

Final Evaluation of the Kabeho Mwana Expanded Impact Child Survival Program



A partnership of Concern Worldwide, the International Rescue Committee, and World Relief

**Gisagara, Kirehe, Ngoma, Nyamagabe, Nyaraguru,
and Nyamasheke Districts; Rwanda**

October 2006- September 2011

USAID COOPERATIVE AGREEMENT # GHS-A-00-05-0018-00

Submitted on: December 22, 2011

Prepared by: Eric Sarriot, ICF International, [CEDARS](#); and the Kabeho Mwana Final Evaluation Team



Acknowledgements

I would like to thank all the members of the evaluation team¹ for three intense weeks of work, and considerable efforts to educate the lead evaluator.

Thank you to all the authorities in the districts of Gisagara, Kirehe, Ngoma, Nyaruguru, Nyamagabe, Nyamasheke, notably Ministry of Health professionals from the district hospitals, district offices, and health centers. Much appreciation to the CHWs and Cell Coordinators who have provided time and information to the evaluation team, as well as cooperative members, and mothers interviewed in health centers, who have provided us with information.

Particular thanks to the Community Health Desk for valuable inputs and data, as well as to the National Malaria Program. Colleagues at USAID and UNICEF contributed insights and valuable perspective into this exercise.

Thanks to the US backstop teams of Concern, IRC and World Relief for time provided both before and during the work in Rwanda, and to the entire project team and Dr Rose Luz for countless hours clarifying questions, gathering documents and providing interview and field notes. Thanks to Dr Laban Tsuma of MCHIP for sharing burden of work and notes about central level interviews with stakeholders.

Cover photograph by Mike Goldwater for Concern Worldwide

¹ Evaluation Team Members are listed in Annex VIII.

Table of Contents

Acknowledgements	ii
Table of Contents	iii
List of Annexes	iv
Acronyms	v
Glossary	vi
Project Photos	vii
Map of Rwanda and the Six Districts of Implementation of Kabeho Mwana	ix
A. Executive Summary	x
Key Findings/Results	xi
Conclusions and Recommendations	xiii
B. Introduction: Overview of the Project	1
Rwanda—National Context	1
The community health structure in Rwanda	2
Project Results Framework	3
Inputs	4
Key Interventions	5
C. Methodology and Limitations	9
Early consultations and data collection planning	9
Primary and Secondary Data Sources	9
In-country kickoff and finalization of field guides	10
Qualitative Data Collection: Note-taking and Reporting	10
Team synthesis	11
Limitations of the evaluation:	11
D. Data Quality and Use	12
E. Child Health Achievements [Presentation of Project Results]	13
Malaria Control	13
Control of Diarrheal Diseases	13
Pneumonia Case Management	14
Other Health Achievements	14
F. Evaluation of Kabeho Mwana’s Strategic Contributions [Discussion of the Results]	18
F.1: A major achievement: expanding CCM in six districts	18
F.2: Strengthening Health Service Delivery Systems	22
F.3: Community Mobilization and Health Promotion	33
F.4: The Care Groups in the Context of c-IMCI in Rwanda	37
G. Discussion of Potential for Sustained Outcomes, Contribution to Scale, Global Learning, CHW Approaches, etc.	40
H. Conclusions and Recommendations	46
H.1: Conclusions	46
H.2: Suggestions / Recommendations	48

List of Annexes

Required Annexes

Annex I	Results Highlight
Annex II	List of Publications and Presentations
Annex III	Project Management Evaluation
Annex IV	Workplan Table
Annex V	Rapid CATCH Table
Annex VI	Final KPC Report
Annex VII. a.	CHW Training Matrix
Annex VII. b.	Levels of Training at
Annex VIII	Evaluation Team Members and their Titles
Annex IX	Evaluation Assessment Methodology
Annex X.	List of Persons Interviewed and Contracted during Final Evaluation
Annex XI.	Special Reports • 1 - HFA Report • 2 - Community Capacity Assessment Report • 3 - Nutrition Abstract
Annex XII	Project Data Form
Annex XIII	Grantee Plan to Address Final Evaluation Findings

Supplemental Annexes

Annex XIV	Terms of Reference for Final Evaluation
Annex XV	Data Sources and Documents Consulted
Annex XVI	Project Timeline
Annex XVII	Ministry of Health Community Health Desk Presentation
Annex XVIII	Child Assessment and Treatment Protocol (French version, 2007)
Annex XIX	Project Measurement Plan
Annex XX	Final Evaluation Schedule of Meetings and Field Visits
Annex XXI	Final Evaluation Field Guides
Annex XXII	Major Project Accomplishments

Acronyms

ACT	Artemisin Combination Therapy
ANC	Antenatal Care
BCC	Behavior Change Communication
CCM	Community Case Management (see glossary)
CDC	Community Development Committee
CDD	Control of Diarrheal Disease
CHD	Community Health Desk (MOH)
CHW	Community Health Worker
CIDA	Canadian International Development Agency
c-IMCI	Community-IMCI
COSA	<i>Comité de Santé</i> (Health Committee)
CSHGP	Child Survival and Health Grants Program
DIP	Detailed Implementation Plan
EIP	Expanded Impact Project = Kabeho Mwana
GOR	Government of Rwanda
HBM	Home-based Management of Malaria (see glossary)
HC	Health Center
HFA	Health Facility Assessment
HIS	Health Information System
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
IR	Intermediary Result
IT	Information Technology
ITN	Insecticide-treated Bed Net
KPC	Knowledge Practice and Coverage Survey
LiST	Lives Saved Tool
LLITN	Long-lasting Insecticide-Treated Bed Net
MOH	Ministry of Health
NMCP	National Malaria Control Program
PBF	Performance-based Financing
PMI	President's Malaria Initiative
PSM	Procurement and Supply Management
QA	Quality Assurance
RDHS	Rwanda Demographic and Health Survey
RDT	Rapid Diagnostic Test
Sub-IR	Sub-Intermediary Result
TWG	Technical Working Group
USAID	United States Agency for International Development

Glossary

Binôme: Community Health Worker (CHW) assigned to and trained in Community Case Management (CCM). Each village has one male and one female CHW dedicated to CCM (hence the name “*binôme*”).

Cell Coordinators: A *binôme* chosen as the supervisor of around 15-20 *binômes* at the cell level. The Cell Coordinator conducts peer supervision visits, and is responsible for compiling and submitting CHW reports, including drug quantification and requisition, to the health center.

Community Case Management (CCM) for the context of Rwanda and this report will refer to the integrated approach to the treatment of three diseases by CHWs: pneumonia, diarrhea, and malaria.

Community Health In-Charge (*Chargé de Santé Communautaire*) is the CHW Supervisor based in each health facility and tasked with support and supervision of CHWs.

Community Health Supervisor: Hospital level community health supervisor, operating above the community health supervisors.

EIP-supported Districts shorthand for the six districts supported by the Rwanda EIP (Gisagara, Kirehe, Ngoma, Nyaruguru, Nyamagabe, Nyamasheke), although they are entirely staffed and managed by the Rwanda Ministry of Health and district authorities.

Health Center Data Manager: Responsible for all health center data compilation, analysis and submission to *Titulaire*

Home-based Management of Malaria (HBM) refers to the provision of anti-malarial treatment at community level by Community Health Workers (CHWs). It is in essence a form of community case management² approach, but will be referred to exclusively as HBM for this report.

Hospital Data Manager: Responsible for data compilation, analysis and submission of all health center data hospital level to Medical Directors

In-Charge of Social Affairs: Local authorities elected at village level in charge of health mobilization and other social cases in the community

Maternal CHW: formerly Traditional Birth Attendants who have assume the role of Maternal Health Animators for safe motherhood and newborn health

Medical Director: Responsible for all curative and community-based health care in all health centers under the catchment area of the hospital

Mutuelle: A national mutual health insurance allowing financially-attractive access to health services by individuals and households.

Palliative Care Health Worker: Responsible for chronic illnesses in the community, e.g. HIV and AIDS, tuberculosis

Titulaire: Head nurse and overall in charge of health center operations and health activities in the sector

² Winch P, Gilroy K, Wolfheim C, et al. Intervention Models for the Management of Children with Signs of Pneumonia or Malaria by Community Health Workers. Health Policy and Planning. Vol 20, Issue 4. P. 199-212. July 2005.

Project Photos



Josepine Mukahirwa, a community health worker of three years educates Tuyishime Sylvie, 26, in Gasambu on the importance of using a bed net.



Mukarurangwa Cecile, a community health worker in Marebe, pictured here with her community case management register, visits the home of Josepha, 30, and Valentine, 3, to examine illness.

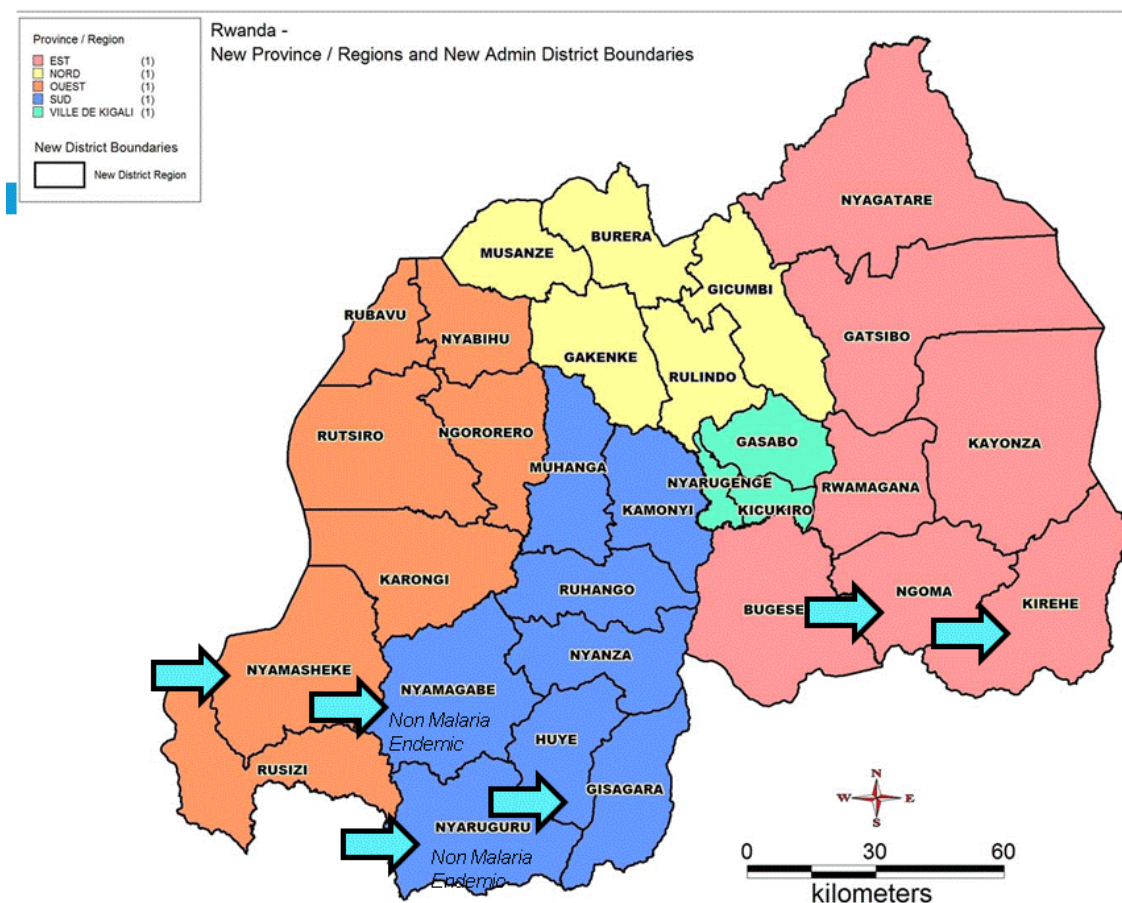


Janviere, 38, travels to the home of Christianne, 51, a community health worker, to test and treat her daughter for malaria



Bahomwana Care Group members meet in Gasambu village to receive training and exchange ideas on how to improve their work as community health workers.

Map of Rwanda and the Six Districts of Implementation of Kabeho Mwana



A. Executive Summary

Kabeho Mwana (“Life for a Child”) was implemented from October 2006 to September 2011 as one of 16 USAID/Child Survival and Health Grants Program (CSHGP)-funded expanded impact projects (EIP) worldwide. It was designed to scale up community case management (CCM) of malaria, diarrhea, and pneumonia, and to promote key community-level health promotion and disease prevention actions in Rwanda. Concern Worldwide was the lead agency, and implemented in partnership with the International Rescue Committee (IRC) and World Relief. The project covered six districts in Southern and Eastern Rwanda: Gisagara, Kirehe, Ngoma, Nyamagabe, Nyamasheke, and Nyaruguru, representing one-fifth of the districts of Rwanda and 18% of the country’s total population.

The project objectives included:

- 1) Increasing access to prompt first-line treatment for young children with malaria, diarrhea and pneumonia by expanding CCM, strengthening health service delivery systems, and establishing performance contracting for CHW supervision.
- 2) Increasing coverage of key preventive interventions by improving targeting and increasing the breadth of preventive child health services through outreach.
- 3) Increasing adoption of key family health practices through community mobilization and social behavior change.

During these five years, the Government of Rwanda (GOR) built on initial efforts at decentralization (2005) to accelerate and nationally scale its community integrated management of childhood illnesses (c-IMCI) approach. Under the governance of the National Malaria Control Program (NMCP), independent efforts of the three NGO partners had already built a positive experience in Home-based Management of Malaria (HBM). As the GOR created the MOH’s Community Health Desk (CHD), it established a national policy for integrated Community Case Management (CCM). This generated both high demands on Kabeho Mwana for flexibility, and a supportive environment for achieving results.

The project’s main interventions, outputs and outcomes are summarized in Table A.1 below. The project’s interventions primarily brought together:

- Equipping, training, and supporting the supervision of CHWs (*binômes*) to carry out CCM for three deadly childhood illnesses.
- The organization of CHWs (*binômes* and others) into CHW peer-support and collaboration groups, or Care Groups. These Care Groups had the primary mission of organizing health promotion efforts through outreach and home visits, but they also became integrative structures for the work of different types of CHWs.
- Support of behavior change communication through the production of visual aids, the training of trainers and the training of CHWs and community leaders.
- Strengthening health service delivery through community drug procurement and support to health information systems, notably through the use of a IMCI Bulletin, providing rapid information at local level through feedback meetings between MOH / health center staff and CHWs / Cell Coordinators.

These interventions were supported by a considerable effort in training, carried out with the

MOH. On average, 71 persons were in training each work day of the project.

Key Findings/Results

Malaria Control: From 2006 to 2011, appropriate care seeking for fever in the six districts reached 75%, and appropriate treatment jumped from 20% to 43%. These remarkable achievements could represent a third of the national gains observed between the Rwanda Demographic and Health Survey (RDHS) 2006 and 2011.

Control of Diarrheal Diseases (CDD): Progress in CDD is far less impressive than for malaria. The improvement in use of ORS (increased from 19% to 33%³) mirrors that of the RDHS. Treatment of diarrhea with zinc progressed from less than 5% to 22%. One of the most positive results in terms of CDD is that the number of caretakers who either increased fluid intake or additional food to a child with diarrhea just about doubled (from 36% to 61% for increasing fluids, and 22% to 57% for increased feeding⁴).

Pneumonia Case Management: Care seeking for respiratory symptoms progressed nationally from 27% to 50%. Knowledge, practice and coverage (KPC) survey data indicate an even more substantial increase in the six districts, from just 13% to 63%, suggesting that progress in the EIP-supported districts may be responsible for over 40% of the national improvement in the last five years. 54% of children in the six districts benefited from appropriate care seeking as well as appropriate treatment for pneumonia (baseline unavailable; would have been below 13%).

Achievements observed in other areas: Other indicators improved, such as Vitamin A coverage (66% to 86%), point-of-use water treatment (doubled from 31% to 65%), and hand washing (2% to 19%). In this latter case, the integration of practical options (such as tippy taps for hand washing) with health promotion “messages” was a strength of health promotion efforts.

These mostly-impressive results were achieved by Kabeho Mwana and the health districts in good part by **making CHWs the first line of treatment for caretakers of children with fever, respiratory symptoms and diarrhea**. By the end of the project, 69% of mothers of children 0-23 months had consulted one of nearly 6,200 CHW *binômes* at least once for the sickness of their child. Over the 12 months prior to the evaluation, the EIP-supported districts delivered about a third of community treatments in Rwanda for pneumonia, diarrhea and malaria.⁵ The evaluation noted, however, that levels of utilization decreased, not just in the six districts but nationally over the last year. Possible factors are analyzed but likely include a decrease in consultations for fever (for which the prevalence has made a notable decline in the last five years), and still insufficient attention to diarrhea.

Kabeho Mwana implemented interventions aimed at strengthening quality of care, including supervision. It provided coaching and facilitated communication between levels of the health pyramid, helping to improve response time to breakdowns in the supply chain.

³ This change is not statistically significant, but equivalent to the RDHS change, which reaches statistical significance.

⁴ Both changes are statistically significant. See Section E and the KPC report in Annex VI.

⁵ Data from the MOH/Community Health Desk

Table A.1 – Summary of Major Project Accomplishments⁶

Inputs	Activities	Outputs	Outcome ⁷
Goal: Increased access to prompt first line treatment for children under five years with malaria, diarrhea and pneumonia.			
- Supply of zinc tablets and ORS sachets, Amoxicillin tablets: purchased until mid-2010, supplied to district - CCM national protocol development: completed by midterm - Printing of CHW training materials and forms: national forms completed printed and supplied but revisions continue to be made for RDTs and other issues - CHW kits: provided at first training - Trainers and Facilitators - M&E - Training venue and participants' transport/food and overnight accommodation	- Training health providers as trainers of CHWs - Training CHWs on CCM: initial trainings 2007-2008, annual refreshers and as needed due to attrition 2009-2011 - Supervision performance contracting with health center: replace by MOH funding as of Jan 2010. - CHW performance reviews: became refresher training, no direct feedback on performance. (In 2011 MOH began developing plan for performance evaluations.) - M&E feedback sessions with district counterparts: done quarterly with increasing ownership by health facilities	<u>By June 2011</u> - 392 health providers trained as trainers of CHWs - 6,177 CHWs have been trained on CCM, plus 463 replacements - 590,283 cases treated for fever (92% within 24 hours of onset of fever) - 93,358 cases treated for diarrhea - 80,990 cases treated for pneumonia - Supervision of <i>binômes</i> was implemented by Cell Coordinators and Community Health In-Charges	- Increased proportion of children under five with fever who received anti-malarial treatment according to official protocol within 24 hours of onset of fever from 20% to 43% - Increased use of ORT for children with diarrhea from 19% to 33% and increased use of zinc treatment for children with diarrhea from 5% to 22% - Increased proportion of children with pneumonia who received Amoxicillin from <13% to 54%
Goal: Increasing coverage of key preventive interventions by supporting Maternal-Child Health Campaigns			
- Transport/Fuel - Staff as Supervisors - CHWs as mobilizers of participation in MCH campaigns	- Participation in National MCH outreach campaigns on-going every six months - Promote the use of LLITNs through Care Groups - Community mobilization and education through Care Groups	<u>By June 2011</u> - 99% of households visited by Care Groups have at least 1 ITN	- Proportion of children under two sleeping under an LLITN possibly progressed from 74% to 83% (non-significant) - Increased proportion of children receiving Vit. A from 66% 86%
Goal: Increased adoption of key family health practices			
- Health promoters and Community Mobilization program staff - Training & BCC materials (BCC materials finalized 3rd Q 2010) - Training venue and participants' transport/food and overnight accommodation	- Program-wide Care Groups community Mobilization - Home visits by Care Group - Training CG volunteers and local leaders - Community data collection (community mobilization database)	<u>By June 2011</u> - 2,741 local and religious leaders trained in key messages for malaria, pneumonia and diarrhea - 660 CGs, with 12,976 members - average of 44 home visits/month/village by Care Groups to educate families on pneumonia, diarrhea and malaria prevention in Jan-June 2011	- Increased hand-washing practice by mothers of <5 yrs. children with soap or ash during critical times from 2% to 19% - Increased proportion of children provided with continued feeding during diarrhea from 22% to 57% - Increased practice of giving increased liquids to children with diarrhea from 36% to 57% - 41% of households visited by CG have hand washing station

⁶ For a full table of Major Project Accomplishments, please see Annex XXII.

⁷ This is a summary table – see Section E for details including statistical significance of observed changes.

Perhaps more important for health system strengthening, the project provided both technical and motivational support to district staff involved in **health information for community-based service delivery**. The IMCI Bulletin provided an evolving learning tool on how to produce and use information to support performance and consequently quality of care at the local levels. It focused care providers, supervisors and managers, on a set of reasonable standards, which could be compared over time and between areas (facilities or districts). The Bulletin faces some issues of design and potential duplication of the routine health information system, but it met a critical need in producing information useable at the local level in a timely manner. This fed into critical feedback meetings between health facility staff and Cell Coordinators.

Supervision efforts improved during the five years under the combined effect of training by project and MOH, primarily through performance-based payment for supervision activities, to which Kabeho Mwana contributed. Supervision was assessed to be more dynamic through the Cell Coordinators, supported by the Care Group structure.

In addition to production of visual aids for **health communication**, and training of CHWs and community leaders, the centerpiece of Kabeho Mwana community mobilization and health promotion efforts rested with the Care Groups. These peer groups provided an energy multiplier for the work of the CHWs themselves, but also for the work of their technical supervisors, the Community Health In-Charges. The elements of peer-motivation, peer-support and peer-accountability cannot be quantified but appear to be fundamental motivators. By bringing CHWs together and allowing them to coordinate and collaborate, the Care Groups allow a measure of integration of community services, both preventive and curative, but also of health/nutrition promotion and small livelihood/agricultural activities.

Among weaknesses identified by the evaluation:

- CDD has probably been insufficiently addressed nationally, and it also took second stage in the EIP intervention districts as efforts were made to support national and district stated priorities.
- Operationally, a number of efforts, including training, were still being accelerated during the last year of the project. Phase-out meetings, to support partners' planning for the post-project phase, came late and were only partially implemented.
- Quality assurance efforts did not go beyond laying the first foundations of information and feedback meetings.
- Information systems for M&E and support of CCM were set in place and used. But they were sometimes fairly ad hoc and not ready for future expansion.
- Beyond the project life, continued progress will rest on the potentially decreasing return on investment of Performance-Based Funding (PBF), and questions are raised about who will fill the community-facility-district connecting role played by EIP project staff.
- While the project made many contributions to sustainability, in terms of investment for development assistance, this EIP grant stopped when its potential for efficiency in supporting c-IMCI was probably at the highest.

Conclusions and Recommendations

The Kabeho Mwana project has been a successful project implemented with a genuine effort to find synergies between three partners: Concern, IRC and World Relief. The lead agency, Concern, is to be commended for a high level of integration of the project team and transparency with its partners. All three partners deserve credit for some loss of their own visibility in favor of the greater benefit of

successful advancement of community health. The coalition *worked*, both in terms of internal management and in terms of support to and recognition by the MOH. The project also intervened in a regrettably rare environment: that of a country taking seriously community health, staffing its MOH hierarchy with dynamic and skilled administrators, and politically committed to *making things happen* and seeing results.

Kabeho Mwana played a key role in moving from HBM for malaria to integrated CCM, and in supporting the GOR in institutionalizing and scaling up CCM.⁸ In so doing, it combined effectiveness and strict adherence to the principles of alignment,⁹ leading to very positive results for malaria and pneumonia case management and more limited ones in the treatment of diarrhea. The success of the project, for example on behaviors such as increasing fluids and food for the sick child, illustrates the value of integration of approaches and intensity of beneficiary contact in health promotion.

The project has been praised for its flexibility and ability to stretch resources. Those compliments are probably an understatement of the commitment of Concern and partners to community health in Rwanda, which led to more than doubling the original USAID/CSHGP grant amount through private funds and Canadian and Scottish government support.

Kabeho Mwana—and to a large extent the projects which preceded it—showed that building from the ground up is essential and complementary to central grand designs. MOH staff at all levels praised Kabeho Mwana lavishly for its field presence. Far from being confused with substitution, this field presence showed that the imperious necessity of coaching and accompaniment at the most operational levels, and in between these levels, in order to build capacity.

The evaluation report concludes with a number of suggestions to the GOR, USAID, and the health sector development partners of Rwanda. These suggestions include: (I) improving the fundamentals of c-IMCI (drugs, supervision, quality assurance processes); (II) specific steps for maintaining vigilance over quality of care at community level; (III) strengthening the c-IMCI architecture notably through the Care Group mechanism in the six districts where Kabeho Mwana operated, and possibly considering similar strategies for strengthening peer-supervision and the integration of CHW practice; and (IV) finding synergies across sectors such as health and nutrition, and livelihood and food security—which are priorities for the GOR as for USAID through its new initiatives. Finally, (V) a number of studies are suggested, including the re-analysis of the RDHS to provide a better assessment of impact (and incidentally allow for a unique validation of the LiST tool).

⁸ Complementary report on the role of Kabeho Mwana in supporting the GOR in the scale-up CCM authored by MCHIP is forth-coming.

⁹ See Paris Declaration on Aid Effectiveness

B. Introduction: Overview of the Project

USAID's Child Survival and Health Grants Program (CSHGP) has awarded 450 grants for child survival activities worldwide since 1985, traditionally with grants up to \$1.5 million. From 2003 to 2006 USAID awarded 13 "expanded impact" grants, ranging from \$2.5 million to \$5.3 million in US government funding, with the intention of achieving greater scale and impact.

Initiated in 2006, Kabeho Mwana ("Life for a Child") was one of these USAID-funded five-year expanded impact projects (EIP). It was designed to offer community case management (CCM) of childhood illness and promotion of key community-level health promotion and disease prevention actions in Rwanda. The program covered six districts in Southern, Western and Eastern Rwanda: Gisagara, Kirehe, Ngoma, Nyamagabe, Nyamasheke, and Nyaruguru. In 2010 the area had an estimated total population of 1,878,466, about 18% of Rwanda's total population of approximately 10.6 million.

The project was designed to address the three leading direct causes of child mortality in Rwanda: malaria, diarrhea, and pneumonia. It was implemented by a consortium of three agencies, Concern Worldwide (Concern), the International Rescue Committee (IRC), and World Relief, with Concern as the lead. Each of these organizations had previously implemented elements of the program separately in limited areas. Kabeho Mwana brought the three organizations together to help advance Rwanda's national community integrated management of childhood illness (c-IMCI) strategy.

By the end of project, Kabeho Mwana trained and equipped over 6,000 community health workers (CHWs). It established a variation of the Care Group model, pioneered by World Relief, to implement health promotion activities. It trained, coached and collaborated with CHWs, community leaders, health center staff and district cadres to create a facilitative environment for activities.

This evaluation will review achievements, shortcomings and discuss the challenging issue of contribution versus attribution of results to project efforts, given the very unique and dynamic national context of Rwanda.

Rwanda—National Context

Rwanda is a small, mountainous and densely-populated country, bordered by Tanzania on the west, Burundi on the south, Democratic Republic of Congo on the east and Uganda on the north. The population is over 80% rural and the majority of the population relies on agriculture to meet its basic needs.¹⁰ The under-five mortality rate in Rwanda has been decreasing steadily since the country's recovery from the 1994 genocide and that process has continued to accelerate. The 2005 Rwanda Demographic and Health Survey (RDHS) found that for every 1,000 live births, 152 children died before their first birthday; by 2010 that number had dropped to 76.¹¹ Malaria, anemia, pneumonia and diarrhea are major causes of mortality in children under age five and malnutrition is a contributing factor in over half of all child deaths. Child morbidity is high throughout the country, although it too has been reduced, particularly between the last two RDHS, a period roughly corresponding to the span of Kabeho Mwana (this is discussed in Section E.)

¹⁰ US Department of State Background Note. Accessed November 14, 2011. <http://www.state.gov/r/pa/ei/bgn/2861.htm>

¹¹ National Institute of Statistics of Rwanda. 2011. Rwanda Demographic Health Survey 2010; Preliminary Results.

The community health structure in Rwanda

Prior to Kabeho Mwana, Rwanda had already made a firm commitment to training and supporting CHWs. Each village elects two CHWs, one male and one female (*binôme*), who are trained to provide community case management (CCM) and act as liaisons with the health facility serving their village. (There are several other cadres of health workers active in the community, including Maternal Health Workers and Palliative Care Workers. There is also a fourth cadre, called the In-charge of Social Affairs, an elected local authority tasked with coordinating health and social affairs at village level.)

CHWs are supported by health center staff through field supervision visits, but the coverage and quality of these supervisions were known to be weak at project outset. Partially in response to this concern, the position of cell coordinator was created in 2008. The cell coordinator is elected by CHWs in the cell (a cluster of 10–30 villages) to provide peer supervision and represent the cell at the sector/health center levels. All of the community level positions are unsalaried but they receive financial support through a contract between the government and the CHW cooperatives, under a statute made official in 2010.¹² A CHW supervisor (Community Health In-Charge) was also recruited for each of the health centers to oversee all of the community health activities in the area. This position is in turn supervised by the district level Community Health Supervisor. Most of these steps were taken nationally from 2009 to 2010.

Most, but not all, Rwandese have access to a *mutuelle*, a national mutual health insurance allowing financially-attractive access to health services by individuals and households.

The six districts covered by Kabeho Mwana lie in three different provinces (see map of Rwanda in the front matter). All six are predominately rural with farming as the main economic activity. Nyamasheke, which borders the Democratic Republic of Congo to the west, is the largest both in area and in population (Table B.1). Two districts, Nyamagabe and Nyaruguru are very mountainous with high elevations. Malaria is not endemic at these high elevations and CHWs were trained to refer rather than treat suspected malaria cases. Differences in terrain also influence access to services and supervision support by Kabeho Mwana staff and MOH. Kirehe and Ngoma in the eastern part of the country are relatively flat and accessible from the capital while the mountainous areas in the south and some of the remote areas in the east are very far from Kigali and difficult to reach. These challenges are aggravated during the rainy season.

Table B.1: District populations and number of CHWs (end of project 2011)

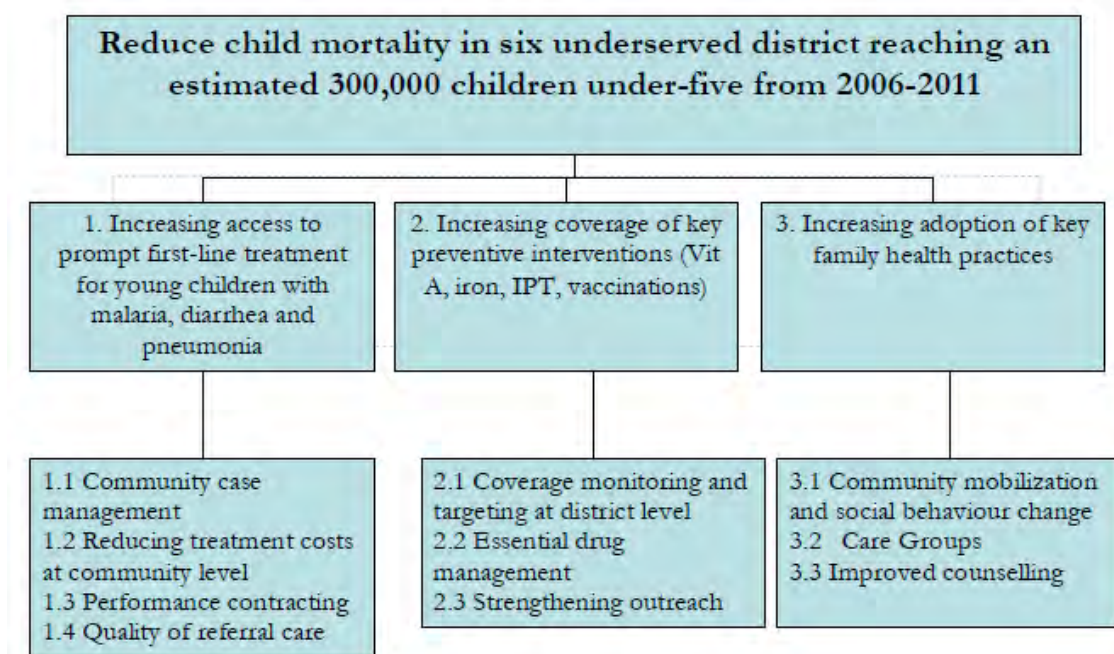
Trict	Total population (2011 est.)	Children under five (est.) 16.3%	Number of active CHWs	Number of Health Centers	Malaria treatment given by CHWs
Gisagara	308,129	50,225	1,048	12	Yes
Kirehe	311,503	50,775	1,232	13	Yes
Ngoma	294,141	49,945	940	12	Yes
Nyamagabe	341,944	55,737	1,072	16	No
Nyamasheke	367,388	59,884	1,206	19	No
Nyaruguru	255,361	41,624	664	16	Yes
Total	1,878,466	306,190	6,162	88	

¹² More information on performance based financing in Rwanda can be found at <http://www.pbfrwanda.org.rw/>

Project Results Framework

Kabehe Mwana sought to address the most common causes of mortality in children under five by 1) increasing access to treatment, 2) increasing coverage of key preventive interventions, and 3) increasing adoption of key family health practices. Adapting global guidance on CCM¹³ and based on the experiences of the consortium partners with home-based management of malaria (HBM) and a pilot of zinc treatment for diarrhea, the program focused on enhancing the role of community-based volunteers to include respiratory illness and diarrhea as well and malaria and expanding the comprehensive model in all six districts. Figure B.1 presents the results framework initially designed in the Kabehe Mwana detailed implementation plan (DIP). Each intermediary result (IR) was supported by a series of activities described in the DIP.

Figure B.1: Kabehe Mwana Results Framework

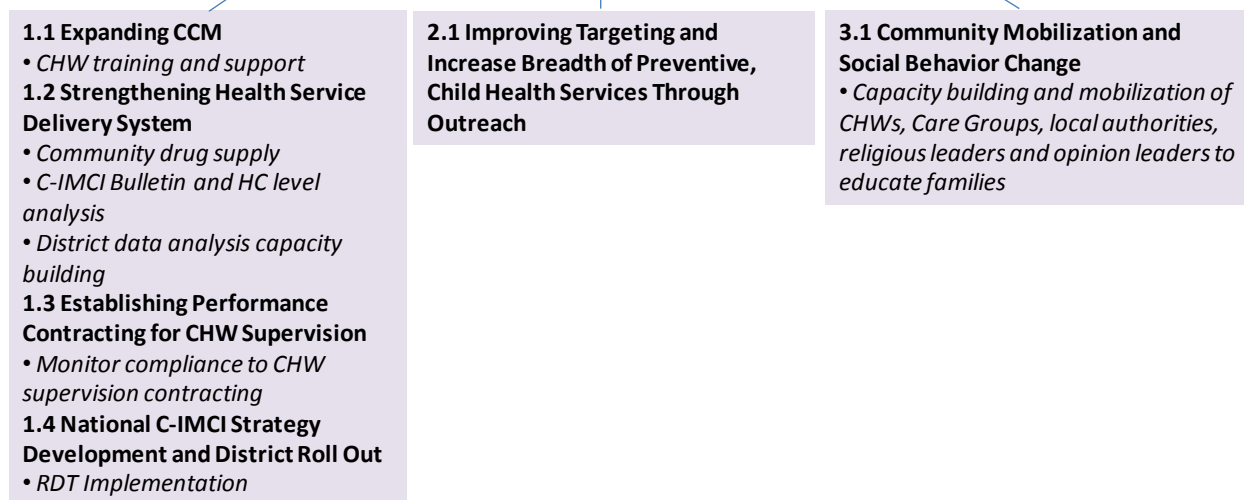


By the time of the evaluation, this results framework remained the reference of the project in terms of the larger goals and vision, but some of its sub-intermediary results (sub-IRs) had either never been pursued or been substantially adjusted. This happened as a combination of accommodations to national policy changes, and project management priorities and challenges.

By the final year of the program, scale up in the six districts covered by Kabehe Mwana had been achieved and the evaluation focused on the following set of sub-IRs (Figure B.2), which were redefined after review of the last work plans, a US launch of the evaluation, and initial contacts with the project team in Kigali. IR2 was in essence a loosely defined support activity to MOH Information, Education and Communication efforts during national health days. The evaluation analyses below will focus on the more important IRs 1 and 3.

¹³ CORE Group, Save the Children, BASICS and MCHIP, 2010. Community Case Management Essentials: Treating Common Childhood Illnesses in the Community. A Guide for Program Managers. Washington, D.C.

Figure B.2: Effective sub-IRs by the time of project evaluation

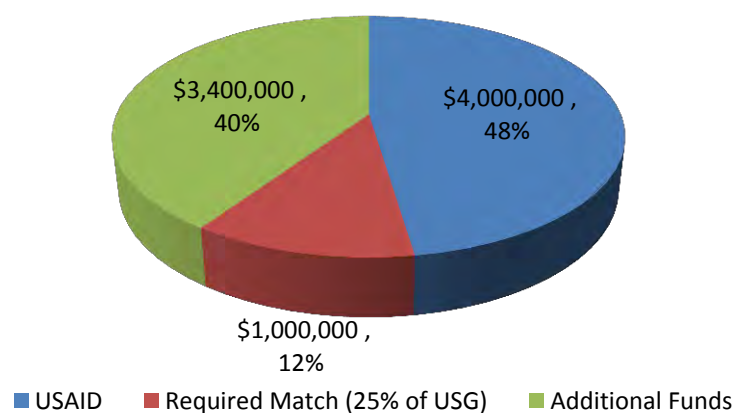


Nutrition was addressed as part of the preventive interventions (mostly sub-IR 3.1), but also included a Community Management of Acute Malnutrition (CMAM) intervention from October 2008 to March 2011, in some sectors of the six districts.

Inputs

The organization of the project's institutional and human resources is discussed in the Project Management annex. We focus here on a macro level perspective of financial inputs.

Figure B.3: Total Kabeho Mwana financial disbursements over five years by source of funding¹⁴



As illustrated in Figure B.3 above, the consortium received a grant of USD\$4 million over five years from the USAID CSHGP. There was a required match of 25% which the partners met from a variety of sources, including private funds and a large grant from the Canadian International Development Agency (CIDA). Altogether, the three agencies more than doubled the USAID grant by bringing in an additional USD\$4.4 million. This does not include the financial inputs of the MOH from the GOR treasury or other donors. It also excludes an additional grant from the government of Scotland for

¹⁴ Actuals for most of the project and estimation for the last eight weeks.

CMAM—a time-limited and geographically-limited effort in the six districts, which was evaluated independently with very positive results.^{15,16}

There is no doubt that the flexibility of the project—highly praised by GOR partners—and its ability to “do more with less”—strongly recognized by the USAID Mission—were made possible through this very substantial financial effort. In terms of scale and adaptability, not discounting possible efficiencies, Kabeho Mwana in fact perhaps simply showed that it sometimes takes more to do more. This was explained by the most senior staff not only of the project but the NGO country teams as simply a reflection of the commitment of the lead grantee and its partners to community health.

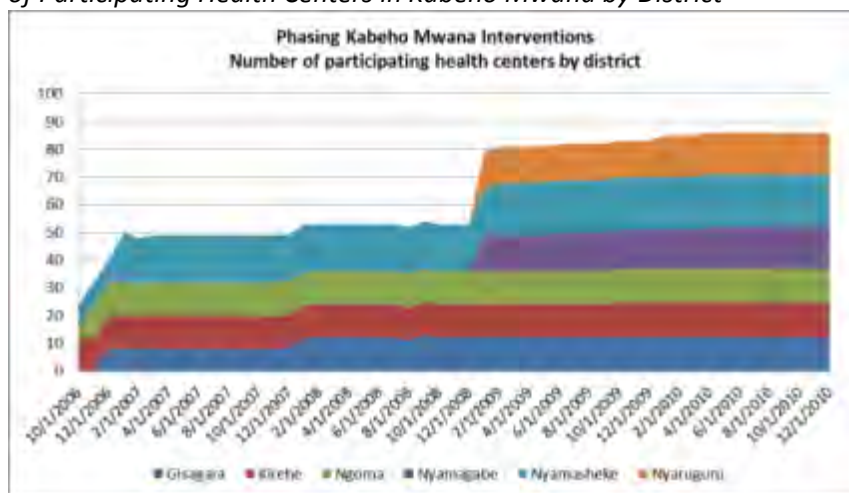
Key Interventions

This section describes the main intervention approaches of Kabeho Mwana, along with key elements of its implementation timeline. Annex XVI provides a detailed timeline of major project activities.

- **Community Case Management**

The process of phasing in the complete package of treatment in all districts was completed in 2009 and is shown in Figure B.4 (creation of new health centers by the MOH accounts for the small increase after that date). A total of 88 health centers received support from the project.

Figure B.4: Number of Participating Health Centers in Kabeho Mwana by District



To implement CCM for diarrhea, pneumonia and malaria (each at an equivalent planned level of effort), Kabeho Mwana built on the already existing community health system in Rwanda. *Binômes*, some of whom had already been providing treatment of malaria through the HBM program, received training on management of the three diseases. Already before the project, CHWs in areas with HBM were giving a combination of Amodiaquine/Sulfadoxine and Pyrimethamine. Artemisin combination therapy (ACT) was phased in in October 2007 using special blister packs with simple instructions in Kinyarwanda and pictures for a low-literate audience. Also in 2007, the MOH approved the use of Amoxicillin for treatment of pneumonia at the community level; CHWs were trained on the use of

¹⁵ Scottish Government. Sub Saharan Africa Development Programme. Final Report Integrating Community-Based Management of Acute Malnutrition (CMAM) into the Child Survival Programme in Rwanda (EICSP) Kabeho Mwana. October 2008-May 2011 (two month extension).

¹⁶ Review of the Scottish Government program went beyond the scope of the final evaluation. It was nonetheless successful and a summary of results is provided in Section E, “Other Health Achievements”.

respiratory timers and treatment began in 2008. Oral rehydration solution (ORS) to prevent dehydration had been in use for several years. IRC piloted adding zinc to the treatment for diarrhea in Ngoma and Kirehe starting 2005 and it was included in all CHW trainings from the outset.

The protocol for child assessment and treatment is summarized in a series of algorithms on which training was based and which were provided to each CHW. (French versions of these protocols [2010] versions are included in Annex XVIII). Accordingly, children under six months with fever, all children under two months, and any child with one or more danger signs are referred to a health center for treatment. CHWs determine dosage based on the child's age. Children with multiple conditions are treated as long as all symptoms can be classified into one of the three conditions. The first dose is observed by the CHW.

A standardized training package covering all three conditions was developed by the MOH Community Health Desk (CHD) with support from the national IMCI task force (later the Community Health Technical Working Group). Master trainers in c-IMCI were trained and the CHW tools were finalized in the last quarter of 2008. These tools included forms for documenting each case seen or referred and making monthly reports. The initial training lasted four days and generally new CHWs received their kits at the completion of the training, including a lockable box for storing drugs and supplies, a spoon and cup for mixing ORS. The first supply of ACT was procured by John Snow International (JSI) DELIVER Project out of USAID President's Malaria Initiative (PMI) funds as a result of the project advocacy efforts to PMI and with the National Malaria Control Program (NMCP). Respiratory timers were supplied by Kabeho Mwana for two cycles, in 2007 and in 2009. At different times the MOH and different partners supplied flashlights, rubber boots and umbrellas. To facilitate the work in reporting and supervision, Kabeho Mwana provided calculators and staplers to all of the Cell Coordinators in the six supported districts.

- **Care Groups**

The main vehicle for community mobilization and behavior change communication was the Care Groups, first implemented in three health center areas per district. These "original Care Groups" consisted of 10-15 volunteers who each covered ten surrounding households. These community-based health educators met regularly (on bi-weekly basis) together with the project Community Mobilizers for training and supervision. Each volunteer was responsible for bi-monthly visits to the ten assigned households to disseminate learned health lessons. Following results from the mid-term evaluation and explicit requests by district officials, the MOH requested that Care Groups be rolled out to the remaining health centers in each district. The result was a "modified Care Group" made up exclusively of official CHWs (including all cadres, not just the *binômes*) rather than volunteers. These groups meet monthly with CHW Cell Coordinators for training and are expected to receive supervision from community health supervisors. As in the original model, each CHW is responsible for monthly visits to 10-15 households that included children under the age of five. The *binômes* retained their unique role of providing specific treatment services in the community but worked as a team with other CHWs for behavior change communication. These new Care Groups were rapidly scaled up starting October 2009. A total of 660 Care Groups were formed over the life of the project.

- **Behavior Change Communication**

In 2008, after conducting formative research, Kabeho Mwana developed BCC visual aids for use at the community level. Draft messages were presented to the MOH and partners at a workshop at the end of the year. In 2009 the process continued with translation and field testing of the messages, further collaboration with the technical working group and finally the contracting of an artist to create

locally-appropriate illustrations. The final products were approved by the MOH and printed in mid-2010, for use in both districts of intervention and at national level. By the end of the year, Kabeho Mwana had organized training of master trainers and cascade training that had reached all CHWs: *binômes*, the In-charge of Social Affairs (for counseling cards), and members of the Community Development and Health Committees and religious leaders (for poster messages) in the six districts, along with the distribution of these materials.

The project also supported the installation of low-cost hand-washing stations called Tippy-Taps at households and health centers.

- **Quality Assurance / Strengthening Health Service Delivery**

Quality assurance (QA) efforts were directed at two main strategies. The first was supporting the supervision of CHWs by Cell Coordinators and Community Health In-Charges. Kabeho Mwana negotiated contracts with the districts and health centers. These were rolled out from 2007 to December 2010. Under this mechanism health centers were given funds to support supervision based on the number of supervisions performed and participation in monthly coordination and planning meetings documented according to targets. Health centers were responsible for assigning staff to the task of visiting CHWs in their communities at least once every three months. During these visits supervisors completed the standard supervision checklist developed by the MOH with the Community Health Technical Working Group (TWG).

The second QA strategy was the development of an IMCI Bulletin designed to provide feedback to the districts and health centers regarding the quality of their work by measuring performance on a limited set of indicators against an agreed upon standard. This was first introduced as a “scorecard” in 2008 and pilot tested in one health center in Ngoma district in 2009. In the early phase, Kabeho Mwana QA Officers collected data from the health centers. The project revised the scorecard into the IMCI Bulletin in 2010, whereby a data entry form was created in Excel for use in all six districts to collect data on monthly basis and consolidated every six months for three successive times: mid-2010, early 2011, and June of 2011. After the first data collection exercise, many of the Community Health In-Charges were able to complete the process with minimal support from Kabeho Mwana staff. An IMCI Bulletin guide and detailed instructions were put together in the last year of the project and presented to the districts and MOH.

- **Monitoring and Evaluation (M&E)**

Kabeho Mwana M&E Officers traveled every month to each health facility, collecting data and providing support and mentoring to staff. At the beginning of the project the health facilities generally had no capacity to develop or manage a database and reporting was very limited. Kabeho Mwana developed an Excel database that included all indicators on the monthly report forms plus some additional indicators required by the donors or for program monitoring. A data entry mask was created using Pocket PC Creations and installed in all health center computers. The MOH recruited Data Managers for the health centers in 2009 and the M&E team began working closely with them. Kabeho Mwana organized training on data entry, analysis and presentation in early 2010. When subsequently the position of Community Health In-Charge was established at the health center level, training was organized on the data management tools.

The MOH was simultaneously developing a health information system (HIS) for community health activities and for facilities. These data drew from the same sources (the monthly report forms) but

were submitted to the districts, who then entered them electronically into the HIS. Kabeho Mwana was not involved in the development of the HIS and did not have access to it.

Once the Data Managers were recruited, Kabeho Mwana began holding quarterly feedback meetings at each health center. During these meetings, Cell Coordinators and Data Managers reviewed data for completeness and accuracy, corrected errors and looked for changes or trends in treatments. Once the Community Health In-Charges were in place, they progressively took over the process from the Data Managers. When the IMCI Bulletin was implemented, it became an important tool for guiding these discussions, providing indicators of quality and coverage rather than raw data, with the intent of shifting the focus more towards decision making and quality improvement.

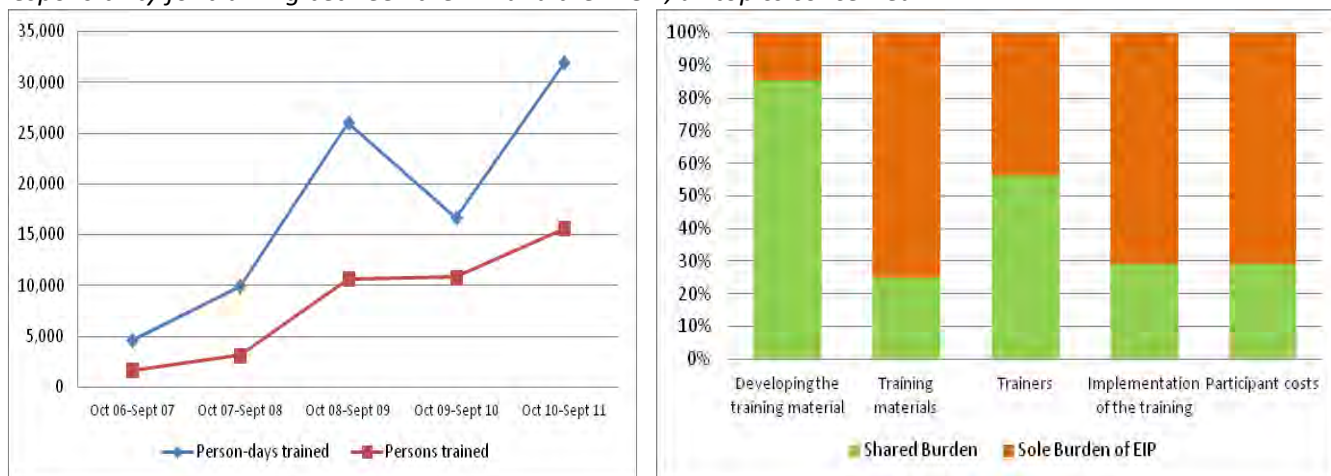
- **Training**

Training was the primary means by which Kabeho Mwana built the capacity necessary for the implementation of the MOH Community Health Strategy. The project contributed to the development of the national curricula for CHWs, Care Groups, trainers and supervisors. Overall, more than 6,177 CHWs (*binômes*) were trained (6,162 were still active by the final evaluation), along with staff from the 88 health centers supporting them. Once the complete package of CCM was rolled out, annual refresher trainings continued.

Display B.5 shows training efforts quantitatively through the life of the project. A matrix of all training topics implemented at various levels in the health system may be found in Annex VIIb, and the CHW Training Matrix may be found in Annex VIIa. Kabeho Mwana trained nearly 42,000 person-days, with 71 persons in training on any given work day of its five years of operations. The display also shows strong involvement (and leadership) of the MOH in curriculum design and in providing more than half of the trainers (the EIP conducted a number of training-of-trainers).

Obviously the continued acceleration of training effort up until the last semester of the project, and the dominant role of the project in implementation and funding of training is a presage of a natural and somewhat inevitable challenge for the MOH in maintaining momentum after the project. Nonetheless, Kabeho Mwana leaves behind a substantial human capacity to implement c-IMCI and CCM, as well as experienced trainers within the ranks of the MOH. (See Section G for further discussion of sustainability contributions and challenges.)

Display B.5: Level of training by Kabeho Mwana per fiscal year, and evaluation estimate of the burden of responsibility for training between the EIP and the MOH, all topics concerned



C. Methodology and Limitations

The evaluation methodology was based on the combination of approaches recommended by USAID/CSHGP guidelines¹⁷:

- Reliance on evidence, first and foremost through pre/post population knowledge, practice, and coverage (KPC) surveys; as well as
- Secondary information obtained from the project M&E and national HIS;
- A qualitative phase of data collection and analysis emphasizing a participatory process with both project staff and MOH counterparts.

Early consultations and data collection planning

Given the size and complexity of the project, an early consultation of US-based technical backstops was carried out for a day and a half on July 6-7, 2011 in Washington, DC. Dr. Laban Tsuma, Senior PVO/NGO Advisor at MCHIP, participated in the meeting and would later join the evaluation team to focus on the documentation of CCM scale up in Rwanda. Participants at this first meeting clarified of the scope of work of the evaluation, developed of a list of priority evaluation questions, discussed some of the important concepts and history behind the project, and developed a skeleton plan for the in-country evaluation.

After completing the KPC survey, the in-country project team had its series of internal meetings to respond to initial questions, plan the logistics of the evaluation, and gather requested documentation. As presented below, sites for field visits, interviews and group discussions were identified to represent all six districts equally, and to purposively introduce some diversity and representativeness in the sample of persons met. The IRC Health Coordinator working along with the EIP Team Leader helped maintain a random element (limiting the risk of bias) in selection of final sites once purposeful criteria had been met. The IRC Health Coordinator was in regular contact with the lead evaluator in making those choices.

Primary and Secondary Data Sources

The baseline and end of project KPC surveys were the main source of information to assess the population level results of the project (see Section E). The methodology, sampling approach, and detailed findings of the 2011 KPC survey are presented in Annex VI.

The project's IMCI Bulletin is presented in Section F.2 and provides a number of routine data analyses, in addition to MOH service statistics, notably district and national data provided by the MOH Community Health Desk.

An endline Health Facility Assessment (HFA) was implemented in the quarter prior to the evaluation and its findings are largely referenced throughout the evaluation. The project also carried out Community Capacity Assessment for health management committees (COSAs) and Community Development Committees (CDCs). The methodology and findings of the HFA and Community Capacity Assessment are detailed in Annexes XIa and XIb, respectively.

Finally, the evaluation made use of routine information data from the MOH about community health, as well as a number of other official publications listed in Annex II.

¹⁷ USAID. Child Survival and Health Grants Program USAID/GH/HIDN/NUT. Guidelines for Final Evaluation. July 2011.

In-country kickoff and finalization of field guides

An evaluation kickoff meeting was held with the full final evaluation team¹⁸ in Kigali on August 15-16, 2011. Project teams presented summaries of their strategies, activities, data sources and results and opened these presentations for discussion. The main findings of the KPC survey and some routine data were presented by the IRC Health Coordinator, who was tasked with additional analyses. It is worth underlining the tremendous efforts put forth by all project staff, notably the evaluation team members, in following up on a series of iterative questions, which only started at this point and continued throughout the evaluation. The EIP Team Leader operated as a model of transparency and responsiveness to evaluation questions.

Field guides for group and individual interviews had been drafted by the lead evaluator and were reviewed, modified and finalized by the evaluation team.¹⁹ Evaluation team members were coached to use these tools as guides, but to use judgment in pursuing lines of inquiries opened by respondents. Discussions of the evaluation objectives and salient questions were key in discussing possible lines of inquiry. A simple participatory learning and research activity was included in the field guide for discussions with Cell Coordinators and was rehearsed during the kickoff meeting.

Two quantitative questions were added relatively late to the interview guide for MOH staff (from Medical Director to Data Manager). These questions explored the current level of autonomy of the district versus reliance on Kabeho Mwana, and then the confidence that a year from now the district would be effectively managing beyond any challenges of the post-project period, on 10 key functions for supporting c-IMCI. This mini- and rapid-survey had modest ambitions and provided some information used in Section G of the report. Evaluation team members were asked to collect this information systematically at the beginning of discussion sessions with individuals and groups of informants from the MOH.

The kickoff meeting also allowed the evaluation team to explicitly identify the audience of the evaluation, from the GOR, to USAID/CSHGP and Mission, Concern, IRC, and World Relief, and beyond to GOR development partners, as well as researchers and public health practitioners in Rwanda's civil society.

Qualitative Data Collection: Note-taking and Reporting

First week –first three districts

Three teams were formed and spent the rest of the first week in the first three districts. Each evaluation team had two note-takers and generally followed the recommendation of having an immediate debriefing after each group discussion. (As teams were often split to collect individual data and/or carry out some group activity, they were also asked to have a group debriefing in the evening.)

The kickoff meeting emphasized the importance for leaders and any members of the evaluation teams to write field notes along the way, where they would be candid about what worked, what

¹⁸ Please see Annex VIII for a list of members of the final evaluation team

¹⁹ The following annexes are relevant to the overall evaluation methodology:

- Annex XX shows the schedule of meetings and field visits;
- Annex X shows the list of groups and persons met in the field;
- Annex XXI includes the initial field guides.

didn't work, what confirmed their presuppositions and what contradicted them. Evaluation team members were encouraged to be open about their possible presuppositions and individual biases, to discuss them and comment about them, rather than hide behind a fig leaf of "objectivity".

Mid-point review and adjustments

The full evaluation team was supposed to meet again for a day after data collection was carried out in the three districts. Due to a holiday that had not been previously reported, this turned into a half day of very compacted activity.

Key steps were nonetheless implemented with evaluation team members from the three first districts, such as:

- Review of "what worked" and "what didn't work" in the evaluation;
- Role playing of approaches to active listening and probing for more information in qualitative interviews;
- "Post-it" session where positive findings, negative findings and surprises about the work of Kabeho Mwana in the three first districts were posted, organized on a wall, then discussed;
- Marginal revisions to the field guides and addition of some select interviews.

Second week of data collection

After this mid-point review, the lead evaluator stayed in Kigali while three evaluation teams returned to the field to implement the rest of the qualitative inquiries in the final three districts.

The lead evaluation team leader worked with Kigali-based informants, independently and with Laban Tsuma of MCHIP; met with the three NGO Country Directors and Finance Managers; and reviewed secondary data. The evaluation team leader also led in-depth discussions with each of the project technical teams (QA, Community Mobilization, and M&E) upon their return from the field work.

Team synthesis

Each district evaluation team submitted its consolidated, translated and typed interview notes to the lead evaluator for review. Evaluation team members gathered for a day of group work and then confrontation of findings and draft recommendations.

Limitations of the evaluation:

The first limitation of the study is the great difficulty in attributing causality for observed changes to one specific set of factors. One of the strengths of the project has been coordination and alignment with national efforts; a direction which makes attribution challenging under any circumstance. The evaluation is thus based on a management for results approach, but generally lacks counterfactuals to impute causality and assess impact (see Text Box below).

The report will emphasize the results achieved in the EIP-supported areas on the premise that most significant (i.e. consequential) results are shared by multiple players. We will highlight, however, the contributions of the project, and try to identify past challenges for the project as it ends, and future challenges for the communities, MOH, and development partners as they move forward. In other words, the core of the evaluation findings is about contribution. Plausible attribution will be highlighted when possible.

Within these constraints, some elements could have been improved:

- 1- A different timing of the evaluation steps may have helped strengthen the fit of its components:
 - a. Efforts were made in the final qualitative phase to establish comparisons between

intervention areas (“original” versus “modified” Care Groups, integration of nutrition into select project sites). Not surprisingly, these efforts resulted in little, if no, benefit.

- b. Similarly, the evaluation could not “not talk” to caretakers, but at the same time knew it did not have the time to do it thoroughly. The sampling of mothers interviewed in the final evaluation—even if purposive—could only be extremely limited under operational conditions.

Those two limitations could have been corrected if an earlier evaluation kickoff and design meeting in the US had been possible. This could have suggested some questions and sampling approaches for both the HFA and the KPC implemented by the project from May to July 2011.

- 2- While the participatory nature of the evaluation is to be commended, there is value in strengthening the independence of the evaluation for a *final* evaluation. This could take the shape of providing at least one or more fully independent co-researchers. While this may be overkill for a regular project, it seems justified for more ambitious ones, such as Kabeho Mwana.²⁰
- 3- The size of the project makes it accessible to analyses through the RDHS. It is unfortunate that the existence of Kabeho-Mwana supported projects was not taken into consideration in the design of the RDHS. The MOH and the Community Health Desk would most certainly have welcomed the possibility of additional learning notably on equity issues, effect of CCM and c-IMCI on *mutuelle* health insurance and access to care by non-insured citizens, etc.

Evaluating Contribution or Attribution?	<i>Kabeho Mwana worked very closely with the MOH, from policy and strategy definition to implementation. From training to implementation of CHW activities, and identification of BCC priorities on a quarterly basis, MOH priorities became part and parcel of project priorities.</i> <i>This results in great difficulty – almost inability – to assign attribution. This evaluation is based on a management for results approach, not pseudo-experimental design.</i> <i>We will try to revisit the question attribution as a conclusion and with the full picture of the results in mind.</i>
--	--

D. Data Quality and Use

This section summarizes responses to CSHGP evaluation guidelines’ questions regarding data quality and use.

- The baseline and final KPCs were carried out following recognized methods, and Kabeho Mwana had a skilled analyst in charge of the KPC report writing. Nothing obviously inappropriate came to the attention of the evaluator beyond some issues discussed in the findings, and the data have been treated as trustworthy.
- A few indicators have evolved in their definition to align with national policies. The baseline KPC survey collected only the Rapid CATCH indicators. The final KPC collected both Rapid CATCH and indicators aligned with national policy. The exclusive breastfeeding indicator suffered definition problems between baseline and final.
- The project used an impressive amount of data and heavily emphasized monitoring and data for decision making, in collaboration with the MOH. Individual data sources certainly face

²⁰ The experience of this project was very positive, and its leadership forthcoming and open; but an evaluation of more challenging or challenged projects could become sensitive to bias if not manipulation.

some of the traditional quality questions of developing health information systems, but they provided a wide body of information to triangulate findings.

- There is an element of ad hoc, build-it-as-you-need-it systems in the Community Mobilization database and even IMCI Bulletin, and they would require some re-design to be able to be used on national scale. The Community Mobilization database stored a substantial amount of data, which had been collected through intensive efforts. It proved challenging to extract information through simple queries.
- The original project design envisioned a series of semi-annual periodic performance assessments using LQAS methods to monitor coverage and progress. This proved impractical and was never fully implemented. Instead, the project relied on the routine data collection system which allowed it to monitor trends in utilization, drug consumption, supervisions, etc.

E. Child Health Achievements [Presentation of Project Results]

This section presents the main changes in child health indicators from the baseline to final KPC survey of the project. We reserve discussion of responsibility for observed changes to the next sections. Tables E.1 and E.2 provide the summary of achievements on the EIP key performance indicators. A full table of all Rapid CATCH indicators is available in Annex V. Display E.1 presents some of the same findings visually, against RDHS / national benchmarks (see Textbox).

Malaria Control

Remarkable progress was made on care seeking and appropriate treatment of fever. From 2006 to 2011, appropriate care seeking for fever in the six districts reached 75%, and appropriate treatment jumped from 20% to 43%²¹. While the objective of 60% was not reached, this is a substantial result. This level of achievement in the six EIP-supported districts may be estimated to represent roughly a third of the national gains in appropriate treatment during the same period (from 2% to 20% in the RDHS 2005 and 2010).

Benchmarking against RDHS

Results for pre- and post-project Kabeho Mwana-supported districts are benchmarked against the 2005 RDHS when possible.

It is important to remember that the six EIP-supported districts account for 18% of the RDHS denominator. We are consequently not *comparing* KPC and RDHS data, but simply providing a *benchmark* of the secular national trend during the same period.

A comparison of EIP and non-EIP-supported districts is recommended through a re-analysis of the RDHS.

Prevention of malaria transmission through the use of insecticide treated nets (ITNs) seems to have improved (a non-statistically significant progression from 74% to 83% of children 0-23 months reported to have slept under a bed net the night before the survey), reflecting the high baseline due to the prior implementation of malaria prevention activities. In comparison the national average for ITN utilization in 2005 was 13%, increasing to 74% in 2010.²²

Control of Diarrheal Diseases

Progress was made in CDD, but is far less impressive than for malaria. The improvement in use of ORS (increased from 19% to 33% though not statistically significant) mirrors that of the RDHS (which with a larger sample size reaches statistical significance). The prevalence of diarrhea at the national level

²¹ The national policy for appropriate treatment of fever was presumptive treatment at the project outset but introduced rapid diagnostic test (RDTs) in 2010. Of note, the 2011 KPC allowed disaggregating the situation of appropriate/presumptive treatment of fever, and those where appropriate treatment was guided by the use of RDTs. The percentage of children treated appropriately was 25% for presumptive treatment and 89% where the RDT policy was implemented (see KPC Report in Annex VI).

²² During that same period (between the RDHS of 2005 and 2010) the prevalence of fever in children dropped from 26% to 16%.

did not change (14% and 13% respectively in the 2005 and 2010 RDHS).

Over 60% of caretakers in the EIP-supported districts sought care for a child with diarrhea in the prior two weeks either at home, with a CHW, or in a health center. Treatment of diarrhea with zinc progressed from less than 5% to 22% (the improvement is statistically significant, but the project objective of 50% was not met due to a number of reasons, including limited care seeking for diarrhea, and a national stock-out in zinc at the time of the final survey).

One of the most positive results in terms of CDD is that the number of caretakers who either increased fluid intake or gave additional food to a child with diarrhea reached the project target and just about doubled (statistically significant improvements from 36% to 61% for increased fluids, and 22% to 57% for increased feeding).

Pneumonia Case Management

While care seeking for respiratory symptoms progressed nationally from 27% to 50%, KPC data indicate a substantial increase from 13% to 63%, suggesting that progress in the EIP-supported districts may be responsible for over 40% of the national improvement in the last five years (based on rapid assumptions, which require recalculation through the recommended RDHS re-analysis).²³

Consequently, 54% of children in the six districts benefited from appropriate care seeking as well as appropriate treatment for pneumonia at the final survey (baseline unavailable; would have been below 13%).

Other Health Achievements

Tables E.1, E.2, and Display E.1 also show significant improvements, notably in Vitamin A coverage, point-of-use water treatment (which doubled from 31% to 65%) and hand washing. This latter indicator was measured according to very strict criteria and increased from 2% to 19%. Even such a measured improvement is not negligible. The KPC indicator was also affected by the absence of visible presence of soap at the Tippy-Tap. (Villagers reportedly explained that the soap had to be hidden indoors or would be eaten by goats.)

Exclusive breastfeeding was high at baseline (88%). Its final measure was measured at 76%. The KPC report, however, indicates variation in the way this questions about this indicator were asked. As a result no clear conclusion can be drawn. Improvements in maternal health indicators and immunization services are also noted, although Kabeho Mwana had no official objective in this (however, see discussion in the community mobilization section).

The integration of CMAM during the 2008-2011 intervention is evaluated in a separate document but showed positive results. According to findings presented at the second nutrition summit in Kigali, the total number of children treated for moderate acute malnutrition through community kitchens or Positive Deviance/Hearth were 1,695 and 2,108 respectively. The pooled analysis of the nutrition survey data reveals that the severe acute malnutrition prevalence in the program area between baseline and end-line decreased significantly from 0.9% (95% CI: 0.5 – 1.5) to 0.1% (95% CI: 0.0 – 0.3).

²³ Remarkably, RDHS data show a four-fold reduction in the prevalence of acute lower respiratory infections from 17% to 4% between 2005 and 2010.

Table E.1 Kabeho Mwana and partner MOH districts key program indicators

Objective/ Result	Indicators	Baseline ²⁴	Final	Change ²⁵	Target	Achievement of Target ²⁶
Malaria						
Increase coverage of insecticide-treated bed nets	% children 0-23 months who slept under a treated bednet the previous night, as reported by their caregiver	74%	83%	n/s	85%	✓
Increase access and use of prompt, effective first-line treatment for presumed malaria	% children under five with fever in past 2 weeks who received appropriate anti-malarial treatment within 24 hours of onset of fever	20%	43%	✓ sig	60%	X
Diarrhea						
Increase access and use of oral rehydration solution for diarrhea	% children under five with diarrhea in past 2 weeks who received oral rehydration solution	19%	33%	n/s	50%	X
Increase access and use of zinc treatment for diarrhea	% children under five with diarrhea in past 2 weeks who received zinc treatment	5%	22%	✓ Sig	50%	X
Correct treatment diarrhea	% children under five with diarrhea in past 2 weeks who received BOTH zinc and ORT	<5%	14%	--	n/a	n/a
Increased practice of giving increased liquids to children with diarrhea	% children under five with diarrhea whose caregiver offered more liquid than usual to their child	36%	61%	✓ Sig	40%	✓
Increased practice of giving continued feeding to children with diarrhea	% children under five with diarrhea whose caregiver offered the same or more food than usual to their child	22%	57%	✓ Sig	40%	✓
Pneumonia						
Increase care seeking for respiratory symptoms	% children under five with cough or respiratory difficulty in past 2 weeks who were taken to an appropriate healthcare provider	13%	63%	✓ Sig	50%	✓
Increased care seeking and appropriate treatment for pneumonia	% children under five with cough or respiratory difficulty in past 2 weeks who received correct first-line treatment from a trained provider	n/a	54%	--	n/a	--
Other						
Increase Vitamin A coverage	% children 6-23 months who received high-dose Vitamin A supplementation within the last six months	66%	86%	✓ Sig	90%	✓
Increase practice of hand-washing with soap on key occasions	% children 0-23 months whose caregiver can cite a designated site for hand-washing, show soap at that site, and who wash their hands after using the toilet and on at least one other key occasion	2%	19%	✓ Sig	25%	✓
Mutuelle membership	% of children whose families are current <i>mutuelle</i> members	n/a	82%	--	n/a	--
Objective/ Result	Indicators	Baseline	Final	Change	Target	Achievement of Target

²⁴ Only point estimates are presented here – confidence intervals and analyses available in Annex VI-KPC Report

²⁵ Legend for pre-post change: sig=statistically significant; n/s=non statistically significant change

²⁶ Legend for reaching of target: ✓ = final estimate non-significantly different to or above target (i.e. can't prove that target is not reached, even if the estimate is lower than the target); X= final estimate statistically significantly below target: the target has not been reached.

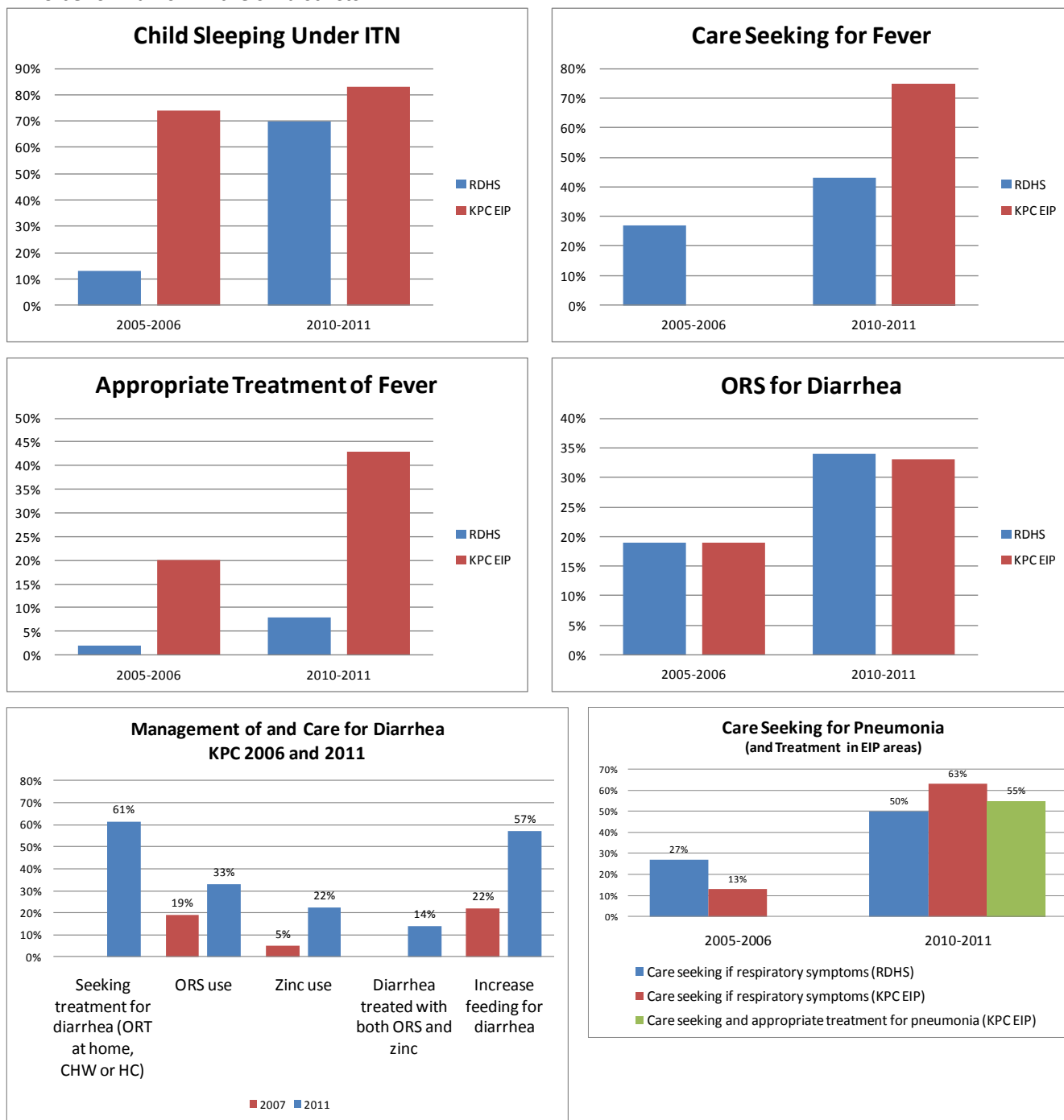
MUAC screening coverage	% of children 0-23 months who were screened with MUAC during the past six months	n/a	82%	--	n/a	--
Utilization of CHWs	% of mothers of children 0-23 months who have ever consulted a CHW for a child's illness	n/a	69%	--	n/a	--
Recent CHW care seeking for sick child	% of children sick in 2 week treated by CHW	--	40%	--		--

Table E.2 – Additional Indicators in EIP Implementation Districts [discussion of the specific contribution of the project discussed in following sections]

Indicators	Baseline	Final	Change
Hygiene - Water and Sanitation			
Point of use water treatment	31%	65%	√
Increase practice of hand-washing with soap on key occasions ²⁷	2%	19%	√
Maternal and Neonatal Indicators			
Adequate child spacing	78%	91%	√
Maternal tetanus	84%	80%	Ns
Maternal ITN use		91%	
Skilled attendance	39%	91%	√
Post natal check	13%	58%	√
Breastfeeding			
Exclusive breastfeeding	88%*	76%*	[*] Indicator Definition issue – see KPC Survey Report
Prompt breastfeeding		71%	
Immunization			
Measles vaccination	92%	97%	Ns
Access to immunization services (DPT1)	69%	97%	√
”Health system performance” (DPT3)	65%	97%	√

²⁷ A stringent definition: % care takers who can cite a designated site for hand-washing, show soap at that site, and who wash their hands after using the toilet and on at least one other key occasion

Display E.1—Visual presentation of pre/post changes on malaria, diarrhea and pneumonia indicators, with RDHS benchmarks²⁸ in the six districts



²⁸ Appropriate treatment for fever corresponds to presumptive treatment for the RDHS. For the EIP, it corresponds to presumptive treatment, but also for 2011 to respect for RDT guidelines in the districts where applicable.

F. Evaluation of Kabeho Mwana's Strategic Contributions [Discussion of the Results]

The contribution of Kabeho Mwana to these largely impressive health achievements came from three key strategies:

1. Expansion of CCM;
2. Strengthening health service delivery systems;
3. Community mobilization and health promotion.

We will present findings and analyses on these three strategic components, then focus some attention on the following:

4. The CHW Care Groups which were designed as the vehicle for health promotion, but actually played a cross-cutting role in the project strategies.

F.1: A major achievement: expanding CCM in six districts

The expansion of CCM in the six districts provided a national learning opportunity and was carried out in full coordination with and support to the new national policy. **This is a major achievement of the NGO consortium and districts, which made CHWs the first line of primary care seeking for children with fever, respiratory symptoms or diarrhea (see text box).** The issue of the interplay between the EIP scale up and the national Rwandese scale up of CCM is being documented in depth by the MCHIP study.

The achievements in care and treatment outcomes presented previously are causally related to achievements in the service indicators supported by the EIP strategy:

- By the end of the project, 69% of mothers of children 0-23 months had consulted a CHW at least once when a child was ill (Table E.1), and 40% of those who had a child sick in the previous two weeks had consulted a CHW.
- 6,177 *binômes* in addition to 463 replacements due to natural attrition had been trained and equipped to assess and treat uncomplicated illness in children under five, counsel parents on sick child care, follow-up sick children and to refer to health centers when necessary. They were



CHWs as a first line of primary care

In the six districts of EIP implementation, CHWs have become the first option of caretakers when a child has a fever, respiratory symptoms or diarrhea. They are also the first second opinion option, after a first consult with either a CHW or in a health center.

- The final KPC survey showed that CHWs were the first point for care seeking for 31% of caretakers when a child had diarrhea or respiratory symptoms (23-27% chose a health center) and 45% of caretakers in case of fever (29% went to a health center first).
- Even when caretakers sought a second consult (61% of the time after a CHW visit and 54% of the time after a health center visit), CHWs remain the first option. After a CHW first consult, 68% of those seeking a second consult will go to the same or another CHW (27% went to a health center). Of those who consulted a second source after a health center, 48% went to a CHW (and 44% went to a health center).

The evaluation heard a number of anecdotal comments on the management of (usually uninsured) care seekers unable to pay. "Treat first" was universally referenced as the crucial value for *binômes*, with varying local adjustments and approaches to dealing with the ensuing debt.

organized and supported through 660 Care Groups in 85 Sectors and 88 Health Centers.²⁹

- The project overview section illustrated the progressive enrollment of districts in the project. Correspondingly, IMCI Bulletin data shows the number of children receiving care from a CHW increased regularly and substantially (see Figure F.1).

While this happened in a context of national scale-up of CCM, the following provides a strong impression for the net benefit of the Kabeho Mwana-District partnerships: For the period of July 2010 to June 2011 and all three conditions considered, the districts of intervention of EIP reported 183,959 community treatments to the Community Health Desk, out of a total of 567,981 nationwide.³⁰ **For the four quarters considered, the EIP-supported districts delivered respectively 28%, 31% and 34% of all reported community treatments for pneumonia, diarrhea and malaria in Rwanda** (Display F.2).³¹

As shown in the previous section, the roll out of HBM and then CCM was supported by an extensive training plan, largely carried out under joint MOH-EIP efforts. Tracking outputs of training and activities against initial work plans does not yield a meaningful measure of project performance, as EIP constantly adapted to support a forceful national momentum³². The project did not and could not charge ahead independently when the GOR was setting the timetable for a national scale-up of CCM. This created delays against *initial* timelines, but then provided tremendous buy-in and support once policies were in place. It also required the project to adjust plans, re-train, and bring in new resources to support development of new material and re-training when necessary. Among the whirlwind of changes which Kabeho Mwana both contributed to and had to adapt to were: switching from amodiaquine/sulfadoxine-pyrimethamine (AQ/SP) to artemisin combination therapy (ACT) for HBM and creation of the Community Health Desk [2007]; developing an CCM tool and training protocols to integrate malaria home based management with pneumonia and diarrhea treatment [2008]—the first child with pneumonia was treated by a CHW in Kirehe in February 2008; discontinuation of intermittent preventive treatment (IPT) of malaria in pregnant women, the implementation of biannual Maternal Child Health vaccination and vitamin A campaigns during which bed nets (LLITN) were distributed; the creation of new dedicated positions at the health centers to support data collection and reporting [2009] and to supervise community health activities [2010]; and the new malaria policy requiring that all cases be confirmed prior to treatment which was implemented in health facilities [January 2010] and extended to the communities with RDTs [2010-2011].

Praise from the MOH, from central to district levels, for the project's capacity to deliver, speaks loudly for the nimbleness of the project in implementation. On the top of the list of salient and quasi-unique features of the project commented upon by informants was the field presence (facilities to communities), which supported bottom up operationalization of central policies.

- **Attempting to explain a recent decrease in the number of children seen by CHWs between 2010 and 2011**

The overall trend is an important increase in service delivery by CHWs for the three diseases, which however— most notably for diarrhea treatment where the national prevalence, is unmodified—

²⁹ The numeric difference between sectors and health centers is due to the geographic division of administrative zones to decentralized districts resulting in some sectors having two health centers and the remaining absence of health centers in some sectors.

³⁰ Thank you to Cathy Mugeni and Erick Gajui (Community Health Desk) for providing these data.

³¹ The national 2010 CHW assessment showed a statistical significant difference in the number of cases seen by CHWs in the EIP-supported district (4.1 per month and per CHW) and the non-EIP-supported districts (3.8).

³² Please see Annex IV for the full project work plan.

remains insufficient to cover all episodes. We consider here a third element: the apparent decrease in community treatments delivered over the last 12 months of the project, which raises questions.

Display F.1 shows high seasonal variability in children seen by CHWs. This is quite understandable given that fever is the overwhelming main reason for consultation. It also shows the absence of a peak in 2011, with utilization at 2008 levels. Routine reporting (aggregated by quarter on Display F.2) shows that this corresponds to a decrease in consultations for fever as well as diarrhea (whereas treatment of pneumonia continued to increase).

For fever in 2011, decreased numbers of children seen by CHWs comes with a rise in the number of referrals to health centers. The evaluation cannot conclude on the cause of this recent trend, but can suggest possible causal factors:

- The reduction in the prevalence of fever between the last two RDHS (from 26% to 16%) should lead to some measure of reduction in utilization of both facility and community-based services. (Many providers, CHWs, and community members interviewed for the evaluation volunteered optimistically that the sole explanation was the simple reduction of illness in their district; not a completely far-fetched impression if malaria cases dropped as significantly as fever prevalence.)
- Some informants pointed to the relative dryness of the 2011 rainy season, as a seasonal factor.
- The new policy for malaria treatment is that each child with fever needs to be tested with an RDT. This requires a finger prick (not a pleasant experience for child, mother or CHW); it requires waiting up to twenty minutes; then treatment only if the test is positive, and referral to the health center if the test is negative. The test is generally repeated at the health center, where drugs are more likely to be prescribed under either testing outcome.³³ Over time, it is reasonable to expect that caretakers would be less inclined to call on a CHW when their child has fever and instead go directly to the health center (or abstain from seeking care). The evaluation could not determine how much this factor weighed but found at least some anecdotal evidence for its existence.³⁴

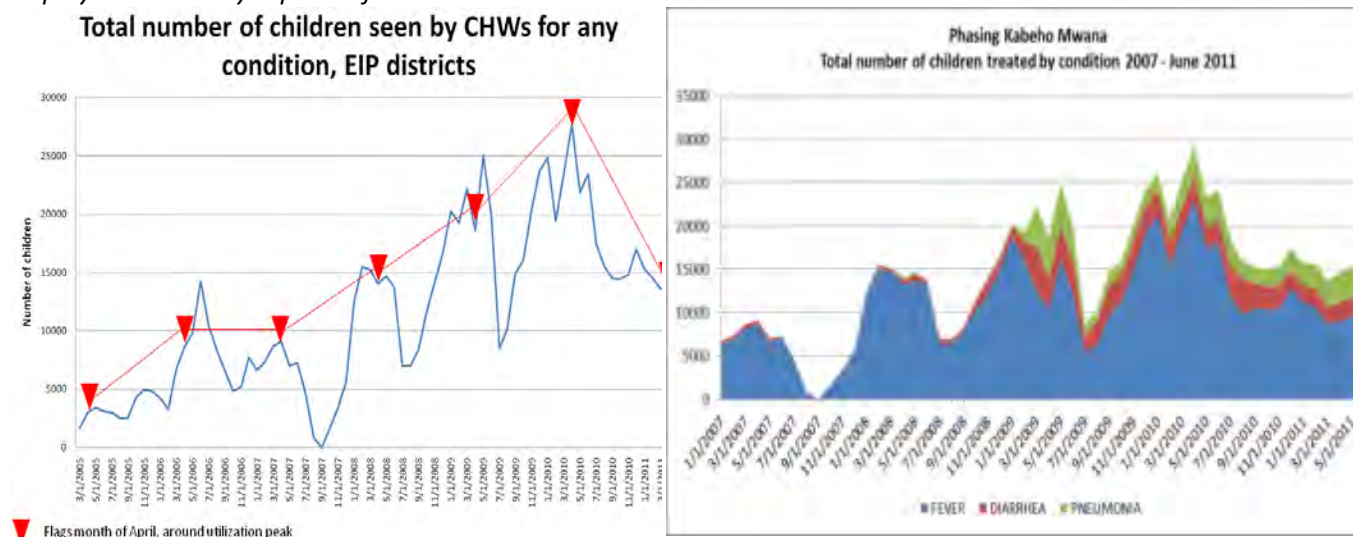
For diarrhea, the problem seems more structural. Data from the IMCI Bulletin (presented below) shows a decreasing rate of diarrhea treatment in the previous quarter in the six districts from about 3% (July 2010) to 1.5% (May 2011).³⁵ While Zinc was unavailable in facilities and at community level during that period, this is likely not the sole factor in low care seeking for diarrhea, and this topic was never given the emphasis of malaria prevention and treatment (see section on health promotion).

³³ There is no sense that MOH health facility staff are not complying with the RDT policy. In other words, there is no indication from this evaluation that ACTs are prescribed when RDTs are negative. But a child with fever, ill enough to be taken to a health facility by the caretaker, demands some action of the care provider. As in many settings, this encourages prescriptions of other (perhaps symptomatic) drugs, some available in facility, and some only available in private pharmacies. This may be at the root of some complaints from mothers about “lack of medicine” in health facilities (heard repeatedly during the evaluation), even when stockout levels are objectively low.

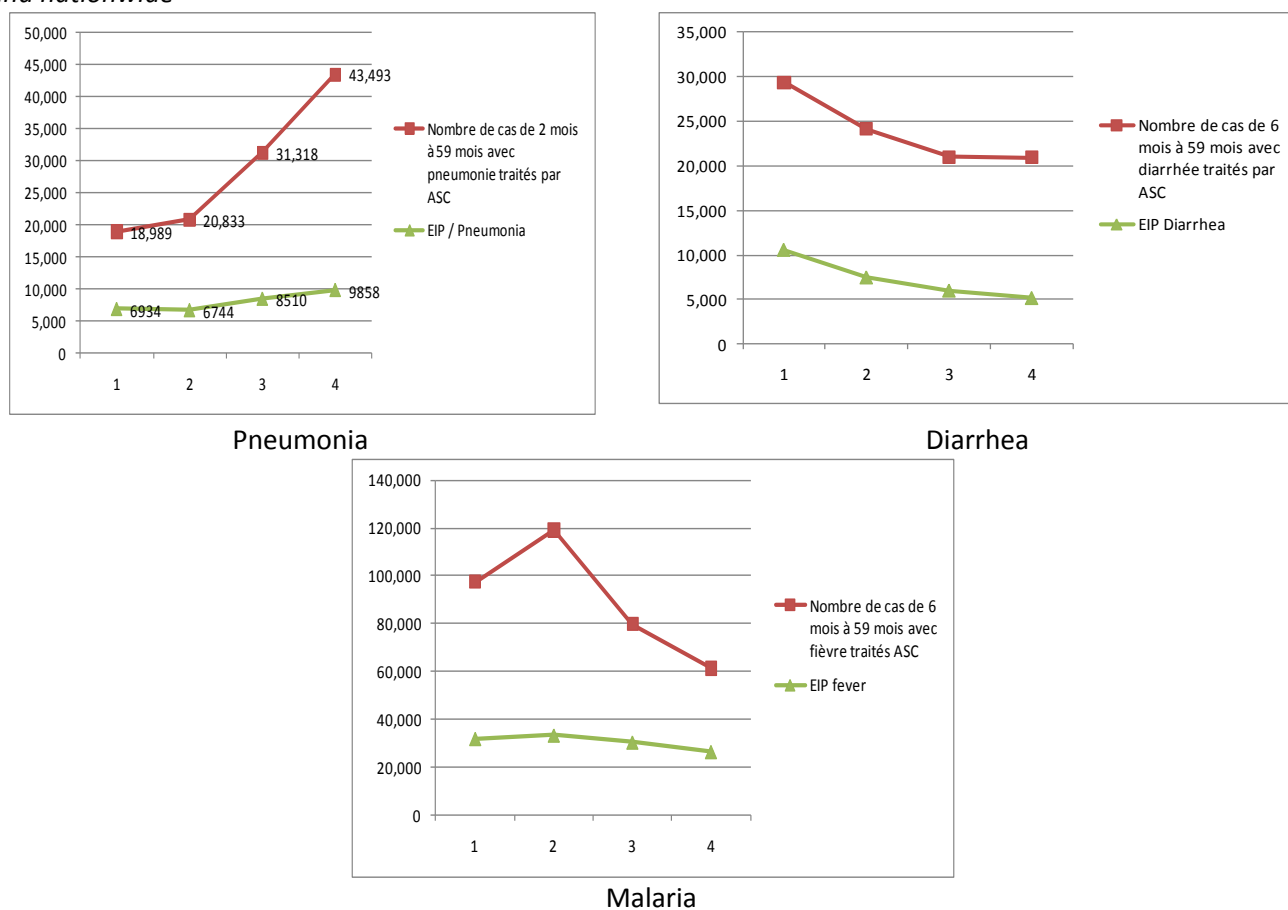
³⁴ At the time of presentation of the evaluation findings, MOH officials explained that the policy was being modified to no longer require referral of all negative RDTs with fever.

³⁵ If children under five suffer three episodes of diarrhea per year, and each child with diarrhea was treated, this rate should be at 25% of children in the preceding quarter. This measure was that used by the project.

Display F.1: Monthly reports of CHW treatments delivered



Display F.2: Number of treatments per condition for July 2010 to June 2011 in districts of EIP implementation and nationwide



F.2: Strengthening Health Service Delivery Systems

Kabehe Mwana implemented a set of interventions, complementary to the roll out of CCM, with the aim of strengthening quality of care (see Section B). Some initial intermediate results were never strategically or systematically pursued (reducing treatment costs at community level, and improving the quality of referral care). Operationally, activities contributed to service delivery through:

- Supporting drug supply at community level;
- Supporting routine health information analysis at district level, and specifically establishing the IMCI Bulletin to measure quality at the facility and district levels;
- Contracting with health facilities to support CHW supervision; and
- General support of the national c-IMCI strategy

These specific interventions took place in a context of close collaboration with MOH partners, and responding to issues and policies as they evolved. These cross-cutting, coaching or support elements included visits by the QA and M&E teams in the context of a PBF system, whereby financial incentives are attached to reporting on key indicators at all levels.

• F.2.1: Supporting Community Drug Supply

Inputs

Over the life of the project, Kabehe Mwana procured and distributed over USD\$225,000 in essential medicine and commodities to support CCM:

- MUAC measuring tapes: 87,564 pcs;
- Respiratory Timers: 16,000;
- Amoxicillin 250 mg: 1,181,000 tabs;
- Zinc tablets 10 mg: 1,159,600 tabs;
- Low osmolarity ORS: 603,400 sachets;
- RDTs: 46,380 tests;
- Gloves for RDTs: 72,000 pcs;
- Safety boxes for RDTs: 1,750 pcs;
- Soap for social marketing to promote hand washing: 46,440 bars;
- Vitamin A and Mebendazole: in-kind donation by World Relief to the MCH national campaigns.

EIP placed its last orders for Amoxicillin and zinc in 2010, and EIP placed a last order for ORS in March 2011. Red and Yellow Primo (ACT under age-appropriate formulation) were procured by the MOH and other partners throughout. By 2011, the MOH's CHD had shifted to new blister packaging of zinc and was planning on retraining the CHWs. As a result, at the time of the evaluation (and the KPC survey) zinc was unavailable in facilities.

Process

In addition to procurement, EIP helped monitor orders with pharmacists, notify management of stock-outs, and, on occasion, arrange pick-up and transport of drugs, as part of its overall involvement with and support of the districts.

In spite of the absence of clear and objective signs of serious concern on the community drug supply, some Cell Coordinators and mothers interviewed raised concerns about the continued availability of drugs. Some of the concern could be attributed to broader "separation anxiety" from the project (given that ACTs were not procured by EIP), but a reasonable concern for the loss of momentum

caused by the end of project cannot be dismissed. The following comments are illustrative:

“If we needed drugs we called Kabeho Mwana who helped us to access medicines and avoid stock outs, I fear we will have frequent stock outs” [Titulaire]

“Kabeho Mwana lobbied for community drug stocks to be considered as much as health facility drugs” [Community Health In-Charge]

“Any time I am out of stock, I call Kabeho Mwana.” [CS Supervisor]

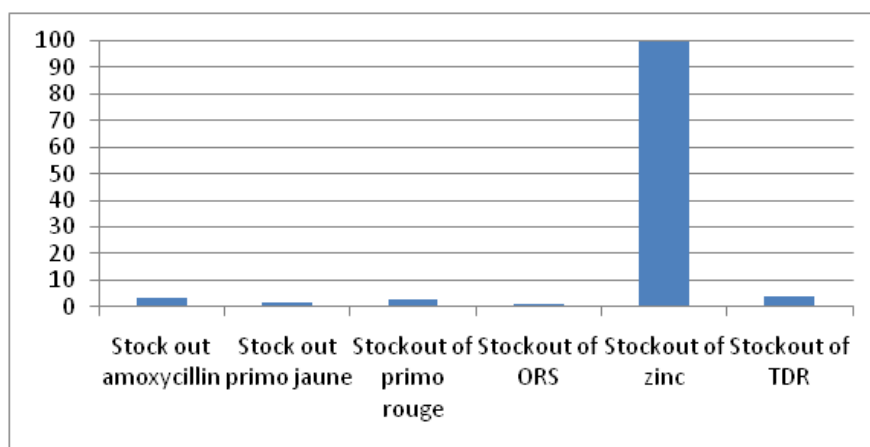
Results

Assessing the success of the community drug supply efforts is challenging and requires consideration of disparate parcels of evidence.

A CHW assessment was carried out in May 2009 and July 2010 by the MOH³⁶ (two years before the end of the project) and included two of the EIP-supported districts in addition to two non-EIP-supported districts. Not designed to establish inferences, it nonetheless reported that during the month before the assessment visit, “both districts experienced stock-outs of one or more molecules”, and “malaria treatment drugs (red primo and yellow primo) had been the most frequently missed.” The study concluded: “the district pharmacists are not motivated to apply the principles and rigor of drug management to CCM because there is no benefit, given that they deliver these drugs to health centers free of charge.”

Given this, the June 2011 HFA carried out by the project revealed very positive findings, with stock-outs in facilities limited to between 1.15% for ORS and 3.7% for RDTs (see Figure F.3). As explained above, zinc was out of stock in facilities nationwide during the process of changing the packaging. Another source, the IMCI Bulletin, reported more than 90% CHWs having essential drugs available consistently from July 2010 to May 2011 (see Figure F.4).

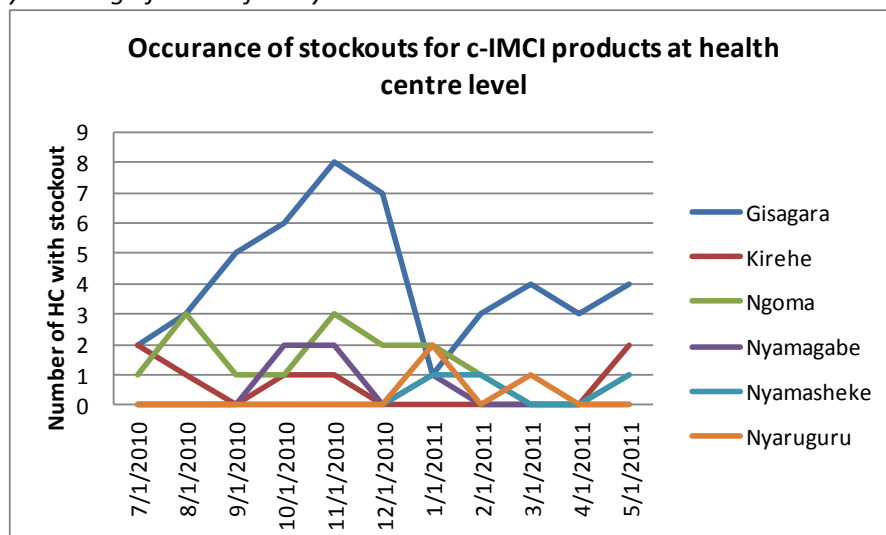
Figure F.3: Percentage of CHWs stockout in a census of all facilities in the 6 districts³⁷



³⁶ Government of Rwanda, Ministry of Health. c-IMCI / Community Case Management Evaluation. July 2010. January 2011 Presentation. This followed the May 2009 published c-IMCI / Community Case Management Evaluation Report.

³⁷ RDT variable: Exclusion of health centres where RDTs had not yet been introduced for all health centres in Nyamasheke and 15/16 health centres in Nyamagabe. Primo jaune and primo rouge - exclusion for 15/16 health centres in Nyamagabe, since there was no previous presumptive treatment in Nyamagabe district and RDTs had not yet been introduced there.

Figure F.4: Monthly tracking of health facility stock-outs in the IMCI Bulletin



During interviews by the evaluation team, a number of challenges were raised by Cell Coordinators and health center staff, such as the time and distance to travel to the health centers to get drugs, the lack of flexibility on the part of the health centers with regard to the day for re-stocking, the failure of some CHWs to come on the assigned day, the issue of health centers not having enough stock of community medicine when all CHWs do show up, and finally the possibility that a CHW sees his/her supplies run out before the next replenishment.

At community level, the 2010 national CHW assessment provides the best picture for all districts. It surveyed randomly 374 and 608 CHWs respectively in EIP supported and non-EIP districts. There was no difference between EIP and non-EIP districts in reported stock-outs of any of the four key medicines (ACT, amoxicillin, ORS, and zinc) over the past month³⁸; both were approximately 36% (N=971). When looking at the speed with which restocking took place however, EIP-supported districts seemed to be performing slightly better: 66% of CHWs in EIP districts were restocked in less than two days, against 54% for non-EIP ($p < .005$); and only 15% had to wait more than a week to be restocked, against 25% for non-EIP (also statistically significant).

Conclusion on drug supply--

- ✚ Kabeho Mwana made a useful contribution to the procurement of essential drugs and RDTs during the scale-up phase of CCM in Rwanda. This responsibility continues to be and is now with the MOH, who is actively engaged in meeting this essential need. The project was not actively involved in building this capacity more systematically for the long-term. National level support to the MOH will hopefully come from projects like JSI's DELIVER and Supply Chains for Community Case Management of Pneumonia and Other Common Diseases of Childhood (SC4CCM).
- ✚ The more critical role of EIP was in supporting the flow of essential products from facilities to community workers. The project did not attempt to move supply management from a "push" system to a "pull" or demand driven approach, something beyond its mandate and capacity.
- ✚ The results of the 2010 CHW survey and the 2011 HFA suggest positive trends in the

³⁸ A difference was observed in "ever having had a stock-out", but was naturally correlated with how long the CHW had been operating.

responsiveness to stock-outs, and Figure F.4 shows how stock-outs of community drugs were limited over time, and tracked regularly through routine information. But the situation beyond the period of the project will not be radically different from other Rwandese districts, with chronic and structural threats to the continuity of the drug supply.

- **F.2.2—Routine Health Information Support and the IMCI Bulletin**

Once again, Kabeho Mwana’s contribution in this domain cannot be discussed outside of the context of Rwanda, where PBF has become the norm and relies on the constant production and flow of information from all levels. As observed with other similar efforts worldwide, this places considerable demands on health center staff for data collection and reporting. In response, the MOH has fielded a new cadre of Data Managers, both in facilities and at district level. Data Managers are personally financially incentivized to produce a set of data tables and reports and have them posted in each facility, something observed fairly consistently during site visits.

Support to Routine Information Reporting

In this context, the regular visits and presence of EIP staff and officers undoubtedly provided support to both facility-based Community Health In-Charges and the Data Managers. Positive, even grateful feedback came throughout the field visits and discussions. EIP staff provided hands-on support to Data Managers in processing data, producing tables and graphs, and even troubleshooting IT problems. While the MOH ensured staffing and initial training, the EIP provided some health facility level training on data collection and reporting and more importantly served the role of support and proximity technical assistance.

IMCI Bulletin and the Feedback Meetings

The IMCI Bulletin was presented as the central piece of a quality improvement strategy by the Kabeho Mwana team, and the main responsibility of its QA Officers. It compiled a small set of indicators, collected monthly from CHWs and community health in charges, compiled and presented at six-month intervals:

- Number of children seeking care at community and facility levels for diarrhea, respiratory symptoms and for fever;
- Availability of drugs at CHW and facility level;
- Number of active (reporting) CHWs, supervision visits (from hospital to health center, and from health center to CHWs), and meetings of cooperatives;
- Payments for services made to CHWs (“community participation”);
- Number of cases treated correctly by CHWs (based on supervisor review of the patient record) ;
- Monthly reports from health centers to district hospital on c-IMCI, and cell-level reporting of health promotion/BCC activities to health centers.

As described in a section below, feedback meetings were added to regular data reporting, where Cell Coordinators, Data Managers, and Community Health In-Charges would review the available information, discuss its meaning, discuss upcoming intervention priorities of the MOH, and problem solve challenges in implementing activities, etc. The feedback meetings were a natural fit for review of the Bulletin.

Standards were established for Bulletin indicators, based on evidence (expected number of treatments based on prevalence estimates) as well as consensus (e.g, the diarrhea treatment “standard” was far from that expected number, given that all sectors started from a low baseline).

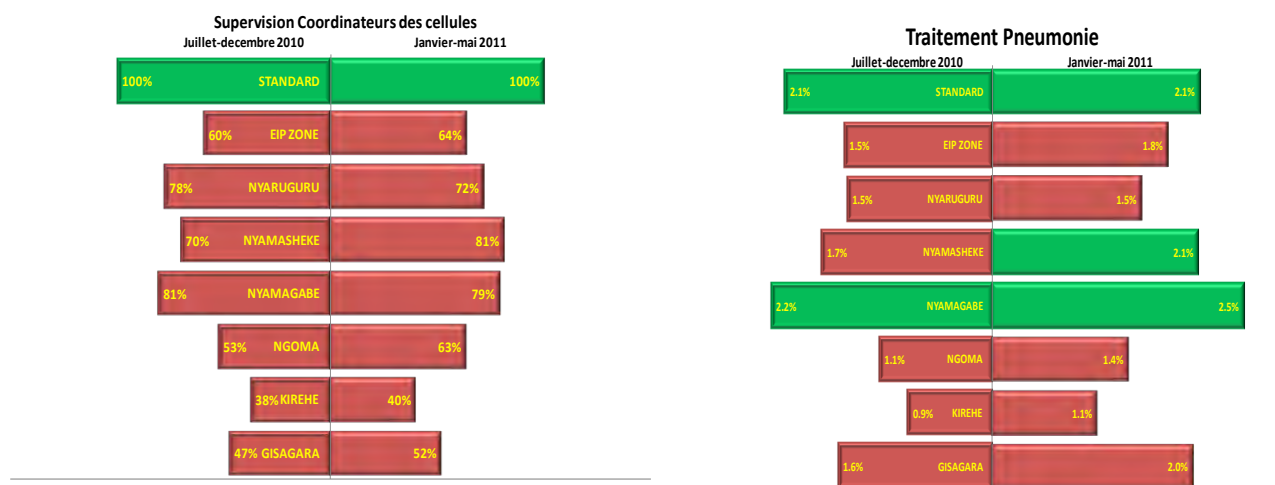
The Bulletin data mostly came from the MOH routine monthly reports and was either extracted directly from the database or from the paper form kept at the facility. Some data elements were taken from the CHW supervision forms and one required direct review of patient forms. This was somewhat duplicative and time intensive though the exercise did provide useful information from sources that were otherwise unused. The Bulletin evolved when a savvy EIP M&E Officer developed a Visual Basics (MS Excel or Access) database, from which automated reports could be generated. For some variables (number of reports, number of meetings, available stocks, etc.) the database flagged indicators in need of attention immediately upon data entry through red labels.

The *standards* provided something facilities and districts could compare themselves to, effectively serving the role of a *benchmark*. In terms of the information displayed in the health centers, the Bulletin showed an incremental approach which was directly observed in some facilities:

- The first displays of data were large blank data tables posted on the clinic wall and where indicators were reported by hand from quarter to quarter;
- The next step was automated data tables printed from the Bulletin database at the facility level;
- Finally in the last semester, Data Managers were able to produce bar graphs and trend lines automatically. At least in some centers (the evaluation could not quantify), the MS Excel tool and pre-programmed summary tables and graphs allowed Data Managers to produce monthly reports, without waiting for completion of the six-month cycle.

Because it could be rapidly processed and automatically analyzed, the Bulletin provided a very useful substance matter during the already established quarterly information and decision feedback meetings, where Community Health In-Charges, Data Managers, and sometimes Community Health Supervisors met with Cell Coordinators, reviewed data, and mobilized for next steps.

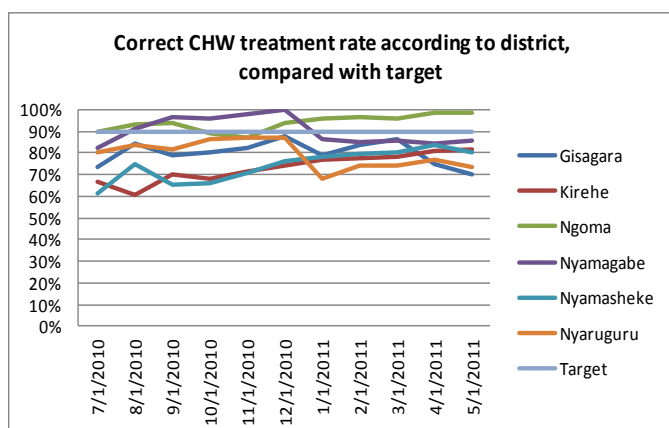
Display F.2.2: Examples of data displays from the IMCI Bulletin



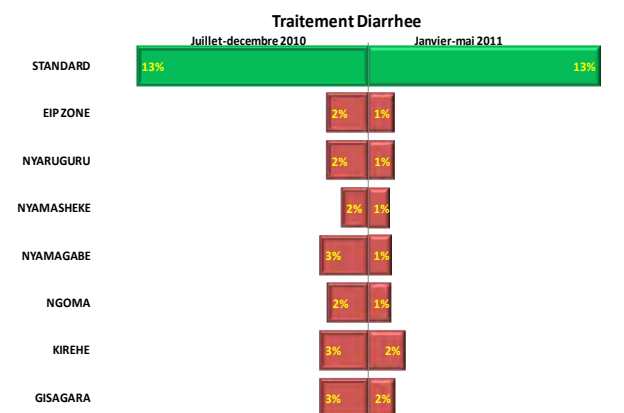
Percentage of Cell Coordinators supervised by Community Health In-Charges per district for the period considered and per district. Target: one visit per quarter.

Expected versus recorded district (facility + community) percent of children treated for pneumonia over two periods. Districts in green have reached the expected standard for treatment coverage of 2.1% of U5³⁹

³⁹ Remembering that the 'Standard' was not based solely on evidence but also on consensus about what would be a reasonable measure of progress to attain. With 0.25 cases of pneumonia per child and per year, 100% treatment should have provided a standard



Percentage of children having received the appropriate treatment for either of the three illnesses based on existing protocols, per district reported on a monthly basis (7/2010 to 5/2011)



Expected versus recorded district level (facility + community) percent of children treated for diarrhea over two periods. Green bars at the top represent the consensus 'standard' for treatment coverage of 13% of U5.⁴⁰

The MOH staff interviewed during the evaluation generally and often spontaneously referred quite positively to the experience with the Bulletin and the feedback meetings, described as a set package. Although some voices raised the issue of the duplication with the routine information, the vast majority of opinions expressed stressed the added value of the Bulletin, referred to as a “self-evaluation”, a “mirror of our activities” where “we see our own work.”

Below are some translated quotes from interview notes: with the hospital-based Community Health Supervisors:

“The Medical Director likes the Bulletin because it guides us on the indicators that need to be re-enforced. I remember a question that he asked me, “Why are you not doing supervisions at the health center?” and I took that opportunity to explain to him the problems with integrated supervision.”

“The Bulletin is like a mirror which allows me to check how I achieve objectives and to plan for better results. For example if I note that I have less supervisions, I wonder why and I plan accordingly.”

“At my level of hospital it only helps me indirectly but at the level of the health center, this is where the bulletin is functional. When they find a problem there, that is where they can identify solutions.”

“From May-June 2011 we noticed an increase in malaria cases. We then decided that the cause was the “Bye Bye Nyakatsi” campaign⁴¹. So we increased our awareness raising to tell people that even if they are sleeping on the floor, they must use an ITN. We also did advocacy

of 6.25% of all children under five having received a treatment in the previous quarter. Only 2/6 districts here achieved the less stringent standard of 2.1% over the preceding quarter.

⁴⁰ Again, this 13% is the result of a consensus process. If each under five has 3 episodes of diarrhea per year and the sector covered 100% of episodes, this would yield 25% of children under five treated for diarrhea every quarter.

⁴¹ A campaign to eliminate thatch roof homes, which administrative zeal translated into forced home demolitions in some regions before this zeal was restrained.

for someone to quickly build a house for these people.” [Cell Coordinator]

Some of these voices even supported a commitment to the sustainability of this local information for decision initiative:

“At the phase-out meetings, we decided that the bulletin would be my responsibility in collaboration with Community Health In-Charge at the health center level.”

“I am certain that the bulletin will continue. It will be led by the health center Data Manager, and I will ensure this during my supervision visits to the health center, as well as the Data Manager at the hospital level.”

Conclusion on health information support and the IMCI Bulletin

- ✚ Kabeho Mwana provided both technical and motivational support to the district staff and to the health information system supporting community-based service delivery.
- ✚ Notwithstanding some weaknesses, the IMCI Bulletin provided an evolving learning tool on how to produce and use information to support performance and consequently quality of care at the local levels. It focused care providers, supervisors and managers, on a set of standards which made sense to them, and could be compared over time and between areas (facilities or districts).
- ✚ The main weaknesses of the Bulletin were its partial duplication of routine information systems; an IT architecture which might prove difficult to scale up without reprogramming; and a somewhat idiosyncratic format for data presentation (see Display F.2.2 above).
- ✚ However, it succeeded in rapidly producing information that was meaningful and useable at local level, from the facility level on to the cell level. This production of information was made meaningful by its use during feedback meetings. The benefits of producing local actionable information far outweighed the weaknesses in informing the higher levels, for whom PBF already provides rapid information flow. (Ultimately, upstream information should not, as it too often does, come at the cost of local and downstream information.)
- ✚ The Bulletin was a positive, manageable initiative (notably thanks to the presence of Data Managers) providing a basis for advancing a culture of quality, by providing local providers with a “mirror” of their performance on a regular basis (every semester for all sites and possibly more frequently in some health centers).
- ✚ The evaluation did not explore the issue of cost, but based on prior experience, this evaluator would expect that the development of the Bulletin on an incremental basis was probably very cost competitive with more polished efforts, which sometime have problems being adapted at local levels.
- ✚ Given the staffing of Data Managers by the MOH and the positive experience of the Bulletin, efforts to improve, adapt, integrate with routine data, and finally scale up this initiative deserve consideration. The existing IT infrastructure⁴² will require that this be tailored to a situation which remains sub-optimal, and where Data Managers will continue to need technical support.

⁴² For reference, the 2011 HFA found that Kabeho Mwana supported districts had from 2.6 to 4.2 computers per facility available, with 37% to 80% of facilities having a reliable power supply in each district.

• F.2.3: Facility Contracting and Support of Supervision

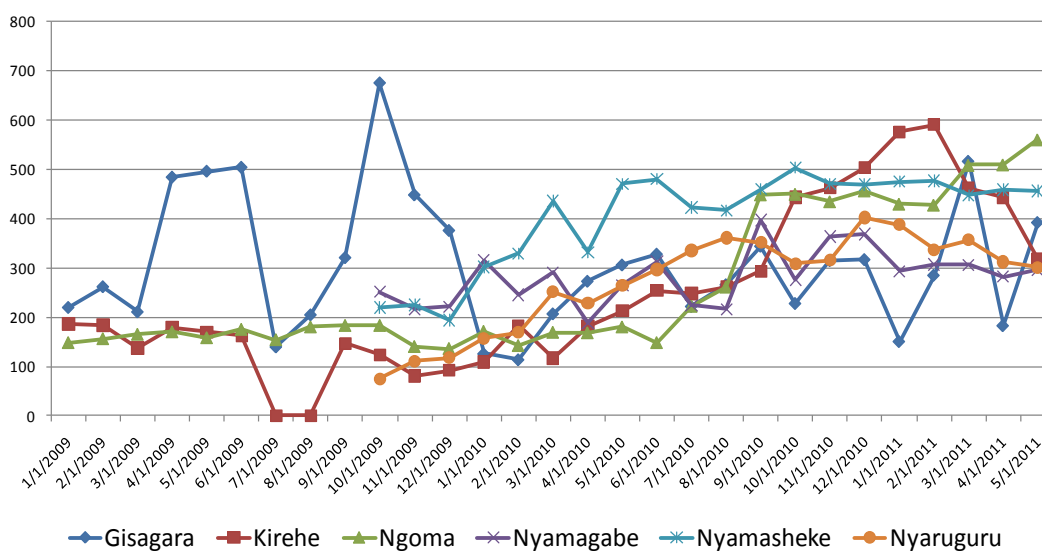
Contracting for supervision with the 88 health centers supported by Kabeho Mwana was supposed to take place from 2007 to 2009, with plans to phase out in the second part of the project. It was “delayed” as the process of consulting with the district health authorities on the contracts took longer than scheduled and therefore started slowly in 2008 with progressively more and more health centers participating. It ended in December 2010 after three years of implementation (some facilities appear to have still received funds in 2011)⁴³. Funds to facilities did not only directly support supervision but also supported facility maintenance (guards and cleaners) to a very small extent in four health facilities where program offices are located. In total, over the last three years Kabeho Mwana disbursed \$115,559 (\$1,400/facility), of which 90% was for the supervision contracting.

Assessment of the value and sustainability of performance based contracting is beyond the scope of this evaluation. PBF is a national policy in Rwanda and is supported by the Global Fund. The amounts disbursed by Kabeho Mwana are probably insufficient to create a “disruption of the market” in this context, but likely contributed to an increase in CHW supervision by health centers (see Figure F.6).

Overall, the data available on supervision paint a number of positive elements:

Over the 12 months prior to the evaluation, the aggregated Bulletin reports showed that supervision of CHWs by Cell Coordinators (expected once per month) rapidly progressed from 50% to over 60% very consistently; while their supervision by the Community Health In-Charge (planned once per quarter) progressed from 30% to 40%.⁴⁴ (Monthly supervision of health centers by hospital level staff also progressed from 40% to 59%.)

Figure F.6: Reported number of supervisions by health centers to CHWs during the period of contracting⁴⁵

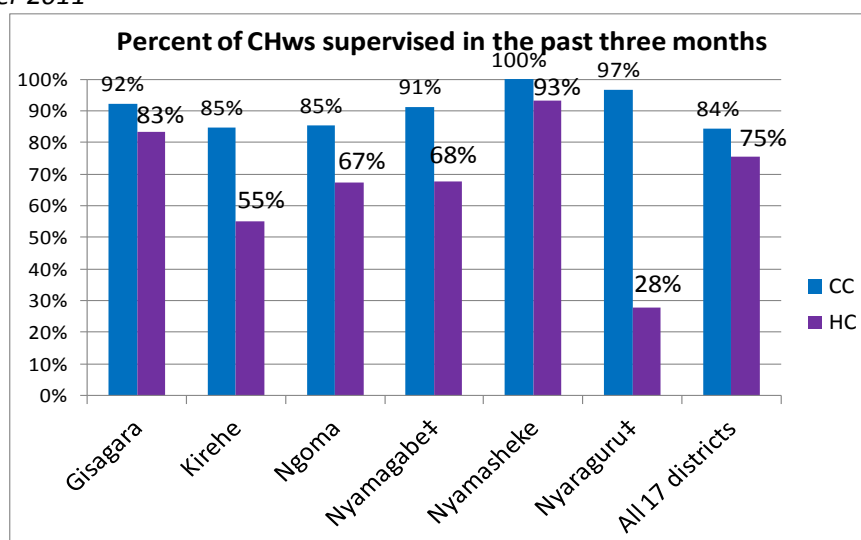


⁴³ The evaluation did not review financial statements.

⁴⁴ According to the HFA—perhaps less suspect of over-reporting—this happened from 12% to 35% of the time in each district, except Nyamasheke which achieved over 65% with additional human capacity at hospital level to support community health supervision.

⁴⁵ Source: Government of Rwanda. Ministry of Health. Community IMCI / Community Case Management. Evaluation Report of Community Health Workers Performance. May 2009

Figure F.7: CHWs reporting supervision in the past quarter by a Cell Coordinator (CC) or Health Center (HC) staff—first semester 2011⁴⁶



Correspondingly, the 2010 IMCI study⁴⁷ showed a statistically significant difference between the number of supervisions provided to CHWs from Cell Coordinators in favor of the EIP-supported districts (91% had been supervised by a Cell Coordinator over the previous three months) versus non-EIP-supported districts (80%). The difference was not significant for supervision by health center staff (75% in both groups). These same data presented in the Figure F.6 for the six districts. Early variation is most likely due to different definitions of what constituted supervision, but over time reporting became more standard.

Given the structural and universal challenges of supervision even at facility level, the net result is consequently a relatively high level of supervision and support to CHWs (Figure F.7). The role of the Care Groups in supporting this will be discussed further. During interviews and group discussions Cell Coordinators reported receiving “supervision from many sources--nurses, admin, supervisor, village to sector level.”

Structural challenges to supervision are also commonly identified.

The perspective from health center staff (primarily Community Health In-Charges) nonetheless emphasizes the time and logistical challenges these staff faced. One supervisor reported:

“Supervision takes time as I have 29-30 binômes to supervise, no time for my own work. One village across [...], I have to pay 500Fr for [transport], which is more expensive than other passengers (100Fr) as I am considered a HC employee. [I face the] risk of falling in water and no life jacket...”

Interestingly, this informant continued with the following anecdote, illustrating a positive working out of responsibilities between MOH and a CHW cooperative:

“...fortunately I explained the problem to the [CHW] cooperative; they elected 2 assistants to help

⁴⁶ Source: IMCI Bulletin; 2011

⁴⁷ Government of Rwanda. Ministry of Health. Community IMCI / Community Case Management. Evaluation Report of Community Health Workers Performance. May 2009

[me] supervise.”

The challenges are widely reported. Another informant stated:

“I average about five supervisions per month, though I should be doing eight. I don't always have means for travel. I'm going to propose to the Data Manager that he lets me rent a private car from the supervision funds available.”

The main challenges of supervision listed by Community Health In-Charges from health centers were:

- Naturally, time. One supervisor volunteered that s/he spent 30% of his/her time on it, another mentioned 70%. On the other hand, one Community Health In-Charge in a group discussion actually directly stated not having time for supervision given other responsibilities, and not attempting to carry out that responsibility. This was fortunately a lone voice.
- Transportation logistics and cost: while the facility in-charge (*Titulaire*) may get funds from PBF, the use of these funds for supervision depends on prioritization by the in-charge, the supervisors' motivation, their creativity, and interaction. Occasionally, but not frequently, cooperatives get involved in sponsoring the cost of supervision. While hospital supervision can make use of the district vehicle, supervision from the health centers needs to rely on rented motorcycles, foot, or bicycle.
- Integrated supervision: this factor affects supervision from hospital supervisors, who must coordinate their field visits with supervisors of specific technical programs. This team supervision creates disincentives against the supervision of CHWs in villages, as most supervisors prefer to return to the district town once facility supervisions are completed. (This comes in addition to the inherent challenge of coordinating four or five individuals to use one vehicle.)
- Finally, these staff may be called to unrelated meetings and activities to support general operations of the health center.

Conclusion on Supporting Supervision and Facility Contracting

- ✚ Contracting with facilities most likely contributed to supporting supervision visits, although relatively late in the project life. The end of this funding stream for facilities will have to be covered by the MOH through its regular funding and through PBF.
- ✚ The relatively high level of supervision achieved (even if below the standards set by the MOH and project) cannot be assigned to any one single factor. Given the relatively higher reliability of Cell Coordinator supervision, the entire dynamics and energy of the project has played a part, including the role of peer support through the Care Groups, the financial incentives, the high level of training, and continued reinforcement by district and project staff.
- ✚ The logistics of supervision and the competition for time of supervision, along with related challenge to its quality, will continue to be a structural challenge, but a positive value has been given to supervision and this can be built upon.

- **F.2.4: General Health System Support to the c-IMCI Strategy**

Through the training of trainers, the production of training material, ongoing dialogue with district authorities and participation in technical groups, Kabeho Mwana has played a support role to the health system. The evaluation did not pursue this issue specifically, but MOH officials at central level clearly recognized the value and role of the project and its senior management.

- **F.2.5: Conclusion on Strengths, Weaknesses and Contribution to Impact of the Health Service System Delivery**

Kabehe Mwana has made important contributions and achieved positive results in supporting the community health system delivery:

- + As mentioned repeatedly during the meetings and interviews of the evaluation team with MOH staff and Cell Coordinators, the project provided a proximity supporting presence from district, to facility and to community levels. That visibility and coaching presence, in and by itself and on top of specific technical interventions from training, to information system support, and organization of feedback meetings, created its own energy behind the MOH efforts for community case management.
- + Specifically, beyond a heavy investment in training, the EIP provided a focus on local timely information about CCM and its support (drugs, supervision). Through the feedback meetings it allowed different actors (MOH staff, Cell Coordinators, CHW cooperatives, health committee members) to learn to coordinate their response, based on this timely information.
- + This contributed to positive, if not optimum, supervision activities, and has also allowed a more rapid resolution of procurement and supply management issues for community medicine.
- + These elements most likely made a contribution to quality of care and the overall results of the project, and district performance.⁴⁸

On the downside:

- + Kabehe Mwana laid a basis for using information for decision-making through the interventions described above, but did not attempt or get to institutionalize a full-fledged quality improvement process.⁴⁹
- + Supervision will continue to be a challenge and is already only partially responding to PBF incentives. Even if PBF can support a minimum intensity of supervision, it cannot guarantee its quality. The burden of data collection and reporting at all levels already threaten to turn both supervision visits and feedback meetings into data processing and reporting efforts only.
- + Under Kabehe Mwana, the Cell Coordinators are themselves *binômes*, and thus able to provide peer-supervision to CHWs in villages. This represents a divergence from the national policy whereby Cell Coordinators are In-Charge of Social Affairs. This will ultimately have to be resolved by the GOR, hopefully by preserving the potential for Cell Coordinator peer-supervision, which has been a success for Kabehe Mwana.
- + Three main factors are going to challenge the role of CHWs, notably *binômes*:
 - CCM may be a victim of its success: the current epidemiological trend shown by the RDHS will reduce the demand for treatment by CHWs⁵⁰;
 - The RDT policy—a positive evolution—is also likely to reduce the demand for the

⁴⁸ The May 2009 c-IMCI/CCM Evaluation Report showed that Kabehe Mwana-supported districts did slightly (but significantly) better on a questionnaire based on the training curriculum and CCM algorithms than non-Kabehe Mwana districts: respectively 72% [70-73%] vs. 66% [64-67%] for a total of 904 CHWs surveyed.

⁴⁹ See USAID/CSHGP Technical Reference Materials / Quality Assurance

⁵⁰ The evaluation findings focus on the positive result of the observed overall increase in utilization of CCM services from a non-existing baseline (up to 40% of care seeking for a sick child episode in the two weeks prior to the final KPC). There is obviously still a gap to be filled in full utilization, notably for diarrhea, and IRC reports much higher CCM service utilization in other countries. The evaluation was not designed to investigate this difference between countries.

services of CHWs;

- An increasing number of external actors with an increasing number of small but additive financial incentives and reporting requirements will also contribute to reduce or dilute the level of activity of CHWs in CCM.

These factors may cause a drop in the number of cases seen by CHWs to drop from an average of 4.1 per month (3.8 in other districts) in July 2010⁵¹ to one or two children in per month. Under these conditions, slippage in quality of care, as well as motivation, can become a concern.⁵²

✚ Finally, the stability of community-drug supply is not guaranteed at this point, in Kabeho Mwana-supported or other districts. While the GOR is taking leadership and initiative, the continuity of commodity supply is not ensured yet, and community drugs remain particularly at risk since they are still often seen as outside the responsibility of the health center pharmacist and are under different financial arrangements that may lead them to be less carefully managed. Zinc is currently unavailable at facility or community level.

F.3: Community Mobilization and Health Promotion

The center piece of Kabeho Mwana health promotion efforts rested with the Care Groups, which are discussed specifically in the next section.

Early on, Kabeho Mwana used the BEHAVE Framework to analyze determinants of health behaviors on pneumonia, maternal/newborn health (including family planning), malnutrition, diarrhea, malaria, and HIV/AIDS. The formative research also identified health centers, CHWs, and radio as the three main sources from which women obtain information. While the BEHAVE framework theoretically seeks to consider knowledge, social and environmental determinants of household behaviors, the formative research largely zoomed in on knowledge and information gaps, and led to the development of messages. Messages were designed at a workshop involving multiple health professionals/stakeholders and “under instructions” from UNICEF, according to project reporting language. This led to the production of a substantial number of products to support BCC/IEC efforts (see Table F.8).

Table F.8: Communication aids for health education and promotion produced by Kabeho Mwana

Communication Aid	Details	Health topics
Songs	I-URUKINGO NI RWIZA (vaccine is good) / II-MALARIYA IZAHAZA ABANA. (Malaria Affects Children Mainly) / III-TURARWANYA UMUSONGA (We are Fighting Against Pneumonia) / IV-UMUCYO WACU UZAMURIKA (Our Light will Shine) / V- NZAJYA NONSA UMWANA WANJYE NKUNDA (I Shall Breastfeed my Beloved Child) / VI. TURWANYE IMPISWI (Let's fight against diarrhea)	Immunization -- Malaria -- Pneumonia -- Infant and Young Child feeding -- Vitamine A--Breastfeeding -- Diarrhea
Counseling card	A 13 page graphic and Kinyarwanda text (recto-verso) flip chart-type tool for individual counseling sessions (see picture).	Malaria control and prevention—Fever, treatment of malaria and CCM—Sick child, rehydration and continued nutrition—General hygiene and latrine use—Treatment of diarrhea—Dehydration—Indoor smoke, vitamin A and utilization of health services—Malnutrition—Breastfeeding—Handwashing—Continued feeding and hydration of the sick child—Growth monitoring
Facilitator's Guide	A Facilitator's Guide on the Counseling cards	
Posters	A series of 13 posters corresponding to the counseling cards for individual discussions	

⁵¹ 2010 Community IMCI evaluation

⁵² The recent MOH initiative to bring *binômes* in facilities for onsite refresher training is a positive initiative.

These products were used by Kabeho Mwana community mobilization teams and CHWs. They were promoted and used in health centers, and by some groups and agencies outside of the project area, through group education sessions in health centers, “awareness activities”, and during national health days supported by the project. Training sessions were conducted with CHWs, but also religious and community leaders through the COSAs and CDCs on the health topics and the communication aids, notably the counseling card. The project managed a community mobilization database (Excel), which attempted to track, through CHW reports, the number of men and women sensitized through these activities on four topics: malaria, pneumonia, diarrhea, and child nutrition. (The KPC survey did not measure exposure to these messages and/or sources of information.) In addition to the four main topics, the community mobilization database also monitored the existence of kitchen garden, appropriate latrines, hand-washing stations (tippy-tap), rubbish pits, and LLINs.

Both the CHW cooperatives and the Care Groups, under priorities defined by the MOH, or through periods of thematic campaigns promoted by Kabeho Mwana, also scheduled and coordinated systematic home visits where individual counseling, mostly of mothers, would take place. This was also supported by small GOR financial incentives for referring a pregnant woman to a health center for delivery, identification of homes missing LLINs or with defective LLINs needing replacement, reporting home deliveries, etc. Expression such as “*selling indicators*” [to the government] and “*buying indicators*” [from Cell Coordinators] came repeatedly and innocently during the evaluation team’s interviews with Cell Coordinators.

Display F.3.1 (p.36) shows how household level contacts in each district came through waves or campaigns on specific themes. Reports on malaria BCC can serve as the denominator for the number of home visits, as Kabeho Mwana was under contractual obligation from PMI funding to include discussion of malaria prevention and treatment in all household contacts (which is what is reported in the database). At full speed, the CHWs carried out nearly 372,000 household visits per quarter, having reached a total of 163,000 households in total. The display shows the intensity of contacts, whereby beneficiary households received more than two visits per quarter on average. It also shows how the intensity was less for other topics, notably diarrhea, on which progress has been far slower in the Kabeho Mwana-supported districts.

Group discussions and interviews conducted for the evaluation identified a range of factors which created a strong energy for the promotion of healthy behaviors:

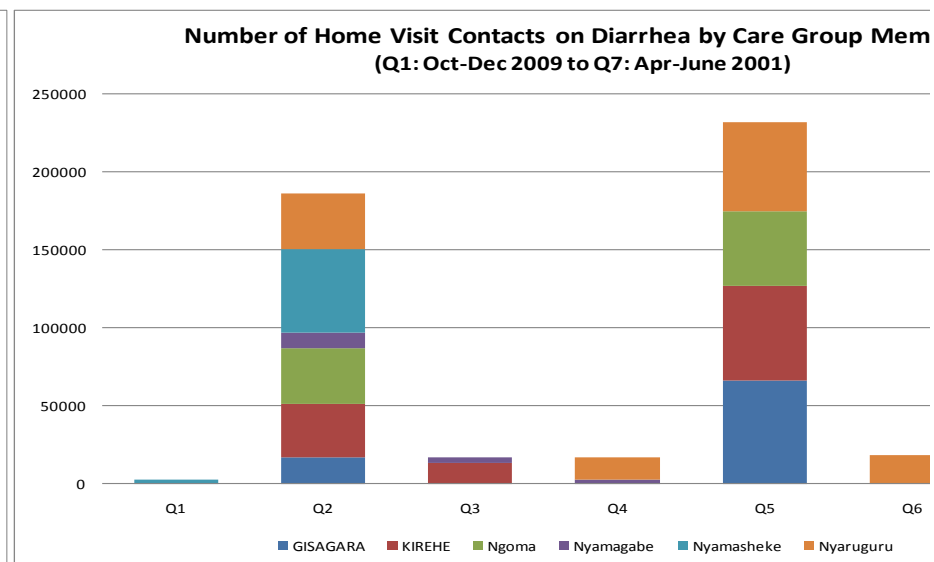
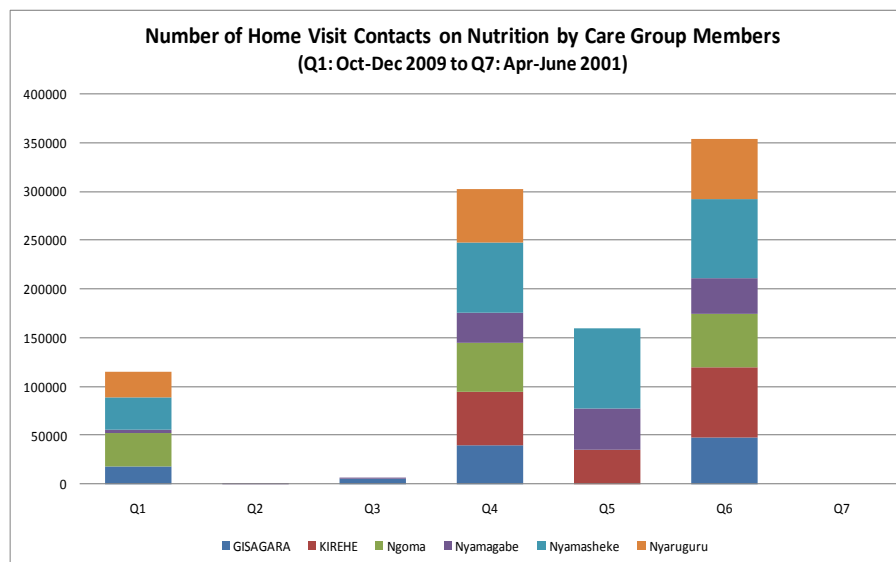
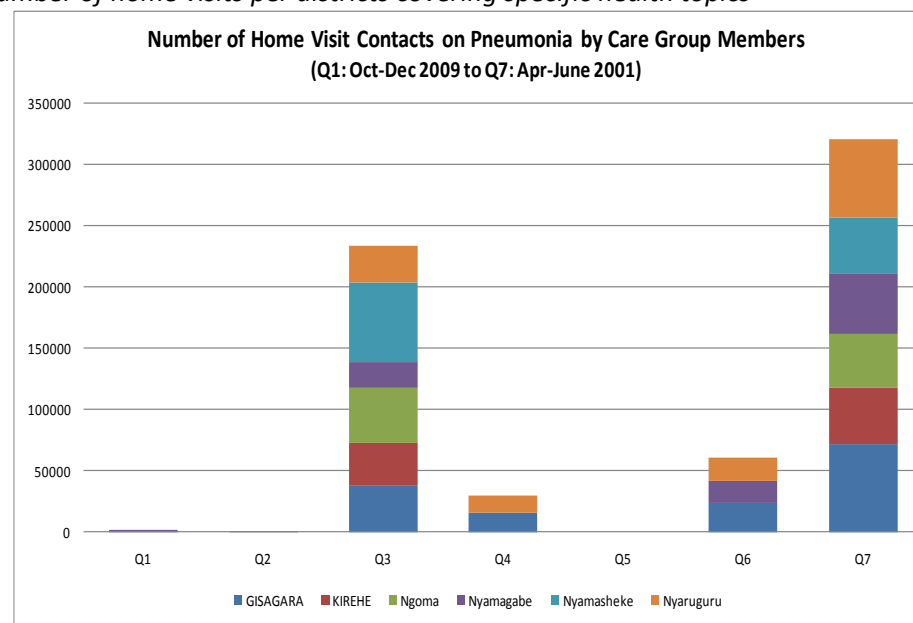
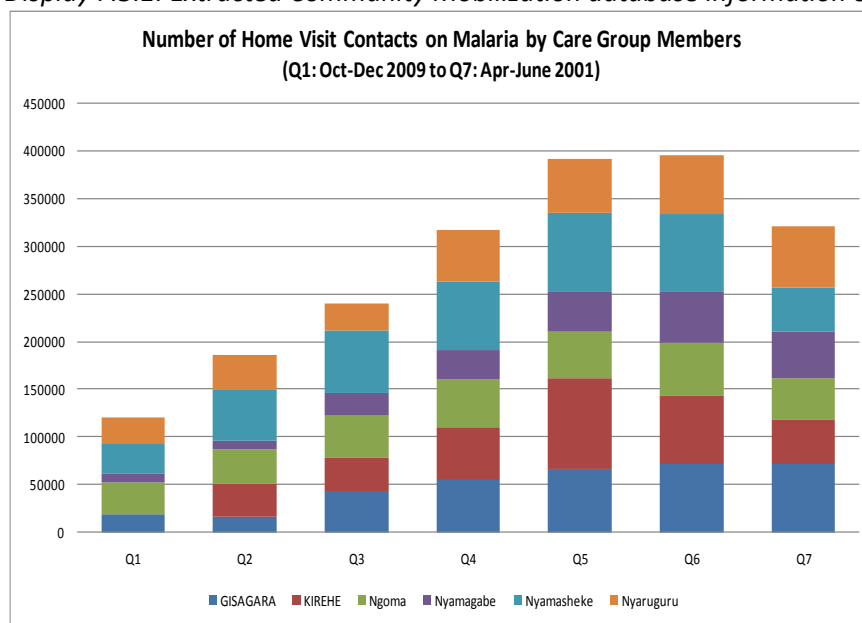
- The motivation mechanisms created by cooperatives and Care Groups—more on that in the next section;
- A context of national priority on some issues, such as malaria (a Kabeho Mwana priority) or maternal health and facility deliveries (not a Kabeho Mwana priority, but still promoted through the same CHWs, and community structures);
- The intensity of communication efforts, at least on some topics, which were covered from the home visits, to the community, health centers, radio, and even national television, which makes disaggregation of project and national efforts virtually impossible;
- The linking of “messages” to actual life options/tangible interventions, such as drugs and CHWs available at community level, LLINs being made available, tippy-taps made accessible and easy, monthly community growth monitoring session for children (reinforcing the nutrition messages) not to mention community garden activities, etc.

- Something of a strong culture of seeking compliance and conformity with social norms. References to “telling women what to do”, “punishing” (mostly about CHWs not performing appropriately), and “making them” were voiced during some group discussions, and notably did not lead to outrage from group participants. Not sleeping under a bed net, delivering at home, not having a latrine, were all identified as very negative behaviors, possibly not to be socially tolerated. CHWs called on community leaders to come and admonish households where these negative behaviors are identified. In one extreme and hopefully unique case, recourse to a traditional healer rather than utilization of health facilities or CHWs, led to the traditional healer being beaten by a community leader in front of villagers.

Conclusion on Community Mobilization and Health Promotion—

- + Kabeho Mwana mobilized considerable resources in bringing information and health education messages to beneficiary communities, and actively promoting healthy behaviors in the homes of children under-five. However, evaluation of impact of specific components of communication for behavior change is not possible without better evaluation design, measures of exposure, and changes in the expected determinants of behavior such as knowledge, awareness, intentions, etc. But it is credible to assess that the amount of communication and reinforcement of practices promoted from health centers to community levels advanced the results presented above.
- + The same logic argues that the MOH agenda, for example on maternal health, took the driving place of these efforts, especially after the establishment of the CHD.
- + Issues such as diarrhea and nutrition probably did not receive the level of attention they deserve from CHWs and health staff. One of the factors for this may be that the national nutrition strategy has not been rolled out yet at district level. The other is simply competition for priorities.
- + Nonetheless, Kabeho Mwana played an initial role, and one that remained important in:
 - o Providing training to a wide number of stakeholders at community level (including CHWs, COSAs and CDCs);
 - o Contributing in a central manner to the definition of themes and messages;
 - o Developing communication aids.
- + Kabeho Mwana’s products / communication aids came late in the implementation of the project, largely due to two factors:
 - o The inherent nature of projects, especially large projects, which demand a time investment to get to efficiency and momentum.
 - o The commitment of the project to alignment and support of Rwandan policies.
- + Beyond the mechanism and strategy of the Care Groups discussed below, some of the most positive elements of the BCC approach of Kabeho Mwana were:
 - o Home visits and individual counseling, thus allowing a measure of accompaniment and support to behavior change (albeit, in the context of a strong national mobilization, with the occasional possible tendency of a drift from gentle encouragement, to active pressure for behavioral compliance);
 - o Behavior modeling by and visibility of a group of CHWs in each community;
 - o Integration of communication into actual life-options modeled and accessible locally. One of the most integrated was the promotion of hand washing along with a tool for hand washing (Tippy-Tap), which led to notable results in both hand washing and point of use water treatment.

Display F.3.1: Extracted Community Mobilization database information on number of home visits per districts covering specific health topics



F.4: The Care Groups in the Context of c-IMCI in Rwanda

The initial evaluation question about the Care Groups was aimed at comparing the original Care Group launched by Kabeho Mwana (see Section B), which was already adapted slightly from World Relief's trademark model, to the modified Care Group scaled-up throughout the six districts. As the evaluation progressed, it became progressively clear that this was not the most pertinent question:

- (1) The modified model was somewhat streamlined, decreasing expectations on project supervision and inputs, thus raising questions about slippage in motivation and intensity of efforts by CHWs. But the evaluation could not be designed at the last stage to test differences in terms of cost, processes, or outcomes of the approaches. An effort was however made to purposefully meet with informants in both contexts. This did not yield notable differences.
- (2) It took a certain amount of time for the evaluation to clearly articulate the initial distinction between *CCM*—training and supporting CHWs to provide care and treatment at community level against three deadly illnesses—and the *Care Groups* --a community mobilization and BCC (preventive) strategy. Once this became clear, however, comments from Cell Coordinators and CHWs in the field started pointing out how the Care Groups had integrated these two strategies. This became an important element to examine.
- (3) The modified model aligned with the MOH guidance and policy for CHWs, integrating supervision within the c-IMCI architecture being set up by the MOH. Consequently, the more meaningful question became, “How does the Care Group model compare with the existing default model of c-IMCI in Rwanda? And what lessons can be learned from its experience?”

The first step to understanding Care Groups as CHW peer-support and collaboration groups is to provide a descriptive analysis (see Display F.10):

In the current Rwandese c-IMCI model, each village has five CHWs. One male and female pair of CHWs—*binômes*—are trained in and responsible for CCM. The others are respectively dedicated to maternal health, social affairs, and chronic diseases. All CHWs are organized at the sector level in CHW cooperatives, where they self-organize for income generating activities and information exchange. The *binômes* report administratively to Cell Coordinators, who are by statute social affairs CHWs themselves and consequently have no technical supervision role. Cell Coordinators meet at the health center level with Community Health In-Charges and possibly health facility in-charges and Data Managers on a monthly basis to report on their activities. Community Health In-Charges are tasked with technical supervision of *binômes* and maternal health CHWs. Social affairs CHWs are under a different administrative structure. At the lowest level, CHWs work fairly independently of each other based on their own sector priorities. Display F.10 provides an illustration of travel times involved between each level, and suggests where some of the supervision logistical challenges will be encountered.

The Care Group model regroups all CHWs from 4-5 neighboring villages into what is effectively a local CHW peer-support, coordination and collaboration group. Care groups then report up to the Cell Coordinator who, in this case, is also a *binôme*. Care Groups have evolved to have a lead coordinator who takes on a function of Assistant Cell Coordinator. The information is thus already compiled first by the Assistant Cell Coordinator at the Care Group level, before being reported to the Cell Coordinator. This provides more time for peer support and exchange at each level. Perhaps more importantly, it provides CHWs of different sectors one place to share their priorities and coordinate their activities. All can be involved in home visits and share their different perspectives. One of the

evaluation teams had an impromptu stop along the drive as we stumbled on a community weighing session for children. Having missed the normal date because of training, all five CHWs organized themselves to invite mothers to a make-up date, and distributed roles among themselves to carry out the activity. Care Groups also provide a place to micro-plan home visits for the next quarter and schedule health promotion or gardening activities.

Three additional elements come into play the Kabeho Mwana model:

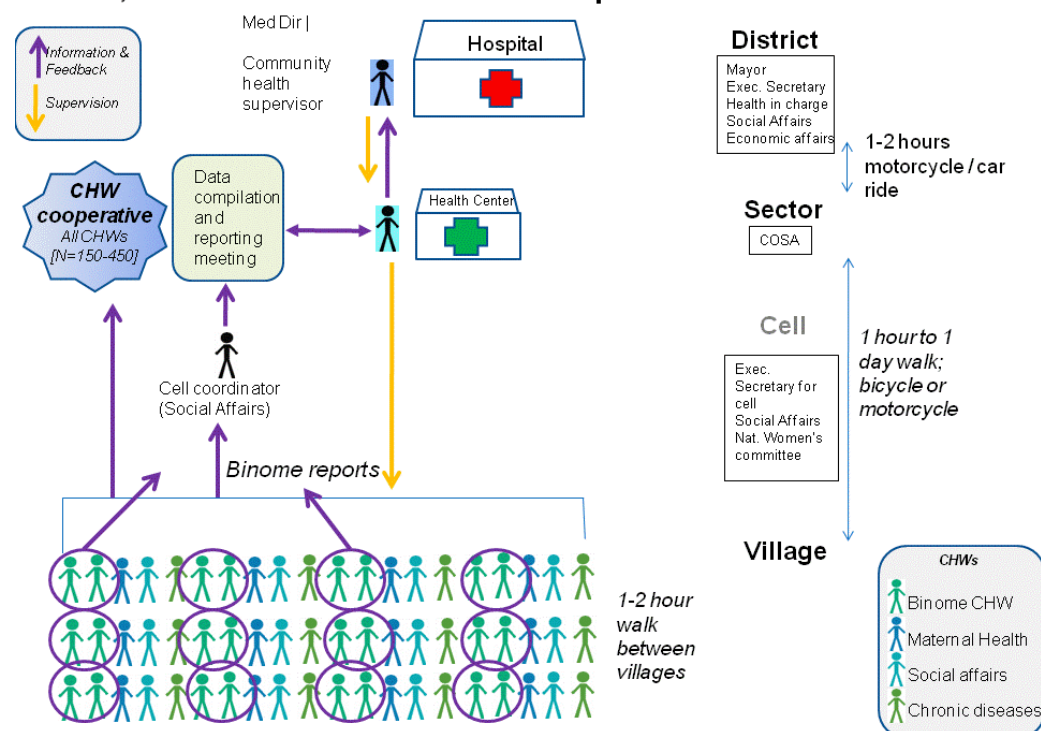
- 1- Given the challenges with field supervision in villages by Community Health In-Charges, the fact that the Cell Coordinator is a *binôme* and the assembling of *binômes* and other CHWs in these peer groups provide more accessible points of contacts for supervision, by Community Health In-Charges.
- 2- In addition to the data compiling and reporting meeting at health facility level, the model allows for a feedback meeting, where the health facility staff meet with the Cell Coordinators to review information from the Bulletin and the routine information system, communicate new MOH priorities, problem-solve and plan for the next quarter's activities.
- 3- Finally, the Care Group provides a more intimate support structure than the CHW cooperative, which can gather 100-200 members. Initiatives that are both smaller scale and more immediately beneficial to CHWs can be supported at this level.

Obviously, the evaluation could not assess the Care Group model against the counter-factual of the *absence* of Care Group, but a number of elements came very clearly throughout the districts and the groups of informants interviewed:

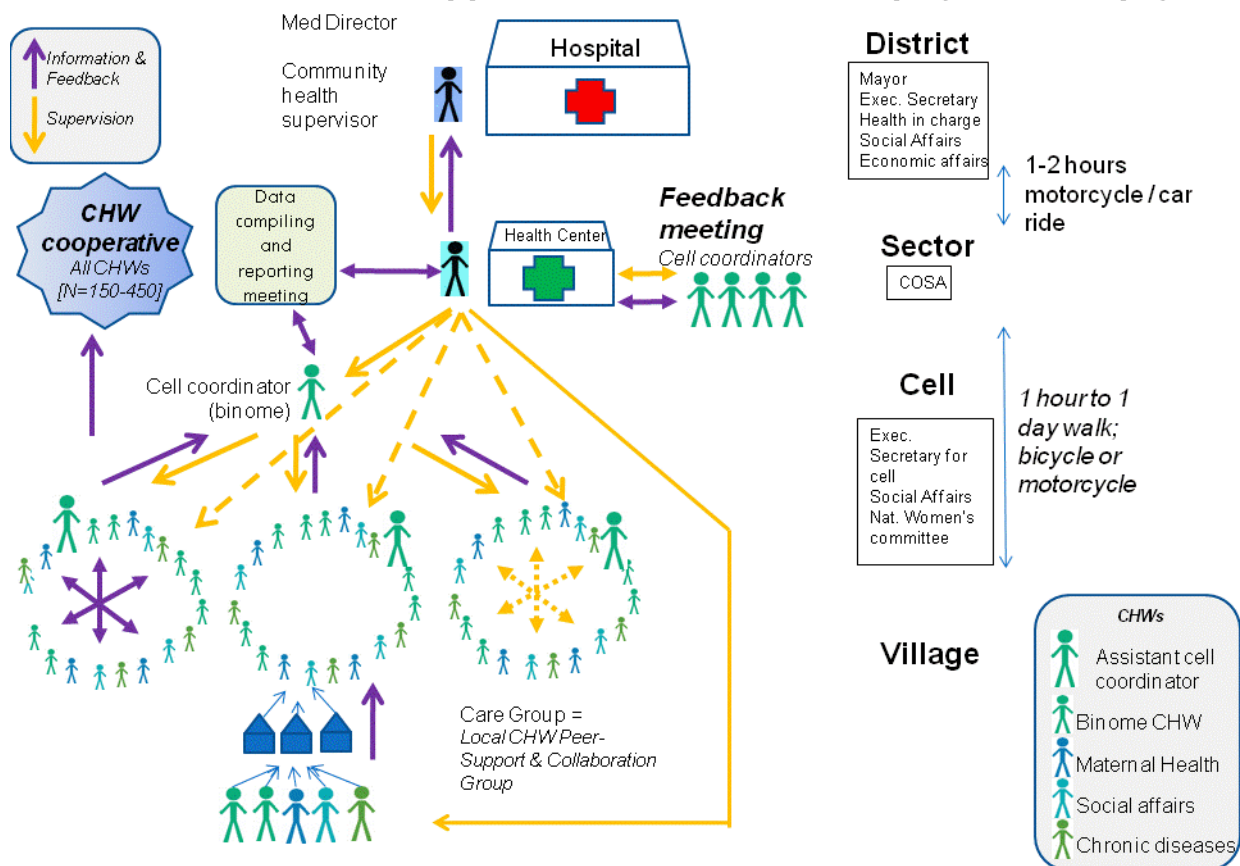
- ✚ The existence of these peer groups provided an energy multiplier for the work of the CHWs themselves, but also for the work of their technical supervisors, the Community Health In-Charges. Kabeho Mwana and districts planned for Community Health In-Charges to supervise each Care Group once a quarter. According to the HFA, this happened from 12% to 35% of the time in each district, except Nyamasheke which achieved over 65% with additional human capacity at hospital level to support community health supervision.
- ✚ The elements of peer-motivation, peer-support and peer-accountability cannot be quantified but appear to be fundamental motivators. Discussions with Cell Coordinator groups met for the evaluation provided at least two examples of a CHW who behaved inappropriately, and who was replaced by the group. On the other hand, the level of attrition of CHWs over a six month period (HFA results) varied at low levels between 0.1% (Nyaruguru) and 2.2% (Nyamasheke). The evaluation team investigated the causes of attrition in sectors where they were the highest and found natural causes (marriage, move, work opportunity or studies) to be the cause nearly universally.
- ✚ The burden of work, particularly on Cell Coordinators, tends to expand with the number of requests and competing priorities. A small illustrative sample of CHWs and Cell Coordinators indicated that in July 2011 they were responsible for five to seven regular reports a month, up to three special or extra reports (for Cell Coordinator), and two-five meetings and/or trainings. From a human motivation perspective, this increasing burden of responsibility also explains the attraction for a Care Group-type organization of work.

Display F.10- The Rwandese c-IMCI architecture with and without Care Groups

C-IMCI, Default Model / without Care Group



C-IMCI, with CHW Peer Support & Collaboration Groups (Care Groups)



- ✚ By bringing CHWs together and allowing them to coordinate and collaborate, the Care Groups allow to integrate community services, both preventive and curative services, but also, for example, health/nutrition promotion and small livelihood/agricultural activities.
- ✚ One of the evaluation team's interests was the possible duplication of roles between the CHW cooperatives, institutionalized by national policy, and the Care Groups, established by Kabeho Mwana. Discussions with CHW cooperative groups in the six districts convincingly established that CHWs consider the cooperatives and Care Groups as different and complementary levels in a consistent system of organization and support. The cooperatives were not all at the same level of functionality (given their recent history) delays in legal establishment and the working out of fund disbursement between health facility and cooperative in the period before full legal recognition at all administrative levels. But even CHW members of the most functional cooperatives commented that Care Groups provided a proximity and small scale opportunity to bring resources together for immediate benefits to members of the group (as opposed to cooperatives which represent an opportunity for larger scale efforts with a longer time and collective payoff).
- ✚ Finally, while this mostly happens informally within the groups or through the work of the Cell Coordinators, Care Groups provide a useful opportunity for peer supervision.

G. Discussion of Potential for Sustained Outcomes, Contribution to Scale, Global Learning, CHW Approaches, etc.

G.1: Scale up

Kabeho Mwana provides an opportunity to look at two overlapping but distinct scale-up processes:

- (1) Scaling up a particular approach to implementing c-IMCI through the organization of Care Groups, where CHWs are organized in semi-formal peer-support and collaboration groups;
- (2) Scaling up CCM from the first districts to a national scale, and along the way, integrating the care for three illnesses from HBM to CCM.

In both cases, the will and determination of MOH leaders in Rwanda has been key, but the first scale-up effort has rested with Kabeho Mwana, partner districts, and community partners. This is discussed throughout this evaluation report (see text box for an illustration of the centrality of the six Kabeho Mwana-supported districts in the scaling up of c-IMCI in Rwanda).

The second scale up process is the results of efforts by the GOR with its development partners, among them Kabeho Mwana and its predecessors, implemented separately by Concern, IRC, and World Relief. The EIP

From IMCI to c-IMCI in Rwanda

"In Rwanda, the IMCI strategy implementation effectively started in 2006 with the set-up of a functional working group, the development of a strategic work plan, the adaptation of the generic material, the training of national trainers then the training of providers in order to quickly expand the strategy. In May 2009, facility IMCI is implemented in 29 districts out of the 30 in the country.

Thanks to technical support from partners like USAID/BASICS, SPS, EIP, Twubakane project and UNICEF, Community IMCI (c-IMCI) implementation tools have been developed and field tested then revised, CHWs have been trained and case management at community level begun on February 2009 in the districts of Kirehe, Ruhango, Nyamagabe, Nyaruguru, Ngoma, Nyamasheke and Gisagara."

Source: Community IMCI / Community Case Management. Evaluation Report of Community Health Workers Performance. May 2009. Republic of Rwanda.

contributed uniquely to forming an evidence and experiential basis for the expansion of CCM. In turn, the scaling up of CCM by the MOH has provided a powerful wind in the sails of Kabeho Mwana and its district partners.⁵³ This evaluation has worked closely with MCHIP to document this scale-up process. The reader is referred to MCHIP's forth-coming complementary analysis of CCM scale-up in Rwanda.

G. 2: Sustainability in Question

Considered in the context of project approaches, the contribution made by Kabeho Mwana to the prospect for sustainability of progress in community health in Rwanda is overall largely positive. We offer here a systematic and critical review of the sustainability of the collective achievement of the project and the different stakeholders of community health at district level.

A Central Driver

It is easy to find evidence of political leadership and commitment among the CHWs and authorities at all levels. CHWs and Cell Coordinators interviewed for this evaluation clearly expressed the value to them of the position they hold:

"The community selected us."

"We are role models."

"Our neighbors trust us."

"The health centers support us."

"The president invited us to Kigali."

The current policy climate in Rwanda frames the remarkable health achievements of the past five years. And there is no question that the level of political commitment to community health will be for the near future the main determinant of progress on primary health care outcomes in the districts of implementation of Kabeho Mwana and nationally.

Picture G.1: President Paul Kagame waves to the crowd after a speech to 30,000 CHWs gathered for a CHW Forum in the Kigali national stadium during the July 2009 CHW Forum.



⁵³ A presentation of the Founder and Coordinator of the MOH's Community Health Desk on the Community Health Program in Rwanda is available as Annex XVII.

Challenges to Sustainability

These elements of political will and leadership can help address many of the following challenges to sustainability:

- Maintaining the quality of care by *binômes*, as their level of effort in CCM is likely to decrease with increasing demands are placed upon them in areas such as nutrition, food security and livelihoods, maternal and neonatal health, chronic care, etc.;
- Resolving the procurement and supply management issues for community health drugs and ultimately moving to a true utilization-driven (“pull”) supply management system, with appropriate logistics information and quality assurance systems;
- Maintaining the focus of Care Groups and Cooperatives on outward services to the community, while capacity to manage funds and distribute benefits to members increase;
- Maintaining the focus of feedback meetings on decisions and actions, versus another opportunity to present indicators and address reporting challenges;
- Maintaining a pressure on, or raising the motivation of MOH staff for effective, hands-on supervision of CCM and health promotion work, when logistics and financial resources do not always align with the mission;
- Avoiding corruption of the PBF system and the unintended consequences of the “selling” of indicators⁵⁴;
- Institutionalizing the production of information illustrated by the Bulletin, not only for high level (district, provincial, national) tracking, but first and foremost to respond to local needs;
- Maintain progress on a national scale as donors re-orient funds in light of the improved health outcomes achieved by Rwanda. (Discussions with the USAID Mission suggested that Rwanda was unlikely to see further increases in overseas development assistance. Currently most, if not all, of the PBF strategy is funded through external assistance mechanisms, primarily the Global Fund.);
- Maintaining momentum over likely decreasing returns on PBF investments⁵⁵, and decreasing external funds available for PBF.
- At the local level, replacing the role played by Kabeho Mwana as a non-hierarchical, supportive, coaching, technical assistance presence, both at community level and at MOH level is going to be a challenge. CHW cooperatives are a long way from being able to take over this role. It is not clear what organization or entity can provide this kind of facilitative support.

Indicators of Strategic Contribution to Sustainability

Kabeho Mwana made numerous contributions, efforts and adaptations to support sustainability. These are apparent throughout the analysis presented above. We will consider first some “indicators” from the health system level, examine some community level determinants and conclude with a

⁵⁴ A system is dependent on the strategies of its individual agents, who can be tempted by the incentives created by the same system. An illustration from the evaluation: CHWs are financially incentivized for reporting home deliveries (the “selling” of indicators), but the bulk of their financial incentives come from health facilities. Health facility in-charges (*Titulaires*) are financially incentivized for eliminating home deliveries. In one sector, the health facility in-charge realized s/he was losing funds due to CHWs reporting home deliveries and weighed on them to stop doing so. Which they did. Later on a visit by a district or national MOH official led to high praises for having eliminated home deliveries. In that one case, the CHWs stood up and reported the instructions they were working under, and this under-reporting was corrected. The point is that individual agent strategies are central to financial incentive strategies, and carry the potential of corrupting the best laid plans.

⁵⁵ A study showed that PBF “had the greatest effect on those services that had the highest payment rates and needed the least effort from the service provider.” See: Paulin Basinga, et al. Effect on maternal and child health services in Rwanda of payment to primary health-care providers for performance: an impact evaluation. *Lancet* 2011; 377: 1421–28.

bird's eye view.

Display G.2 below illustrates two “micro-level” indicators of sustainability.

- The first shows that nearly a third of the distribution of community drugs to Cell Coordinators and CHWs is carried out by facility pharmacists, while two thirds of the distribution is carried out by the Community Health In-Charge. This shows that the institutionalization of CCM in the normal drug procurement and supply management of the country is at best partial. It also shows that the MOH has created a cadre of skilled staff (supervisors) who have been able to fill the gap.
- The second illustration shows that these supervisors and/or other MOH staff currently run the feedback meetings in nearly 80% of the cases, the rest still being carried out by Kabeho Mwana staff.

Display G.2: Drug supply for CCM and facilitation of feedback meetings (Source: HFA 2011)



In the same vein, the 2011 Community Capacity Assessment done found that most COSA members had benefited from training in child health topics and the collection and analysis of community health data. This translated into COSA work plans as established priorities for facility births and ANC, immunization coverage, hygiene, family planning coverage, promoting good nutrition and increasing *mutuelle* membership. On one hand, this showed high support for the entire enterprise of community health, as did the trust in and recognition of CHWs by community members; on the other, it strongly aligned with national priorities where PBF provides incentives, but neglected issues such as diarrhea, exclusive breastfeeding and nutrition in general.

In other words, the central driver presented above (GOR leadership) carries into elements of sustainability at the community level. But the relative weaknesses of Kabeho Mwana and the c-IMCI strategy in general (on issues like diarrhea control and nutrition⁵⁶) are structural and will continue to be unresolved until the same energy is brought to bear on these issues.

Finally, in a purposive rapid survey of 42 MOH staff (from Medical Director to hospital-based Community Health Supervisor) in the six districts carried out during the evaluation, questions were asked about first the current level of autonomy of the district versus reliance on Kabeho Mwana, and then about the confidence that a year from now the district would be managing effectively beyond

⁵⁶ The additional and time-bound intervention on CMAM shows among other things that results can be achieved when integrated efforts are brought to bear at community level.

any challenges of the post-project period. Table G.3 summarizes the difference in responses to the “now” versus “a year from now” questions.

Table G.3 Sense of autonomy and confidence in collective efficacy of 42 MOH staff on specific functions supporting community health

Function	Current sense of autonomy ⁵⁷	Future confidence ⁵⁸
CCM drug supply	Relies on Kabeho Mwana	High confidence
CHW training (initial)	Relies strongly on Kabeho Mwana	Mid to low confidence
CHW refresher / ongoing training	Relies strongly on Kabeho Mwana	Mid to low confidence
Technical and management supervision	Relies on Kabeho Mwana	High confidence
Supervision logistics	Relies on Kabeho Mwana and MOH/district	High confidence
Community-level data collection	Relies on Kabeho Mwana and MOH/district	High confidence
Analysis of community data	Relies on Kabeho Mwana	Mid to low confidence
Problem solving and quality improvement	Relies on Kabeho Mwana	High confidence
Community PBF	Relies on MOH/districts	High confidence
Support and coordination of Care Groups	Almost exclusively relies on Kabeho Mwana	Mid to low confidence

The challenges listed above are thus real and perceived by our MOH informants. However, the most remarkable thing is that the confidence in the future appears to be higher than the current sense of autonomy. In other words: the project is here and the partners work with and rely on it; the project will be gone, and there is a reasonable level of confidence that essential functions will be served through endogenous capacity.

What is the resulting picture for sustainability?

Since there is no single sustainability determinant—not even political will—the question is: have enough reinforcing elements of strength been put in place by the project and all district partners, to allow an effective and productive adaptation to the post-project phase, and to continue improving health standards for children?

Figure G.2 below tries to illustrate how some of the main elements that have been identified have the potential to produce a fair level of sustainability.

In conclusion:

-  Kabeho Mwana has made a very strong contribution to sustainability, choosing to be flexible and aligned with national policies at each step of the process. Projects are inherently incentivized to cut corners when it comes to partnership, and Kabeho Mwana needs to be commended for its resisting this temptation. Obviously this happened in the remarkable context of Rwanda where community health has visibly been embraced and valued by the highest level of government.
-  The corollary is that a number of interventions of the projects were still in an acceleration phase in 2011; some of them having started relatively recently. This guarantees some shock to the local system; hence repeated requests for continued presence of the three implementing partners,

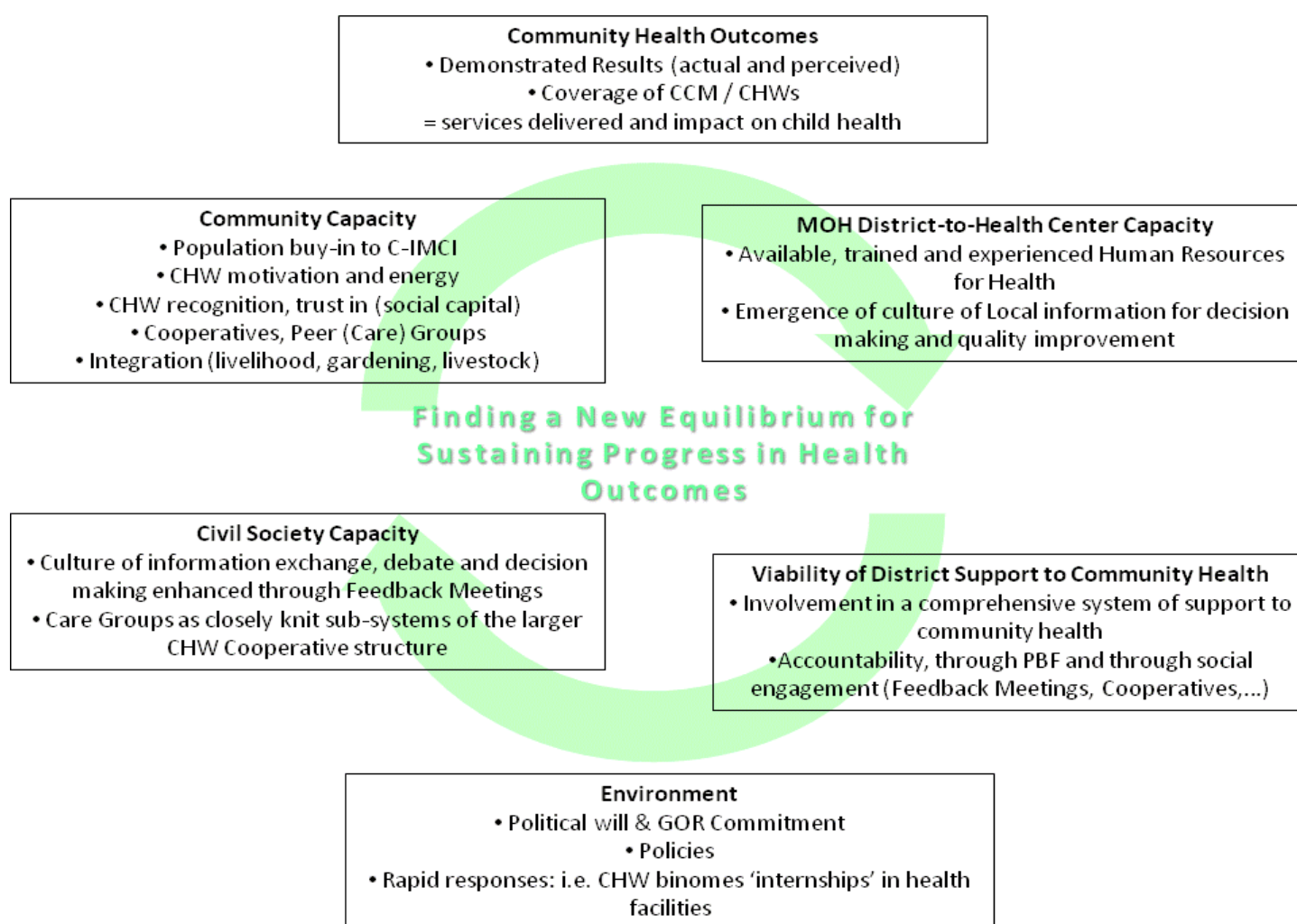
⁵⁷ Based on a substantial majority assessing the function relies proportionally more on district vs. project.

⁵⁸ Based on a substantial majority expressing confidence on ability to meet future function.

Concern, IRC and World Relief, in the six districts during evaluation activities.

- ✚ Nonetheless, the heavy emphasis on capacity building, the number of people trained and supported to actually put the training into practice, the remaining trainers in the health system, in communities and in community structures, the efforts in coaching, in “doing with”, will leave behind an impressive level of standing capacity for the MOH and community groups to respond to the shock of the end of the project in a constructive manner.
- ✚ The two greatest threats to this capacity of adaptation are: (1) at a local level, the absence of strong civil society partners in the role of facilitation which Kabeho Mwana had taken on, and (2) the risk of having perhaps reached peak foreign investments, when performance depends so much on external funding.

Figure G.2: Positive community health sustainability determinants, advanced by Kabeho Mwana, partners and MOH



H. Conclusions and Recommendations

H.1: Conclusions

The Kabeho Mwana project has been a successful project implemented with a genuine effort to find synergies between three partners⁵⁹. The lead agency, Concern, is to be commended for a high level of integration of the project team and transparency with its partners. All three partners deserve credit for some loss of visibility to the greater benefit of successful advancement of community health. **The coalition worked, both in terms of internal management and in terms of support to and recognition by the MOH.**

The project also intervened in a regrettably rare environment: that of a country taking seriously community health, staffing its MOH hierarchy with dynamic and skilled administrators, and politically committed to *making things happen* and seeing results.

Kabeho Mwana played a key role in moving from HBM for malaria to integrated CCM, and in supporting the GOR in institutionalizing and scaling up CCM.⁶⁰ In so doing it managed to combine leadership and strict adherence to the principles of alignment.⁶¹ The project has been praised for its flexibility and ability to stretch resources. Those compliments are probably a misunderstanding of the efforts made to double the original USAID/CSHGP grant, thus showing a high commitment to community health in Rwanda.

The primary objectives of the project were to advance care for three deadly illnesses: malaria first of all, then pneumonia and diarrhea. Very notable results have been achieved in:

- Access and use of first-line treatment (now ACTs) for malaria (first presumed, now confirmed by RDT), which doubled from 20% to 43%;
- Care seeking for respiratory symptoms in children under five years of age (from 13% to 63%) leading to more than half of children with pneumonia being treated appropriately;
- Positive health behaviors such as point-of-use water treatment (doubling from 31% to 65%) and hand washing (progressing from 2% to 19%).

Although weakest in the treatment of diarrhea, the project areas also saw improvements in related household behaviors such as increasing fluids and food intake in case of child diarrhea (both indicators doubled or nearly doubled).

The achievements in malaria and pneumonia appear to be drivers of the remarkable achievements of Rwanda in the past five years. In the six districts alone, 183,000 children under five received treatment for one of the three illnesses over the past year. This is about a third of reported children treatments nationally in that period, although the project area accounts for approximately 18% of the total population.⁶²

On the other hand, achievements in diarrhea control are on a par with the secular trend, and there is no overall national impact on diarrhea prevalence.

⁵⁹ See Project Management Evaluation in Annex III.

⁶⁰ See the forth-coming MCHIP complementary report for more details.

⁶¹ See Paris Declaration on Aid Effectiveness.

⁶² Either the six districts have provided more than their expected share of treatments for the period, or they have simply reported proportionally more than other districts. In the context of PBF, which compensates for *reported* treatments, when CCM started in the six Kabeho Mwana-supported districts before national scale up, this latter hypothesis cannot be ruled out but is not the most likely.

The project is victim of its success: by successfully aligning with national and district priorities, it has made it very hard to attribute exclusive responsibility to the project for any achievement. The six districts have achieved results where Kabeho Mwana had little or no initial mandate, for example in maternal health. On the other hand, the human and social infrastructure, which the project had a central role in developing, certainly played a role in these results.

Local informants, from MOH officials and staff to CHWs and Cell Coordinators to community members, tend to largely recognize the value of the community health structure supported by the project and the MOH, and also attribute an actual reduction of illnesses to its work.

The establishment and support of CCM in the six districts has shown clear results, making CHWs the first line of care seeking and treatment for the three illnesses. The total commitment of \$8.4 million of the project sets an interesting benchmark for community health strengthening efforts, in terms of CHWs trained (over 6,000), skills training provided⁶³, skills and practices strengthened at facility and district levels, and ultimately improvements in health outcomes.

Kabeho Mwana, and to a large extent the projects which preceded it, showed that building from the ground-up does work. During the evaluation, the MOH professionals at all levels praised Kabeho Mwana lavishly for being present on the ground. Kabeho Mwana showed that field presence does not mean substitution, but rather that capacity building requires coaching and accompaniment at the most operational level, which, in this case, is the CHW charged with visiting a household.

This evaluation presents other strengths and weaknesses of the project above. Among the strengths, is an unwittingly integrative approach to curative and preventive community health through the misnamed Care Group model (a CHW peer support and collaboration group) and practical efforts at building a culture of data for decision making and quality improvement.

Among the weaknesses can be identified insufficient resourcing of M&E, when it was providing a backbone for so many of the project's efforts. The project nonetheless built tools and processes for decision-oriented M&E, and documentation about its efforts. In a context of indicators being "sold" and "purchased", Kabeho Mwana was key in supporting multi-stakeholder efforts at *using* indicators to guide programmatic response and quality improvement. The extent to which this will be sustained in the future is in question, but the fact that it happened with some regularity at the level of health facilities with Cell Coordinators and CHWs is highly noteworthy.

Other weaknesses have been identified, for example in placing insufficient efforts on diarrhea control and treatment, a weakness already identified at midterm.⁶⁴ Information systems were used, and that's a fundamental strength, but they were also sometimes not fully integrated with MOH efforts (this is a weakness of both the project and the GOR's efforts); some of the data systems would also require new designs to expand beyond the project. Finally QA efforts laid a basis through the provision of information and the feedback meetings, but much remains to do to build true institutionalized processes of quality assurance in CCM.

Finally, Kabeho Mwana implemented many good practices in trying to advance sustainability. The

⁶³ Quality and value of training are not easily quantifiable. The project provided over 89,000 person-days of training, but of course a number can be meaningless or deceitful. Annex VII a and VII b provides details about the types of trainings delivered.

⁶⁴ Review of lessons and recommendations from the mid-term was carried out during the evaluation but did not substantially enrich this report.

combined achievements of the MOH and the project leave behind a set of capabilities, experiences, and human resources with a strong potential for adapting to the unavoidable disruption of the end of project. The fact that so many of the project's interventions were still in the acceleration phase by the end suggests that this adaptation will face challenges.

H.2: Suggestions / Recommendations

Kabehe Mwana as a project has ended. However, the evaluation may make the following suggestions to the GOR/MOH, notably CHD and NMCP, and their development partners:

- **Consolidate the fundamentals**

- 1) Drug Supply: Efforts to strengthen community drug and commodity procurement and supply management need to continue, starting with zinc.
- 2) Quality Assurance for CHW Performance: Support the MOH/CHD current initiatives (observation of CHWs in facilities practicums).
- 3) Continue developing supervision for community health as a supportive function distinct from control:
 - a) Analyze and resolve the issue of disbursement gaps between funds provided to health facilities and use of same funds to implement community supervision. Creative solutions have been developed in some districts and facilities, and between facilities and cooperatives. These real-life examples need to be understood and emulated if possible.
 - b) Look for creative solutions to the logistical challenges to supervision at community level in a land of 1,000 hills. This evaluator believes that solar-rechargeable electric bicycles are worth considering, notably through public-private partnership efforts. The existence of all-terrain e-bikes and the potential for renewable energy use make this idea worth exploring.
 - c) As in most health care settings, including Western-based health facilities, peer groups can provide important supervision, motivation and quality assurance functions. Dedicate efforts to testing and institutionalizing systematic CHW peer supervision, whether in the form of Care Groups or another model, as a rigorous element of clinical and administrative supervision.
- 4) Make supervision at community level more recognized and valued through PBF, focusing on quality and not just quantity.

- **Support quality and performance in community health with CHWs**

- 5) The rationale and processes of the IMCI Bulletin need to be supported and expanded beyond the Kabehe Mwana areas and integrated in the process of the feedback meetings.
 - a) The Bulletin cannot be scaled as is, but its logic can. Until integration with a smoothly flowing routine information system is possible, slight duplication allowing for rapid feedback of information must be considered a better alternative than a fully integrated system unable to provide time-sensitive information at sector and community levels.
 - b) Ultimately, data flows will need to be re-engineered to reduce duplication and favor institutionalization. This is more likely to progress along with developments of the government IT infrastructure.

- 6) Districts will specifically need to pay attention to “mission-creep”.⁶⁵ They will need a Bulletin-like tool and feedback meetings processes to actively monitor and evaluate how their CHWs and c-IMCI system maintain and preserve achievements on primary health tasks when additional roles are vested upon them [i.e. hygiene, additional nutrition work, neonatal health, first aid...]. Both district and central levels will need to pay close attention to this natural evolution.
- 7) Establish regular (24-30 months) reviews of community health protocols and standards vs. needs and requirements.
- 8) Review and, if necessary, adjust the roles of Cell Coordinators between *binômes* and social affairs agents.
- 9) In-kind support should be provided to CHWs (flashlight, boots, raincoats⁶⁶), especially *binômes* and maternal health agents, preferably through cooperatives, the MOH, or local civil society organizations. External partners making such contributions should be duly acknowledged, but strongly encouraged to do so through these mechanism rather than independently.

- **Maintain and build up the c-IMCI infrastructure, including through the Care Groups**

- 10) This evaluation did not demonstrate that the Care Groups were *the* way to go in Rwanda (neither did we attempt to do so), but it highlighted strong and valuable elements of the model as an “energy multiplier”, a source of motivation and peer-accountability among CHWs, a way to integrate important community health and community development elements all the way to the household level, and a manageable sub-level of the CHW cooperative infrastructure. The future of community health in Rwanda will depend on finding ways to continue learning and improving positive experiences like the Care Groups. The GOR and its development partners should seek to support and strengthen the model where it is already in place, and consider expanding it.
- 11) The CHW cooperatives supported by Kabeho Mwana are the best positioned to explain how Care Groups can fit in the Rwandese context. If efforts are considered to “scale up” the Care Groups, dynamic and successful CHW cooperatives should be used as catalysts for lateral learning between districts, meaning that resources could be spent to allow structured exchanges between different areas and districts.
- 12) The management capacity of CHW cooperatives needs to be strengthened, but each step in building their autonomy and capacity for leveraging funds needs to continue to be linked to strengthening their role in support of effective community health, and to strengthening inclusiveness and governance in their operations, including representation of women.
- **Find synergies across sectors, but maintain clear monitoring of essential services**
- 13) Donors and the GOR, beyond the MOH, may want to consider the potential of CHW cooperatives and CHW peer groups for livelihood, food security and nutrition efforts, first by mapping out some of the ways in which it has started to happen, then by channeling funding from sectors such as Food Security and Economic Development. The USG could consider mechanisms such as grants-under-contract, for example. Any effort to work across sectors should however be rigorous in maintaining focus on essential services (curative and preventive). Information systems will

⁶⁵ The danger of asking more and more from the existing CHW workforce beyond a clear initial mandate.

⁶⁶ This was a common and logical request of CHWs during the evaluation discussions with cooperatives and Cell Coordinators.

continue to be essential in this work.

- 14) Lessons from the successful CMAM intervention—integrated into c-IMCI—need to be taken to heart, as the MOH with UNICEF prepare to roll out district plans based on the national nutrition strategy.

- **Consider studies to improve c-IMCI efforts⁶⁷**

- 15) CHWs spoke clearly and loudly of their commitment to treating first, and addressing payment next. This translates in practice into debts paid in cash, in kind, and possibly sometimes not at all. A qualitative / anthropologically based study should examine how household debt toward CHWs is managed and affects life choices of poor families, including care seeking.
- 16) The timetable and scale of Kabeho Mwana and the three recent RDHS provide a unique opportunity to re-analyze these RDHS to compare EIP-supported districts to other comparable districts or even the rest of the country. A re-analysis of the DHS is possible and would allow exploring issues of equity, gender, health insurance, and others in the achievement of service coverage and health outcomes. Since a KPC was carried out for the EIP on the same cycle as the RDHS, this may provide an interesting opportunity to assess the value of the KPC including for mortality estimates through the use of the LIST tool.
- 17) Understanding life-choices and cultural determinants for the management of diarrhea in poor households needs to be improved. The evaluation incidentally stumbled on interesting concepts of treatment of diarrhea and breastfeeding based on different criteria. If this has not been done before, this should be further studied, with the decision-making processes for treatment of diarrhea, hand washing and the entire water-hygiene range of issues, including where progress has already been observed. (If this has been studied, then this information needs to be brought back to life to stimulate energetic efforts for the control of diarrheal diseases.)
- 18) CHWs are on the front line of health promotion efforts, and effective steps integrating health promotion and livelihood initiatives. This creates opportunities for learning from a select population:
 - a) Conduct a study of the health and nutrition status of CHW children, CHW families, close relatives, and peers – with attention to household strategies linking health and food security. Such a study could be comparative of different CHW organization schemes (Care Groups, CHW cooperatives in different district contexts, etc.). CHWs would no doubt present a privileged sub-group of population, and the evaluation of how benefits accrue not only to them but diffuse through their family and peer networks would provide information on how much can be expected from cross-sector efforts (for example health and food security).
 - b) Assess livelihood and food security impact at community (i.e. village-wide) level of income-generating activities led through Care Groups and CHW cooperatives.
- 19) With the national scale-up of CCM and c-IMCI and the large scale model of Kabeho Mwana and possibly new projects on the horizon, Rwanda is in a unique position to consider a longitudinal,

⁶⁷ Full disclosure: the lead evaluator has direct or indirect ties with MEASURE Evaluation (UNC), MEASURE DHS (ICF), as well MCHIP (JHPIEGO), and is the Director of ICF's CEDARS Center, dedicated to the study of sustainability in human development efforts.

mixed method study of intended and unintended performance and system effects of PBF and c-IMCI strategies, with a focus on robustness and adaptability of the models.

- **Final suggestions to the three partner NGOs**

The following recommendations were made to Concern, IRC and World Relief during the evaluation debriefing in Kigali. Some of them are no longer timely at the time of production of this report:

- 20) For new projects in Rwanda or elsewhere launch activities with the type of phase out planning (“end in mind”) which Kabeho Mwana implemented in the last quarter, rather than wait for the end of the project. As institutionalized to some extent through the Bulletin, establish project M&E based on agreed upon and shared project-district-partners objectives.
- 21) Based on the lessons of the project and the credibility of the Kabeho Mwana consortium, consider sharing the project’s experience with other agencies to advance good practices for enhancing sustainability. This could include efforts to channel micro-grants to create learning and exchange opportunities between officials and cooperative leaders from different districts; or supporting innovations in partnership between districts and civil society (cooperatives, academia) to continue advancing community health.

- **Suggestion to CSHGP for the evaluation of similar projects**

- 22) While the participatory nature of the evaluation is to be commended, there is value in strengthening the independence of the evaluation for a final evaluation. This could take the shape of providing at least one or more fully independent co-researchers. While this may be overkill for a regular project, it seems justified for more ambitious ones, such as Kabeho Mwana.