff so that it is always readily available.
- Ask community emergency transport committees to work with community members to develop a community action plan to save funds in order to purchase and modify a replacement motor tricycle when the current one is no longer serviceable.



Each month, Healthy Mothers and Newborn Care Committees update community giant scoreboards at communitywide meetings so all residents are aware of MCH progress.

INNOVATION NO. 6 | COMMUNITY GIANT SCOREBOARDS

Healthy competition drives MCH gains

Community participation is essential for improving maternal and child health, but motivating communities to remain focused on MCH outcomes can be a challenge. As part of the EPPICS project design, CRS Ghana included community giant scoreboards, an innovative strategy previously tested in a prior MCH project to foster increased community awareness and participation in MCH initiatives. These large signs, called Walls of Good Health in EPPICS communities, let community members visually track their progress towards desired health outcomes.

Built in easily accessible public places in all 240 East Mamprusi communities, the community giant scoreboards rally residents

by encouraging them to engage in healthy practices to improve performance results. Each scoreboard is a large wall with pictorial illustrations of two selected MCH indicators, one on each side. The illustrations serve as an educational tool by showing pictures of the desirable action next to the undesirable action.

For example, a wall tracking exclusive breastfeeding might show a picture of a woman breastfeeding an infant next to a woman feeding food to an infant. The back of the wall might track skilled assisted deliveries, with a picture of a woman giving birth at a health facility shown next to a picture of a woman delivering at home. Green borders

“ Not a single woman gives birth at home now.”

— **Richard Wundow**, HMNCC chairperson, Samini village

around the desired actions signal the behavior as positive, while red borders around the undesired actions signal the behavior as negative.

At the top of each scoreboard are 10 slots, each representing 10 percent. Colored sticks are placed in these holes as scoring indicators, with green sticks representing achievement of desirable outcomes and red sticks representing undesirable outcomes. For example, if progress against an indicator is 60 percent, the wall would show six green sticks and four red sticks to visually represent the gains achieved and improvements still needed. The walls initially showed baseline results and are updated each month based on MCH data. The goal for community members is have both sides of the wall showing 10 green sticks, representing 100 percent achievement of both indicators. Because the walls rely on visual pictures and cues, this unique intervention motivates both literate and illiterate community members.

The EPPICS project supported construction of the community giant scoreboards in all 240 East Mamprusi communities, with community members assisting with labor and supplies. The initial mud and plaster design of the wall deteriorated within a few years in a number of communities, so GHS is now working with those communities to repair 30 of the walls. Moving forward, the recommendation is to use cement instead of mud. CRS also contracted with artisans to paint the pictorial illustrations. To allow for easier paint touch-ups in the future by community members, CRS recommends that simpler pictures be used, such as symbols.

EPPICS helped communities to strengthen existing community health committees or form new seven-member Healthy Mothers and Newborn Care Committees (HMNCCs) to update the scores monthly and handle any wall maintenance needs. Committee members typically include the two community health volunteers, a link provider, the community women’s representative, a community emergency transport commit-



“IT HAS COME TO SAVE A LOT OF LIVES”

Members of the Healthy Mothers and Newborn Care Committee in Jawani describe the healthy changes resulting from their work and their Wall of Good Health.

“We have skilled delivery and exclusive breast-feeding as our two indicators on the wall. We picked EBF because babies used to have lots of diarrhea. Now there is no more diarrhea. Women used to miscarry and have stillborn babies and don’t anymore, so men value the antenatal care.”

— **Adisah Yakurugu**, link provider and committee secretary

“We still update the wall with the entire community every month and celebrate that we don’t have diarrhea any more. The community likes it so much. It has come to save a lot of lives, and we don’t experience so many sicknesses.”

— **Memuna Awalewale**, model mother and committee member

“We are focused on good health in regard to our pregnant mothers. Every month we track how many women have given birth at the facility and at home. We can’t remember the last home birth. Before EPPICS there were more home births. It was out of ignorance that women were giving birth at home. But with EPPICS, we learned the importance of giving birth at clinics to save lives.”

— **Shafura Mahammud**, link provider and committee member

“Men now pay attention to the health of their wives.”

— **Bimata Tia**, link provider and committee member

“Even last week, we called a meeting of all pregnant women, their husbands and their father-in-laws.”

— **Mohammed Abdulai**, chairperson



tee member, the district assembly representative and an opinion leader, with attention placed on gender diversity.

The HMNCC consults with GHS staff to decide which two indicators to depict on either side of the Wall of Good Health. They select health behaviors needing the most improvement in each community, such as exclusive breastfeeding, skilled assisted deliveries or early antenatal care. Committee members also share MCH messages communitywide and conduct home visits to ensure that pregnant women and their husbands have clear birth plans in place for delivery at a formal health facility.

The HMNCC in each community works closely with CHPS officers to generate scoring data from community and clinic registers to determine progress against the tracked indicators. Each month, the committee hosts a communitywide ceremony—at times with celebratory drumming and dancing—to update the wall publicly in front of community members. Red sticks are changed to green when progress is made or reverted to red in the case of a performance decline.

At the ceremonies, committee members—typically accompanied by the community chief—engage the larger community in assessing, analyzing and agreeing on key actions to take based on the monthly outcomes. The spirited discussions about positive and harmful health practices make community members integral players in their own health and that of the overall community. Some communities even impose small

finances on any members who fail to follow through with the positive health behaviors. Communities with Councils of Champions (see the Innovation No.3 section) let councils take the lead in the wall updates due to their considerable influence over public opinion.

“Community giant scoreboards make communities aware of their health status,” says Adam Anas, East Mamprusi district health information officer. “When people can assess their own health, it helps them to come up with solutions and community action plans.”

Thanks to the community pride and excitement generated by the Walls of Good Health, the community giant scoreboards proved to be a highly effective way to get community members to engage in healthy practices. Community members can immediately see if the actions they take are having positive results. Because the walls are often visible from main roads, the community giant scoreboards also generate healthy competition among surrounding communities, with each wanting to have walls showing only green sticks.

By providing a highly visual, community-led monitoring tool, community giant scoreboards encourage community members to become active players in improving MCH outcomes. The success of this innovation in rallying community members around MCH improvements led CRS to incorporate community giant scoreboards in child survival projects being implemented in Burkina Faso, Niger and Myanmar.

IMPLEMENTATION PLAN

INNOVATION NO. 6 COMMUNITY GIANT SCOREBOARDS

KEY IMPLEMENTATION STEPS

1. Determine whether or not a community health committee already exists in the target community.
 - a) If a committee already exists,
 - i) find out details of the committee's composition, the last time they met and recent discussion topics
 - ii) use this information to determine the capacity of the committee to address current community health needs
 - iii) discuss the status of the committee with community leaders
 - iv) expand the committee size to seven members as needed and ensure that at least three women are committee members
 - b) If a community health committee does not exist,
 - i) organize a communitywide meeting and assist the community through facilitation to nominate seven members to form the Healthy Mothers and Newborn Care Committee (HMNCC)
 - ii) ensure that at least three women are committee members
2. Organize a communitywide meeting to introduce the new or reconstituted HMNCC, the community giant scoreboard concept and committee roles and responsibilities.
3. Train the HMNCC members on their roles and responsibilities, including management and maintenance of the community giant scoreboards.
4. Have the HMNCC determine the two key indicators to be depicted on the community giant scoreboard with input from GHS staff and community health volunteers.
5. Have the HMNCC recruit community volunteers to assist in building the community giant scoreboard using local materials, with EPPICS support.
6. Organize a communitywide celebration to unveil the newly constructed community giant scoreboard and commission the HMNCC members into their work. At the unveiling, explain the meaning of the green and red sticks, and insert the sticks as appropriate based on baseline indicator performance results.
7. Have local health staff ensure that the HMNCC holds monthly community meetings to update the

community giant scoreboard indicators and share related MCH messages with community members to promote even greater future gains.

8. Collect monthly reports from the HMNCCs of all activities undertaken.
9. Provide quarterly facilitative support visits to the HMNCCs.
10. Conduct quarterly reflection meetings to assess HMNCC performance and help address any challenges.
11. Organize annual districtwide HMNCC meetings as part of the reflections to enable committee members to share experiences with their peers and to reward the best-performing committees

PRIMARY CHALLENGES

- Porous soil and holes for the indicator sticks allow water to seep into mud walls, reducing their lifespan.
- Walls built during the rainy season often fail to completely harden.
- Complex pictorial illustrations require an externally contracted artist to complete the initial painting and any subsequent painting touch-ups.
- Children like to play with the sticks and often lose or break them.
- Fully painted green and red sticks provide no way to show a partial percentage for progress against an indicator.

BEST PRACTICES

- Use cement blocks instead of mud with plaster to lengthen the lifespan of the walls.
- Build the walls during the dry season for best hardening.
- Add a drain to the wall design to prevent water from seeping into the walls.
- Design simpler illustrations with symbols instead of pictorial scenes to enable the HMNCC to handle any needed painting touch-ups.
- Put stick holes at the top of the wall to keep children from removing them.
- Determine a stick design that allows communities to reflect a partial percentage, such as a stick painted half green and half red.



Twice a month, 60 to 70 lactating women and 30 pregnant women attend C-PrES sessions in Langbensi community to learn best practices for maternal and child health.

INNOVATION NO. 7 | COMMUNITY PREGNANCY SURVEILLANCE AND EDUCATION SESSIONS

Modeling healthy behavior for healthy babies

To create behavior change, mothers need to learn how MCH practices will keep them and their babies alive and healthy. Prior experience taught CRS that community members are more likely to listen to a peer than to a stranger coming in with unfamiliar ideas. With this concept in mind, the EPPICS program recruited two model mothers in each East Mamprusi community and trained them to host community pregnancy surveillance

and education sessions (C-PrES) to deepen women's understanding of maternal and child health.

Model mothers are positive-deviant women who follow recommended MCH practices, including antenatal attendance within the first trimester, attendance of four or more antenatal visits prior to delivery, use of skilled assistance at childbirth, attendance of postnatal

“ We sing at our meetings to make the message more interesting. The songs bring joy and happiness and also attract new people and help them to accept our message.”

— **Bimata Tia**, model mother, Jawani village

check-ups within the recommended period, and practice of appropriate infant and young child feeding practices. The project identified these mothers by conducting a formative study as part of a positive-deviant inquiry based on predetermined criteria, including the willingness of each mother to motivate her peers to follow desired behaviors and practices. EPPICS staff then selected the best two candidates in each community to become group leaders.

Once selected, the 480 model mothers received training in healthy birthing practices, including birth preparedness, postpartum care, maternal and child nutrition, and more. They also worked with community health volunteers and HMNCCs to identify all of the pregnant and nursing mothers in their community, regularly conducting home visits to be aware of new pregnancies. EPPICS staff introduced the model mothers and C-PrES sessions to community members and invited all pregnant women and nursing mothers to enroll into C-PrES groups.

Once groups are formed, preferably with no more than 25 members per group, the model mothers begin holding biweekly behavior change communication sessions. Using visual materials, the model mothers teach pregnant mothers about:

- the health benefits of early antenatal visits and more than four antenatal visits
- malaria prevention, including vaccinations and sleeping under insecticide-treated nets
- the need for a diet high in proteins and vegetables
- danger signs in pregnancy
- the lifesaving nature of institutional deliveries
- the benefit of initiating breastfeeding within half an hour of birth

- the value of a post-natal visit within two days of birth

Sessions for nursing mothers focus on:

- the benefits of exclusive breastfeeding
- breastfeeding techniques
- danger signs in newborns
- appropriate complementary feeding practices for children age 6-23 months
- monthly growth monitoring
- child immunization schedules

Some groups create songs to make the learning more entertaining and memorable. One song even has lyrics that say, “CRS is coming from America. CRS’ positive practices will save the lives of your children. We were suffering and now we have relief.” A side benefit of the groups is that members watch out for each other. The model mother leaders also follow up with individual women in home visits whenever they hear of someone not adhering to recommended MCH practices, such as delayed antenatal care.

“The C-PrES groups share knowledge in the community. It’s not health workers sharing the information but your own colleagues,” notes Nelson Manduaya, public health coordinator for Nalerigu subdistrict. “You marvel to hear them turn the lessons into a song to educate people. Women also see that the model mother’s child is strong and intelligent because of the breastfeeding.”

The C-PrES sessions, coupled with other EPPICS outreach activities, contributed to many statistically significant increases in maternal health indicators as detailed in the guide’s introduction. A total of 480 groups were formed across East Mamprusi, and most continue to meet after the project end, receiving ongoing support and encouragement from GHS staff and community health workers.



LEARNING FROM EACH OTHER

Group members from Jawani village, shown above, and Langbensi community share lessons learned in C-PrES sessions, reflecting significant behavior change and uptake of MCH services.

“Because of these sessions, we have love and concern for each other. If you don’t see your friend at the meeting, you go check on her. And we sing and dance. We have lactating songs with health messages, like bringing the child to the breast and to practice exclusively for six months and songs for pregnant women to go for antenatal care and to go to the health facility for delivery.”

— **Zalia Dawuni,** model mother, Jawani

“Our husbands used to give us a blood concoction before birth and they don’t any more. We have been told it is harmful and to come instead to the health center.”

— **Fati Abdubu,** group member, Jawani

“If you don’t feed your child with water, but just with breast milk, your child won’t get sick.”

— **Cecilia Jacob,** group member, Lanbensi

“I learned about hygiene—to wash the utensils and hands of children with soap so they don’t get diarrhea.”

— **Cecilia Kaba,** group member, Langbensi

“You bathe the child and then put clean clothes on the child. It models for other mothers good hygiene.”

— **Nurah Climate,** group member, Langbensi

“Our parents told us that for the first pregnancy you have to perform a ceremony before you go to antenatal care. Health staff explained that antenatal care should come first, then the ceremony, and parents now all agree.”

— **Zuwera Musati,** model mother, Langbensi

“When you are pregnant, you need to go to antenatal care until you give birth. They will determine if you and the child are healthy and the position of the child, and they tell you what to eat.”

— **Hannah Sandoa,** group member, Langbensi

“It was difficult interacting with health facility staff because there was no relationship between village women and them. The only interaction you would have was at the health facility. Health staff then began to come and talk to us at these meetings.”

— **Tiapoa Awuni,** group member, Langbensi

“They encourage us to feed our infants breast milk and after six months we introduce other foods. We thought the babies would die of thirst, but we learned that they don’t because the breast milk has water.”

— **Sadia Mutari,** group member, Jawani

IMPLEMENTATION PLAN

INNOVATION NO. 7 COMMUNITY PREGNANCY SURVEILLANCE AND EDUCATION SESSIONS

KEY IMPLEMENTATION STEPS

1. Determine project criteria for model mothers—mothers who consistently follow MCH behaviors and practices as recommended by health staff.
2. Organize a communitywide meeting to introduce the C-PrES sessions and related operational strategies.
3. Conduct a formative study as part of a positive-deviant inquiry to identify model mothers based on the predetermined criteria.
4. Based on the population of women of reproductive age in the community, select the best two model mothers and secure their commitment to lead C-PrES groups for pregnant women and nursing mothers. In larger communities, select additional model mothers as needed to keep C-PrES groups to a maximum of 25 participants.
5. Organize another communitywide meeting to introduce the selected model mothers to community members, share their roles and responsibilities, and encourage pregnant women and nursing mothers to join C-PrES groups.
6. Train the model mothers to facilitate C-PrES sessions for pregnant women and nursing mothers and enroll qualified clients into C-PrES groups that should not exceed 25 participants.
7. Support the model mothers in enrolling clients and hosting biweekly education sessions.
8. Work with health staff to mentor the model mothers, provide facilitative support visits on a quarterly basis and supervise all C-PrES activities.
9. Collect monthly reports about group meetings from the model mothers and provide any other assistance or guidance as needed

PRIMARY CHALLENGES

- When groups exceed 25 participants, message delivery can lose effectiveness.
- Low attendance occurs from September through November due to the harvest period, as harvesting is mostly done by women.
- In communities where groups meet under large trees, meetings must be canceled when it's raining.

BEST PRACTICES

- Train enough model mothers as group leaders so each group has a maximum of 25 participants.
- Organize early morning or evening sessions during harvest periods.
- Use classrooms or other public buildings when they are available during evenings or weekends to allow sessions to be held regardless of the weather.



Fati Mahama at left and Philomena Lamisi, each 66 years old, serve as mentors for the CRS Ghana REST project to share their decades of MCH experience with new health facility staff members.

INNOVATION NO. 8 | MENTORING HEALTH FACILITY STAFF

Tapping decades of experience for positive gains

At rural health facilities, less experienced staff members at times struggle to treat complicated cares. Although they quickly refer such cases to more advanced health facilities, by not being able to resolve the issue locally, care is delayed. There is also the risk that the client will not follow through on the referral. These risks increase dramatically when pregnant mothers or newborns are involved who require immediate emergency care.

To address the third delay contributing to poor maternal and newborn outcomes—clients failing to receive appropriate and quality care after reaching a health facility—GHS conducts supervisory visits at all health facilities, but limited time and resources restrict opportunities for one-on-one coaching. GHS also regularly hosts skills trainings

for its frontline health workers. The trainings are typically held in larger urban areas, requiring rural health staff to be absent from their posts. During these training periods, rural health posts may need to cut back hours or close completely due to reduced staff capacity, leaving local residents at risk.

In hopes of increasing staff skills in a more efficient and effective way, the EPPICS project designed a pilot project to provide mentoring to less experienced frontline health workers. The project engaged the services of the GHS district focal person, a public health nurse and four midwives to serve as mentors. These highly experienced health professionals—each with significant experience in obstetric and newborn care within East Mamprusi—agreed to visit eight of the more rural health facilities in East Mamprusi

“ We have taught so many things, and now they can do it alone. We’ve seen great changes.”

— **Philomena Lamisi**, REST project mentor

district on a rotating basis and also provide mentoring at their own health facilities. During the bi-monthly visits, they worked with less experienced staff members to monitor their performance, advise on any needed procedural corrections and demonstrate more advanced skills to increase staff members’ MCH knowledge.

The mentors focused primarily on antenatal care, delivery procedures and post-natal care. Supervisory visits showed noticeable increases in staff capacity. Health facility staff also responded positively to the mentoring. As a result, CRS expanded the mentoring under the privately funded CRS REST project, which builds on EP-PICS successes by extending the proven EPPICS strategies to six districts—three in Northern Region (including continued work in East Mamprusi) and three in Upper East Region. Under REST, 12 mentors are now mentoring 263 staff members at 34 health facilities.

“If you add up the experience of these 12 people, you have combined experience of more than 350 years,” notes Andrew Saibu, REST project coordinator at CRS Ghana. “Once they impart their knowledge to the young nurses, midwives, and community health nurses, that knowledge stays with them and you can’t take it away.”

The mentoring begins with pairs of mentors conducting a client-patient satisfaction survey at each of their assigned health facilities. The mentors conduct confidential interviews with three clients at each facility: an antenatal care client, a child welfare client and a mother seeking clinical assistance for herself or her baby. The survey answers enable the mentors and project staff to identify potential service gaps in order to focus mentoring efforts accordingly.

After analyzing the survey results, the mentors begin visiting their assigned facilities on a rotating basis. They stay two to three days at each site, providing on-site coaching and mentoring to the most inexperienced staff members based on whatever activities occur during their visit. The mentors then continue to the next site until they complete the full rotation of site visits. The mentors also encourage staff members to call them with any questions that arise between visits to provide additional guidance and advice remotely.

“We were doing nothing, just sitting at home with our knowledge,” shares 66-year-old REST mentor Fati Mahama. “People are in need of our knowledge, so we bring it to them.”



“WE ARE HAPPY TO IMPART OUR KNOWLEDGE”

Philomena Lamisi, a mentor with the privately funded CRS REST project who has been a nurse since 1975, shares her experience coaching health staff in East Mamprusi.

I was happy to be asked to be a mentor because I could impart the knowledge I have to the younger nurses. Our job is to go and monitor their work. We also model procedures for them to teach them and correct their work.

When we arrive at a facility, we join in and start working with the staff on whatever they are doing—a delivery, antenatal care, post-natal care and so on. We watch their work and show them where they may need some corrections. For example, there was a delivery of an infant with locked shoulders. I quickly put on gloves and showed the nurse how to support the head and move the baby a bit to deliver it.

We go out for two weeks to visit the six facilities we’re working in, then return for a week of rest, then go out again. The distances are long, and sitting on the motorbike is tiring, but we are happy to impart our knowledge to staff members. The nurses and community are always pleased to see us and share their challenges. We have taught them so many things to them, and now they can do it alone. We’ve seen great changes.

IMPLEMENTATION PLAN

INNOVATION NO. 8 MENTORING HEALTH FACILITY STAFF

KEY IMPLEMENTATION STEPS

1. Develop clear statements of program objectives and outcomes, roles and responsibilities, and limits for all those to be involved in the mentoring program.
2. Conduct a baseline assessment at each target health facility to establish gaps and challenges that needs to be addressed.
3. Establish a selection criteria for mentors.
4. Sign contracts with each mentor that provide clear terms of reference, expected mode of delivery for the mentoring and remuneration packages.
5. Provide orientation and training to both mentors and mentees on their roles and responsibilities.
6. Procure and distribute supplies and equipment as needed to each target health facility to support effective mentoring activities in the field.
7. Monitor and visit the mentors to learn of and help address any challenges faced as part of their work.
8. Put in place an ongoing evaluation plan to monitor progress against program objectives, provide proactive troubleshooting and ensure quality mentoring.
9. Facilitate submission of quarterly reports by mentors and annual assessments of mentors to measure program performance against baseline values.

PRIMARY CHALLENGES

- Full-time health staff do not have enough time to regularly visit less experienced health workers at rural health facilities.
- Travel to health posts can be arduous, particularly during rainy seasons.
- Inexperienced and new health staff cannot learn more advanced skills if the equipment or supplies needed to conduct the given procedure is not available at the rural health facility.

BEST PRACTICES

- Hire retired public health nurses and midwives who can dedicate sufficient time to provide quality, effective mentoring instead of relying on full-time GHS health staff with other primary responsibilities.
- Secure the commitment of GHS to provide comfortable transportation for the mentors to visit assigned health facilities on a regular, recurring basis.
- Procure and distribute essential equipment and supplies to target health facilities to support effective mentoring.



IMPACT AT THE HOUSEHOLD LEVEL

Changed hearts and minds

Across northern Ghana, father-in-laws, mother-in-laws and husbands typically make all decisions in a household. As the primary breadwinner and head of the compound, a father-in-law has the final say over the lives of children living in his home, including married offspring. Meanwhile, the mother-in-law makes the majority of daily domestic decisions, including what to eat, when to treat an illness and when to go to a health facility.

As a result, these extended family members have considerable influence over the health of pregnant women and chances of infant survival. They determine if a pregnant woman will rely on traditional medicine and give birth at home or use formal health services throughout her pregnancy, including seeking a skilled assisted delivery at the local health facility when she goes into labor.

By sharing key MCH messages across each community through a holistic set of innovations, the EPPICS project helped to change long-held practices and beliefs, gaining communitywide support for use of local health services. This interview shares one family's change of heart in Samini village.

"I had two children. My daughter passed away five years ago during a home birth," explains Dahamata Sampa, the mother of a one-year-old son. "Transportation was difficult to find in Samini at that time. By the time my family went to find a motorbike, I gave birth to a stillborn baby."

"I was born at home so I thought my child should be born at home," shares her husband Sampa Mbatia, who now serves as the secretary for the Samini Community Emergency Transport Committee.

"I preferred home births too. Our mothers gave birth to my father and to me at home, and we practiced traditional medicine," adds Iddirisu Tahiya, Sampa's father and Dahamata's father-in-law. "We were giving concoctions to women [when they went into labor] and thought it would work fine with my daughter-in-law."

"We were using our herbal concoctions, and then the birth would come fast, but women and children were dying," explains Avoa Yidana, Sampa's mother and Dahamata's

mother-in-law. "After we lost our first grandchild, we didn't want it to happen again."

"The health staff told us not to give birth at home and to go to the hospital," Iddirisu says. "Initially in the first year of the project, we didn't accept the idea until we saw that women were giving birth at the facility and not dying,"

"I had our son at the health facility," Dahamata shares, with her husband Sampa noting they switched over to this new idea after learning about the dangers of home births. "I didn't do any antenatal care with my first child, but with this baby I learned from the health workers to eat proteins—vegetable, eggs and fish—so he would be healthy. And as soon as I get pregnant again, I will go to the hospital for antenatal care."

"Our ideas changed four years ago because the health staff shared health messages with us," Iddirisu says as he smiles at his grandson. "Women don't give birth to stillborn babies or die from pregnancy anymore."

Extending CRS innovations for global impact

The EPPICS project has demonstrated exceptional, statistically significant increases in MCH indicators across East Mamprusi district. Due to these documented achievements, Ghana Health Service and CRS are rolling out EPPICS innovations in other districts and regions in Ghana in hopes of achieving similar MCH outcomes. CRS has also incorporated community giant scoreboards into child survival programs in three other countries.

Thanks to their community-based design, EPPICS innovations can easily be adapted to any development context by working closely with local community members to better understand underlying issues impacting maternal and child health. As of May 2016, EPPICS innovations are being scaled up or expanded in the following ways in Ghana and elsewhere:

- The Regional Director of Health Services directed all Northern Region districts to follow East Mamprusi's lead and adopt the link provider, MMT and Council of Champions strategies as MCH priorities using allocations for public health interventions and funds generated by health facilities as the region sources additional funding from USAID and other players.
- GHS' Northern Regional Health Directorate is also working with CRS to develop a policy brief that will inform a revision of a community-based maternal and newborn care implementation policy component based on the successes and lessons learned from the EPPICS project.
- In addition, GHS is sourcing funds from the US-AID-funded Systems for Health to implement the Council of Champions strategy in five regions targeted by Systems for Health.
- CRS is scaling up use of EPPICS innovations through the privately funded \$2.6 million, three-



year REST project, which will reach an estimated 85,000 women and children by March 2017 in 60 communities in East Mamprusi and five additional districts, two in Northern Region and three in Upper East Region.

- Another privately funded CRS initiative, the \$750,000 PROMISE project, is implementing all eight EPPICS strategies in the Kumbungu district of the Northern Region.
- CRS has incorporated community giant scoreboards in child survival projects being implemented in Burkina Faso, Niger and Myanmar.

With the release of this implementation guide, CRS hopes that additional Ministries of Health, development agencies and other organizations worldwide will consider implementing EPPICS innovations to achieve statistically significant MCH gains.



Soansobigi community members are excited to have access to an MMT for emergency transports to the local health facility, and they appreciate the MCH gains made thanks to the EPPICS project.

An epic success

The community-based nature of the eight EPPICS innovations clearly made a significant positive impact on maternal and child health indicators across East Mamprusi district. The district went from being the worst-performing district in Northern Region in 2011 to the best-performing district overall in 2014. In 2015, it continued to be the best-performing district in maternal and child health.

As importantly, EPPICS innovations helped to establish a strong link between an East Mamprusi health facility and each of East Mamprusi's 240 communities. These relationships provide a solid foundation for continued MCH outreach and increased services usage. EPPICS also strengthened existing civil society structures and linked them to the District Health Information Management System to provide better tracking of community health data and enable GHS to better identify any gaps for additional outreach efforts.

A number of key lessons learned emerged throughout the project timeframe, leading to the following best practices:

- Place the Ministry of Health as the lead implementing partner to maximize resource use, capacity building and long-term sustainability, with project objectives complementing broader national health goals.
- For project sustainability in rural areas, involve community members in project design, implementation

and monitoring to promote positive behavior changes and increase their commitment to continuing key activities after project end.

- Advocate for increased investment in the rural health infrastructure to increase availability of formal health facilities in remote areas, reducing travel times for clients.
- Secure sufficient funding for all needed supplies, equipment, vehicles and staff resources to enable health staff to meet their mandates with ease, resulting in increased staff motivation, capacity building, ownership and likelihood of success.
- Consider implementing project activities districtwide to compound the impact of interventions down to the household level.
- Provide incentives and motivations for health staff to accept rural posts and remain in rural areas.
- Use energetic and committed retired health professionals to provide mentoring to less experienced health staff as a cost-effective way to increase staff capacity at the facility level.
- Engaging custodians of practices, rituals, attitudes and beliefs as Councils of Champions for maternal and child health is a highly effective strategy for modifying harmful cultural practices and beliefs and

“The interventions of EPPICS have come to stay even though the project has ended.”

— **Chief Salifu Nantoma**, Council of Champions member, Namasim village

introducing new positive health-seeking behaviors.

- Modified motor tricycles are a cost-effective approach to enable rural clients to reach a point of care more easily by overcoming transportation challenges caused by poor roads and long distances.
- Community giant scoreboards placed in common public areas motivate community members to take action to improve MCH outcomes by presenting performance against key indicators in an engaging, pictorial way.
- Using high-quality construction materials and simple visual designs when building community giant scoreboards increases durability and reduces maintenance needs. The scoreboards should also be built during dry periods.



The EPPICS project clearly made positive contributions to improvements in key MCH indicators in East Mamprusi district during its four-year timeframe. The deployment of CRS innovations focused on both health facilities and the communities they serve—with GHS serving as the lead implementer—had a powerful impact that promises to provide benefits well into the future.

The strategies found to be most promising include repositioning TBAs as link providers, Councils of Champions, community giant scoreboards and the strengthening of quality improvement methods in health facilities. Many of these strategies have already been adopted by Ghana Health Service and are being scaled up in additional Northern Region districts, other Ghana regions and other countries thanks to their significant positive impacts. These gains promise to be sustained thanks to ongoing efforts by GHS staff and community volunteers to continue project activities.

“EPPICS strategies are sustainable because community members have seen that the strategies have really improved their health,” notes former District Director Bayiwasi. “Healthy Mothers and Newborn Care Committees, C-PrES, TBAs as link providers, community emergency transport committees, Councils of Champions, community giant scoreboards—all of these structures are still intact.”

CRS hopes this implementation guide will help other development players to tap the enormous potential of EPPICS innovations to improve the state of maternal and child health services in Ghana and other places across the globe where access to quality health care is not available to the most vulnerable populations. By implementing evidence-based, community-led MCH strategies, we can all contribute to building resilient rural health care systems.

No.1

PERFORMING NORTHERN REGION DISTRICT IN HEALTH OVERALL IN 2014

240

EAST MAMPRUSI COMMUNITIES FORMALLY CONNECTED WITH HEALTH FACILITIES

480

TBAS REPOSITIONED AS LINK PROVIDERS TO LINK PREGNANT WOMEN WITH HEALTH FACILITIES

240

HEALTHY MOTHERS AND NEWBORN CARE COMMITTEES ESTABLISHED

480

MODEL MOTHERS TRAINED TO SHARE KEY MCH MESSAGES

240

COMMUNITY GIANT SCOREBOARDS CONSTRUCTED

12

HEALTH FACILITIES PROVIDED WITH NEEDED EQUIPMENT AND SUPPLIES

240

COMMUNITY EMERGENCY TRANSPORT COMMITTEES FORMED OR STRENGTHENED

12

QUALITY IMPROVEMENT TEAMS FORMED OR STRENGTHENED

44

COUNCILS OF CHAMPIONS FORMED IN SAKOGU SUBDISTRICT

ENDNOTES

- ¹ CRS Ghana Evaluation of Encouraging Positive Practices for Improving Child Survival, East Mamprusi, Ghana, West Africa, November 2015
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