



Operations Research for Accelerating Results toward Ending Preventable Child and Maternal Deaths

Testing 30 Innovative Community and Health System Solutions in Underserved, Vulnerable Populations across 23 Countries

In the last 20 years, the number of child and maternal deaths has declined by 35% and nearly 50%, respectively, in part due to scale up of access to high impact interventions such as immunization and skilled care during pregnancy. Yet these known, life-saving interventions are not equally distributed, and additional efforts and strategies are needed to reach the underserved, such as the urban and rural poor. In an effort to catalyze global action for child survival, the Governments of Ethiopia, India, and the United States together with UNICEF convened the ‘Child Survival Call to Action’ in Washington, D.C. in June 2012. Under the banner of ‘Committing to Child Survival: A Promise Renewed’, more than 160 governments signed a pledge to renew their commitment to child survival, to eliminate all preventable child mortality in two decades. In addition, WHO, the US Government, and many others have started processes to define a new vision for maternal health and elimination of preventable maternal deaths. To accelerate results for ending preventable child and maternal deaths globally, key strategies of A Promise Renewed include investing in operations research to provide solutions and improve the evidence base how best to overcome barriers to delivery and use of high-quality

Bridging gaps between community and health systems

These integrated, innovative solutions intervene to improve **both** supply and demand factors:

Health systems:

- To improve quality of care, health worker motivation, and system collaboration with communities.

Community systems:

- To improve knowledge and healthy behaviors, community-level service delivery and referral, collaboration with health workers, and governance and monitoring for health system accountability.

interventions, and how to scale up service access for underserved populations.

To build this crucial evidence to help inform ministry of health policy and practice, partnerships are needed. Building partnerships to promote innovation and research is a priority for both the United States Agency for International Development (USAID) *Forward* reform agenda and the U.S. Government’s major strategic initiatives, including the Global Health Initiative (GHI) and Feed the Future (FtF). Since 2008, USAID’s Child Survival and Health Grants Program (CSHGP) has supported 19 international NGOs, in partnership with academia, ministries of health, and other local partners in 23 countries¹ to implement and test innovative approaches to bridge gaps between community and health systems.

For example, in order to bridge these gaps, projects strengthen coordinated health information systems, governance groups, and other supportive and teaming structures between health workers and communities. Operations research embedded in the implementation of these projects creates evidence policy-makers and ministries of health need for informed decisions on how best to overcome persisting challenges to reaching the underserved such as barriers to

¹ Afghanistan, Bangladesh, Benin, Burundi, Cambodia, East Timor, Ecuador, Ghana, Guatemala, Honduras, India, Indonesia, Kenya, Liberia, Malawi, Nepal, Nicaragua, Niger, Pakistan, Rwanda, Sierra Leone, Southern Sudan, and Zambia

service use and healthy behaviors, barriers to accessing and using information for health decisions, and gaps in continuum of care and quality of service provision.

The 30 operations research studies supported through the CSHGP are contributing to national and global evidence building for solutions such as:

- **Smart integration of services** (for continuum of care for maternal, newborn, and child health; cross-sectoral integration across nutrition, food security, and agriculture; and integration of child health and education for early childhood development)
- **Civic participation and empowering communities** through existing social structures to enhance local capacities to influence quality of care and uptake of services
- **Private-Public partnerships** to improve access, effectiveness, and sustainability
- **Promoting and advancing equity** by overcoming geographical, gender, and social barriers in maternal, newborn, and child health
- **Building community health systems capacity** including strengthening health workforce, information systems, and quality service delivery to achieve better maternal, newborn, and child health outcomes, and
- **Introducing low-cost technologies or reinvigorating low-coverage interventions** to improve access and efficiency of maternal, newborn, and child health interventions

The evidence and lessons generated from the projects (durations from 3-5 years) are poised to advance policies and strategies at the national and global levels, and will begin to be available as soon as 2013. Already, there has been demonstrated success in the uptake of operations research findings by country governments. For example, the Ministry of Health in Ecuador has allocated a budget and supporting policy for the national scale up of a new model to provide early postpartum home-based care interventions through TBAs and skilled providers. The model uses an Essential Obstetric and Neonatal Care (EONC) network that coordinates community and facility based services (public and private), and promotes service delivery along the continuum of care from the households to facilities. This network supports increased coverage and improved quality of care in remote, indigenous communities. In addition, the government of Nepal is contributing funding and technical support to expand a model to improve maternal and child nutrition through a collaboration between agricultural and nutrition sectors. The Enhanced Homestead Food Production (EHFP) model teaches households improved techniques for the production of diversified animal and plant-source foods and uses behavior change communications to promote the adoption of optimal nutrition practices.

Thirty Innovative Approaches Tested Through Usaid's Child Survival And Health Grants Program (2008–2012) Are Presented By Evidence Theme

Smart integration: Integrating service delivery (package of services within and across sectors) to improve access, continuum of care, effectiveness, and sustainability of maternal, newborn, and child health interventions

Integrating Homestead Food Production with Positive Household Nutrition Behaviors and Practices (Essential Nutrition Actions) to improve and sustain nutritional outcomes in Nepal (2008–2012)

Nepal's National Nutrition Action Plan advocates for a comprehensive, integrated, and multi-sectoral strategy for addressing persistent problems of food insecurity and malnutrition in the country. To support this plan, Helen Keller International (HKI) tested a cross-sectoral integrated model of its proven Homestead Food Production (agriculture) with Positive Household Nutrition Behaviors and Practices (Essential Nutrition Actions). This test targeted

vulnerable households and their members, such as pregnant and lactating women, infants and young children, to demonstrate the impact of this integrated model on improved and sustained maternal and child nutrition in Nepal. HKI's homestead food production program has increased household production of micronutrient-rich foods and improved food security and diet quality among vulnerable households in multiple settings. In addition, the behavior change model promotes messages and services for seven essential nutrition actions to prevent malnutrition. The project employed a cluster randomized control study design to assess the additive effects of integrating the two nutrition program approaches on food security and behavior change. The results showed improved production of food varieties, dietary diversity, and reduced maternal and child anemia and have facilitated a national dialogue on health and agriculture policies and strategies in Nepal, as well as Feed the Future's global priorities to eradicate malnutrition. HKI is building governance capacity of the Ministries of Health and Agriculture and the National Planning Commission, in joint planning and coordination for future cross-sectoral programming at the district, regional, and national, levels.

Integrating public and private service delivery with community-based care using the Essential Obstetric and Neonatal Care Network Model to improve survival of mothers and newborns in-hard to-reach areas in Ecuador (2009–2013)

In Ecuador, essential maternal and neonatal care has been fragmented, poorly integrated, and often of low quality. In 2008, the Ministry of Health launched a health care extension program model named "Basic Health Teams" (EBAS in Spanish) to expand coverage of high-impact services from primary health centers to the community. The Center for Human Services (CHS) in partnership with the Center for Population and Social Development Studies (CEDAR) in collaboration with the MOH is piloting the EBAS model to provide early postpartum home-based care interventions through TBAs and skilled providers. The model uses an Essential Obstetric and Neonatal Care (EONC) network that coordinates community- and facility-based services (public and private), and promotes service delivery along the continuum of care from the households to facilities. This network supports increased coverage and improved quality of care in remote, indigenous communities. The evidence and learning generated by CHS for its innovative EONC network model influenced a decision by the MOH for country-wide expansion, as part of a national initiative to reduce maternal and newborn mortality, including a dedicated budget and staffing in all provinces of Ecuador. The model will continue to be adapted within Ecuador, appropriate to the setting, and can be globally adapted across countries.

Integrating the delivery of a new national community-based newborn care package with maternal care while strengthening health systems for high impact in Nepal (2009–2013)

The Nepal Ministry of Health developed a policy for newborn care and endorsed a specific, community-based Newborn Care Package (CB-NCP) parallel to a similar package implemented for maternal care. The CB-NCP includes a collection of neonatal services at the community level. It involves with some support from facility-based providers through their supervision of Female Community Health Volunteers although it lacks a complementary focus on strengthening facility-based services and maternal services. HealthRight International in partnership with Mother and Infant Research Activities (MIRA) will test an innovation that will supplement the CB-NCP by strengthening maternal and newborn care (MNC) services at both the community and facility levels, and by creating an integrated continuum of care from pregnancy through the postnatal period to ensure the health and safety of both the mother and newborn. The results will be the first of their kind clearly documenting the impact of facility strengthening combined with community-facility linkage-building and investigating barriers to seeking care.

Leveraging early childhood development groups in the education sector for greater effectiveness and equity in child health and survival in Rwanda (2010–2014)

In Rwanda, CARE is supporting the government's efforts to operationalize the integration of three newly developed policies—the Community Health Policy, National Nutrition Policy, and Early Child Development Policy—by strategically integrating MNCH interventions into home-based Early Child Development groups. CARE, in collaboration with Tulane University, will introduce, implement, and evaluate this cross-sectoral integration model, under the Government's Community Health Worker (CHW) strategy to improve MNCH and child development outcomes as well as reduce health disparities based on economic status. This integration enables CHWs to reach all mothers with young children in the community on a regular basis with key health messages and behavior change activities and creates synergy with early child stimulation, which has been shown to be associated with better health outcomes. The operations research will investigate whether this model increases safety and security for children, enhances child development through parental training on early childhood stimulation, and increases economic security of the participating households by allowing women to engage in economic activities.

Integrating maternal nutrition and health interventions during pregnancy to improve maternal and newborn outcomes in Cambodia (2010–2014)

In Cambodia, the government has developed policies and program strategies to help guide the country and its national and international partners on how to effectively monitor, treat, and prevent malnutrition among its vulnerable populations. Programs specific to maternal under-nutrition are included in the “National Social Protection Strategy for the Poor and Vulnerable,” “National Policy and Guidelines for Micronutrient Supplementation to Prevent and Control Deficiencies in Cambodia,” and “National Strategy for Reproductive and Sexual Health.” These documents state that detection and treatment of anemia in pregnancy will be strengthened through the provision of equipment for blood testing to health centers and referral hospitals. To help operationalize these policies and guidelines, International Relief and Development (IRD) with their research partner, the University of British Columbia, is testing the effectiveness of a maternal nutrition intervention strategy that combines provision of a fortified food supplement to pregnant women and hemoglobin testing using a HemoCue device to accurately detect and treat anemia among pregnant women. Regular household visits by village health workers to follow up and counsel women are an integral component of the strategy. The study has important policy and programming implications not only for generating evidence to scale up the program in Cambodia, but also for global stakeholders concerned with improving nutrition of pregnant women through effective strategies and approaches.

Integrating family planning with the maternal, newborn, and child health community-based package of interventions to achieve a continuum of care—“No Missed Opportunity”—in Malawi (2011–2016)

Since their inception, government-supported CHWs, called Health Surveillance Assistants (HSAs) in Malawi, have been used to deliver a range of health programs at the community level. Although these programs are delivered by the same HSAs, they are developed, supported, and supervised in parallel through different departments within the MOH, creating gaps in the continuum of care and hence missed opportunities, duplication of resources for implementation, and low quality of care at the community level. Save the Children in partnership with the MOH and Malawi College of Medicine is designing and implementing an integrated family planning (FP)/MNCH intervention model to be delivered by HSAs in Blantyre district to improve access to a wider range of lifesaving interventions along the continuum of care. The operations research study will assess the feasibility and impact of the FP/MNCH integrated service delivery model on the continuum of care to ensure that there are no missed opportunities. The project will also investigate the incremental benefit of adding community care through

volunteers and grandparents to improve newborn care practices, timely detection of danger signs, and care-seeking. The findings from this study will help inform scale-up of the HSA program and feed into other ongoing national efforts including the USAID Mission's bilaterals for health systems strengthening and behavior change.

Integrating family planning with existing community maternal and child health platforms and with the immunization program to improve uptake of comprehensive health services in Liberia (2012–2016)

The Liberian Ministry of Health and Social Welfare (MOHSW) has prioritized family planning in its policies and strategies as a means to reducing maternal and child mortality. Indeed, Liberia's policy document, the "Accelerated Action Plan to Reduce Maternal and Neonatal Mortality" (July 2012), states that family planning integration with routine maternal and child health (MCH) service delivery platforms is a key strategy to improving MCH. In line with these priorities, the International Rescue Committee will work collaboratively with the Ministry of Health and Social Welfare to implement the Better Future, Better Lives project to increase uptake of FP services within primary care services through integrating FP with community-based MCH and the Expanded Program on Immunization (EPI) service delivery platforms in Lofa and Montserrado counties. The operations research will evaluate the effects of this integration model of family planning with the communities' existing MCH platform to improve uptake of FP interventions. These interventions will include contraception methods such as injectables and strengthening of postpartum family planning (PPFP) by offering immediate IUD insertion in postnatal care settings and with EPI service delivery at the facility level. The findings from this study will help inform future directions of the national family planning policy and guide the scaling-up of integrated approaches of family planning with maternal, newborn, and child health service delivery platforms, in Liberia and globally.

Civic participation and empowering of communities through existing social structures to enhance local capacities to influence quality of care and uptake of services for better and sustainable MNCH health outcomes

Care Groups' potential for national scale-up of behavior change interventions in Burundi (2008–2013)

The Care Group Model, a community-based implementation strategy for the delivery of behavior change interventions, has been implemented in 14 countries by 19 NGOs. It is a promising mechanism for improving the uptake of high-impact MNCH interventions and sustainably improving outcomes. Concern Worldwide International (Concern) has refined, adapted, and implemented the Care Group Model within the existing health system in Burundi. In the traditional Care Group Model, Care Group Volunteers are trained and supervised by Health Promoters (full-time, paid project staff), who are supervised and supported by supervisors (full-time, paid project staff). Community Health Workers are included in the Care Groups along with the other Care Group Volunteers, but they are not given the responsibility or training to facilitate the Care Groups themselves. This research will examine an adapted model that more powerfully leverages the potential of CHWs with fewer inputs for paid staff and transport than the traditional Care Group Model and will assess the viability of the model in terms of effectiveness, functionality, and sustainability. Concern, in collaboration with the Institut National de Santé Publique in Burundi, will evaluate the capacity of the less resource-intensive Care Group Model to improve key child health and nutrition behaviors among caregivers of children 0–23 months. The evidence and lessons generated will inform the potential for scaling up the Care Group Model as a part of the MOH strategy to effectively reach children and sustainably improve coverage of high-impact child survival interventions.

Community empowerment through a community-based organization model to effectively improve maternal, newborn, and child health in marginalized populations in Bangladesh (2009–2014)

The Government of Bangladesh's Health and Population Strategy recommends the promotion of private-public partnerships in remote communities to achieve better health outcomes and address gender and income inequalities for vulnerable populations. World Renew (formerly Christian Reformed World Relief Committee; CRWRC) has developed a new approach called the People's Institution Model—a community-based organization (CBO) comprising several smaller women's and men's groups—to organize and mobilize communities for health and social change. In collaboration with the International Center for Diarrheal Disease Research Bangladesh (icddr,b) and the University of Michigan, World Renew will assess the extent to which a CBO can function as an independent, self-sustaining organization, as well as its effectiveness/cost-effectiveness in reaching poor, marginalized mothers and newborns as compared to existing government programs. The evidence and lessons generated will inform national and global learning for the value-added of international NGO community mobilization models that aim to strengthen and institutionalize community engagement, and their impact on improving equitable access to health services in marginalized populations and improving health outcomes.

Combined Community-Based Impact-Oriented and Care Groups Model to improve and sustain maternal, newborn, and child health outcomes of indigenous communities in Guatemala (2011–2015)

The Guatemalan Ministry of Public Health and Social Welfare's (MPSW) national health priority is to improve access and quality of health services for vulnerable populations, including indigenous and rural Mayan women and children under five. Poor accesses to health facilities, lack of culturally appropriate care, lack of data, and limited use of information for action at all levels—community to national—are major barriers to improving health care in Guatemala. Curamericas in collaboration with the American College of Nurse-Midwives (ACNM), MPSW, and Mayan community members are testing a Community-Based, Impact-Oriented (CBIO) strategy used in synergy with Care Groups to address these barriers to improve health behaviors and outcomes for women and children in Huehuetenango, Guatemala. The project uses community mobilization and education activities to develop relationships of mutual trust, commitment, ownership, and active community involvement to create sustainable partnerships among key stakeholders. The CBIO implemented by Care Groups ensures that: 1) scarce resources and services are appropriately targeted to the most common causes of illness and death as deemed by local data to achieve maximum impact at affordable cost; 2) service outreach and utilization reach the most vulnerable in a culturally appropriate, interpersonal manner; and 3) outcomes and impacts are well-measured for continuous quality improvement, timely decision-making, and confirmation that those most in need are served. The operations research will also investigate the cost-effectiveness, sustainability, and impact of the intervention on skilled birth attendance. It is anticipated that research findings will serve as a pilot program that can be adapted and scaled up nationally.

Leveraging the powers and influence of community leaders—Council of Champions—to improve the uptake of maternal, newborn, and child health services in East Mamprusi, Ghana (2011–2015)

In East Mamprusi (EM) District, Ghana, high levels of maternal and neonatal deaths have been attributed to cultural beliefs, rituals, and attitudes that result in delays in seeking care during pregnancy and delivery, thus jeopardizing the health of pregnant women and their unborn babies. In response, Ghana's MOH adopted a Community-based Health Planning and Services (CHPS) Initiative in 1999 that aims to reduce socio-cultural and geographic barriers. The CHPS strategy relies on mobilization of volunteers, resources, and cultural institutions (traditional community structures) to promote and support positive health behaviors in communities. To

build on the CHPS initiative, Catholic Relief Services (CRS) is working with the MOH, Ghana Health Services, EM health management teams, and the University for Development Studies (UDS) to operationalize the CHPS strategy by leveraging existing traditional leaders. The project will establish Councils of Champions (CoCs) comprising traditional leaders—esteemed community members who are seen as custodians of the socio-cultural, traditional, and religious practices and as behavioral influencers within their communities, including Magazias (“Queen Mothers,” or respected senior females in a community), Chiefs, and Imams/Pastors. The CoCs will work with health care providers using participatory approaches to assess the health and service situation within communities and plan solutions to improve use of services and promote healthier pregnancies and improved newborn outcomes. The operations research will assess the acceptability and impact of CoCs on maternal and newborn health behaviors and outcomes. Ghana Health Services is interested in testing this approach for potential scale-up to other districts.

Establishing a culturally appropriate behavioral change strategy to promote the use of rapid diagnostic tests for malaria diagnosis and management at the community-level in Benin (2012–2016)

In an effort to improve case management of malaria in Benin, the National Malaria Control Program’s (NMCP) strategy is to ensure that only rapid diagnostic test (RDT)-confirmed cases of malaria are treated with artemisinin-based combination therapy (ACT) to avoid unnecessary and excessive use of expensive drugs (lower costs) and minimize the risk of fostering ACT drug-resistant strains of malaria. Supporting this effort, CRS in collaboration with the MOH in Benin is implementing the “Communities Accessing Testing for Child Health – CATCH” in Parakou-N’dali in Borgou in the north and Allada Toffo-Ze in Atlantique in the south to increase access and use of community-based quality malaria services for children under five. The CATCH project goal is to promote household-level health-seeking behaviors and access to malaria confirmatory testing using RDTs as well as treatment with ACT as necessary to ensure quality care and treatment of malaria for children under five. Nonetheless, cultural misconceptions concerning the purpose of the RDT tests continue to inhibit its uptake in rural communities. To address this problem, CRS will conduct an operations research embedded in the CATCH project to investigate a culturally appropriate behavioral change communication approach that will help facilitate the uptake of RDT at the community level for malaria case confirmation before treatment. The study findings have national programming and policy implications including strengthening NMCP’s comprehensive strategy to improve and expand community RDT services nationwide to diagnose and treat malaria appropriately at the community level by community health workers.

Building and strengthening private-public partnerships to improve access, effectiveness, and sustainability

Building public-private partnerships for strengthening Pakistan’s National Community Midwifery Strategy in remote districts (2008–2013)

Pakistan’s National Community Midwifery (CMW) Strategy, a part of the National Maternal, Neonatal and Child Health Program, was initiated in 2006 to improve skilled intrapartum care for women in remote and underserved communities. However, the rollout of the CMW strategy has been difficult due to government devolution to provinces, limiting the uptake of services provided by community midwives as well as retention, as indicated by high drop-out rates. The Aga Khan Foundation in collaboration with district health teams is implementing the Chitral Child Survival Project (CCSP) to increase access and use of the obstetric and neonatal continuum of care in 28 remote and isolated target communities in Chitral District, Khyber Pakhtunkhwa (KP) province. In this project, AKF in collaboration with the Aga Khan University (School of Nursing and Department of Community Health Sciences) will test a public-private partnership model that combines strengthening training (i.e., establishing a

midwifery school), deployment, and incentivizing Community Midwives (CMWs) through community-based savings groups and engaging village health committees in supporting and managing CMWs. The operations research will strengthen Pakistan's evidence base to help inform the government's national CMW strategy that is now devolved to the provinces and its scaling-up to other districts.

Micro-financing to privatize the community midwifery program to improve quality and access to maternal and newborn health services and better outcomes in Pakistan (2012–2016)

In 2011, Pakistan's National (Federal) Ministry of Health was abolished, and its responsibilities devolved to the provincial Departments of Health (DOHs). Consequently, the provincial DOHs are finding it extremely difficult to support national priorities including the Community Midwifery (CMW) Strategy established in 2006 to improve maternal, neonatal, and child health in the country. Mercy Corps in partnership with the DOHs is implementing the *Saving Mothers and Newborns in Communities (SMNC)* project in Quetta, Gwadar, and Kech districts in Balochistan province. The SMNC initiative seeks to increase use of quality essential MNC through private-sector community midwives to improve maternal and neonatal health outcomes, especially for poor and marginalized populations. Mercy Corps and its partners will conduct an operations research within the SMNC project to assess the feasibility and effectiveness of providing micro-finance opportunities to CMWs aimed at privatizing their practices of providing maternal and newborn service in a sustainable manner. The findings will be used to assist the provincial DOH to develop a MNCH strategic plan to support CMW work and improve the availability of quality MNC services in an equitable and financially self-sustaining manner.

Strategies for promoting and advancing equity due to geographical, gender, and social barriers in maternal, newborn, and child health

Promoting gender equity at the household level central to improving access to and use of maternal, newborn, and child health services in Nicaragua (2008–2012)



Photo courtesy of World Vision

Afghan community health workers learning how to access tele-emergency assistance on a mobile phone.

Strengthening community health workers is one of the strategies the Nicaraguan MOH has put in place to address health and social issues, especially in remote areas. Matagalpa is a remote district with the highest rate of inter-family violence in Nicaragua, an indication of gender inequality and poor health indicators. CRS, in collaboration with the Center for Health and Research Studies (CIES)/University of Nicaragua, is assessing the capacity of a constructive male involvement model to improve decisions for maternal, newborn, and child health care at the household level in order to increase access to and use of services in Matagalpa. The innovation focuses on educating men and involving

them creatively and effectively to support MNCH issues, thereby increasing opportunities for shared decision-making. At the request of the MOH, CRS implemented and tested a second strategy to improve utilization of MNCH services through developing and strengthening community health agents in isolated rural areas, which were reporting particularly poor health outcomes. The evidence and lessons from both studies will inform the development of behavior change communication strategies for improving MNCH that effectively address gender norms

for decision-making at the household and community levels and contribute to strengthening the MOH's community health worker strategy for reaching remote areas.

New mobile health technology applications to improve the efficiency of community health workers in Afghanistan (2008–2012)

In rural areas outside Herat, Afghanistan, access to health care is extremely limited due to the distances people live from facilities, and there are few qualified health care providers. To address these issues, World Vision, in collaboration with Dimagi, is implementing a mobile technology innovation designed to test new ways of improving access to pregnancy, obstetrical, and newborn care by increasing referrals as well as prompting essential lifesaving actions at the time of delivery. Tele-Emergency Assistance (TEA) is an innovative strategy to improve maternal and child health outcomes. The project will provide mobile phones to CHWs, midwives at community health centers, and selected doctors at the maternity hospital. TEA will allow CHWs and midwives utilizing mobile phone units to directly communicate with a 24-hour on-call senior midwife and or obstetrician at the maternity unit of Herat Regional Hospital. Observations, pictures, and data can be transmitted through the mobile unit to allow for the midwife or obstetrician to give informed technical advice. Appropriate training will be provided to health workers with mobile phone users on use of the phones, transmission of messages, and documentation during TEA. Home Based Life Saving Skills (HBLSS) are being integrated into the application. Ultimately, the aim of using the application is to decrease maternal and newborn deaths resulting from issues around access to services, timely information, and knowledge transfer. While other institutions are exploring application of mobile technology in Afghanistan, this study is the first of its kind in the country.

Establishing community-led Maternity Waiting Homes to improve access to skilled maternal and newborn care for women who live far from a health facility in Liberia (2010–2014)

In Liberia, the government policy recommends and exclusively supports facility-based births with a skilled birth attendant. However, in this post-conflict setting, the long distances between most rural communities and urban health facilities (a walk of seven to eight hours) limit the number of pregnant women who can afford to travel and arrive on time to deliver in these facilities. Africare, in collaboration with the University of Michigan, will evaluate whether instituting Maternity Waiting Homes—where pregnant women await delivery, arriving one to two weeks before their delivery date—near health facilities will increase the proportion of women who deliver in a facility and facilitate timely access to quality MNC services for women and their newborns. Africare plans to involve traditional birth attendants in new roles as caregivers and care promoters during the weeks leading up to delivery, in addition to addressing the distance factor. This operations research study is highlighted in USAID Liberia's strategy for maternal and newborn health, and was featured in Women's E-News feature entitled "Liberia Innovates to Save Lives of New Mums." The feature story can be accessed at: <http://www.womensenews.org/story/reproductive-health/110204/liberia-innovates-save-lives-new-moms>.



Credit: Juhie Bhatia

Women waiting at Redemption Hospital in Monrovia.

Improving equitable access to community-based structures to strengthen decentralized health systems in Honduras (2009–2013)

The Government of Honduras is decentralizing its public health services to the regional level as a strategy to increase coverage and equity in health. The “how” of this strategy’s implementation must be better defined so that high-quality services are available with limited national resources. A strong, community-level strategy will support local commitment and service use, and create a sustainable bond between community and regional government resources. ChildFund International, in collaboration with CENET (Centro Nacional de Educacion para el Trabajo), is developing and testing a standardized “community health unit” model to provide quality, integrated MNCH services in remote areas, with the goal of increasing access, coverage, referrals, and equity. This operations research will generate data-driven evidence and lessons learned in order to determine the value-added to the formal health system of the community-based structures, thereby supporting and informing the scale-up of the MOH’s decentralization strategy.

Using mobile phone technology—“Mobile Moms”—to improve access and quality of health care for women during pregnancy through the postpartum period in Timor-Leste (2011–2015)

As a post-conflict country, Timor-Leste’s health system has insufficient infrastructure and human resources to provide quality, skilled care to women in remote areas, especially during pregnancy and delivery, as well as after delivery. In 2008, the MOH initiated the Integrated Health Services (Servisu Integradu Saude Comunitaria, or SISCa) as an outreach service delivery model to increase access to quality health services at the community level during pregnancy through the postpartum period. Family Health Promoters (Promotores Saude Familia, or PSF) play a pivotal role in the implementation of SISCa by helping to promote preventive and health-seeking behaviors at the village and household levels while strengthening linkages between communities and clinic staff. Leveraging these initiatives, Health Alliance International (HAI), in collaboration with the MOH, University of Michigan, and the Ainaro and Manufahi DHMTs, is conducting operations research to develop and test a mobile phone technology strategy, “Mobile Moms.” They are focusing on whether the strategy can reduce geographical access barriers to health care during pregnancy, delivery, and the postpartum period, particularly when complications arise. The Mobile Moms strategy will facilitate communication between pregnant women and midwives and improve women’s access to health information. Specifically, HAI and its partners will assess the feasibility of using the mobile phone technology (e.g., timely text messages to promote healthy behaviors) and evaluate its effectiveness in promoting use of skilled birth attendants, increasing facility deliveries, improving maternal health behaviors, promoting community birth preparedness plans and access to emergency care, and strengthening the perceived midwife-patient relationship. If successful, the “Mobile Moms” strategy will be scaled up to other districts in Timor-Leste with limited physical access to facilities to improve access and use of health services, and ultimately improve health outcomes of mothers and their children.

Establishing maternity waiting homes as a strategy to increase facility-based births and improve maternal and newborn health outcomes for a pastoral population in Kenya (2012–2016)

Kenya’s Ministry of Public Health and Sanitation (MOPHS) developed a community health strategy, “*Taking the Kenya Essential Package of Health to the Community*,” to help take health services to the village level. The community strategy has prioritized strengthening health service delivery through a decentralization process to increase availability and improve access to quality services for underserved and vulnerable populations. Concern Worldwide International (Concern), in partnership with county and national authorities involved in health issues for Arid and Semi Arid Lands, is implementing a project in Marsabit County. This project aims to expand access to quality maternal, newborn, and child health services through outreach clinics, integrated community case management (iCCM), and maternity waiting homes (MWH)

to reduce morbidity and mortality among the pastoralist population. Concern will conduct an operations research to assess the feasibility and effectiveness of establishing MWHs as a means of increasing access to critical MNC interventions in pastoralist settings. The evidence will help operationalize the Community Health Strategy and demonstrate what can be achieved and scaled up to other districts and in the region and for the pastoralist populations.

Building community health systems' capacity including strengthening health workforce, information systems, and quality service delivery to achieve better maternal, newborn, and child health outcomes

A teaming approach focusing on Community Health Workers to extend integrated newborn care and Community Case Management in Zambia (2009–2014)

In Zambia, TBAs and CHWs are among the only feasible, national community-based agents for many rural populations. TBAs provide care to pregnant women and limited care to newborns. The CHWs provide care to the child six months and above. The infant between one and five months of age is therefore left without any care. Currently TBAs and CHWs may reside in the same community, but work independently of each other, leading to inefficiency and missed opportunities for teaming and continuity of care. Save the Children is working in partnership with Boston University and the District Health Management Teams in the underserved Lufwanyama district to assess the feasibility and effectiveness of a new CHW and TBA team linked to health facilities and Neighborhood Health Committees (NHCs), consistent with Zambian Ministry of Health policies. In addition, findings from this project will help inform a larger, global effort to build evidence for innovative solutions to maximize available human resources, including task shifting and effective teaming between different cadres of health professionals.

Expanding roles of semi-literate women volunteer leaders in Care Groups to include treatment with prevention and promotion at the community level in Niger (2009–2014)

Through the Catalytic Initiative to Save a Million Lives, supported by the Canadian International Development Agency and UNICEF, the Niger Ministry of Health's efforts are aimed at accelerating progress in reducing maternal and child mortality. However, this initiative and other government health plans face challenges in terms of limited resources in the health sector including a shortage of qualified health workers. Concern Worldwide International (Concern) is working with District Health Teams to investigate the feasibility of establishing Care Groups of Mother Leaders with limited education to deliver integrated community case management (iCCM); this would allow for easy access to multiple health services for children under five in communities compared to provision of these care services exclusively at Health Posts. The evidence and lessons generated by Concern will inform the Niger MOH's strategy to roll out iCCM as an alternative delivery strategy, particularly as a component of the Catalytic Initiative in Niger.

Optimizing the role of Home Health Promoters in providing an integrated package of services in Community Case Management and Home-Based Life Saving Skills in Southern Sudan (2010–2014)

Southern Sudan faces a dire health workforce shortage, and the country's few available health professionals prefer to work in urban areas such as Juba, Wau, and Malakal. Thus, there is a significant need to increase the human capacity and delivery of community-based health care to a majority of Sudanese in remote areas. The Government of Southern Sudan developed a Basic Package for Health Services (January 2009), which stresses the importance of a newly approved cadre of CHWs known as Home Health Promoters (HHPs). The HHPs are part of a national strategy to undertake community-based interventions such as health promotion and community

case management (CCM) of common childhood illnesses like malaria, pneumonia, and diarrhea for improved access to prevention, care, treatment, and basic emergency services for all families. To help inform the sustainability and scale-up of this strategy, World Vision, in partnership with the Johns Hopkins University and Makerere University, will develop and test operational guidelines for implementing the HHP strategy to effectively deliver an integrated package of CCM and Home-Based Life Saving Skills (HBLSS) services at the household level. This would be a means of increasing access to essential services and improving newborn and child health outcomes in this setting with limited access to health care.

Using the Improvement Collaborative Model to improve performance and retention of CHWs in Benin (2010–2014)

In 2010, the Beninese Ministry of Health (BMOH) developed National Directives for Community Based Health Promotion that clearly define community structures involved in the community health delivery system, roles and responsibilities of a CHW, CHW performance indicators, and a policy on motivation of CHWs. However, it is not clear how this policy will be implemented and successfully taken to scale in order to ensure sustainability and improve health outcomes. Indeed, in their 2011 Operational Plan for national scale-up of high impact interventions, the BMOH recognizes that CHWs are a critical component of the health care system for the reduction of maternal, neonatal, and child mortality. The Center for Human Services (CHS) in partnership with Centre d'Expertise d'Ingénierie pour le Développement Durable (CEID) will help operationalize and evaluate the effectiveness of the MOH's new CHWs program. Specifically, CHS will conduct an operations research study to test the effectiveness of the Improvement Collaborative Model to improve the performance and retention of CHWs for a sustainable community health system compared to the MOH's basic package of CHW incentives and improving child health outcomes. The evidence and lessons learned will help inform Benin's MOH policy directive on community health and contribute to increasing the effectiveness of strategies involving CHWs.

Using mobile technology to improve collection, availability, and use of high-quality service data to improve decision-making and MNCH outcomes in Indonesia (2010–2014)

The Government of Indonesia has recognized the value of using evidence-based data to accelerate progress toward the reduction of the country's high maternal and infant mortality rates. In 2007, the MOH (with support from UNICEF) developed the Local Area Monitoring and Tracking (LAMAT) system to provide comparable data across municipalities, districts, facilities (public and private), and communities to monitor performance (i.e., access and coverage) of immunization and MNCH services. Data from the system provide opportunities to share best practices based on evidence and are used to help health program managers identify low-performing areas, and allocate/advocate resources based on need. However, there have been a number of operational bottlenecks within the system at the data collection, analysis, and dissemination levels, which have discouraged many stakeholders including the private health care providers from reporting or using the LAMAT data. To help address these challenges, Mercy Corps, in collaboration with the Center for Family Welfare of the University of Indonesia (PUSKA-UI), is introducing and assessing the effectiveness of using mobile technology to improve collection and use of quality data to inform local planning and resource allocation for better MNCH interventions and outcomes.

Establishing a participatory, community-based health information system strategy for improved health-related decision-making in Freetown City, Sierra Leone (2011–2016)

The Government of Sierra Leone decentralized planning, implementation, and management authorities for health and other basic services to the district and municipal levels (2004). The National Health Sector Strategic Plan (2010–2015) identified health information systems strengthening as a priority area for improved program decisions. However, lack of

comprehensive and quality data from both community and facility levels have limited the use of evidence-based knowledge for program planning and management decisions. Concern Worldwide in collaboration with the Ministry of Health and Sanitation is implementing a maternal and child health project in 10 urban slum communities within Freetown to improve maternal and child health outcomes. They are conducting an operations research to develop and test a participatory, community-based health information system (P-CBHIS) that will help provide comprehensive and timely data to understand the local health situation, improve practices, and ultimately improve outcomes of women and children. The P-CBHIS strategy is aimed at empowering communities to design and collect data to monitor, plan, and manage their own health situations at the household, community, and primary health facility levels and hence improve program functioning, ownership, and sustainability of project initiatives. In addition, the project will explore potential synergies with Concern Worldwide's Innovations for Maternal, Newborn, and Child Health project (funded by the Bill & Melinda Gates Foundation) in relation to health systems strengthening. The study has other policy implications including contributions to USAID's strategy for Sierra Leone on women- and girl-centered approaches and to the global evidence base for strengthening urban health systems for better health outcomes.

Operationalizing a community-based “Task Sharing” strategy with community health workers in improving access to maternal and newborn care in Elgeyo-Marakwet County, Kenya (2012–2016)

Kenya's Ministry of Public Health and Sanitation (MOPHS) developed the Community Health Strategy (CHS) to address community-level health system challenges to access and use of proven health interventions in rural and under-served areas. The CHS calls for establishing Community Health Units, increasing capacity of the district health management teams (DHMT) and health facilities to implement high-impact interventions, and improve access to and quality of care for underserved, vulnerable populations. Building on these efforts, HealthRight International in collaboration with the DHMT is implementing the Partnership for Maternal and Neonatal Health Plus (PMNH+) project in Marakwet East and West districts (Elgeyo-Marakwet County). The project will improve maternal and newborn health (MNH) outcomes through a continuum of care and services from households to facility level. HealthRight and its partners will conduct an operations research within the PMNH+ project to assess the acceptability and effectiveness in “task sharing” of a package of MNC services with CHWs at the facility and community levels to increase the availability, demand, and use of MNC services for better MNH outcomes in Elgeyo-Marakwet County. The study will provide evidence to help operationalize the CHS strategy and inform its implementation and scale-up plans and guidelines for an effective task sharing with CHWs as a means toward achieving Kenya's Millennium Development Goals 4 and 5. The study will also contribute to the global gap in evidence on task shifting/sharing as a solution to shortages of health professionals in remote areas.

Introducing low-cost technologies or reinvigorating low-coverage interventions to improve access and efficiency of maternal, newborn, and child health interventions

Enhancing the national, community-based nutrition program with “Nutrition Weeks” through behavioral and practice changes to improve child nutrition in Rwanda (2011–2015)

Rwanda's MOH, in partnership with other ministries and partners, developed a national nutrition policy to eliminate malnutrition among its vulnerable populations, including women and children. The Community-Based Nutrition Program (CBNP) was developed as a key strategy to prevent and manage malnutrition through behavior change communication approaches. World Relief, in collaboration with the MOH, is developing and evaluating the feasibility and effectiveness of adding “Nutrition Weeks” to the CBNP. The project will demonstrate a scalable implementation approach that empowers CHWs and engages mothers in active learning during “Nutrition Weeks” instead of offering the standard cooking demonstrations and nutrition talks to promote behavioral change. Specifically, the operations

research study will assess the relative improvement in behavioral practices and outcomes and the feasibility of CHWs sustaining this approach in Nyamagabe district. “Nutrition Weeks” will target pregnant women and mothers with children under two years of age to have an impact during the critical “1,000 days” period. Training topics will include incorporation of local nutritive food into a diet; preparation of age-appropriate, nutrient-dense foods; and responsive feeding. CHWs will reinforce key messages when conducting home visits. It is anticipated that if successful, this intervention strategy will be used to strengthen the CBNP and to further refine the national protocol and its implementation guidelines for scale-up.

Testing a repair and maintenance strategy to prolong the operational and usage life of long-lasting insecticide-treated nets distributed at community level in rural Benin (2012–2017)

As a President’s Malaria Initiative (PMI) priority country, Benin has a National Malaria Control Program (NMCP) whose main strategies include: improving malaria prevention through distribution of long-lasting insecticide-treated nets (LLINs), intermittent preventive therapy for pregnant women (IPTp), and Indoor Residual Spraying; providing access to treatment with artemisinin-based combination therapy (ACT) in health facilities and at the community level through Community Case Management (CCM); and strengthening and integrating the health care system. In line with the NMCP’s 2011–2015 National Malaria Strategic Plan, Medical Care Development International (MCDI) is implementing the PADNET project. The goal of this project is to promote access to malaria prevention and treatment interventions through encouraging positive behavior change; increasing coverage and usage levels of LLINs among children under five and pregnant women; and reducing malaria-related morbidity and mortality in Sèmè-Kpodji community, Ouèèmè Department. MCDI in collaboration with MOH and the Centers for Disease Control and Prevention will design and conduct an operations research within the PADNET project to assess the feasibility and test the effectiveness of a cost-saving malaria prevention model that promotes regular utilization, maintenance, and repairs to prolong the useful life of LLINs distributed to prevent malaria at the community levels in rural Benin. This operations research study responds directly to the NMCP’s need to evaluate the impact of and continuously improve malaria-related interventions in Benin. The results will help inform program practices and policy decisions in Benin on how to extend or preserve the expected operational life of LLINs and better plan for future LLIN procurements and distribution to prevent malaria. If successful, the LLIN repair and maintenance strategy will also be scaled up by existing malaria control programs to maximize the health benefits achieved through the rapid mass distribution mechanisms of LLINs.

Introducing a simplified neonatal resuscitator equipment (“upright” bag-and-mask) to address neonate asphyxia at primary health center level facilities in Uttar Pradesh State, India (2012–2015)

The Government of India launched the National Rural Health Mission (NRHM; provision of equipment in 2005), Janani Suraksha Yojana (JSY; promotion of institutional deliveries in 2007), Navjaat Shishu Suraksha Karyakram (NSSK; training of health care providers in essential newborn care and resuscitation, 2009), and Janani Shishu Suraksha Karyakram (JSSK; free medical care for sick newborns) and increased funding to states to address health concerns including neonatal mortality. These initiatives rapidly increased deliveries at primary health centers where critical challenges such as inadequate skills and equipment exist. Overall neonatal mortality rates are highest in Uttar Pradesh (UP) state, and ensuring universal access to newborn resuscitation is an essential and necessary step to address “birth asphyxia” a leading cause of neonate deaths. Save the Children in collaboration with UP’s MOH is implementing a Saving Newborn Lives Project in Gonda District and the slums of Aligarh City. In this project, Save the Children will collaborate with key stakeholders including the National Neonatology Forum to conduct an operations research study to test the effectiveness of an easier-to-use, effective, and affordable newborn resuscitator (“upright” bag-and-mask) to

improve management of birth asphyxia at primary health centers. The study will help inform the implementation and protocols for scaling up the use of the newborn resuscitator for improved and sustainable quality of newborn care at primary health care-level facilities.

For more information on USAID's Child Survival and Health Grants Program and its Innovation and SCALE Grantees, link to www.mchipngo.net, http://www.mchipngo.net/controllers/link.cfc?method=OR_Report, or link to <http://www.usaid.gov/what-we-do/global-health/child-survival-and-health-grants-program>

ANNEX

CSHGP Innovation Awardees: Partnerships, Research Questions, and Study Designs

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Afghanistan World Vision 2008 – 2012	5 districts of Herat Province (260,500)	WRA 45,250 U5 36,200 Total 81,450	5 remote villages in Karukh District (57,900)	WRA 11,580 U2 4,362	United Nations Children's Fund (UNICEF), Ministry of Public Health (MOPH), Coordination of Humanitarian Assistance (CHA), MOVE, Dimagi*	How does mobile technology use strengthen routine care for pregnant women and newborns through improved access to obstetrical and newborn emergency care in hard-to-reach areas?	Pre-/post-test design with intervention only
Bangladesh World Renew 2009 – 2014	Durgapur and Kendua Sub-districts, Netrokona District (484,920)	WRA 124,313 U5 96,571 Total 220,884	Intervention: Entire project area Comparison: 2 non-project upazilas in the same district	Same as project	Sustainable Association for Taking Human Development Initiatives (SATHI), Pari Development Trust (PARI), LAMB Hospital, White Ribbon Alliance, International Centre for Diarrheal Disease Research, Bangladesh (icddr,b)*, University of Michigan*	How does the People's Institution Model (Raising Social Capital + Community mobilization for health) work to increase care-seeking, reduce health costs, and reach poor and marginalized communities?	Pre-/post-test study design with an intervention and comparison groups
Benin Center for Human Services 2010 – 2015	AZT, SAO, DAGLA Health Zones (HZs) in Departments of Zou-Collines and Atlantique (588,354)	WRA 75,220 U5 55,422 Total 130,642	SAO and DAGLA HZs (37,225) Intervention and Comparison areas: 1 HZ each	U5 6,551 WRA 8,660	Centre d'Expertise d'Ingénierie pour le Développement Durable (CEID), MOH, Promotion des Mutuelles de Santé en Afrique (PROMUSAF), Réseau Alliance Santé (RAS), Ministry of Health's Bureau of Statistics*, Christian Relief Services, CRS, Africare, Projet Intégré de Santé Familiale (PISAF)	Does use of the Collaborative Model with the MOH's Basic package of CHWs incentives improve the performance and retention of CHWs for a sustainable community health system and improved child health outcomes?	Pre-/post-test design with intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Benin Medical Care Development International 2012-2017	Sèmè-Kpodji commune, Department of Ouémé (159,403)	WRA 42,122 U5 26,002 Total 68,124	LLIN durability study: 4 cohorts, LLIN discounted vs. free study: 2 cohorts	Same as project	NMCP (MOH), Centre Recherche Entomologique de Cotonou (CREC), private enterprises and government authorities in Sèmè-Kpodji commune	What changes are feasible, scalable, and cost-effective for extending LLIN durability through regular utilization, maintenance, and repair in rural Benin?	Pre-/post-test study design with intervention and comparison groups
Benin Catholic Relief Services 2012-2016	N'dali Parakou (NP) and Allada-Toffo-Ze (ATZ) Health Zones (613,507)	WRA 143,862 U5 119,075 Total 252,029	Entire project area; 55 intervention villages in ATZ and 40 intervention villages in NP	Same as project	PMI (ARM3), UNICEF, IRSP, Palu Alafia, 20 CBOs per commune, NMCP, Public Health Research Institute, GFATM malaria grantees, DHOs, health centers, MOH	How can the uptake of RDT use, acceptance of its results, and adherence to negative results at the community level be improved?	Pre-/post-test study design with random allocation of villages to intervention and control groups
Burundi Concern Worldwide 2008-2013	Mugina, Bukinanyana and Mabayi Communes, Mabayi Health District, Cibitoke Province (234,050)	WRA 53,831 U5 41,661 Total 95,492	Bukinanyana Commune, Mabayi Health District, Cibitoke Province (101,094)	U2 7,594 and primary caregivers	Institute Nationale de Santé Public Burundi*, Care Groups Working Group, Cibitoke provincial and district health offices, Gruppo Volontariato Civile, UNICEF, The Italian Cooperation	Does an adapted, less resource-intensive Care Group Model improve knowledge and practice of key child health and nutrition behaviors as the standard Care Group model does?	Pre-/post-test study design with intervention and comparison groups
Cambodia International Relief and Development 2010-2015	Boribo Operational District (OD) (119,525)	WRA 49,372 U5 12,847 Total 62,219	Pongro and Phsar health center catchment areas, Boribo OD (36,255)	Same as project	Reproductive Health Alliance of Cambodia (RHAC), World Food Program (WFP), Community Poverty Reduction (CPR), URC, the Reproductive and Child Health Alliance of Cambodia (RACHA), Phnom Neang Kangreik Association (PNKA), University of British Columbia (UBC)*	Does a maternal nutrition strategy that combines accurate detection and treatment of anemia using HemoCue, food supplementation, and household follow-up visits during pregnancy improve maternal nutritional status and pregnancy outcomes?	Pre-/post-test with intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Ecuador Center for Human Services 2009-2014	21 rural parishes in Cotopaxi Province (384,499)	WRA 44,345 U5 23,590 Total 67,935	Entire project area	Same as project	Center for Population and Social Development Studies (CEDAR), MOH	Does the implementation of early postpartum home-based care by teams of trained TBAs with skilled providers increase access and quality of MCH services through coordinated continuum of care from home to facility?	Pre-/post-test intervention only design
Ghana Catholic Relief Services (2011-2015)	East Mamprusi District (122,187)	WRA 26,881 U5 24,431 Total 51,312	Entire project area	Same as project	The University for Development Studies, Ghana Health Services	How effective is the strategy of engaging the "Council of Champions" in behavior-change communications in addressing cultural barriers and influencing community-level health-seeking behavior and practices for improved uptake of maternal, newborn, and child health care services and outcomes?	Pre-/post-test with intervention and comparison groups
Guatemala Curamericas (2011-2015)	San Sebastián Coatán, Santa Eulalia, and San Miguel Acatán Municipalities, Department of Huehuetenango (98,341)	WRA 32,330 U5 15,327 Total 47,657	Intervention: Half of project area Comparison: (1) Other half of project area	Same as project	Curamericas Guatemala, Mayan Families, ACNM, CUNOC, MPH SW	How feasible and effective is combining Community-based Impact-Oriented (CBIO) plus a Care Group Model as a strategy to improve and sustain MNCH outcomes?	Pre-/post-test intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Honduras ChildFund International 2009-2014	12 Southern municipalities of the Department of Francisco Morazán (41,027)	WRA 26,454 U5 14,573 Total 41,027	Entire project area	Same as project	University Research Co., LLC (URC), Centro Nacional de Educación para el Trabajo (CENET)*, MOH, Technical Assistance Local Unit (ULAT), ADACAR (Reitoca implementing partner)	How does establishing Health Structures/Posts (UCOS Model) in hard-to-reach communities while closely linked to the formal national health system provide integrated MNCHN services for improved coverage, equity, and sustained outcomes?	Pre-/post-test intervention only design
India Save the Children 2012-2015	Gonda District and in Aligarh City of Uttar Pradesh - UP (3.6 million)	WRA 982,000 U5 455,000 Total 1.44 million	Entire project area	Same as project	UP Directorate of HFW, District Reproductive Health Teams and city governments, Medical College in Aligarh Muslim University, State branches of the National Neonatology Forum and Indian Academy of Paediatrics, Ministry of Health, Laerdal, all India Institute of Medical Sciences, and Indian Nursing Council	Does the use of a new simplified (“upright” bag-and-mask) resuscitator contribute to its wider availability, correct and ease of use, better retention of provider skills, and quality of newborn resuscitation at health facilities in remote areas?	Pre-/post-test intervention and comparison groups
Indonesia Mercy Corps 2010-2015	Two Districts of West Municipality, Jakarta City (N/A)	WRA 131,211 U5 25,422 Total 156,633	3 Urban sub-districts of West Municipality, Jakarta City (N/A)	N/A	Center for Family Welfare of the University of Indonesia (PUSKA-UJ)*, Jakarta Public Health Office (PHO)	Does using mobile technology (SMS) to improve collection, availability, and use of high-quality health data in the Local Area Monitoring and Tracking (LAMAT) improve decision-making and MNCH outcomes?	Pre-/post-test intervention only design

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Kenya Concern Worldwide 2012-2016	Marsabit and Moyale Districts (135,807)	WRA 31,620 U5 23,268 Total 54,888	Entire project area	Same as project	DHMTs, Pastoralist Integrated Support Program (PISP), JHSPH, Food for the Hungry, Catholic Church, AMREF, World Vision	To what extent do Maternity Waiting Homes increase access to key, facility-based MNC interventions?	Pre-/post-test intervention and comparison groups?
Kenya HealthRight International 2012-2016	Marakwet East and West Districts (192,000)	WRA 46,154 U5 30,795 Total 76,959	8 targeted facilities (4 in a group) and associated community units (CUs)	Same as project	DHMT, 8 partner facilities, Sobon Support Group, Health NGO Network (HENNET), World Vision	How feasible and effective is “task sharing” of a package of MNC services with CHWs at facility and community levels in rural areas to improve availability, quality, acceptability, utilization, and outcomes for mothers and their newborns?	Pre-/post-test intervention and comparison groups
Liberia Africare 2010-2015	Bong and Bomi Counties (410,955)	WRA 25,788 U5 17,073 Total 42,861	Bong County (328,919)	N/A	Liberia Prevention Maternal Mortality (LPMM), University of Michigan*, Ministry of Health and Social Welfare (MOHSW), Bong County Health Team (BoCHT), Medical Team International (MTI)	Does establishing Maternity Waiting Homes (MWHs) near a health facility improve maternal and newborn outcomes (institutional births and postnatal care)?	Pre-/post-test design intervention and comparison groups
Liberia International Rescue Committee 2012-2015	Lofa and Montserrado counties (504,863)	WRA 111,070 U5 100,973 Total 212,043	Lofa County (276,863)	WRA 75,714 U5 49,994 Total 125,708	MOHSW, County Health Teams, Planned Parenthood Association of Liberia (PPAL), Columbia University*, FHI360, Jhpiego, Clinton Health Access Initiative (CHAI)	Does integrating family planning with immunization and with community-based health delivery platforms improve access and use of family planning services?	Pre-/post-test with intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Malawi Save the Children 2011-2016	Blantyre District (538,413)	WRA 113,067 U5 91,530 Total 204,597	329 hard-to-reach villages within 17 Health Centers' catchment areas (~252,000)	Same as project	MOH, DHMT, Mother2Mother, Development Aid from People to People (DAPP), Barja la Mtsogolo, National Statistics Office (NSO), World Vision, USAID/SSDI-Communication and USAID/SSDI-Services (bilateral projects), Malawi College of Medicine	Will an integrated delivery of community-based package of family planning and children's iCCM services by HSAs improve access and use of all basic FMNCH services at each interaction with clients as compared to the standard approach?	Cluster randomized trial (communities randomly assigned to intervention and control groups)
Nepal HealthRight 2009-2013	Kapiivastu and Arghakhachi Districts, Western Development Region (822,936)	WRA 191,544 U5 118,223 Total 309,767	Arghakhachi District, Western Development Region (242,469)	WRA 52,642 U1 8,729 U5 39,067	Women's Development Office (WDO), Mother Infant Research Activities (MIRA)*, New Era*, University College London Centre for International Health and Development (CIHD)*, Ministry of Health and Population (MoHP), Tufts University's Positive Deviance Initiative (PDI)	Does using quality improvement improve continuum of MNC, the strengthening of health facilities and community-facility linkages and improve the quality of care, utilization of services, MNH knowledge and household practices among mothers?	Post-test only design with intervention and comparison groups
Nepal Helen Keller Intl. 2008-2012	Kailali and Baitadi Districts, Far West Region (N/A)	WRA 169,580 U5 101,749 Total 271,329	Baitadi District, Far West Region (257,659)	WRA 20,300 U5 12,000	Nepal National Social Welfare Association (NNSWA), Snehi Mahila Jagaran Kendra (SMJK)*, Nepali Technical Assistance Group (NTAG)*, District Agricultural Development Office (DADO)	What are the effects of an integrated food security and nutrition model (Homestead Food Production + Essential Nutrition Actions) targeted to vulnerable households on child and maternal nutrition (anemia, knowledge, and practice)?	Cluster-randomized, pre/post design with intervention and control groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Niger Concern Worldwide 2009-2013	7 Communes, Tahoua District, Tahoua Region (N/A)	WRA 145,167 U5 164,962 Total 310,129	6 Communes, Tahoua District, Tahoua Region (N/A)	All U5s	UNICEF, Ministry of Health (MOH), Tahoua and Illéla District Health Teams (DHTs)*, Relief International (RI), Helen Keller International (HKI)	What are the feasibility and effects of establishing a Care Group Model of Mother Leaders with low-education to deliver integrated CCM on access and use of lifesaving interventions for children under five in communities? Does constructive male involvement improve care-seeking behavior for MNC and maternal and neonatal health outcomes?	Descriptive case study design (focus groups, key informant interview, and observations)
Nicaragua Catholic Relief Services 2008-2012	Matiguas, Waslala, Rio Blanco and Paiwas Municipalities, Matagalpa Department (173,267)	WRA 27,770 U5 16,349 Total 44,119	Intervention: 15 communities in Matiguas; 6 in Río Blanco; 4 in Paiwas Comparison: all other	Pregnant women and newborns	NicaSalud*, Center for Health Research and Studies (CIES) of the University of Nicaragua*, URC, Management Sciences for Health (MSH), Caritas Matagalpa, Health Care Improvement Project (HCI)	Does constructive male involvement improve care-seeking behavior for MNC and maternal and neonatal health outcomes?	Pre-/post-test with intervention and comparison groups
Pakistan Aga Kahn Foundation 2008-2013	Chitral District, Khyber Pakhtunkhwa Province (112,406)	WRA 30,350 U5 20,233 Total 50,583	Entire project area	WRA	National MNCH Program (NMNCHP), Aga Khan Health Service, Pakistan (AKHS,P), Aga Khan Rural Support Program, Pakistan (AKRSP), Department of Health (DOH), Government of Pakistan (GOP), Aga Khan University School of Nursing (AKUSON)*, Aga Khan University Department of Community Health Sciences (AKUCHS)*	Does introducing a new package of training and deploying a cadre of Community Midwives (CMW) program strategy improve the skills and retention of CMW for improved maternal and newborn outcomes?	Longitudinal cohort study of intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Pakistan Mercy Corps 2012-2016	Quetta, Gwadar and Kech districts (450,000)	WRA 99,000 U5 76,500 Total 175,500	Different interventions implemented in each of the 3 districts	Same as project	DOH, Tameer Microfinance Bank, Health Services Academy (HSA) Quaid-e-Azam University	How feasible and effective is a micro-finance scheme for Community Midwives to: 1) establish and own private practices to provide maternal and newborn services in their communities and to improve uptake of their services, and 2) financially sustain 3) improve skilled birth attendance?	Cluster-randomized, pre-/post-design with intervention and control groups
Rwanda CARE 2010-2015	Karama, Musambira, Kayenzi, and Nyarubaka Sectors, Kamonyi District (64,449)	WRA 20,749 U5 17,562 Total 38,311	Entire project area Comparison: Kayenzi; Intervention: other 3 districts	Same as project	Tulane University*, Social Affairs Unit of the District of Kamonyi	What is the value added of integrating Child Survival interventions into community-based Early Child Development groups, with support from CHWs for improving positive health behaviors and child health outcomes?	Pre/posttest design intervention and comparison groups
Rwanda World Relief 2011-2015	Nyamagabe District (325,776)	WRA 111,431 U5 41,314 Total 152,745	Intervention: Kaduha Hospital Zone (161,743) Comparison: Kigeme Hospital Zone (168,767)	Same as project	MOH, DHMT, MOA, MSW	What is the acceptability and impact of "Nutrition Weeks" model as a strategy to improve Infant and Young Child Feeding (IYCF) practices and nutritional status?	Pre-/post-test with intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Sierra Leone Concern Worldwide (2011-2016)	Western Area Urban District, Freetown (163,398)	WRA 36,276 U5 35,480 Total 71,756	Intervention: 5 of 10 communities in project area Comparison: Remaining 5 communities	Same as project	JHSPH, MOHS, DHMT, Freetown City Council	To what extent does P-CHIS facilitate data use to plan and implement key MCH interventions and contribute to improved health outcomes for the interventions related to leading causes of child illness and death identified through the P-CBHS?	Pre-/post-test with intervention and comparison groups
South Sudan World Vision 2010-2015	Gogrial East and West Counties, Warrab State, Northern Bahr el Ghazal Region (133,045)	U5 10,831 and 2166 pregnant women U5 15,779 and 3155 pregnant	Intervention: Pathoum West and Kuac South Comparison: Pathoum East and Kuac North	Same as entire project	Government of South Sudan (GoSS) MOH, Gogrial East Women's Association (GEWA), Johns Hopkins University*, Makerere University*, County Health Department	Can the newly approved cadre of community health workers, Home Health Promoters (HHPs), deliver quality integrated package of ICCM and HBLSS at the household level and improve access to newborn and child health services?	Pre-/post-test design intervention only
Timor-Leste Health Alliance International (2011-2015)	Manufahi and Ainaro Districts (107,803)	WRA 21,559 U5 16,655 Total 38,214	Entire project area Intervention: Manufahi Comparison: Ainaro	Pregnant women	MOH, Catalpa International, Health Research Cabinet	What is the impact of mobile technology (cell phone) use by pregnant women to access knowledge and improve use of MNC services and outcomes?	Pre-/post-test with intervention and comparison groups

COUNTRY GRANTEE PROJECT YEARS	PROJECT LOCATION (TOTAL POP.)	PROJECT BENEFICIARIES	OR STUDY LOCATION (TOTAL POP.)	OR STUDY BENEFICIARIES	PARTNERSHIPS (LOCAL, NATIONAL, GLOBAL)	RESEARCH QUESTION(S)	STUDY DESIGN
Zambia Save the Children 2009-2014	Lufwanyama , Copperbelt Province (85,033)	WRA 18,537 U5 15,136 Total 33,673	Entire project area	Same as project	Boston University (BU) Center for Global Health and Development*, District Health Management Team (DHMTs)*, World Health Organization (WHO), UNICEF, John Snow International (JSI)	Does the TBA-CHW teaming in delivering an integrated, community-based newborn care and CCM (continuum of care for children under 5) linked to health facilities and Neighborhood Health Committees (NHCs) improve access to maternal, newborn, and child services and outcomes?	Pre-/ post-test intervention only design

Notes:

* Indicates key partners on design and implementation of the operations research component of the study.

Project beneficiaries broken into women of reproductive age (WRA); children under five (U5); children under two (U2); and children under one (U1).

Not available (N/A): In some cases, the information has not been submitted to USAID CSHGP yet; in other cases, the information was not required and is therefore not available.