Training manual on tracking financial data in health facilities in Kayonza and Kirehe

Sandy Tsai, Grace Umugiraneza, John Ruhumuriza, Solange Kandamutsa, and Chunling Lu
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If you use this resource, we ask you to cite the following paper/website and to acknowledge the survey designers and authors in accordance with standard academic practice.


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<thead>
<tr>
<th>ACRONYMS</th>
<th>EXPANSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ARV</td>
<td>Antiretroviral drugs</td>
</tr>
<tr>
<td>BWH</td>
<td>Brigham and Women’s Hospital</td>
</tr>
<tr>
<td>CFO</td>
<td>Chief Financial Officer</td>
</tr>
<tr>
<td>CHW</td>
<td>Community Health Workers</td>
</tr>
<tr>
<td>DDCF</td>
<td>Doris Duke Charitable Foundation</td>
</tr>
<tr>
<td>DGHE</td>
<td>Division of Global Health Equity</td>
</tr>
<tr>
<td>DH</td>
<td>District Hospital</td>
</tr>
<tr>
<td>DHU</td>
<td>District Health Unit</td>
</tr>
<tr>
<td>DO</td>
<td>District Office</td>
</tr>
<tr>
<td>DP</td>
<td>District Pharmacy</td>
</tr>
<tr>
<td>EGPAF</td>
<td>Elizabeth Glaser Pediatric AIDS Foundation</td>
</tr>
<tr>
<td>EMR</td>
<td>Electronic Medical Records</td>
</tr>
<tr>
<td>FBO</td>
<td>Faith-Based Organization</td>
</tr>
<tr>
<td>FOSA</td>
<td>Formation Sanitaire (Health Facility)</td>
</tr>
<tr>
<td>FSI</td>
<td>Family Strengthening Intervention</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>GFATM</td>
<td>Global Fund</td>
</tr>
<tr>
<td>HC</td>
<td>Health Centers</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HIS</td>
<td>Health Information System</td>
</tr>
<tr>
<td>HMIS/SIS</td>
<td>Health Management Information System (Système d'Information Sanitaire)</td>
</tr>
<tr>
<td>HMS</td>
<td>Harvard Medical School</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resources</td>
</tr>
<tr>
<td>ID</td>
<td>Infectious Diseases</td>
</tr>
<tr>
<td>IMB</td>
<td>Inshuti Mu Buzima</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of Childhood Illnesses</td>
</tr>
<tr>
<td>IRC</td>
<td>International Rescue Committee</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>MAP</td>
<td>Medical Assistance Programs</td>
</tr>
<tr>
<td>MESH</td>
<td>Mentoring and Enhanced Supervision at Health Centers</td>
</tr>
<tr>
<td>MMI</td>
<td>Military Medical Insurance</td>
</tr>
<tr>
<td>MPD</td>
<td>Medical Procurement Division</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
</tr>
<tr>
<td>PAM</td>
<td>Programme Alimentaire Mondial (World Food Programme)</td>
</tr>
<tr>
<td>PEV</td>
<td>Programme Elargi de Vaccination</td>
</tr>
<tr>
<td>PHIT</td>
<td>Population Health Implementation and Training</td>
</tr>
<tr>
<td>PIH</td>
<td>Partners In Health</td>
</tr>
<tr>
<td>POSER</td>
<td>Program on Social and Economic Rights</td>
</tr>
<tr>
<td>PSI</td>
<td>Population Services International</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>RWF</td>
<td>Rwandan Francs</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
</tr>
<tr>
<td>UNPF</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>VCT</td>
<td>Volunteer Counseling and Testing</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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CHAPTER 1 INTRODUCTION

1.1 About the Doris Duke Charitable Foundation and the Origins of PHIT

Taken from the following website: http://www.ddcf.org/Medical-Research/Program-Strategies/African-Health-Research/African-Health-Initiative/

In 2007, the DDCF launched African Health Initiative in order to address the health disparities in Africa more broadly. The African Health Initiative aims to strengthen health systems by supporting partnerships that will design, implement and evaluate large-scale models of care that link implementation research and workforce training directly to the delivery of integrated primary healthcare in sub-Saharan Africa.

Central to the initiative is the establishment of large-scale Population Health Implementation & Training (PHIT) Partnerships that will link implementation research and training directly to health care delivery. In 2009, DDCF awarded four grants to support PHIT Partnerships working in Ghana, Mozambique, Rwanda, Tanzania and Zambia.

Over a period of 5 to 7 years, each PHIT Partnership will:

- Provide integrated primary healthcare and achieve significant, measurable health improvements for underserved communities of between 300,000 and 1.6 million people;
- Strengthen health systems in a manner that enables local and national governments to sustain improvements beyond the grant period;
- Increase the knowledge available for evidence-based health systems planning through rigorous operations and implementation research.

1.2 About the Rwanda PHIT Partnership

“Strengthening and Studying Community-Based, Integrated Primary Health Care Systems in Rural Rwanda”

Taken from the following website: http://www.ddcf.org/Medical-Research/Program-Strategies/African-Health-Research/African-Health-Initiative/Rwanda-PHIT-Partnership/

In 2009, Brigham and Women’s hospital, Partners In Health, PIH Rwanda (IMB) and the Rwandan Ministry of Health (MOH) received funding through a grant from the Doris Duke Charitable Foundation (DDCF) to strengthen health systems in two districts (pop = 460,000) in eastern Rwanda over a 5 year period. The approach includes interventions aimed at making significant improvements to each of the six health systems building blocks described by the World Health Organization. Rwanda’s second Health System Strategy Plan (HSSP-II) outlines a number of goals that correlate directly with these six domains, thus facilitating our effort to
offer an approach to improving population health that integrates both WHO and Rwandan MOH priorities.

Within each of our intervention districts, implementation takes place across four distinct levels: (1) community health worker, (2) health center, (3) district hospital, and (4) district leadership. Our intervention’s five primary activities are designed to strengthen all of the domains outlined by the WHO across each of these four levels, with varying degrees of intensity.

The five primary activities include the following:

1. The implementation of a novel training program called “Mentoring and Enhanced Supervision of Healthcare” (MESH). The goal of MESH is to improve the overall quality and effectiveness of health center-based care through an improved training module.

2 & 3. Strengthening the district hospitals and health centers within our intervention area. Strengthening activities at these two levels contribute to improvements in each of the six building blocks. These activities include: strengthening human resources and service delivery support; making improvements to infrastructure; improving access to medical equipment and products; providing social and financial risk protection; increasing nutritional and informational support; improving communication; and, providing ongoing training, supervision, and transportation support.

4. Implementing an enhanced network of community health workers (CHWs).

5. The implementation of a robust M&E system with feedback systems to improve care at all four district intervention levels.

1.3 Economic Study Overview

Objectives

The purpose of the economic analysis is to address three important policy questions:

1. How does the PIH-PHIT program help strengthen the finances of local health facilities in the two districts (South Kayonza and Kirehe).
2. Does the PIH-PHIT’s financial contribution lead to an increase in health care provision?
3. Does the PIH-PHIT program lead to child health improvement through increasing child health care provision?

To provide answers to these three questions, three core finance indicators have been identified and defined:

1. Expenditure per capita of health systems in the two districts
2. Expenditure per capita of PIH-PHIT program in the two districts
3. Proportion of PIH-PHIT’s contribution to health system spending.
To measure these three core indicators, we will collect annual data on annual expenditure and received funds in the two districts.

Research Products

The financial survey project will lead to three major research products. First, it will lay a foundation for establishing a financial data collecting system in rural health facilities. We will establish standard procedures, methodologies, and manuals for guiding the survey process and develop estimation methods for missing data. The procedures can be used for collecting health facility finance data in Rwanda by the Ministry of Health. Our experience in Rwanda can also be shared and learned by research teams in other countries. Second, it will produce the first comprehensive and systematic study on health system financing and PIH/PHIT’s contribution to it in the two PIH sites. By measuring the expenditure of special health-promotion activities, such as community health workers program, we will be able provide necessary expenditure data for future cost-effectiveness studies on these special programs. Third, combined with the outcome data in the two districts, an efficiency analysis on PIH-PHIT program can be conducted to evaluate the impact of the PIH-PHIT program in promoting health care production and improving outcome variables, such as child mortality, which will illustrate the pathways through which the impact of PIH-PHIT financing contribution on population health was likely achieved.
CHAPTER 2 SURVEY DESIGN

2.1 Local health system

For this study, a health system is defined as the entire set of health programs in intervention areas, including NGOs and FBOs. In the two districts, health systems include two district health offices, two district pharmacies, two district hospitals, 21 health centers, and donors-supported NGOs or FBOs which help providing health care to local residents. Figure 1 demonstrates the health systems in the two districts.

Using data from the Health Facility Survey 2008, we found that there were at least six donor-supported health programs in the two districts: PIH (Partners in Health), GFATM (Global Fund to Fight AIDS, Tuberculosis, and Malaria), MAP (Medical Assistance Programs), EGPAF: (Elizabeth Glaser Pediatric AIDS Foundation), UNFP (United Nations Population Fund), and IntraHealth (IntraHealth International).

![Figure 1 Components of District Health Systems](image)

2.2 Local Health system financing

To measure the cost of health systems, we need to understand the financing structure of the district health systems. As shown in Figure 2, there are three major funding sources for district health systems: central government transfers (including donor contributions), direct donor contribution to hospitals, pharmacies, or health centers, and private health spending mainly from household out-of-pocket health spending.

We can summarize the expenditure of each health unit into six categories based on the six building blocks of a health system proposed by the World Health Organization: (1) service delivery which includes items such as infrastructure (building, furniture, equipment, vehicle, etc.) and maintenance and operation (rent, water, telephone, electricity, gasoline, etc.); (2) human resources which include salary, benefits, and incentives; (3) medicine, vaccines and
technologies; (4) health information such as health information system, public education programs; (5) spending on Mutuelle program; and (6) management and leadership.

Figure 2 Financing Mechanisms of District Health Systems

To supply medication, the Rwandan government set up a central purchasing body for essential drugs (Medical Procurement Division, formerly known as CAMERWA). The MPD purchases a list of generic drugs used by the Ministry of Health and distributes them to the pharmacies in the health districts based on the demand of pharmacies. The pharmacies in the health districts sell the drugs to the health facilities such as hospitals and the health centers, with only limited profit margin allowed.

“Medicine for Programs” refers to those medicine that MPD receives from the Global Fund, USAID, and others as an in-kind donation. The MPD distributes to the district pharmacies for free. Sometimes MPD distributes these drugs directly to the HC and hospitals; sometimes they are given to district pharmacies with specific instructions of how to distribute. “Medicines for Programs” include ARVs, Contraceptives, TB meds, SRO (oral rehydration salts—ORS) for CHWs, Malaria (some are free, some are sold to the HC at a subsidized rate), Zinc (diarrhea), Amoxicillin (pneumonia), etc.

Donor-supported NGOs or FBOs may only provide medicines to the national and district pharmacies and should not provide medicines to hospitals and health centers directly. In
practice, they may send the medicine to health centers if the distribution channel did not function well.

2.3 Health facility finance survey

We illustrate some important definitions, standardized questionnaire, along with a written description of why certain questions, sections are included.

Definition of expenditure/costs

The purpose of the survey implementation is to collect cost (or expenditure) information from each health facility in the two districts, and we need to first define “costs”. We adopted the WHO’s approach and measure the costs from the perspective of the society. Economic costs, such as costs of in-kind services or goods, time of volunteers, depreciated money values of pre-existing facilities and equipment, etc. will be included in the calculation. When designing survey instruments, there are several ways of classifying costs. Costs can be classified by: (1) Input categories (salaries, medical supplies, capital); (2) Intervention activity (administration, planning, supervision, education, prevention, intervention, etc), and (3) Organizational level (hospital, district, provincial, national). We use the “input categories” to classify the total costs and collect the cost data from each health facility.

Questionnaire Design

Questionnaires are designed to collect annual financial data (funds received and expenditure) from health facilities in the two districts. Different health facilities have different functions. For example, district pharmacies have different structure and function differently from that of health centers. We design questionnaires for the five types of health facilities: (1) health center, (2) district hospital, (3) district pharmacy, (4) district office, and (5) PIH. To obtain comparable data across the same type of health facilities and over time, we develop the following five standard model questionnaires for each type of health facility (Table 1). The contents of the core questionnaire vary across different types of health facilities. For example, the questionnaire of funding sources used in district office may be different in many ways from those used in hospitals. For some health facilities, some core questionnaires may not be conducted. For example, PIH surveys do not include “annual funding sources” and “2009 existing capita”. It is also important to understand that model questionnaires may change over time as a result of ongoing health system reorganization.

<table>
<thead>
<tr>
<th>Core Questionnaires</th>
<th>Fiscal year</th>
<th>Health centers</th>
<th>District hospitals</th>
<th>District health offices</th>
<th>District pharmacies</th>
<th>PIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Annual funding sources</td>
<td>2009 - 2014</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 1 Core questionnaires for the five types of health facilities between 2009 and 2014

<table>
<thead>
<tr>
<th>2. Annual expenditure</th>
<th>2009 - 2014</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Existing capital</td>
<td>2009</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. PHIT start-up costs</td>
<td>2010</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5. Expenditure on CHWs</td>
<td>2010-2014</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(1) Annual funds received from 2009 to 2014
The questionnaire will collect annual data on the funds received by the health centers, district hospitals, pharmacies, and offices from three main sources: government resource allocation, private spending, and donor’s contribution. It serves the purpose of understanding the contribution of PHIT/PIH to health system financing. The estimates can also be used to validate reported total expenditure data by the health facility.

- **Domestic government resource allocation (including in-kind support):** For each health facility, we collect information on how much the Rwanda governments invested (in cash or in-kind transfer) in the facility. The governments refer to MoH, district office, district hospital (for health center only), MDP, and other government agencies. Note that this part may include the donor’s contribution to these government agencies. Funding for special programs such as Performance-Based Payments, Mutuelles, RAMA, MMI, CHWs, etc. is included. Quantity and unit price of in-kind supports, such as paid staff, vaccine, medicine, medical equipment, vehicle, construction, etc. are also included.

- **Private expenditure:** Questions ask about the out-of-pocket health payments, insurance premium, and domestic NGOs’ contribution (such as First Lady Foundation, Kabeho Mwana, etc.).

- **External health aid (including in-kind support):** Information on donor’s contribution, both in cash and in-kind support is collected for GFATM, MAP, PIH, EGPAF, UNPF, Introhealth, etc.

(2) Annual expenditure from 2009 to 2014
This part of survey will collect information of annual expenditure on

- Human resources
- Service delivery
- Medicine, vaccine, and other medical technology
- Health information
- Management and governance (collected from the central MoH)
For the cost of “Management and Governance”, one of the six building blocks, it basically refers to the spending at the higher level of MoH on supervising, monitoring and evaluating the district health systems performance. We will get
the data from the MoH and the category will not be included in the survey instruments.

- Mutuelles
- Other costs

The components included in annual funds received and expenditure are summarized in Table 2.

<table>
<thead>
<tr>
<th>Funds received</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 1: Government</strong></td>
<td><strong>Section 1: Human Resources</strong></td>
</tr>
<tr>
<td>Amount of cash received from governments, Mutuelles office, RAMA(^a), MMI(^b)</td>
<td>Salary, benefits/allowances, incentives, consultant fees, professional development costs</td>
</tr>
<tr>
<td>In-kind support: item names and their quantity, market unit prices, and total values</td>
<td>Fees for CHWs(^e) and <em>accompagnateurs</em>(^f)</td>
</tr>
<tr>
<td><strong>Section 2: Private</strong></td>
<td></td>
</tr>
<tr>
<td>Household out-of-pocket health spending</td>
<td>Total number of volunteers/staff paid by other agencies and their estimated payments</td>
</tr>
<tr>
<td>Domestic NGOs</td>
<td>Other costs related to human resources</td>
</tr>
<tr>
<td>In-kind support: items and their quantity, market unit prices and total values</td>
<td></td>
</tr>
<tr>
<td><strong>Section 3: External health aid</strong></td>
<td><strong>Section 2: Health Service Delivery</strong></td>
</tr>
<tr>
<td>Amount of cash received from GFATM(^c), PIH(^d), and other external donors</td>
<td>Buildings (function/square meters/useful life), vehicles, furniture, equipment, supplies</td>
</tr>
<tr>
<td>In-kind support: item names and their quantity, market unit prices, and total values</td>
<td>Maintenance, insurance, rental, utility, transportation</td>
</tr>
<tr>
<td><strong>Section 4: Other sources not listed</strong></td>
<td>Other related costs</td>
</tr>
<tr>
<td><strong>Section 3: Medicines, Vaccines and Technologies</strong></td>
<td></td>
</tr>
<tr>
<td>Drugs, medical supplies, lab supplies, other costs related to medicine</td>
<td></td>
</tr>
<tr>
<td><strong>Section 4: Health Information</strong></td>
<td></td>
</tr>
<tr>
<td>Computers and related equipment, software, communications, printing/copying, other costs</td>
<td></td>
</tr>
<tr>
<td><strong>Section 5: Mutuelles</strong></td>
<td></td>
</tr>
<tr>
<td>Total amount billed to Mutuelle office</td>
<td></td>
</tr>
<tr>
<td>Total amount received from Mutuelle office</td>
<td></td>
</tr>
<tr>
<td>Other costs related to Mutuelles</td>
<td></td>
</tr>
<tr>
<td><strong>Section 6: Other</strong></td>
<td>All other costs not included in above list.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Core components of survey instruments

(3) Existing capital in the baseline year
This part of survey will estimate the economic value of the existing capital in the period of July 2009 to June 2010. The data will survey the purpose of projecting the costs of scaling up the program of PIH/PHIT. The existing capital includes items such as existing
buildings, furniture, office equipments, water and electricity systems, vehicles, etc. The economic cost of these items should be estimated with market prices, depreciation rate, annualized factors, and GDP deflators.

(4) Start-up costs of the PIH-PHIT program
The start-up period is defined as the period between deciding to implement an intervention and starting to deliver it to the first beneficiary. This part of survey will collect cost data that was associated with preparing the PIH-PHIT program. It will cover the resources include personnel, supplies, overhead, and capital items and estimate costs of activities such as designing, developing, planning, orientation and training. Some health facilities may not incur any start-up costs of the PIH-PHIT program.

(5) Implementation costs of PIH-PHIT programs
This part of survey will collect the data of annual PHIT expenditure in the six building categories by PIH.

(6) Annual expenditure on “community health workers” project
This part of survey will collect cost data for some special activities focused by the PIH-PHIT program. In the two intervention districts, the project of “community health workers” has been supported by the PIH-PHIT program. The project trained and paid community health workers to pay visits to each household in the catchment areas. The information of total cost of the activity will be mainly collected from PIH.

2.4 Procedure of survey revision

Surveys will be revised as needed. Any new versions of the survey should incorporate any changes in the data collection procedures, or changes in data available. The survey should be revised as a team; then sent to the Economic Evaluation Lead for feedback and final comments.

All surveys should be checked for formatting (correct font, enough room for accountant to write in boxes, correct footer, no gaps between sections, etc.). Once the formatting has been checked, the new survey should be converted into PDF form, and saved in the relevant folder in the “Surveys” folder in Dropbox, with the name “ABCD Survey_language_vX_MM-DD-YYYY.”

For example, if the English version of the District Office survey was changed, the new name would be:

District Office Survey_English_v4_12-12-2011

If an older version of the survey was sent to an accountant or other health facility personnel in soft copy, a new version may be sent, with a note explaining the updated changes. Only surveys in PDF form may be sent in soft copy to anyone outside the team.

To ensure that the data properly reflect the situations they intend to describe, three steps are adopted.
Pilot study

We follow the standard procedure for survey design and conduct a pilot study. Two health centers, one district hospitals, one district pharmacy, and one district office are chosen for the sites of the pilot study. The pilot study not only allows us to test our preparation for survey implementation, but also enable us to examine the quality of questions through analyzing the data collected from the pilot study. The survey instruments are revised based on the pilot study.

Revision during the application

We apply the questionnaires generated from the pilot study to all health facilities. During the application, we find that even for the same type of health facility, the cost information can sometimes be recorded differently. We revise the questionnaire and make it more flexible.

Revision based on accountants’ feedback

In order to continue improving the quality of survey design and implementation, we make efforts to create an environment for breeding local health facility’s “ownership” of the survey and strengthening the partnership between us by sending feedback form to the accountants (see Table 3). When time permits, the team also calls the accountants at least once a year to receive feedback.

Introduction: We want to thank you for your hard work, which helps us understand the financing situation of your facility. We would like to know your suggestions on how to improve the survey and data collection work in future.

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>1.</strong> Do you have any suggestions on how we can improve our communication with you?</td>
<td></td>
</tr>
<tr>
<td><strong>2.</strong> Do you have any suggestions on how to improve the questionnaire?</td>
<td></td>
</tr>
<tr>
<td><strong>3.</strong> What would be the best way to make appointment with you, such as which day per week /which week in month do we come to collect data?</td>
<td></td>
</tr>
<tr>
<td><strong>4.</strong> About the training on questionnaires, did it help you understand the survey? If not, what can we do to make the survey more clear?</td>
<td></td>
</tr>
</tbody>
</table>
2.5 Questionnaire translation

The finalized questionnaires are translated into French and Rwandan. The translation team is comprised of a translator, an accountant, an economic manager, and two data collectors.
CHAPTER 3 PREPARING FOR DATA COLLECTION

This section describes the process of implementing the survey in the two districts. The important components include “capacity building,” “communication with stakeholders,” “training and workshops”, and “logistic support”.

3.1 Research capacity building

Cost survey like this has never been conducted in the two districts before. The crucial part is to build up a local team under the PIH office so that the team will gradually gain the capacity to design survey instruments, collect, analyze, disseminate, and use the cost data during and after the PHIT program. During the survey implementation, the Boston-based research staff provides constant technical guidance and support in fieldwork, quality control, and production of survey report documents.

Team training

The cost data team in Rwinkwavu consists of one economic manager and two data collectors hired from Rwanda.

Team regular activities

The team members meet every Monday at 7:40am where we will share the following information:

- Weekly schedule
- Upcoming trainings
- Upcoming meetings
- Any other news or information about the program
- Any upcoming absences (if a team member is going on leave, etc.)
- Go over what was accomplished the previous week
  - Any challenges
  - Suggestions for improvement

**An assigned team member will take notes at the meeting and put them into Dropbox under “PHIT\Schedule and Tasks\Meeting Notes”.

- All work done by team members should be shared in Dropbox, for others to access and view.

- All team members are expected to:
  - Be open and honest about their own work and about each other’s work,
  - Provide constructive feedback and be respectful of each other’s ideas and opinions,
  - Solve conflicts through effective communication.
• The team also agrees to write a work plan every Thursday or Friday that will include the tasks to be done next week using the template below.

<table>
<thead>
<tr>
<th>Next Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Person 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How to Give and Receive Feedback

<table>
<thead>
<tr>
<th>Team members</th>
<th>Supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Share during meetings</td>
<td>- meet periodically to discuss work plan, progress and issues</td>
</tr>
<tr>
<td>- Share during individual performance meetings (monthly)</td>
<td>- provide detailed feedback</td>
</tr>
<tr>
<td>- review work plan</td>
<td>- share experiences</td>
</tr>
<tr>
<td>- provide immediate and constructive feedback</td>
<td>- provide training opportunities</td>
</tr>
<tr>
<td>- refer to expectations/manual/documentation</td>
<td>- public thank you</td>
</tr>
<tr>
<td>- have retreat meetings (monthly)</td>
<td>- understand background and weaknesses</td>
</tr>
<tr>
<td>- organize picnics</td>
<td>- give advice/constructive feedback</td>
</tr>
<tr>
<td>- prizes</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problems w/ Health Centers</th>
<th>Team members</th>
<th>Supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- discussion</td>
<td>- understand problem and possible solutions</td>
<td></td>
</tr>
<tr>
<td>- training on site</td>
<td>- document challenges and solutions</td>
<td></td>
</tr>
<tr>
<td>- analysis of problem</td>
<td>- provide training for management skills</td>
<td></td>
</tr>
<tr>
<td>- feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- problem vs. frustration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- identifying person who can help resolve situation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accountant training

For each health facility, the main data source was its accountant. To promote positive interaction between the data collectors and accountants, we provided two-day workshops to
orient accountants and other related personnel before each cycle of data collecting. Accountants were regularly consulted when revising survey instruments. The trainings and consultations gave them a better understanding of the importance of obtaining accurate financing data and increased their sense of ownership of the project. Trainings should take place once per year, before the start of data collection for the next fiscal year.

1. Collaborate with the following people to plan the budget and logistics:
   a. Country Director
   b. Economic Evaluation Lead
   c. Project Manager (Boston side)
   d. Associate Director of Research and Monitoring and Evaluation
   e. Site Coordinators (Kayonza, Kirehe, Burera)
   f. Titulaires and Accountants of each health center and hospital
   g. District Pharmacists
   h. Others that may be relevant (Examples: Accountants in charge of audits)

2. Target Audience
   a. Accountants of each health center and hospital, district pharmacy, and district office
   b. Possibly cashiers, if no accountants are available, or if cashier is covering for an accountant for an extended period of time
   c. Possibly the logistics coordinator and procurement officer from the district offices
   d. Possibly the data manager and stock manager from the district pharmacies
   e. Others that may be of assistance in helping us obtain the data for our surveys

3. Format of the Trainings
   a. Training materials (slides and surveys) will be presented in both French-Kinyarwanda or English-Kinyarwanda.
   b. The team will receive the support from the Economic Evaluation Lead, Research Coordinator from the Boston office, and the Training Department at IMB to develop the training materials and schedule.
   c. First trainings should be in a 2 day format, to allow ample time for accountants to fully understand the survey, and ask questions.
   d. Follow-up trainings may be in a 1 day format; however, if accountants feel that a full training is necessary, a follow-up training may be in a 2 day format.
   e. A feedback form will be given to the accountants at the end of the training to help inform and improve future trainings.
4. Checklist for Logistics
   ✓ Space for training/projector
   ✓ Copies of presentation slides (French, English, and Kinyarwanda)
   ✓ Copies of surveys (French, English, and Kinyarwanda)
   ✓ Copies of any exercises that will be done (French, English, and Kinyarwanda)
   ✓ Food and Drink
   ✓ Accountant Feedback Forms or evaluation form (French, English, and Kinyarwanda)
   ✓ Transport per diems

3.2 Support for data collection

Meetings shall be held with the following people to ensure the full cooperation of the accountants and other staff needed to obtain information:

- PIH Site Coordinators
- Clinical Directors
- Associate Director of Research and M&E
- Titulaires of the Health Centers and Hospitals
- District Pharmacists
- Directors/Executive Secretaries of the District Offices
- Country Director

PIH Site Coordinators may support the team in getting approval at the district level (including approval from the Mayor’s office). Clinical Directors, Associate Director of Research and M&E, and the Country Director may help with getting access to data needed at the national level, either the Medical Procurement Division, PEV, or the MOH.

3.3 Logistic support

Regular transportation is needed for going to each health facility to collect data. Arrangements should be made with the following people to ensure the availability of transportation.

- PIH Site Coordinators
- Coordinators of vehicle team
CHAPTER 4 DATA COLLECTION

4.1 When and where to collect data

Data is collected from June (current) to March (next year) in each year cycle in Kirehe and Kayonza Districts:

- 2 District Offices
- 2 Hospitals
- 2 District Pharmacies
- 21 Health Centers
- PIH Data
- MPD and PEV (value of vaccines, medicines, etc. as needed)

District Office
- Total amount received from the health centers and hospitals
- Any monetary funds from the government, NGOs, etc.
- Staff salaries, benefits, operations and maintenance costs (Table 2)

Pharmacy
- Total value of medicine (may only include essential meds) and supplies that each health center and hospital purchased from the pharmacy. The pharmacies should have delivery notices and receipts that document what they delivered to each health center, and how much it was worth. However, they may not have this for all of the health centers. We may not make copies, but we can go to the pharmacy and go through the records to get the data we need.
  - The data may be recorded on separate spreadsheets, then collated together in the “Data Acquired Electronically” folder, under the “20XX-20YY” folder in Dropbox, and entered directly in the database.
  - Be cautious of recording duplicate records. Ask the accountant for assistance with any difficult to read, or confusing numbers.
- List of medicines and supplies (including condoms and lab reagents) that the pharmacy donated/distributed to each hospital and health center.
- Double check if the pharmacy received in-kind support or any other monetary support from the government, NGOs, etc.

Notes:
- When we collect data about the value of medicines from each health center, we are collecting data on what the HC and hospitals purchased for the medicine.
- Since April 2011, HC started giving the district pharmacy reports of what they have in stock, what they received from the pharmacy, etc. Ex: FP, EOC, IMCI, Nutrition,
ARVs, Opportunistic Infection Meds, HIV Rapid Tests from each HC. However, they only record the *quantity* of medicines they receive, *not the value*. If MPD does not have information on which HC they distributed to, we may collect data on the quantity of medicines, then check with MPD on the values of each.

*We also need to double check if any essential medicines were donated to any health centers*, as well as donated by MPD to the pharmacy. Essential medicines typically are not donated, but there may be some cases where this has happened. If so, we need to record the information both in funding in-kind, and also in transfers to health centers.

**Medical Procurement Division**

- MPD should have all values of medicines (both essential and those donated as in-kind)
  - Each donation comes with a red book that shows the wholesale price, OR a document with the value of the international market price.
- MPD may also have the quantity and value of medicines given to each HC, hospital, and district pharmacy.
  - The data may be recorded on separate spreadsheets, and then put into the folder “Data Acquired Electronically” folder, under the “20XX-20YY” folder, under “MEDICAL PROCUREMENT DIVISION Data 20XX-20YY” in Dropbox. The data may be collated and then entered directly into the database.

**Notes:**

- MPD also sells medical supplies (such as guaze, syringes, etc.) and lab reagents to the pharmacy, which sell them to the HC and hospitals. All values of medicines should also include medical supplies and lab supplies.
- Will need extra support to get access to the records at MPD. Refer to the District Clinical Director or others for support.

**PEV**

- Programme Elargi de Vaccination (under MOH) distributes all vaccines. Collect data on the value of vaccines given to each HC and hospital and district pharmacy.
- Will need extra support to get access to the records at PEV. Refer to the District Clinical Director or others for support.

### 4.2 Who collects the data

- Economic Research Coordinator
- Data Officers

All three members of the team should always go to the field to collect data together. The Economic Research Coordinator should ask the questions to make sure all data is captured; the Data Officers will each take notes and write on the survey. Each Data Officer will collect data
on his/her own surveys, and will compare the information when in the field. Any discrepancies will be followed-up with the health facilities.

4.3 General guidelines for collecting data on paper surveys

When filling out a paper survey, particularly during the pilot phase, much of the information may not be obtained at the health facility visited. In addition, multiple visits and follow-up calls may be needed in order to collect all of the data. Some revisions to the survey may also be needed. The following are some guidelines and examples of how we can track missing data, take notes, and correct mistakes in a systematic and clear way.

1. How to fill out surveys:

- Please *do not leave any spaces blank*. If data is missing or needs to be followed-up on, please make a note of it on the survey.
- Please *write neatly in the spaces provided* in the survey. If there is not enough space, please use the margins to write the number, and we can revise the survey to allow for enough space in the future.
- Surveys are complete only if there are NO blank spaces. Data entry can begin before surveys are completed.

Example 1:

<table>
<thead>
<tr>
<th>2.2 ONGs Locales (Exemple: First Lady Foundation, etc.)</th>
<th>RWF 355.55</th>
</tr>
</thead>
<tbody>
<tr>
<td>-9. Je ne sais pas (Spécifiez pourquoi)</td>
<td></td>
</tr>
<tr>
<td>RWF 0</td>
<td></td>
</tr>
<tr>
<td>-9. Je ne sais pas (Spécifiez pourquoi)</td>
<td></td>
</tr>
<tr>
<td>The numbers are written neatly on each line. There are no blank spaces. The answer to 2.2 is &quot;no&quot;, so number 2 is circled neatly. The question 2.4 is not applicable, so the data collector wrote &quot;N.A.&quot; neatly to the side.</td>
<td></td>
</tr>
</tbody>
</table>

Example 2:
2. Taking notes

- Notes can be taken on the front page, by the question number, or at the bottom of the survey. Notes regarding any changes to the survey needed, additional contact information, and questions to the Researcher or Principle Investigator can be written by the section on the survey being addressed, or on the front page of the survey.

Example 1:

Example 2:

Example 3:
3. Keeping track of missing data

- **Any data that needs to be followed-up** on (where we can get the data either from another source or person at the health facility) should have a note next to it saying “missing”, or “check with _______” next to the question.

- **Any data where we will have to make estimations** ("-9") should be circled on the survey. If possible and relevant, please also specify why the health facility does not have the information.

- **Any data truly missing** (where we cannot even make estimations) should be kept track of in the spreadsheet titled “Irresolvable Issues 20XX-20YY” in the “Missing Data and Follow-ups” folder in Dropbox. A note may also be made next to the question, indicating why the data is truly missing.

- **When the missing data is followed-up on**, please check off the note, and write the date in which the missing data was obtained.

Example 1:

Example 2:
4. How to correct mistakes

- Sometimes the accountant forgot to include a value, or we write down the wrong number on our survey. When this happens, please draw a single line through the mistake, and write the correct number either underneath or to the side. This will make it easier to read the survey and do data entry later.
5. Other

- Sometimes the hospitals and district offices may give us a paper copy of all in-kind donations received (may be from a report, or from their own records). A note should be made on the survey that such a document was received, so that we know we need to enter data directly from that document. In addition, they may email us soft copies of in-kind donations received, or capital purchased. We should also make a note of this on the survey, and put the electronic record in Dropbox, under the folder “Data Acquired Electronically”, with the name of the health facility and year clearly labeled.

  For example, you may name the document:
  - Rwinkwavu DH in-kind from PIH 2009-2010.doc
  - Kirehe DH capital costs 2010-2011.doc

- Data collected electronically from the pharmacy records should be labeled clearly, and put in the same folder.

  For example, you may have a folder called “Kayonza DP cash received 2009-2011”, with the following documents in it (depending on how you divided the work at the pharmacy):
  - Kayonza DP July 2009 to Jan 2010.doc
  - Kayonza DP Feb 2010 to June 2010.doc
  - Kayonza DP July 2010 to Jan 2011.doc
  - Kayonza DP Feb 2011 to June 2011.doc

  If you had data for all in-kind donations transferred to each health center, you might label the folder “Kayonza DP transfers 2009-2011”, etc.

- Finally, you may write down questions for the Principle Investigator directly on the survey, or in a separate notebook.

4.4 Data collection procedure

Please read the instruction part in the survey carefully. Funding and expenditures are recorded only ONCE on the survey. For example, if Global Fund gave to the district, which gave to the
health center, only write down that the value came from ONE source (either Global Fund OR district).

**Health Centers and Hospitals**

1. **Surveys of funding sources and received funds**

   - Make sure accountants include funding from ALL sources (ask about NGOs not listed as well)
   - Include ALL in-kind donations
     - Important things to collect:
       - Quantity
       - Where it comes from
     - If the value of the donation is unknown by the accountant, we will research the price
   - Note that all values of funding in-kind donations are recorded as the UNIT price.
   - Note that in-kind donations for community health programs will be aggregated into ONE value.

2. **Surveys of expenditures**

   - Make sure all values include in-kind donations
   - Include money spent that was given to the health centers by other NGOs, not just the government.
     - Note: green books only record spending from government funds. Need to check other reports that contain information about spending from other NGOs, such as Global Fund and PIH.
   - Note that all values of expenditure capital costs are recorded as the TOTAL price.
   - Note that 2.2.7 and 4.4 will most likely to be aggregated, and when we separate the values, they are likely to be estimations.

3. **Surveys of existing Capital includes all durable things (buildings, equipment, furniture, vehicles, water tanks)**

   - Make sure that the things put in Table 3 are things that were purchased BEFORE 2009 and are STILL used in 2009
     - Even if the item was not used in 2010 or 2011, if it was used in 2009, record
     - Building year= the year that the building was FINISHED (when the construction was done)
     - Equipment Resale will usually be blank—nothing is resold in Rwanda
   - If necessary, walk around the health center and record all items in each room and building.
• Clarify to the accountants that buildings are composed of the entire structure, and not just one room or department
  o Example: If there is a VCT house, which includes a VCT room, Laboratory, and an ID Clinic in the SAME BUILDING, then we do NOT count each department (VCT, lab, ID clinic) as separate buildings. We need only information on that HOUSE called “VCT.”

• Only record large items (no need to record small things such as flasks, cups, staplers, etc.)

• Important information to collect
  o Name/Function
  o Quantity
  o Purchase year

• Common missing data will may include
  o Useful Life
  o Purchase price
  o Building’s square meters

• If the accountant can know the useful life, purchase price, and building square meters, we will record their data (No guessing or estimating, unless accountant is sure of the value)

• If the useful life or purchase price is unknown, the following steps will be taken:
  o Record market value price in 2011, if known
  o If current market price not known, will research later (see Estimation Procedures)

4. Surveys of start-up costs for PHIT program
   • Money spent to prepare to be supported by PIH
     o For example, fees may be spent on communication, transport, building a structure to house the generator that’s donated, consultants

District Offices

1. Surveys on funds received, expenditure, and existing capital
   • Record funding and expenditure for the District Health Units ONLY (not for the entire office)
• For in-kind and existing capital, and some expenditures, record the % of time spent using the items
  o Example: If global fund donated a vehicle to the DO, and the DHU uses the vehicle 20% of the time, record “20%” instead of a monetary value.
  o Example: If the DHU uses 10% of the building (2 rooms), record “10%” for buildings
  o Note: All % of time will probably be estimations, and not exact values.

• Check with other staff in the District Office for information on in-kind support and capital, such as the Executive Secretary, Store Keeper, the Logistics Coordinator, and Infrastructure Coordinator. Support from the PIH Site Coordinators may be needed to contact such staff.

2. Cash and In-kind transfers
• Record any transfers to all hospitals and health centers in the district
• Make sure to include in-kind support (may need to attach extra sheet for in-kind support)

District Pharmacies

1. Please note the structure change as described below.
Before 2009, each district had a committee made up of the medical director of the hospital, the titulaire, and others, who managed the district pharmacy. The committee had their own budget, and managed their own accounts. In 2009, the pharmacies turned to the district offices to help them better manage their accounts, since they had no accountants. Then, in FY2011 (July 2011), there was separation of the district offices and district pharmacies. Each district pharmacy hired their own accountants, and now has full autonomy of their accounts. As a result, many of the bank statements and records of transactions from FY2009 and FY2010 reside at the District Offices. Some records may be lost or unreliable.

2. Payment System for Essential Medicines (from 2009-2011)

(1) When the health centers and hospitals need more medicine, they go to the DO to pay for the medicine.
(2) The DO then gives them a receipt and bank sheet with a proof of payment, and their order. The hospitals and health centers take the receipt to the pharmacies to fill their orders.

(3) When the pharmacy runs out of medicine, they go to the DO to let them know what medicines they need to purchase.

(4) The DO then takes money out of the account, and pays the Medical Procurement Division under the Rwanda Biomedical Center (formerly CAMERWA) the money for the medicine.

(5) Medical Procurement Division sends the medicine to the pharmacy.

Notes:
• Beginning in FY2011, the District Office no longer manages the accounts. All transactions are done directly with the pharmacy. (see below)

- The District Office/Pharmacy does not transfer any money in the pharmacy account to the health centers (HC) and hospitals; they only transfer medicines and supplies.
- The District Office/Pharmacy charges 20% interest rate on each medicine sold to the HC and hospitals (20% of what they purchased from each medicine from MPD).
- We do not know how much interest MPD charges.

Information about Medicines and their Values

Types of Medicines in the Market

• Essential medicines: medicine that MPD buys from the international market, and sells to the district pharmacies, which sell to the HC and hospitals.

• “Medicines for Programs”: medicines that MPD receives from the Global Fund, USAID, and others as an in-kind donation, and which MPD distributes to the HC and hospitals, and district pharmacies for free.
  o Sometimes MPD distributes these drugs directly to the HC and hospitals; sometimes they are given to district pharmacies with specific instructions of how to distribute.

Medicines for Programs include the following:
• ARVs
• Contraceptives
• TB meds
- SRO (oral rehydration salts—ORS) for CHWs
- Malaria (some are free, some are sold to the HC at a subsidized rate)
- Zinc (diarrhea)
- Amoxicillin (pneumonia)
- Insulin

**PIH Data Collection**

**Sources of Data**

PIH Data will come from 3 sources:

1. CFO and financial office
2. Health facilities
3. Project Manager

**Types of Data**

1. The CFO will provide spreadsheets for each fiscal year from the accounting office for all cash expenditures, *and in-kind donations* for PHIT (DDCF), non-PHIT, and special programs. *This is called the “PIH Financial Worksheet” in the manual.*
2. The health centers will provide data on what in-kind donations were received from PIH, and will be checked against the spreadsheets that the CFO provides.
3. The Project Manager will provide data on the start-up costs, DDCF costs on the Boston side for the PHIT program, and information about volunteers sent (and their value) and staff paid by other agencies for both the PHIT and non-PHIT programs.

**Schedule**

1. The Economic Research Coordinator and Data Officers will sort through PIH spreadsheet to find the expenditures and organize the in-kind data from the health facilities 1-2 days a week. The data will be collected as a team, to ensure integrity and accuracy of the data.
2. Any questions that come up, and any missing data needed will be emailed to the CFO the morning of the meeting with the CFO.
3. The team will meet with the CFO every Monday or Wednesday to answer questions and verify data.
4. The Research Coordinator on the Boston side will meet with the Project Manager to obtain start-up cost and other data.

**Organizing and Collecting the Data**
- All PIH data is collected electronically in the “PIH FY XXXX data collection” spreadsheet in folder “PIH data 20XX-20YY” in Dropbox. Please refer to this spreadsheet for instructions on how to organize and collect the data.
- **All data should be collected in both USD and RWF.**
- Please see “PIH Budget Categories,” and “PIH Mapping” in the Appendix for references to Program and Project Names, Funders, and Accounts.

**Expenditure Data**

The data from the spreadsheet provided by the CFO (PIH Financial Worksheet) will be organized and collected on the “PIH data collection” spreadsheet created by the team (see above). Each section has instructions of how to filter and obtain the data needed from the large accounting spreadsheet from the CFO.

1. **DDCF Funds transferred to each health center and hospital.**
   a. Select DDCF in "Fund Name Lookup". Filter each health center in "Purpose Name".
   b. Select each program, and total the amount for each health center and hospital.

2. **Non-DDCF Funds transferred to each health center and hospital.**
   a. Select everything EXCEPT DDCF in "Fund Name Lookup". Filter each health center in "Purpose Name".
   b. Select each program, and total the amount for each health center and hospital.
   c. Uncheck "F" and "X" from the "Fund No".

3. **DDCF Funds spent on each of the 6 building blocks in the Expenditure section of the survey, by program.**
   a. Select DDCF in "Fund Name Lookup". Select everything EXCEPT the health centers, expansion, and hospitals. Includes data from Burera District, Kirehe District, Kayonza District, Rwanda Cross-site Operations, Rwinkwavu Training Center only.
   b. Select out each category in "Account Name Lookup", and fill in the "expenditure table" for each program.
      i. See PIH Budget Mapping and PIH Budget Categories in the Appendix.

4. **Non-DDCF Funds spent on each of the 6 building blocks in the Expenditure section of the survey, by program.**
   a. Select everything EXCEPT DDCF in "Fund Name Lookup". Select everything EXCEPT the health centers, expansion, and hospitals. Includes the Burera district, Ngoma district, Kayonza and Kirehe districts, Kigali office, Ngoma District, Rwanda Cross-site operations, and Rwinkwavu Training Center.
   b. Select everything EXCEPT anything with "X" or "F" in the "Fund No".
   c. Select out each category in "Account Name Lookup", and fill in the "expenditure table" for each program.
i. See PIH Budget Mapping and PIH Budget Categories in the Appendix.

5. Non-DDCF Funds spent on special programs, where PIH is only a fiscal agent or “extra budget.”
   a. Select everything EXCEPT DDCF in "Fund Name Lookup", Select everything EXCEPT the health centers, expansion, and hospitals.
   b. Select only the categories with "X" or "F" in the "Fund No".
   c. Select out each category in "Account Name Lookup", and fill in the paper surveys for each FUNDER.

Remember:
- Always make a copy of the ORIGINAL data FIRST, before manipulating the data.
- Include anything in (______) in the TOTAL
- Include all expenditures in Both RWF and USD format.
- Always verify the data by totaling the expenditures of each program or health center.
- Be sure to exclude bad debit expense, foreign currency transactions, and realized gain/losses from any totals.

In-kind Donation Data

Some values of the in-kind donations of the PIH expenditures will already be included in the PIH data collection. However, there are some in-kind donations that are made to PIH by other sources (for example, exam tables) that were directly transferred and donated to health centers. As a result, these data are not in the PIH Financial Worksheet.

In order to obtain those in-kind data not captured by the PIH Financial Worksheet, the team will speak to the following people for the data, as well as any data that was missing from the health centers and hospitals:

- CFO
- Operations Manager
- Stock Manager
- Procurement Manager
- IT
- Boston Office-Rwanda Program
- Any others that are relevant

The in-kind donations included in the PIH Financial Worksheet will have to be searched, through the “Description” column of the spreadsheet, recorded on the “PIH Funding in-kind” spreadsheet in the “PIH data 20XX-20YY” folder in the “PIH Data Collection” folder in Dropbox, and entered in the Access database. Any new or missed donations should also be added.

Important note:
• The data for the in-kind donations should NOT be recorded twice.
• To help avoid this mistake, all values that were found on the PIH Financial Worksheet will be highlighted in Yellow. Those values that need to be added to the total value expenditures will be WHITE.

Any questions that come up should be directed to the CFO during the weekly meetings.

Existing Capital Data

The existing capital data will be collected on the “PIH Assets Register” spreadsheet in the folder “PIH Existing Capital”, which is under the “PIH Data Collection” folder in Dropbox.

The 2 main worksheets the team will fill out will be the “Fixed Asset Inventory File” worksheet, and the “Inventory Master File”. The “Fixed Asset Inventory File” documents all of the vehicles purchased before 2009, and are still used by PIH. The team will collaborate with the Operations Manager at IMB in Rwanda, as well as the Program Manager for Rwanda in the Boston Office to obtain the values of each vehicle.

The “Inventory Master File” documents all of the equipment and furniture purchased before 2009, and is still used by PIH. The file may be filtered so that only the equipment and furniture data are collected, along with any assets that are “active” and in “good” condition. The team will work with the IT office, the CFO, the Procurement office, and the Procurement office in Boston to obtain the values of each item.

A spreadsheet for buildings will be collected on the file “PIH Existing Capital Buildings” under the “PIH Existing Capital” folder, which is under the “PIH Data Collection” folder in Dropbox. The team will work with the Procurement office, as well as the Building specialist at PIH to obtain the data for existing buildings.

Any questions that come up should be directed to the CFO during the weekly meetings.

4.5 Tracking data collection progress

The Economic Research Coordinator will fill out the latest data collection progress form, under the “Data Collection Progress Forms” folder, under “20XX” in Dropbox every Friday, to update and keep track of data collection (see Appendix for template). The new file will be labeled “Data Collection Progress MM-DD-YY”.

How to report missing data?
• Data Officers will keep track of missing data on the “Missing Data for HC 20XX-20YY” spreadsheet in Dropbox, under the folder “Missing Data and Follow-ups”.
• Data Officers will follow-up with missing data from the health facilities, pharmacies, district offices, and PIH as needed.
• When missing data is no longer missing, the Data Officers will immediately update the information in the paper surveys, and note it in the spreadsheet. Data entry for missing data should be done soon after.
• The Research Coordinator should also make updates to the “Data Collection Progress” form in Dropbox to reflect the new changes.
CHAPTER 5 GUIDELINE AND INSTRUCTIONS FOR DATA ENTRY

5.1 Health Centers and Hospitals Database

I. General Guidelines and Instructions

- Open the FRONT END of the database containing the forms ONLY (should be located on your desktop or Dropbox). Example: “PHIT database SOLANGE.”

- Open each form in the database (Funding, Expenditures, Existing Capital) to enter data.

- Make sure you fill in ALL blanks. NO box should be left blank. If it is not applicable, or “zero”, put in “0.”

  a. Example: In Expenditures, under the “Infrastructure” tab, for vehicles, equipment, and furniture, there is no need to fill in the function name or meters squared. Instead, put a “0” under the item name and meters squared.

Note for Expenditure Capital Costs (under the “Infrastructure” tab):

Enter ALL data, even if the health facility did not purchase any new capital. For example, if the health center did not purchase any vehicles (2.1.1), enter “vehicles” under “Type of Capital” on the form, then enter “0” for all other field names. This will show that we remembered to ask the question about vehicles.

Example:

<table>
<thead>
<tr>
<th>Health Facility</th>
<th>Year</th>
<th>e2capitaltype</th>
<th>e2function</th>
<th>e2meter ssq</th>
<th>e2purchase price</th>
<th>e2usefulife</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Bukora</td>
<td>2009</td>
<td>vehicle</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(2) Bukora</td>
<td>2009</td>
<td>building</td>
<td>VCT</td>
<td>150</td>
<td>30000000</td>
<td>-99</td>
</tr>
<tr>
<td>(3) Bukora</td>
<td>2009</td>
<td>water/electricity</td>
<td>water tank</td>
<td>0</td>
<td>-99</td>
<td>-99</td>
</tr>
<tr>
<td>(4) Bukora</td>
<td>2009</td>
<td>furniture</td>
<td>0</td>
<td>0</td>
<td>400000</td>
<td>0</td>
</tr>
<tr>
<td>(5) Bukora</td>
<td>2009</td>
<td>equipment</td>
<td>0</td>
<td>0</td>
<td>600000</td>
<td>0</td>
</tr>
<tr>
<td>(6) Bukora</td>
<td>2009</td>
<td>other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(1) Shows that we asked about whether the HC purchased vehicles for the FY 2009, and none was purchased
(2) Shows that the HC purchased a building for VCT that was 150 square meters, and cost 30,000,000 RWF. Useful life is unknown, and we will have to estimate it later.
(3) Shows that the HC did purchase a water tank, but that the purchase price and useful life are unknown.
(4) Shows that the HC purchased furniture with a value of 400,000. No useful life is necessary, since the furniture was aggregated.
(5) Shows that the HC purchased equipment with a value of 600,000. No useful life is necessary, since the equipment was aggregated.
(6) Shows that we asked the HC about any other purchases, but that they had none.

- Please refer to the “In-kind and Capital Categories” document in the Appendix to fill in the correct categories in the in-kind, capital costs, or existing capital sections on the forms.
- All numbers should be in _ _ _ _ _ _ _ _ form, with NO commas. For example, put “400000”, NOT “400,000”.
- For buildings, for meters square, use a “.” Instead of a “,”
  - Example: put “48.75”, NOT “48,75”

II. Dealing with Missing Values

- If it is truly missing (we cannot find out the information from the health facility, hospitals, donors, pharmacies, or research), we put a “-8”.
  - Then, make a note of the missing data in the spreadsheet “Irresolvable Issues 20XX-20YY” in the “Missing Data and Follow ups” folder in Dropbox.
- If the information is missing from the health facility, but we can find out from other sources, such as donors, pharmacies, hospitals, we put a “-9”
- If the information is missing, and we need to estimate the costs or research the value of something, we put a “-99”
  - If the health facility gave a range of values, put a “-990”
    - Note: we may need to create a variable for the range, using upper bound/lower bound.

  **For ALL prices from data collected before November 2011 in Existing Capital, enter “-99”.

- After doing estimations, change missing values to the estimated values.
III. How to Enter Aggregate Values in Expenditures

- Put a “0” in each box that was aggregated, and then put the value of the aggregated sections under the “aggvalue” box.

  - Example: If 3.1, 3.2, and 2.3 were aggregated, put a “0” in 3.1, 3.2, and 3.3, and then put “300000” in “agg1value.” (See below)

<table>
<thead>
<tr>
<th>3.1 Drugs</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Other medical supplies</td>
<td>0</td>
</tr>
<tr>
<td>3.3 Lab supplies</td>
<td>0</td>
</tr>
<tr>
<td>3.4 Other costs related to meds</td>
<td>0</td>
</tr>
<tr>
<td>Any aggregate values in Section 3</td>
<td>3.1-3.3</td>
</tr>
<tr>
<td>Value of aggregate values</td>
<td>2629109</td>
</tr>
</tbody>
</table>

  - Example: If 2.2.7 and 4.4 were aggregated, put a “0” in 2.2.7 and 4.4, and then split the number, based on the health center’s estimations. That is, if the total value of 2.2.7 and 4.4 was 250000, but the health center estimated that 200000 was spent on 4.4, and 50000 was spent on 2.2.7, then put “0” in 2.2.7, and put “50000” in “agg2value,” and put “0” in 4.4 and “200000” in “agg4value.”

5.2 District Office Database

General Guidelines and Instructions

- One person at a time will fill in the data for the District Offices. Open the database in the “PHIT Databases” folder under “District Office Database” in Dropbox, and fill in each form (Funding, Expenditures, Existing Capital).
- Follow all procedures listed for the Health Centers and Hospitals above.
- When filling in “perusage”, or percent usage, please record the number in decimal form. Example: “20%” should be recorded as “.20”.

5.3 District Pharmacy Database

General Guidelines and Instructions
• One person at a time will fill in the data for the District Pharmacies. Open the database in the “PHIT Databases” folder under “District Pharmacy Database” in Dropbox, and fill in each form (Funding, Expenditures, Existing Capital).
• Follow all procedures listed for the Health Centers and Hospitals above.

5.4 Start-up Costs Database

General Guidelines and Instructions

• One person at a time will fill in the data for the Start-up costs for all health facilities. Open the database in the “PHIT Databases” folder under “Start-up Costs Database” in Dropbox, and fill in the form (Start-up Costs).
• Follow all procedures listed for the Health Centers and Hospitals above.

5.5 PIH Database

General Guidelines and Instructions

• One person at a time will fill in the data for the District Pharmacies. Open the database in the “PHIT Databases” folder under “PIH Database” in Dropbox, and fill in each form (Transfers to Health Centers, Program Expenditures, Special Programs, PHIT Start-up Costs, and Existing Capital).

• Be careful when entering data—there are spaces to enter values in both RWF and USD. If a section is only available in only one type of currency, please put “na” in the currency that has no value. (Please do not put a “zero”, if the data is not available. This will allow others to think that no money was spent).

• The funding in-kind form should only contain data that is NOT highlighted in yellow on the “PIH Funding in-kind” worksheet in Dropbox. This is to avoid recording the funding in-kind numbers twice, in the database.

• Data will be entered from the data collected sorted and collected electronically. All PIH data can be found under the folder “PIH Data Collection” in Dropbox.

5.6 Tracking data entry progress

• The Economic Research Coordinator will coordinate with the Data Officers to assign which health facilities to enter in the database.
• Data entering progress will be tracked on the whiteboard, and checked off when done.
• Data Officers may write which health facilities they have already entered in the binders where the finished surveys are kept, followed by their initials or name, and the date entered.
• Missing data entered will be kept track of in the “Missing data for HC 20XX-20YY” document in the “Missing Data and Follow-ups” folder in Dropbox.
CHAPTER 6 DATA CLEANING AND VALIDATION

6.1 General guidelines
Data cleaning will be done by the following people:

- Economic Research Coordinators
- Data Officers

Before cleaning the data, the data should be checked from the FRONT END (if in the Health Center and Hospital Database), and the FORMS (if in all other databases) by checking if there are any blank spaces in any of the records in the database.

Data will be cleaned and validated every 2 weeks manually at the Rwandan office:

1. Go to the BACK END of the Access database
   (`\192.168.2.254\IT_Desktop\economical\PHIT database - BACK END`)
   Start → type “run” in the search box and press enter → type in: `\192.168.2.254` and press enter → economical folder
   Note: only ONE person may open this to clean the data. Data must NOT be entered while data cleaning is taking place.

2. Data may be cleaned in 2 ways:
   - For the funding and expenditure tables, check every 5\textsuperscript{th} row of data all the way across, using the paper surveys as a cross-checking reference.
   - For each table, pick 2 variables that are important (example: funding total and global fund total from the funding table; or quantity and unit price in funding in-kind table), and check that the data is correct for ALL of the health centers in the database.

Choose ONE of these ways when data cleaning.

   - For the funding in-kind, expenditure capital costs, existing capital, expenditure transfers, and purchases from health centers tables, pick 5 random health centers and years to check all items in the tables (including item name, item quantity, and item price).

3. Enter what you have changed, and what you checked in the “Data Validation Spreadsheet” document in Dropbox.

6.2 Tracking the data cleaning
Data will be tracked through a shared spreadsheet, in the Dropbox, that indicates the date of cleaning, person who cleaned, what was changed/ fixed, and what they checked.
CHAPTER 7 DATA SECURITY AND STORAGE

7.1 Guideline on data security

- **All data and study related materials should be accessible only to the Economic Research Team:**
  - Economic Evaluation Lead
  - Economic Research Coordinators
  - Data Officers

- Accountants or other personnel at health facilities requesting a copy of the survey should be given the latest version in *hard copy* only. If necessary, a PDF version of the survey may be emailed. However, if the version of the survey sent changes between the time it was sent and the time of data collection, an email must be sent to the accountant with the new version of the survey attached, and a letter explaining what changes were made.

- Any other personnel other than those stated above requesting copies of the data or study related materials should be referred to the Economic Evaluation Lead for further assistance. *No materials should be shared with anyone outside the Economic Research Team, without first consulting the Economic Evaluation Lead.*

- Only finalized versions of study materials should be shared. If approved, a draft may be shared, but must be accompanied by a letter stating that the materials being sent are only in draft form, and that a finalized version will come later.

7.2 Filing and storing paper surveys

- All completed surveys will be put in binders, by district, year, and in alphabetical order, and stored on the shelves in the Economic Research Office.
- All incomplete surveys will be put in green folders by the name of the health facility in the drawers in the Economic Research Office.
- The office where the surveys are kept shall be locked during non work hours.
- Data should only be shared with those in the Research team until ready for publication or public reporting.

7.3 Securing Electronic Database

- The database that stores all of the electronic format of the data will only be shared among the computers in the Economic Research Team (*\IT_Desktop\economical*). Access this by going to Computer → Network → IT_Desktop → Economical). The System Administrator (IT) will have the password, if anything needs to be changed.
Data Officers may transfer information from the paper surveys to an electronic version of the surveys if there is time. These electronic versions will be stored in Dropbox ONLY.

### 7.4 Storing Data Electronically

1. All contents in the Dropbox containing material related to the study will be backed up on a hard drive in the Boston office weekly.

2. Everyone enters data on his/her OWN forms ON THEIR DESKTOP or in Dropbox (for Health Center and Hospital Database). For all other databases, one person will enter the data one at a time.

3. The LAST person to enter data that day, will go into the “economical” folder under IT_Desktop (access this by going to Start → Run → \192.168.2.254 → Economical), and COPY the file: “CLEAN PHIT database – BACK END” to the folder and sub-folder “PHIT\PHIT Database” in Dropbox. Always COPY and REPLACE.

4. Everyone should save a copy of his/her OWN forms in Dropbox as well! Save all forms under “PHIT\PHIT database” in Dropbox after each data entry session.

5. Anyone entering data in any of the other databases (District Office, District Pharmacy, Start-up Costs, and PIH) should always save the latest copy in Dropbox.

### 7.5 Procedures for editing database

Before editing a database, please consult the Economic Evaluation Lead and Research Coordinator first. Make a copy of the original database before making any changes.

Save the new database in the PHIT folder in Dropbox under “PHIT Databases” with the relevant name, and the date of the new database. (For example: “Start-up Costs Database_12-10-2011”. All data will be entered under the most recent version of the database.

#### Adding Questions (Fields)

1. First, delete or add the question on the relevant TABLE in the database. If making changes to the Health Center and Hospital Database, go to the BACK END to make changes in the table.

2. If applicable, make the new field a dropdown box.
3. Add the new field on the relevant form. If making changes to the Health Center and Hospital Database, be sure that ALL forms in the front end are the same.

4. If data has already been entered, be sure to go back to all current records and fill in data for the new field.

**Note:** *If a field needs to be deleted, please check with the Economic Evaluation Lead and Research Coordinator on the Boston side first.* Once a field is deleted, all data in that field are also deleted.

**Changing the Format of the Forms**

1. The layout of the forms may be changed as often as the Data Officers and Economic Research Coordinator feel is necessary. All information on the forms must reflect the latest tables and surveys. If forms are changed, it must be checked that all fields from the table are on the form.

2. If there are any changes in the format of the form (for example, if a field on the form is changed to a dropdown box, or from a text to a number), some data may be lost. *Please check with the Economic Evaluation Lead and Research Coordinator on the Boston side before changing any formats.* If the format needs to be changed, the team will need to go back to all current records and re-enter any data that might have been lost.
CHAPTER 8 ESTIMATING ECONOMIC COSTS

8.1 Estimating economic costs for labor, consumables, and overhead

The costs of providing health interventions can be divided into four categories: labor, capital (building and equipment, etc), consumables (medicine, etc) and overhead (maintenance, electricity, water, etc). For costs on labor, consumables, and overhead, we may follow traditional approach and use dollar values (financial costs) as their economic costs. We admit that financial cost do not necessarily reflect the economic value. Constrained by time and resources for costing project, we decide to take the traditional approach.

8.2 Estimating economic costs for capital goods, in-kind support, volunteers

For costs on capital goods, defined as inputs lasting for more than a year, such as building space, medical equipment, and vehicle, financial costs are not the same as the economic costs. For example, buildings and equipment are depreciated over time and could reach an account value zero to some time point. However, the economic value of the building cannot be zero. For this project, we need to estimate economic costs for the existing capitals in the base year and new capital during the intervention period. In addition, each year, health centers, hospitals, and pharmacies may receive in-kind support (such as medicines, bed-nets, computers, vehicles, etc) from donors. We need to calculate the dollar value for these items. In many health units, volunteers may come to help and their contribution should also be estimated in dollar values. To summarize, we need to conduct estimation of economic costs for (1) capital, (2) in-kind support, and (3) volunteers.

Estimating economic costs for capital goods

For those capita goods such as buildings or vehicles, find out whether the rental market exists. If it does, then the economic value will be the rent. For those capital goods without rental market, we will follow the WHO’s recommendations to estimate the costs using information such as quantity, market price, deflation rate, inflation rate, and annualized factors.

Estimating economic costs for donated goods and services

Goods: they can be valued at local market price if available. If local price is not available, we can find international price.

Volunteers: the cost of voluntary labor will be valued at the wage rate of health personnel who would normally be employed to do the same tasks.

Joint costs

When collecting cost data for important intervention activities, such as community health workers (CHWs), we need to consider the issue of joint cost. For example, we need to know about whether the resources used by CHWs activity are shared with activities. If yes, we need
to decide how to allocate the costs to CHWs. In general, personnel costs can be allocated on the basis of the proportion of time. Vehicle costs can be allocated according to the proportion of the total distance. Building costs can be allocated using the proportion of the spaced occupied by the CHWs.