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Testing innovative maternal, newborn, and child health approaches to serve vulnerable communities: USAID's partnerships with 14 International Non-Governmental Organizations (INGOs) through the Child Survival & Health Grants Program in 16 countries

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). The USAID Child Survival and Health Grants Program (CSHGP) leverages the development entrepreneurship of international non-governmental organizations (INGOs) in collaboration with local and national partners. CSHGP awardees design and test innovative approaches that address critical bottlenecks, which limit breakthrough improvements in maternal, newborn, and child health (MNCH) outcomes, particularly for vulnerable populations. These innovations are integrated into community-oriented health and development programming platforms to harness the potential for impact, scalability, and sustainability within local and national health systems. Since 2008, the CSHGP has developed partnerships with 14 INGOs and their local partners to innovate for results in 16 countries (Afghanistan, Bangladesh, Benin, Burundi, Cambodia, Ecuador, Honduras, Indonesia, Liberia, Nepal, Nicaragua, Niger, Pakistan, Rwanda, Southern Sudan, and Zambia). USAID funding[1], through the CSHGP, supplemented by technical assistance provided through the Maternal and Child Health Integrated Program (MCHIP), enables these organizations to develop effective partnerships with local and national stakeholders and research institutions to design and test innovative solutions to complex public health challenges. CSHGP's connection to the CORE Group coalition through MCHIP (http://www.coregroup.org/) contributes to strengthening a broader INGO community of practice focused on innovation and operations research and serves as an efficient mechanism for management and wide-spread dissemination of new program-based knowledge.

The CSHGP defines an innovation as an approach or practice that introduces novel ways of addressing critical operational barriers for improving the delivery and use of high impact MNCH interventions in vulnerable populations and strengthening health systems, ultimately leading to increased scale of these interventions and improved health outcomes.

Innovations require challenging existing paradigms in order to address an identified need by key stakeholders at the national and global levels.

The 17 ongoing operations research studies supported through the CSHGP are contributing to national and global evidence building for:

- **smart integration (continuum of care for maternal, newborn, and child health; cross-sectoral, including nutrition, food security, and agriculture; child health and early childhood development; and civic participation and health);**
- **community health worker performance and effectiveness, including task shifting;**
- **identification of equitable approaches;**
- **mobile health technology; and**
- **introducing new or reinvigorating low-coverage technical interventions.**

Credible evidence and lessons generated from the studies—supported by the research partnerships between INGOs, research institutions and Ministries of Health (MOH)—will become available between 2013 and 2015. This brief provides an overview of the INGO-designed innovations currently supported by the CSHGP, and the operations research poised to advance policies and strategies at the national and global levels.

[1] Each project is funded up to $1,750,000 in USAID/USG resources, supported by an additional cost share of up to 25% in non-government resources. Operations research components of projects are budgeted up to $200,000.

HIGHLIGHTS FROM 17 INNOVATIONS CURRENTLY BEING TESTED THROUGH USAID'S CHILD SURVIVAL & HEALTH GRANTS PROGRAM

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

In Zambia, Traditional Birth Attendants (TBAs) and Community Health Workers (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 1-5 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) that are 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.

Assessing the effectiveness of a new cadre of Home Health Promoters in providing an integrated package of services in Community Case Management and Home Based Live 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) that stresses the importance of a newly approved cadre of CHWs known as Home Health Promoters (HHPs) in the health system as part of a national strategy to undertake community based interventions, Examples include 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 HHPs strategy to effectively deliver an integrated package of CCM and Home Based Live Saving Skills (HBLSS) services at the household level as a means of increasing access to essential services and improving newborn and child health outcomes in this setting with limited access to healthcare.

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 (MOH) 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; with some support from facility-based providers through their supervision of Female Community Health Volunteers (FCHVs) though 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 MNC services at both the community and facility level, 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.

A new Essential Obstetric and Neonatal Care network model integrating public and private service delivery with community-based care to improve survival of hard to reach mothers and newborns 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 (MOH) 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 MOH is also working towards a national policy that establishes the role of the TBAs in early post-partum home based care for mothers and newborns. The Center for Human Services (CHS) in partnership with Center for Population and Social Development Studies (CEDAR) and in collaboration with MOH is piloting this 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. The evidence and lessons generated from the evaluation of this model will inform the Ecuadorian MOH's policies and strategies as well as regional strategic initiatives in Latin America and Caribbean (LAC) (e.g., Latin American Maternal Mortality Initiative, LAC Newborn Alliance) aimed at improving the delivery of high impact interventions to reduce maternal and neonatal mortality among vulnerable populations.

Leveraging early childhood development groups 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 homestead food production with Positive Household Behaviors and Practices (Essential Nutrition Actions) to improve nutrition in Nepal (2008–2012)

Nepal's multi-sectoral National Nutrition Action Plan advocates for a comprehensive, integrated and inter-sectoral strategy for addressing food insecurity and malnutrition. To support this plan, Helen Keller International (HKI) is testing its homestead food production program model integrated with essential nutrition actions (ENA) by targeting vulnerable household members such as pregnant and lactating women, infants and young children, to demonstrate the impact of this integrated model on improved 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. The rigorous evaluation of this project will generate evidence and lessons demonstrating the added impact of integrating two nutrition program approaches (food security and behavior change) and is poised to inform national health and agriculture policies and strategies, as

well as Feed the Future's global priorities. The operations research lessons will also support HKI's leadership role in building governance capacity in the Ministries of Health and Agriculture and the National Planning Commission, in order to enable joint planning and coordination mechanisms for future cross-sectoral programming at the district, national, and regional levels.

Assessing a maternal nutrition strategy that combines food supplementation with strengthened detection, treatment, and monitoring of anemia 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 undernutrition 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 in the "National Strategy for Reproductive and Sexual Health" where it is stated 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.

Assessing the capacity of new, community-led Maternity Waiting Homes to improve access to skilled care 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 near health facilities—where pregnant women await delivery, arriving 1-2 weeks before their delivery date—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.

Women waiting at Redemption Hospital in Monrovia.

Credit: Juhie Bhatia

Improving equitable access with 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 implementation of this strategy 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.

Promoting gender equity at the household level central to improve access to and use of Maternal, Newborn, and Child health services in Nicaragua (2008–2012)

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. Catholic Relief Services (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 by increasing opportunities for shared decision making. At the request of the MOH, CRS also implemented a strategy to improve utilization of MNCH services through developing and strengthening community health agents (CHAs) in isolated rural areas, which were reporting particularly poor health outcomes. The evidence and lessons 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.

Testing 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 and 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 Community Health Workers (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 Institute Nationale de Sante Public 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.

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 (CI), supported by CIDA 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 CCM (iCCM) for easy access to multiple health services for children under five in communities versus provision of these care services exclusively at Health Posts. The evidence and lessons generated by Concern will inform the Niger Ministry of Health's strategy to roll out iCCM as an alternative delivery strategy, particularly as a component of the Catalytic Initiative in Niger.

Improving a new cadre of community midwives and informing future 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 intra-partum care for women in remote and underserved communities. Assessments of the roll out of the CMW strategy to date have highlighted major bottlenecks in both 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 the Aga Khan University (School of Nursing and Department of Community Health Sciences), is testing a new package for strengthening training, deploying, and incentivizing the new cadre of Community Midwives (CMW) as well as addressing barriers to utilization through introduction of approaches such as community-based savings groups and engaging village health committees in supporting and managing CMWs. The operations research will strengthen Pakistan's evidence base by comparing two models: the Government CMW model and the NGO-facilitated model, with new approaches targeted to addressing the gaps in the implementation of the existing CMW model.

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 greater health outcomes and address gender and income inequalities for vulnerable populations. The 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 (I**CDDR) Bangladesh and** the University of Michigan, CRWRC 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 INGO 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.

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

In 2010, the Beninese Ministry of Health developed National Directives for Community Based Health Promotion that clearly defines 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 (ICM) to improve the performance and retention of CHWs for a sustainable community health system compared to the MOH's basic package of CHWs 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.

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

Photo courtesy of World Vision

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 healthcare is extremely limited due to distance from facilities, and there are few qualified healthcare 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 life-saving actions at the time of delivery. Tele-Emergency Assistance (TEA) as an innovative strategy to improve maternal and child health outcomes. The project will provide mobile phones to CHWs, midwives at CHC and selected doctors at a maternity hospital for TEA. 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 informed technical advice. Appropriate training will be provided to mobile phone users on use, 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.

Using mobile technology to improve collection, availability, and use of high-quality services 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 towards 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 & private), and communities to monitor performance (i.e., access and coverage) of immunization and MNCH services. Data from the system provides opportunities to share best practices based on evidence and is 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 bottle-necks within the system at the data collection, analysis, and dissemination levels that have discouraged many stakeholders including the private health providers from reporting or using the LAMAT data. To help address these challenges, Mercy Corps, in collaboration with 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.

For more information on USAID's Child Survival and Health Grants Program and its Innovation Grantees, contact CSHGP Team Leader Nazo Kureshy at nkureshy@usaid.gov; link to www.mchipngo.net, and click on "Projects"; or link to http://www.usaid.gov/our_work/global_health/home/Funding/cs_grants/cs_index.html.

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*	Does a mobile technology innovation strengthen routine care for pregnant and newborns and improve access to obstetrical and newborn emergency care by increasing referrals as well as prompting essential life-saving actions at the time of delivery?	Pre/posttest design with a control group
Bangladesh **Christian Reformed World Relief Committee** 2009-2014	Durgapur & Kendua Sub-districts, Netrokona District (484,920)	WRA 124,313 U5 96,571 Total 220,884	Same	Same	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*	Is the People's Institution Model (Raising Social Capital + Community mobilization for health) more capable of increasing care seeking, reduce health costs and reach poor and marginalized communities?	Pre/post-test study design with an intervention and control group
Benin **Center for Human Services** 2010-2015	AZT, SAO, DAGLA Health Zones in Departments of Zou-Collines and Atlantique (588,354)	WRA 75,220 U5 55,422 Total 130,642	Same	Same	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/posttest design with intervention and control
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 & Primary caregivers	Institute Nationale de Santé Public Burundi*, Care Groups Working Group, Cibitoke provincial & 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?	Pre/post-test study design with an intervention and control group

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
Cambodia **International Relief and Development** 2010-2015	Boribo Operational District (119,525)	WRA 49,372 U5 12,847 Total 62,219	Pongro and Phsar Health Center Catchment Areas, Boribo Operational District (36255)	N/A	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/posttest with intervention and control groups
Ecuador **Center for Human Services** 2009-2014	21 rural parishes provinces in Cotopaxi Province (384,499)	WRA 44,345 U5 23,590 Total 67,935	Same	N/A	Center for Population and Social Development Studies (CEDAR), MOH,	Does the implementation of early postpartum home based care by trained TBAs and skilled providers increase coverage and quality of MCH services through coordinated continuum of care from home to facility?	Pre/posttest intervention only 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	Same	Same	University Research Co., LLC (URC), Centro Nacional de Educación para el Trabajo (CENET)*, MOH, Technical Assistance Local Unit (ULAT), ADACAR (Reitoca implementing partner)	What is the effectiveness of Health Structures (UCOS Model) based in communities to provide integrated MNCHN services in hard-to-reach areas while closely linked to the formal national health system for improved coverage, equity, and sustained outcomes?	Pre/posttest intervention only design
Indonesia **Mercy Corps** 2010-2015	2 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-UI)*, 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/posttest intervention only design
Liberia **Africare** 2010-2015	Bong and Bomi Counties (410,955)	WRA 25,788 U5 17,073 Total 42,861	Bong County (328,919)		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 (MWH) near a health facility improve maternal and newborn outcomes (institutional births and postnatal care)?	Pre/posttest design intervention and control

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
Nepal **HealthRight** 2009-2013	Kapilvastu & 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 integrating a community-based neonatal care package with maternal care and the strengthening of health facilities and community-facility linkages improve the quality of care, utilization of services, MNH knowledge and household practices among mothers compared to implementing the community-based MNC package alone?	Post-test only design with intervention & control groups
Nepal **Helen Keller Intl.** 2008-2012	Kailali & 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)	Does integrated food security & nutrition model (Homestead Food Production + Essential Nutrition Actions) targeted to households with children 0-24 months of age yield greater impact on their nutritional status (anthropometric + anemia)?	cluster-randomized, pre/post design with intervention & control groups
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)	Could establishing a Care Group model of Mother Leaders with low-education to deliver integrated CCM decrease barriers to access lifesaving interventions for children under five in communities?	Descriptive study design (focus groups, key informant interview, and observations)
Nicaragua **Catholic Relief Services** 2008-2012	Matiguas, Waslala, Rio Blanco & Paiwas Manicipalities, Matagalpa Department (173,267)	WRA 27,770 U5 16,349 Total 44,119	Municipality of Matiguás, Matagalpa Department (49,714)	N/A	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 and maternal and neonatal health outcomes?	Pre/posttest 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
Pakistan **Aga Kahn Foundation** 2008-2013	Chitral District, Khyber Pakhtunkhwa Province (112,406)	WRA 30,350 U5 20,233 Total 50,583	Same	WRA 30,350	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 a new package of training and deploying a cadre of Community Midwives (CMW) program strategy improve the skills and retention of CMW for improved MN outcomes?	Longitudinal cohort study of intervention and comparison groups
Rwanda **CARE** 2010-2015	Karama, Musambira, Kayenzi, and Nyarubaka Sectors, Kamonyi District (64,449)	WRA 20,749 U5 17,562 Total 38,311	Kamonyi District (N/A)	N/A	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 control
Sudan **World Vision** 2010-2015	Gogrial East and West Counties, Warrab State, Northern Bahr el Ghazal Region (133,045)	U5 10,831 & 2166 pregnant women U5 15,779 & 3155 pregnant	Intervention: Pathoun West & Kuac South Comparison: Pathoun East & Kuac North (N/A)	N/A women	Government of South Sudan (GoSS) MOH, Gogrial East Women's Association (GEWA), Johns Hopkins University*, Makerere University*, County Health Department	Does 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 increased access to newborn and child health services?	Pre/posttest design intervention only
Zambia **Save the Children** 2009-2014	Lufwanyama , Copperbelt Province (85,033)	WRA 18,537 U5 15,136 Total 33,673	Same	Same	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 maternal, newborn, and child health outcomes?	Pre/posttest 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); 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.