

Reaching Communities for Child Health: Advancing Health Outcomes through Multi-Sectoral Approaches



December 2004

Prepared by
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The CORE Group, a membership association of international non-governmental organizations registered in the U.S., promotes and improves the health and well being of children and women in developing countries through collaborative NGO action and learning. Collectively, CORE member organizations work in more than 140 countries, supporting health and development programs. For more information, contact:

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Table of Contents

Executive Summary.....	1
I. Introduction.....	5
A. Purpose.....	5
B. Methodology.....	8
II. Defining the Multi-Sectoral Platform.....	11
III. Approaches to Implementing the MSP.....	15
A. Communicating Key Family Practices and/or Extending Health Services Through Other Sectors.....	16
B. Conducting Joint Activities with Non-Health Sectors To Address Local Key Determinants of Child Health.....	19
C. Working Through Local Government To Increase Capacity and Funding for Community Health Programming.....	32
IV. The Multi-Sectoral Platform – How To Make It Work.....	39
A. Impediments to Multi-Sectoral Programming.....	39
B. Key Strategies for Making the MSP Work.....	43
V. Conclusions.....	47
References.....	49
Appendix 1: <i>Reaching Communities for Child Health and Nutrition: A Proposed Implementation Framework for HH/C IMCI</i>	
Appendix 2: Key Informant Interviews	
Appendix 3: Literature Review of Multi-Sectoral Impacts on Health	
Appendix 4: Multi-Sectoral Platform Case Study Papers	

Acronyms

ADRA	Adventist Development and Relief Agency
AMREF	African Medical and Research Foundation
BASICS	Basic Support for Institutionalizing Child Survival project
CGPP	CORE Group Polio Partners project
CHW	community health worker
C-IMCI	Community Integrated Management of Childhood Illness (see also HH/C IMCI)
CORE	Child Survival Collaborations and Resource Group
CORPS	community owned resource persons
CPHA	Canadian Public Health Association
CRS	Catholic Relief Services
CSRA	Consejo de Salud Rural Andino (Andean Rural Health Council)
DALY	disability-adjusted life year (represents one year lost to poor health)
DHS	Demographic and Health Surveys
DPO	district planning officer
DTF	district task force
EHP	Environmental Health Project
EPI	Expanded Program on Immunization
FWI	family welfare index
GDP	gross domestic product
GESCOME	Gestion Communautaire de Santé Environnementale
HH/C IMCI	Household and Community IMCI (see also C-IMCI)
HIA	health impact assessment
HIV/AIDS	human immunodeficiency virus/acquired immune deficiency syndrome
IMCI	integrated management of childhood illness
IMR	infant mortality rate
MSP	multi-sectoral platform
NGO	non-governmental organization
NNM	neonatal mortality
OECD	Organization for Economic Cooperation and Development
ORT	oral rehydration therapy
PCI	Project Concern International
PEI	Polio Eradication Initiative
PHC	primary health care
PHE	population, health and environment
PNNM	post-neonatal mortality
RR	relative risk (also risk ratio)
TEHIP	Tanzania Essential Health Interventions Project
TOT	training of trainers
U5MR	under-five mortality rate
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCT	voluntary counseling and treatment
WASH	Water and Sanitation for Health project
WHO	World Health Organization
WV	World Vision



Executive Summary

More than ten million children under five years of age die every single year. Two-thirds of these deaths could be prevented if effective child health interventions reached all children, mothers, and caregivers. Many children, especially those in the poorest families, are simply not being reached. Multi-sectoral approaches are essential for reaching those hardest to reach, addressing the underlying causes of poor health and implementing effective and sustainable child health interventions.

In 2001, CORE and partners developed a framework for community integrated management of childhood illness (C-IMCI) composed of three interlinking elements (partnerships between health facilities and the communities they serve; appropriate and accessible care and information from community-based providers; and integrated promotion of key family practices critical for child health and nutrition) supported by a multi-sectoral platform. The platform represents the importance of addressing determinants of ill health such as poverty, illiteracy and water and sanitation in order to achieve sustained improvements in health and well-being. Feedback from CORE members, however, indicated that while community-based child health interventions within the three elements were well developed, there was a lack of understanding about the most effective ways of integrating health interventions with other sectors in order to achieve greater impact and sustainability.

The purpose of this paper is to explore how multi-sectoral approaches are used within community-based child health and development programs and the evidence-base to support that use. It seeks to answer three questions: 1) how do NGOs define a multi-sectoral platform; 2) how do NGOs implement a multi-sectoral platform to achieve better or more sustainable health outcomes; and 3) how can child health programmers work effectively with other sectors to support community-based improvements in child health. This paper represents the results of a literature review, key informant interviews, abstract selection process to identify case studies, and a workshop designed to explore the different issues and approaches. Section one covers the purpose and methodology.

The importance of a multi-sectoral platform is based on the principle that there is an intricate mix of influences and resources within a community that affect health outcomes. To positively affect these health outcomes, partnerships need to be built between the health sector and non-health sectors to program interventions that are more effective, efficient, equitable or sustainable than either sector acting alone and that provide positive benefits for all sectors involved. Section two further explicates this definition.

Section three explores three approaches that NGOs can use at the community level to implement a multi-sectoral platform. For each of the three approaches, this section covers the theory behind the approach, the evidence base in the scientific literature, case studies from NGO project experience and implications for programming. Briefly, the approaches are:

MSP Approach #1 – Communicating key family practices and/or extending health services through other sectors

Non-health sectors, through their material, human and financial resources, allow the health sector to reach farther and deeper within the community to affect behavioral change. First, collaboration with other sectors that agree to deliver a similar set of health messages provides opportunities to scale up and extend project reach without significantly increasing costs. Second, health messages delivered to families and communities by various types of community resource persons are more believable and magnify the importance of the message. Third, use of multiple channels to support and promote key behaviors breaks down barriers and reinforce behavior change leading to longer-term sustainability. NGOs can establish or strengthen multi-sectoral round tables or coalitions to coordinate messages and improve multi-sectoral actions. Examples from Guatemala and Tanzania illustrate approach #1.

MSP Approach #2 – Conducting joint activities with non-health sectors to address local key determinants of child health

Joint activities between health and non-health sectors can effectively diminish obstacles to good health, facilitate healthy practices, and improve the sustainability of health outcomes. While more research is needed to determine how behavioral determinants interact at the community and family level, there is evidence that positive health outcome is associated with improvements in income, maternal education, water and sanitation, agriculture, and social capital. Community demand and community prioritization of need often spur NGOs into implementing projects that address the underlying causes of poor health. Workshop participants emphasized that program managers should work with community members to determine local priorities, and with community and sectoral leaders to establish a clear conceptual framework that clarifies the link between sectors, how each sector will benefit from collaboration, and the key indicators for measuring results in each sector. It is not enough to simply provide an amalgamation of different programs in the same geographic area without strategically planning how to maximize impact. Case studies from Uganda, Madagascar, Bolivia, Ghana, India and Zambia demonstrate how a multi-sectoral approach reduced barriers to adoption of key family practices, reduced social resistance, and improved health outcome at comparatively low cost.

MSP Approach #3 – Working through local government to increase capacity and funding for community health programming

Decentralization of government services brings decision-making processes, including resource allocation responsibilities, closer to the community, ensuring that local decisions can be relevant and in the public interest. An empowered local government, with evidence-based health data and resources to respond, can have a tremendous influence on improving health service quality and access at the local level. NGOs can build the capacity and skills of local government to assume a leadership role in health by addressing, planning, and providing resources for local health needs that respond to local epidemiology and needs. NGOs can support community meetings to assess

health status and government's willingness and readiness to respond. For a decentralized health system to work over time, the local community must also understand and value essential public health goods and services, demand to be heard, and hold government accountable for appropriate actions. Case studies from Bolivia, Nepal, Honduras, Peru, and Benin demonstrate positive health impact attained through committed leadership and involvement of government in health project design, implementation and assessment.

Section four explores the challenges to multi-sectoral programming and the key strategies and recommendations for effective implementation. Multi-sectoral collaboration works best when:

- Effective partnerships are built early on in program development;
- Communities are engaged in assessment and planning;
- Open and consistent communications are used that address differences in language and approaches between sectors;
- Advantages of collaboration to each sector are articulated;
- A common shared objective and framework is developed that demonstrates the potential synergies and impact between different sectors; and
- Some common indicators are developed for periodic monitoring and evaluation.

Organizations involved in a multi-sectoral effort will need to invest in relationship building, engage key stakeholders so they are supportive, and develop a good understanding of the evidence and theory connecting different sectors. Collaboration must be viewed as “value added” for all organizations so that it is worth the time and effort required to make it work. Identification and support of mobilizing factors often creates an entry point for collaboration on child health issues. Successful partnerships have been based on development of strategies around overlapping target populations, establishment of a campaign to rally around, focus on a crisis or epidemic to motivate immediate mutual action, and use of a champion or charismatic leader to catalyze action.

Participants were passionate that through the use of a multi-sectoral platform, programs have resulted in more sustainable maternal and child health outcomes, reached more children and families in need, and were more sustainable overall. Complete papers on each of the NGO case studies developed for the workshop to illustrate approaches for multi-sectoral collaboration are included in Appendix 4.



I. Introduction

More than ten million children under five years of age die every single year. Two-thirds of these deaths could be prevented if effective child health interventions reached all children, mothers, and caregivers. Many children, especially those in the poorest families, are simply not being reached. (Bellagio Study Group, 2003) Multi-sectoral approaches are essential for reaching the hardest to reach, addressing the underlying causes of poor health and implementing effective, sustainable child health interventions.

A. PURPOSE

This paper will explore how multi-sectoral approaches are used within community-based child health and development¹ programs and the evidence to support that use. Specifically, it will seek to answer the following questions:

The argument for collaborating outside the health sector was established as far back as 1978 in Alma-Ata, considered the start of the Primary Health Care movement. As explained by Dr. Wilfreid Kreisel, Director of WHO:

“Intersectoral cooperation for achieving health goals has been accepted as one of the guiding principles of the health strategy that was adopted at the International Conference on Primary Health Care (Alma-Ata, USSR, 1978) – other sectors (in particular agriculture, animal husbandry, food, industry, education, housing, public works and communications) are explicitly recognized.” (WHO, 1997)

In 1986, WHO produced a technical paper, *The Role of Intersectoral Cooperation in National Strategies for Health for All*, and in 1997 hosted an international conference titled “Intersectoral Action for Health” which suggested that intersectoral collaboration would be necessary to meet the Health for All goals. Since then, WHO has reiterated that, “Many determinants

The Fundamental Questions...

1. How do NGOs define a multi-sectoral platform?
2. How do NGOs implement a multi-sectoral platform to achieve better or more sustainable health outcomes?
3. How can child health programmers work effectively with other sectors to support community-based improvements in child health?

¹ Within this paper, the terms child health or C-IMCI may be used interchangeably to refer to community-based child health and development programs. C-IMCI refers to the community component of the Integrated Management of Childhood Illness strategy.

of ill health and the means for bringing about significant improvements in them will depend on developments beyond the health sector.” (WHO, 1999)

Several different efforts within the child health field, including the Roll Back Malaria initiative, UNICEF’s Integrated Early Childhood Development effort, and programs to support orphans and vulnerable children affected by HIV, support the importance of developing multi-sectoral approaches for child health.

In 2001, CORE created the framework for Community IMCI depicted on the following page. The framework was based on NGO experiences and includes a multi-sectoral platform (MSP) and three interlinking elements that optimize child health outcomes:

Element 1: Partnerships between health facilities and the communities they serve.

Element 2: Appropriate and accessible care and information from community-based providers.

Element 3: Integrated promotion of key family practices critical for child health and nutrition.

The platform at the base of the framework was included to represent the importance of addressing determinants of ill health such as poverty, illiteracy and water and sanitation in order to achieve sustained improvements in health. (For more information on the framework, see Appendix 1.)

Despite its importance, however, working multi-sectorally is not well understood and often met with reticence or anxiety. While well documented in conference discussions, statements of values, and proposals, few within the health sector have a clear understanding of the intricacies of the relationships between non-health sectors and child health. Fewer still know how to employ strategies to optimize interventions with other sectors in order to achieve better or more sustainable health outcomes and overcome the challenges.

There are several reasons for writing this paper at this time:

1. *Lessons learned:* It has been 26 years since the Alma-Ata declaration was signed. In that time, much has been learned about how other sectors affect health, how to work with other sectors for the implementation of health activities and how to make collaboration effective.
2. *Continued confusion about effective implementation of the multi-sectoral platform within C-IMCI programs:* Feedback from CORE members has suggested that while community-based child health interventions are well developed, there is a lack of understanding about the most effective ways to integrate health interventions with other sectors in order to achieve greater impact and sustainability.

This paper will help demystify the multi-sectoral platform and define its use within the context of community-based child health programs.

HOUSEHOLD & COMMUNITY IMCI

AN IMPLEMENTATION FRAMEWORK



B. METHODOLOGY

A steering committee of CORE members and partners formed in 2002 to discuss approaches to using multi-sectoral programming to increase the effectiveness and sustainability of Community-IMCI efforts. The committee delineated three approaches to implementing the multi-sectoral platform at a community level. Through the process described below, these approaches evolved to become: 1) communicating key family practices and/or extending health services through other sectors; 2) conducting joint activities with non-health sectors to address local key determinants of child health; and 3) working through local government to increase capacity and funding for community health programming.

Solicitation of CORE member abstracts on the MSP: In July of 2003, CORE released a call for abstracts, describing the three approaches and soliciting NGO experiences. A committee reviewed and scored each abstract submitted. Winning abstracts provided successful examples from interventions or activities implemented in Community-IMCI projects, child survival projects, or other related child health projects, and lessons learned on integrating programming with other sectors to achieve child health outcomes. Of the thirteen abstracts submitted, seven were selected. These papers are included as an appendix to this paper and are incorporated into the main text as case studies.

Background Paper Development: The steering committee also commissioned this paper to expand the understanding of multi-sectoral approaches. In addition to reviewing case studies, the author conducted a literature review and key informant interviews, and presented preliminary findings to the steering committee for feedback. This paper underwent revisions during and after the March 2004 workshop based on workshop proceedings.

Literature review: Through Medline searches, key informants and research at the National Institutes of Health library, more than 70 scientific studies, project assessments and reports that assess sector-specific and multi-sectoral approaches to health were identified and reviewed. Key word searches included: child health with multi-sectoral, intersectoral, education, wealth, income, water and sanitation, social capital, health behaviors, diffusion, and health practices in various combinations. This research provided the bulk of the scientific analysis presented in this paper. While it is understood that there are many other sectors with an influence on health, the above sectors were selected to start the process of clarifying and providing guidance. It is not the intent of this paper to provide an exhaustive analysis of all multi-sectoral links.

Conducting Interviews: Between January 26 and February 10, 2004, the author conducted 14 interviews by phone and in person with researchers, donors and NGO representatives (Appendix 2). Individuals were selected based on their experience and/or knowledge relevant to multi-sectoral collaboration.

It should be noted that from a research standpoint, there is very little information that looks specifically at any of the three approaches in terms of relative effectiveness or efficiency. One of those interviewed noted that there is only weak scientific evidence for the effectiveness in routine programmatic settings of many interventions to promote child health and development. The MSP is no exception – especially given its inherent complexity, and the associated difficulty of evaluating specific components of the MSP.

Workshop to examine different approaches to implementing the MSP in support of sustainable Community IMCI programs: The CORE Group and USAID's Environmental Health Project (EHP)

co-hosted a workshop in Washington DC, March 23-25, 2004, to examine different approaches to implementing the multi-sectoral platform as an essential part of sustainable Community IMCI efforts. The seven selected papers were presented along with the findings of the research effort. Forty-six participants reviewed the different information and worked to refine the definition and approaches related to the multi-sectoral platform.

Review by steering committee and key partners: Members of the steering committee and several key partners reviewed and commented on two previous versions of this paper.



II. Defining the Multi-Sectoral Platform

Before exploring the operationalization of the multi-sectoral platform, it is necessary to develop a clear definition. Different terms have been used at different times to refer to collaboration among two or more sectors. “Intersectoral collaboration” is a general term used to describe an association between at least two sectors to achieve certain objectives. It is the term most often used in the literature and generally reflects the type of relationships sought under the MSP. In many academic circles, the term “trans-discipline” is used to describe this type of collaboration. Some USAID missions talk about “synergy” between sectors.

A number of definitions have been proposed to describe what is meant by intersectoral collaboration. Specifically, the Intersectoral Action for Health initiative proposed:

“[Intersectoral collaboration is] a recognized relationship between part or parts of the health sector with part or parts of another sector which has been formed to take action on an issue to achieve health outcomes, (or intermediate health outcomes) in a way that is more effective, efficient or sustainable than could be achieved by the health sector acting alone” (WHO, 1997).

The Canadian Public Health Association, in preparation for the Intersectoral Action for Health meeting, came up with a definition that was similar, but added a focus on outcomes of other sectors:

“[Intersectoral collaboration is] a coalition of two or more parties who agree to cooperate on common objectives and agree on the allocation of expected advantages” (CPHA, 1996).

Discussion and debate at the March 2004 MSP workshop built on these definitions and resulted in the following proposed definition of the multi-sectoral platform. The “multi-sectoral platform” is based on the principle that there is an intricate mix of influences and resources within a community that affect health outcomes (see Figure 1 below). Implementing the MSP involves:

It is important to define several concepts within this definition:

“Building partnerships ...” A partnership is a relationship between individuals or groups that is characterized by mutual cooperation and responsibility.

“Building partnerships between the health sector and non-health sectors in order to improve the impact of child health programming in a way that is more effective, efficient, equitable or sustainable than acting alone and provides positive benefits for all sectors involved”

“between health sector and non-health sectors ...” Taken from the perspective of an organization applying the framework, multi-sectoral collaboration means reaching beyond the health sector. This is consistent with WHO’s definition which recognizes that the relationship is between part or parts of the health sector and part or parts of another sector. In this respect, partnerships between vertical health programs would not be included in the MSP. Collaboration within the health sector is inherent in the three elements of the CORE framework. The plural use of ‘non-health sectors’ is intentional. The question of “how many other sectors” is contextual and must be determined at the community level.

“in order to improve the impact of child health programming ...” The focus of NGO child health programs and their field managers is to improve child health. Therefore, any multi-sectoral partnerships must clearly support the work undertaken in the three framework elements or help to reinforce and sustain the health gains achieved by those elements. The way in which the MSP increases impact must be clearly articulated and supported by sound analysis. Maintaining this focus will help organizations to avoid diffusing program impact.

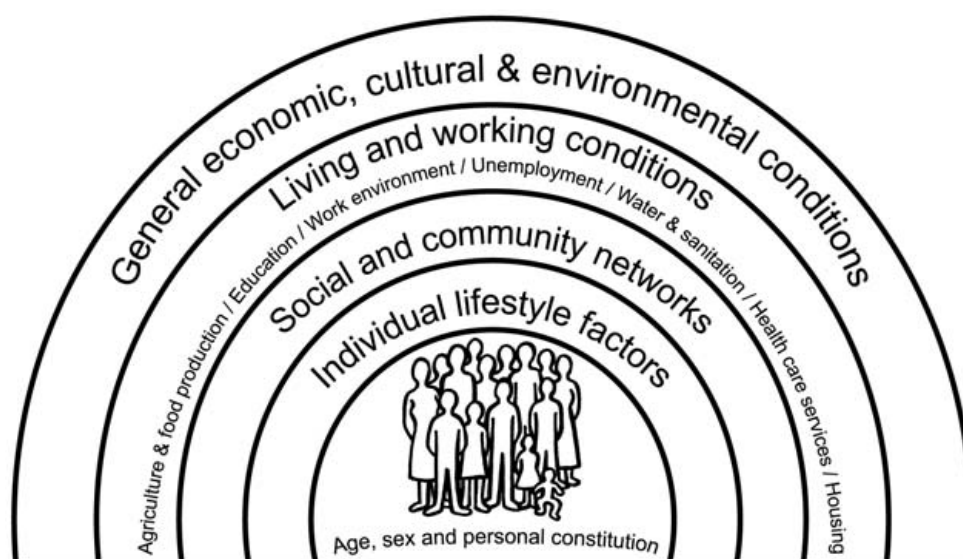
“in a way that is more effective, efficient, equitable or sustainable than acting alone ...” It takes more effort to partner with other sectors than to work solely within the health sector. This added investment is worthwhile, however, if working with other sectors proves more effective, efficient, equitable or sustainable than working alone. *Effectiveness* is the ability of the selected intervention to produce the desired outcome(s). *Efficiency* refers to the ratio of output to input. In this context, it measures the ratio between the cost expended and the desired outcome (e.g., reduction in infant mortality). (Reinke, 1988) *Equity* relates to fairness in distribution and benefiting the most disadvantaged communities and individuals. (Evans et al, 2001) Working through other sectors, NGOs can extend programs to the hardest-to-reach populations. *Sustainability* is a “contribution to the development of conditions enabling individuals, communities, and local organizations to express their potential, improve local functionality, develop mutual relationships of support and accountability, decrease dependency on insecure resources (financial, human, technical, informational), in order for local stakeholders to negotiate their respective roles in the pursuit of health, wellness and development, beyond a project intervention.” (Sarriot et al, 2004)

“and provides positive benefits for all sectors involved.” This recognizes that while child health may be the *raison d’être* for the health community’s involvement, it may not provide sufficient motive for another sector’s involvement. Having a clear and mutual understanding of how partnerships under the MSP contribute to the needs and motivations of the other sectors will be critical to building successful, lasting partnerships.

Figure 1 (Evans et al, 2001) provides a visual depiction of the multitude of factors that influence the health of the individual. This model provides the basis for understanding why it is important to work across multiple sectors to influence health. At the center are the individual child and caregiver with characteristics that influence their choices and health status. These characteristics of age, sex, and personal constitution are important to understand in targeting messages and interventions, but are largely unchangeable. The next layer represents personal behavioral factors such as breastfeeding, food choices, and use of insecticide-treated bed nets. Social and community networks surround the individual and provide support and influence from peers, family and social structures. Beyond the social

networks, living and working conditions influence health through such factors as the availability of food supplies, access to necessary goods and services such as health care, housing and clean water, and the ability to generate income. The broadest level of influence is general economic, cultural and environmental conditions that prevail across a society. This final layer is beyond the scope of this paper but is important for macro-level policy consideration.

FIGURE 1: A CONCEPTUAL MODEL OF THE MAIN DETERMINANTS OF HEALTH





III. Approaches to Implementing the MSP

As a foundation for addressing questions of implementation, this section will explore three distinct approaches to applying the multi-sectoral platform that NGOs can use at the community level. For each of the three approaches, this section will define the approach and answer the following questions:

The theory: What is the theoretical logic or hypothesis that supports the approach as a relevant vehicle for improving child health?

The evidence: Based on the literature review, what scientific evidence exists in peer-reviewed journals or research studies to support the theory?

Case studies: How has the approach been implemented through NGO project activities and what were the results?

Implications for action: Based on workshop discussion and the above three sections, what are the implications for local programming at the community, sub-district or district levels?

MSP Approach #1 – Communicating key family practices and/or extending health services through other sectors

Non-health sectors, through their material, human and financial resources allow the health sector to reach farther and deeper within the community to affect behavioral change. First, collaboration with other sectors that agree to deliver a similar set of health messages provides opportunities to scale up and extend project reach without significantly increasing costs. Second, health messages delivered to families and communities by various types of community resource persons are more believable and the importance of the message is magnified. Third, use of multiple channels to support and promote key behaviors breaks down barriers and reinforces behavior change, leading to greater sustainability. NGOs can establish or strengthen multi-sectoral round tables or coalitions to coordinate messages and improve multi-sectoral actions. Examples from Guatemala and Tanzania illustrate this approach.

MSP Approach #2 – Conducting joint activities with non-health sectors to address local key determinants of child health

Joint activities between health and non-health sectors can effectively diminish obstacles to good health, facilitate healthy practices, and improve the sustainability of health outcomes. While more research is needed to determine how behavioral determinants interact at the community and family

level, there is evidence that positive health outcome is associated with improvements in income, maternal education, water and sanitation, agriculture, and social capital. NGOs are often drawn by community demand and community prioritization of need into implementing projects that address the underlying causes of poor health. Workshop participants emphasized that program managers should work with community members to determine local priorities, and with community and sectoral leaders to establish a clear conceptual framework that clarifies the link between sectors, how each sector will benefit from collaboration, and the key indicators for measuring results in each sector. It is not enough to simply provide an amalgamation of different programs in the same geographic area without strategically planning how to maximize impact. Case studies from Uganda, Madagascar, Bolivia, Ghana, India and Zambia demonstrate how a multi-sectoral approach reduced barriers to adoption of key family practices, reduced social resistance, and improved health outcome at comparatively low cost.

MSP Approach #3 – Working through local government to increase capacity and funding for community health programming

Decentralization of government services brings decision-making processes, including resource allocation responsibilities, closer to the community. The community's involvement, in turn, can ensure that local decisions are relevant and in the public interest. A local government empowered with evidence-based health data and the resources to respond can have a tremendous influence on improving health service quality and access at the local level. NGOs can build the capacity and skills of local government to assume a leadership role in health by addressing, planning, and providing resources for local health needs that respond to local epidemiology and needs. NGOs can support community meetings to assess health status and government's willingness and readiness to respond. For a decentralized health system to work over time, the local community must also understand and value essential public health goods and services, demand to be heard, and hold government accountable for appropriate actions. Case studies from Bolivia, Nepal, Honduras, Peru, and Benin demonstrate positive health impact attained through committed leadership and government involvement in health project design, implementation and assessment.

A. COMMUNICATING KEY FAMILY PRACTICES AND/OR EXTENDING HEALTH SERVICES THROUGH OTHER SECTORS

1. The theory

Non-health sectors, through their material, human and financial resources, allow the health sector to reach farther and deeper within the community to affect change. This approach involves using other sectors as channels for health messages and health services, thereby providing greater breadth and sustainability.

There are three important benefits of using multiple sectors or channels to impact behavior change:

- **Cost-effectiveness:** Collaboration with other sectors that have similar messages provides opportunities to scale up and extend project reach without significantly increasing costs.

- **Logic:** It makes good sense to take advantage of the synergies between sectors. Families and communities do not think and act sectorally.
- **Long-term sustainability:** Using multiple channels or sectors to support and promote key behaviors, to breakdown barriers and reinforce behavior change, can have a greater long-term impact on changing behavior and ultimately on the sustainability of improved child health outcomes. (Sarriot et al, 2004)

This approach also fits with current work on determining gateway factors. Gateway factors are psychosocial, demographic, social, and other variables that determine several health behaviors. In the gateway factor model, “two outcome behaviors are found to be related because they are both caused by some common factor. Efficiency of programs can occur since improvement in the common factor can lead to improvement in several behavioral outcomes.” (Acharya, 2004)

2. The evidence

Two studies were identified that reviewed programs utilizing Approach #1. The first was a 1997 study published in the *Journal of Women and Health* that looked at 3,564 poor households involved in NGO collateral-free credit programs that incorporated health education. (Amin and Li, 1997) To improve coverage of its Expanded Program on Immunization, the Government of Bangladesh forged partnerships with NGOs, the private sector, voluntary associations and other groups. Each of the five credit NGOs studied provided an integrated package of development services including health education and promotion related to immunization. All NGOs were successful as credit organizations, achieving a 90 percent recovery rate. After controlling for other socio-economic variables, child immunization rates were significantly higher among credit program users than among non-credit users. In addition, non-credit users who resided in the credit communities had higher immunization coverage rates than those in non-credit communities.

The second study examined a USAID-led public-private partnership handwashing initiative in five Central American countries between 1996 and 1999, facilitated by BASICS and EHP (BASICS, 1999). In addition to engaging the government ministries, NGOs and media, they also turned to for-profit soap manufacturers in order to expand and unify their message. This provided BASICS and EHP with a resource-rich platform on which to promote their hygiene message, while providing soap manufacturers with important marketing opportunities and the legitimacy of being part of a national hygiene effort. Selection of private sector partners was done only after careful consideration of the companies’ capacities and competitive market assessment. During this period, the private sector investments totaled more than \$615,000. Based on extrapolation, over the four-year campaign, it was estimated that there was a 4.5 percent reduction in diarrheal disease prevalence and a 10 percent improvement in handwashing. While modest percentage-wise, these changes occurred throughout Central America making it quite significant (*i.e.*, the epidemiological case).

Health promotion provided through credit programs can increase use of immunization services in a community.

3. The case studies

CRS Guatemala: From September 2001 through March 2003, Catholic Relief Services/Guatemala Program (CRS/GP) implemented a series of projects to address the emergency food needs of children under five in the eastern part of Guatemala. Irregularities in rainfall, as well as declines in income-generating opportunities given the decline in international coffee prices, created the nutritional emergency. The CRS/GP response addressed the three programmatic elements of C-IMCI. The final element, the promotion of key family practices, was addressed with a multi-disciplinary approach: every field technician (water and sanitation, health, agriculture and food supervisors) was involved in this activity. From the start of the project, the program was able to focus on a single objective and everyone, regardless of sector, was responsible for the results of nutritional impact. After one and a half years of programming, the percentage of children classified as severely or moderately malnourished dropped from 7 percent (of 6,503 children measured) to 0.12 percent and mild malnutrition dropped from 20 percent to 6.46 percent. (Walter, 2004) (See complete paper in Appendix 4.)

Delivery of sanitation messages through the manufacturing sector can decrease diarrhea prevalence.

AMREF Tanzania: AMREF initiated a C-IMCI program in Mkuranga, one of six districts in the Coast Region of Tanzania, East Africa. Mkuranga (pop. 187,000) is one of the poorest and most underserved districts in the country. The project used a multi-sectoral steering committee of the heads of six sectors, including water, health, education, planning, agriculture and food security, to facilitate planning and supervision of C-IMCI activities. The committee, chaired by the district planning officer (DPO), met quarterly, providing AMREF with the opportunity to train cadres of trainers from different sectors. Participants in these trainings of trainers (TOTs) were selected by the heads of their departments, (members of the district project steering committee). Together with AMREF staff, the trainers, in turn, applied their new knowledge and skill to train the 240 CORPS (Community Owned Resource Persons) in the project area. Each trainer continues to support the village CORPS through mentoring and supervision. The CORPS then train families to improve health practices. Final project evaluation is pending. (Bukonya D. *et al.*, 2004) (See complete paper in Appendix 4.)

Project Concern International: In the Maluku region of Indonesia, PCI worked with schools to develop a curriculum designed to educate children about the importance of immunizations; the children then bring that information home. Within two years, attendance at the *Posyandu* (Integrated Service Post) rose from 33 percent to 77 percent and immunization coverage of children 12-23 months soared from 33 percent to 81 percent. This improvement resulted directly from the students motivating mothers to bring their children. (WHO-EPI, 1997)

4. Implications for action:

These cases demonstrate two different methods for operationalizing approach #1. In both the CRS and AMREF examples, workers across several different sectors were mobilized to deliver the same health messages. In the AMREF example, the project built on existing organizational structures and skilled resource persons (CORPS). Across the different sectors, the CORPS represented community-based resource persons serving the same or similar populations. Combining health and

other sector messaging through one worker allowed the different sectors to achieve greater efficiency and less duplication of effort. In the CRS example, the different sectors rallied behind the goal of improving child nutrition and promoted the same messages on key family practices through their various sector-specific field technicians. In this way, they reached a greater population, magnified the potential of the message (when heard from multiple different field technicians) and increased the likelihood of behavior change. NGOs can support the MSP by building on existing systems and advocating with different government ministries to develop a coordinated community outreach strategy.

The second method to operationalize the approach involved the promotion through another sector of a health message or product. The evidence and case studies illustrate this method through the credit program, soap manufacturers and the school system. For this method to work, the selected sector(s) need to have a relationship to the target audience. For example, if a particular soap manufacturer (due to high pricing or lack of demand), had limited distribution among the target group, it would not be a good match. Similarly, if the credit NGO targeted only households or communities with high immunization rates, the impact sought would probably not be achieved. Additionally, a good fit between the topic and the cooperating non-health sector helps facilitate collaboration and better targeting of the message or services. For example, nutrition is a natural fit with agriculture, as is the fit between hand washing and soap manufacturing. These complementarities may clarify how involvement in health issues can be beneficial to non-health partners. NGOs can look for these connections during their initial formative research in a community and involve the community in developing effective approaches to health messaging.

A common set of messages delivered by all community resource persons can more easily lead to behavioral change.

In all of the cases, establishing multi-sectoral round tables or coalitions to coordinate efforts was a key component. In Guatemala, an inter-institutional roundtable brought together multi-sectoral partners and, through the food security framework, made a clear argument for the linked causality of the different sectors and the potential for each sector to contribute to resolving the nutrition crisis. In Tanzania, the District Planning Office coordinated the multi-sectoral activities. Strengthening and building these coalitions is a key function NGOs can play to build community capacity and increase sustainability.

Strengthening and building multi-sectoral coalitions is a key function NGOs can play to improve an inter-institutional response to a health or nutrition crisis.

B. CONDUCTING JOINT ACTIVITIES WITH NON-HEALTH SECTORS TO ADDRESS LOCAL KEY DETERMINANTS OF CHILD HEALTH

1. The theory

Child health programmers recognize that a child does not exist in a vacuum. At the community level, many different sectors influence their lives, opportunities, and behaviors. In order to increase child health, it is important to work together with other sectors to ensure, for example, that a child has access to adequate food, sanitary conditions, household income to afford preventive and

curative care, and a safe environment in which to grow. Often, different organizations (or divisions within one organization) focus on the same community to provide different services, but do not coordinate their efforts in order to ensure that the efforts are synergistic.

Child health may be impacted in different ways by different influences. It is critical to understand how a particular sector relates to the desired outcome. For example, maternal education and agriculture may have little impact on neonatal mortality but are significant to child mortality.

This section will review the evidence base for the interactions between different sectors and child health. Different programs use different conceptual models to visually and epidemiologically connect the various sectors to the desired outcome. The Household Food Security and Livelihood Concept (Frankenberger et al, 2002), the Hygiene Improvement Framework (USAID, 2004) and the UNICEF diagram of the causes of malnutrition (UNICEF, 1990) are a few examples. In addition to providing the rationale for partnership, these models provide a common language for all potential partners and a way of clearly describing the respective sectoral inputs to reach the final targets.

Below, we look at the theoretical basis and evidence for interaction between child health and the following:

- Income/wealth.
- Maternal education
- Water and sanitation
- Agriculture
- Social capital
- Multi-sectoral efforts

2. The evidence

The author reviewed twenty-nine studies that assessed one or more of the five selected determinants of health (see Appendix 3 for more detailed information). Other studies were reviewed but discarded because of weak methodological approaches. The twenty-nine selected studies were a combination of meta-analysis, longitudinal, cross-sectional and case-control studies that looked at impacts on mortality, morbidity or nutritional status, or behavior. Some were multi-country and some focused on a particular country or region. In almost all cases however, some method of logistical regression was used to isolate determinants. As a whole these studies reaffirm that the areas reviewed significantly influence health outcomes. Individually, improvements in any one of these sectors could reduce relative risks of negative health outcomes by as much as a factor of three, and together (when coupled with health interventions), these sectors have resulted in significant reductions in child mortality. Each sector, however, has its limitations and considerations that are important to be aware of when applying this MSP strategy.

TABLE 1: SUMMARY ANALYSIS OF RESEARCH					
SECTOR	# STUDIES	SIGNIFICANT IMPACT	MORT.	MORB/NUT	BEHAVIOR
Income/Wealth	13	Yes	✓	✓	✓
Education	9	Yes	✓	✓	✓
Water/Sanitation	7	Yes	✓	✓	
Agriculture	4	Yes	✓	✓	
Social Capital	2	Mixed	✓		
Multi-sectoral	2	Yes	✓	✓	✓

As a general rule, most of the sectors selected for study have a curvilinear relationship to child health. Each proportional gain results in diminishing improvements. In other words, the association of another sector's involvement with health impact was linear to a point, and then diminished. Given the significantly sub-standard conditions of most of these sectors within the developing world, this may not be an issue in determining interventions. Regardless, it should be considered when predicting impact.

In some sectors, certain levels or thresholds of improvement may be required before yielding tangible improvements in child health. This is the case with water and sanitation interventions where a certain level of sanitation must exist before significant health improvement is seen. There may also be a threshold effect with maternal education: not until the seventh year of education does maternal education begin to show an impact on child health. In program evaluation, there is the danger of assuming linear cause and effect relationships which cannot be proven, or – worse – would disprove the value of a multi-sectoral intervention simply because it has been developed at levels below a threshold for impact.

It is important to note that the majority of the studies go directly from the determinant to final health outcomes, bypassing behavior, such that the path taken to reach that outcome is not clearly understood. It is hard to determine, for example, whether improved income leads to better health care-seeking practices or if a family with a higher income is able to afford improved housing which then decreases the likelihood that their children will suffer from pneumonia. Understanding the difference is crucial to programming effective interventions. More research is needed to better understand exactly how these determinants interact.

Income/wealth: The relationship between income/wealth and health outcomes has received considerable attention. In the studies reviewed, income or measures of wealth had a significant impact on virtually every health variable studied, including neonatal mortality, post-neonatal mortality, infant mortality, child mortality, nutritional measurements and health-seeking behaviors (Bicego and Boerma, 1993; Peña *et al.*, 1999; Mahalanabis *et al.*, 1996; Woldemicael, 2000; Kennelly *et al.*, 2003; Wagstaff, 2003; Marmot, 2002; Mellor and Milyo, 2001; Amin and Li, 1997; Hussein *et al.*, 1999; Wang, 2003; Sauerborn *et al.*, 1996; Poerwanto *et al.*, 2003). Woldemicael (2000) found that children in urban Eritrea who came from the wealthiest income groups were 60 percent less

likely to die during the neonatal and post-neonatal period than those from the low- and moderate-income groups. Using the same comparisons and controlling for other influences such as water and sanitation and maternal education, wealthier children were 70 percent less likely to die before the age of five. Kennelly *et al.* (2003), in their study of 19 Organization for Economic Cooperation and Development (OECD) countries, used six different models of analysis to demonstrate that income consistently showed a significant and inverse relationship with neonatal and infant mortality rates. In a household survey in Burkina Faso (Sauerborn *et al.*, 1996), researchers found that in the rainy season, when incomes were low and illness rates higher, respondents' expenditures on health care were a mere 27 percent of dry season expenditures. In the dry season, respondents benefited from the temporary increase in income levels from post-harvest sales.

As with most sectors, the influence of income/wealth is affected by the laws of diminishing returns resulting in a curvilinear response. A World Bank study shows that there is little, if any, gain in life expectancy as per capita GDP rises above \$5,000 (Marmot, 1993). Another study reported substantially reduced effects at \$4,000 GDP (Judge *et al.*, 1998). It is important to understand that income influence is not exclusive. There is also a connection to the distribution of resources within the household; studies demonstrate that households with low female control of resources tend toward lower levels of care-seeking behavior for sick children. (WHO/World Bank, 2001) Additionally, it appears that health subsidies can augment income level, *i.e.*, incomes being equal, children fare significantly better when the percent of public expenditures on health is higher. (Kennelly *et al.*, 2003; Wang, 2003; Wagstaff, 2003; World Development Report, 2004)

In urban Eritrea, children from the wealthiest income groups are 70 percent less likely to die before the age of five.

There is also a reverse connection in which improved health status leads to improved economic conditions. Disease is an economic burden on a household, creating the need to pay for health services and leading to the loss of productive time for either food production or income-generating activities. Conversely, good nutritional status is linked to better health outcomes, which result in improved productivity and household resources. (Kleinau, 2002) The Commission on Macroeconomics and Health stated in their final report that "extending the coverage of crucial health services, including a relatively small number of specific interventions, to the world's poor could save millions of lives each year, reduce poverty, spur economic development, and promote global security." (WHO, 2001)

Maternal Education: Maternal education is significant in determining health outcomes but under somewhat more restrictive circumstances. Most of the studies reviewed found improved maternal education to be associated with 35-54 percent reductions in child mortality and morbidity. They also found significant impacts of maternal education on nutrition and care-seeking behavior (Bicego and Boerma, 1993; Kuate Defo, 1996; Arntzen *et al.*, 1996; Peña *et al.*, 1999; Mahalanabis *et al.*, 1996; Reed *et al.*, 1996; Bender and McCann, 2000; Woldemicael, 2000; Poerwanto *et al.*, 2003; Smith and Haddad, 2000). In three of the studies however, (Mahalanabis *et al.*, 1996; Bender and McCann, 2000; Poerwanto *et al.*, 2003), the educational advantage was not significant until seven or more years of education had been attained. Studies that looked at neonatal outcomes found no significant association with maternal education and none to small

associations with infant mortality. (Bicego and Boerma, 1993; Woldemicael, 2000; Arntzen *et al.*, 1996) However, this conclusion should be conditioned by the fact that maternal education has been found to influence antenatal care-seeking behaviors, which are critical to lowering neonatal mortality. (Bender and McCann, 2000) For children aged one to five years, having an educated mother significantly influenced health outcomes.

The effect of maternal education may have upper and lower limits based on household income. Peña *et al.* (1999), in a cohort study in León, Nicaragua, found that the educational advantage was limited only to the poorer households while Reed *et al.* (1996) found that in Benin, maternal education had no effect at low socio-economic levels and weak association at higher socio-economic levels but was significant in the mid-range. It may be that in abject poverty conditions, education cannot immediately change access to care and services and at the upper levels, income alone is sufficient. While the educational effect was dependent on the socioeconomic status in some studies, that status was not defined in the same way. Also, other studies found maternal education to be significant regardless of income. Perhaps the most compelling case for maternal education is the extensive work done by Smith and Haddad (2000) to determine the underlying causes of malnutrition. They found improvements in maternal education between 1970 and 1996 to be the strongest underlying determinant of reductions in malnutrition during the same period. Their calculations suggest that maternal education was responsible for 56 percent of the improvements in nutrition among the 66 countries studied.

Most of the studies reviewed found improved maternal education to be associated with 35-54 percent reductions in child mortality and morbidity.

Water and Sanitation: Worldwide, an estimated four billion episodes of diarrhea occur annually, more than half of these among children under five. WHO estimates that every year in developing countries, diarrhea accounts for the deaths of nearly 1.5 million children under five. Water and sanitation improvements have a direct and immediate impact on mortality and morbidity as well as an intermediate impact by providing the means for increasing hand washing. (Woldemicael, 2000; BASICS II, 1999; Hussein *et al.*, 1999; WASH Project; Checkley *et al.*, 2004; Curtis and Cairncross, 2003; Prüss *et al.*, 2002)

Based on worldwide experiences, a combination of hygiene promotion, improved access to water and sanitation hardware and household technologies, and interventions to ensure a healthier environment yield the greatest health impact and reduce child mortality and morbidity substantially. (Bellagio, 2003) A 30-50 percent reduction in the burden of diarrheal diseases is achievable through feasible primary prevention—*i.e.*, improvements in water supply, sanitation and hygiene. (Esrey *et al.* 1991; World Bank 1993; Curtis and Cairncross 2003) A recent analysis of 21 controlled field trials of point-of-use water treatment and safe water storage at the household level showed a reduction in diarrheal disease of 42 percent compared with control groups. (Clasen and Cairncross, 2004)

A 30-50 percent reduction in the burden of diarrheal diseases is achievable through feasible primary prevention—i.e., improvements in water supply, sanitation and hygiene.

In Eritrea, Woldemicael (2000) found that post-neonatal mortality and under-five mortality were 40 percent lower in households with water supply and toilet facilities compared to those

with none, after adjusting for the effects of wealth and maternal education. Additionally, researchers in Peru (Checkley *et al.*, 2004) found that at 24 months, children with the worst water and sanitation conditions were 1.0 cm shorter and had 54 percent more diarrheal episodes than those in the best conditions. Water supply and sanitation are especially important to child morbidity and mortality at the age when supplemental foods are introduced and inadequately prepared weaning foods and infant formula may be a source of pathogenic organisms. (Woldemicael, 2000)

Agriculture: Malnutrition contributes to about 60 percent of all childhood mortality in the developing world. (Pelletier *et al.*, 1994; Bellagio Study Group, 2003) More than two thirds of the people in developing countries derive their livelihood from agriculture and it is well documented that a rise in income can increase food consumption and improve the quality of diets for poorer households. (Bonnard, 2001) Therefore, it stands to reason that support to agriculture and food security activities would be critical to improving health and nutrition outcomes in children.

There is a wide body of evidence that confirms the important connections between agriculture and nutrition. Smith and Haddad (2000) reviewed findings from 63 countries to conclude that improvements in per capita food availability were responsible for 26 percent of the reductions in under-five malnutrition between 1970 and 1996; they found only maternal education to be more strongly associated with a reduction in malnutrition. Increases in agricultural production can improve income, which in turn can have associations with improved food intake, including improvements in dietary quality and micronutrient intake. Kennelly *et al.* (2003) concluded that fruit and vegetable consumption was strongly associated with increased life expectancy of both men and women in Organization for Economic Cooperation and Development (OECD) countries.

Micronutrient malnutrition (notably vitamin A, iron, and iodine) remains alarmingly high throughout the world. In the case of vitamin A, the major approaches consistently recommended to address vitamin A deficiency are vitamin A supplementation, food fortification, and dietary diversification, including the production and promotion of vitamin A-rich foods. Orange fleshed sweet potatoes (high beta-carotene), for example, could contribute to preventing and controlling vitamin A deficiency and have sustaining results. In one clinical study, the introduction of orange-fleshed sweet potatoes into the diet of three to six year olds improved vitamin A status (in children mildly deficient in vitamin A) as much as deworming and fat supplementation, and a combination of increased intake of orange-fleshed sweet potatoes and fat, with deworming, had an even greater effect (Jallel *et al.*, 1998).

Improvements in per capita food availability were responsible for 26 percent of the reductions in malnutrition in children under five between 1970 and 1996 based on a study of 63 countries.

Depending upon the program, food-based interventions, such as crop diversification, food fortification, small- or large-scale vegetable, fruit and milk production, small animal husbandry, agro-processing, and/or improved post-harvest storage (Kataki, 2002) can be appropriate and effective interventions. They can be part of a coordinated approach that takes several sectors into account and meet a range of development objectives. Specifically, agriculture activities can be designed to support and result in improved nutrition by promoting the links that exist between agriculture production, income generation, and consumption of more nutrient-rich foods. A recent review of

the evidence (Bonnard, 2001) found that agriculture interventions are more likely to result in nutrition impacts when:

- The incremental income is earned or controlled by women;
- The stream of income is regular or frequent, even if the absolute amounts are small;
- The income is in-kind (*i.e.*, in the form of food); and
- Training in health and nutrition is provided.

There are a few cautionary notes about the nutritional results of agricultural interventions, however. Many agricultural endeavors have focused on increasing production of a narrow range of cash-oriented crops, with mixed results. Increased production, while it tends to improve income, may not necessarily lead to improved nutrition for all members of the household. (Bouis, 1997)

Social Capital: Robert Putnam describes a community with a high level of social capital as one with high levels of civil engagement, social participation, and social interaction in addition to high levels of trust, political equality, and social structures that facilitate cooperation between citizens. (Bolin et al, 2003) Numerous studies have looked at the link between social capital and health and demonstrated that high levels of social capital are associated with lower levels of mortality. Additionally, high social capital has been linked in studies to better economic development and growth, lower cardiovascular mortality, and lower accident and suicide-related mortality. (Bolin et al, 2003) Using an ecological regression model, Kawachi et al (1997) found that social capital explained 58 percent of variance in mortality among 39 US states. Lower levels of social trust were associated with higher rates of most major causes of death including infant mortality; higher per capita group membership was strongly associated with lowered all-cause mortality. Bolin et al (2003) also found social capital to be positively associated with self-reported health status during three time periods in Sweden. Focusing on population health, however, Kennelly et al (2003) found no significant influence on neonatal, post-neonatal or infant mortality using six different variables of social capital in a study of 19 Organization for Economic Cooperation and Development (OECD) countries. There is a great deal of literature on social capital exploring different definitions, measurements, linkages and causalities. While literature is scarce on a direct link between social capital and health outcomes in developing countries, there is a large body of evidence for the importance of social capital in supporting health programs. (Thompson and Winner, 1999; Rifkin, 2001; Rifkin, 2003; Shediak-Rizkallah and Bone, 1998)

While often not considered a separate sector, social capital is an important reality of all NGO community-based interventions across the elements of the framework and the multi-sectoral platform. NGO activities improve social capital by connecting people at three different levels (Sarriot, 2004):

- Household: Connecting households to each other for mutual support and cooperative activities

Lower levels of social trust were associated with higher rates of most major causes of death including infant mortality, and higher per capita group membership was strongly associated with lower all-cause mortality.

- **Communities:** Connecting different subgroups within communities together so that they can work more effectively and equitably
- **Decision makers:** Connecting communities to decision makers or authorities (such as municipal government or health district staff) in order to improve civil accountability and increase access to key services for communities.

Multi-sectoral efforts: While many of the studies found that one particular sector could explain 30-50 percent of a given child health outcome, it is also clear that in the absence of progress in one sector, improvements in another could provide comparable results. For example, while income is a strong determinant of health outcomes, in absence of high income, higher public expenditures on health will compensate if also associated with efforts to improve quality and access. Reciprocal causation may also be at play whereby an improvement in a non-health sector improves health and consequently the improvement in health results in the further improvement of the non-health sector in an upward spiral of causation. This has been the case argued for the health-wealth link. (Rodriguez-Garcia and Goldman, 1994) Finally, reinforcement value states that when you control for one sector, the gains in another sector are diminished. For example, if you control for education, the boost that wealth gives to health outcomes is diminished.

In addition to the literature analyzing specific sectors and health, a few studies have explored the effects of multiple sectors. A self-reported review in *Tropical Doctor* (Knowles, 1995) found the use of multi-sectoral approaches significantly beneficial in positively affecting targeted health outcomes in a rural African setting. Knowles (1995) reported on the visionary efforts of his hospital and its staff in evolving from a care-oriented mission to primary health care, and ultimately to a community health-oriented mission servicing a population of 50,000. Over the course of ten years, more than forty components were added to the program to address the underlying determinants of health. These included many of the community health strategies advocated for in Elements 1-3 of C-IMCI, but also included water and sanitation programs, grain banks, a trust fund for women farmers, literacy classes, subsidized fertilizer and seeds, and a housing program. Over the ten-year period, child mortality was cut in half in the region (330/1,000 to 145/1,000) while the national figure dropped by only 10-20 percent.

The *Journal of Health Policy and Planning* (Gonzales *et al.*, 1999 edition) reported on a Save the Children child survival program in the highlands of Bolivia. The program began in 1986 with traditional child survival interventions and gradually added literacy training for women and women's credit programs. In a 1999 review, Save the Children conducted a cross-sectional study comparing households that participated in all

three types of programs, those participating in health and either literacy or credit programs, those that participated in health programs alone and a control community. In this study, they found no clear association with participation in one or more Save the Children programs and the prevention and treatment of diarrhea. However, households participating in all three programs were half as likely to have malnourished children as households in comparison communities; children whose parents participated in one or two programs were significantly less likely to be at risk of becoming

Program evaluation for a multi-sectoral effort in rural Africa found that over a ten-year period, child mortality was cut in half in the region (330/1,000 to 145/1,000) while the national figure dropped by only 10-20 percent.

malnourished. Controlling for availability of health services, social class and drinking water did not appreciably change the results.

3. The case studies

Africare Uganda: Africare implemented a four-year C-IMCI project in rural Ntungamo District of South Western Uganda. The project was operating in eight of the district's fifteen sub-counties with a target population of 42,054 children under five and 46,058 women of reproductive age. The overall project goal was to reduce morbidity and mortality of children under five years of age. In order to reach this goal, Africare coordinated internally and in their target area with health, water and sanitation, agriculture, income-generation and education programs and stakeholders. Pre-project research was critical for identifying non-health issues of key concern to the target population and developing effective strategies. Barriers to adoption of the key family practices were addressed in the following way:

- In order to reduce diarrhea, the project worked with water and sanitation projects to increase access to safe water.
- To improve nutrition, the project incorporated work with agriculture to diversify gardens, raise rabbits and fish, enhance food security and generate income.
- To address HIV/AIDS (of particular concern to the community, but not Africare's programming strength), the project helped the community link to existing voluntary counseling and treatment (VCT) services, trained a community-based resource person, and identified organizations to provide nutrition supplements for people living with HIV/AIDS.
- The project worked with the education sector, through school children, to enhance message dissemination.
- The project established strong linkages with the district health sector (for VCT and referrals) to reinforce health messages, and to ensure a strong drug supply.

The project achieved results in most of the child health indicators including vitamin A-rich food intake, which increased from 21 percent at baseline to 50 percent at final evaluation. The number of households with designated hand-washing facilities with soap/ash present increased over 100 percent from the baseline (from 8% to 20%). The project sought the involvement of sub-county leadership from the beginning (thereby assuring ownership and sustainability) and found that the multi-sectoral approach tangibly added resources to the project. One constraint experienced by this project, however, was the lack of available measures for monitoring and evaluating multi-sectoral activities; existing tools tended to monitor program elements in a vertical fashion. The Africare approach has been adopted by the Ministry of Health as a 'learning model' and is visited by teams from other districts and countries. (Innocent, 2004) (See complete paper in Appendix 4.)

EHP Madagascar: Based on the impact of deforestation and population growth in Madagascar, the Environmental Health Project implemented a four-year program to link and integrate the approaches of the health, population and environmental (natural resource management) sectors. A key mechanism for planning and implementation of integrated population, health and environment

(PHE) activities was the development of the *Voahary Salama*, which began as a partnership and became a legally registered Malagasy association. *Voahary Salama* consists of 29 partner organizations, nine of which are local NGOs implementing field activities. *Voahary Salama* covered 160 Malagasy communities and a population of approximately 125,000. Although PHE integration covers a broad range of interventions, the project focused on the following eight:

- Family planning
- Immunization
- Maternal and child nutrition
- Diarrheal disease prevention through improved water supply, sanitation and hygiene (known collectively as hygiene improvement)
- Malaria and other infectious diseases prevention and treatment
- Reduction of slash and burn practices and improved agriculture
- Reforestation
- Income generation

The effort built on existing program resources and increased the impact by supporting communities and groups in a consistent manner, explicitly linking different partners' messages and services, sharing resources for fieldwork and evaluation, and cross-training field agents from other sectors. (Kleinau, 2002) Systematic monitoring and rigorous evaluation showed that integrated programs could be very effective at relatively low costs. Substantial improvements of key PHE indicators were measured (Kleinau, 2004) such as contraceptive prevalence rates (from 12% to 17%), immunization coverage (from 48% to 68%), access to safe water (from 19% to 24%) and basic sanitation (from 52% to 55%), and the practice of less destructive natural resource management methods (slash and burn decreased from 55% to 25%). However, health indicators such as malnutrition and diarrhea prevalence remained high, with poverty and natural disasters from cyclones as important contributing factors.

Freedom from Hunger: Freedom from Hunger's *Credit with Education* programs work with rural credit unions and other financial institutions providing non-collateralized loans. While providing a service that addresses one of the underlying causes of poor health, poverty, it also provides a tactical opportunity to address behavioral change issues. The education component includes topics of improved business practices as well as health and nutrition topics, such as breastfeeding, diarrhea prevention and treatment, infant and child feeding, family planning, immunization, malaria prevention and treatment, care of the sick child and HIV/AIDS prevention. A study of the program's impact in Ghana and Bolivia showed significant improvements in nutritional status. (MkNelly and Watson, 2003) In Ghana, Dunford and Denman found that "Credit with Education not only increases income and savings, enhances self-confidence and improves health/nutrition knowledge and practices of women ... [but] can ultimately improve household food security and children's nutritional status." (Acharya et al, 2004)

CORE India: As part of the global effort to eradicate polio, CORE was awarded USAID funds to support supplementing immunization campaigns in hard to reach communities in India by some of its member organizations (ADRA, PCI and WV). CORE and its partners looked at the impediments to greater coverage, which included poor sanitation (a condition favoring wild polio transmission), inadequate community involvement, and a general distrust of health services. The social resistance to immunization appeared to stem from a failure of programmers to address other community priorities and pointed directly to the need for multi-sectoral programming.

“Credit with Education not only increases income and savings, enhances self-confidence and improves health/nutrition knowledge and practices of women ... [but] can ultimately improve household food security and children’s nutritional status.”

The CORE Group Polio Partners Project (CGPP) mobilized several NGO partners to address community needs, increasing community trust and ultimately making the community a partner in community health programs and in the polio eradication effort. CORE members offered a package of integrated services that included other health areas such as malaria prevention, ORT and medical camps but also ventured into household latrines, hand pumps and sanitation drives. The areas selected were based on community priorities and intermeshed with CORE’s priority of polio eradication. Using community meetings and the involvement of religious leaders, they were able to overcome strong mistrust and identify and respond to areas of community concern unrelated to polio – but leverage that mobilization to support polio eradication efforts. By selecting those priorities that remove some of the barriers to key family practices, CORE and its partners were able to effectively incorporate the MSP (via water/sanitation) while addressing community priorities and energizing support for their specific health goals. This was accomplished without losing focus. As a result, CORE communities significantly increased the number of children vaccinated for polio compared to non-CORE communities. It is also important to note that CORE utilized a secretariat to coordinate activities among its partners. (Solomon, 2004) (See complete paper in Appendix 4.)

The social resistance to immunization appeared to stem from a failure of programmers to address other community priorities and pointed directly to the need for multi-sectoral programming.

PCI Zambia: Project Concern International (PCI) applied a multi-sectoral approach in its child survival project in Nchelenge, Zambia. In an area of both high HIV prevalence and poor child health indicators, the project sought to incorporate prevention of mother-to-child transmission of HIV/AIDS (PMTCT) with promotion of traditional Community IMCI interventions. The formation of a district task force (DTF) brought together key stakeholders from multiple sectors for HIV/AIDS programming. The DTF is made up of more than thirty partners from government, local and international NGOs, faith-based organizations, and community-based organizations. Through the DTF, these groups share resources and collaborate on joint activity planning and monitoring. By inviting the DTF to become a core partner of its child survival/HIV/AIDS project, PCI was able to successfully create links between HIV/AIDS prevention, support for child caretakers and children’s health activities. Multi-sectoral activities are promoted in a way that meets community demands while addressing critical underlying causes of HIV/AIDS transmission and

mitigating the threats of its impact on child health. Specifically, the DTF supported literacy education through the Ministry of Community Development (which also integrates HIV/AIDS and other health messages within training), and improved food security in vulnerable households through the Ministry of Agriculture (by providing a kit containing seeds, vitamins, and food supplements). Final project evaluation is pending, but PCI believes that the multi-sectoral approach helps coordinate efforts and can effect lasting impacts on health. They found that the DTF model costs relatively little to form and sustain, but is time-intensive and requires resources to motivate and sustain it. These investments are offset by the resources provided through multi-sectoral involvement (such as equipment, supplies and technical assistance). (Yourkavitch and Tsamwa, 2004) (See complete paper in Appendix 4.)

4. Implications for action:

The case studies demonstrate several important implications for local implementation of this approach.

a. Making real linkages: In applying the multi-sectoral platform, it is not enough to simply create different programs within the same geographic area. As demonstrated in the evidence base for agricultural initiatives, agricultural programs can successfully increase production and economic indicators by producing a narrow range of cash-oriented crops, yet this has negative implications on the nutritional status of children. Planning with other sectors enables health programmers to introduce the notion of how those sectors might affect health. They can then plan strategically to meet the objectives of both sectors, thereby synergistically increasing the positive implications for the target community. In the agricultural example, this translated into food-based nutrition programs focused on crop diversification, food enrichment, large-scale vegetable, fruit and milk production, improved post-harvest storage and small animal husbandry including poultry and fish in order to ensure positive nutritional responses to agriculture.

The Save the Children study of multi-sectoral programming did not support Save the Children's original hypothesis that participation in multi-sectoral programs would comprehensively improve health behaviors and health outcomes, but it did highlight the importance of truly linking multi-sectoral programs in order to achieve the expected outcome. The report discussed issues not addressed affecting diarrhea prevalence and the importance of making clear links among the different sectors for staff and community members. Both of these points lead NGOs to carefully select the best multi-sectoral efforts to connect together and coordinate planning among sectors for maximum public health impact.

Planning with other sectors enables health programmers to introduce the implications the other sectors have on health. They can then plan strategically to meet the objectives of both sectors, thereby synergistically increasing the positive implications for the target community.

b. Benefiting goals of each sector: In order for different sectors to work together and a multi-sector approach to succeed, each sector must share a common vision and at least one mutual goal and see the benefits to its own objectives. The multi-sectoral platform is based on the

premise that the benefits that accrue to each sector outweigh the added complexity of managing multi-sector partnerships and a lesser organizational independence.

EHP's Madagascar program succeeded because a diverse set of development actors and sectors came together under a common umbrella (*Voahary Salama*) that allowed them to buy into and implement a common vision and common development objectives. The program demonstrates that different sectors working towards a common development goal clearly believe that each sector mutually benefits. The multi-sectoral implementation of activities in Madagascar also showed the importance of a clear conceptual framework that clarified the links between the sectors, demonstrated how each sector benefited, and set in place a monitoring and evaluation system to measure key indicators important to the different sectoral partners. The following examples illustrate the link and mutual benefits from integrating family planning and natural resource management interventions. Food insecurity is one of Madagascar's biggest development problems causing malnutrition in one of every two children. An important objective of the agricultural sector was therefore to increase production of rice and other food staples. However, rapid population growth meant more mouths to feed every year, while more people tried to cultivate the limited supply of fertile land. Therefore, reducing family size became a strong motivator for the agricultural sector to participate in family planning promotion. The health sector, on the other hand, had a keen interest in improving the nutritional status of women and children, and this required close collaboration with the agricultural sector, for example, to promote market gardens for growing vitamin A-rich vegetables. Similarly, the conservation sector understood the clear links between population growth and the loss of biodiversity, and was interested in limiting human activities in ecologically sensitive areas. To prevent exploitation of forest resources, the conservation sector worked with the health sector and the agriculture sector, to provide families with access to essential health and family planning services and alternative sources of food production.

In order for different sectors to work together and a multi-sector approach to succeed, each sector must share a common vision and see the benefits to its own objectives.

The Freedom from Hunger case provides another good example of the benefits of having both mutual and sector-specific goals. For the health sector, incorporation of health education into the micro-credit programs provided a tactical opportunity to engage many women in dialogue about important health information as well as address income as an underlying cause of poor health. The finance sector found within two loan cycles that the health education served as a strong incentive for women to return to them as clients and that those programs using Credit with Education achieved better operating efficiency ratios (operating expenses divided by average outstanding loan balance) with no additional costs than similar programs without education service. (Thys, 2004)

It is important to have a clear conceptual framework that clarifies the links between the sectors and how each sector benefits and to include a monitoring and evaluation plan to measure key indicators important to the different sectoral partners.

c. Addressing the identified needs of the community: The research shows that selected sectors contribute positively to child health outcomes, however the results will vary from country to country and community to community. Each community presents a different set of vulnerabilities and strengths that will influence health outcomes. Analyzing which ones pose the greatest threat and/or opportunities for improving child health enhances the ability to prioritize and focus selected interventions.

Both the Africare and CORE India case studies highlight the importance of addressing the perceived needs of the community in order to address health issues. Some of the interventions in other sectors are more visible to the community and can serve as points of entry for health programming. Additionally, health education programs hit a limit in the number of different messages that community health workers can effectively communicate and how much individual change can be expected from one caregiver at a certain time. The interventions with other sectors that are clear local priorities (such as safe water sources, sanitation facilities, and food production) help to produce an enabling environment for improved child health. NGOs should conduct participatory assessments with the community to determine the key local vulnerabilities, priorities and determinants of child health and implications for interventions.

NGOs should conduct participatory assessments with the community to determine the key local vulnerabilities, priorities and determinants of child health and implications for interventions.

C. WORKING THROUGH LOCAL GOVERNMENT TO INCREASE CAPACITY AND FUNDING FOR COMMUNITY HEALTH PROGRAMMING

1. The theory

Governments provide for the welfare of their people through legislation and administration of public funds to meet basic needs. An underlying assumption is that the greater the proportion of resources allocated for public health services, the more access to health services increases, resulting in better health outcomes. Too often, though, these health services do not reach poor people, especially those in rural areas or in rapidly growing urban slum areas. In the 1990s, decentralization of the public health sector became appealing as a mechanism to provide better and more flexible health services catering to local preferences, decrease duplication of services, reduce inequalities between urban and rural areas, provide for community financing and involvement, integrate activities and different public and private agencies, and improve intersectoral coordination especially in local government. (Litvack, 2004) Decentralization can bring decision-making processes closer to the community, ensuring that local decisions are relevant and in the public's interest. To realize these benefits, high quality epidemiological information must be widely available so that the public can hold decision-makers and local officials accountable for the health and well-being of their children.

Local government (regional, district, municipal, community) is part of the multi-sectoral fabric within the community that can be engaged to support child health through improvements in access to and quality of health facilities, accessible health care and information at the community level, and promotion of key family practices. In that sense, government is no different than other sectors.

What distinguishes local government, however, is that its officials are appointed or elected to respond to the communities' needs, and in freer, more democratic societies, their jobs may depend on that responsiveness. Given the increasing levels of decentralization in many countries, NGOs can impact community child health by working with local government.

2. The evidence

Several studies support the hypothesis that greater shares of public spending toward health in general result in significantly improved health outcomes. (Kennelly *et al.*, 2003; Wang, 2003; Wagstaff, 2003; World Development Report, 2004) In trying to explain variations in 42 countries in health status of households living on one dollar (US\$1) a day per capita, Wagstaff (2003) suggests that the percent of a country's budget spent on public health expenditures is responsible. In support of this link, he explains that in Kazakhstan, a child living on one dollar a day has only a 10 percent risk of being underweight, while the risk facing a child living on one dollar a day in India is 60 percent - the difference resulting from each country's percentage of public health expenditure.

Given the increasing levels of decentralization in many countries, NGOs can impact community child health by working with local government.

The World Development Report (2004) also reflects that Cuba's remarkable reduction in mortality has been due, in large part, to their higher allocation of resources to public health (Cuba spends 6.6% of their gross domestic product on health, compared to an average of 3.3% throughout the rest of Latin America). Wagstaff calculates that a 10 percent increase in per capita spending on health reduces the infant mortality rate at \$1/day by 2.4 percent. Wang (2003) determined that an increase of 0.2 percent of GDP going to health in the 60 low-income countries he studied would reduce the under-five mortality rate by one death per thousand live births.

Once funds are allocated, they need to be properly spent in order to achieve the desired health outcomes. Following decentralization in other countries, the total expenditures for all health services versus other programs decreased even though there was a central mandate for a minimum percentage of resources to be allocated for health. (Khaleghian, 2004) There is evidence to show that without adequate health information and data, local governments tend to prioritize curative health services over public health services, such as immunization, because prevention is perceived to be of lower value. In Uganda, for example, local governments spent only a small amount on essential public health services such as immunization; and in the Philippines and Nicaragua, decentralization shifted the balance of health expenditures more toward curative care.

A number of NGOs and other development partners work with local governments to build their capacity to make good funding decisions related to public health. The author found a few published studies regarding the relative effectiveness of working with local government in achieving better health outcomes. The Tanzania Essential Health Interventions Project (a collaboration between Tanzania MOH and the International Development Research Centre) demonstrated how an evidence-based tool can guide decentralized health planning. Using a district burden-of-disease profile

Without adequate health information and data, local governments prioritize curative health services over public health services such as immunization.

(obtained through a demographic surveillance system), combined with a district health account profile, local decision-makers in two districts each increased twenty-fold resources allocated to prevention and treatment of malaria (which accounted for 30 percent of the disease burden) among children under five-years of age. Due to local health care planning improvements, end of project statistics demonstrated that the mortality of children under the age of five dropped by 43 percent in Morogoro District between 1997 and 2003 and by 46 percent in Rufiji District between 2000 and 2003. (TEHIP, 2004)

3. The case studies

Curamericas Bolivia: Curamericas and its counterpart NGO in Bolivia, *Consejo de Salud Rural Andino* (CSRA), implemented a child survival project from October 1997 to September 2001 in the Altiplano region of Bolivia. The goal of the project was to improve child survival and reproductive health practices targeting men, women and children 0-5 years of age. The project covered three municipalities and developed excellent relationships with local governments through a strategy of openness, shared responsibility, and transparency in child survival and primary health care programming. These relationships paved the way for two innovative and potentially sustainable strategies: shared management of local health systems (between the Ministry of Health and an NGO), and shared management of municipal health systems through municipal health boards. Curamericas focused time and resources on strengthening municipal health boards to improve service quality and access. By actively involving the municipal health boards and strengthening their leadership roles, the health boards took ownership and responsibility for the realities in their communities. This ownership led the health boards to increase their commitment to health programs, including increased financial support for recurring operational costs. Over the course of the project, local support for recurring costs increased from 20-42 percent to over 54 percent for all municipalities. By the end of the project, key behaviors had improved by an average of 15-36 percent and strong municipal involvement meant that there was a greater chance that these achievements could be sustained. (Torrez R., 2004) (See complete paper in Appendix 4.)

The analysis of local epidemiology and health accounts by local government led to health care improvements in Tanzania. Mortality of children under the age of five dropped by 43 percent in Morogoro District between 1997 and 2003 and by 46 percent in Rufiji District between 2000 and 2003.

CARE Nepal: CARE Nepal implemented the Child Survival Project in the Kanchanpur district from October 1999 to September 2003. The goal of the project was to reduce maternal and child mortality in the district by improving healthy behaviors and care-seeking by caregivers, increasing community access to health services and supplies, and improving capacity of local and community-based institutions to support child survival activities.

In the decentralized environment created by the Nepal Local Self-Governance Act of 1999, improving local government program management capacity was seen as a key factor toward achieving desired health outcomes. CARE worked closely with officials from local government in the project design and implementation and involved the government in training activities, orienta-

By the end of the project, key family practices in Altiplano, Bolivia improved by an average of 15-36 percent and a strong municipality supported recurring health costs from 20-54 percent.

tions, and joint reviews. CARE states that their programmatic focus on local government resulted in real ownership and sustainability. This is demonstrated by 100 percent of the village development committees committing financial support to community-based child survival activities, incorporation of child survival program activities into the district's five-year plan, and written commitment from government to financially support the female community health volunteers after the end of the CARE project. Additionally, there were strong results in child health outcomes. At the end of the project, 68 percent of the indicators improved by 10 percent or more and over half of the indicators equaled or exceeded project targets. (CARE, 2004) (See complete paper in Appendix 4.)

CARE Honduras and Peru: Two other CARE programs illustrate the relevance of governmental engagement. (Schnell, 2002) In both Honduras and Peru, CARE Title II programs designed Livelihood Security approaches that involved consensus-based planning and implementation of local development agendas through organized communities that included national and international NGOs and municipal governments. Permanent participatory municipal development councils (or "Consensus Tables") were established to facilitate these processes for each local government. Municipal authorities received job training and skills building, to support decentralization and improve governance. With training and support, local governments developed annual action plans to mobilize resources and carry out projects, which in turn led to implementation of many of the planned food security interventions within one to two years. By the end of the project, municipalities and communities were covering the majority of the program costs. Most importantly, the participants assumed the role of protagonists and demonstrated the ability to overcome problems, thereby greatly favoring future food security and other basic needs.

EHP Benin: The Benin GESCOME (Gestion Communautaire de Santé Environnementale) project implemented by EHP showed that coalitions between local government, civil society, and communities can increase participatory decision-making and health problem solving. (Krieger and Yallou, 2002) From 1999 through 2001 under GESCOME, EHP worked with USAID/Benin to optimize decentralized decision-making related to diarrheal disease prevention in selected medium-size towns in Benin. The activity resulted in the provision and well-structured management of much wanted and needed public

latrines and water points. In addition, participatory community health communication ensured the proper use of latrines in the communities (as high as 7,000+ users in one town) and led to improved hygiene behavior such as hand washing after latrine use, covering food and covering water jars. There was also a change in the understanding of diarrhea's causes and an increase in participatory decision-making. A key element in the successful decision-making structure was the effective linking of community groups and informal neighborhood groups with local elected officials, the municipal/commune-level government, and the departmental administration.

For a decentralized health system to work over time, the local community must understand and value essential public health goods and services, demand to be heard, and hold government accountable.

4. Implications for action

a. The potential power of local government support for C-IMCI: It is clear that increases in public expenditure on health lead to improvements in health outcomes. It is also clear that decentralization continues to be a major part of health sector reform. It can be expected that local government, empowered with evidence-based data and the resources to respond, can have a tremendous influence on health outcomes at the local level, especially when geared toward supporting C-IMCI approaches. Not only does public expenditure on health improve health outcomes, but the efficiency of the allocation (where and how the available funds are distributed) is also critical. Therefore, decentralization coupled with support for more Community IMCI-oriented interventions could potentially result in greater impacts. Local government's power to respond depends on a dialogue or partnership between the Ministry of Health and the Ministry of Local Government (or other relevant ministry charged with resource allocation decisions). NGOs have the opportunity to facilitate these partnerships, advocate for and increase knowledge of C-IMCI, and strengthen evidence-based data systems to make the case for critical child health investments.

b. Local government's capacity and willingness to respond: The degree of democratization and decentralization within a region or country may dictate the degree to which local government has the power to act. Therefore, the relevance of this third approach will differ between countries. This will be an important consideration in determining how much to invest in this aspect of the MSP. Other factors that will affect the capacity of government to respond are the 'representativeness' of local government, including gender balance, the degree of built-in accountability of local government to both its superiors and to civil society, the stability of leadership and governance structures and the equity in resource allocations to local government. Even where capacity is strong, government's willingness to respond can be low for a variety of reasons. It is therefore important to understand the degree to which individuals within local government are sincerely committed to change, willing to be transparent, and ready to assume responsibility. NGOs can build local governments' capacity and skills, use data to promote accountability, and fund community meetings to assess health status and local government's willingness and readiness to respond. NGOs can follow a rights-based approach to ensure that marginalized groups are prioritized. NGOs can also prioritize areas of work where the commitment, transparency and accountability of local officials will demonstrate positive health impact, involving government from the earliest stage of project design, implementation and assessment.

c. Capacity of community to hold local government accountable: For a decentralized health system to work over time, the local community must understand and value essential public health goods and services, demand to be heard, and hold government accountable. Communities need to develop local structures to help prioritize local needs, develop relationships with elected government officials, and advocate for their representative needs to government. NGOs can help communities develop a supportive environment

NGOs can build local governments' capacity and skills, use data to promote accountability, and fund community meetings to assess health status and local government's willingness and readiness to respond.

for child health by training CHWs and other community resource persons, creating associations of CHWs, health committees or local health boards, developing community-based information systems, and developing advocacy skills.



IV. The Multi-Sectoral Platform – How To Make It Work

It is clear from the evidence and case studies above that optimizing a multi-sectoral platform is essential for improving child health. Many have argued that to truly impact child health, programming must be extended beyond the clinics and official health care facilities. It must now be recognized that this focus needs to also extend beyond the confines of traditional community health structures and interventions. While we have demonstrated many of the successes of this approach, multi-sectoral programming is not simple. In order to consider how this type of programming it can be achieved, we need to start by recognizing the sources of resistance.

A. IMPEDIMENTS TO MULTI-SECTORAL PROGRAMMING

If partnering outside the health sector is the defining action for implementing the MSP and addressing child health more effectively, it must be asked, “why don’t we see more multi-sectoral partnerships?” This is the question asked of many who were interviewed for this paper. Some of the responses are shared below:

“Organizationally, we’re more compartmentalized at the central level because our focus is on resource acquisition which is compartmentalized by the donors. At the country and community level, our staff collaborates across sectors with greater ease.”

“Community demands are not sectoralized, it is we that sectoralize based on our disciplines.”

“It wasn’t until the Administrator prioritized and championed this [health issue], that intersectoral collaboration began to take place.”

“The key to good intersectoral collaboration is to overcome the issue of ownership.”

“Generally, successful multi-sectoral collaboration has to have a win/win situation.”

“Priority and funding stream help to dictate multi-sectoral collaboration.”

“Evidence base is important ... there also has to be a capacity building piece. I’m a big believer in toolkits, tools and methodologies.”

“You need to invest in your field staff to think outside of their boxes. Often times we dream up these lofty ideas of collaboration during the proposal writing stage and then forget that field staff weren’t involved when it was envisioned.”

“There’s a gender bias at work here. Public health is predominantly a female-dominated field, whereas agriculture, for example, is primarily a male-dominated field.”

“Intersectoral programs are criticized due to the complexity of the management and communication issues. They work when there is a coordinated effort in planning, a streamlined management process and a ringmaster.”

“We need to figure out how to address human affairs in a way that doesn’t respect sectoral boundaries ... peoples’ discipline bias gets in the way. When you are trained in the public health mode, you tend not to care about other sectors.”

Some of the comments above reflect the more strategic or tactical challenges. The case studies presented illustrate some operational strategies through which these challenges have been addressed.

A fundamental overlying influence on the degree of freedom various actors have to collaborate is reflected in how they are organized as donor agencies, NGOs and government ministries. In the words of one workshop participant, the agencies are typically ‘technocratically siloed’. This results in programs that are strongly influenced by the way in which the sponsoring agency is organized. For a donor agency, NGOs and government ministries, there are obvious advantages to sectoralizing – it assures a sense of control and focus while facilitating the ability to set targets and measure results more directly. (Unger, *et.al.*, 2003) Sectoralization also allows for specialization and greater depth of understanding in particular focus areas critical to developing effective interventions. At the same time, this can result in missed opportunities and decreased efficiency.

While sectoralized organizational structures are important influences, it is not the only, or necessarily most important, determinant of the ability or quality of multi-sectoral collaboration. Many organizations, in fact, have achieved high levels of multi-sectoral collaboration with restricted funding, and in spite of the sectoralized structures within their own agencies and government ministries. Many interviewees and workshop participants felt that multi-sectoral collaboration works when, collectively, organizations are more inclusive, able to adapt to new professional cultures and responsibilities, have a broader understanding of health, view collaboration as value-added, and are willing to put in the time to make it work.

Following are the key issue areas to address in developing effective multi-sectoral programming.

Sectoral centrality: By nature, each individual is egocentric which in turn contributes to the *sectoral-centric* view harbored within each discipline. Within the health sector, this can manifest itself in three different ways. First, the health sector presumes dominion over all issues dealing

with health. Ownership is claimed over health problems and those with health training deal with those problems from the limited perspective of that discipline. Second, since health is “the key to everything else,” a certain degree of dominion is claimed over other human affairs. A recent WHO report, for example, went to great lengths to describe how health is the key to productivity and poverty alleviation. (WHO, 2001) However, others outside the health sector might just as easily assert that the inverse is true. Even within the health sector, individuals tend to lobby for the central importance of their area of discipline over others (*i.e.*, nutrition, health education, reproductive health, etc.). Finally, the health sector presumes other sectors will recognize the central role it plays and will willingly collaborate to help achieve the health goals. The same centric views blind individuals within the health sector from understanding what other sectors need or how the health sector might be able to assist them in achieving their goals. Being inclusive means being willing to dispel these issues of ownership while broadening appreciation for the role and needs of other sectors. For example, Freedom from Hunger, when “selling” its Credit with Education program, describes how incorporating health education will reduce client dropout; an argument that addresses the needs of loan officers.

Multi-sectoral collaboration works when, collectively, organizations are more inclusive, able to adapt to new professional cultures and responsibilities, have a broader understanding of health, view collaboration as value-added, and are willing to put in the time to make it work.

Collaboration around HIV/AIDS provides a good example of the potential impact of surmounting sectoral centrality. Successful, broad coalitions have formed in states, provinces and communities around the world to combat HIV/AIDS. In Uganda, for example, twelve different government ministries are involved in combating HIV/AIDS. AIDS is not seen as strictly a health issue, rather it is perceived by most as a societal problem of national and international concern with different sectors recognizing it as a labor, educational, financial, or other cross-cutting issue. In response to this, there has been an emerging political will to address the problem. Multi-lateral and bi-lateral sector-specific funds also recognize the multi-sectoral nature of the disease. HIV/AIDS funding now comes from such atypical sources as the US Department of Agriculture and Department of Defense. One factor in the broad collaboration around HIV/AIDS stems from its unique epidemiology and the fact that it affects adults, in the prime of their lives, in all socio-demographic groups. However, a key lesson to learn from this experience is the importance of demonstrating the clear linkages between health and other sectors and being willing to give up health’s sole ownership in favor of multi-sectoral ownership of the issues.

Different “languages”: Trying to work with another sector can be like going to a country where you don’t speak the language. The terminologies, culture, policies and administrative structures are all unfamiliar. This unfamiliarity can lead to misunderstandings of intent and distrust. Child health programmers share a certain culture and language and it is often more comfortable to work with others who share the same ideologies. But, a recent example where USAID’s Environmental Health Project (EHP) brought together child health, social

It is important to demonstrate the clear linkages between health and other sectors and to be willing to give up health’s sole ownership in favor of multi-sectoral ownership of the issues.

science, and engineering professionals to advance the water supply and sanitation sector shows how with flexibility and open communication this challenge can be overcome.

Water supply and sanitation has traditionally been the operating ground of engineers and technologists – with their particular language, outlook, and approach. Recently, as we have acknowledged the importance of behaviors in maximizing water supply and sanitation impacts, social scientists have become prominent in the field – bringing their own particular culture and language. But, since these projects are ultimately about preventing diarrhea and improving child health, the expertise, and therefore language, of child health practitioners is also important to include in the overall approach.

Trying to work with another sector can be like going to a country where you don't speak the language.

EHP facilitated dialogue and coordination among professionals from the three sectors, established a common language for communication, and used this language to develop the Hygiene Improvement Framework. The Framework presents a consensus, integrated approach which links technologies, hygiene promotion for behavior change, and an enabling environment with strong organizational structures to prevent and measure reduction of diarrheal diseases. USAID, UNICEF, the World Bank's Water and Sanitation Program, and other global partners subsequently endorsed the Hygiene Improvement Framework. Now this common language – achieved over time through dialogue and definition – will help guide the program design, implementation, and evaluation of several organizations. (USAID, 2004)

Evidence base: Sometimes organizations simply lack the necessary information and tools to determine how and with whom to work. Without some kind of understanding of the MSP's value and under which conditions it will work, it is often hard to convince supervisors, partners and staff of the relevance of such an undertaking. There may also be a fear of diluting program impact if a program attempts to take on too many different sectors and consequently loses focus on achieving the core child health outcomes. One of the goals of this paper is to provide the reader with an evidence base, case studies and implications to make the case for the multi-sectoral platform. There is much that is not known, however, about relative effectiveness and efficiencies or the exact way in which another sector influences health and there is no one formula appropriate for all communities. It is important to develop a good understanding of the evidence and theory connecting different sectors and to form a clear framework for multi-sectoral interaction. Additionally, given threshold effects of progress on any one sector and the lack of linearity in how each influences health outcomes, the question is no longer whether to integrate through the MSP, but rather what and how to integrate, and at which points.

Collaboration means giving something up:

Self-preservation is a powerful motivating force. Organizations intrinsically try to protect their own livelihood as well as the programs they believe in. It has been suggested

It is important to develop a good understanding of the evidence and theory connecting different sectors and to form a clear framework for multi-sectoral interaction.

that making arguments in favor of other sectors' contributions to health may diminish, in the minds of donors, the value of investing in adequate child health interventions. Moreover, some

consider sharing through collaboration a draw on limited health resources. For donors the question should not be “either/or” but “both and integrated”. Moreover, many of the case studies presented demonstrate that investing in the MSP is not a zero-sum game. Collaboration can add value not only to health impact but also to the overall resource base. Given this understanding, one may find that self-preservation is *incumbent* upon the ability to build effective partnerships across sectoral boundaries and not the other way around. During the workshop, several arguments were made for multi-sectoral programming as value added. MSP programming can:

- Increase total resources in terms of programming dollars, capacity building and household resources;
- Result in more efficient use of resources (including human resources);
- Strengthen sustainability of health programs;
- Increase impact on child survival and increase coverage rates; and
- Provide flexibility to adjust to community-identified needs.

Patience for both short- and long-term results: There is no doubt that multi-sectoral consensus building takes time and effort – especially in the beginning. Given the imposed time constraints of most programs, it often seems easier to disregard the MSP in favor of the more direct and manageable elements of child health programming to which organizations are accustomed. Moreover, responsiveness of certain sectors to health outcomes may be delayed by years, decades or generations. This can be a huge deterrent to collaboration. Yet those who have made the commitment and have invested the necessary time in collaboration have found it to be invaluable in creating important synergies that contributed to project results. Moreover, they believe that these results are more sustainable than if they would have acted alone.

Collaboration can add value not only to health impact but also to the overall resource base.

B. KEY STRATEGIES FOR MAKING THE MSP WORK

A number of cross-cutting operational strategies used by successful programs emerged from the case studies and workshop discussion.

Involve the community: No intervention at a community level can be successful or sustainable without the input and participation of the local community. Ideally a project will work with a representative group from the community to assess needs and resources, establish priorities, and manage project activities and funds. There are a number of good tools and strategies (such as Participatory Rural Appraisal and Appreciative Inquiry) for involving the community in assessments and planning. An impor-

KEY STRATEGIES:

Involve the community

Collaborate by committee

Start multi-sectoral collaboration early in the project

Find a common objective or common ground

Communicate often and effectively

Look for entry points

Get buy-in from leadership

Plan to invest in the MSP

tant part of this process is building community members' capacity in representation, negotiation, needs identification, consensus building, and management. In many cases, projects work with selected groups to help build these skills. This point links closely with the evidence base linking social capital and health. While training in these skills may not seem directly linked to health interventions, they are crucial for the community to be able to negotiate for its own needs and priorities with its elected leaders, local representatives, donor organizations, and NGOs. A well-trained community committee is able to hold local leaders accountable for their actions and advocate for their own needs. This capacity building has implications on the design and timetable for a project and needs to be taken into account from the design phase. Ultimately, this will increase a population's ability to respond to its own needs.

Collaborate by committee: When building effective partnerships, organizations have found multi-sectoral committees to be crucial mechanisms for planning and decision-making. Most of the case studies demonstrate the importance of creating or working through an existing mechanism for coordination. In some cases, a full-time staff person was hired to support that coordination. Secretariats, task forces, roundtables, multi-sectoral advisory committees and other types of committee have all been employed to keep information flowing, ensure consensus, and unify vision. Existing mechanisms are ideal as they eliminate the significant time and effort needed to set up a new structure, but they pose the risk of inadequate representation. At some point, the question must be asked: "Who else ought to be here?" All such committees, pre-existing or new, when properly composed, provide a critical mechanism to discuss issues and conduct joint planning. Irrespective of the kind of structure, they all require dynamic leadership that is respected and that can mediate between partners with an air of neutrality. It is also important to consider existing committees in different sectors to which health could be added for synergistic effect. An example provided in the workshop was ensuring that a group making decisions about road building included stakeholders who would factor in locations of health clinics in addition to those stakeholders interested in the locations of local markets.

Start multi-sectoral collaboration early in the project: Ideally, the MSP should be incorporated and budgeted for in the program design. It is best to start this process early on, since it requires important investment up front in working out coordination and relationship building. This also helps to create a sense of ownership among all sectors, and hence a sense of obligation.

When building effective partnerships, organizations have found multi-sectoral committees to be crucial mechanisms for planning and decision-making.

Find a common objective or common ground: As a general rule, different sectors come together in order to derive benefits that cannot be easily achieved by working individually. Looking at the general experience however, it becomes evident that these collaborations are not necessarily driven because sectors share common *objectives*, but because:

1. They face common problems that affect them differently;
2. They can derive *different* benefits from the same intervention; or
3. Both.

While it is ideal that all sectors share a common vision and one common objective, it is also unusual. It may be sufficient to find common ground. Multiple sectors can rally around a common objective, such as HIV/AIDS or water conservation because their consequences are crosscutting. In other cases however, mutually beneficial relationships must be fostered by collaborating on interventions that serve more than one sectoral purpose – such as promotion of hand washing with soap which contributes to improved health as well as increasing revenues of soap manufacturers. Either way, agreeing on and measuring key indicators for the objectives will be important to demonstrate results for all sectors involved.

Communicate often and effectively: Open communication among all partners is critical for program success. In order to address issues of different sectoral “languages”, workshop participants stressed the importance of learning the languages of other sectors and reducing the use of health jargon as much as possible. It is similarly important to cultivate relationships with partners, create coordination mechanisms and a plan for consistent, transparent exchange of information. In Bolivia, collecting census-based health data helped program implementers effectively communicate the needs and thereby mobilize the support of governments and communities. Workshop participants also recommended identifying and sharing positive results of multi-sectoral partnerships. Success is contagious and can spark greater support for collaboration in the future.

Look for entry points: It is often easier to mobilize communities or sectors if we can capitalize on other priorities or motivations as entry points for health activities. In the case of CRS/Guatemala, the crop failures had reached national and international attention. This crisis had a way of bringing people together from diverse sectors. In Tanzania, decentralization provided the opportunity to mobilize funding and support for locally identified priorities. While the motivation may not always be altruistic (*e.g.*, public opinion for politicians or potential for deriving resources for one’s organization), it is nonetheless an effective entry point. Other entry points may be those non-health sector concerns that the community is most enthusiastic to address or through existing strong familial, civil or religious networks. Regardless of the reason, identification of these mobilizing factors and support to address them often creates an entry point for collaboration on child health issues.

Get buy-in from leadership: The process of coalition building is greatly facilitated by getting buy-in and involvement from higher-ups, both internal and external to an organization. This can provide the organization with the mandate, authority and even resources necessary to effectively engage at the community level. In some cases, they may become the champions. Conversely, resistance by higher-ups can quickly sap efforts. In Zambia, a national mandate pushed collaboration among the Ministries of Education, Health and Community Development. District and community levels were mandated to form multi-sectoral teams and in turn, informal integration of interventions started to occur at the grassroots level as participants recognized the tremendous overlap in their agendas.

Plan to invest in the MSP: In all the case studies, investments were needed to optimize the platform. This “investment” came in different forms including time, training and, in some cases, money. Africare/Uganda stated that their investment in engaging additional partners brought ideas and human and financial resources to the table. Collaboration with the district brought access to vehicles, staff to help with training, and additional sites for voluntary counseling and testing

(VCT). PCI/Zambia felt that with collaboration, the financial costs decreased, but the time required of partners increased, thus slowing progress. Patience was needed to realize the longer-term benefits of collaboration. Workshop participants felt that MSPs typically resulted in greater program efficiencies through shared administration, facilities and transportation; decreased management costs; more effective partnerships; and adaptation of tools from other sectors. All implementers seemed to believe that their investment paid off in child health dividends and a fuller understanding of the situation on the ground. However, more research is needed to document the transaction costs and resulting benefits.



V. Conclusions

At the beginning of this paper, three fundamental questions were raised:

1. How do NGOs define a multi-sectoral platform?
2. How do NGOs implement a multi-sectoral platform to achieve better or more sustainable health outcomes?
3. How can child health programmers work effectively with other sectors to support community-based improvements in child health?

The multi-sectoral platform is based on the principle that there is an intricate mix of influences and resources within a community that affect health outcomes. Implementing the MSP involves building partnerships between the health sector and non-health sectors in order to improve the impact of child health programming in a way that is more effective, efficient, equitable or sustainable than acting alone and provides positive benefits for all sectors involved.

Three approaches to implementing the MSP are: communicating key family practices and/or extending health services through other sectors; conducting joint activities with non-health sectors to address local key determinants of child health; and working through local government to increase capacity and funding for community health programming. This paper outlined the evidence base for these approaches; the case study papers and the presentations and discussion at the workshop validated these approaches based on NGO experience. It is important to note that while this paper explores these approaches as separate activities, many NGO programs employ two or three of these approaches simultaneously.

This paper identified a number of strategies for working effectively with other sectors to support community-based improvements in child health. A key conclusion that can be seen across all of the approaches, case studies, and literature is the importance of building effective multi-sectoral partnerships early on in program development. Open, effective, and consistent communication that addresses differences in language and approaches between sectors is vital to establishing these partnerships. Starting early and detailing the advantages of the collaboration to each sector is likewise critical. Investing in relationship building and having support from key stakeholders is necessary. An early activity of the partnership should be to identify and plan how to engage these stakeholders. After the

partnership is in place and stakeholders are engaged, then community-level data and information should be collected within a framework tailored to multi-sectoral program planning. Several ideas for maintaining multi-sectoral partnerships include developing strategies around overlapping target populations, establishing a joint approach to rally around, using a crisis or epidemic to motivate immediate mutual action, and linking up with a champion or good leader to catalyze action. A good multi-sectoral partnership that has engaged in this type of open and participatory organization and planning should then be able to attract funding from multiple donors and local sources.

Additionally, we conclude that there is a dearth of information on effective community-based multi-sectoral programs designed to impact child health. NGOs develop innovative programs at the community level, but often do not have the time nor the ability to document these efforts for peer review. Further case studies should be collected to provide more in-depth guidance on how these approaches can best be implemented and the outcomes achieved.

An important aspect of this documentation will be the collection of good evaluation data. Better evaluation of current and future programming efforts is essential to improving the state-of-the-art knowledge on best approaches for utilizing and benefiting from a multi-sectoral platform. Since multi-sectoral work often emerges out of engaging the community in response to felt needs and priorities, program evaluation is conducted retrospectively, thus limiting the possibility for randomized trials. NGOs should consider partnering more with research institutions to develop well-designed studies on multi-sectoral programming. Serious attention should be devoted to documenting cost and answering questions related to the cost effectiveness and long-term health impact of multi-sectoral programming compared to health sector interventions acting alone. Inherent in this recommendation is that we need to learn how to measure the effectiveness of complex, integrated programs instead of standard programs with only a few variables. Research findings and well-documented case studies can provide a basis for more realistic future budgets and project proposals that lead to sustainable child health outcome.

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Appendix 1

Reaching Communities for Child Health and Nutrition:
A Proposed Implementation Framework for HH/C IMCI

Reaching Communities for Child Health and Nutrition

A Proposed Implementation Framework for HH/C IMCI

Workshop Participants

Reaching Communities for Child Health: Advancing
PVO/NGO Technical Capacity and Leadership for
Household and Community Integrated Management of
Childhood Illness ((HH/C IMCI)

Baltimore, Maryland
January 17–19, 2001

BASICS II is a global child survival project funded by the Office of Population, Health and Nutrition of the Bureau for Global Programs, Field Support, and Research of the U.S. Agency for International Development (USAID). BASICS II is conducted by the Partnership for Child Health Care, Inc., under contract no. HRN-C-00-99-00007-00. Partners are the Academy for Educational Development, John Snow, Inc., and Management Sciences for Health. Subcontractors include Emory University, The Johns Hopkins University, The Manoff Group Inc., the Program for Appropriate Technology in Health, Save the Children Federation, Inc., and TSL. CORE is funded by the Office of Private and Voluntary Cooperation within USAID's Bureau of Humanitarian Response under the terms of Contract No. FAO-A-00-98-00030-00.

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Reaching Communities for Child Health and Nutrition

A Proposed Implementation Framework for HH/C IMCI

The Household and Community component of IMCI (Integrated Management of Childhood Illness) was officially launched as an essential component of the IMCI strategy at the First IMCI Global Review and Coordination Meeting in September 1997. Participants recognized that improving the quality of care at health facilities would not by itself be effective in realizing significant reductions in childhood mortality and morbidity because numerous caretakers do not seek care at facilities.

Since that first meeting, several efforts were undertaken to strengthen interagency collaboration for promoting and implementing community approaches to child health and nutrition.

Sixteen Key Family Practices

At the UNICEF-led *International Meeting on Health and Nutrition in Communities* held in Durban, South Africa (20–23 June 2000), participants stressed the need for collaboration among a wide range of partners in the promotion of a core set of practices to improve child health and nutrition at the household and community levels. Meeting participants reached consensus on 16 key family care practices listed in Table 1 (see page 7), which—based on scientific evidence and country experience—contribute to a child's survival and healthy growth. These define the “what” Community IMCI is to target. The key family practices, the backbone of the Community IMCI strategy, are grouped according to four categories of practices that:

- *promote physical growth and mental development*
- *prevent disease*
- *facilitate appropriate home care*
- *facilitate care seeking behaviors.*

Consensus was reached that country experience demonstrates that community and household approaches can be effective in improving these key practices. However, the practices need to be tailored to respond to specific country situations including different levels of health systems performance, emergencies, and HIV/AIDS.

HH/C IMCI Proposed Implementation Framework

Another important workshop, *Reaching Communities for Child Health: Advancing PVO Technical Capacity and Leadership in Household and Community IMCI*, was held in Baltimore, MD (January 17–19, 2001), and organized by CORE and BASICS II with support from USAID/G, USAID/BHR/PVC, and MACRO/CSTS. Participants endorsed an operational framework for HH/C IMCI implementation.

The framework addresses the issue of “how” Community IMCI can be implemented at the community level. This framework enables implementers and their colleagues to communicate better and plan public, private sector, and household interventions that can improve child well-being and reduce child mortality and morbidity in communities,

HH/C IMCI is the optimization of a multi-sectoral platform for child health and nutrition that includes three linked requisite elements:

Element 1: Partnerships between health facilities (and services) and the communities they serve.

Element 2: Appropriate and accessible care and information from community-based providers.

Element 3: Integrated promotion of key family practices critical for child health and nutrition.

within the overall guidelines of the HH/C IMCI strategy established by UNICEF and its partner organizations.

Overview of the HH/C IMCI Implementation Framework

The HH/C IMCI implementation framework distinguishes HH/C IMCI programs from a wider set of community-based programs implemented under a broader definition of Comprehensive Primary Health Care. Each of the elements addresses critical community locales for child caring, illness prevention, illness recognition, home care, appropriate care seeking, and treatment compliance practices.

Element 1 focuses on health facilities and outreach clinics, especially in the public sector.

Element 2 focuses on private and informal sectors, including volunteers.

Element 3 focuses on household and individual practices.

The multi-sectoral platform, including partnerships with other key ministries (e.g., Nutrition, Agriculture, Water and Sanitation, Local Government) and other key district/community projects and activities (e.g., income generation, civil society organizations), facilitates inclusion

to promote adoption of key family practices. It acknowledges the social, political, environmental, and economic foundations upon which families and communities operate. Multiple actors and sectors can help accelerate implementation of HH/C IMCI. Their efforts can help to address factors that facilitate or hinder adoption of new practices and behaviors that are promoted by HH/C IMCI, connect broader development efforts to the key family practices, and promote the active role of local governments and associations in health. This platform is critical for sustainability of HH/C IMCI efforts.

Examples of connections that can be reinforced through the platform include:

Improved water and sanitation linked to the promotion of handwashing.

Income generation activities linked to the promotion of bednets.

Income generation for men linked to men's involvement in reproductive and child health.

Element 1: Partnerships between health facilities (and systems) and the communities they serve.

Element 1 emphasizes the importance of partnerships (formal or nonformal) between health facilities and communities where both have roles, responsibilities, and accountability to each other.

Several interventions can improve these two-way partnerships:

- *Facility staff can reach out to the community and attract more clients through improved counseling by health workers, increased outreach by health workers, and greater accountability for quality of services.*
- *The community can advocate that caretakers increase usage of facilities where services have been improved, provide community-based data to health facilities to plan appropriate promotional and outreach events, and help manage facilities with government staff.*

HOUSEHOLD & COMMUNITY IMCI

AN IMPLEMENTATION FRAMEWORK

ELEMENT 1

Improving partnerships between health facilities and the communities they serve



ELEMENT 2

Increasing appropriate and accessible health care and information from community-based providers



ELEMENT 3

Integrating promotion of key family practices critical for child health & nutrition



MULTI-SECTORAL PLATFORM

Optimizing a multi-sectoral platform to support sustainable child health & nutrition

Element 2: Appropriate and accessible care and information from community-based providers.

In many places health facilities are not accessible or are not the first choice in community level care for ill children. Often caretakers seek immediate care from community health workers or other voluntary workers, private providers, traditional healers, traditional birth attendants, shopkeepers and pharmacists—those who enjoy community prestige and are the closest providers of care. In many Private Voluntary Organization (PVO) programs, Community Health Workers (CHWs) are trained to provide basic curative care where other sources of care are not accessible. In all of these circumstances, interventions are needed to:

- *Improve the treatment of sick children (by upgrading the skills of community-based practitioners, and/or using simplified algorithms for case management, and ensuring supply of essential drugs at the community level).*
- *Improve referral of sick children from the community-based providers to the 1st level facility through feedback loops among community-based private providers, facility-based providers, and communities. Communities can help in the establishment of community-based emergency transport systems, community revolving funds, or insurance schemes for health emergencies.*

- *Decrease harmful practices such as frequent use of injections, unsafe treatments, over-prescription of antimicrobials and antibiotics by private providers.*
- *Increase the role of community-based providers in the promotion of preventive practices (e.g., handwashing, condoms).*

Element 3: Integrated promotion of key family practices critical for child health and nutrition.

The third element emphasizes the importance of the key family practices and the need for effective communication and behavioral change packages for their promotion and adoption in the home and in the community. This is often more traditionally recognized as the key strategy for HH/C IMCI. Key interventions include:

- *Using integrated client-centered behavior change strategies based on integrated assessments or surveys. These strategies take into account who is to perform the behaviors, the time (dry season versus wet season, continuous versus periodic, etc.), and the place (household, community, health facility) they are to be performed.*
- *Using multiple channels (e.g., local radio, mothers' groups, CHWs, community committees, local government) to promote key messages.*

Assumptions for Element 1	Where Element 1 is Crucial	How Element 1 differs from other community programs
<ul style="list-style-type: none"> ■ Facilities exist and are functional. ■ Communities have geographic and economic access to facilities. ■ Ideally, health workers are trained in IMCI systems, improvements are in place, and quality of care meets standards. 	<ul style="list-style-type: none"> ■ Facilities and services have been improved, but utilization of child health services is still less than expected. ■ CHWs are linked to health facilities. ■ MOH or other organization has limited experience with community work. 	<ul style="list-style-type: none"> ■ Linkages are made to implementation of IMCI in facilities. ■ Facilities increasingly are held accountable for quality of services they provide. ■ Community is involved in management and sustaining systems improvements. ■ Community has a role in the maintenance of service quality.

- *Developing methods for participatory community assessment and planning, such as the PRA methodology advocated by the MOH in Uganda.*

Further applied research is critical to guide better practices related to this element. Many CHWs or other community-based resource people who are mobilized to promote messages are often left alone for long periods of time without supportive mentoring or supervision. If they do not receive regular technical updates, their effectiveness will drop over time. Consistent messages about the key family practices are

needed across multiple sectors. Many organizations still struggle with how to promote multiple behaviors effectively, how to maintain behavior change over time, and how to scale up these community-based interventions to regional and national levels.

Linkages with Other Health Sectors and Initiatives

The framework is meant to be inclusive and to help facilitate collaboration, dialogue, and linkage with other health sectors and initiatives implemented at the community level. Table 2 (see page 8) highlights some of these possible linkages.

<i>Assumptions for Element 2</i>	<i>Where Element 2 is Crucial</i>	<i>How Element 2 differs from other community programs</i>
<ul style="list-style-type: none"> ■ Many children continue to receive treatment outside of health facilities, even though facilities may offer those services sought by the community. 	<ul style="list-style-type: none"> ■ Long distances and / or difficult terrain separate people from health facilities, especially during the rainy season. ■ Traditional healers and private providers are the major sources of care. ■ There is concern about unsafe treatment practices in the community setting. 	<ul style="list-style-type: none"> ■ Focus is on formal and non-formal private providers, not just CHWs. ■ Training courses for community-based workers are integrated rather than disease specific. ■ IMCI concepts and tools are adapted for use in the home and community (e.g., treatment of all conditions a child has, algorithms for making decisions).
<i>Assumptions for Element 3</i>	<i>Where Element 3 is Crucial</i>	<i>How Element 3 differs from other community programs</i>
<ul style="list-style-type: none"> ■ Community input into the design and delivery of local communication and behavior change (CBC) strategies (when complemented by national or district CBC strategies) will have the greatest effect on influencing behavior change. 	<ul style="list-style-type: none"> ■ In all areas where promotion of the key family practices (preventive and curative) will result in improved child health through: <ul style="list-style-type: none"> – Enhanced physical growth and mental development – Prevention of disease – Appropriate home care – Appropriate care-seeking behavior. 	<ul style="list-style-type: none"> ■ More systematic approach to integrated promotion of different behaviors. ■ Better “support-a-vision” systems that combine supervision and empowerment. ■ Greater community input into the selection of behaviors to be promoted. ■ Link to IMCI implementation in facilities. ■ Introduction of innovative strategies such as Positive Deviance.

Principles of HH/C IMCI Operational Framework

After much discussion participants developed the following principles for implementation of HH/C IMCI.

- **HH/C IMCI can be implemented at national, district, and/or community levels, as appropriate.**

Ideally, HH/C IMCI has the most value when implemented at all levels, but it is valuable at any level even when HH/C IMCI is not yet operational at the national level.

- **HH/C IMCI can be implemented by multiple actors or by a single organization.**

If properly organized, collective groups can contribute the most toward an HH/C IMCI vision, but any organization (given adequate human and financial resources) can make a difference.

- **HH/C IMCI recognizes the importance of curative and preventive interventions in the community for reducing child mortality and morbidity.**

HH/C IMCI places a high value on promoting an environment where children can thrive with minimal risk of disease and recover rapidly from illness.

- **HH/C IMCI can be implemented with or without IMCI Components 1 (Health Worker Skills) and 2 (Health System Supports).**

All three IMCI components contribute to an effective life-saving strategy, but where necessary, HH/C IMCI can function independently and still make a major contribution to improved child health.

- **All three elements are requisite for HH/C IMCI (except element 1 if facilities are inaccessible).**

The proposed elements are necessary to improve child health in the community. If public facilities do not exist in the community catchment area, however, advocacy for increased facilities is essential as a first step.

- **Phased introduction of promotion of key family practices is acceptable.**

A communication and behavior change strategy should be constructed according to a seasonal calendar that matches local morbidity trends, and in a sequence that builds upon progress made and confidence gained at the individual, household, and community levels.

- **Phasing of introduction of the three elements is acceptable.**

Prioritization for implementation of elements should be done based on assets and needs analyses at district and community levels.

Table 1. List of Key Family Practices adopted by WHO and UNICEF

[List presented at The International Workshop on Improving Children's Health and Nutrition in Communities, Durban, June 20–23 2000]

Key Community IMCI Family Practices

For physical growth and mental development

- Breastfeed infants exclusively for at least four months and, if possible, up to six months. (Mothers found to be HIV positive require counseling about possible alternatives to breastfeeding.)
- Starting at about six months of age, feed children freshly prepared energy- and nutrient-rich complementary foods, while continuing to breastfeed up to two years or longer.
- Ensure that children receive adequate amounts of micronutrients (vitamin A and iron, in particular), either in their diets or through supplementation.
- Promote mental and social development by responding to a child's needs for care through talking, playing, and providing a stimulating environment.

For disease prevention

- Take children as scheduled to complete the full course of immunizations (BCG, DPT, OPV, and measles) before their first birthdays.
- Dispose of feces, including children's feces, safely; wash hands after defecation, before preparing meals, and before feeding children.
- Protect children in malaria-endemic areas by ensuring that they sleep under insecticide-treated bednets.
- Adopt and sustain appropriate behavior regarding prevention and care for HIV/AIDS affected people, including orphans.

For appropriate home care

- Continue to feed and offer more fluids, including breastmilk, to children when they are sick.
- Give sick children appropriate home treatment for infections.
- Take appropriate actions to prevent and manage child injuries and accidents.
- Prevent child abuse and neglect and take appropriate action when it has occurred.
- Ensure that men actively participate in providing childcare and are involved in the reproductive health of the family.

For seeking care

- Recognize when sick children need treatment outside the home and seek care from appropriate providers.
- Follow the health worker's advice about treatment, follow-up, and referral.
- Ensure that every pregnant woman has adequate antenatal care. This includes having at least four antenatal visits with an appropriate health care provider and receiving the recommended doses of the tetanus toxoid vaccination. The mother also needs support from her family and community in seeking care at the time of delivery and during the postpartum and lactation period.

Table 2: Linkages between the HH/C IMCI Implementation Framework and Other Health Initiatives

<i>HH/C IMCI Framework</i>	<i>Roll-Back Malaria</i>	<i>Nutrition</i>	<i>Immunization</i>	<i>Peri/Neonatal</i>	<i>HIV/AIDS</i>	<i>Early Childhood Development</i>
Multi-sectoral Platform	Collaboration with other sectors on <ul style="list-style-type: none"> ■ Production, packaging, sales, and distribution of rugs, nets, insecticides. ■ Limiting malaria transmission resulting from economic development, deforestation, irrigation). 	Collaboration with other sectors working on agriculture production, food security, emergency feeding programs, income generation, etc.	■ Support for vaccination by other government ministries and the private sector.	■ Collaboration with various services / programs aimed at women/families/children to improve awareness of neonatal health.	Collaboration with other sectors on HIV/AIDS programs including (awareness, behavior change and care), education, agriculture, churches, MED, food security. <ul style="list-style-type: none"> ■ NGOs/CBOs, self-help groups (youth/women). ■ Ministries of local government, labor, finance, information. 	■ Development of comprehensive national ECD policies addressing the emotional, cognitive, social, and physical development of the young child through inter-sectoral collaboration. <ul style="list-style-type: none"> ■ Creation of a nationally defined and measured developmental check list.
Element 1: Improving partnerships between health facilities (and services) and the communities they serve	■ Collaboration between health services and communities on growth promotion, nutrition rehabilitation, micronutrient delivery. ■ Collaboration between health services and communities on growth promotion, nutrition rehabilitation, micronutrient delivery. ■ Community input into decision-making on malaria control.	■ Collaboration between health services and communities on growth promotion, nutrition rehabilitation, micronutrient delivery.	■ Communities work with health facilities and outreach teams to ensure all children and women of reproductive age are fully immunized.	■ Collaboration between health services and communities to improve neonatal care in the community and promote referral of ill newborns to health facilities.	■ Collaboration with clinics, hospitals, and laboratories (if present) and outreach programs for awareness, testing, referral, condom distribution, and surveillance. <ul style="list-style-type: none"> ■ Community feedback into and co-management of HIV/AIDS programs. 	■ Collaboration among health services, communities, and parents on monitoring developmental milestones. <ul style="list-style-type: none"> ■ Improve counseling & feedback by facility-based personnel on monitoring developmental milestones.
Element 2: Increasing appropriate and accessible care and information from community-based providers	■ Improved treatment of cases of malaria & promotion of malaria prevention by private providers, shopkeepers, and traditional healers.	■ Improved nutrition counseling by private providers. <ul style="list-style-type: none"> ■ Growth monitoring and nutrition education by CHWs. 	■ Promotion and support of immunization by CHWs, TBAs, and private providers.	■ Improved essential newborn care by birth attendants. <ul style="list-style-type: none"> ■ Referral/treatment of sick newborns by CHWs and private providers. 	■ Linkages with CHWs, TBAs, traditional healers, and private providers for awareness, referral for testing and treatment, home care counseling, condom distribution, and reduction in risk from unsafe injections.	■ Improved early care and development by primary caregivers (e.g., mothers) through caregiver education/program given through CHWs and other community workers.
Element 3: Integrated promotion of key family practices critical for child health and nutrition	■ Improved home management of malaria. <ul style="list-style-type: none"> ■ Treated Materials integrated with other behavior change activities. 	■ Promotion of nutrition interventions and behaviors fully integrated with promotion of other key family practices.	■ Promotion of child and maternal vaccination integrated with promotion of other interventions / services (e.g., vitamin A).	■ Promotion of essential newborn care and appropriate care seeking behavior integrated with promotion of other key family practices.	■ Promotion of condom use, STI referral, improved partner testing and commitment to monogamy; identification and support of HIV affected households/orphans. <ul style="list-style-type: none"> ■ Reduction in transmission risk from injections, blood transfusion. 	■ Promotion of emotional, cognitive, social, and physical development of 0- to 5-year olds with focus on early stimulation and learning at home, integrated with promotion of other key family practices.

Appendix 2

Key Informant Interviews

The following individuals were interviewed during the process of developing this paper.

1. Bill Brieger, Associate Professor, Community Health and Health Systems, Department of International Health, Johns Hopkins Bloomberg School of Public Health on Jan. 29, 2004
2. Larry Casazza, Director, African Communities Against Malaria, Jan. 28, 2004
3. Dr. Thoric Cederstrom, Director of Food Security and Sustainable Agriculture, Counterpart International on Jan. 30, 2004
4. Robb Davis, Senior Vice President, Program Services, Freedom from Hunger on Feb. 5, 2004 (via phone)
5. Environmental Health Project on Feb. 2, 2004
Sandra Collier – Project Director
Eckhard F. Kleinau – Senior Technical Director
Craig Hafner – Project Manager
Dan Campbell – Information Specialist
6. Pat Fn Piere, Democracy Specialist, and Ishrat Husain, Senior Advisor, Office of Democracy and Governance, USAID on Jan. 28, 2004
7. Sarah Macfarlane, Associate Director of Health Equity, Rockefeller Foundation on Jan. 30, 2004 (via phone)
8. Ray Martin, Director, Christian Connection for International Health in Feb. 2004 (via phone)
9. Eric Swedberg, Child Survival Specialist, Office of Health, Save the Children on Jan. 28, 2004
10. Merri Weinger, Environmental Health Advisor, Office of Health, Infectious Diseases and Nutrition, Bureau for Global Health, USAID on Jan. 29, 2004
11. Peter Winch, Associate Professor in the Department of International Health, Johns Hopkins Bloomberg School of Public Health on Jan. 29, 2004

Appendix 3

Literature Review of Multi-Sectoral Impacts on Health

The following table summarizes the research articles reviewed for this paper organized by sector.

Literature Review of Multi-Sectoral Impacts on Health

AUTHOR	TYPE	NNM	PNNM	IMR	U5MR	MORB	NUT	BEHAV	NOTES
INCOME									
Bicego <i>et al.</i>	Meta-analysis of 17 DHS surveys	0	1	-	-	-	1	1	40-50% of gross education effect explained by income
Pena <i>et al.</i>	Cohort analysis in Nicaragua	-	-	1	-	-	-	-	RR of IMR due to unsatisfied basic needs is 1.49
Mahalanabis <i>et al.</i>	Case/Control in Dhaka, Bangladesh	-	-	-	-	1	-	-	RR of severe diarrhea of 41% between upper and lower quartile
Woldemicael	Urban Eritrea	1	1	-	1	-	-	-	Children of wealthy HH 60% less likely to die of NNM & PNNM as those of low-med HH; 70% lower risk for U5MR
Kennelly <i>et al.</i>	Study of 19 OECD countries	-	1	1	-	-	-	-	Per cap income shows pos & sig. assoc. with NNM & IMR in 6 diff models
Wagstaff	Meta-analysis of 42 countries	1	-	1	-	-	-	-	Income levels being the same, differences in mortality exist
Marmot	1993 WB Report	-	-	-	-	-	-	-	WB Report showed that life exp. tapers off beyond \$5,000 GNP
Mellor <i>et al.</i>	30 countries over 4 decades	-	-	0	-	-	-	-	Looked at income inequality
Amin <i>et al.</i>	3,564 poor HH with some in credit program in Bangladesh	-	-	-	-	-	-	1	Even after control of other socio-economic variables, involvement in credit program had sig. impact
Hussein <i>et al.</i>	1500 HH in Dhaka, Bangladesh	-	-	-	1	-	-	-	U5MR sig. assoc. with HH income
Wang	DHS survey data of 60 low-income countries	-	-	-	1	-	-	-	Everything being equal, GDP growth of 6% averts 1 U5 death per 1,000
Sauerborn <i>et al.</i>	Multiple round survey of 566 HH in Burkina Faso	-	-	-	-	-	-	1	HH shifts healer choice in rainy season away from high cost due to limited funds (health care costs in rainy season 27% that of dry season); income also changes perception of illness
Poerwanto <i>et al.</i>	Data from 1997 DHS in Indonesia	-	-	1	-	-	-	-	RR of infant death was two times higher for families in low FWI (Family Welfare Index) and 3 time higher in medium FWI compared to high FWI

Key: (-) = variable not studied; (0) = no significant association; (0.5) = limited significant association; (1) = significant association

NNM: Neonatal Mortality; PNNM: Post-neonatal Mortality; IMR: Infant Mortality Rate; U5MR: Child Mortality Rate; MORB: Morbidity; NUT: Nutrition; BEHAV: Behavior

Literature Review of Multi-Sectoral Impacts on Health

AUTHOR	TYPE	NNM	PNNM	IMR	U5MR	MORB	NUT	BEHAV	NOTES
EDUCATION									
Bicego <i>et al.</i>	Meta-analysis of 17 DHS surveys	0	1	-	-	-	1	1	Adjusted RR of mat. ed. on Nut and Care-seeking is 1.5-1.7. RR of antenatal care is 4.7
Kuate Defo	1978 Cameroon World Fertility Study data	-	-	1	1	-	-	-	Maternal education explains most to all of excess mortality differences
Arntzen <i>et al.</i>	Cohort during 3 periods in Norway	-	0.5	-	-	-	-	-	No sig. in the 1960s but sig. for first born in the 70s and RR in the 80s is 2.5 for first born and 2.1 for later born
Pena <i>et al.</i>	Cohort analysis in Nicaragua	-	-	0.5	-	-	-	-	Pos. effect of maternal education only in poor households. Accounts for 35% of mort. in poor HH and 4% in non-poor
Reed	41 rural comm. in Benin	-	-	-	-	-	0.5	-	Upper and lower thresholds. Mat. ed sig. in HH with intermediate soc. ec. conditions, no sig. at low levels and weak at high levels
Mahalanabis <i>et al.</i>	Case/Control in Dhaka, Bangladesh	-	-	-	-	0.5	-	-	7+ yrs of education assoc. with 54% reduced risk; after adjusting for income, children of illiterate mothers had 2-3 times higher risk of severe diarrhea than mothers with 7+ yrs of ed; moderate levels had no appreciable impact
Woldemicael	Urban Eritrea	0	0	-	1	-	-	-	Mat ed. had no effect on IMR or PNNM but resulted in 42% lower risk for U5MR after controlling for soc. ec. and sanitation
Bender <i>et al.</i>	HH survey among 413 HH in Santa Cruz, Bolivia							0.5	Only high med-high maternal ed. with med-high grandmother education affected antenatal care.
Poerwanto <i>et al.</i>	Data from 1997 DHS in Indonesia	-	-	1	-	-	-	-	RR of infant death was two times higher among mothers who had less than 7 years of formal education
Smith <i>et al.</i>	Review of 63 countries during 1970-96	-	-	-	-	-	1	-	Found that maternal education was responsible for 43% of the total reduction in malnutrition from 1970-96

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Literature Review of Multi-Sectoral Impacts on Health

AUTHOR	TYPE	NNM	PNNM	IMR	U5MR	MORB	NUT	BEHAV	NOTES
WATER & SANITATION									
Woldemicael	1995 DHS data; urban Eritrea	0	1	-	1	-	-	-	PNNM is 40% lower in HH with water supply and toilet facility after adjusted for econ. and maternal ed; effects are similar for U5MR
BASICS II	Study of handwashing campaign in Central America	-	-	-	-	1	-	1	Over 4-year campaign there was a 4.5% reduction in diarrheal disease prevalence and 10% improvement in handwashing
Hussein <i>et al.</i>	1500 HH in Dhaka, Bangladesh	-	-	-	1	-	-	-	U5MR sig. assoc. with personal cleanliness
WASH Project	Review of 144 studies worldwide	-	-	-	-	1	-	-	Improved water and sanitation results in 22-26% mean reduction in diarrheal disease; most effective intervention is safe excreta disposal
Checkley <i>et al.</i>	Cohort analysis of children in peri-urban Peru	-	-	-	-	-	1	-	At 24 mo. children with worst water/san conditions were 1.0cm shorter and had 54% more diarrheal episodes than those with best. Effects independent of HH income and maternal education
Curtis <i>et al.</i>	Meta-analysis of 17 handwashing studies	-	-	-	1	-	-	-	RR of diarrheal disease associated with no handwashing was 1.88. Handwashing results in 47% reduction. Can avert 0.5-1 million deaths per year by handwashing
Pruss <i>et al.</i>	Calculation of disease burden based on multi-country study	-	-	-	1	1	-	-	Disease burden from water/san/hygiene is equal to 4% of all deaths and 5.7% of DALYs

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 NNM: Neonatal Mortality; PNNM: Post-neonatal Mortality; IMR: Infant Mortality Rate; U5MR: Child Mortality Rate; MORB: Morbidity; NUT: Nutrition; BEHAV: Behavior

Literature Review of Multi-Sectoral Impacts on Health

AUTHOR	TYPE	NNM	PNNM	IMR	U5MR	MORB	NUT	BEHAV	NOTES
AGRICULTURE									
Smith <i>et al.</i>	Review of 63 countries during 1970-96	-	-	-	-	-	1	-	Found that improvements in per capita food availability were responsible for 26% of the reductions in malnutrition between 1970-96
Low <i>et al.</i>	Study of use of orange-fleshed sweet potato	-	-	-	-	-	1	-	Jalal study - sig. increases in serum retinol among 3-6 yr olds - as much as deworming and fat supplementation; vitamin A deficiency has 60% case fatality and sub-clinical has 23% mortality; replacing white-fleshed sweet potato with orange would impact 50 million based on conservative assumptions
Kennelly <i>et al.</i>	Study of 19 OECD countries	0	0	-	-	-	-	-	Fruit and veg. consumption not assoc. with NNM or PNNM but strongly associated with increased male/female life exp.
Pruss <i>et al.</i>	Calculation of disease burden based on multi-country study	-	-	-	1	1	-	-	Disease burden from malnutrition is equal to 11.7% of all deaths and 15.9% of DALYs
PUBLIC HEALTH EXPENDITURE									
Kennelly <i>et al.</i>	Study of 19 OECD countries	-	1	1	-	-	-	-	Public health expenditure as % of GDP showed positive & significant association with NNM & IMR in 6 different models
Wagstaff	Meta-analysis of 42 countries	1	-	1	-	-	-	-	Regression analysis shows 10% increase in per capita spending on health reduces IMR at \$1/day by 2.4%
World Development Report 2004	Global study	-	-	-	1	-	-	-	Cuba continues to achieve reductions in U5MR despite low income compared to rest of Central America - answer is that they spend 6.6% of GDP compared to 3.3% avg. in Latin America
Wang	DHS survey data of 60 low-income countries	-	-	-	1	-	-	-	An increase of 0.2% of GDP going to health can reduce U5MR by 1

Key: (-) = variable not studied; (0) = no significant association; (0.5) = limited significant association; (1) = significant association
 NNM: Neonatal Mortality; PNNM: Post-neonatal Mortality; IMR: Infant Mortality Rate; U5MR: Child Mortality Rate; MORB: Morbidity; NUT: Nutrition; BEHAV: Behavior

Literature Review of Multi-Sectoral Impacts on Health

AUTHOR	TYPE	NNM	PNNM	IMR	U5MR	MORB	NUT	BEHAV	NOTES
SOCIAL CAPITAL									
Kennelly <i>et al.</i>	Study of 19 OECD countries	1	1	1	-	-	-	-	6 different variables of social capital showed no significant influence on IMR, NNM or PNNM
Bolin <i>et al.</i>	Empirical model using 3 time periods in Sweden	-	-	-	-	-	-	-	Social capital positively associated with self-reported health status
Kawachi <i>et al.</i>	Cross-sectional ecologic study of 39 US states	-	-	-	1	-	-	-	Ecological regression model explained 58% of variance in mortality – lower levels of social trust were associated with higher rates of most major causes of death incl. infant mortality; per capita group membership was strongly associated with all-cause mortality – social capital higher in democratic societies/association related to leisure and income
MULTI-SECTORAL EFFORTS									
Gonzalez <i>et al.</i>	Intervention study in Bolivia	-	-	-	-	-	1	0.5	Children in multi-intervention communities 1.2 times as likely to boil water, 2.3 times as likely to breastfeed and half as likely to be malnourished; but no significant difference for treatment of diarrhea
Knowles	Intervention analysis	-	-	-	1	-	-	-	40+ component intervention including health, education, income, agriculture and water resulted in drop of IMR by 50% while nat'l level has dropped only 10-20% over 10yr period

Key: (-) = variable not studied; (0) = no significant association; (0.5) = limited significant association; (1) = significant association
 NNM: Neonatal Mortality; PNNM: Post-neonatal Mortality; IMR: Infant Mortality Rate; U5MR: Child Mortality Rate; MORB: Morbidity; NUT: Nutrition; BEHAV: Behavior

Appendix 4

Multisectoral Platform Case Study Papers

A New Hope for Eastern Guatemala
Gilda María Walter, Nutritionist/Health Technician
Catholic Relief Services/Guatemala Program

Description of Program or Activity:

During 2001, the Guatemalan government declared a nutritional emergency. The emergency was caused by a combination of agricultural (low production due to irregularities in rainfall) as well as economic factors (decline in international coffee prices). The national malnutrition rate increased dramatically to levels superior to 20% among under five.¹ One of the most affected areas in the nutritional emergency was the Eastern region, specially the geographical area inhabited by the Mayan Ch'orti' people, where the Guatemalan ministry of health reported malnutrition rates of 26% amongst the under five population. On September 2001, Catholic Relief Services/Guatemala Program (CRS/GT) implemented a series of projects in order to address the emergency food needs of children under five in the eastern part of Guatemala, specifically in the departments of Chiquimula and Zacapa (five municipalities). CRS nutritional intervention targeted 58 communities in geographical areas inhabited by large populations of Ch'orti' people (up to 40 per cent of the population in the area affected where the moderate and severe malnutrition prevalence was found to be higher than 10% in children under five years of age. People from this ethnic group have historically been the very vulnerable due to historical racial policies, characterized by economic, political and social exclusion with no access to land ownership. These problems directly affected the food security of the area, as large numbers of vulnerable people did not have access to the food staples in local markets for lack of income. In addition, health problems, characterized by high levels of malnutrition, with aggravating factors of underlying high prevalence of stunting, high incidence of respiratory and diarrheal diseases (38.3% and 11.2%, respectively), led to poor utilization of food resources.

Due to the multiple causes of the crisis in the area, CRS/GT designed its response according to the food security framework, including activities in Agriculture, Water & Sanitation, Health & Nutrition and Food Aid. The agriculture component aimed to improve the availability of crops and to improve production. The water and sanitation component focused on improving sanitary conditions, achieving an adequate health status that allowed a biological utilization of the food consumed by the population attended. The health and nutrition component was responsible for promoting key practices through Community Health Workers (CHWs), and linking the population with their health centers.

The CRS/GT response addressed the three programmatic elements in the Household and Community IMCI Framework. Linking communities to health facilities was done through community informational sessions and improvement of community's referral system, ultimately aiming at increased utilization of health facilities. Training the Community Health Workers (CHW's) was also a key activity during the program, with the objective of increasing their knowledge and skills related to the promotion of preventive practices and decreasing the harmful ones, in order to improve the quality of the care they provided. The final element, the promotion of key family practices, (such as exclusive breastfeeding for children under six months old, complementary food from this age forward, complete immunization before the first year of age, referrals for outside treatment once the children are in danger, and personal hygiene), was

¹ UNICEF Nutritional Indicators 1995-2002

addressed with a multi-disciplinary approach given that every field technician (water and sanitation, health, agriculture and food supervisors) was involved in this activity,. Each technician, regarding his/her activities, stressed the standard messages that emphasize the importance of adopting the key family practices.

The nutritional framework was operationalized through food preparation demonstration sessions. In these sessions, participant women practice new cooking, feeding, hygiene, and caring behaviors. The sessions were implemented in collaboration among staff from different sectors, such as health, nutrition, and agriculture. During the demonstration sessions, the project staff identified leader women, who had the attitude and ability to continue this activity, and included them on the teaching process. This allowed the other women in the community to turn to these women for advice and help.

The demonstration sessions included a solving-approach methodology, which focused on limiting factors for selected behaviors. Periodic staff meetings, where data were presented, allowed every technician to observe how his/her work was contributing to achieve the overall objective.

One of the main differences in the implementation of this intervention from a conventional multi-partner PL-480 Title II program was the utilization of an nutritional framework, which promoted inclusion of other sectors besides health in addressing the nutritional deficit. It also created consciousness, both on CRS/GT and on its partner staff, of cause-effect relationship in nutritional issues of other sector besides health, and therefore, of the importance of working together to achieve a common objective and results. Another difference was the promotion of inter-institutional collaboration through the establishment of “Round-Tables”. This inter-institutional initiative, initiated in the area by UNICEF, had as an objective to promote and search a sustainable and integral development for the four municipalities participating. The working areas of this roundtable were:

- Environmental recuperation
- Education, health and security
- Ch’orti’ culture promotion
- Tourism promotion

Evaluation / Analysis Methodology:

Monthly growth monitoring activities were carried out using the weight/age index. This activity aimed at identifying children at nutritional risk as well as identifying malnourished children. Once a child was identified as suffering from inadequate weight gain, the mother received information on actions to take, avoiding a bigger weight loss that could lead to malnutrition. A table with minimum weight gain/age was used to determine how much weight was the child suppose to gain from month to month. Identified malnourished children were referred to Therapeutic Feeding Centers, which also allowed monitoring the evolution of the nutritional crisis and the effectiveness of the different project activities.

Weight/height measurements were used to assess project impact. A total of 6,503 children under five years of age participating in the program were included in the sample. Because this type of

measurement can be time consuming, a Nabarro Chart was used, which allows health volunteers and mothers to explain and easily understand the changes in the nutritional and health status of their children, since it uses colors as indicators of nutritional status. CHW's, with health & nutrition staff support, carried out these measurements throughout the life of the project. No qualitative evaluation was made.

The data resulting from both weight/height and weight gain measurements was compared in order to identify trends and to prioritize communities, including in the analysis epidemiological factors. This analysis was made with the entire team, in order to re-evaluate actions taken and monitoring the activities being developed. Nevertheless, this data was also analyzed in the Food Security Roundtable, so all the participants could be aware of the situation of the participating communities and take it into account, when planning next steps on the Roundtable and their institution work; and at the community level, for them to realize how the changes in their own actions and lifestyles could contribute improvement in their children's health.

Results:

The Maternal-Child Health National Survey carried out, by the National Institute of Statistics and the Ministry of Health, during 1998-99, showed an overall acute malnutrition prevalence rate, for the northeastern area of the country, of 2.9% severe malnutrition (weight/height under – 3SD from the mean) and 5.8% total malnutrition (weight/height under – 2 SD from the mean). Another survey carried out by the same institutions during 2002, showed an improvement on both figures, with a 0.9% of severe malnutrition and 3.6% of total malnutrition. These figures show the responses to the crisis in the area were effective enough not only to avoid higher acute malnutrition prevalence but also to diminish this prevalence.

CRS/GT, as part of its monitoring plan, carried out a series of measurements. An initial measurement was taken at the beginning of the program, in November 2001; other two measurements were taken during 2002 and their average was used as mid-term data. Finally, one last measurement was taken in March 2003, at the end of the program. The results from each measurement are stated in the following table:

Table 1
Acute¹ malnutrition prevalence

Status	Initial	Mid-term	Final
Mild ²	20.3%	13.1%	6.46%
Moderate ³	4.9%	1.2%	0.12%
Severe ⁴	1.8%	0.3%	0%
Total	27.0%	14.6%	6.58%

¹ Weight for height under, using Nabarro Chart.

² Weight for height between mean and –1SD. Yellow area in the Nabarro Chart.

³ Weight for height between –1SD and –2SD. Orange area in the Nabarro Chart.

⁴ Weight for height between –2SD and –3SD. Dark red area in the Nabarro Chart.

The nutritional impact of the intervention was evidenced by a substantial decrement in weight for height measurements at baseline and final. The total malnutrition prevalence showed 20.4 % points decrement in malnutrition rates between baseline and final. Mild malnutrition was the

highest impacted during the intervention, showing almost 14% points of decrement, whereas moderate showed almost 5% points, and severe almost 2% points.

Even though, no qualitative evaluation was carried out, the growth monitoring process could be used as an indicator on how the improvement on practices and behaviors on the families was accomplished, since no appropriate growing could occur without the proper care from the children's caretakers.

Partners:

As a multi-sectoral platform, CRS/GT and its local partner CARITAS Zacapa/Chiquimula, established strategic alliances and close coordination with UNICEF, Ministry of Health and Agriculture officials, local municipal governments, participating communities, the World Food Program (WFP), other NGOs and local income-generating and educational foundations in the area.

Due to a great quantity of institutions working in the area, each with different criteria and guidelines, UNICEF staff led an initiative to unify efforts. At the beginning, invitations to join a Health Roundtable were made only for institutions working in health and nutrition, such as CRS and the Health Centers of the Ch'orti' Region. As a result of this initial roundtable, guidelines and working areas were decided by consensus; the multi-causality of the nutritional problem was also recognized. According to this new perspective, other organizations and authorities were invited and included in the roundtable, which later became the Food Security Roundtable of the Ch'orti' Region. Now, even though the crisis has ended, this Roundtable still discusses new projects for the area, specific problems the different actors are going through, and how everyone can help to address them. Each monthly session is led by one of the municipal governments involved. This is the first Roundtable of this variety in the country and has allowed synergic efforts between institutions.

The local CRS partner, CARITAS Zacapa/Chiquimula, was the organization responsible for implementing the different activities in the field. Other partners were the Ministries of Agriculture, with seeds and fertilizer, and Health in the central and local levels, whose main interest was to increase coverage of health services such as immunization and epidemiological surveillance. The local municipal governments participated by funding part of the transportation needed to complete infrastructure activities and by giving priority to child health issues in their investments and planning. Other NGOs working in the area coordinated in order to avoid duplication of activities, increasing the coverage of services in the area. The participating communities were also a very important part of the program, since all the actions were based on community volunteer workers, for agriculture, water and sanitation, and especially health. These volunteers were trained to help disseminate the messages to the entire population.

Discussion:

This initiative's positive impact is due to four principal factors: First, activities from different components (health and nutrition, water and sanitation, agriculture and food aid distribution) were linked to achieve one objective, improve the nutritional status of the children participating. Second, the entire community was included in the different efforts that were implemented, including the CHW's, who played an active role in the education of the families, and both parents in the families, a different approach from others in which the mother is the only one

involved in the behavioral changing processes. Third, the creation of the Ch'orti' Food Security Roundtable, notwithstanding, it was initiated from without the communities, it was after the implementation process appropriated by the community to address their own needs, empowering them in the process of searching the answers to diverse problems they face. Fourth, the close coordination between CRS/GT and the implementing partner, CARITAS Zacapa/Chiquimula, which took into account the partner's technical strengths in agriculture and water & sanitation, and complemented them with CRS' own direct implementation of the nutritional component.

The Food Security Roundtable continued working after addressing the crisis and the municipal government of each municipality participating now heads it. This roundtable has allowed the different institutions working in the area to find grants to finance projects that respond to problems that affect every element of food security. For example, some institutions obtained grants to improve the roads from some communities to the main town, in order to improve overall access to local health centers, markets for their products and for other important services. The health and nutrition status has also been addressed in order to identify problems before they become a crisis, especially since the weather and economic conditions have not improved.

The utilization of a multi-sectoral approach in addressing nutritional problems is desirable and feasible, as demonstrated by this experience. An operational framework such as the one used by CRS Guatemala facilitates this approach. The inter-institutional collaboration through mechanisms such as the round-table also promotes a multisectoral approach, as well as community empowerment and sustainability. Leadership is an important aspect in the implementation of a multisectoral approach. The project's approach can be replicable as long as the leading person or institution can inspire and direct the effort of each person involved in a project toward a common objective, to which they can all relate to.

The lack of support from the Central Government was a very strong limiting factor. Nevertheless, as a relevant issue for other countries with Guatemala's conditions, the local Ministry of Health was finally able to take a leadership role on every action focused on improving health, avoiding a scenario where every institution carried out their own programs with different criteria and methods.

This project initiated as a response to a nutritional emergency, nevertheless, to support and continue the changes in practices and behaviors initiated, USAID decided to include this area in the DAP, until the end of fiscal year 2006. This decision will allow a bigger impact on the lives of the people of the area.

Theme: Communicating Key Family Practices through Water Supplies, Sanitation and Hygiene Programs

**Integrating Water, Hygiene and Sanitation into Community IMCI Interventions:
Lessons from the African Medical and Research Foundation (AMREF) in Tanzania**

**Presentation at the workshop:
“Reaching Communities for Child Health: Advancing Health Outcomes through
Multisectoral Approaches”**

Washington DC March 23-25, 2004

Daraus Bukenya², Joseph Komwihangiro¹, Koronel Kema¹

Background:

Mkuranga is one of six districts in the Coast Region of Tanzania, East Africa (*Map 1*). With a population of 187,000 mostly of the ‘Zaramo’ tribe, Mkuranga is also one of the poorest and underserved districts in the country. The infant mortality rate (IMR) and under five mortality rate (U-5 MR) are estimated at 120 and 202 per 1000 live births respectively (*Table 1*). 95% of the population is Moslem but traditional beliefs significantly influence daily practices. For nearly 50% of major illness episodes, the traditional healer is the first choice of contact. Indeed illnesses such as childhood febrile convulsions are believed to results from evil spirits and only treatable by a traditional healer.

Malaria is endemic with both malaria and acute diarrhea accounting for nearly 60% of childhood morbidity and the majority of deaths among under-five children (*Table 2*). Acute respiratory infections, eye diseases, anemia, intestinal worms, pneumonia, nutritional disorders and schistosomiasis are other common diseases that inflict children in the district. HIV/AIDS is rapidly becoming the leading cause of adult mortality and morbidity.

The district is rich in water resources, but most water sources are contaminated and are a source of water and sanitation related disease. Until two years ago, less than 40% of households owned a latrine (*Table 3*). The sandy collapsible soils make latrine construction difficult for most poor households.

The strong cultural practices hinder the full participation of women and girls in development activities that take them outside their homes. The interaction in public between women and men is restricted and most women hesitate to take on community leadership responsibilities or when they do, they must seek the permission of their spouses. Nonetheless, women are the primary childcare givers but also the providers of food and water in most households. On the other hand, men control household incomes and material wealth.

² African Medical and Research Foundation (AMREF) Tanzania

In response to the poor water, sanitation and hygiene situation, the African Medical and Research Foundation (AMREF) initiated a pilot project in 1999 to improve water sources and provide hygiene education in three villages. The pilot project enabled AMREF to get a better understanding of community practices and especially the gender relations in terms of health, water and sanitation. The project was scale up in 2000 to cover four of the ten wards of the district with an estimated population of 74,000 or nearly 50% of the district population. Communities were facilitated through Participatory Hygiene and Sanitation Transformation (PHAST) methods to identify their water and sanitation needs and the local resources to address them. As a result, villagers supported by their leaderships mobilized construction materials while AMREF provided the technical know-how to construct shallow wells, boreholes and latrines in a few households. Water storage jars were also constructed in some of the primary schools in the project area. Local artisans were trained in water point and latrine construction skills. A cadre of community own resource persons (CORPS) were trained to provide sanitation and hygiene education at the household level. Very importantly, the project succeeded to enlist the acceptance and participation of women in water source management.

The participation of women in the project brought a new dimension to the project - the health of children. Women were concerned that unless the health of children is specifically targeted, water source improvement and hygiene education alone would not have tangible impact on the morbidity and mortality of their children.

Therefore water provided an entry point to the community Integrated Management of Childhood Illnesses (cIMCI) interventions initiated in 2002. It also provided an opportunity for a Multisectoral partnership to become established as the scope of the interventions widened. The design of the project was build on a previous experience with community IMCI in the neighboring district of Temeke, also in the Coast region. District and the community involvement in the project design was critical.

The project addresses Multisectoral platforms (MSP) from an integrated programming perspective that brings about resource sharing and synergy between the various sectors.

Project aims and strategies:

The aim of the cIMCI intervention is to reduce childhood morbidity and mortality through illness prevention, proper home care and better health seeking. HIV/AIDS education is also included among the core IMCI components.

The key strategies and activities adopted to implement the intervention include:

- a) **Integration with water, sanitation and hygiene education.** AMREF reorganized the implementation arrangements of its projects in the district to facilitate the integration of cIMCI into ongoing water and sanitation activities. Among the areas of integration were:
 - i. Project management structures including the organizational structure and management information systems (*Fig 1*).
 - ii. Community mobilization and education methodologies. An integrated community education program based on participatory approaches was developed.

- iii. Joint planning and quarterly progress review. The two interventions develop a joint plan and integrate their training and community education sessions. For example, community educational sessions including those conducted at water collection points have expanded focus to include childcare giving.
 - iv. Project coordination mechanisms have been integrated all the way from the district down to the village level.
- b) **Strengthening Multisectoral partnerships.** In order to achieve the necessary partnerships, the project has involved the district authorities in the coordination of project activities and worked towards creating ownership by the district. A project Multisectoral steering committee of heads of six sectors including water, health, education, planning, agriculture and food security and community development, gender and children facilitates planning and supervision of cIMCI activities (*Table 4*). The committee meetings chaired by the district planning officer (DPO) take place quarterly. Other partners including the UNICEF funded Child Survival (CSPD) project and other NGOs in the district attend the meetings. In addition, the district authorities appointed the DPO to be the focal person for the project, thereby creating an opportunity for a Multisectoral involvement to thrive. The district also provides and maintains a project office within its own premises. This proximity has provided another opportunity to engage other sectors at the district level. It has also enabled the district to share with the project some of the district human and material resources including transport for supervision while providing easier access to the project computerized databases for planning purposes.
- c) **Community mobilization and organization:** The project builds on the community based health care (CBHC) approach and organizational structures established under the water project. Such structures include ward and village health committees, the community own resource persons (CORPS), the community based supervisors of CORPS who are now trained as trainers of trainers (TOTs) and the water point committees. As a result, the cIMCI intervention has expanded the role of these organized groups and provided appropriate training to promote the focal areas of IMCI. Community activities include family education on childcare giving, sanitation and water hygiene, community planning and priority setting and assignment of responsibilities, mobilization of water point construction materials and provision of unskilled labor for water point construction. The CORPS also promote latrine use but individual families take responsibility for constructing own latrines.



The project organizes and trains the community leadership to engage and mobilize communities to participate in project activities including cIMCI activities. Emphasis is placed on the involvement of men, women, boys and girls in decision making processes and in identification of community resources. Through the village committees, communities organize village health days where a wide range of services including immunization, growth monitoring, nutrition education, food preparation and food security demonstrations and advice are

provided. Insecticide treated nets (ITNs) are also promoted. Village health days have been successful in linking government programs such as the Expanded Program on Immunization (EPI) to cIMCI and to increase the number of community outreach activities by the government extension workers including health providers in local health facilities. Anecdotal reports from health providers indicate that the village health days have attracted communities that have in the past failed to attend immunization sessions.

- d) **Training:** 28 trainers of trainers (TOTs), most of whom were previously community facilitators in the water project, have been trained in cIMCI including child healthcare seeking, illness recognition and home care. They have also been reoriented on water and personal hygiene and basic sanitation skills in an attempt to link water, sanitation and hygiene and child health. They are also trained in adult learning and participatory methodologies. The TOTs are employees of the various district departments including health, water, education, agriculture and community development. The mix allows the wider involvement necessary for effective interaction with families and reflects the Multisectoral partnership at the district level. TOTs are selected for training by the heads of their departments, effectively members of the district project steering committee. Together with AMREF staff, the TOTs apply their new knowledge and skill to train the 240 CORPS in the project area. Each TOT also supports the village CORPS through mentoring and supervision. The CORPS then train families.

Health providers in health facilities in the project area are trained to apply IMCI approaches and to link childhood diseases to environmental hygiene and sanitation during health promotion sessions at the clinics. They are linked to the community CORPS through the referral system and a community based information system (CBIS).

- e) **Family and community education:** At the household level, the CORPS work with families to promote proper child care and health seeking behavior, personal hygiene, sanitation and use of insecticide treated nets. Early recognition of childhood diseases and their danger signs is given prominence. Family and community education takes different forms including home visiting, participatory community theatre, community meetings and distribution of information, education and communication materials. The village health days are an essential component of the family education program as they also provide entertainment through music and drama, usually performed by the youth theater groups that have become intensely associated with the project. Some of the youths are the same as those involved in water point construction and therefore have been essential in linking the project components.



- f) **Using local data to inform project activities.** During home visiting CORPS collect data that reflects the link between child health and household water and sanitation status. For example, a link between diarrhea episodes and water hygiene enables the CORPS to follow up with appropriate health education using appropriately prepared family education materials (*Fig 2*). The data is also the basis for the CBIS and is presented in

simple and easy to interpret formats. Such data has also been the basis for the various health education materials developed by the integrated project.

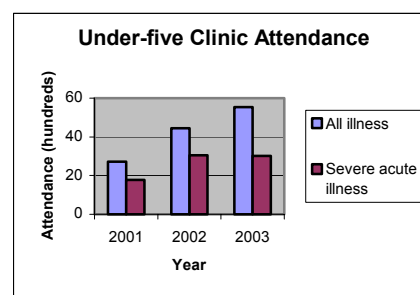
In addition, AMREF regularly collects data from the government health management information systems (HMIS) at health facilities for comparison with the CBIS. A joint database with relevant elements from both the CBIS and the HMIS is established and computerized at the project office at the district level and becomes easily accessible to the district authorities during planning and budgeting. By comparing the two sets of data, health workers attempt to interpret their activities in relation to the actual situation in the community. Besides, health facility data allows AMREF to evaluate and establish an opinion on the overall impact that the cIMCI is having on the population in the health facility catchment area. The village health days have on several occasions provided an opportunity for the project to share with communities, results of the CBIS, which are then used as an advocacy and community education tool.

An external project evaluation is planned later in 2004. Nonetheless, monitoring data has pointed to several project achievements and challenges.

The results:

As the project monitoring system continues to evolve, observations and anecdotal reports from families, community leaderships and the CORPS themselves have enriched the project results monitoring much of which is qualitative.

Anecdotal reports from the CORPS and evidence from community meeting agendas show that communities and especially the childcare givers increasingly relate childhood illness to water, hygiene and sanitation. In addition, CORPS report a changed community attitude to the management of childhood febrile convulsions, although this information is not corroborated by data from most health facilities in the project area, which do not seem to see an increasing number of children with febrile convulsions. However, data from several health facilities shows at least 10% increase in service utilization and a decrease in the proportion of children with severe illness, although this change may not be a result of the project alone (*Table 5*).



Very importantly, the project has gradually broken the gender barriers and enlisted the deeper participation of women. For example, women lead nearly one third of the 85 water point committees. Women membership on the village health committees has also increased by up to 15%. In addition, women are responsible for the revolving fund to increase access to insecticide treated nets (ITNs). Introduced as a pilot, the ITN revolving fund has had a high turnover exceeding project expectations. As more women become involved with the project, more are attracted to participate. The village health days have also become an attraction to men. The number of men carrying their children, sometimes accompanied by their spouses, has increased two fold over the past one year, although it still remains small.

The district through its various sectoral departments has been a main partner in the project. Membership of district departmental personnel on the project committees at the district, ward and village levels has enabled the infiltration and indeed mainstreaming of project activities into the overall sectoral programs. For example, two thirds of the primary schools, which have also participated in the water project, have at least one teacher trained as a cIMCI trainer of trainers responsible for supervising CORPS in communities around the school. The construction, two years ago of water storage jars at primary schools in the four wards has been an incentive for school head teachers to become fully involved in the cIMCI activities. Indeed the project is in the process of introducing a child to parent educational component in a selected number of schools where the teacher TOTs have been outstandingly active. The trained teachers will drive the child to parent education component.

The proximity of the project to the district planning office and the Multisectoral Steering Committee at the district level have been essential in influencing the district planning processes including resource allocation. As a result, the project has quickly become integrated into the district planning frameworks. For the first time, the district allocated to the NGO-initiated intervention, a modest and important budget equivalent to US\$ 10,000 in its 2003/04 financial year. In two villages, the district has used its own resources to construct boreholes to complement the ongoing cIMCI activities. Nevertheless, the project estimates that the district personnel spend at least 25% of their time planning, supervising or training for the integrated water and IMCI project. The district also contributes logistical support in form of transport during field supervision. This support alone translates into at least US\$ 30,000 annually or one tenth of the overall district annual budget. Through the district multisectoral committee, the district has for the first time prepared a proposal and received US\$ 47,000 funding from local sources for an HIV/AIDS component linked to the ongoing project activities.

CORPS, a cadre of community workers outside the normal government structure have been accepted as key frontline workers that directly interface with and influence health behavior at the family level.

Discussion:

Much of the project success could be attributed to the project conception and design that involved the stakeholders including the users themselves. Therefore, local ownership existed from the start. In addition, decentralization has created an opportunity for local governments such as that in Mkuranga district to set priorities of their own and allocate resources.

Previously, the tendency for governments and developments agencies was to address community concerns from a single sector perspective. More recently, the government of Tanzania and its development partners have increasingly embraced a Multisectoral approach. Multisectoralism is therefore a new concept that is yet to become internalized by all actors. Its implementation continues to pose huge challenges. As a result of this change in approach, Mkuranga district also inclines towards supporting Multisectoral frameworks, probably explaining the support this project has received. On the other hand, the project has also demonstrated that through integration, Multisectoral partnerships could develop and influence practice across communities and indeed sectors.

The broad focus of community IMCI provides an opportunity for a comprehensive and integrated approach that addresses a wider range of community needs. In addition, integration as evidenced from this project, provides an opportunity for the roles that the sectors play to complement each other. By linking water and sanitation to cIMCI, it has been possible for the project to access more males especially young males involved in water construction with child health messages.

While the project has made visible the gender imbalances in the community, local authorities including elected leaderships have been instrumental in bringing their authority to bear on the negative cultural practices. For example, the project has effectively used local political leaders to apply their political clout to change community attitudes and practices regarding women participation in development activities. This change could not be achieved without the involvement of the leaders. On the other hand, it is unlikely that in the absence of the project, the leaders would have placed women involvement among their priorities.

The CORPS have taken advantage of water collection habits to organize educational sessions for women at water points. Women are traditionally the water collectors and often carry their young children along. They do not have to be mobilized for this activity and most tend to collect water at same hours of the day – when the wells are filled up. Water points have therefore provided an opportune venue where CORPS meet women to provide educational sessions on child health while also teaching about water point maintenance, hygiene and sanitation. Childcare demonstrations are also conducted on site. Although less than a quarter of the CORPS are themselves women or girls, this has not been a hindrance to the educational sessions at the water points.



CORPS have demonstrated their effectiveness in mobilizing and educating families as volunteers. However, sustaining this cadre of workers outside the ordinary government structures remains a challenge. Although most CORPS have not attained a high level of basic education, they are able to articulate the basic messages necessary for behavioral change. They nevertheless require substantial supervision to enhance their effectiveness and maintain their motivation and commitment. The trainers of trainers, most of whom in formal government employment supervise the work of CORPS. In the absence of the Multisectoral partnership, it is unlikely that this collaboration by the different sectors to supervise CORPS can be sustained. On the other hand, the commitment of the CORPS cannot be sustained in the absence of supervision and ongoing training as incentives. For example, of the 240 CORPS trained in the project, at least 60 may still be described as inactive over a period of six months in a year. Nonetheless, the critical knowledge that CORPS impart on families and the changed practices at the household level can be sustained for a long time. Therefore, the question is not whether CORPS will be sustained in the community but whether the knowledge they transfer leads to sustainable change in behaviors and practices.

Although very important, the community-based management information system is very laborious and soon becomes monotonous to the CORPS and TOTs, bringing to question its

sustainability. Indeed the government of Tanzania has not been successful on several occasions to introduce a similar system nationwide. AMREF and its district partners have contemplated a reward system for data collection, although there has also been a fear that this too could result in inaccurate data as CORPS become more inclined towards the reward. In addition, the formal health facility data does not yet reflect the IMCI approach and therefore further and often complex interpretation is necessary to be able to link it to the CBIS. In view of these shortcomings, complete reliance on quantitative data in cIMCI may not give the full picture of the benefits of the project.

Conclusion:

Integrated programming could enhance Multisectoral frameworks, especially as Multisectoralism is yet to be fully internalized and mechanisms developed for its implementation. Community interventions integrated within a Multisectoral framework such as that in Mkuranga district have demonstrated that through a Multisectoral approach, communities become attracted as a result of the wider scope of their needs that could be met. Messages that link several concerns seem to make more sense and are likely to become adaptable by families. Opportunities are also created for leveraging human, financial and materials resources. Government reforms have given a new impetus towards Multisectoral approaches. However, the rather labor intensive integrated Multisectoral programming could also place a heavier workload especially on the frontline workers who are often volunteers. Sustainability considerations should be placed on the resulting knowledge and behavior change, hence quality of education rather than on the program inputs per se.

**Africare-Ntungamo Community-based Integrated
Management of Childhood Illness Project**
Africare-Uganda

***The Role Of The Multi-Sectoralism In
Attainment Of Goals And Objectives:
Working Through Different Sectors To Address Factors
That Facilitate Or Hinder Adoption Of Key Health Practices***
{tc \l1 "That Facilitate Or Hinder Adoption Of Key Health Practices}

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Description of Program or Activity

With a grant from the United States Agency for International Development (USAID), Africare has been implementing a four-year (October 1, 1999 to Sept 30, 2003) Community Based Integrated Management of Childhood Illnesses (CIMCI) project in rural Ntungamo District of South Western Uganda. The project was operating in eight of the district's fifteen sub-counties with a target population of 42,054 children under five and 46,058 women of reproductive age. The overall project goal was to reduce morbidity and mortality of children under five years. Africare implemented the Multi-sectoral approach through sectors of health, water and

sanitation, agriculture, income generation and education in the implementation of the CIMCI project

The multi-sector platform was established within Africare/Uganda to reduce the duplication of efforts and maximize resources and impact. It was an incremental process as a result of learning from start up activities during the implementation process. The project was designed to include an Action Research Component whose purpose was to identify programmatic gaps during project implementation. Using data collected by the Action Research component, it was deemed necessary to implement CIMCI using an MSP approach to address community needs. The project developed proposals, concepts and partnered with other organizations to obtain complementary funding to address outstanding needs. As communities and households are affected by a combination of problems, the need to adopt cross cutting approaches became eminent. Exchange visits to other partner organizations, joint planning meetings with different sectors, project staff orientation on MSP, and attendance at national and international conferences all assisted in bringing the concept and knowledge of the MSP approach to Africare Uganda. Once the approach was embraced, it was also necessary to hire additional staff to complement existing skills and capacities.

Through the multi-sectoral approach, Africare promoted the sixteen key household practices for prevention, decision-making, home treatment and care-seeking of four childhood illnesses: malaria, diarrheal disease, acute respiratory infections (ARI) and malnutrition. The approach was a critical component to the CIMCI framework supported child health and development in the District. Without integration of these sectors, the CIMCI approach would have been partial and fragmented.

For example CIMCI could not be fully implemented without the water component to address the problem of lack of safe drinking water critical for the diarrheal diseases. Although behavioral change messages were being intensified in communities regarding control of diarrheal diseases, the communities had a problem of accessing safe water and the project responded by lobbying other donors for matching funds to construct and rehabilitate shallow wells, community water tanks and springs. In order to strengthen the implementation and reduce the costs, the Starr Foundation Water for Child Health Project worked closely with the water and sanitation sector to improve safe water coverage, home hygiene and sanitation, leading to a reduction in childhood diarrhea

During the implementation process, the project identified that though there were messages on improvement of nutrition, communities were not aware of the importance of growing vegetables and did not have seeds or the technical guidance needed to establish seed beds, raise rabbits or establish fish ponds. It was therefore deemed necessary to establish links with the agriculture sector at the district to help the project implement agriculture related interventions. The agriculture sector worked with the project to establish community vegetable gardens, rabbit rearing centers and fish ponds. The resulting food production and income contributed to the overall household food security, which was seen through improved child nutrition and increased

income. Money that community members received through selling surplus production was used to purchase household necessities and contributed to the reduction of poverty in some households.

When project activities started, the community development structure was already well established on the ground. A well-developed community capacity building program that formed and trained community structures to identify problems through routine data collection. The data generated could be used for planning purposes and addressing some of the gaps. Africare realized the potential impact of these structures and designed the capacity building component of this project to work with the local structures to enhance sustainability and ownership of the program. In addition, the project collaborated with the community development sector to train community health workers and drama groups to promote the sixteen key household behaviors.

Establishing linkages and integrating the project activities within the District health sector during the implementation was crucial. Africare conducted community mobilization and sensitization on voluntary counseling and testing (VCT) but did not operate VCT sites. Africare established linkages with the District health sector where services were provided to Africare referred clients.

The CIMCI Project worked closely with the Ntungamo district health staff to (a) organize activities that aimed at linking communities to health facilities, (b) advocate for a strong health service delivery system with trained personnel, (c) ensure availability of essential IMCI drugs for mothers with sick children, and (d) demystify the folk beliefs surrounding child "millet disease" and "false teeth disease" which are ARI and diarrhea respectively.

Africare supported HIV/AIDS projects have increased awareness in communities on prevention of mother to child transmission (PMTCT) and provided fortified food supplements to people living with HIV-AIDS (PLWHAs) who are unable to cultivate enough food for their children. This has contributed to improved nutrition for both PLWHAS and their children. The beneficiaries of food distribution project were identified by the district health department. This project is implemented in collaboration with local NGOs ¹ and a faith based organization ².

The education sector provided opportunities for disseminating child survival messages to a wider audience. In the initial implementation of the project, due to high illiteracy levels, many women were unable to read the messages from the project's IEC materials. To overcome this barrier, schools were used as an alternative means of dissemination where materials could be distributed for pupils to read to their mothers. The project trained teachers who acted as behavioral change agents through enforcing selected key behaviors at school.

Working through a multi-sectoral approach has not only increased community commitment and involvement in the CIMCI process but throughout the entire project. Community's realization of both the importance of CIMCI and the impact of behavior change on the health and well being of their children has increased as a result. Different sectors added tangible inputs, which increased

the community's realization of the importance of CIMCI project. These inputs included construction of shallow wells, springs and community water tanks under the water and sanitation sector; establishment of vegetable gardens, fishponds and rabbit rearing centers under agriculture sector; and distribution of food to PLWA and orphans under the HIV/AIDS sector.

As part of the sustainability strategy, project implementation involved the Sub-county leadership from the beginning. The leadership was involved in the planning, implementation and monitoring of the projects. The Africare field officers worked closely with the sub-county extension staff, especially the community development and the health assistants. They would develop the same work plans and share essential materials. The agriculture and veterinary officers were also called upon to offer technical guidance in their area of specialization. Through their involvement, the sub-counties' officers were impressed by the work the project and included Africare activities in the government work plans and budget for sustainability purposes. Due to limited resources of the local councils, the agriculture departments allocated money from the Plan for Modernization of Agriculture (PMA) funds to sub-counties to support the scale up of vegetable growing. The Sub-county community development sector also set aside in their annual budget, funds to support Sub-county trainers during support supervision to the Parish Development Committee (PDC), a structure that Africare hopes will continue CIMCI implementation in the Sub-counties after phasing out. Approximately \$ 5,000 was allocated to CIMCI in each of 8 CIMCI Sub-counties' annual budgets. This includes labor, time, locally available materials, as well as money.

Due to the impressive results that were realized from the multi-sector platform, the four year CIMCI (October 1, 1999-September 30, 2003) project was extended for another five years (October 1, 2003-September 30, 2008) to cover the whole District. Africare plans on continued support from the local government in terms of both human and financial resources.

Evaluation / Analysis Methodology

The project uses both quantitative and qualitative methods of evaluation/analysis. Quantitative methods are the most commonly used and include knowledge, practice and coverage (KPC) surveys, review of existing health management information system (HMIS) reports and special studies. These methods have been applied at baseline, midterm and final evaluation to determine process, output and impact indicators. Process indicators that are used for demonstrating the effectiveness of project sustainability included the (1) number of: community structures trained, (2) number of resource persons trained and those that are active, (3) number of joint planning meetings with partners, (4) inclusion of CIMCI activities in the sub-county work plans, (5) IEC materials translated into local languages, (6) number of CIMCI trained groups (drama, women, etc.) and those that were co-opted by the district to access resources from other district development programs. Qualitative methods, though limited have been used, include strengths, weaknesses, opportunities, and threats (SWOT) analysis and focus group discussions (FGDs).

Results

The multi-sectoral approach described enabled the CIMCI project to realize most of the set targets and indicators. Through supportive mechanisms and capacity building, the project has ensured the sustainability of child health outcomes. The results show impressive achievements on most child health indicators. There has been steady increase in the percentage of children under five who sleep under ITNs from 3.6% at baseline to 11% at midterm and to 23% at final evaluation. Moreover, the percentage of mothers who reported giving chloroquine or SP increased from 46% at baseline to 50% at final evaluation. Vitamin A-rich food intake dramatically increased from 21% at baseline to 50% at final evaluation. Finally, the number of households with designated hand washing facilities with soap/ash present increased by over 100% from the baseline to the final evaluation.

The project has also developed research tools and organized impact studies such as Out Patient Turn up Assessment (OTA) study to demonstrate effectiveness of behavior change communication interventions in linking communities to health facilities. The findings indicated that there was an overall increase in sick child consultations of 97% in CIMCI sub-Counties compared to 50% in non-CIMCI sub-counties. Children in CIMCI sub-counties were brought to health facilities in less severe conditions. The findings influenced the district to increase drug allocations by more than 10% and recruitment of three more health staff at the sub-county level to handle the work overload

Approaches that promote active involvement of beneficiary sub-counties in the project implementation resulted in the inclusion of CIMCI activities in the sub-county budgets and work plans, a good indicator of sustainability. The establishment of a bed net credit scheme among mothers has reinforced community coping mechanisms that will be valuable beyond the life of the project. More than 30 groups each with at least ten mothers learned how to solve the problem of malaria among the children under five through pooling of meager resources of less than \$1 per mother per month which enabled them to buy one mosquito net per month. The practice, which started in only two sub-counties, has replicated by other five sub-counties.

Due to the strong performance of the project, the Ministry of Health has embraced Ntungamo CIMCI project as a learning model. Several study visits have been taken by other districts, NGOs, collaborating agencies (CAs) and other countries including Mozambique, Kenya, Liberia, and Rwanda to learn from the project. These partners are testing the CIMCI project approaches and anecdotal reports indicate that some have been replicated. In addition the project produces quarterly newsletters and the staff participate in both national and international conferences and workshops to share information about scaling up activities. The country partners involved in health system development have selected Africare to host the CORE supported Uganda IMCI-Roll Back Malaria NGO Secretariat which is a fora of PVOs and CAs including government line ministries to share information on activities and best approaches to maximize coverage. Without the MSP, it would not have been possible to achieve all these results within a short time.

However, it was not possible to evaluate the MSP elements in a synergistic manner. The project is currently using the KPC instrument with generic questions developed by CORE Group, WHO and the Inter-Agency Working Groups. The generically developed evaluation tools are tailored to one sector interventions, rather than those using an MSP approach. Most of the projects Africare is implementing are short term, and yet behavior change is a gradual process making it hard for the project to carry out impact assessment. Instead, Africare largely focused on evaluating output indicators.

Africare believes from experience that it is cost effective to implement a multi-sector platform because it builds structures, linkages with other actors, community support and government buy-in. However, Africare did not do a cost benefit analysis in CIMCI phase 1. This analysis is currently planned for phase II.

Partners

The success of CIMCI is a result of strong partnerships built at different levels. The project is implemented with strong partnerships among the various Ntungamo District sectors. Other partners include, (a) WHO and UNICEF, for technical guidance; (b) Ministry of Health, for policy framework and advocacy; (c) BASICS II, for technical reference materials; (d) DISH II Project, for IEC materials development; (e) Commercial Marketing Strategies for increased access to ITNs; (f) Directorate of Water Development, for technical assistance; and (g) AIDS Information Center (AIC), and The AIDS Support Organization (TASO) for material and technical support in HIV/AIDS.

At the district level the CIMCI works in partnership with existing NGOs, namely, (a) Nutrition and Early Child Development Project (NECDP), (b) Uganda Women's Efforts to Save Orphans (UWESO) and (c) Faith Based Organizations such as Kagamba Catholic Church, and (d) Community Based Organizations such as Hands on a Child Project (HACH) and community structures namely Parish Development Committees (PDCs), Traditional Birth Attendants (TBAs), local councils, drama groups and women groups. Capacity of these groups has been built to expand, scale up and sustain successful practices.

Lessons Learned:

- Implementing the CIMCI project using a multi-sectoral approach provided tangible and sustainable in-puts, which increased community understanding and involvement at the community level. The project demonstrated that communities strongly identify with tangible outcomes.
- Using multi sectoral approach requires a high degree of flexibility and innovations to respond to community needs.

- Over the LOP, it has come out clearly that the MSP helps to; a) maximize resource use (cost effectiveness), b) reduce resource duplication, c) minimize constraints and d) maximize impact.
- The CIMCI project enjoyed different partners who brought in a variety of rich experiences from different sectors and personnel with skills that reinforce each other.
- In using the multi sectoral approach, the CIMCI project impacted on poverty reduction at household level.
- Whereas the MSP enabled the project to maximize impact, it was not possible to monitor and evaluate the projects in an integrated manner. There is need to develop a strong integrated monitoring, evaluation and documentation system.

Ntungamo was one of the pilot Districts in Uganda to implement the community component of IMCI where experience would determine whether to go to scale in other Districts. Based on the Ntungamo experience, the Ministry of Health has decided to use this approach in other sectors.

- The Program can be taken to scale within the District through development of strong collaboration mechanisms at the district and Sub-county levels by involving all the relevant sectors in the planning, implementation and monitoring the activities. This empowers them in making decisions about the project as well as sustaining the activities.
- At the District level, scaling up requires simplification of tools and processes for wider use at different levels. There is also a need to avail locally developed IEC and training materials that can easily be replicated.
- Document and dissemination of the implementation process, best practices, lessons learned and constraints. This can be done through information dissemination and sharing in national and international workshops and conferences and distribution of newsletters.
- Capacity building of the local institutions like the District Health Team can help replicate the project. Participatory approaches create sustainable linkages between the health system, community and other actors in the community.
- Partnership building with other donors, NGOs and CBOs is key to Program scale up and sustainability. The use of inexpensive approaches and intervention can also help to put the program to scale and sustained.

Combating Resistance to Polio Vaccination in Underserved Communities in Uttar Pradesh, India

The CORE GROUP

Description of Program or Activity

In 1988 the World Health Assembly resolved to eradicate poliomyelitis globally by the end of the year 2000. At that time, wild poliovirus was endemic in more than 125 countries on five continents, paralyzing more than 1000 children every day. Through 2002, the number of polio-endemic countries declined to seven, and the estimated incidence of polio decreased >99%. Only 677 cases of polio were reported in 2003 (as of 13 January 2004). Today, only six countries in the world remain polio-endemic (Nigeria, India, Pakistan, Egypt, Niger and Afghanistan).

India, the only remaining country in the South-East Asia Region with ongoing indigenous wild poliovirus transmission, reported a major resurgence of polio in 2002, from 268 cases reported in 2001 to 1,599 cases in 2002, representing >83% of the globally reported cases in 2002. The state of Uttar Pradesh accounted for 1,241 (78%) of the total cases in India. Analysis of genetic data demonstrated that all lineages identified in India in 2002 were derived from strains that circulated in Uttar Pradesh during 2000--2001. (*Source: World Health Organization (WHO) 15 Jan 2004*)

In India, during 2001, the wild poliovirus was geographically clustered in a group of four 'Hot' districts, Moradabad, Rampur, Bareilly and Badaun in Western Uttar Pradesh (U.P) (*Table 1*). Almost 40% of the population here can be classified as underserved (22.6% Muslims and 16.5% Scheduled Castes).

Table 1: Wild Polio Cases in Western UP			
Districts	2001	2002	2003
Moradabad	45	79	1
Rampur	22	37	0
Bareilly	29	33	0
Badaun	20	49	15
TOTAL	116	198	16
Total cases in U.P	216	1242	88
<i>Data Source: Department of IVD/WHO-SEARO</i>			

The resurgence of cases in 2002 was attributed to the following causes: Fewer S/NIDs (Sub-National/ National Immunisation Days) during 1999 - 2002, no S/NIDs during January - September 2002, an interval that permitted the accumulation of a large susceptible cohort of newborns, decreased geographic extent of SIA (Supplementary Immunisation Activity) (The majority of districts in eastern and central UP were not targeted, leaving this area at high risk) and the fact that a substantial number of children were missed during SIA rounds (SIA

monitoring data in western UP during June - August 2002 indicated that house-to-house teams failed to vaccinate children in <15% of houses in some districts).

This suggests that hundreds and thousands of children were missed in areas with high population density, a very large birth cohort, and poor sanitation favor poliovirus transmission. One major factor contributing to poor SIA quality in UP was inadequate engagement and involvement of the general community, particularly members of minority groups. The critical challenge that prevents India from reaching the polio eradication goal are an estimated 10% of India's children under 5 years of age that are consistently missed, especially in Uttar Pradesh.

In Western U.P, crowded housing conditions, 70% illiteracy and 73.6% unemployment affect the health and quality of life. Routine immunisation data does not show any improvement in full vaccination coverage (20%) from NFHS³ 1(1992-'93) to NFHS II (1998-'99). In fact, the situation seems to have worsened with only 14.5% of children being fully covered while 32.4% did not receive any vaccination. The DPT 3 drop out rate is 24.5%. Need assessments carried out by the CORE PVOs endorsed the NFHS II data that showed a lack of safe drinking water in these communities, with only 12% of the population having access to piped water, while 82.6% of the population was dependent on hand pumps. Almost 23% mothers reported diarrhoeal episodes affecting their children in the last two weeks, 24% of whom reported the source of water to be hand pumps. Only 40% knew about ORS preparation. As high as 62% people go to open fields for defecation and unsanitary conditions prevail both in rural as well as urban areas. All the above factors contribute to an Infant mortality of 81.8 per 1000 live births (*NFHS II*), which is much higher than the national average of 68 per thousand live births as reported by Sample Registration System, Office of the Registrar General, India (2000 figures).

The above profile clearly demonstrates that uninterrupted transmission of poliovirus is amongst those who live in poor, marginalized underserved communities, where routine immunization coverage is very low. The combination of all these factors results in ongoing transmission.

The IEAG (India Expert Advisory Group) that met in Nov 2003 admitted that despite a coverage of over 34 million children in each SIA round in U.P, an estimated one million children were being missed. "Probably, most are under two years of age and are children of underserved communities who have poor and limited access to health services, information, education, safe drinking water and adequate sanitation facilities."

Partners

Funds were awarded in 1999 through the United States Agency for International Development (USAID) to The CORE Group to accelerate ongoing polio eradication activities in priority countries. The project includes a funded secretariat and CORE member PVOs (Private Voluntary Organizations) and their local partners working together in a coordinated, collaborative fashion. In India, through 2002 -2003, the member PVOs were ADRA (Adventist Development Relief

³ National Family Health Survey (NFHS) equivalent to Demographic Health Survey (DHS) was first conducted in 1992-93 is an important demographic and health database in India, and was repeated in 1998 - 99 as NFHS-2.

Agency), PCI (Project Concern International) and WV (World Vision). The PVOs' core strength lies in implementing child survival programs, especially among the marginalized. The CORE PVOs were given the task of social mobilization and combating resistance to the program.

CORE elected to work in the four hot districts, and blocks were selected based on epidemiological data. Each PVO's approach was different; ADRA implementing activities through a Community Based Organization (CBO), hospitals and schools, PCI working through local NGO partners while World Vision (WV) used an ongoing Child Labor Project that worked in the area of greatest need (Traditionally WV works through Area Development Programs). Though the same program framework was used, each partner had its own gamut of social mobilization activities such as video shows, puppet shows, magic shows, social and child mapping and rallies to increase community participation, involvement and increased ownership of the program.

Blocks (CORE Blocks) selected by PVOs were hard to reach areas with stiff resistance to the polio eradication program. Some reasons of resistance, which emerged during the community assessment done by the PVO partners, were that polio vaccination would lead to impotency, government had not provided any other services, and practically no relationship between the community and the health service provider existed. Resistance was demonstrated by way of refusal to allow the vaccination teams to enter the villages, women standing on rooftops, ready to throw boiling water on the teams in case they managed to enter the village and finally hiding children inside the house.

PVOs strategized to combat resistance by putting in 'Add on interventions' (mostly sanitation and safe water) that were need based and targeted at Behavior change (*promoting key family practices*) in the communities that had long been neglected and deprived of basic infrastructure. To build a sense of community participation in the program, PVO partners' organized sanitation drives (cleanliness drives), where every member of the community would devote his/her time on a particular day decided by the community. All men and women would join in cleaning their locality. Slogans would be used such as "*Agar polio ko bhagana hai to gandagi ko jarh se mitana hai*" (If you want to remove polio, then garbage and dirt should be removed from its roots). Tricycles were provided to the community to be used by unemployed youth for garbage removal and income generation. Child survival funds were used for organizing community sanitation drives, while funds from infectious diseases were used to buy the tricycles.

Performance of the PVOs is shown in table 2 below:

Table 2: Performance Results of CORE Partners 2002-2003					
SN	Activities	World Vision	ADRA	PCI	Total
A.	Coverage				
1	Districts	Moradabad	Rampur & Bareilly	Badaun	4
2.	Blocks	10	11	10	31
3	Community volunteers	300	220	200	720

	(CHWs)				
B.	Add On Activities				
4	Household latrines	400	50	245	695
5	Hand pumps installed/repaired	250	29	0	279
6	Medical Camps conducted	65	67	60	192
7	Mosquito nets distributed	0	1000	0	1000
8	ORS packets distributed & demonstrations conducted	1139	2211	7910	11260
9	ORT Corners established	200	200	284	684
10	Sanitation drives organized	87	115	96	298
C.	Social Mobilisation Activities				
11	Community meetings	954	4224	6922	12100
12	Involvement of religious leaders	298	774	421	1493

Genetic sequencing showed that most of the wild poliovirus reported in 2002 had Moradabad strain. It was thus important for the program to interrupt wild virus transmission in Moradabad, which was only possible with high polio vaccination coverage during SIAs, especially in Moradabad Urban. NPSP and District health authorities identified Karula and Mukarampur as the most resistant pockets. World Vision and ADRA were asked to work in these pockets and they strategized towards community behavior change by addressing a major community hygiene issue. Both these urban areas were situated along big drains, at times, 2 kilometers long, 3 meters wide and 4 ft deep. These drains were completely silted and were leading to formation of cesspools during rains, making it almost impossible for people to move around. PVOs hired casual laborers (whom the local municipal corporation had recently retrenched due to financial constraints), to clean the drains. The drains were usually cleaned manually and the entire exercise would take around 60 working days, involving 45 laborers. The cleaning paved the way for the volunteers to enter every resistant house and also helped in redeeming the community from the risk of major infectious diseases. Big billboards were put up with messages to combat myths and rumors. With the entire community excited on seeing these drains being cleaned, it became easy to capitalize on it and organize community meetings, inviting religious leaders to combat the rumor of polio vaccine causing sterilization. Appeals were made through these leaders asking parents not to hide their children and participate in the entire nation's efforts towards polio eradication. Holding of Child parliaments was another innovative strategy used, where children were used as 'Change agents'. Mock parliaments were set up, with children advocating on their own behalf and placing the adults and local government authorities in the dock. Children's clubs also ensure that their siblings would be brought for vaccination. These strategies played an important role in conversion of X marked (resistant) houses to P (acceptance) in most of the program area. Child survival funds were used for these social mobilization activities.

While PVOs were using activities to change behavior at the community level, it was also important to address the issues of behavior change and resistance at the Household Level. Child Survival funds were used to support these latter activities. In order to ensure that the community

did not perceive it was rewarding not to give their children polio vaccination, suitable criteria were developed to select equal numbers of beneficiaries both from the doer (*who continuously allowed their children for vaccination*) and non- doer (*who did not allow their children to be vaccinated*) groups. A non-doe beneficiary was asked to commit that all the children from his house would be vaccinated, and that he would work as a change agent on volunteer basis to counsel the other non-doers in his neighborhood and advise them to get their children vaccinated and combat rumors. Doers were selected from those who had immunisation cards, at least 2-3 children under five years of age and were regular in bringing their children for vaccination. 1000 families were provided with insecticide treated mosquito nets, 695 household water sealed toilets were constructed, and 279 hand pumps were either installed or repaired to provide safe drinking water. Around 75 youth were taught hand pump repair to provide them employment opportunities in their communities. The following four key hygiene behaviors were promoted by the project through all its community meetings, wall paintings, street plays and video shows: 1. Proper hand washing at critical times (after defecation, after handling children's faeces, before preparing food and before feeding children and eating), 2. Sanitary disposal of human faeces, especially of young children, 3. Protection of drinking water from faecal contamination, 4. Protection of food from faecal contamination.

To combat the issues of program fatigue and resistance, the PVO Coalition (CORE) was very clear that it requires more than just giving polio drops. Other health needs had to be addressed and a relationship between community and the health service providers had to be built. Improving family and community practices, one of the three components of the IMCI strategy, which aims to initiate, reinforce and sustain family practices that are important for child survival, growth and development seemed to be the answer. There was a need to involve families and communities as partners in the efforts to eradicate polio, in prevention of common childhood illness through community ownership of the routine immunisation program, improved hygiene practices and nutritional status of both children and mothers and in improving home care for sick children. There was a need for creation of better linkages between the community and the health care providers on a regular basis and not merely during S/NIDS; improve the quality of care being provided to mothers and children by health workers; for building capacity at the household and community levels to enable them to counter myths and rumors and getting their children vaccinated not just for polio but also for all the other vaccine-preventable diseases provided under routine immunisation.

To address the concerns discussed above, PVOs used Child Survival funds and jointly organized 192 medical camps (outreach camps), where antenatal check up was provided free of cost to pregnant women, vaccinations were given to the children, referral services were provided to the sick and the needy, and general health care was given to the community. Since medicines cannot be purchased with USAID funds, a few PVOs contributed by purchasing basic medicines through private sources. These health camps were widely accepted by the community and demand for such services increased. This also provided a platform for the community to interact with health care providers, since the Primary Health Center Medical Officers and the Auxiliary Nurse Midwives were deputed to provide the services. During these camps, PVOs also addressed myths and rumors through puppet, magic and video shows. Further, 11260 ORS packets were distributed to the parents with under five children and 684 ORT corners were established that parents could access when they required ORS. This helped in reducing

resistance, which can be measured by the proxy indicators of increased vaccination coverage shown in table 3.

Methodology:

All the 58 blocks of the four hot districts of Moradabad, Bareilly, Rampur and Badaun were taken as the universe for the study. Blocks with presence of CORE PVO partners were categorized as CORE Blocks (n=31), whereas those without presence of CORE PVO partners were categorized as NON CORE Blocks (n=27) and formed the control group for the study.

The PVO partners carried out social mobilization activities intensively in the CORE Blocks and independent booths were organized during the SIAs. Each block had around 20-30 volunteers for visiting resistant houses and conducting social mobilization activities. Additionally, special activities (Add ons), discussed in greater detail in the previous sections of this paper were carried out in these blocks. UNICEF was also carrying out social mobilization activities in some of these blocks. These blocks were also exposed to the mass media. Non CORE Blocks, forming the control group, were not entirely free from social mobilization activities, and volunteers from UNICEF or Rotary were working there. They were also exposed to mass media. Hence we cannot entirely categorize these blocks as pure control group and the effect was seen during the analysis, thus the changes could not be attributed.

The incidence rate for wild polio cases and coverage during the National Immunisation days (booth and house to house activity) were used as outcome indicators to assess the impact of the social mobilization activities carried out in response to the resistance to OPV. The number of wild polio cases reported for a block during 2002 was used to calculate average incidence rate. The same methodology was used to calculate the incidence rate for 2003. Another indicator was created as 'Change in average incidence rate' to measure the difference brought in from 2002 to 2003. The November 2002 SNID data for all the blocks in the four districts was taken as a baseline and the data of the consecutive five rounds in all the four districts was the universe for the study. The SNID data of September 2003 was used to calculate the change.

Results:

Multivariate analysis was applied using EPI Info 2003. Means for all the indicators were calculated, and p value generated through t-test. Additionally, linear regression was carried out holding district as constant to interpret the degree of change (level of significance). Covariates in the regression model include the following categorical "dummy" variables: block type (CORE vs. Non-CORE) and District (Badaun, Bareilly, Moradabad, Rampur), and the interaction terms between these two covariates were indicated.

Table 3 below shows the results of the multivariate analysis. Column 1 in the table shows all the indicators used to assess the impact. Column 2 shows the mean value for CORE blocks for all the indicators, and column 3 shows the mean value for Non CORE blocks for all the indicators. Column 4 shows calculated p value of the multivariate analysis with block type and district in the model and Column 5 indicates the level of significance. [Note that for Indicators 2 and 3, the interaction tests were statistically significant ($p < .05$) between block type and district and its

effect on the outcome. It may be more useful to refer to means of the outcome variable separately by district for these two indicators. Outcomes in some districts are better in the CORE block, but in other districts, outcomes appear to be better in the non-CORE blocks; this may be due to the fact that there is a ceiling/floor to how much outcomes (changes in incidence, for example, refer graph 1) can improve: zero is the ceiling/floor]. Other indicators such as X marked houses converted to P, and the percentage of missed houses were also considered for analysis. No significant difference was found after the analysis, and thus it is not presented in this paper.

Graph 1: Change in incidence of wild polio in CORE India Polio Project districts, 2002-03

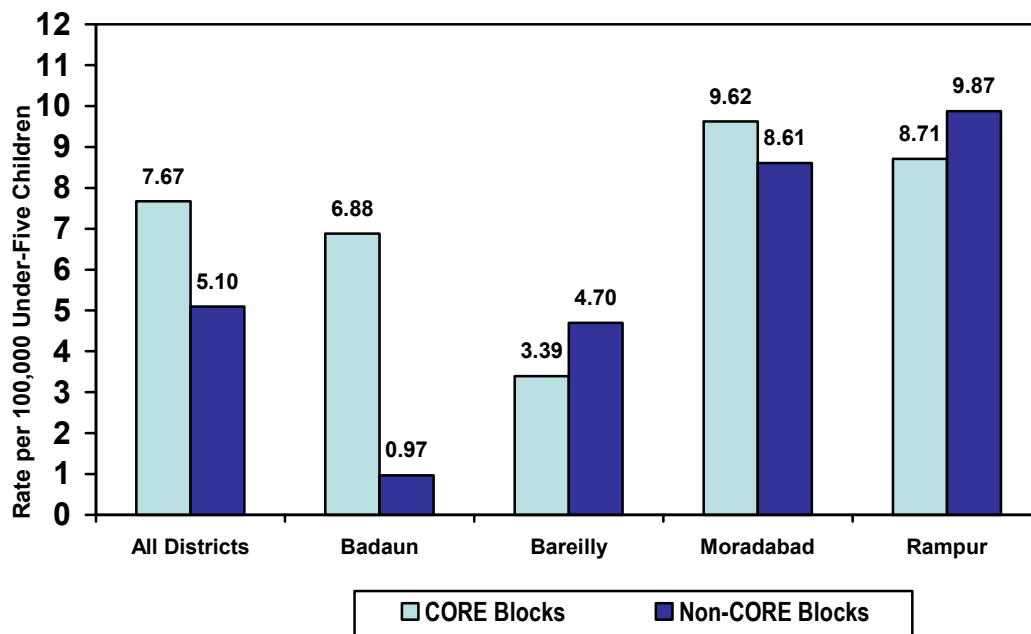


Table 3: Results of multi-variate analysis of impact and outcome indicators in CORE India Districts by CORE- vs. Non-CORE-India Blocks (Nov 2002-Sep. 2003)

Indicators	CORE Blocks (n=31)	Non CORE Blocks (n=27)	p-value	Sig.
1. Average block-level wild polio incidence in (per 100,000 under-five children), CORE India Districts, 2002	8.07	6.00	0.53	
2. Average block-level wild polio incidence (per 100,000 under-five children), CORE India Districts 2003	0.27	1.41	0.00	** ⁱ
3. Change in average block-level wild polio incidence (per 100,000 under-five children), CORE India Districts 2002-03	7.81	4.58	0.02	** ⁱ
4. Average block-level NID coverage, CORE India Districts November 2002 (percent)	80.9	81.6	0.78	
5. Average block-level NID coverage, CORE India Districts September 2003 (percent)	101	98.9	0.02	*
6. Change in the average block-level NID coverage, CORE India Districts Nov 02 – Sep 03 (percent)	19.8	17.3	0.03	*

* p < .05

** p < .01

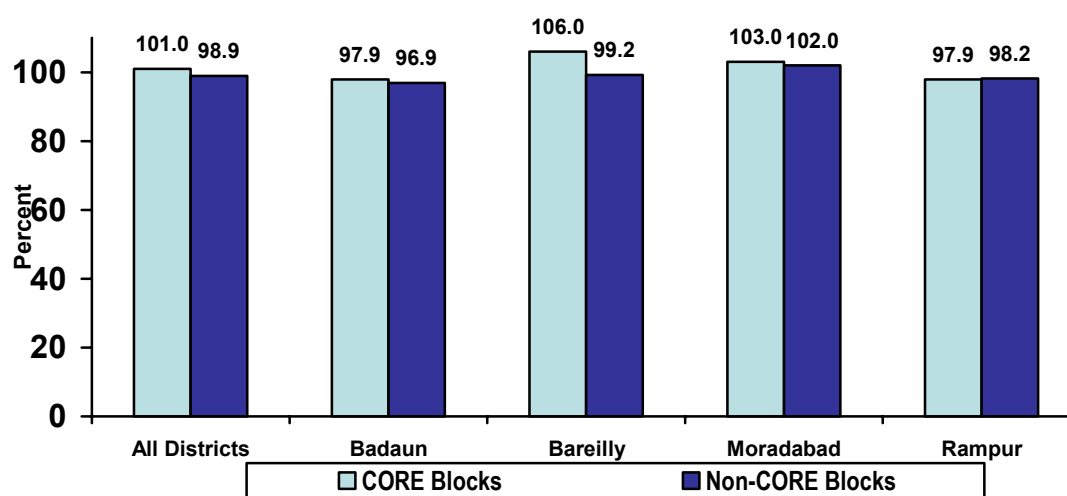
ⁱ Interaction present: the effect of block type on incidence is modified by what district is being analyzed. The interaction may be due to a ceiling effect, however, as incidence in two districts fell to zero in both CORE & Non-CORE blocks. It may be more useful to observe the means for CORE and Non-CORE blocks by district.

Discussion:

The number of wild polio cases reported during the period can be used as an indicator to measure success of any SNID/NID. (*Communication Handbook for Polio Eradication and Strengthening Routine Immunisation/WHO/1999*). Analysis shows that During 2002, CORE blocks were likely to have 8.07 cases per 100,000 under five children per block (actual 129 cases of wild polio were reported in CORE blocks) and NON CORE blocks 6 cases per 100,000 under five children per block (actual 69 cases of wild polio reported in Non CORE blocks). Multivariate analysis revealed that CORE blocks actually started from a high incidence rate during the baseline. During 2003, significant change was observed in the incidence rates. CORE blocks were now likely to have .27 cases per 100,000 children less than five years per block (actual WPC reported were 04) and Non- CORE blocks, 1.41 cases per 100,000 children less than five years per block (actual WPC reported were 12). The chances of reporting wild polio cases dropped significantly by 7.81% in CORE blocks when compared to Non CORE Blocks where the chances dropped only by 4.58%. However, as noted

above, the direction of this effect between CORE and Non-CORE blocks varies by district; the difference in means of the incidence rates should also be viewed independently by district. Graph 1 shows that there was an interaction between the districts. There were no cases reported in Bareilly and Rampur in both in CORE and Non CORE Blocks, 2003, hence the interaction may be due to ceiling effect. In Moradabad and Badaun, significant difference was observed in CORE blocks. The India Expert Advisory Group, which met in November 2003, concluded that the wild polio transmission still remains uninterrupted in Badaun, one of the original ‘hot’ districts, but there had never been a better opportunity to interrupt wild poliovirus transmission in the country because transmission was at the lowest ever in high season, very low transmission in UP and strong motivation to ‘ finish the job ’. End goal of 2004 goal was now feasible.

Graph 2: Vaccination Coverage for NID in CORE India Polio Project districts, Sep 2003



The coverage data of National Immunisation Day reveals the acceptance level to polio vaccination in the program area. Data shows that work in CORE and the Non CORE areas started almost at the same level during the baseline. The mean block level coverage in CORE blocks was 80.9% and the mean block coverage in Non CORE blocks was 81.6%. Mean coverage per block increased to 101% in CORE blocks whereas it increased to 98.9% in the Non CORE blocks. The mean change observed in the NID coverage was 19.8% in CORE blocks and 17.3% in Non CORE Blocks. Although the figures do not reveal a very high difference but it is significant at the .05 level of significance. There may be a ceiling effect in the CORE areas as it already had reached 100%. The polio eradication program does not have any enumeration, thus the total coverage of the previous round is taken as denominator for the next round. Total coverage of June 2003 was taken as denominator for September 2003. Performance improved in September, and denominator being less than numerator, coverage shows over 100% (refer graph 2). This can also be attributed to the fact that in the CORE Areas more families have been reached through the community based volunteers and the special strategies adopted by CORE PVO partners for social mobilization, but this cannot be quantified. This can only be proved by a further qualitative study, which we recommend. Getting children vaccinated by polio drops was a community practice, which the program wanted to promote and sustain. Increased booth coverage is a proxy indicator of community participation, ownership and sustainability of the program. Increased booth participation and increased polio vaccination coverage is inversely proportionate to the resistance.

There were certain limitations in the study. Some of the Non-Core blocks cannot be fully categorized as control, since there may not be a presence of CORE PVO partner for social mobilization but there was presence of UNICEF for social mobilization. So in some of the Non CORE blocks, even with community volunteer support, the degree of activity may not have been as high as in CORE blocks. CORE PVO partners were covering only one third of the population in a block, and data exclusively for CORE volunteers' area was not available. This is a lesson learned, and probably exclusive CORE PVO partner area data may have shown different results instead of using the entire block data.

Results and lessons learned by promoting key family practices, and other water and sanitation activities to combat resistance and program fatigue were not only of importance to CORE PVO partners to build up on their achievement but also for the government to apply the lessons to their efforts of eradicating measles. The above-discussed achievements have set the CORE PVO program on a path to address the next challenge, which is 'Measles Eradication'. CORE now has a national reputation in polio eradication and will also be part of the UP State Immunisation task force, which is an advisory body to the Government of U.P. The next Challenge for CORE is to strengthen routine immunisation in its PVO partners work areas. Steps are already been taken such as training PVO staff on EPI site mapping, which will prove to be an important strategy not just for strengthening RI, but also for measles eradication. Achievements of CORE PEI program has also set the CORE PVO partners to address the next challenge and sustain the benefits of the program. World Vision, who had piggy backed upon their small child labor project, with a very limited audience and coverage, was able to establish it's base in almost 10 blocks of Moradabad covering a population of 1 million, an ideal base to launch their child survival program funded by USAID. Trained community workers can be sustained to promote family practices such as exclusive breastfeeding, and promoting complementary feeding (all IMCI strategies). Highly motivated by the results and broad community acceptance, ADRA is planning to launch a Reproductive Health Program, which is another challenge in these underserved communities. Trained volunteers task force can be sustained by building their capacity on Reproductive and Child health Issues.

Improving child health through the community is at the core of the IMCI strategy. Improving child health and development in and through the community sounds deceptively simple but experience shows that the process is long and there are no short cuts. Breaking resistance to the program was not as simple as it looks through the data. Addressing community needs, especially the issue of child health through medical camps, vaccination programs, etc paved the way for community acceptance of the polio program. It required careful planning, adequate resources and the cooperation of all partners and the government. In short, PVO partners followed a systematic approach, strengthening the relationship between health worker and individual family, promoting key family practices and also CORE Secretariat raising the issues at the National level.

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District Task Force for HIV/AIDS– A Multisectoral Model for Preventing HIV/AIDS and Improving Child Health

Jennifer Yourkavitch, MPH and Dickson Tsamwa
Project Concern International

ACRONYMS

BEACON	Building Effective AIDS Coalitions, Organizations, and Networks (USAID-funded PCI program)
CBO	Community-based Organization
C-IMCI	Community-based Integrated Management of Childhood Illness
DDCC	District Development Coordinating Committee
DHMT	District Health Management Team
DTF	District Task Force for HIV/AIDS
DRC	Democratic Republic of Congo
HIV/AIDS	Human Immuno-deficiency Virus / Acquired Immuno-deficiency Syndrome
ITN	Insecticide-treated net
MCH	Maternal and Child Health
MOH	Ministry of Health
MSF-H	Medicins Sans Frontieres - Holland
NCHE	Nutrition, Child and community, health and HIV/AIDS Education Project (USAID-funded PCI project)
NGO	Non-governmental Organization
NHC	Neighborhood Health Committee
PCI	Project Concern International
PMTCT	Prevention of Mother to Child Transmission (of HIV/AIDS)
SWOT	Strengths, Weaknesses, Opportunities, Threats (analysis)
UN	United Nations
UNDP	United Nations Development Programme
VCT	Voluntary Counseling and Testing (for HIV/AIDS)

Description of Program

Nchelenge district is in Luapula province in northern Zambia and borders the Democratic Republic of the Congo (DRC). The HIV/AIDS prevalence in the province is 11.2 %⁴. A vibrant fishing trade gives Nchelenge a unique position in that it attracts traders from the major urban towns in Zambia and traffic from the DRC on a daily basis, making it one of the most vulnerable areas for HIV/AIDS transmission in the country. Key child survival indicators are equally worrisome: nearly 25% of children <2 are underweight (weight for age); less than 50% of births are attended by skilled personnel; less than 40% of infants are exclusively breastfed for the first

⁴ Demographic Health Survey, 2003

six months of life; less than 5% of mothers wash their hands at all of the appropriate times; and only one half of mothers surveyed could cite at least two ways of reducing their HIV/AIDS risk⁵.

Project Concern International's NCHE Project⁶ integrates elements of Prevention of Mother-to-Child Transmission of HIV/AIDS (PMTCT) programming with C-IMCI. Certain emphasis behaviors not currently included in C-IMCI are critical to sustaining child health in areas with high HIV/AIDS prevalence, including risk reduction behaviors like voluntary counseling and testing (VCT) for pregnant women and their partners, condom use, and informed and consistent infant feeding practices. With an integrated behavior change strategy, the NCHE Project promotes risk reduction behaviors under the umbrella of PMTCT, phasing in other C-IMCI emphasis behaviors as appropriate. Caregiver risk reduction and PMTCT can stem the tide of HIV/AIDS eroding progress made in past decades in child survival. With this goal in mind, PCI invited the Nchelenge District Task Force for HIV/AIDS (DTF) to become a core partner of the NCHE Project.

The DTF is a multisectoral organization whose individual members' expertise brings to bear a greater collective effort to address the effects of HIV/AIDS. Membership in the DTF is voluntary and open. The objective of the DTF is to enhance district efforts to deliver and scale up HIV/AIDS interventions through focused and rationalized resource allocation in a sharing environment. Key intervention areas include prevention education, VCT, STI management, OVC, and home-based care. It is managed by an executive committee of five members who are elected annually from and by the general membership. This committee meets monthly, while the general membership meets quarterly. The quarterly meetings ensure collaboration among the government, NGOs, and CBOs through joint activity planning and monitoring.

PCI has supported the DTF since 1998 with financial, technical, and human resources. Through NCHE and another project, PCI continues to build the organizational capacity of the DTF by providing guidance for assessments, planning, monitoring, and evaluation.

In its role as a core partner in PCI's NCHE Project, the DTF's multisectoral strength is focused on integrated HIV/AIDS and maternal and child health issues, mainly impacting key health behaviors affecting PMTCT, but additionally effecting adoption of correct complementary feeding practices, safe water access and storage, and caregiver risk reduction behaviors (see *Results* section below). The DTF contributes to the PCI and DHMT-led revitalization of Neighborhood Health Committees (NHC) by mobilizing communities around HIV/AIDS issues. In addition, it supports various health activities through its membership on area development committees. Leveraged activities supported by the DTF through its members include:

- Literacy education using HIV/AIDS and other health topics for women through the Ministry of Community Development
- Improving food security in vulnerable households by providing a kit containing seeds, vitamins, and food supplements through the Ministry of Agriculture
- Promotion of VCT and condom use by local restaurants, other businesses and NGOs and every government ministry
- Infant feeding counseling by counselors trained with MSF-H and PCI support

⁵ PCI KPC survey, 2003

⁶ PCI's Child Survival Project in Nchelenge, 2002 – 2007

- Community education on HIV/AIDS through drama at health centers and NHCs

Though not explicitly included in C-IMCI, caregiver risk reduction is essential to child health and well-being, illustrating the logical links between PMTCT and traditional child survival programming. A child whose mother is critically ill for a long time and/or dies has a significantly lessened chance of well-being and survival. Likewise, an infant infected with HIV at birth will not survive in resource-poor environments.

In this way, PCI operationalizes links between HIV/AIDS and C-IMCI: first, by integrating emphasis behaviors important to maintaining caregiver health (preventing HIV infection) and PMTCT with existing BASICS Emphasis Behaviors⁷, and then by promoting the integrated set of behaviors in a logical order under the umbrella theme of PMTCT. For example, DTF-supported dramas at health centers deliver messages about the importance of antenatal care, VCT, and risk reduction behaviors to PMTCT. Using PMTCT as an entry point leads seamlessly to promoting safe motherhood and appropriate infant feeding. As community health workers and health center staff reinforce and support appropriate infant feeding, they promote other behaviors important to child health, including handwashing, early recognition of danger signs, and immunization.

In addition to supporting adoption of key health behaviors, the multisectoral platform represented by the DTF also supports the first two elements of C-IMCI through literacy training and improving food security. As described in the C-IMCI Framework developed by CORE⁸, literacy increases the ability of community members to participate in NHCs that advise health facilities, thus strengthening community - health facility partnerships. Literacy also enables parents to understand counseling and follow written instructions. Improved food security reduces malnutrition while making it easier for parents to follow feeding recommendations from health workers.

Evaluation / Analysis Methodology

Just one year into the project, it is too early to report results from a formal analysis. As part of PCI's BEACON program, the DTF undergoes quantitative and qualitative capacity assessments every other year. In addition, the DTF facilitates its own SWOT analysis as part of its annual planning process. As part of the NCHE Project's mid-term evaluation in 2005, PCI will pilot an evaluation of DTF impacts on MCH, considering indicators such as:

- % women attending ANC who have at least four visits
- % women attending ANC who take up VCT
- % women creating a birth plan for a safe delivery
- % women that deliver with a skilled birth attendant
- % women reporting consistent infant feeding with appropriate method

⁷ Reproductive Health Practices (to include *VCT*), Infant and Child Feeding Practices (to include exclusive feeding of chosen method and recommendations for appropriate feeding, which may include early weaning), and Prevention (to include risk reduction behaviors for women during pregnancy and lactation),

⁸ CORE, et al., "Framework for HH/C IMCI." 2001

For measuring program sustainability, some of the key indicators of the BEACON methodology include:

- # partners working effectively with DTF in support of HIV/AIDS program
- % program activities integrated in member organisations' work plans
- # DTF organizations undertaking HIV/AIDS activities jointly
- % drop out rate from DTF
- # proposals funded for HIV/AIDS Activities
- # program activities running (entirely) on local resources' support
- Achievement of performance targets for financial resource management practices

Results

To date, no impact assessments have been conducted. In 2001, PCI commissioned a consultant to document the impact of the DTF in Nchelenge, using key informant interviews and document reviews⁹; some results are included in the *Discussion* section below. Results from this qualitative assessment are pertinent to this discussion because they demonstrate the impact of the multisectoral nature of the DTF in the district and highlight factors that contribute to its success, as well as those that challenge it. The following results demonstrate health impact, and were collected from district and sector reports.

Food Security: Through the Ministries of Agriculture, Community Development, and Social Services, the DTF identified vulnerable families and provided seed packages. A total of 3,115 beneficiaries were assisted during the 2001/2 farming season. This partly contributed to a reduction in child malnutrition in the district, from 37% in 2000 to 27% (weight for age) in 2002¹⁰. In addition, through the Ministries of Agriculture and Health, the DTF supported the initiation of a community garden and provide technical assistance for community cooking demonstrations, which promote appropriate complementary feeding practice.

Education: Through the department of Community Development, 335 clients were enrolled in literacy programs from 2000-2, helping to combat the 42% illiteracy rate in the district. DTF members incorporated HIV/AIDS prevention, nutrition, water and sanitation, and family planning lessons into the literacy curriculum. Other DTF members, including Ministry of Health, Society for Family Health (NGO) and the Nchelenge Teachers' Anti-AIDS Association, have revived AIDS awareness clubs in schools, bringing prevention messages to pupils, and to their families through extension activities.

HIV/AIDS: Even more DTF member organizations support the *Bumi Bwesu* (Our Health) Information Center, which serves 22,000 people by disseminating health information through printed materials and videos, and providing VCT. In 2002, 1,724 adults accessed information here, which has contributed to the visible increase in condom access and VCT utilization. In 2001 there was only one VCT center; now six sites offer the service, and more than 3,500 clients were counseled and tested in 2003.

⁹ Siachitema, K. and PCI, "Case Study of the Nchelenge District HIV/AIDS Task Force." 2002

¹⁰ DHMT, 2004.

General Health: Some DTF member organizations support the sale and distribution of ITNs. Since 2000, 22,500 ITNs have been sold in the district. The MOH credits increased uptake of ITNs with reduction in malaria morbidity, from 393 cases per 1000 children <5 in 2001 to 315 per 1000 in 2003. DTF member organizations also promote *Chlorin* sales for purifying water and controlling diarrheal disease. Although diarrheal disease morbidity has increased slightly in past years due to deteriorating environmental conditions, MOH believes the number of cases would be much higher were it not for DTF promotion of *Chlorin*, together with promotion of proper handwashing and safe water storage.

“The overall impression is that the formation of DTF seems to have transformed Nchelenge District into a hive of activity on HIV/AIDS and brought about unprecedented levels of community mobilization, organization and solidarity built around HIV/AIDS issues. It is also clear from the information presented that PCI aroused Nchelenge District from its complacency with regards to the HIV/aids scourge to its current realization of its vulnerability. The findings have also confirmed not only PCI’s belief in the potential that exists for the model to sustain itself in financial terms by using its enormous strength, which is the unique levels of community mobilization, organization and cohesion that exists, but also in its belief that, the long-term and seemingly un-measurable benefits of the model, by far surpasses the immediate investment in time, labor and money.”¹¹

¹¹ Siachitema, K. and PCI, “Case Study of the Nchelenge District HIV/AIDS Task Force.” 2002

Partners

USAID, Royal Danish Embassy, and DTF membership:

1. DHMT- Executive Committee Member (Govt.)
2. Hospital AIDS Committee- Vice DTF Chairperson, Vice Bank Coordinator –[NGO (mission)]
3. Program Support Group- Executive Committee Member (Catholic HBC Program)[NGO]
4. MSF-H (International NGO)
5. Zambia Police (Govt)
6. Prisons Department (Govt.)
7. Zambia Revenue Authority (Govt.)
8. Ministry of Community Development and Social Services (Govt.)
9. Department of Social Welfare - DTF Chairman (Govt.)
10. Zambia Information Services (Govt.)
11. District Council (Local Govt.)
12. Forestry/Ministry of Tourism, Environment and Natural Resources - Secretary DTF (Govt.)
13. Forum for Women Educationists in Zambia (NGO)
14. Kosapo Women's Club (NGO)
15. Office of the President (Govt.)
16. Action for Improvement of Mathematics, English and Science (Govt.)
17. Groups and Associations Support- Vice Secretary (Govt.)
18. Ministry Of Education / District Inspector of Schools - Executive Committee Member (Govt.)
19. Tamba Bashila Fish Processing Company - (Business)
20. Ray of Joy Community School (NGO)
21. Society for Family Health (NGO)
22. Traditional Health Practitioners Association of Zambia (NGO)
23. Society of Women Against AIDS in Zambia (NGO)
24. Zambia National Farmers Union - Vice Chairman (NGO)
25. Office of the District Administrator (Govt.)
26. Nchelenge Basic School (Govt.)
27. Ministry of Agriculture and Cooperatives - Executive Committee Member (Govt.)
28. PCI – Secretariat (NGO)
29. Zambia Popular Theatre Alliance – for drama groups (NGO)

Discussion

For working with a multisectoral group like the DTF, PCI has learned that:

- A multisectoral approach coordinates efforts and can effect lasting impacts on health.
- Resources must be invested in the multisectoral body itself to motivate and sustain it. Government has contributed by providing meetings and secretariat locations, and by generously donating staff time.
- The DTF model is relatively low cost (though time intensive at the outset) to form and sustain; using this model can help offset the expensive inputs of equipment, supplies, and training needed, to improve HIV/AIDS prevalence rates and related treatment/services.
- Periodic self-assessments set the pace for organizational development and sustainability.
- The DTF is still defining its role *vis a vis* the role of its member organizations. The difference is that the DTF functions as the overseer of district HIV/AIDS programs and is responsible for the coordination of planning, monitoring and evaluation, whereas a members' role is to implement jointly planned activities at the institutional level.
- A full-time Field Coordinator, functioning as the DTF Secretariat, was critical to maintaining the DTF for the first few years of its existence.
- Regardless of the intensity of commitment at the district level, advocacy is still needed at the national level to convince ministries to create budget guidelines that acknowledge the impact of HIV/AIDS on their departments and to include a budget allowance for HIV/AIDS activities at the district level.
- DHMT participation is critical for ensuring links to broader health initiatives.
- The C-IMCI approach provides adequate impetus for mobilizing a multisectoral group like the DTF with a framework for action. Modifications to the framework, to include HIV/AIDS risk reduction behaviors, should be considered for areas with high HIV/AIDS prevalence.

This paper explains how a multisectoral group formed to address HIV/AIDS can positively impact child health. The key point is that the collective effort of a group whose members have a wide range of specialized skills brings to bear a greater impact on health by working through multiple sectors of society. The main challenges lie in coordinating such a group, evaluating and documenting its impacts, working in a resource-poor environment, and promoting true collaboration among organizations that maintain individual agendas.

PCI's support to the DTF began as a capacity-building project; as is often the case, funding was focused on implementation, not evaluation. PCI took critical steps towards addressing this challenge by hiring a consultant to document successes and lessons learned, and by partnering with the DTF for the NCHE Project, which ensures a degree of impact evaluation on maternal and child health.

Coordination and resources challenges may be addressed by the recent shift in administration. In 2003, the DTF became a subcommittee of the government District Development Coordinating Committee (DDCC). As such, it enjoys the benefit of government "buy-in" and a stronger mandate, but the price is autonomy, as government generally leads planning and decision-making now. UNDP will support a UN Volunteer (Zambian national) to assume the Secretariat function and coordinate the network. As DTF capacity is strengthened and more

resources become available through the DDCC and resource mobilization efforts (local and international), it is believed that more people will benefit directly from DTF efforts, although the network believes that even now the entire population of Nchelenge District (136,000)¹² benefits to some degree from its concerted efforts.

Another challenge for sustainability and scale-up is that there are currently separate streams of funding for HIV/AIDS and child survival programs nationally and internationally. PCI and the DTF need to make convincing operational links between HIV/AIDS and child survival, and increase advocacy efforts in order to successfully leverage resources that optimally address maternal and child health in areas of high HIV/AIDS prevalence.

¹² DHMT, 2004

Working Through Local Government to Increase Their Resource Commitments to Community Child Health Programming in Bolivia

Ramiro Llanque Torrez, CSRA
Curamericas and Consejo de Salud Rural Andino

Title of Abstract: Working Through Local Government to Increase Their Resource Commitments to Community Child Health Programming in Bolivia

Name of PVO: *Curamericas*

Description of Program or Activity:

Curamericas and Consejo de Salud Rural Andino (CSRA), its counterpart NGO in Bolivia, implemented a child survival project from October 1997 to September 2001 in the Altiplano region of Bolivia. The overall goal of the project was to improve child survival and reproductive health practices targeting men, women and children (0 to 5 years of age). The project covered three municipalities near Lake Titicaca: Ancoraimes, Carabuco, and Puerto Acosta.

During the four years of the project, Curamericas/CSRA focused on working with municipal governments to scale up child survival and primary health care services, to increase community capacity in health decision making, and to strengthen the capacity of Curamericas and CSRA to provide leadership in the development of sustainable child survival programs and health care services. Project interventions included: immunizations, control of diarrheal disease, pneumonia case management, nutrition and micronutrients, maternal and newborn care, and child spacing. The key project strategies included the implementation of a census-based, impact- oriented (CBIO) primary health care methodology, regular home visits with IMCI protocol conducted by auxiliary nurses and health volunteers, provision of child survival services through health centers and health posts that are jointly managed by CSRA and the Ministry of Health, and the co-management of municipal health systems through the strengthening of Municipal Health Boards (consisting of representatives from the municipal mayor's office, a community representative, and a member of the Ministry of Health).

Curamericas/CSRA developed excellent relationships with local governments due to a strategy of openness, shared responsibility, and transparency in child survival and primary health programming. These relationships paved the way for two innovative and potentially sustainable strategies: shared management of local health systems (between the Ministry of Health and an NGO), and shared management of municipal health systems through Municipal Health Boards (MHB), who are responsible for the development of local health systems in their respective municipalities.

During the life of the project, Curamericas/CSRA made significant advances in strengthening Municipal Health Boards (MHB), which received on-going accompaniment by the project staff regarding public health, management of local health systems and administration of the Bolivian Basic Health Insurance package (Seguro Basico). In general, municipal strengthening was a slow process due to contentious local politics and a continual replacement of mayors, focusing on human development as opposed to infrastructure, and emphasizing improved service quality and access. During the project, Curamericas/CSRA mobilized funds and public resources from municipal governments. The project worked with

the MHB, who are responsible for the development of local health systems in their respective municipality, on developing a shared vision and improving board capacities. Emphasis was placed on strengthening health leadership, inter-institutional coordination, and allocation of sufficient resources for local systems to function efficiently, appropriate local management of the Bolivian Basic Health Insurance, and the analysis of local health data for shared decision-making during monthly and quarterly meetings.

As the Bolivian MOH decentralized and ceded more authority to health districts and municipal governments, the municipal government's initial efforts at managing health systems in the past were generally focused on building and securing infrastructure, purchasing expensive medical equipment (i.e. MRI equipment), and treating chronic illnesses, as tangible and visual results that these elected political officials could show were the direct result of their leadership. However through Curamericas/CSRA's constant presence, advocacy, and sharing of health data with the MHB and other community representatives, leaders became aware that the local causes for the majority of deaths could be more readily solved through this investment in human development and in some cases through the strategic construction of village health posts and providing primary health care rather than purchasing expensive medical equipment that might never be used. We believe that this resulted directly from the constant meetings and education that the health project provided to the elected officials.

To ensure these goals, CSRA staff routinely met with the municipal health board to raise their awareness of the health care needs of the community. A key strategy to empower the health board was to involve the authorities in planning, monitoring and evaluating the district health care services provided in their districts. The health board members actively participated in all the evaluation workshops with the district health staff and CSRA. The participants reviewed the data collected, discussed the results, and developed participatory plans to improve health activities that were identified as weaker. The health board also participated in all the monthly health information analysis committee meetings conducted by the health staff. As their participation and involvement were actively solicited and the project shared important health information from their municipality, the health board members became more engaged in the health problems that affected the local population and in identifying possible solutions.

As Curamericas/CSRA were working in different municipalities, two to three times a year CSRA would organize joint coordination meetings where the three municipal health boards could present the health indicators from their municipalities and share their experiences between them. By actively involving the health board members and strengthening their leadership roles, the health boards took ownership and responsibility for the realities in their communities. This ownership led to the health boards increasing their commitment to the health programs. As a result, the municipal governments increased their financial obligations for recurring operational costs for child survival and primary health care. These costs include hiring additional health staff as well as increasing their commitment and support for training health care workers and volunteers, and to support health fairs and workshops (providing funds for snacks and materials) in the local communities.

The decentralization process was very important even though it was not fully implemented. Changes in the laws and funding processes gave the municipalities responsibility for administering the health systems human resources (health workers: doctors, nurses and auxiliary nurses) by control and supervision at the central level. As a result, the budget received from the central level was used in a better way by focusing on the needs of all the communities. The municipalities became organized for managing the delivery

of preventive, health promotion and curative health services by ensuring the correct implementation of the national health policies.

At present, the government funding level is increasing in the area -- the municipal government is dedicating more money for health activities, making it possible to hire more doctors and auxiliary nurses, using resources from HIPC (debt relief under the Highly Indebted Poor Countries Initiative).

Decentralization also provided the impetus for Curamericas/CSRA to develop a role as a health system administrator and not just a technical/financial resource. Very early on during decentralization, the project team realized that the municipal governments generally did not have the capabilities to manage the new resources with which they were charged. The team saw that they could serve as capacity builders for these officials to improve local capacities to manage administrative and financial services more effectively.

Evaluation / Analysis Methodology:

The project results are from Curamericas' final evaluation results conducted in 2001. The information was obtained through: analysis of baseline and final KPC studies; review of financial data and project indicators; meetings and interviews with project staff; key informant interviews with Municipal Government and Municipal Health Board staff; and site visits and observations. Key indicators to measure improved local management of child health services included: increase local support for recurrent costs of health facility management from 18% to 50%; increase resources from the regional representatives of the central Government of Bolivia by 15%; and, increase from 3% to 20% municipal support for local health systems.

Results:

The project has proven that an NGO can have an impact on how municipal governments manage health systems and can demonstrate success in the following areas: development of vision and competencies through accompaniment in the provision of health services; capacity building through participation on municipal health boards; and, demonstration of personal and professional values that inspire MOH and municipal partners to deliver quality health services.

Through formal, signed agreements with the government partners, Curamericas/CSRA was able to guarantee that municipal funds and reimbursement for health care services provided by the Basic Health Insurance package were used in support of the local health services. Local support for recurring costs increased among all municipal governments from 20% to 42% (Carabuco had the largest increase from supporting 19% of recurring costs at the beginning of the project, to over 54% of all recurring operating expenses at the end of the project). Funding from the regional representative of the Government of Bolivia increased from \$69,440 in 1997 to \$95,933 (an increase of 27%). Finally, municipal support for the local health systems fell short of the program goal yet did achieve substantial increases in funding. In Carabuco, municipal funding increased from 3% to 19%; in Puerto Acosta funding increased from 5% to 14%, while in Ancoraimes municipal funding only increased from 1% to 5% (aggregated funding over the three municipal governments increased from 3% to 13%).

Coverage rates for key child health indicators also increased over the course of the four-year child survival project. On the other hand infant mortality (less than 1 year) decreased from 83 in 1998 to 58 in 2001 as an average result from all the CSRA project area.

PROJECT OBJECTIVES	KPC 1998	KPC 2001
Increase the number of children age 12-23 months with complete vaccination coverage	40%	73%
Increase the number of mothers seeking treatment from trained health personnel for their children age 0-23 months with signs of pneumonia.	39%	53%
Increase the number of children age 0-23 months who receive growth monitoring six times per year	33%	73%
Increase the number of pregnant women delivering in the presence of a trained person	8%	30%

An important result of this approach has been the development of a network of health care services, with a system of referral centers and health posts that are accessible for the majority of the people (90% of the population lives within an hour walk of a health post). In addition, the Bolivian government actively promoted a national health care system that provided many child and maternal health services for free to the clients and reimbursed the municipal governments for the services rendered. The combination of community health posts that are easily accessible and the promotion of the national insurance system have increased access to health services. Active promotion of the health insurance system has increased access to services, which has increased demand for services, leading to additional income and more financial stability for the health care facilities.

Another result of the work with the municipal health boards is that the health boards no longer think of health just as the absence of illness, but have begun to think of health as something more holistic and intersectorial. For example, in Puerto Acosta an intersectorial coordination committee has incorporated organizations that work on related issues such as education, microcredit, water and hygiene, and agriculture, among others. The first outcome of this committee has been to improve adult literacy levels, household water quality, and to introduce microcredit in many villages. Meeting the urgent needs of the community has improved the health and well being of the community as a whole.

CSRA has continued to work with the municipal governments and, since 2001, the health boards have grown to include more partners. These partners include other NGO's and representatives from the education sector, in addition to representatives from the mayor's office, community and the Ministry of Health. As the process has evolved and health boards have developed, CSRA, as an NGO, has assumed more of a role as technical advisor rather than the coordinator or leader in this health planning process.

In Carabuco, even though Curamericas/CSRA has ended its project in the municipality, the health boards continue to support local health facilities, and the municipal government continues to provide financial support for child health and maternal health services. One cause for this sustained support has been the development of demand for services at the community level; the communities and people are aware of their rights and they demand access to quality health services.

In Curamericas/CSRA's new service area of Senkata, (a peri-urban neighborhood in El Alto), CSRA has begun working with community health representatives and neighborhood organizations to increase the local demand for health care resources as a strategy to sustainability. This project only started in 2003, but this work with neighborhood organizations has already resulted in increased levels of staffing for clinics (assignment of additional nurses and physicians), paid for by the ministry of health due to increased political support from the mayor's office.

LOCAL SUPPORT FOR CURRENT COSTS

GEOGRAPHIC AREA	Base line 1996-1997		Percent Local Support	Final 2000-2001		Percent of Local Support
	Total operational budget	Local support		Total Operational Budget	Local Support	
Carabuco	\$120,867	\$ 22,787	19%	\$ 152,201	\$ 82,807	54%
Ancoraimes	\$135,874	\$ 27, 801	20%	\$ 147,252	\$ 50,519	34%
Puerto Acosta	\$69,094	\$ 16,305	23%	\$ 152,568	\$ 58,504	38%
Total	\$ 325,835	\$ 66,305	20%	\$ 452,021	\$ 191,830	42%

Partners:

A key partner in the success of this project was Curamericas' local counterpart NGO, Consejo de Salud Rural Andino. Other partners included the Bolivian Ministry of Health, and the municipal governments of Ancoraimes, Carabuco and Puerto Acosta.

Discussion:

The Curamericas-CSRA project has been successful in reaching its objectives, based upon a comparison of final KPC data with baseline indicators. Several of the implementation strategies represent innovations management of child health care systems: use of the CBIO approach shared management of health services between the public and private sector (MOH-NGO) and joint management of municipal health systems. The challenges facing Curamericas and CSRA at this juncture are: to expand the strategies that have been developed to other regions of Bolivia and to the other countries, to explore opportunities for influencing national Bolivian health policy based on their successful models of local health systems management and to document these experiences so they can be shared on a global level. To achieve these goals, CSRA found it necessary to hire a full time person to assist the health directors in working with municipal health boards. In 2003 the co-administrative specialist began writing a training guide for working with health boards that will be useful for all CSRA project areas. Since each area has different particularities, the guide will be adapted to the local contexts of each region.

Working with health boards requires a significant, ongoing commitment of staff time, but can be well worth the effort for a variety of reasons. This activity supports achievement of child health goals through increased access to financial resources as well as increased community understanding and buy-in to the project. Open sharing of information about the realities in the communities is an important key to success. Working with health boards in this way provides capacity building for the municipalities, and strengthens their commitment to the communities they serve. This process has also resulted in increased community demand for services. Villages have demanded new health posts in strategic areas (within a one hour walking distance for the majority of people in un-served populations). Work with municipal health boards is an important strategy for sustainability and capacity building in community health projects.

In conclusion, in Curamericas and CSRA experience:

1. CSRA's strategy of engaging in shared management of local health systems with municipal health boards and MOH facilities has resulted in increased coverage of preventative and curative services to the population and a decrease in maternal and infant mortality, and represents a true joint undertaking to improve local health systems.

2. An NGO can have a huge impact on how municipal governments manage health systems.
3. It is possible to implement inter-sectorial development programs with a high level of synergy among sectors, if the municipal government buys into an integrated vision and takes a leadership role in fostering inter agency participation.
4. Empowerment implies change and change implies risk. If health personnel and other change agents are not willing to share these risks, there is no example for community members to follow.
5. In order to sustain health programs it is very important to increase the participation of municipal governments, municipal health boards, and other community-based organizations.
6. There is a need to constantly work with members of the health boards because of the inherent instability in membership of health boards, due to political and personal factors. Increased levels of awareness and training also increase the likelihood of sustainability. It would be preferable to maintain lines of communication and information with municipal governments about the health situation. Without this ongoing communication, there is no certainty that this kind of support can be maintained.
7. There is a need to have a systematic approach, even though it is a very time consuming, on-going process.

**Working Through Communities and Local Government to Increase Capacity for
Health Programming in Kanchanpur, Nepal**

CARE-Nepal

Submitted for the workshop:

Reaching Communities for Child Health:
Advancing Health Outcomes through Multi-Sectoral Approaches

March 23 - 25, 2004

Washington, DC

LIST OF ACRONYMS AND ABBREVIATIONS

ARI	Acute Respiratory Infection
CARE HQ	CARE Head Quarter
CBO	Community Based Organization
CHE	Community Health Extensionist
CM	Community Mobilization
CB-IMCI	Community-Based Integrated Management of Childhood Illness
CM	Community Mobilization
CS	Child Survival
CSP	CARE-Nepal Child Survival Project in Kanchanpur
DCM	Diarrhea Case Management
DD	Diarrheal Disease
DDC	District Development Committee
DPHO	District Public Health Office
DIP	Detail Implementation Plan
EHP	Environmental Health Program
EPI	Expanded Program of Immunization
EOC	Emergency Obstetric Care
FWR	Far-western Region
FCHV	Female Community Health Volunteer
FCHV-CC	Female Community Health Volunteer Coordination Committee
FHE	Family Health Extensionist
GON	Government of Nepal
HFS	Health Facility Survey
HMG	His Majesty's Government
HMIS	Health Management Information System
HP	Health Post
HFMC	Health Facility Management Committee
HQ	Headquarters
HWS	Health Worker Survey
IFA	Iron and Folic Acid
IEC	Information Education Communication
IMCI	Integrated Management of Childhood Illness
INGO	International Non-Governmental Organization
JSI	John Snow International
LG	Local Government
LPO	Local Partner Organization
MCHW	Maternal and Child Health Workers
MG	Mothers Group
MM	Mahendranagar Municipality
MNC	Maternal and Newborn Care
MOH	Ministry of Health
MS	Multi-sectoral
NGO	Non-Governmental Organization
ORS	Oral Rehydration Solution
PCM	Pneumonia Case Management

PIMS	Project Information Management System
PO	Partner Organization
SHDK	Safe Home Delivery Kit
SHP	Sub-Health Post
SHPMC	Sub-Health Post Management Committee
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
TTBA	Trained Traditional Birth Attendant
USAID	United States Agency for International Development
VIC	Village Development Committee
VHW	Village Health Workers

Project background

High rates of child morbidity and mortality in Nepal highlight the poor health status of Nepalese children. Mortality rates are especially high in the Far-Western Region (FWR) of Nepal: while under-five mortality of Nepal is estimated to be 139.2 per 1000 live births, it is estimated to be as high as 178.5/1000 in districts in the FWR (Nepal Family Health Survey, 1996). The lack of effective community mobilization and weak government capacity to provide access to quality health services in Nepal limits the effectiveness of interventions to improve child health.

CARE-Nepal collaborated with the District Public Health Office (DPHO) and other local partner organizations (POs) to implement a Child Survival Project (CSP) in Kanchanpur district, located in the FWR of Nepal, from October 1999 to September 2003. The goal of the CSP was to contribute to the reduction of maternal and child mortality in Kanchanpur district by achieving progress towards four broad objectives: improved healthy behaviors and care-seeking by caregivers, increased community access to health services and supplies, improved capacity of local and community-based institutions to support child survival (CS) activities; and improved quality of care provided by community-based health personnel. Major technical interventions of CSP include pneumonia case management, control of diarrhea disease, maternal and newborn care, nutrition, and malaria control. This paper documents the approach used by CARE-Nepal to implement the CSP, the results that were achieved, and the principal lessons that were learned.

Project strategies

This section briefly describes the four primary strategies that were used to guide project activities.

Strategy 1: Community-Based IMCI (CB-IMCI)

The CSP used CB-IMCI as an overarching strategy through which individual technical intervention areas were addressed. CB-IMCI is a well-established program in Nepal. The MOH-implemented IMCI training in Nepal focuses on five major technical interventions (ARI, DD, EPI, nutrition, and malaria control). The CSP supported all three components of CB-IMCI – training of health staff for appropriate case management, health system strengthening, and community and family practices.

Strategy 2: Partnership with local government

The CSP committed itself to work closely with officials from local government (LG) in the design and implementation of the project. CSP extended functional coordination with LG for synergetic effect of the project and such examples includes joint planning, implementation and monitoring of CS activities, resource sharing, strengthening management capacities, strengthening health cell in Mahendranagar Municipality, initiation of FCHV program in municipal area etc.

Strategy 3: Community mobilization

The community mobilization (CM) strategy followed by the CSP consisted of three key components. The CSP worked with communities to identify and train a new cohort of population-based FCHVs, resulting in an increase of FCHVs in Kanchanpur from 171

women in 1999 to 835 in 2003. The CSP also supported the formation of FCHV Coordination Committees (FCHV-CCs) at the VDC-level. The vision of project stakeholders was that FCHV-CCs – composed entirely of FCHVs – would serve as providers of health care services (both individually in their own service areas as well as in a group), overseers of care provided by fellow FCHVs, and local-level advocacy bodies. Finally, the CSP supported the mobilization of Mothers Groups (MGs). Each FCHV worked closely with a MG, which constituted both the principal forum where CSP activities were implemented as well as a second channel for community mobilization.

Strategy 4: Multi-sector approach to compliment CB-IMCI

CSP adopted a strategy of including multi-sectoral (MS) activities in collaboration with several organizations. These activities played an important role to complement health-related activities and made the CSP a more effective project. The CSP was able to mobilize resources for the multi-sectoral activities from within the allocated budget and through other partners/donors. The multi-sectoral activities included the formation of group saving and credit schemes by MGs, the conduct of literacy classes, and the implementation of a water and sanitation program.

Evaluation methodology

Data were gathered throughout the duration of the CSP to provide information for monitoring and evaluation purposes. The routine project reporting system consisted of periodic reports, the Project Information Management System (PIMS), the MOH Health Management Information System (HMIS), and periodic evaluations of the project (annual reviews, mid-term and final evaluations). This paper is primarily based on the findings of the CSP final evaluation¹³ that was conducted in September 2003. An overview of the methodology of this evaluation is provided below.

Evaluation objectives: The objectives of the final evaluation included an assessment of project impact; the identification of areas of success and lessons learned in the first phase of the CSP; the determination of promising practices and opportunities for scaling up, replication, or use of the approach in a broader context; and the recommendation of program activities, strategies, and approaches for the second phase of the CSP.

Evaluation approach: The evaluation used a participatory approach¹⁴. The evaluation was guided by a 16-member evaluation team that included representatives from USAID-Nepal, MOH Child Health Division, CARE-Nepal, CARE-HQ in Atlanta, the Nepal Family Health Program, the Social Welfare Council (the official GON counterpart of the CSP), the Kanchanpur DPHO, and independent consultants.

Quantitative data collection: CSP logframe indicators were measured at baseline through a number of data collection activities that included a household cluster survey conducted in

¹³ The final evaluation report, titled Child Survival in Kanchanpur District, Nepal, is available from CARE-Nepal or CARE-US, in electronic format. Please contact Nirmala Sharma (nirmala@carenepal.org) or Sanjay Sinho (sinho@care.org).

¹⁴ based on Participatory Program Evaluation Manual: Involving Program Stakeholders in the Evaluation Process (Aubel; 1999).

February 2000 (n = 300) and a survey of health facilities in Kanchanpur. Most logframe and Rapid CATCH indicators were reassessed in final evaluation in August 2003 through three surveys: a household cluster survey, a survey of facility and community-based health workers and a survey of health facilities.

Qualitative data collection: The final evaluation team developed qualitative data collection instruments and gathered data from project-field using qualitative techniques that includes group-discussions, in-depth interviews and observation. A number of stakeholders including officials from MOH, USAID-Nepal and partner organizations were also interviewed .

Results

This section presents an overview of the achievement of objectives by the CSP and results for key project strategies.

Achievement of project goals and objectives

The final evaluation report of the CSP presented a “meta-analysis” of achievements of program goals and objectives. This analysis, presented below, examines two broad measures of achievement for each of the four CSP objectives:

Achievement of objectives: Among those indicators with comparable baseline and final estimates, the fraction of indicators that show a ten percent or greater improvement from baseline to final.

Achievement of goals (targets): Among those indicators with stated goals, the fraction of indicators for which the final estimate equals or exceeds the goal (i.e., target) set by the CSP in the Detailed Implementation Plan (DIP).

Table 1: Degree of Gain in Indicators and Achievement of Goals, by Project Objective

Project Objective	# of indicators with $\geq 10\%$ improvement						Total	# of indicators where final estimate equals or exceeds goal						Total
	N	DC M	MN C	PC M	M	G		N	DC M	MN C	PC M	M	G	
Behavioral	1/3	4/5	3/3	1/1	--	--	9/12	0/1	2/5	1/3	0/1	--	--	3/10
Access	1/2	0/1	0/1	2/2	1/1	--	4/7	0/2	0/1	0/1	2/2	1/1	2/3	5/10
Quality of care	--	--	2/3	--	--	--	2/3	--	3/3	2/3	2/2	--	1/3	8/11
Institutional	--	--	--	--	--	--	--	--	--	--	--	--	6/7	6/7
Total	2/5	4/6	5/7	3/3	1/1	--		0/3	5/9	3/7	4/5	1/1	9/13	
Overall total	15/22							22/38						

Notes: 1. N = Nutrition, DCM = Diarrhea Case Management, MNC = Maternal and Newborn Care, PCM = Pneumonia Case Management, M = Malaria, G = General.

2. Indicators that were included in the analysis are the following: Nutrition (2-4, 6, 7), DCM (2-8), MNC (1-7), PCM (2-4), Malaria (2), and General (1, 2, 4, 7-12). Some indicators were divided into sub-indicators (see Summary Table in Appendix 1 for details).

It is simplistic to comment on whether the four CSP objectives were met or not in a project such as the Kanchanpur CSP. Broadly stated objectives in a complex, ambitious project are met to degrees. The data and analysis above suggest that solid gains were made in achieving the behavioral objective (9/12 indicators increased by more than 10 percent) but that the degree of achievement of behavioral goals (3/10 targets were met) was low. Somewhat more modest gains in the achievement of the access objective (4/7) are balanced by a higher degree of achievement of access goals (5/10). Two of the three indicators that measure achievement of the quality of care objective increased by more than ten percent while the majority of project goals related to quality of care were met (8/11). Similarly, the majority (6/7) of institutional goals were met. Overall, more than two-thirds (15/22) of the indicators for which comparable estimates exist at both baseline and final showed improvements of greater or equal than ten percent while 58 percent (22/38) of project goals that were measured appear to have been met. Combining the data on progress in achievement of objectives and achievement of goals leads to the conclusion that significant progress was made towards achieving all four objectives (behavior, access, quality of care, institutional capacity) but that the strongest gains were in the areas of quality of care and institution-building while improvements in access and behaviors lagged slightly behind.

Achievement in project intervention

Table 2 below gives a brief picture of CSP achievement on its five major interventions.

Interventions	Indicators	Baseline Feb. 2000	Goal	Final Aug.2003
DCM	❖ Decrease the % of children under 2 who have had diarrhea in the past two weeks from 28% to 20%	29 (87/300)	20	13 (38/300)
	❖ Increase the % of children under 2 who had diarrhea in the past two week who were treated with ORS from 1% to 50%	1 (1/87)	50	34 (13/38)
	❖ Use of latrine	16		33
MNC	❖ Increase % of mothers from 6% to 40% who consumed iron folic acid supplements for at least 3 months in last pregnancy.	6 (19/300)	40	26 (77/300)
	❖ Increase % of women who have had at least 2 prenatal visits with a trained provider during their last pregnancy from 23% to 40%.	23 (70/300)	40	50 (149/300)

PCM	❖ Decrease the % of children under 2 who have had signs of pneumonia in the past two weeks from 26% to 20%.	26 (77/300)	20	8 (25/300)
	❖ Increase % of mothers who seek medical care from a qualified trained provider.	27 (21/77)	75	40 (10/25)
Malaria	❖ Increase the % of households having bednets using them for all household members	32 (96/300)		62 (185/300)
Nutrition	❖ Increase the % of mothers who initiated breastfeeding within 8 hours of birth from 91% to 95%	91 (272/300)	95	91 (274/300)
	❖ Increase the % of children 6-24 months who consume vegetables, fruits and foods rich in vitamin A from 63% 75%	63 (119/188)	75	37 (86/232)

Out of total 33 indicators defined in Project logframe to evaluate intervention wise achievement, above given 10 indicators are proportionally selected where as the selection basis includes solid success (achieved and/or near to achieve the goal) and the weakest achievement among the indicators.

Evaluation shows that prevalence of diarrheal disease decreased significantly over the duration of CSP, it is difficult to argue that the CSP activities along made a significant contribution. Availability and utilization of toilets is getting improved but yet to be improved in home-based management of diarrhea and sanitation. Solid gain is achieved to increase prenatal visit with trained service provider. Use of supplement commodities by mothers is increased from 6% at baseline to 26% but yet not achieved the estimated goal to 40%.

Achievement in community mobilization

Community mobilization (CM) was considered to be the most successful aspect of the CSP. The quantitative indicators of success included the percentage of FCHV-CCs supporting their members with strong links to the VDCs and MoH health facilities that are established and operational (95 percent: 18 out of 19 VDC), percentage of wards have established functional community health funds and mechanism for cost recovery for SHDKs, ORS, and Cotrimoxazole (90 percent where as target was 30 percent), percentage of FCHVs are actively involved in health education (74 percent: 23/31) and the percentage of wards that have at least 3 operational Mothers Groups (estimated at greater than 95%). The establishment of FCHV-CCs in each VDC was a major accomplishment of the CSP and its partners, although FCHV-CCs are at a nascent stage and must continue to receive considerable support if they are to become sustainable. Another key finding was that the most crucial area in need of strengthening in CM concerns the mobilization of MG members (an estimated 10-15 percent of all mothers) to work in concert with FCHVs as informal extension agents to reach non-members of MGs. This mobilization is essential: although MGs are in principal open to all mothers in a community, factors including

physical proximity, informal networks, and caste issues often served as barriers to membership.

Achievement in working in partnership with local government

CSP put extraordinary efforts into developing strong relation with LG leaders who from the “gateway to implementation”. Evidence of the strength of the relationship was

- Willingness of local leaders to experiment with health policy without official approval from the national government.
- Quantitative evidence of success in this strategy is the percentage of VDCs that commit some financial support to CS activities at the community level (100 percent: 19/19).
- CSP efforts being written into the 5-year plan of the district
- Implementation of community drug program in all health facilities
- Written commitment by the District Development Committee (DDC) and the Mahendranagar municipality to support the FCHVs financially after the end of the CSP.

CSP partnership with local government has made a complement support in the operationalization of decentralization policy particularly in health sector. The government of Nepal (GON) has promulgated decentralization policy through the strong legislative and regulatory framework embodied in the Local Self-Governance Act of 1999. Under this Act, LG is given the authority, responsibilities, means and resources that are required to make the local bodies capable and efficient in local self-governance. The GON provides certain development funds to LG and grants them the authority to mobilize local resources (taxes & revenues). On top, LG bodies are officially center points to coordinate overall development program at local level. District level government health service structure is gradually being handed over to LG under the decentralization policy. Sub-Health Posts (SHPs) in Kanchanpur have been handed over to VDCs leading to movement towards increased accountability and community surveillance. In this background, program management capacity of LG bodies stands as crucial gateway for the effective implementation of overall local development program. Considering the demonstrated willingness of LG leaders, CSP put additional efforts to extend operational partnership with LGs with an aim to leads towards program sustainability. The CSP provided facilitation support for linkage building between community and LGs and also provided hands on support in program management capacities bywhich contributed for community ownership building and enhancing capacities and accountability to perform the role effectively. Basically, benefit gained from partnership with LGs can be summarized into three points: 1) It led to real DDC/VDC ownership/investment in the project 2) It created the need of regular monitoring and progress follow up of the project during DDC/VDC meetings 3) It helped create a camaraderie between CARE and DDC /VDC staff

Achievement in multi-sectoral approach

The use by the CSP of a multi-sector approach in the implementation of C-IMCI contributed to the success of CSP. The main positive effect of this approach has been to create a synergetic effect with CB-IMCI by addressing the multi-faceted underlying causes that contribute to childhood illness. A brief overview of project results achieved through multi-sectoral activities is given below.

Drinking water and sanitation program: The CSP implemented a drinking water and sanitation program in collaboration with district-level line agencies, NGOs and community members under the funding of Rotary International. CSP also supported FCHVs in their promotion of home-based management of diarrhea and improved household hygiene. Evaluation results showed increased availability and utilization of toilets in the project area and improved home-based management of diarrhea. Although indicators of the prevalence of diarrheal disease decreased significantly over the duration of the CSP, it is difficult to argue that the CSP activities alone made a significant contribution to this improvement.

Literacy classes: The CSP collaborated with the District Education Office to implement literacy classes in areas where the literacy rate was comparatively low, focusing on the indigenous Tharu community who were often absent from MG meetings (MG meetings serve as the primary forum where FCHVs provide regular health education). The CSP used the literacy classes to provide health messages to these communities. This has resulted in an expansion of out-reach services to the marginalized community who often do not benefit from development activities. Health messages that were delivered in formal venues (e.g., literacy class) were found to be more effective in promoting behavior change of caregivers than messages delivered in more informal venues.

Group saving credit scheme: The purpose of the MG saving and credit activity was to introduce community soft-loan schemes to increase the capacity of community members to pay for emergency health care as well as consume nutritious food through promoting kitchen gardening, livestock and other income-generating activities. The saving and credit program also helped to maintain group solidarity among MG members. Some of positive results that demonstrate the complementary effect of saving and credit schemes on CB-IMCI include improving the regularity of conduct of MG meetings, utilization of funds saved by the group for timely treatment in the emergency cases as well as to obtain nutritious foods, and the expansion of MG involvement into other community development work such as sanitation campaign at community level. In addition, MGs have developed a lending policy with the provision of subsidized loan (low interest rate and easy process to access which varies to groups) for health care support.

3.5 Results highlight and conclusion

Community mobilization was a guiding framework for the CSP. The CSP positioned itself on the cutting edge of FCHV related policy development in Nepal. Training, institutionalization and empowerment of FCHVs to provide new services that directly address major causes of child morbidity and mortality including first-line treatment of pneumonia, diarrhea and malaria is a major achievement of the CSP. In addition, a model partnership with LGs, formation of FCHV Coordination Committee (FCHV-CC), pilot initiatives outside the current national policy (e.g. FCHV program in municipal area and concept of FCHV-CC), pioneering approach to community-based malaria prevention and control through FCHVs are the impressive achievements highlighted in the final evaluation report.

The highlighted conclusion of final evaluation report includes to draw attention of CSP-2 for strengthening effective network of FCHV, expansion of MG member coverage, equal or

greater emphasis to strategies over technical interventions with defined phase-strategy, flexible to decentralized decision, policy level advocacy to incorporate and scale-up promising practices.

Partners

The CSP worked with a broad variety of local partner organizations (LPOs) from both local government as well as other institutions and organizations. The LPOs that the CSP supported with funding can be divided into three groups – NGOs, local government (LG), and community-based organizations (CBOs: MGs and FCHV-CCs) – whereas the DPHO and the Social Welfare Council can be considered as counterpart organizations. CSP efforts to build capacity of these LPOs varied by organization. The CSP also coordinated and collaborated at the national-level with INGOs such as JSI and EHP in the areas of CB-IMCI and malaria.

The CSP had a positive experience working with the local branches of government in Kanchanpur. The CSP found the HMG system to be a relatively well-established structure and an ability to initiate a national-level rollout that can contribute to sustainability as well as to the establishment of new policy (best practices) and replication throughout the government system. The CSP has positive experience working with local government (i.e., VDC and DDC) in line with the HMG decentralization policy. The CSP found local government to be responsive and accountable to civil society (due to the elected nature of local officials).

Discussion

CB-IMCI is widely considered to be one of the best strategies to address major health problems of children in developing countries. Realizing that health is not separate from other social problems, but rather closely interrelated with them, the CSP made attempts to incorporate health programs into the mainstream of development by developing a partnership with LG bodies and the community. This has contributed to an increase in the community's ownership and therefore enhanced the sustainability of the program. The focus of this discussion section is on two issues: 1) advantages and disadvantages of intensive engagement of local government for future scale-up of project strategies, and 2) lessons learned during CSP regarding the application of multi-sector approaches within the CB-IMCI framework.

Partnership with local government

The expressed goal of the CSP partnership strategy with local government was to strengthen local capacity to ensure quality health care through the active participation of local leaders. In addition, this strategy strengthened government decentralization policy, outreach expansion, local resource mobilization, and created community ownership through which the service system moved towards sustainability.

CARE centered the CSP sustainability strategy on three primary components of sustainability: behavioral (i.e., mechanisms at the community level to improve the quality of health care through FCHVs and MGs), institutional (i.e., demand creation with improved utilization and supplies through MGs, FCHV-CCs, SHPs/HPs, HFMCs, and local NGOs; and increased surveillance through local government), and financial (i.e., through

increasing the paying capacity of the community and cost-recovery systems such as the Community Drug Program and Saving and Credit Schemes).

The primary obstacles to sustainability of government surveillance are the work burden that DPHO staff members must manage with limited resources coupled with the poor quality of HMIS data. The CSP has found that VDC-level sustainability is more fragile and varies among VDCs as to the VDC will have to assume primary responsibility.

One of the biggest advantages of working closely with LG is the potential for scaling up positive project strategies and interventions. The experiences gained by the CSP in this regard are encouraging and are described briefly below.

Advantages of engaging government for future scale up of project

1. The project "fits" well within the government system – the government system is almost the same everywhere, so it is easier to scale up on a wide scale. CARE-Nepal was awarded a grant by the Child Survival and Health Grant Program in the expanded impact category to replicate the best practices of the CSP and expand the most promising interventions and strategies into five districts of the Far-Western Region of Nepal.
2. One of the most practical lessons learned is that success working with government in one district is appreciated and respected by government officials in other districts – “the word gets around” and the project is favorably received to scale up.
3. The funds provided from central government that are controlled by local government are similar across the country – scaling up an approach that builds on local government investing in their own community works well because all local communities control their own revenue.
4. When the pilot project is completely implemented within the government system, the scale up is easier because there is no need to look for an implementing partner or framework and repeat the work done in the pilot to develop ownership – the lead partner (i.e., the government) is already determined, and the INGO can focus its efforts on supporting implementation and technical support.
5. HMG has relatively standardized set up and system for health service delivery in all sites that provides support to scaling up the intervention.

Disadvantages of engaging government for future scale up of project

1. Political issues can have a negative effect on program implementation.
2. The support received from government varies among districts. The Kanchanpur local government was exceptionally supportive – the project will be more difficult to scale up in districts where local government is less supportive.
3. HMG is a bureaucratic organization that generally works in a slow and inefficient manner.
4. The government is currently threatened by the Maoist insurgency that causes frequent disturbances in project implementation.
5. GON officials have a relatively negative outlook towards strategies that are followed by CARE-Nepal such as a right-based approach and advocacy; these officials do not want to follow strategies that encourage the public to pressure them, especially in the current

context in which the democratic system is not properly institutionalized and the political situation is unstable.

5.1.3. Factors for success in partnering with local stakeholders in Kanchanpur

Systematic factors : The project paid full attention to create project ownership by community and local government that the examples includes intensive consultation, due weight to LGs opinions/needs, joint planning and monitoring, innovative peer support networks for grass root level workers, capacity building training and orientation on different health and management issues, strategic utilization of cross visits and capacity building opportunities, active presence in different coordination forum and transparency maintaining.

Subjective factor: Personal chemistry between the CARE and local government leadership, progressive local leadership, decentralized management, impeccable reputation in the field is some of examples of subjective factor.

Challenges: A major challenge of project is to keep momentum going on and to institutionalize personality based relationships. Besides, scarcity of trained human resource and staff training; financial resource scarcity in LG, absence of elected body in LG are placed as challenges for the Project.

Application of multi-sectoral approach in CB-IMCI

Communities face different problems in all sectors. Their problems are not solely concentrated in health, therefore a Multi-Sectoral (MS) approach allows communities to play a role in defining and addressing their own problems on a broader scope (i.e., in areas that are inter-related with health), improving community ownership and contributing to a synergetic effect.

Constraints of MS approach in CB-IMCI

There are several constraints that a project seeking to adopt a MS approach may face. Projects do not always have expertise in different sectors – collaboration is necessary if a MS approach is to be followed, and collaboration can be quite difficult in practice. In addition, projects are donor-dependent and are implemented for a limited duration, thus leading to a limited scope of activities (i.e., to address specific programmatic issues) that they can take on. Adding a MS strategy to a project will therefore often require exploration of funding externally, which is an effort that can take time away from valuable program activities.

Project impact in MS approach

The MS strategy was not included in the original design of the CSP. The driving force for adding the MS strategy at a later stage was the high potential of strategies such as community mobilization and working through local partnerships to interact with MS approaches to address emerging needs. Because the evaluation plan was not designed to measure impact achieved through the MS strategy, it is difficult to attribute positive project impact to MS activities. In retrospect, the following evaluation results suggest that MS activities may have contributed to the achievement of CSP objectives:

1. Positive results in diarrheal disease management (related to MS activities in water and sanitation).
2. Notable improvements in the percentage of deliveries attended by trained and skilled birth attendants (related to MG saving and credit schemes).
3. The empowerment of mothers through the literacy program may have contributed to sustainable impact through the strengthening of CBOs (e.g., MGs, FCHV-CCs) at the community level.

