

CORE Group Members Discuss NGO Roles in Global Health Research

**A summary statement by the CORE Secretariat following
CORE Group's Annual Spring Membership Meeting
Atlanta, Georgia, April 14-18, 2008**



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June 25, 2008
Washington, DC

Introduction

The April 2008 CORE Group Spring Meeting, organized around a theme of “Child Survival Investigations,” focused on the role of CORE Group members in global health research. Participants included technical and program staff from CORE member organizations, university- and CDC-based research partners, and colleagues from the private sector. Presentation of research findings was paired with skill-building sessions and in-depth discussion of factors that facilitate or hinder NGO involvement in research. CORE members identified actions the CORE Secretariat could take to strengthen NGO involvement in global health research and to build NGO capacity to disseminate research findings through policy advocacy, participation in national health strategy planning processes, and publication in peer-reviewed journals.

CORE Group is a membership association of international health and development NGOs that improve the lives of women and children in developing countries through collaborative NGO action and learning. CORE Group members have a presence in 180 countries including all “Countdown to 2015” priority countries for concerted action to reach the Millennium Development Goal child survival. Through participation in CORE Group activities, member NGOs access opportunities for professional development and capacity building and share lessons learned on behalf of the CORE community within global, regional and national forums. Within this NGO community, similar to findings from a study of Canadian NGOs¹, there is some collective expertise related to all stages of the research process – priority setting, ethical assessment, resource mobilization, knowledge generation, utilization of research findings and advocacy. In all cases, however, partnerships between CORE NGOs and universities or research institutions were a critical factor for successful implementation and utilization of research.

Research Principles

A plenary presentation by Dr. Sarah Kambou stressed the following three key principles, derived from the International Center for Research on Women’s organizational learning, necessary to promote practical, evidence-based solutions to the development agenda.

1. Base all action on evidence. Be true to evidence. Use evidence to generate new perspectives and solutions to old problems. Use evidence to identify and address emerging community issues.
2. Trust in the power of partnership. Pursue a strategy of collaborative engagement with partners as a way to be relevant and to achieve impact and sustainability. Grounding research in communities keeps it real, relevant and responsive to emerging needs.

3. Monitor progress and evaluate results. Ensure that implementation is on course. Identify standard indicators that are sensitive measures of the health issue being studied and effective at capturing differences between populations, such as differences in gender, class, wealth, or other socio-demographic variables.

As a community of public health practitioners, Dr. Kambou called upon CORE members to pay close attention to the political will, funding, and community participation needed to address underlying social and economic causes of poor health.

Types of Research

The majority of current CORE member organizations are engaged in some form of research. Examples include: operations research to solve implementation problems, formative research to design behavior change interventions, summative research to measure the results or impact of an intervention, and evaluation research to measure the effectiveness of a micronutrient, vaccine or technical intervention. Most research conducted by CORE members can be classified as operations research, sometimes referred to as implementation research or programmatic research. According to a frequently cited Population Council manual on the subject,ⁱⁱ operations research is a continuous process that involves identifying and solving problems encountered in the design and implementation of programs. The operations research cycle typically includes the dissemination and utilization of research findings. According to WHO, the overall objective of implementation research is to significantly improve access to efficacious interventions by developing practical solutions to common, critical problems in the implementation of these interventions.ⁱⁱⁱ CORE members commonly set up implementation research to design or assess the effectiveness of new program delivery strategies. In order to reduce the burden of disease among the world's most vulnerable populations, NGOs must ensure that implementation research findings become part of the global evidence base (typically through publication in a peer-reviewed journal), are disseminated to key decision-makers, and contribute to policy-making and strategic planning for health service delivery.

Selected examples of implementation research conducted by CORE NGOs with relevance beyond the project area were shared and discussed. For example, based on technical assistance provided at a two-week CORE-sponsored operations research workshop with Population Council, World Vision sought to determine whether the integration of standard days method and the lactational amenorrhea method into a community-based child health program in India increased the use of modern contraception in mothers of children under one year. Although the implementation research was conducted in a specific project setting, the research question was addressed common barriers to scaling up access to family planning.

CORE members typically implement complex primary health care programs with relatively few field staff and varying degrees of HQ involvement. In this context, research often takes a back seat to the daily concerns of program implementation and management. Staff may find it difficult to formulate specific research questions, especially questions that can provide an immediate practical solution to a specific environment, while addressing a broader question relevant to state, national or regional interests. Formulating these questions, crafting study designs, and choosing research

methods that are feasible within the programmatic context and human resource constraints present ongoing challenges for many CORE members.

Many CORE members struggle to determine the level of evidence needed to make claims about the impact or effectiveness of their program strategies. Randomized controlled trials are the gold standard for probability statements; through the use of control groups, however, CORE members could make plausibility statements about the effect of their programs, although other explanations for the effect could not be completely ruled out. Without some degree of randomization or the presence of a control group, statements may only be made about coverage or quality of implementation, not about causal attribution. Most importantly, CORE members could place greater emphasis on prospective process documentation of intervention development, steps in the implementation process, how logistical problems were addressed, analysis of constraints to behavior change, and health system supports that were critical to sustain the intervention. Several CORE members noted that their organizations would benefit from technical assistance in this area.

Why Research Now

The “Countdown to 2015” April 2008 report card for the health-related Millennium Development Goals shows that only 16 of 68 priority countries are on track to reach MDG Goal 4 (to reduce child mortality by two-thirds from 1990 rates). In many countries, progress is hindered by very low coverage of key interventions, particularly for preventive measures that require community- and household-level delivery systems.^{iv} CORE members have demonstrated progress in increasing the use of insecticide treated bednets, early initiation of breastfeeding, exclusive breastfeeding, care seeking for pneumonia, use of ORT for diarrhea, good hygiene and warmth for newborns, and other interventions in defined population areas.^v CORE members have developed and documented innovations in service delivery for marginalized populations. These strategies, if documented more thoroughly, may enable more rapid and effective scale-up by other NGO and public sector agencies, improve equitable delivery of services to vulnerable populations, and inform resource allocation at national and global levels. While some program models developed by NGOs have been documented in the peer-reviewed literature or cited by policy makers, many effective program strategies remain relatively hidden in the “gray literature,” often enabling incremental expansion through NGO or sub-national efforts but remaining largely invisible to policy-makers and national planners.

Constraints to Research

Efforts to increase CORE member organizations’ involvement in research face philosophical and pragmatic constraints. CORE NGOs design their programs to achieve maximum sustained impact on maternal, newborn, and child mortality based on state-of-the-art technical interventions. Each NGO introduces new concepts, approaches or methodologies for solving major challenges of delivering these services to vulnerable populations, improving health outcomes and strengthening health systems in resource-poor settings. Additional costs and staff time for conducting operations research to evaluate these service delivery innovations are perceived to undermine efforts to quickly reach a larger population or to provide additional services.

Additional resources, capacity building, and partnerships with academic institutions are critical to build or complement NGOs' internal research capacity. Technical expertise is needed in order to establish standards with regard to appropriate research design, assist with institutional review board processes, ensure high quality data collection, and provide third-party perspectives during data analysis in order to increase credibility with policy-makers and planners..

NGO staff and university-based researchers are united by a desire to solve problems and overcome challenges in order to provide higher quality services to ever larger numbers of people; nevertheless, differences in organizational culture and time frames often result in communication challenges. Research institutions often find it difficult to engage with myriad decentralized NGOs, each with unique management structures and reporting relationships. Several CORE NGOs lack the necessary expertise in epidemiology and research design as well as existing relationships that enhance credibility with colleagues in academia. Resources are limited to support forums for collaboration and learning between NGOs and research institutions.

Partnering with Universities and Research Institutions

Increasingly, CORE Group members are building long-term alliances, short-term partnerships, or a combination of both with universities and research institutions in developed and developing countries. These partnerships enable NGOs and researchers to plan and execute implementation research that serves immediate population needs for better services and health outcomes while also informing more national and regional evidence-based policy decisions.

Some CORE members are directly affiliated with a university in the U.S. For example, many Health Alliance International (HAI) senior program staff are on the faculty at the University of Washington School of Public Health, and the organization provides opportunities for MPH and PhD students to apply research skills in HAI's program sites. In Mozambique, HAI works closely with the University Eduardo Mondlane Medical and Public Health Schools and the Catholic University of Mozambique Medical School. Partnerships with the University of Washington and local universities enhance HAI's credibility through rigorous monitoring and evaluation of programs and professional development opportunities for staff. The relationship also enables the University of Washington to train and engage with MOH leadership through HAI's programs and offers community-based sites for student and faculty research. The Mozambican universities benefit from capacity building for faculty and students, use of HAI sites for student practicums, and ownership of research findings that can inform local policy-making and planning processes. Challenges have also emerged in the partnership. HAI has limited resources for research and must implement programs along timelines established by donors rather than researchers; university protocols and time-intensive collection of research data can slow the pace of implementation. HAI is experimenting with direct partnerships between the Mozambican MOH, the University of Washington and various donors to establish a center for operations research that would enhance collaboration.

Haitian Health Foundation (HHF) is a long-term partner of the University of Connecticut. For two decades, HHF has utilized a census-based approach to improve the health of 200,000 people in Haiti. The university contributes expertise in sampling methods and data analysis. The prospective

database provides an opportunity for careful documentation of the introduction of new interventions or adaptations in service delivery strategies. For example, in 1990, HHF worked with WHO to conduct an ethnographic study of explanatory models and perceptions of pneumonia in rural populations. HHF used the information to design programs that reduced ARI morbidity and mortality in their program area in Haiti, while WHO used the information to design ARI algorithms and guidance for other countries. HHF has become a national training site for pneumonia prevention and control. HHF benefited from a series of University of Connecticut students' research activities, initially focused on child survival but now expanding to include maternal and newborn health. Each year, two or more students receive funding and faculty support from the University of Connecticut schools of medicine and public health; they are assigned to HHF's program site in Haiti in response to current needs and challenges. HHF identifies new research questions based on programmatic data and community needs. Collaboration with the University of Connecticut has helped HHF to develop feasible study designs and implement appropriate sampling, methods and data analysis. HHF's university partnerships have expanded to include JHU and the University of Michigan.

Another CORE member, Future Generations, was established as an NGO with research and teaching arms, including an MPH program in Applied Conservation and Community Development. Using its program sites in the field as applied learning centers, Future Generations provides academic training through distance learning, mentoring, and periodic field practicums, empowering field-level practitioners to develop their own research efforts in order to influence local policy-making, planning, and resource allocation.

Other CORE members have established partnerships with local universities through their relationships with staff and faculty at U.S. universities. For example, through a JHU faculty member's personal contacts, Save the Children (SC) was invited to work with the University of Bamako in Mali to study community perceptions of zinc treatment for diarrhea and introduction of ACTs for treatment of fever (malaria) by community volunteers. SC provided a field site, program support costs, additional resources for OR, and student oversight. SC also involved staff and communities in a participatory process to develop the operations research protocol and analysis plan. The University of Bamako contributed to the development of the research protocol, secured ethical review approval, supported implementation through contracting of Malian graduate students, and was instrumental in advocacy and dissemination of research findings to policy makers. SC was able to build staff capacity while creating research opportunities for Malian graduate students, including three MD thesis projects. Oversight and technical expertise was provided by JHU. Challenges encountered have led SC to recommend formal Memoranda of Understanding outlining clear administrative procedures for student payment and oversight. Program staff identified a need to budget for increased costs associated with delays in the research timeline due to bureaucratic processes in both universities. Ongoing relationship building between SC program staff and student researchers will enable both field staff and universities to better understand each others' information needs, language, and qualifications. SC's Saving Newborn Lives initiative has also published ground breaking research on community solutions for newborn health through a strong partnership between Save the Children (involving multiple sites, in-country partners, technical HQ and field staff) with JHU staff and local organizations.

Through a grant from the Robert Woodruff Foundation to the CDC Foundation, CARE partnered with CDC to conduct community-based participatory research on nine health, water and sanitation projects in Africa, and Central and South America, and one Atlanta-based project involving CARE and CDC headquarters staff. CDC requested that CARE solicit input on critical health issues or service needs from community members in program sites and then matched these responses with appropriate technical expertise within CDC. CDC scientists, CARE field staff, and communities jointly developed and implemented research protocols. This partnership model facilitated the timely translation of research results into improved public health practice. Factors that contributed to the project's success included commitment to a community-based participatory approach, ongoing communication between CARE's staff and CDC scientists, and capacity building opportunities for CARE's field staff.^{vi}

CORE Group is a collaborating partner with Boston University (BU) in a five-year USAID- funded program called Country Research Activity. While this relationship did enable BU to identify and work with several CORE organizations in specific countries (such as Salvation Army World Service Organization in Zambia), the CORE Secretariat only served as a conduit for information dissemination at CORE meetings and on the CORE listservs, rather than as a more involved partner.

CORE members recommended that increased opportunities for contact and communication with universities and other research institutions would be critical to fostering the relationships necessary to establish the collaborative efforts that are essential for increasing NGO involvement in health research. CORE members made several suggestions regarding steps the CORE Secretariat could take to facilitate networking that would result in partnerships where diverse actors (including communities) work together to develop a joint research agenda. These steps include:

- Invite more researchers from schools of public health to attend CORE Group meetings and participate in CORE Working Group activities. Structured opportunities for dialogue and exchange would help to build relationships between agencies, help CORE members understand how to better engage with researchers, and establish new mechanisms for managing collaboration.
- Work with a set of academic partners to develop a series of community-oriented operations research projects that would engage several CORE members across multiple field sites to document effective community-based service delivery strategies to improve maternal and child health.
- Raise funds for CORE to link member organizations with public health faculty and graduate students, who can provide leadership and technical assistance for operations research through a competitive funding process that would cover travel and related costs for advanced students to work with CORE members' field projects.
- Continue to host OR capacity building workshops, in the U.S. and in countries where multiple CORE members are operational, to design and write proposals to support joint OR efforts. Actively seek to involve academic partners from the US and universities in developing countries in these workshops. Establish ongoing research mentoring relationships between academic partners and CORE member organizations.

Publishing

Several CORE members have experience publishing research findings in peer-reviewed journals; two such individuals served as resource people for a roundtable and advising session on publishing. Using a case study approach with draft research manuscripts provided by CORE members, mentors led participants through writing exercises to improve data presentation and analysis. Participants also discussed approaches to selecting and citing previously published work that supports the analysis and conclusions. In order to influence national policy and facilitate rapid application of research findings to program designs and resource allocation, CORE members are encouraged to publish results in national health and medical journals in the countries in which research was conducted. In cases where operations research was not explicitly pursued, project results can sometimes be submitted to peer-reviewed publications in the form of a letter to the editor, particularly if the findings are relevant to a special issue theme or recently published article in the same journal. New electronic journals offer alternative publication options.

Participants identified several challenges related to publishing results from routine program monitoring and evaluation processes in peer-reviewed journals. Constraints include: lack of a mentor to go to for advice; lack of clarity regarding appropriate journals; lack of staff time for writing and revisions; and undervaluing of publication by a supervisor or the organization. Solid and visible commitment from organizations' senior leadership is vital to enable staff to conduct research and seek publication. Participants stated that mentoring is crucial for those attempting to publish research findings or program results.

Recommendations from these sessions included:

- Establish a mechanism whereby CORE members who have previously published research findings mentor other individuals over the life of a project, from research design to publication.
- Institutionalize a writers' round table or mentoring session at CORE membership meetings.
- Circulate a list of journals that routinely publish research related to community-based health programming.

Research Funding

CORE members expressed concern that so little funding was available for implementation research on community-based MNCH program strategies, despite recommendations by the Lancet and others regarding the need for research investment at this level.^{vii} Some NGOs felt that building research activities into applications for implementation funds would increase overall project costs, causing them to appear uncompetitive and reducing chances of securing funding.

Many NGOs experience a lack of internal organizational buy-in needed to support operations research. Some organizations engaged in large scale programming or seeking opportunities to scale-up implementation view research as an uncertain investment. Research requires additional work and staff time to manage data collection and supervise research activities, yet resources to fund research by NGOs, especially community-based participatory research, are often minimal. Technical partners are needed who value participatory research approaches that facilitate greater community

involvement in research and build capacity among NGO staff. Tripartite relationships between a research institution or university, an international NGO, and local academic institutions capitalize on each partner's strengths. These partnerships build research capacity at the country level, provide opportunities for local authorship, influence local public health practitioners and public policy, and improve health outcomes.

Recommendations related to research funding included:

- Establish an OR fund through CORE that would be sub-granted to member organizations on a competitive basis to answer key implementation research questions around a set of high priority topics. Funding would be complemented by technical assistance to build member capacity for more rigorous design, data collection, analysis, leading to publication.
- Encourage USAID to enable greater involvement of NGOs in its global health research agenda, possibly by providing additional funds and technical support to USAID Child Survival and Health Grantees to pursue implementation research in the context of child survival projects.

Important Community-Oriented Research Topics

Throughout the week, members of CORE's technical working groups discussed promising service delivery strategies that must be systematically documented and evaluated in order to contribute to the global evidence base for maternal health and child survival. While large-scale trials have demonstrated the efficacy of many child survival interventions, from Vitamin A supplementation to community case management for pneumonia, program strategies needed to deliver these interventions in diverse program settings are less established. Coordinated operations research *across* CORE member organizations' program sites has the potential to contribute to the global evidence base on service delivery mechanisms for key child survival and health interventions. As a first step in this direction, CORE members must become intimately familiar with the existing evidence base for technical areas or topics of particular relevance to their interventions, program strategies, and the populations with whom they work.

Conversations at the spring meeting led to an initial list of priority areas for operations research. Next steps for CORE members and the Secretariat will focus on increasing opportunities for collaboration among researchers, technical resource people, and implementing partners. The following preliminary list of questions for operations research arose from CORE's technical working groups and newly formed interest groups on cross-cutting issues.

Community Health Workers

- Contribute to the global evidence base on the institution of lay community health workers as part of a successful health system. Document and compare approaches to CHW recruitment, training, retention, workload, motivation, supervision, and engagement of community support systems.
- Explore systems for formalizing and registering CHWs in centrally planned CHW programs; examine roles and effectiveness of CHW associations.
- Document community-based health information systems to improve vital event registration systems through CHW surveillance; explore links to national birth registries.

- Determine optimal density of CHWs (ratio of CHWs to households or beneficiaries) in light of workload, number of interventions, compensation status, geographic area, etc.

Community Mobilization

- Measure effects of socio-ecological conditions on capacity of recipient communities to improve health outcome.
- Clarify constructs and develop indicators to measure community capacity.

Community Case Management

- Explore variation in quality of care provided by CHWs in relation to demographic factors (gender, literacy, etc.) and strategies for CHW selection, training, and supervision.
- Explore community, facility, provider, and program characteristics associated with referral and referral compliance rates.
- Explore factors associated with effective counseling by CHWs for caregivers of sick children; examine adherence to medicines and adoption of supportive home care behaviors and appropriate nutrition actions.
- Explore opportunities to implement CCM through the informal private sector; compare and contrast with public sector and NGO-led CHW approaches to CCM.

Equity

- Develop a common language for assessing equity (both in terms of equitable access to services and equity of health outcomes) within NGO programs; develop and work to validate indicators across organizations and program sites.

Malaria

- How can high coverage and utilization of ITNs be maintained, e.g. through routine service delivery points and integration of BCC messages to promote use, in post-distribution settings?
- How can RDTs best integrated into CCM for malaria in settings with high coverage of prevention interventions?
- What challenges emerge related to quality of care in an integrated program to treat fever and pneumonia, and how can these best be addressed?

Discussion: Possible Research Roles of CORE Group

Several CORE member organizations have made substantive research contributions at the country level. A smaller number of members conduct rigorous intervention trials and disseminate findings through the peer-reviewed literature and participation in WHO and UNICEF technical consultations. Many other CORE members are well positioned to participate in operations research on key service delivery questions that must be addressed in order to achieve MDGs 4 and 5. Several CORE members have long-standing partnerships with one or more U.S. universities and an increasing number of members work with technical and academic partners in developing countries for program development and research purposes. While NGO-academic partnerships encounter obstacles in terms of financial arrangements and differences in organizational culture, participants agreed that the benefits of collaboration—namely, opportunities for rapid translation of research findings into

program implementation to achieve immediate improvements in population health outcomes— far outweigh these challenges.

While a few CORE Group members have conducted operations research with private sector partners, this remains a largely unexplored partnership arena. Participants discussed opportunities for private sector-NGO-university partnerships to increase the effective and appropriate use of health commodities. In-depth discussion of opportunities and obstacles for partnerships with the private sector will be taken up at a future CORE meeting.

Participants discussed opportunities for CORE to coordinate OR across multiple organizations and multiple field sites, enabling research partners to address high priority technical and programmatic questions across a range of program settings in order to derive generalizable recommendations. For example, many CORE members have extensive experience designing, managing, and evaluating community health worker systems and related community mobilization efforts. Through coordinated prospective program documentation and focused operations research, these organizations can contribute to much needed guidance for scaling-up national health service packages, particularly with regard to promotion of key family practices that are critical to the household-level production of health. Through its membership network and participation in global partnerships for health, CORE is well positioned to disseminate research findings and recommendations to policy-makers, program planners, and other audiences at the local, national, and global level. Several existing CORE initiatives offer opportunities for enhanced collaboration for research and dissemination of research findings:

1. **Communities of Practice** Through CORE’s technical working groups, members share program innovations, successes, and challenges and collaborate to solve problems, develop technical guidelines, and disseminate research and evaluation findings.
2. **Diffusion of Innovations** With technical and editorial support from the CORE Secretariat, member organizations share program strategies through CORE’s *Diffusion of Innovations* series. Previous publications include: *The Care Group Difference*, a volunteer training and community mobilization manual the *Census-Based Impact-Oriented Approach*, a population-based strategy for planning, service provision, and surveillance; and *Positive Deviance/Hearth: A Resource Guide for Sustainably Rehabilitating Malnourished Children*. These and other program approaches disseminated through the *Diffusion* series have been widely adopted by CORE member organizations and adapted for use in diverse program settings.
3. **Outcome Monitoring** In collaboration with the Child Survival Technical Support Team + at MACRO International, CORE supports Child Survival and Health Grants Program grantees to design and implement rigorous monitoring and evaluation systems. Members use standardized indicators and tools such as the Knowledge, Practice, Coverage (KPC) survey to monitor progress toward program objectives. Some CORE members have begun to utilize an adapted “Lives Saved” calculator, based on the WHO CHERG methodology, to estimate program effectiveness and impact in terms of child deaths averted. CORE’s M&E Working

Group recently launched a KPC survey mentoring program to facilitate transfer of best practices and lessons learned to new program staff and new CSHGP grantees.

4. **Country-Level NGO Collaboration** CORE's Secretariat provides financial and technical support for collaboration among member organizations to pilot new service delivery strategies, host national or regional training workshops, and conduct small-scale operations research to address critical program implementation challenges. These collaborative efforts have included implementation of a standardized package of interventions across multiple organizations' project areas; coordinated advocacy, planning, and implementation with ministries of health; integration of program strategies with technical leadership in each organizations' area of expertise; and joint efforts to share program outcomes and research findings with policy-makers and national-level health planning committees.

As a network of community-oriented health and development organizations dedicated to improving the health and well-being of women, children and the communities in which they live, CORE Group has an important opportunity to facilitate learning across organizations, program sites, countries, and regions of the world facing similar health challenges. Coordinated efforts to document programs and address gaps in the existing knowledge base through focused operations research activities are critical steps to accelerate progress toward MDGs 4 and 5. The following possible strategic directions for CORE emerged from presentations and discussion at CORE's 2008 Spring Membership Meeting. Some suggestions focus on roles for CORE Group as a membership collective, while others highlight opportunities for CORE's Secretariat to provide technical or other forms of support to member organizations. They are listed here in order to solicit feedback from CORE's members, friends, and critics; inclusion in this list does not indicate that CORE's membership, board, or Secretariat have formally adopted these roles or strategic directions.

Suggestions for short and medium term strategies include:

- Strengthen relationships between CORE Group members, universities, and the private sector through efforts to find a common vocabulary and shared learning agenda.
- Provide mentoring opportunities and capacity building workshops for NGOs to encourage publication of program results and research findings.
- Build capacity for research among CORE members by creating and hosting a series of workshops organized around the research cycle, including identification of research needs and priorities; ethical assessments; resource mobilization strategies; research methods; results analysis; and translation of research findings for advocacy purposes.
- Highlight member organizations' research activities through presentation and discussion of study designs and research findings within technical working groups and during membership meetings.
- Secure donor funding to enable the Secretariat to coordinate research partnerships among CORE member organizations, universities, private sector entities, and international technical agencies to strengthen the evidence base for community-based interventions and service delivery strategies.

Longer term strategies suggested include:

- Secure funding to develop a coordinated multi-country operations research portfolio across CORE members' program sites, empowering NGOs to systematically address key technical and programmatic challenges for community-based programming and service delivery.
- Increase the number and capacity of Secretariat staff to provide technical support to member organizations engaged in research, represent CORE members in research meetings in conjunction with new global health partnerships, and establish strong working relationships with university-based researchers and international technical agencies, enhancing opportunities for NGO involvement in major efforts to generate new knowledge and recommendations to improve global health.

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ⁱⁱ Fisher, A. and Foreit J. Designing HIV/AIDS interventions studies: An operations research handbook. Population council. Available at <http://www.popcouncil.org/Horizons/orhivaidshndbk.html>

ⁱⁱⁱ UNICEF/UNDP/WHO/World Bank Special Programme for Research and Training in Tropical Diseases (TDR) Implementation Research and Methods (IRM). Guidelines for Preparing a Grant Application to the TDR Steering Committee for Implementation Research. Geneva: March 2005.

^{iv} Countdown Coverage Writing Group. Countdown to 2015 for maternal, newborn and child survival: the 2008 report on tracking coverage of interventions. *Lancet* 2008; 371:1247-58

^v Ricca, J. Lives Saved Analysis presented at CORE Group meeting April 24, 2008. Available online at <http://www.coregroup.org/meetings/meeting>

^{vi} Riley PL, Jossy R, Nkinsi L, Buhi, L. The CARE-CDC Health Initiative: A model for global participatory research. Editorial. *AJPH* October 2001, V91, No 10, 1549-1551

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