



Comprehensive external evaluation of the Community Health Program in Rwanda

Inception report

Liverpool School of Tropical Medicine
Centre for Maternal and Newborn Health
April 2016

Contents

Contents	2
1.Background	3
2.Purpose and scope of the evaluation	4
2.1. Purpose.....	4
2.2. Scope.....	5
2.3. Evaluation questions	8
3.Approach and methodology	9
3.1.Approach and Principles	9
3.2.Evaluation Design	10
3.2.1.Results of the evaluability assessment.....	10
3.2.2.Revising the evaluation questions	13
3.2.3.Design and methods.....	16
IMPACT	19
RELEVANCE.....	24
EFFECTIVENESS	25
EFFICIENCY	30
SUSTAINABILITY	35
3.2.4 Evaluation matrix.....	37
3.3. Methods of data collection and analysis	40
Ethical considerations.....	45
3.4. Dissemination.....	47
4.Implementation Plan	48
4.1.Deliverables.....	48
4.2.Working in partnership.....	48
4.3.Work plan and timeline	50
List of Annexes	51

1. Background

Located in Eastern Africa, Rwanda is a small land locked country with an estimated population of 11.6 million people, of which approximately 15% are children under the age of five years.

According to the African Development Bank, “Rwanda has evolved through a period of economic prosperity and macroeconomic stability in the past two decades. Real GDP grew by an average of 8% annually, during the period 2000 to 2013, which is among the highest average growth rates in East Africa. (...) Peace, political stability, high and sustained real GDP growth and sound macroeconomic management have contributed significantly to poverty reduction, increased income equality, improved social indicators and progress towards the MDGs.”¹

In line with such socio economic development, Rwanda has achieved remarkable progress in improving maternal and child health outcomes. According to recent estimates, the under-five mortality rate has declined from 152 per 1,000 live births in 2005 (RDHS 2005) to 50 per 1,000 live births in 2014 (RDHS 2014-15); the neonatal mortality rate has also reduced from 35 per 1,000 live births to 20 per 1,000 live births. The maternal mortality ratio (MMR) has also successfully reduced. In 2005, the estimated MMR was 750 per 100,000 live births and 210 per 1,000 live births in 2014-15 (RDHS 2014-15). Thus, MDG 4 and 5 targets have met in Rwanda.

Progress in improving child nutrition has also been observed, although at a more modest pace: child stunting prevalence was estimated at 51% in 2005 (RDHS 2005), and it was still as high as 38% in 2015 (RDHS 2015).

Established in 1995, the Community Health Program (CHP) aimed to enhance access to essential services for the population in Rwanda. From 2005, after the decentralization policy, sustained capacity building of the Community Health Workers (CHWs) was introduced through training, mainly in maternal and child health (MCH) service delivery; this was complemented with supplying relevant health materials for CHWs.

After 20 years of CHP implementation, the Ministry of Health (MoH) in partnership with UNICEF has commissioned an independent evaluation of the program. It is envisaged that the evaluation will guide the MoH on how to use CHWs most effectively to achieve national health goals, contributing to the achievement of post-2015 global sustainable development goals (SDGs).

In January 2016, the Centre for Maternal and Newborn Health (CMNH), at the Liverpool School of Tropical Medicine (LSTM), was contracted to perform an independent evaluation of the CHP in Rwanda. The evaluation started in January 2016, and it will be completed by the end of July 2016.

Based on the terms of reference (ToR) for the evaluation, this inception report builds on an initial assessment of the program, conducted in February and March 2016, which aimed to inform the evaluation design.

¹ Improving economic competitiveness to bring about shared growth – The African Development Bank Group, 2014

The methodological design proposed in this report is informed by:

- Key stakeholder interviews conducted at national level, from the 15th to the 19th of February 2016 (**Annex 1**).
- Literature review of CHP evaluations conducted in Africa (**Annex 2**).
- Mapping and analysis of studies, evaluations, assessments and reviews of the CHP available in Rwanda (**Annex 3**).
- Review of key MoH policy and planning documents designed to inform the health sector strategy in general and the community health program in particular.

2. Purpose and scope of the evaluation

2.1. PURPOSE

The **purpose** of the proposed mixed-methods evaluation, as per its ToR, is to document the Rwanda CHP, assessing programmatic achievements and constraints by reviewing the existing conceptual framework and overall system, including financial support, human resources, management structure, supervision mechanism and governance.

The **objective** of the evaluation is to understand **whether the CHW program has achieved its intended objectives**, thus contributing to the overarching objectives defined in the Health Sector Strategic Plan III (HSSP III) of improving the health status of the population by *Ensuring universal accessibility of quality health services for all Rwandans*².

The objectives of the CHW program, as defined through the National Health Community Strategy Plan 2013-2018, are:

1. Strengthen the capacity of decentralized structures to allow community health service delivery.
2. Strengthen the participation of community members in the community health activities.
3. Strengthen CHWs motivation through CPBF to improve health service delivery
4. Strengthen coordination of community health services at the central, districts, health centres and community levels.

The study will have both formative and summative aspects. The main focus of the evaluation will be on learning. To that effect, a participatory approach to the evaluation is embedded in all the stages of the exercise, from design to implementation, analysis and validation of findings.

² Government of Rwanda, Ministry of Health. Third Health Sector Strategic Plan July 2012-June 2018

2.2. SCOPE

Geographical scope

The evaluation is designed to assess the program nationwide. The evaluation questions will be addressed at a national level. Routine data, available through HMIS, SISCOM, Rapid SMS and other MoH reports, will be analysed for all the provinces and districts of the country. Data will be disaggregated by geographical area, where feasible and useful.

For primary data collection, appropriate statistical methods will be used to select a sample of the population under study that is representative of the entire country. In particular, cluster sampling will be used to select sample of CHWs that is representative at national level. During the inception phase, a sampling frame was obtained from the MoH and a total of 10 districts and 80 facilities were randomly selected (**Annex 7**). The districts selected for the survey are: Kayonza and Nyagatare (Eastern Province), Gasabo and Kicukiro (Kigali), Gicumbi and Rulindo (Northern Province), Muhanga and Ruhango (Southern Province), Ngororero and Nyabihu (Western Province).

Focus of the evaluation (subject and outcome)

The evaluation ToR requires an assessment of the community health program in Rwanda, and of its impact on maternal, newborn and child health (MNCH).

A review of existing policy documents and interviews with key stakeholders performed at inception highlighted the need to clarify the central focus of the evaluation, in terms of what is the subject to be evaluated, and of what is the central outcome measurement under evaluation.

Subject:

Many actors and mechanisms are active at community level in Rwanda, and these are deployed and supported by either the MoH, NGOs, civil society organizations, or other line ministries. One central question in shaping the evaluation design is to determine *what is the subject to be assessed?*

We propose to focus the evaluation on *CHWs*, defined by the CHP as binomes and agents de santé maternelle (ASM), who are selected, trained and deployed by the MoH to deliver a defined set of tasks at community level. CHWs are the central element of the Community Health Policy and of the Community Health Strategic Plan of the MoH, and they will be the core subject of the evaluation.

In particular, AMSs (women, one per community) are deployed to offer maternal and newborn health services, and namely (Community Health Strategic plan, page 2):

- . Follow up of pregnant women and their newborns
- . Malnutrition screening
- . Community-based provision of contraceptives
- . Preventive NCDs
- . Preventive and behavior change activities

Each village also has two multi-disciplinary CHWs (*binômes*: one man and one woman) who carry out:

- . Integrated community case management of diarrhea, pneumonia, malaria, and malnutrition in children under five years of age)
- . Malnutrition screening
- . Community-based provision of contraceptives
- . DOT for TB
- . Preventive NCDs
- . Prevention and behavior change activities

Other cadres and structures deployed at community level will be mapped in order to assess division of labour and the relationship of CHWs with these cadres, but they will not constitute a direct subject of the evaluation.

The implementation of mechanisms of performance based financing (PBF) mechanisms through CHWs cooperatives will be taken into account through the evaluation, as a variable potentially influencing the performance and motivation of the CHWs, and as core strategy set in place to ensure the sustainability of the program. Again though, the focus of the evaluation, as per TORs, will be on CHWs and not on the functioning and management of these cooperatives, and/or on the economic impact of the cooperatives on the CHWs.

Other studies have been conducted and/or are ongoing which focus on cooperatives, and evidence from such studies will be used to inform the evaluation analysis, in as far as this has been an influence on the role of CHWs.

Outcome measure:

According to the National Community Health Strategic Plan 2013-2018, the deployment of CHWs was envisaged as a strategy that would support the achievement of various MDG targets, including MDGs 1, 4, 5, and 6.

In fact, the range of services offered by CHWs includes various interventions that are not exclusively related to maternal, newborn and child health and nutrition, such as:

- health and hygiene promotion; provision of family planning;
- TB active case finding and DOTs;
- promotion of HIV counselling and testing and referral; referral of victims of gender based violence;
- referral of persons with mental health issues; and more recently, diagnosis and treatment of malaria in adults.

It is hereby proposed that the evaluation maintains its focus on *maternal, newborn and child health*, as per ToRs. Other services provided by CHWs will be taken into account as variables that affect

caseload, service delivery, workload, supervision, and the overall management and delivery system of the CHP, but will not constitute a central element for measurement of impact and outcome variables of the evaluation.

Time period

The ToR for the study were designed to cover the period 1995-2015.

Following our initial assessment, however, the evaluation team proposes instead to limit the focus of the evaluation to the period 2005-2016.

Three main reasons justify this approach:

- *Relevance and usefulness*
Assessing the CHP program from its start in 1995 may be useful to provide a descriptive documentation of the program history, evolution and results. It will be less useful for prospective policy making, since the political, social and economic context as well as the program features of mid-90s to 2008 may not be relevant to the actual country situation and needs.
- *Program content*
Some key elements of the CHP were only introduced after 2005. Assessing the CHP before then would entail assessing a program that is significantly different in nature and content from today.
In particular:
 - The Government decentralization policy was introduced in 2005;
 - Integrated Community Case Management (iCCM) was introduced in 2008;
 - Community based distribution of family planning was introduced in 2010;
 - The community maternal and newborn health program was introduced in 2010;
 - The community performance based financing (C-PBF) was introduced in 2010.
 - The community Based Provision program was introduced in 2010
 - MCH week campaign and nutrition program were also introduced in this period

All programs were gradually scaled up over a period of few years.

- *Availability of data*
Routine data are available through the Health Information System in Rwanda, and will be an essential source of information for the evaluation. Retrospective secondary data available through HMIS are limited by the following factors:
 - The Community Health information system (SISCOM) was only introduced in 2010
 - The Rapid SMS was also introduced in 2010, and was gradually scaled up and updated.
 - In addition, routine verbal autopsy of maternal, newborn and child deaths and stillbirths at community level is currently being scaled up.

Therefore, for consistency of the analysis to be carried out, and given the importance of secondary data for the evaluation, we propose to limit the timeline of the evaluation to a more confined period of the past 5-7 years.

Evaluation criteria

In line with the OECD/DAC criteria for international development evaluations³, and as detailed in the ToR, the proposed evaluation will provide an independent assessment of the CHP in Rwanda against the following criteria: relevance, impact, effectiveness, efficiency and sustainability.

Box 1: Definition of evaluation criteria

- **Relevance:** Extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.
- **Effectiveness:** Extent to which an aid activity attains its objectives.
- **Efficiency:** Measuring the outputs – qualitative and quantitative – in relation to the inputs.
- **Impact:** Positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended.
- **Sustainability:** Measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn. Projects need to be environmentally and financially sustainable.

2.3. EVALUATION QUESTIONS

A set of evaluation questions were proposed by the MoH and UNICEF. Assessing the relevance of the proposed questions and then identifying suitable, solid methods to address them was the central focus of the inception report.

The original evaluation questions proposed for the evaluation are detailed below in [table 1](#), grouped by OECD/DAC criteria.

Table 1. Evaluation questions as per evaluation ToR

Evaluation criteria	Key Evaluation Questions
Impact	To what extent does the programme: <ul style="list-style-type: none"> ▪ Contribute to MNCH? (at family, community and policy level) ▪ Contribute to increased access and utilisation of MNCH, and improved health seeking behaviours?
Relevance	<ul style="list-style-type: none"> ▪ National level: how well the programme fit to national priorities. To what extent has the programme contributed to the policy direction for MNCH. ▪ Community level: how well was initiative accepted by the communities? Did it fit to community priorities?
Effectiveness	To what extent does the programme:

³ Guidelines developed by the OECD/DAC Network for Development Evaluation (OECD/DAC 2010)

	<ul style="list-style-type: none"> ▪ Improve the capacity of decentralized structures to deliver community health services? ▪ Increase participation in community health activities? ▪ Increase the motivation of CHWs? ▪ Improve coordination of community health services at national, district, health centres and community level?
Efficiency	<ul style="list-style-type: none"> ▪ Were the available resources (financial, human and commodities) used efficiently to achieve the programme objectives? Are the available resources adequate to meet programme needs?
Sustainability (and partnership)	<ul style="list-style-type: none"> ▪ How well is the initiative incorporated into national and subnational legislation? ▪ How well are CHWs incorporated in the community? What is the attrition rate (and reasons for drop-out)? ▪ What are the main incentives for CHWs to stay in the programme? ▪ What were the overall programme coordination mechanisms? Was it functional? Can it be improved?
Human rights approach	<p>To what extent does the programme:</p> <ul style="list-style-type: none"> ▪ Consider the equity approach (i.e. focus on most deprived areas, areas with high prevalence of critical newborn and under-5 mortality, low-income families)? ▪ Involved vulnerable groups in the planning and utilisation of the service?

3. Approach and methodology

3.1. APPROACH AND PRINCIPLES

The evaluation design is based on the Standards for Evaluation as defined by the United Nations Evaluation Group⁴ (UNEG).

The principles guiding and shaping the **LSTM Code of Practice for Research Conduct** to the research and evaluation, which will be adopted by the team of consultants deployed to this assignment and which have informed all the aspects of the plan presented through this report, are:

- Being open, honest and fair, including properly attributing the contribution made by others;
- Providing leadership and co-operation in research, including the appropriate supervision and mentoring of young researchers;
- Appropriately recording and reporting research, allowing ready verification of the quality and integrity of the research data;
- Appropriate dissemination, application and exploitation of the results of research;
- Compliance with relevant regulations or policies, whether legal, institutional or other, which govern particular aspects of research;

⁴ United National Evaluation Group (UNEG): Standards for the Evaluation in the UN System. April 2005.

- Professional participation only in work which conforms to accepted ethical standards and which ensures the safety of all those associated with the research;
- Participation only in work which the researcher is competent to perform;
- Avoidance of real or apparent conflicts of interest;
- Strict maintenance of the confidentiality of all those involved.

These principles, which form part of the LSTM rigorous approach to research, are fully aligned with key UNEG standards, and in particular: integrity, independence and impartiality (UNEG 2.5.); participation of stakeholders throughout the evaluation process (UNEG 3.11); respect and honesty (UNEG 3.10); anonymity and confidentiality of individual information (UNEG 2.7.).

The LSTM team will also ensure that **gender equality and human rights** are fully embedded in each stage of the evaluation cycle. This will be done by ensuring: a fair composition of teams of consultants and field workers involved in data collection; that equal voice is given to different groups assessed/involved in data collection at management, facility or community level; that data analysis provides disaggregation by gender and/or by socio-economic characteristics of the population. The findings of the evaluation will highlight relevant aspects of gender equality and human rights, exploring barriers/bottlenecks to equal access to care for different groups of the population.

Participation will also be a guiding principle of the evaluation, in all its stages of design, data collection and analysis. In order to ensure maximum participation of all stakeholders, various workshops have been planned throughout the evaluation to ensure that the MoH, NGOs, UN agencies, donors, and academic institutions are actively involved in the work.

3.2. EVALUATION DESIGN

3.2.1. Results of the evaluability assessment

At inception, a rapid Evaluability Assessment was conducted by the evaluation team. The results of such assessment have informed the proposed approach to the evaluation.

The key findings of the Evaluability Assessment are summarized below.

- **Evaluability of the Program**

- Program design

The Rwanda CHP builds on a consolidated approach to expanding access to essential health services via CHWs, which has been adopted in many African countries.

However, the model implemented in Rwanda presents unique features related to various aspect of the program: scale and density of community health workers; deployment model, including training and incentives scheme; scope of practice, including tasks, mode of service delivery and division of labour; sustainability approach via cooperatives and performance based financing.

Such a unique model is implicitly described in various policy and planning documents, but it lacks an explicit theory of change (ToC) linking inputs to activities, outputs and outcomes. Building a ToC is essential to define the boundaries of the evaluation, to fine tune the evaluation questions, and to disentangle coordination mechanisms with other initiatives implemented at community level in Rwanda.

Availability of data

The body of evidence available in Rwanda on the CHP is substantial. During the inception phase, the evaluation team mapped a total of 93 studies, reviews or assessments available on the CHP in Rwanda. We fully reviewed 34, as they presented evidence on various relevant aspects of the CHP.

The availability of an extensive body of literature is an indicator of the high degree of evaluability of the program. It also influences the evaluation design, since it enables the evaluators to build on the existing body of knowledge to address the evaluation questions, aiming therefore at systematizing such knowledge and at using primary data collection and analysis primarily to fill relevant knowledge gaps.

In addition, the Rwandan health system can rely on a solid routine data collection system (HMIS, Siscom, Rapid SMS), which is implemented at national scale and which presents a good degree of accuracy (World Bank, 2014; Mitsunaga et al., 2014; Mitsunaga et al., 2015; Mwenda, 2015). These unique features of the Rwandan health system are an asset for the evaluators and also indicate a high degree of evaluability of the program.

It also challenges the evaluators to maximize the efficiency of the evaluation exercise, to ensure that routine data is used as much as possible to inform the analysis of the evaluation questions.

Stakeholder engagement and perspectives regarding the evaluation

The evaluation process has been designed and promoted by the MoH and the Rwanda Biomedical Centre (RBC). It is governed by an **evaluation steering committee**, chaired by RBC, co-chaired by UNICEF and composed of representatives of the MoH, UN agencies, NGOs and academic institutions. Therefore, it has a high level of commitment from key stakeholders within the government and partners.

Preliminary interviews conducted in Rwanda during the inception phase at central level included: MoH; RBC; Donors; UN agencies; NGOs; University of Rwanda School of Public Health. One district health unit and one health centre were also interviewed during this initial phase.

In principle, all the stakeholders consulted welcomed the evaluation, and confirmed their full availability and interest in participating in it. This is an essential condition for the evaluability of the program.

- **Evaluation design**

Available evidence on the CHP in Rwanda:

An initial review of papers and reviews of the CHP available in Rwanda was conducted to map existing evidence against the assessment criteria defined for this evaluation. The results of our review (**Annex 3**) are summarised below:

- There is substantial evidence available on the **impact** of the CHP program. Most of the available studies focus on individual interventions such as iCCM (Mugeni et al., 2014); home based management of malaria (Nzayirambaho et al., 2012); postpartum haemorrhage (Dao et al., 2015); maternal and newborn health (Haver et al., 2015). Results of various available studies indicate that the CHP contributed to the achievement of increased access to and utilisation of essential MNCH interventions. Evidence regarding the effects of PBF to improve population health, however, is less clear (Binagwaho et al. 2014; Skiles et al. 2015; Humuza et al., 2015).
- **Effectiveness:** various studies and reviews document various aspects of the program, including service delivery (outputs) and various components related to CHWs (inputs, activities) such as training, supervision, motivation, workload, availability of supplies. It is worth noting though that most of the available studies mostly focus on individual service delivery interventions (e.g. iCCM; CBP-FP), and on limited aspects of the program delivery chain. No study presents a comprehensive, holistic assessment of the effectiveness of all services provided through the program, in terms of processes and outputs.
- **Efficiency:** we could identify only one study documenting value for money, which analysed actual costs of the 2010 iCCM program for a small sample size of CHWs and health centres (MSH, 2013). No available source documenting potential efficiency gains or comprehensive descriptive costing of the programme was identified.
- **Sustainability:** only one study was identified assessing the sustainability of the Rwanda CHP (Sarriot et al, 2015). Through a causal loop analysis, the study identifies three potential threats to sustainability: the reduction of external funding; the loss of momentum and political commitment; the lack of resolution with regard to health system performance gaps that affect the program (HMIS, supplies, supervision).

Stakeholders' perspectives on the evaluation:

- During the inception phase, 35 interviews were conducted at national level to explore stakeholder's perspectives on the CHP program, and on the evaluation design (**Annex 1**). One district and one health centre were part of this initial exercise.
- Most stakeholders agree that the lack of a **ToC** is a critical element contributing to lack of clarity on/consistency of program design and implementation across the country.
- The majority of the stakeholders interviewed expressed various concerns regarding various components of the program (motivation; training; supervision; supply; scope of practice;

workload, etc) and highlighted the importance of assessing these aspects using a holistic approach to the program (**effectiveness/efficiency**).

- All stakeholders, both through individual interviews and in the Steering Committee meeting, identified the issue of program **sustainability** as a core element that the evaluation should assess in depth. In particular the issues of social sustainability (human capital) and financial sustainability emerged as key priorities.

The key recommendations of the Evaluability Assessment are:

1. The program presents a high degree of evaluability: the minimum conditions to proceed to the evaluation are in place, and the evaluation is likely to add value and generate evidence that is useful for future health policy and planning considerations;
2. A ToC needs to be designed and validated at the inception of the evaluation. This is critical to define the boundaries of the evaluation and to refine assessment methods.
3. Substantial evidence is available to document the program in terms of process, evolution, results and impact. Yet most of this evidence is limited to individual interventions or program components. An independent evaluation will add value to the current knowledge and evidence by assessing the program as a whole through a holistic approach, and evaluating therefore the CHP as a platform designed to deliver a comprehensive package of services at community level.
4. In light of the available evidence, stakeholders' priorities and views on the CHP, some of the initial evaluation questions will have to be adapted and revised.

These conclusions have informed the theoretical approach and design of the evaluation, presented in this report.

3.2.2. Revising the evaluation questions

In light of the findings and recommendations of the Evaluability Assessment, the evaluation team has reviewed the feasibility and relevance of the initial set of evaluation questions, and revised them accordingly. Table 2 presents the initial evaluation questions, and the **suggested set of revised questions** that LSTM proposes to use to guide the evaluation.

The revision of the evaluation questions was guided by the following logic:

- Streamline and simplify the questions, avoiding duplication and/or lack of clarity. For example, it is proposed that the set of questions initially proposed under the dimension of Human Rights Approach are removed, since they will be implicitly addressed by evaluating effectiveness (equity) and relevance (community ownership and participation).

- Tailor the questions to the priorities emerged during the inception phase. For example, the questions on sustainability have been rephrased to permit the evaluators to deliver a comprehensive assessment of barriers and facilitators to the long term sustainability of the program.

The changes proposed to the evaluation questions do not alter the main purpose and objectives of the evaluation.

They have been driven by a rationale of addressing the evaluation objectives through a feasible, meaningful and solid evaluation design.

Table 2. Initial and Revised Evaluation Questions

Evaluation Criteria	Preliminary Key Evaluation Questions (as per TORs)	Proposed Evaluation Questions (LSTM, post inception)
Impact	<ul style="list-style-type: none"> ▪ To what extent did the programme contribute to the maternal, newborn and child health (at the family, community and policy level)? ▪ To what extent did the programme contribute to increased access and utilization of maternal-newborn and child health, and improved health seeking behaviours? 	<ul style="list-style-type: none"> ▪ Has the CHP contributed to the improved health status of women, newborn and children in Rwanda, by increasing coverage of evidence based, high impact maternal, newborn and child health interventions?
Relevance	<ul style="list-style-type: none"> ▪ National decision-making level: how well the programme fit to national priorities. To what extent has the programme contributed to the policy direction for the maternal, newborn and child health. ▪ Community level: how well was initiative accepted by the communities? Did it fit to community priorities? 	<ul style="list-style-type: none"> ▪ Is the CHP consistent with national policies and plans? ▪ Is the CHP relevant to the needs and priorities of the community? How well is the CHP accepted and owned by the community?
Effectiveness	<p>To what extent the programme:</p> <ul style="list-style-type: none"> ▪ Improve capacity of decentralized structures to deliver community health services? ▪ Increase participation in community health activities? ▪ Increase the motivation of CHWs? ▪ Improve coordination of community health services at national, district, health centres and community level? 	<ul style="list-style-type: none"> ▪ Has the CHP achieved its objectives? To what extent and how? ▪ What were the main facilitators and barriers to achieving the program objectives?
Efficiency	<ul style="list-style-type: none"> ▪ Were the available resources (financial, human and commodities) used efficiently to achieve the programme objectives? Are the available resources adequate to meet programme needs? 	<ul style="list-style-type: none"> ▪ What are the program costs and its main cost drivers? ▪ Are the available resources (financial, human and commodities) efficiently used to achieve the programme objectives?
Sustainability (and partnership)	<ul style="list-style-type: none"> ▪ How well is the initiative incorporated into national and subnational legislation? ▪ How well are CHWs incorporated in the community? What is the attrition rate (and reasons for drop-out)? ▪ What are the main incentives for CHWs to stay in the programme? ▪ What were the overall programme coordination mechanisms? Was it functional? Can it be improved? 	<ul style="list-style-type: none"> ▪ What are the main factors influencing the future sustainability of the program (human, social, financial, institutional)? ▪ To what extent and how are program results likely to be sustained in future (technically, institutionally and financially) and under which scenarios?
Human rights approach	<p>To what extent does the programme:</p> <ul style="list-style-type: none"> ▪ Consider the equity approach (i.e. focus on most deprived areas, areas with high prevalence of critical newborn and under-5 mortality, low-income families)? ▪ Involved vulnerable groups in the planning and utilisation of the service? 	N/A

3.2.3. Design and methods

A variety of approaches are proposed to address the complex and comprehensive set of evaluation questions.

3.2.3.1. THE OVERARCHING EVALUATION DESIGN: CONTRIBUTION ANALYSIS

In line with our initial proposal, a theory-based approach is envisaged as the most suitable method to address the evaluation questions. Rather than addressing the traditional question ‘*To what extent can a specific net impact be attributed to the intervention?*’ a theory based evaluation aims at addressing the question of *whether the intervention has made a difference*.

Contribution analysis⁵ is an analytical approach suited for studies that examine **whether a programme or policy contributed to achieving certain results and impacts**.

As suggested by Mayne, contribution analysis is useful in instances where it is impractical, inappropriate, or impossible to address the attribution question through an experimental evaluation design. In such cases, the evaluation question must be readdressed by focusing on the extent to which the evaluator can “build a case for reasonably inferring causality,” that is, the extent to which the intervention can be said to have contributed to a set of observed (positive or negative) outcomes.

The basic assumption underlying contribution analysis is that causality (plausible attribution) can be derived from addressing the following:

- The program is based on a plausible and achievable ToC;
- ToC activities are implemented accordingly;
- The ToC can be validated by existing evidence;
- Evidence demonstrates that the chain of expected results has occurred and that other factors, including influencing factors and alternative explanations for achievements that influenced the programme were assessed and their relative influence recognised.

The proposed contribution analysis will allow robust conclusions to be drawn about the programme design, by refining the ToC about how the programme is expected to achieve its objectives and by identifying the underlying mechanisms that are assumed to determine change (hypotheses). These hypotheses will be then tested against alternative explanations to indicate attribution of impacts of the programme.

The proposed contribution analysis will not only permit to address the evaluation questions relative

⁵ Mayne, J. 2001. Addressing attribution through contribution analysis: using performance measures sensibly. Canadian Journal of Program Evaluation 16: 1-24

to impact, but largely also the questions relative to effectiveness, relevance, and sustainability.

There are six iterative steps in contribution analysis. These will be followed during the CHP evaluation, and adapted to the specific context and case under analysis, as described below.

Step 1: Identify the attribution problem to be addressed – According to the Health Sector Strategic Plan III, the vision of the Rwandan Health Sector is to *‘Continually improve the health of the people of Rwanda, through coordinated interventions by all stakeholders at all levels, thereby enhancing the general well-being of the population and contributing to the reduction of poverty’*. Community health is envisaged as one of the **service delivery systems** set in place to achieve such vision.

In line with this vision, the Community Health Strategic Plan and the Community Health Policy set out the role of the CHP in contributing to the achievement of MDGs in Rwanda, spelling out clearly that it will contribute to reduced child, infant and maternal mortality rates, improved general health of the population and to the achievement of MDG indicators.

Such objectives set out a very broad scope for the program, which includes various target groups and various dimensions of health and well being, including: poverty, nutrition, access to preventive and curative services, access to water and sanitation.

For this evaluation, it is proposed that the focus of the contribution question remains on MNCH, as per the evaluation ToR.

Our initial hypothesis is that the contribution question may be phrased as follows:

‘Has the CHP contributed to the improved health status of women and children in Rwanda, by increasing coverage of key maternal, newborn and child health interventions?’

This contribution question will guide the exercise of building a ToC of the CHP, which will be validated through a stakeholder consultation workshop (see step 2).

Step 2: Develop a theory of change - the CHP does not rely explicitly on a ToC, setting out the program results chain and key assumptions behind the various links in the chain.

In line the terms of reference for the evaluation, the evaluation team has drawn a draft Theory of Change of the program, based on the review on available program documentation. Such draft ToC has been discussed and reviewed in a workshop organized in Rwanda prior to the approval of the inception report, held on the 4th and 5th of April in Bugesera. The workshop, which saw the participation of stakeholders from MoH, RBC, UN agencies and other program partners, as well as of district and facility level health managers and providers, permitted to analyse and refine the initial ToC. As part of the exercise, key hypothesis (assumptions) and alternative explanations were identified at each step of the causal chain of results of the program.

At the end of the exercise, an initial draft of the ToC was produced (**Annex 13**): such draft will be the starting point for the contribution analysis, and will be refined through the various steps of data collection and analysis foreseen for the evaluation and presented later in this report.

Step 3: Gather evidence on the theory of change – An extensive range of methods will be used to collect evidence on the program ToC, which will be used to refine to the ToC and to test hypotheses and alternative explanations.

These methods are described in detail in [chapter 3.3](#). The collection and analysis of additional primary and secondary data will permit to test the ToC along the whole causal chain that links inputs to activities, to outputs, and to immediate and intermediate outcomes. At each step of the causal chain, **key hypotheses and alternative explanations will be tested using evidence from primary and secondary data.**

In particular, through a mix of primary and secondary qualitative and quantitative data, we will assess:

- a. the occurrence or not of key results along the results chain (outputs);
- b. whether the program is implemented as planned (process);
- c. whether the assumptions in the ToC are valid.

Step 4: Assemble the contribution story – Data collected and analysed through the evaluation will permit the team to build a *contribution story*.

Building the contribution story will be an iterative process of using the ToC to answer the evaluation questions. The performance story will be built in the form of a narrative describing: what was expected to be achieved; what was actually accomplished; what was learned.

Step 5: Assess the contribution story – At this stage, the contribution story will be assessed against key criteria:

- How plausible is the story?
- Do stakeholders agree with the story?
- Are there alternative explanations to the story?
- Is there evidence in the literature confirming the story?

Multiple lines of evidence will be used to confirm and validate the contribution story. Various methods of **triangulation** will be used To build a contribution story which is based on a solid and objective approach to **drawing conclusions** based on available data.

Step 6: Strengthen the contribution story and address the contribution question - As a result of the process, the analysis will permit the team to address the contribution question. For the evaluation of the CHP in Rwanda, the anticipated **level of analysis will be of direct influence**. This level of analysis will confirm that the outputs have been delivered; that the expected results in the area of direct influence have been achieved (immediate outcomes) and that the program is influential in achieving such results.

ADDRESSING THE EVALUATION QUESTIONS THROUGH CONTRIBUTION ANALYSIS

The proposed ToC based approach of contribution analysis will permit to address the evaluation questions through a process of design and validation of the theory of change, and of its key assumptions.

In particular, through a variety of methods, we will assess the pathways to change that transform inputs into activities, outputs and outcomes.

The paragraphs below set out in detail the methods and parameters that will be used to test and validate the ToC and hence to assess specific evaluation criteria, within the framework of the above proposed approach.

IMPACT

Proposed evaluation question

- Has the CHP contributed to the improved health status of women, newborns and children in Rwanda, by increasing coverage of evidence based, high impact maternal, newborn and child health interventions?

Methods

The World Bank defines Impact Evaluation as: ‘...*assessing changes in the well-being of individuals, households, communities or firms that can be attributed to a particular project, program or policy*’. Attribution involves a causal claim about the intervention as the cause of the impact, and measurement of how much of the impact can be linked to the intervention.

Epidemiological methodology uses experimental and quasi-experimental designs to address issues of attribution and causality.⁶ In fact, a recent review of previous evaluations of CHW programs⁷ reports that these studies used primarily experimental and quasi-experimental studies to assess iCCM programs. These programs though were not implemented at scale and therefore the identification of suitable control groups was a feasible approach.

In the case of Rwanda, the fact that the CHP has been in place for the past 20 years and that is implemented nationwide does not allow the identification of a suitable control group to assess the impact of the intervention under study.

The approach proposed to estimate the contribution of the CHP to MNCH outcomes in Rwanda for this evaluation is described below.

⁶ BROADENING THE RANGE OF DESIGNS AND METHODS FOR IMPACT EVALUATIONS: Report of a study commissioned by the Department for International Development, APRIL 2012. Elliot Stern, Nicoletta Stame, John Mayne, Kim Forss, Rick Davies, Barbara Befani

⁷ A proposed model to conduct process and outcome evaluations and implementation research of child health programs in Africa using integrated community case management as an example. T. Diaz, T. Guenther, MN. Oliphant, T. Muniz. *Journal of Global Health*, December 2014.

- Hypothesis: the deployment of CHWs contributes to increased coverage of essential MNCH interventions in Rwanda, and hence maternal, newborn and child mortality.

- Assumptions:

1. Selected interventions were introduced at community level in Rwanda as of 2008. These were scaled up progressively, as they were introduced in various stages in clusters of districts in the country until reaching full scale.

These include:

- Maternal and newborn health program, introduced in 2010 and implemented at full scale across the country by 2012/13.
 - Provision of misoprostol for post-partum haemorrhage prevention, introduced in 2012 and currently implemented in 13 districts.
 - Provision of family planning methods at community level, introduced 2010 and implemented at full scale by 2015.
 - ICCM, introduced in 2008 and implemented at full scale by 2011.
2. For each of these interventions, a timeline of their introduction by district is available through program records and reports. At the time of this writing, the LSTM team is reconstructing a detailed chronology of the introduction and scale up of each intervention by district, in partnership with the RBC and MoH.
 3. Data on coverage are also available in all districts, through HMIS, SISCOM and Rapid SMS.
 4. A recent publication documents the impact of iCCM on child mortality (Mugeni et Al, 2014), and provides solid evidence, that can be used to draw conclusions on the impact of this specific intervention.
 5. The roll out of misoprostol for post-partum haemorrhage prevention is still undergoing, and no indicators of coverage with this intervention are available through SISCOM or HMIS.

- Methods:

The impact of development interventions on MNCH is commonly measured by assessing changes in maternal, newborn and child mortality rates.

In particular, estimates of lives saved due to health interventions are used as an indicator of their impact by health managers, planners, evaluators.

Through available secondary data, a **stepped wedge analysis** will be used retrospectively to assess the effects of the introduction at community level of selected interventions on population coverage: maternal and newborn health program; provision of family planning.

Data for selected indicators available in the national HMIS system will be extracted for each month per each district/facility from January 2010 to December 2015.

The data extracted for each indicator will be analysed using methods outlined by Hemming et al (2015)⁸. The analyses performed will account for month (Jan, Feb, . . . Dec), whether the intervention has been delivered or not, using appropriate statistical models (generalised linear mixed models or generalised estimating equations). The possibility of an underlying secular trend in the responses will be considered, using calendar year as a continuous covariate. Sensitivity analyses may also be performed, in which the months during which the intervention was rolled out are omitted from analysis.

The sequence in which interventions were introduced is known. The potential impact of other interventions rolled at in a different sequence will be considered in the analysis by inclusion of additional indicator variables for whether they have been delivered or not.

Trends and measures of increased coverage will be compared with trends and rate of reduction of maternal and newborn mortality.

For the following indicators and through the proposed analysis will measure retrospectively the **incremental effects of introducing community health interventions on coverage and on mortality rates**.

Impact indicators

- Maternal mortality ((# of maternal deaths at HF + # of maternal deaths in the community) / Total expected number of women in a reproductive age)
- Neonatal mortality ((# of neonatal deaths at HF + # of neonatal deaths in the community) / Total expected number of children 0-28 days)

Outcome indicators (coverage and service uptake)

- Skilled birth attendance / Total expected deliveries
- Number of women accompanied or referred by CHW to HC for assisted deliveries / Total deliveries at HC Number of ANC1 / Total expected pregnant women
- Number of ANC4 / Total expected pregnant women
- Number of pregnant women accompanied or referred by CHW for ANC in the first 4 months of pregnancy / Total ANC new registrations
- Number of women and child (alive) pairs accompanied to postnatal visit within 24 hours of home delivery / Home deliveries
- Number of PNC new registrations / Total expected deliveries
- Number of new acceptors to modern contraception
- Number of new women users referred by CHWs for modern FP method / Total new acceptors

The proposed approach will permit to estimate the **fraction of change in coverage** that is attributable to the introduction at community level of the interventions under study, for each indicator.

⁸ K Hemming, T P Haines, P J Chilton, A J, Girling and, R J Lilford. The stepped wedge cluster randomised trial: rationale, design, analysis, and reporting. *BMJ* 2015;350:h391 doi: 10.1136/bmj.h391

Also, the estimates of incremental coverage achieved through selected interventions will be modelled through the Lives Saved Tool (LiST), to provide estimates of the impact on lives saved attributable to the CHP.

The Lives Saved Tool (LiST) is a Microsoft Windows-based software tool used to model the impact of scaling-up health interventions aimed to reduce mortality and morbidity in mothers, newborns, and children under five years of age. LiST allows users to set up and run multiple scenarios, called projections, in order to estimate the impact of different health intervention packages based upon coverage at the national or subnational (e.g. region, state, or district) level.⁹

Using household survey data, available through DHS (2005; 2010; 2014/5), we will assess the effects of changes in coverage for selected interventions from 2005 to 2014, by estimating the *additional lives saved* due to the changes observed in mortality across two time periods: before the start of the introduction of selected interventions at community level (2005-2010) and during their implementation (2010-2014/5).

We will then use the LiST tool to estimate what portion of those additional lives saved during the implementation period can be attributed to the introduction of interventions at community level.

Limitations

Attribution

Although stepped wedge analysis is a powerful statistical method, the question of attribution of change to a specific intervention is more complex (association vs causation) as it entails considering a number of (co)variables that cannot be captured or isolated through a retrospective analysis as the one proposed.

Hence, the proposed model will not address the question of attribution, and is not designed to do that since attribution is not the central question of the proposed evaluation approach. Instead, it will provide an indicative estimation of whether the roll out of specific interventions at community level has contributed to increased coverage and reduced mortality for pregnant women and newborns.

Stepped wedge analysis

At the time of writing this report, the evaluation team could not access HMIS data, due to the ongoing process of approval of a confidentiality agreement between LSTM and the MoH. Future access to data will permit the team to determine the expected precision of the study, via retrospective stepped wedge analysis.

The expected key variables affecting the proposed approach will be:

- a. timeline of introduction of the selected interventions at community level (steps);
- b. non-randomisation of the district in the introduction of selected interventions;

⁹ <http://livessavedtool.org/how-list-works#WhatisLiST>

- c. accuracy of denominators available through HMIS or census projections.

LiST tool estimates

Although widely used for planning, monitoring and evaluation, LiST remains a modelling tool, which builds on a number of assumptions.

Published validation studies of the tool¹⁰ indicate that LiST is reasonably reliable. Yet it is opinion of the evaluators that the results of LiST analysis should always interpreted as the result of projections and interpreted with caution.

¹⁰http://livessavedtool.org/images/documents/training/Analysis_Part_2_Validation/Analysis_Using_LiST_Part_2_Validation_Studies.pdf

RELEVANCE

Proposed evaluation questions

- Is the CHP consistent with national policies and plans?
- Is the CHP relevant to needs and priorities of the communities? How well is the CHP accepted and owned by the community?

Methods

The OECD-DAC defines relevance as the extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.

The methods proposed for addressing the evaluation questions related to relevance are primarily qualitative, and use primary data collection and documents review as the primary source of information.

In line with the above reported questions, the evaluation of the relevance of the HTF intervention strategies and governance mechanisms will primarily explore two dimensions:

Consistency with national strategies, policies and plans

Through a **desk based documents review**, the evaluation will assess whether there are gaps or inconsistencies between the community health program and the national policies and, and whether there are internal inconsistencies within the CHP in terms of objectives; indicators; manuals and guidelines; tools and protocols.

Triangulation of sources will be used as the primary method of analysis to address the evaluation question.

Documenting the internal and external consistency of the program will be essential to review and refine the theory of change in its overarching elements of program design and logic.

Mapping out the benchmarks and standards defined by the program (tools, procedures, indicators, protocols) will permit to assess whether and to what extent the program is implemented as expected and therefore to document if and to what extent there are discrepancies between program design and actual practice. Actual practice will be documented through Key Informants Interviews (KIIs), Focus Group Discussions (FGDs) and surveys.

Relevance to beneficiaries and acceptance of the program

Women of reproductive age, mothers, newborns, children and indirectly healthcare workers and CHWs will be the identified group of beneficiaries, for the purpose of the proposed analysis.

We will explore the views and perspectives of end users with regard to the **quality, accessibility and relevance** of the package of services provided by CHWs in communities, through FGDs with

community members and with village health workers. Perspectives of healthcare providers at facility level will be captured via KIIs.

A **framework analysis approach** will be used to produce a descriptive analysis of emerging themes and to draw explanatory conclusions from interviews and FGDs.

Semi structured interview guides have been developed, and thematic visual maps will be generated through the analysis of the data to display key patterns and findings regarding the intermediate and final users' perceptions of the appropriateness of CHP interventions, and of what worked and what did not, and why.

Evidence emerging from primary qualitative data will be triangulated with other qualitative studies performed in Rwanda on CHWs.

Limitations

Documents review

The review of policy documents, guidelines and protocols is useful to identify (or not) inconsistencies in the way that a policy or a program is defined, described and regulated across various documents. Such exercise is certainly useful to the policy maker, since it provides an opportunity for reviewing and streamlining such documents, although it should be noted that this remains a descriptive analysis confined to the program design only. Practice may differ from theory.

Qualitative research

FGDs and KIIs will be administered in a limited number of districts (5), as described later in this document (chapter 3.3.).

Some of the potential limitations of the qualitative research proposed through the evaluation are:

- Participants may be reluctant to openly express their opinions for fear of recrimination during KIIs and FGDs even though researchers are external to the programme. Therefore, the researchers from the LSTM will use open-ended questions (where applicable) based upon the topic guides to minimize interviewer/facilitator bias.
- Some of the data and its meaning/implications may be lost during translation even though all efforts will be deployed to ensure data integrity.
- The positions of the researchers could have an effect on the data generated and this could lead to bias.
- The findings of the study may have limited generalizability beyond its immediate locality as they will include a limited number of stakeholders, interviewed at a specific stage (point in time).

EFFECTIVENESS

Proposed evaluation questions

- Has the CHP achieved its objectives? To what extent and how?
- What were the main facilitators and barriers to achieving the program objectives?

Methods

A mix of quantitative and qualitative methods will be used to address the central question of effectiveness, which is whether the program achieved its objectives, and why (why not).

The objectives of the CHWs program, as defined through the National Health Community Strategy Plan 2013-2018, are:

1. Strengthen the capacity of decentralised structures to allow community health service delivery.
2. Strengthen the participation of community members in the community health activities.
3. Strengthen CHWs Motivation through CPBF to improve health service delivery
4. Strengthen coordination of community health services at the central, districts, health centres and community levels.

This component of the evaluation will essentially look at process, exploring activities and outputs along the program ToC.

In doing so, a mix of primary and secondary qualitative and quantitative data will be used to assess all relevant program components, and the outputs achieved through the program.

It is worth noting that the proposed exercise will build on the CHP M&E framework, as defined through the Community Health Strategy Plan 2013-2018 (Annex 6, page 61). Such framework identifies key indicators per each of the above referred program objectives, indicating baseline levels (2012) and targets (2015; 2018).

We will populate the framework, to assess the level of achievement of program objectives against defined target. This will be a defined benchmark to measure program achievements.

We will also expand such framework, to look at critical program components (elements of the ToC) which are not accounted in the framework, such as supply management, supervision, motivation and retention.

A summary of the program components that will be assessed through the evaluation, of tracer indicators and of related sources is illustrated in Table 3.

A detailed analysis plan for effectiveness indicators is presented in Annex 12

The quantitative analysis will be complemented through qualitative data collected at all levels through KIIs and FGDs (national level stakeholders; district level; health facility level; CHWs; communities), to explore and document what are the perceived barriers and facilitators to achieving (or not) program results.

Table 3. Illustrative assessment plan, by CHP component

Program component	Area of assessment	Sample indicators/ areas of analysis	Source/ method of data collection
Service delivery and scope of practice	Performance (Outputs 1.5 to 1.10 of the CHP M&E Framework)	Number and trends of services provided, disaggregated by district and by intervention	SiSCOM Rapid SMS LSTM Survey
	Quality of services and care	Adherence to guidelines and protocols for treatment and referral	LSTM survey (CHW) FGDs with communities KIs with Health care workers
Policy and planning	Availability and use of plans, guidelines and tools (Output 1.1)	CHWs with plans, guidelines and tools available Quality and consistency of protocols, manuals and tools	LSTM Survey Desk based review
Deployment and training	Delivery of training (Output 1.2 and 1.3)	Proportion of district staff trained in CHP (ToT) Proportion of CHWs trained (per training package) Average time lapse between CHW deployment and training completion	RBC/MoH records LSTM survey (CHW) RBC/MoH records LSTM survey (CHW) RBC/MoH records
	Quality of training	CHW and CHW supervisors' knowledge of key practices Duration and content of training Application of learning through adherence to protocols for treatment and referral	LSTM Survey (CHW and facility)
Workload, motivation and retention	Workload	Average and range of n. hours worked per day and per week Average time spent on other activities Perception of workload Qualitative assessment of issues related to motivation	LSTM survey Rapid SMS SISCOM LSTM survey Focus Group discussions with CHWs LSTM survey Siscom
	Motivation	Average Ranking of factors to assess intrinsic and extrinsic motivation (Likert scale) Average amount of incentive received per month	LSTM Survey
	Retention	Analysis of drop out rates (Trends, by district)	Focus group discussions SiSCOM/Rapid SMS

Supervision	Coverage of supervision	CHWs receiving supervision as planned	LSTM survey SISCOM RBC/MoH SupervisionReports
	Quality of supervision	Content of supervision	Supervision reports FGDs with CHWs KIIs at HF level Supervisory tools
Monitoring and Evaluation	Consistency of routine data	Accuracy of secondary data Completeness Timeliness	HMIS, Siscom, Rapid SMS LSTM Survey
	Use of routine data	Use of data for decision making Feed back to CHWs based on data analysis	LSTM Survey, Reports from CHP, FGDs Supervision Reports
Supply management	Availability of essential equipment	Availability and functionality of equipment as per program guidelines	LSTM Survey and FGDs Supervision Reports
	Availability of essential supplies	Stock out rate of essential medicines (by product)	SISCOM District Pharmacy reports LSTM survey Checklists of drugs and supplies
	Quality of essential supplies	Expiry Storage and conservation of medicines	LSTM Survey FGDs
Coordination	Coordination between MOH/RBC programs with community component ¹¹ and other community health interventions (e.g. RRP+, ARSH programs etc) (Outputs 4.1, 4.2., 4.3)	Quarterly coordination meetings Integrated coordination fora	RBC/MoH records LSTM Key information interviews and FGD Joint integrated annual plans (national and district) Partner mapping
	Linkages between HC and community	Referral and counter referral Individual Tracking system for efficient response	Rapid SMS HF registers, linking to CHP, referral and counterreferral tools Verbal autopsy and death audit reviews

¹¹ CHU, TB, malaria, HIV, mental health, CBEPP, cooperatives/CPBF)

Limitations

The quantitative analysis will present the following, potential limiting factors:

Availability and accuracy of secondary data

As previously reported in this document, at the time of this writing LSTM is in the process of obtaining access to data owned by the MoH (HMIS; SISCOM; Rapid SMS; internal reports). Since a data confidentiality agreement was not yet signed, the evaluation team could not assess the completeness and accuracy of secondary data.

This issue will be explored and documented at a later stage, once such data are obtained. A final set of indicators will be therefore produced once access to data is granted and the feasibility and accuracy of each proposed indicator can be assessed.

Survey data

The cross-sectional survey proposed to collect information at facility and CHWs level (Section 3.3. of this report) is calculated to provide estimates of proportions at national level, and for all respondents as an overall cadre of community health workers. Stratification (by District, by cadre of CHW, or by geographical area) will be used as a method for analysis where applicable, although the precision of the study at level of strata will be less accurate.

Qualitative data

The same limitations of qualitative analysis, as described above in the chapter regarding relevance, will apply.

EFFICIENCY

Proposed evaluation questions

- What are the program costs and its main cost drivers?
- Are the available resources (financial, human and commodities) used efficiently to achieve the programme objectives?

Methods

The OECD-DAC defines efficiency in terms of transformation of inputs into results.

Various methods have been identified to assess efficiency of aid interventions. Palenberg¹² classifies methods for efficiency analysis into three main categories:

- Level 2, the most potent, is capable of assessing the efficiency of an aid intervention so that it can be compared with alternatives or benchmarks (e.g., cost effectiveness analysis);
- Level 1, which is capable of identifying the potential for efficiency improvements within aid interventions;
- Level 0, which is entirely descriptive and hence informative rather than formative.

A mix of these methods will be used to assess efficiency through the final evaluation of the CHP.

Costing of the CHP

During the inception phase, all stakeholders reiterated consistently to importance of mapping program costs through the evaluation, although this exercise was not part of the original design and ToRs.

In fact, some of the program costs are known and documented (eg. costs of performance based financing mechanisms). Others have not been systematically documented (eg. costs of training; supplies; supervision).

During the inception phase, the evaluation team carefully assessed the possibility of producing and populating a model for costing the CHP, that can document the actual costs of the program. To that effect, the following parameters will be used.

During the Evaluation Steering Committee meeting held on the 6th of April 2016 in Kigali, it was acknowledged that a partner to the CHP program, Management Sciences for Health (MSH), has in fact planned to design and implement a costing exercise of the CHP. In light of such plan, the Steering Committee recommended that the evaluation team coordinates with MSH in such a way that:

- MSH delivers the costing study as per plans, and in coordination with MOH and RBC;
- LSTM inputs in the costing study design, so to ensure that approach and methods used for the

¹² Palenberg, M. (2011): Tools and Methods for Evaluating the Efficiency of Development Interventions. *Evaluation Working Papers*. Bonn: Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung.

- costing exercise are aligned and compatible with the evaluation design;
- Costing data produced by MSH are then used by the evaluation to generate efficiency analysis and cost effectiveness analysis.

The main features of the costing study as outlined by MSH are presented below¹³.

Objectives:

This study intends to estimate the costs of delivering the CHW services package with an aim to promote sustainability. It will take an overall health system’s perspective and generate evidence of the current CHP cost structures to inform policy decisions. In addition to estimating the direct and indirect costs at all levels of the service package, the study will calculate the current and projected resource envelop available to finance the service package and measure the resource gaps that must be met with increased resource mobilization and efficiency measures. Lastly, in collaboration with the LSTM, the study will include a cost-effectiveness analysis applying effectiveness indicators and data collected by the LSTM.

The specific objectives of the study are:

1. To measure the total and unit cost of the CHW service packages;
2. Identify the resources allocated to the CHW service package and for specific programs within the package;
3. Identify the cost drivers that could be targeted for resource mobilization goals and efficiency gains;
4. Calculate the cost-effectiveness of targeted programs.

Methods:

The study will apply an activity-based costing tool developed in MS Excel that is dynamic, open source and user friendly. The tool has been developed by MSH with UNICEF support and has been tested in two African countries, Malawi and Sierra Leone. The key feature of this dynamic costing tool is that costs are based on key variables, such as target populations, incidence rates and service delivery platforms. Changes in these variables are immediately and automatically reflected in all component costs. Dynamic costing tools are highly suitable for planning and developing finance option models since the cost impact of different scenarios can be seen immediately and applied to the decision-making and planning process. The result of using such a tool can be used for multiple purposes: investment case scenario development, service package planning, resource allocation, cost-effectiveness and efficiency analysis and resource gap analysis.

This study will use both quantitative and qualitative methods to collect data for CHW integrated service package costing. A sample will initially be identified and depending on the variation in existing data, more data will be collected from key informants and other CHW through focus group discussions.

¹³ DRAFT CONCEPT NOTE: Costing of Community Health Workers (CHWs) Integrated Service Packages. MSH, April 2016

The costing tool will be adapted to establish the cost per CHW activity and service program. We will apply a step-down and bottom-up methodology. Direct input costs will be estimated for each function and allocated to activities (bottom-up costing methodology) e.g. cost of drugs/medical supplies, utilities, repairs/ maintenance. Indirect costs will be calculated applying a step-down method whereby total program costs are stepped down and allocated across the activity/service direct costs e.g. training, supervision and other costs associated with each service will be considered.

This study will rely on collecting retrospectively the most recent data January 2015 to December 2015 on the identified cost indicators/elements for each activity and service program. The direct and indirect costs will be collected from the different stakeholders including central level GoR ministries and agencies, developmental partners, and CHW sampled sites. Data on services utilization required will also be collected retrospectively for the January 2015 to December 2015.

Costing analysis

The costing tool will be used for analysis that will permit to estimate the total and unit cost of delivering the activities and packages of services for the CHW.

The analysis will include:

1. Calculating total direct input costs of CHW services by function stepped up to activity and program. This includes all direct costs related to CHW activities;
2. Calculate total indirect costs of CHW services by function stepped down and allocated across the functions, activities and service programs. This includes all related capital and other non-recurrent expenditures;
3. Calculation of level of current and projected resources required for an effective, sustainable CHW system;
4. Calculation and projection of costs;
5. Allocate the total cost of each service to the specific services package based on the services used and estimate the total cost of delivering the package;
6. Divide the total cost for each package by the number of patients or services utilization to arrive at the average cost per user for that service of the service package;
7. Identify the probable cost drivers of the CHW services package, controlling for other confounding factors.

Following the SC recommendations, the evaluation will coordinate with and rely upon the MSH planned study in order to generate evidence regarding the CHP cost effectiveness and efficiency.

Any changes to such plan will be communicated on due time to the SC and approval will be sought at each step of the process. Possibly, and MoU between LSTM and MSH will be drawn and shared with the SC, outlining roles and responsibilities of the two parties in producing and using the costing exercise within the evaluation.

Assessing efficiency and potential for efficiency improvement

In assessing efficiency of health interventions, three main types of efficiency can be considered:

- Productive efficiency has to do with the maximization of outputs vs inputs, i.e. with ensuring that the highest possible outputs are produced for the available inputs.

- Technical efficiency has to do with the concept of producing the desired output with the least cost combination of inputs;
- Allocative efficiency is concerned with whether the mix of services produced is that of most value to society.

A mix of the above efficiency types will be assessed via survey questionnaire and secondary data, to explore efficiency alongside the service delivery chain of the program.

In essence, our proposed analysis will explore efficiency in terms of overall model of service delivery, of outputs, and of inputs/activities. This will be done by measuring relevant indicators, stratified by cadre, age, sex, type of intervention and geographical area.

Illustrative indicators that will be used for the analysis are reported below:

Service delivery model and outputs:

- Density of CHWs per population, by cadre and district
- Caseload per person/month, by age, sex, cadre, type of intervention
- Cases treated/total contacts per person/month
- Cases referred/total contact per person/month

Inputs and activities:

- Average time spent per activity
- Average number of training events per person/year
- Average n. of CHWs seen per supervisory visit
- Ratio supervisor/CHWs
- Average medicines consumption per case treated
- Wastage rate

In addition to quantitative analysis, qualitative research at lower levels of the systems (CHWs and Health Facilities) will be used to explore perceptions of managers and service providers of potential areas for efficiency improvements along the service delivery chain, and of potential solutions to be considered for maximizing efficiency.

A detailed plan for the cost effectiveness and efficiency analysis will be submitted to the evaluation Steering Committee following the approval of the MSH costing study design by MOH.

Limitations

The availability and quality of data related to program costs and inputs is a key determinant for the costing exercise, and potentially a limitation of the study.

A second limitation of the costing exercise is time and resources available for the evaluation, since an in depth assessment and analysis of program costs was not part of the initial evaluation design. Although the costing study will be performed by a third party, additional time and resources may be needed to produce an analysis of data, to generate cost effectiveness analysis, and to ensure

coordination in between the evaluation team and the costing study team since its design stage.

SUSTAINABILITY

Proposed evaluation questions

- What are the main factors influencing the sustainability of the program in future (human, social, financial, institutional/political)?
- To what extent and how are program results likely to be sustained in future (technically, institutionally and financially) and under which scenarios?

Methods

Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn. Projects need to be environmentally and financially sustainable.

During the inception phase, sustainability emerged as a core area of concern from interviews with all stakeholders. The main critical elements of sustainability are:

- The feasibility and financial sustainability of the PBF model, in light of the decreasing funds available from PBF through external aid;
- The high drop out rate, that highlights issues of motivation and retention of CHWs and that is a major determinant of high investment (deployment) costs and potentially of reduced quality of services;
- Community ownership and relevance of the CHP to communities.

The sustainability issue will be at the core of the *contribution story*, which will be produced through the evaluation. In fact, addressing the sustainability issue will entail bringing to synthesis all the elements and findings gathered through the analysis of impact, effectiveness, relevance and efficiency.

A recent review of determinants in sustaining CHWs programs in low and middle income countries¹⁴ identifies three major categories of barriers and facilitators to long term sustainability: program design and management; community fit; integration with the broader environment.

Program design and management issues relate to the consistency of the theory of change, in terms of inputs, activities and outputs. In essence, a first determinant of the program sustainability is the consistency and quality of its implementation. This aspect will be documented through our evaluation of effectiveness, previously presented in this document.

¹⁴ Community Health Workers in Low- and Middle-Income Countries: What Do We Know About Scaling Up and Sustainability? – American Journal of Public Health, July 2013

Community fit refers to relevance of the program to community needs, to credibility and accountability to communities, and to acceptance of the program from its end users. This aspect will be documented through our evaluation of relevance, previously presented in this document.

Integration with the broader environment has primarily to do with integration and coordination of the program with the broader health system, with political commitment, and with long term funding arrangements.

The methods proposed so far, for the evaluation address most of the key sustainability questions described above.

An analysis of the health-financing environment in Rwanda and of prospective financing options for the CHP is outside of the scope of this evaluation.

Yet, bringing to synthesis elements of program design, political commitment, community ownership, results, and costing and efficiency ratios, the evaluation will provide possible scenarios for program (re) design and optimisation, that can support it in enhancing effectiveness and efficiency and hence its sustainability.

Barriers and facilitators to various elements of social, human capital and financial sustainability will be documented and taken into account in the analysis.

Proposed scenarios will build on models and experiences from other countries, and will draw on views and experiences of key stakeholders, who will be consulted through KIIs.

3.2.4 Evaluation matrix

An evaluation matrix has been developed, with operationalised sub-questions, indicators, judgement criteria and norms, as well as data sources, per each of the evaluation criteria and methods described above.

The evaluation matrix gives a complete overview of how and on which basis judgements or answers to evaluation questions will be made.

The evaluation matrix is presented in **Table 4**.

Table 4. Evaluation matrix

Evaluation criteria	Key evaluation questions	Sample indicators/ Evaluation output	Sources/Tools	Methods of analysis
Impact	<ul style="list-style-type: none"> Has the CHP contributed to improve the health status of women, newborn and children in Rwanda, by increasing coverage of evidence based, high impact MNCH interventions? 	<p>Contribution story of the CHP</p> <p>Attributable fraction of change in coverage for selected interventions (as per par. 3.2.3.2)</p> <p>Estimates of additional maternal and newborn lives saved due to the introduction of the program at community level</p>	<p>Theory of Change</p> <p>HMIS SISCOM Program timeline (MoH)</p> <p>DHS coverage data List tool</p>	<p>Contribution analysis</p> <p>Retrospective stepped wedge analysis of RH and MNH interventions</p> <p>Projections and modelling</p>
Relevance	<ul style="list-style-type: none"> Is the CHP consistent with national policies and plans? Is the CHP relevant to needs and priorities of the communities? How well is the CHP accepted and owned by the community? 	<p>Document review/descriptive analysis</p> <p>Narrative synthesis of emerging themes from qualitative research</p>	<p>Program policy documents, reports, manuals, guidelines, protocols, tools</p> <p>Key informant interviews and Focus Group Discussions</p> <p>Qualitative studies on CHP available in Rwanda</p>	<p>Data triangulation</p> <p>Thematic framework analysis</p>
Effectiveness	<ul style="list-style-type: none"> Has the CHP achieved its objectives? To what extent and how? What were the main facilitators and barriers to achieving the program objectives? 	<p>CHP indicators as defined through the Community Health Strategy Plan 2013-2018 (Annex 6)</p> <p>Narrative synthesis of emerging themes from qualitative research</p>	<p>HMIS SISCOM Program reports LSTM Survey</p> <p>KIIs and FGDs</p> <p>Qualitative studies on CHP available in Rwanda</p>	<p>Analysis of progress of program indicators against defined targets, and from baseline (Annual rate of change; gap to target)</p> <p>Thematic framework analysis</p>
Efficiency:	<ul style="list-style-type: none"> What are the program costs and its main cost drivers? 	<p>Descriptive analysis of program costs</p>	<p>MoH reports and data SISCOM Rapid SMS</p>	<p>Analysis of variance of standard vs actual costs</p>

Evaluation criteria	Key evaluation questions	Sample indicators/ Evaluation output	Sources/Tools	Methods of analysis
	<ul style="list-style-type: none"> ▪ Are the available resources (financial, human and commodities) used efficiently to achieve the programme objectives? 	Qualitative assessment of efficiency gaps	LSTM Survey Other studies on costing performed in Rwanda LSTM survey KIIs and FGDs Other studies on costing	Comparison with benchmarks from literature Descriptive Analysis of efficiency indicators Stratification Comparison with available benchmarks
Sustainability:	<ul style="list-style-type: none"> ▪ What are the main factors influencing the sustainability of the program in future (human, social, financial, institutional)? ▪ To what extent and how are program results likely to be sustained in future (technically, institutionally and financially) and under which scenarios? 	Descriptive Synthesis of barriers and facilitators to sustainability, in its aspects of: program design and management; community fit; integration with broader environment Scenarios for optimization of the program in terms of design, effectiveness, efficiency	All used in evaluation All used in evaluation	Narrative synthesis Comparison with models/strategies used in other contexts/countries

3.3. METHODS OF DATA COLLECTION AND ANALYSIS

A mixed research methodology will be adopted, as previously discussed, to address the evaluation questions. This will entail collecting and analysis both primary and secondary qualitative and quantitative data.

Primary data collection will take place in the form of a cross sectional survey at CHW and HF level, KIIs and FGDs. This data will complement secondary data sources, which will be used extensively for this evaluation.

Proposed methods of data collection and analysis are summarised in [table 5](#), by stage of the contribution analysis process, and described in depth below.

Table 5. Data collection plan

Stage	Data collection method	Number	Data source	Theme/variables
Construct/validate Theory of Change	KIIs	15-25	National policy makers and stakeholders	Components and processes included in the proposed Theory of Change. Available information resources
	Desk-based data analysis	Not applicable	National policies and plans	Description of CHW programme implementation and coordination. CHW policies
	Workshop	35	Key stakeholders (Central and district level)	Components and processes included in the proposed Theory of Change.
Collect additional evidence	Desk-based data analysis	Not applicable	Secondary data: National survey,	Trend in mortality ratio
			HMIS/CHWs routine data,	Attrition rate of CHWs
	Cross sectional survey	80	Health facilities	CHW population reach
			400	CHWs
	FGDs	5 (one per district, in 5 districts)	Community stakeholders	Programme results; availability of drugs; training, availability of essential equipment; monitoring/reporting mechanisms.
			CHWs	Perceptions of services by end users. Alignment of programme with community priorities
	KIIs (individual or group interviews)	35-40 (At least 7 per study district, in 5 districts)	. Directors and managers of district-level;	Programme implementation, barriers and facilitators of success
. Managers of cooperatives . Facility managers . In charge of community health . Cell Coordinators . Village leaders				
Assemble and assess contribution story	KII	15-25	National policy makers and stakeholders	Programme implementation, barriers and facilitators of success
	Triangulation of findings	Not applicable	Analysis of qualitative and quantitative data	
Address contribution question	Workshop	35-45	Key stakeholders (Central and district level)	Findings from data collection

Cross sectional survey

A cross sectional survey will be conducted at health facilities and at community level. It is anticipated that such survey will permit the team to collect critical information regarding the program results, as well as processes and inputs.

Survey design

At health centre level, the survey will explore issues regarding the CHWs program such as supervision of CHWs; availability of drugs; payment of incentives; training; population coverage.

At community level, the survey will explore complementary dimensions such as: program results; availability of drugs; availability of essential equipment; monitoring/reporting mechanisms.

Survey questionnaires have been designed based on available, tested and widely used tools (Core Group; LSTM; Save the Children; UNICEF) and adapted to local standards.

The data collection tools designed by the evaluation team were analysed and reviewed in detailed during the inception workshop held in Rwanda on the 4th and 5th of April: during such workshops, various working groups critiqued and helped fine tuning various modules of the questionnaires, and all inputs have contributed to a final version of the survey questionnaire.

The tool for data collection at both health facility and CHWs level is available in Annex (**Annexes 5 and 6**).

Sample size

The proposed sampling design for the survey will entail:

- a) Select 10 out of 30 districts (stratified by province: 2 per province, sample using probability proportional to size (number of health facilities))
- b) Randomly sample 8 facilities from each selected district (total=80 / 469)
- c) Randomly sample 5 CHWs under each facility (total=400, 40 per district / 45,000)

The margin of error (MoE) for estimation of a proportion measured at facility level for the nation will depend on: cluster size; Intra cluster correlation coefficient (ICC) between facilities for the proportion of interest.

The table below indicates the MoE for estimation of proportions for a range of values of the ICC if the proportion is 50%.

ICC	Deff at HF level	5 HCWs		
		MoE at district level	Deff at national level	MoE at national level
0	1.00	15.5%	1.00	4.9%
0.01	1.07	16.0%	1.36	5.9%
0.02	1.14	16.5%	1.68	6.8%
0.04	1.28	17.5%	2.21	8.2%
0.06	1.42	18.0%	2.63	9.5%
0.10	1.70	20.2%	3.25	11.5%

Sampling

A sampling frame of all facilities of the country was obtained at inception from the MoH.

In light of the proposed sampling methods, we randomly selected districts and of health facilities to be surveyed by LSTM. Sampling of CHWs will be performed once detailed data of CHWs in selected facilities is available.

A list of districts and facilities to be surveyed during the evaluation is presented in **Annex 7**.

Implementation

A local survey company will be contracted to implement the survey. LSTM will be responsible for the finalisation of tools, for training and supervision, and then for data analysis.

Electronic data collection will be used to perform the survey at both facility and CHWs level; this will permit to enhance the quality of data (inconsistency checks embedded in the electronic tool) and the timeliness of data availability via real time upload on servers.

Details on the recruitment process and on the selected company are presented in **chapter 4.3**.

Key Informant Interviews and Focus Groups Discussions

KIIs will be undertaken at various stages of the evaluation process, and at all relevant levels of the system, targeting national policy makers and stakeholders, directors and managers of health services at local/district level, health workers, and community health workers (where applicable).

KIIs will be performed by LSTM team members, following semi-structured topic guides (**Annex 8**); translators will be used to support the interview process where relevant.

Interviews will be performed at the various levels of the health system, to gather views of various stakeholders involved with the community health program in Rwanda.

Snowball sampling may be used to recruit additional participants if we are unable to attain data saturation using our purposive sample.

FGDs will be conducted on two levels.

FGDs with community health workers (**Annex 9**) will be conducted in up to 5 districts, including approximately 12 participant male and female CHWs, with a maximum 1 FGDs per district. In total, it is anticipated that up to 60 CHWs will be involved in discussing key areas of the CHWs program, and barriers and facilitators to its success.

At community level, purposive sampling will be used to identify and recruit male and female community members. The focus groups (**Annex 10**) will comprise of a maximum of 12 participants and

will be conducted by experienced CMNH-LSTM staff with local facilitators to be identified at inception. Recruitment will continue until data saturation is reached. It is expected that up to five FGDs will be held, aiming at capturing perceptions of end users regarding the program.

Topic guides for KIIs and FGDs were critiqued and revised during the inception workshop held in Rwanda in early April.

Also, during the workshop a stakeholders mapping exercise was initiated (**Annex 14**); such mapping exercise will permit to select stakeholders for qualitative research at central, district, HF and community levels.

Secondary data

A full mapping of relevant documents, reports, and studies on the CHP has been performed during the inception phase (**Annex 4**).

The main secondary data sources will include, but not be limited to:

- **Literature review** – a literature review of previous reviews/evaluations of CHWs programs will be conducted at inception by two (CMNH) researchers. The review will be used to define/refine the evaluation approach and methodology, as well as to inform stakeholders of best practices and case scenarios from other countries.
- **National surveys** (DHS, MICS) – data sets from national surveys, including the recent DHS 2014, will be accessed and analysed to perform historical trends analysis of interventions coverage, prevalence of disease and mortality. Where relevant and possible, data will be stratified per relevant socio economic characteristics of the population but also by source of service provider.
- **HMIS/CHWs routine data (SISCOM and Rapid SMS)** - National vital statistics and routine data and reports available via HMIS and including the performance of CHWs
- **HR information systems**- data on numbers, distribution and characteristics of CHWs (sex, age, education level, marital status, years in service/date of appointment), deployment, attrition rates and trends, types of basic, in-service/on the job training received
- **National policies and plans** – National policies and Plans (eg HSSP III) will be analysed in detail, to assess the relevance and coherence of the CHWs program with the national health strategy, but also to benchmark survey results with defined performance or process related benchmarks for the program.
- MoH performance review reports, where applicable
- UNICEF reports
- Other reports, studies, evaluations, assessments and reviews conducted in the countries

Available documentation and reports will be classified and used for desk based review and analysis. The full set of documents and data used for the evaluation will be stored in Liverpool and provided to RBC, MOH and UNICEF in the form of a full archive in electronic version as an annex to the final report.

Ethical considerations

LSTM will ensure, in line with its internal policies and code of conduct, that the research associated with the evaluation takes all possible measures to protect the participants from harm or danger, to preserve their rights and to reassure the community (and sponsoring organisations) that this is being done.

Steps to be taken to minimise adverse effects, discomfort and risks :

Participants will be encouraged not to disclose any information they are not comfortable with sharing and to decline responding to any statement they consider sensitive.

Confidentiality and anonymity will be ensured at all stages of the study to ensure that statements cannot be traced to the participant except by the research team.

Participation will be on voluntary basis and participants are free to withdraw at any stage without offering explanation.

For those participating in focus group discussion, the importance of maintaining confidentiality outside the venue of FGD will be emphasized to all participants.

-Flexibility with timeliness during data collection to meet the needs of participants (interviews, group discussions and facility visits).

Data will be presented in an aggregated form so that no health facility or individuals could be identified.

Each health facility and CHW will be identified with code numbers. The code numbers and the health facility or CHW's name will be recorded in two separate databases and the code linking the two databases will be kept securely. Only members of the research team will have access to the database.

In particular, the following measures will be set in place:

Consent and information to participants

Informed consent will be obtained using the adapted LSTM research ethics committee consent template which consists of the information sheet and the certificate of consent.

Information given to participants:

- Name of the principal investigator, contact details and institution affiliation
- Purpose of the study
- Reasons why the participant was selected
- Procedure involved in data collection and how data will be managed and stored.
- Potential impact of research on participants : benefits, discomfort
- Voluntary participation

Delivery of information to participants:

The informed consent will be administered by the principal researcher having been trained and also having experience in obtaining consent using ethically and culturally appropriate approaches.

Consideration for local circumstances

For illiterate participants, the information sheet and certificate of consent will be translated into local language and read to them while encouraging them to ask questions about part of the information sheet or certificate of consent that is not clear to them. If they consent to participate in the research, they will be asked to thumb print in the certificate of consent.

In addition, consent will be sought from families of recipients of CHWs' services before inviting them to participate with their carers/family.

Minors: Minors will not be recruited for the research.

Confidentiality and anonymity

Ensuring anonymity

Except for the informed consent that will bear the names of participants, all other documents including transcripts and questionnaire are to be coded using pseudonyms. The pseudonyms will help keep an audit trail in case reference needs to be made to one of the participants. Equally, participants at the group discussions will be given numbers during discussions and encouraged to use these rather than names. We will ensure as much as possible to maintain anonymity to prevent recognition.

Confidentiality

We will do everything possible to maintain confidentiality throughout the study by ensuring that the information shared is not traceable to any of the participants. However, absolute confidentiality may not be guaranteed for the FGDs due to possibilities of accidental breaches in confidentiality by participants in the FGDs and some participants may share content of discussions outside the group discussion. However, the facilitator and participants will agree on norms that will boost confidentiality at the beginning of every FGD and participant will be encouraged to disclose what they are comfortable to share rather than over disclosure.

Data storage and analysis

Qualitative data will be transcribed verbatim as soon as possible following collection, ensuring all identifying information is removed and transcripts anonymised. Recordings of interviews and group discussions will be stored on password protected data devices and destroyed once the data has been transcribed and analysed. Every effort will be made to ensure that confidentiality and privacy of respondents is protected at all stages of data collection and processing. This may be particularly important for KIIs who will come from a relatively small pool of people who may know each other, but also at community level where certain information may provide clues on the author of the information. Particular attention will therefore be paid to ensure no data becomes traceable to an individual and that data confidentiality is not compromised. In reporting, suitable id system will be developed to protect the individuals who take part in the project.

All data collectors being trained in good interviewing skills and principles of data confidentiality, who in turn can reassure respondents. Participants will be informed about the study in advance (written communication and telephone calls for key informants, through community leaders/committees) and just prior to data collection. This is to ensure that participants understand the purpose of the study and

their rights to participate (voluntarily) or not and withdraw from the study at any time without any prejudice.

Ethical approval for the evaluation has been submitted to the LSTM Research and Ethics Committee, and is currently under review.

As per advice from the Ministry of Health, a full study protocol will be submitted for ethical approval in Rwanda only after the approval of the inception report.

In addition, a Data Confidentiality Agreement has been signed between LSTM and the Rwanda Biomedical Centre, and its conditions will be strictly abided to, in the use of secondary data for the evaluation.

3.4. DISSEMINATION

The results of the evaluation will be included in a report which will be submitted in draft (narrative and powerpoint) to the MOH, RBC and UNICEF for discussion and review.

Following the report submission, a final workshop will be organised in Rwanda to present the main evaluation findings to key stakeholders from central and districts levels.

In addition, LSTM in coordination with RBC, MoH, UNICEF and other stakeholders will produce up to four papers for possible submission to peer reviewed journals.

Approval from the MoH of such articles will be a pre-condition for publication of study findings.

We propose that the four papers are selected amongst the following:

1. Evaluation of the Community Health Program in Rwanda: methodology, design, and evaluation results
2. Assessing the impact of community health interventions on maternal and newborn health in Rwanda through stepped wedge analysis
3. Capacity building of CHWs through training and supportive supervision: lessons learnt from Rwanda
4. Community Health program in Rwanda: an analysis of program costs and of potential for efficiency gains
5. Barriers and facilitators to the long term sustainability of the community health program in Rwanda

4. Implementation Plan

4.1. DELIVERABLES

The deliverables that we aim to provide are:

- **Inception report (deliverable 1):** comprehensive report, including annexes and tools, reviewed by the Steering Committee. Once approved, LSTM will submit the protocol for the evaluation for ethics approval in Rwanda.
- **Brief report of key informant interviews (deliverable 2):** it is expected that interviews at national level will be carried out at the beginning of the data collection phase. A short report summarizing key emerging themes from stakeholders will be produced and delivered to UNICEF.
- **Data collection report (deliverable 3):** a short report will be produced soon after completion of data collection work, to inform UNICEF and the evaluation Steering Committee on progress and achievement of data collection work.
- **PowerPoint presentation with key evaluation findings (deliverable 4):** this will summarise the evaluation design, methods, findings, conclusions and recommendations.
- **Final evaluation report (deliverable 5):** a final report will be made available, together with a raw database format in English version. All relevant tools and data sets will be enclosed to the report. A final dissemination event will be planned with the MoH and UNICEF, to present the results of the evaluation to relevant authorities and to other stakeholders, and to discuss the key recommendations identified by the evaluation team.
- **Articles (deliverable 6):** up to four articles will be produced and submitted to the MoH, to be considered for later submission and publication in open access journals.

4.2. WORKING IN PARTNERSHIP

Evaluation team

We have purposively selected a multi-disciplinary team that combines: sound expertise in thematic areas that are relevant for this evaluation; sound research capacity; presence of French-speaking team members.

The team will be structured as follows:

- **Coordination team,** composed of expert public health professionals conversant with the environment in Rwanda and of a program manager based in Liverpool, the team will be in

charge of leading/organising the country based work including initial consultations, contacts, organisation of field work and analysis of country data.

- **Qualitative research team:** the team will be composed of a senior research associate, a research associate, a research assistant and an HRH specialist, and will be in charge of designing, delivering and analysing all qualitative research, including review of national policies and plans; FGDs; KIIs; consultation workshops.
- **Quantitative research team,** composed of the an M&E specialist, of a statistician and of a specialist in PSM and health financing, this team will oversee the development of survey questionnaires; the implementation of the field survey and its analysis; the analysis of secondary data, the analysis of financial data available on the program.

The evaluation team will access the technical, management and support services available within the institution to deliver the evaluation work.

Detailed profiles of the evaluation team members are available upon request.

Data collection company

During the inception phase, LSTM invited four local data collection companies to submit technical proposals and financial offers for the delivery of data collection in Rwanda, including both qualitative and quantitative research.

Offers were received from four companies, and analyzed and scored independently by the members of an internal LSTM procurement committee.

The company Laterite Ltd. has been pre-selected, and it is proposed that this firm is subcontracted to perform data collection, subject to the approval of the inception report from the Steering Committee.

Laterite Ltd. offers a breadth of experience that positions the firm well to provide LSTM data collection services for the comprehensive evaluation of the community health program in Rwanda. We believe that Laterite offers a compelling value proposition.

Laterite has been based in Kigali since 2010 and has established itself as the leading development research firm in Rwanda. The company has developed a strong understanding of the local context through strategic advisory projects for NGOs, multilateral organizations, companies, and government institutions. One project that highlights our understanding of the local context is for the Medical Research Council South Africa, as part of the Evaluation of a Community-level Programme to Prevent Gender-based Violence in Rwanda. Laterite is currently conducting the baseline survey for the program, consisting of 3300 interviews with couples and 3300 interviews with community leaders.

Administration and Logistic services in Rwanda

Considering that LSTM does not have a registered office in Rwanda and hence a logistic team in place, we have explored options to sub-contract such services, and identified Health Poverty Action (HPA) as the preferred organisation to support administration and logistics for the evaluation in Rwanda.

HPA has been working in Rwanda in health since 1998. The organisation currently works with Rwandan communities to provide safe water and sanitation facilities, tackle HIV and sexually transmitted diseases, to end violence against women and to reduce poverty directly through income generation. LSTM and HPA have partnered on previous occasions in various countries, sharing offices and logistics services. The proposed subcontract lies therefore on a consolidated model of partnership between the two organisations.

Approval to sub-contract HPA was sought from UNICEF and obtained, in March 2016.

Rwandan expert consultants

Following the Steering Committee recommendation to involve local researchers in the evaluation (First evaluation Steering Committee health in Rwanda on the 19th of February, 2016), LSTM has engaged in discussions with local experts since thereafter.

In particular, it is anticipated that a local health economist may be contracted through the evaluation, to support the costing analysis of the program.

4.3. WORK PLAN AND TIMELINE

The timeline agreed by contract for this evaluation is 20th of January to 20th of July 2016.

During the inception phase, a revised work plan was developed and is available in **Annex 11**. The work plan attempts to deliver the evaluation by the end of July 2016.

It should be noted through that actual delays experienced so far in the process against initial timeline, as well as potential future delays (eg ethics approval) may affect the feasibility of finalising the evaluation as per initial deadlines at the desired quality standards.

During the approval stage of the inception report, LSTM will discuss with UNICEF, RBC and MoH the possibility of extending the duration of the evaluation.

List of Annexes

- Annex 1** – Summary of consultative meetings with key stakeholders
- Annex 2** - Literature review of evaluation of community health programs in Africa
- Annex 3** - Review of evidence on CHP in Rwanda: key findings
- Annex 4** – List of documents, data and reports on the Community Health Program
- Annex 5** – Survey questionnaire for CHWs
- Annex 6** – Survey questionnaire for Health Centre
- Annex 7** – Sample of districts and facilities
- Annex 8** – Topic guides for key informant interviews
- Annex 9** – Topic guides for focus group discussions with CHWs
- Annex 10** – Topic guides for focus group discussions with community members
- Annex 11** - Work plan
- Annex 12** – List of Indicators and Analysis Plan
- Annex 13** – Theory of Change of the Community Health Program
- Annex 14** - Mapping of key stakeholders of the Community Health Program (*draft*)