

# Uganda Health Workforce Retention Study Manual

Created for the Health Workforce Advisory Board of the Uganda  
Ministry of Health  
&  
The Capacity Project

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In 2006, the Uganda Ministry of Health (MOH), in partnership with the Capacity Project, designed a study to help the MOH better understand the specific recruitment and retention factors for health workers in Uganda. The goal of the Uganda Health Worker Retention Study is to provide the Ministry of Health with data on the satisfaction level of health workers, their intent to leave or stay in their jobs, and the magnitude of health worker turnover in both the public and not-for-profit sectors so that they can develop specific policies to address worker retention and out-migration. This study will be replicated by the MOH to track the success of policy changes over time. It is also the MOH and the Capacity's Project intent to conduct this research in a way that builds the research capacity of individuals and institutions in Uganda.

This manual documents the process used to carry out the Uganda Health Worker Retention Study. The purpose of this manual is to document the processes and tools used to carry out the research, as well as to provide recommendations to guide the future implementation of similar studies by the Ministry of Health.

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## **Purpose of the Study**

Those who have researched health worker satisfaction in other settings have developed some generic factors associated with health worker satisfaction, and therefore associated with recruitment and retention. It is important, however, to test some of those concepts in the specific context of Uganda and refine the specific opportunities to maximize the potential of human resources for health in Uganda.

The purpose of this survey is to assess the factors related to retention of human resources in the health sector. The findings will help the Ministry of Health understand the factors associated with successful recruitment and retention of workers in the health sector.

We also hope to understand the magnitude of health worker turnover in both the public and not-for-profit sectors.

One important anticipated outcome from the wider retention project is to build the research capacity of Ugandan institutions. A deliberate attempt has been made to engage Ugandan academic and research institutions in the planning of this project and to select field data collectors and supervisors from their students, junior and senior lecturers, and other interested potential researchers.

## **Literature Review**

Health worker retention and migration are very important topics to the Uganda Ministry of Health and others concerned with public health in developing countries. In 2004, the Joint Learning Initiative published a report estimating that 1 million additional health workers are needed in sub-Saharan Africa alone - nearly triple the number currently working in the region.<sup>1</sup>

The WHO has since updated these data, and the outlook is even grimmer. According to the WHO, 36 of the 57 countries that are suffering from a serious shortage of health workers are in sub-Saharan Africa, and more than four million additional doctors, nurses, midwives, managers, and public health workers are needed to fill this gap. Countries with the highest relative need have the lowest number of health workers. The Africa region suffers from more than 24 percent of the global burden of health, but has access to only 3 percent of the world's healthworkers.<sup>2</sup> In contrast to the WHO's recommendation of at least one doctor per 5,000 people, ten African countries average one doctor per 30,000 or more people.<sup>3</sup> And, these statistics mask the rural/urban divide, as doctors congregate in urban areas leaving the rural areas even more underserved.<sup>4</sup>

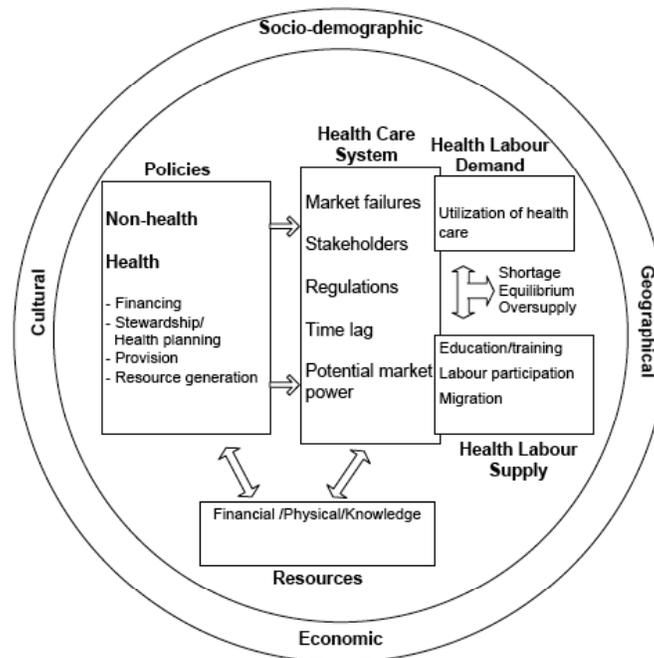
At the same time as low-income countries are struggling to train new health workers to fill the workforce gap in sub-Saharan Africa, countries are also struggling to retain the workers that they have already trained. Migration of health workers is often stepwise. Workers first migrate from rural areas to urban areas then out of the country.<sup>2</sup> In August of 2006, the Center for Global Development published a database representing the first systematic effort to collect information on the bilateral net flows of African-born physicians and nurses to nine important destination countries. According to this "brain drain" database, Uganda is 22<sup>nd</sup> on the list with 45 percent of its doctors working abroad.<sup>5</sup>

### Framework for Human Resources for Health

As Figure 1 displays, a shortage in the health labor pool is not caused by a single event, but instead impacted by multiple inter-related factors. Health policy, financial, physical, and knowledge resources, and the health system itself all interact with the supply and demand of health workers to create a shortage, equilibrium, or oversupply of health labor. All of these factors are also strongly influenced by the broad socio-demographic, economic, cultural, and geographic forces at work in the region of interest.

Health sector reforms are also believed to contribute to the health crisis in sub-Saharan Africa. Structural adjustment programs of the 1980's and 1990's forced reductions in public expenditures and affected essential public health services through the quest for efficiency, greater involvement of the private sector, and decentralization.<sup>7</sup>

**Figure 1: Framework for Human Resources for Health<sup>8</sup>**



This study, the Uganda Health Workforce Retention Study, aims to look at the health labor supply aspect of this framework, investigating the working conditions and motivating and demotivating factors that may be leading to labor participation and migration.

In 2005, the Capacity Project conducted a literature review of the documented factors that lead to high turnover in health jobs in low-resourced environments and of the strategies used by countries to retain health workers. This literature review, titled *Retention: health workforce issues and response actions in low-resource settings*, provided the framework on which the subsequent data collection tools were created. A copy of the paper is included in this manual under tools below. This literature review demonstrated a number of “push” and “pull” factors

that lead health workers to migrate or leave health work completely. These factors include social unrest/conflict, further professional training, low salary/benefits, poor working conditions, poor living conditions, lack of career opportunities, and other factors.<sup>6</sup>

By understanding these push and pull factors and how they apply to the Uganda workforce, the Ministry can develop new policies that positively impact the health labor supply in Uganda.

#### Tools

- [Capacity Project Resource Paper: Health Worker Retention](#)

### **Proposal**

The first step in the 2006 Retention Study was the writing of a written proposal outlining the purpose of the study, the research questions that the study would address, the data collection methods, and the proposed products of the study. This written proposal was used by the study managers to raise the necessary funds, secure the permissions, and plan the work for the retention study. A copy of this proposal is included below.

#### Tools

- [Copy of Study Proposal](#)

### **Research Approvals**

Permission to conduct research in Uganda must be obtained from the Uganda National Council for Science and Technology (UNCST) before the study can begin. As a part of this process, the study managers must show that they have sufficient mechanisms in place to protect the health workers that participate in this study is extremely important. The health workers are providing the research team with private information about their working conditions and job satisfaction, which could have adverse impacts on their jobs and therefore their family's source of livelihood.

The application for permission to conduct this study that was submitted to the UNCST is included in the tools below, as is the resulting approval letter.

#### Tools

- [Research Application Submitted to UNCST](#)
- [Approval Letter from UNCST](#)

### **Planning**

Conducting a study like the Health Workforce Retention Study takes considerable planning and logistics. This section of the manual describes the planning process and provides some tools and resources to help replicate the process in the future.

### ***Facility Selection***

In order to make the data collected representative of the country as a whole, a random sample method must be used to select the districts and the facilities participating in the study. In 2006 study, we used a random selection method called “Probability Proportional to Size” sampling to identify the nine districts where data would be collected. An in-depth description of this sampling method is included in the manual.

The study design dictated that we slightly oversample for “hard to reach/hard to retain” areas of the country. In order to do this, districts were first stratified to ensure that “hard to reach” areas were selected, and selection was weighted by population so the results would be generalisable to the nation.

“Hard to Reach” districts were defined by an algorithm developed by the Ministry of Health that included factors of security (50% of the score), distance from Kampala (10%), social amenities & utilities (10%) and proportion of the approved staff positions that were vacant (30%). The security factor was measured by the proportion of the population in a displaced persons camp. The social amenities factor was measured by the presence of a bank, grid electricity, tarmac road and tertiary educational institution. The districts of Gulu, Apac, and Moyo were rated “hard to reach,” while the districts of Kampala, Kabarole, Kibale, Mbarara, Nebbi and Mbale were not.

For a more in-depth description of the sampling method and the spreadsheet that was used to choose the actual districts participating in the study, see the two tools below.

### ***Tools***

- [Description of Sampling Method](#)
- [Spreadsheet of Facilities Chosen for 2006 Study](#)

### ***Facility Outreach***

Facilities that are chosen to participate in the study should be notified in advance of their participation. For the 2006 study, the Ministry of Health Human Resources Division sent a formal letter to the DDHS and to the Medical Superintendent introducing the project and encouraging them to assist the field team during their visit. Since exact field dates were not known until just prior to the visits, the letters gave the general timeframe for the study and informed facilities that they would be contacted by a team leader with more detailed information.

In the case of the private hospitals, study staff obtained letters from the appropriate medical bureaus in Kampala (Protestant, Catholic, or Muslim), which were also sent to the facilities and carried with the research team on their visits. A copy of the letter from the Catholic Medical Bureau to its participating facilities is included as a sample in this manual.

The team leader then followed up by phone with the DDHS and the facilities to be visited to make sure they had received the letter, to update them on the dates of the visit, and to help the facilities prepare for the team’s visit.

It was very important to make sure that research team members carried copies of the official letters with them on their field visits. It is also important for research team members to have the names and phone numbers of all those to whom letters were sent. In a couple of site visits during the 2006 study, letters had been overlooked and the field team would not have had access to the hospital staff without presenting an additional copy of the official letter.

In 2006, we only sent letters in advance to the facilities describing the project, which led to some challenges for the research team as district or hospital officials had not always received the letters in advance. The study team arrived at some facilities to find that hospital staff were not available for interviews due to conferences, trainings, or other scheduling conflicts.

In the future, the Study Managers should consider sending team leaders and/or MOH officials on advance visits to the districts participating in the study to meet with DDHS and hospital administration. These advance visits have the potential to improve study outcomes. Less time could be spent at the facility reaching health workers if a schedule for focus groups and administration of questionnaires was set up with hospital management prior to the visit.

There are also some potential negative effects to providing advance notice to hospital and district administrators. As one team leader in the 2006 study pointed out, some facilities may have had more time to prepare their staff or choose those that they wanted to participate in focus groups or interviews, which could potentially bias results towards those who are willing to provide positive feedback about the facility.

### Tools

- [Sample Letter to Facility from UCMB](#)

### **Research Team Selection**

One of the key aspects of this 2006 study's success was having an excellent team of health researchers to carry out the field research on the project. Research team members were recruited through the Health Workforce Advisory Board and the project partners. A letter was used to recruit potential members who were then screened by the In-Country Study Lead.

One of the keys to a successful project is having a good research team. Research Team members must have good communication skills and must be hard workers. Even the team leaders need to be interacting with the health workers to set up focus groups and administer questionnaires, so everyone on the team needs to have data collection skills and must be willing to work. The Study Team Managers should choose the research team members and team leaders carefully, by interviewing potential team members in advance and choosing the strongest to participate in the training for the project.

### Tools

- [Study Leadership Team](#)
- [Job Description for Supervisors](#)
- [Job Description for Research Team Members](#)

## Training

Providing comprehensive training for all research team members is very important to a quality end product. In the 2006 study, we provided three days of training for all research team members. Only those who completed all three days of training went on to participate in the study as research team members.

The training for research team members should include a day of pilot testing of both the questionnaires and the focus groups at a local hospital. This proved very valuable to both the research team members and the team leaders in preparing for the upcoming field visits. It also helped discover some problems with the instruments, which could then be fixed before the teams left on their first field visits.

Training topics included an overview of the purpose of the study, role playing and group administering of the various questionnaires used for data collection, an overview of focus groups including a role play and practice session, and data entry practice. The most important part of the training was a pilot test of the instruments at a local hospital. In 2006, we used Kibuli Muslim Hospital in Kampala as our pilot site. The research team administered the questionnaire and ran two practice focus groups during the visit. The

group then debriefed on what worked well and what was challenging about the instruments and the recruitment of participants. Adjustments were made to the instruments based on the feedback from the pilot testing session at Kibuli, and the new instruments were presented to the team for review on the last day of training. An agenda for the three days of training in 2006 is included in the tools below as a sample.

### Tools

- [Field Manual Template](#)
- [Agenda for Training](#)
- [Focus Group Presentation](#)
- [Focus Group Background](#)
- [Certificates of Completion](#)
- [Data Quality and Integrity Contract](#)
- [Evaluation of Training](#)
- [Team Leaders Packet](#)
- [Conducting a Pilot](#)

Host a get together for all research team members about halfway through the data collection to discuss project, troubleshoot issues, and discuss the findings from the project. This will help address any questions research team members have and help to build camaraderie and share best practices between teams.

## Data Collection

In the 2006 study, we used three primary methods for collecting data.

1. Questionnaires that were administered to three groups: those currently in health care positions in our selected hospitals (“Stayers”), those who voluntarily left an employer in the last year (“Leavers”), and two groups of managers—health district directors and facility administrators (“Managers”).

2. In-depth interviews with managers at the district and hospital level about health professionals who have left their employment since July 1, 2005.
3. At least three focus groups in each facility: one with nurses, one with physicians and clinical officers and one with allied health and pharmacy staff.

The Questionnaires for stayers, leavers and manager were designed in a simple way. The questionnaires can be administered either by interview with a research team member or the respondent can fill in the questionnaires, by themselves with guidance from the data collector.

Try to keep questions consistent between “stayers” and “leavers” questionnaire – since leavers are asked questions about their current facilities, their answers to those questions can be included in the analysis of current facilities, but only if the questions are the same. It will make it easier for data entry if the question numbers match up.

The majority of questions in the questionnaires are close ended. This means we have identified and listed the most likely responses to the questions. For the most part, all the interviewer or respondent has to do is check the choice among the answers listed. There are a few open-ended questions at the conclusion of the questionnaire. For these questions interviewers or respondents will have to write down the answer in the space provided.

“Stayers” Questionnaire – This is the most common questionnaire as it is used with all health workers unless they have voluntarily switched jobs in the last year.

“Leavers” Questionnaire – This questionnaire is for health workers who have voluntarily left an employer in the last year. This questionnaire will be used rarely during the facility visits, and in future studies I would not recommend using this questionnaire for the facility visits. We found very few “leavers” while at facilities, so it would simplify the process greatly to just use the one questionnaire for all health workers except managers.

“Managers” Questionnaire – This questionnaire should be used for the DDHS and other district management, as well as with the medical superintendent and the nursing manager.

The Chief Administrative Officer (CAO), Personnel Manager, and other district officials should be asked a set of open-ended questions about health staffing in the district. A copy of a sample questionnaire is included in this manual.

Some of the research teams used the “managers” survey for meetings with the CAO, Personnel Officer, and other district staff. We found that the managers survey was too detailed and not relevant for these interview, so this manual includes a set of questions appropriate for this level of district leadership.

### Instruments

- [2006 Final Stayers Questionnaire](#)
- [2006 Final Leavers Questionnaire](#)
- [2006 Final Managers Questionnaire](#)
- [Focus Group Discussion Guide](#)
- [DDHS Interview Guide](#)

- [District Leadership Interview Guide](#)
- [Facility Demographics Form](#)
- [Updated Version of Survey](#)

#### Consent Forms

- [Questionnaire](#)
- [Managers](#)
- [DDHS](#)
- [Focus Group](#)

#### Additional Tools

- [Flyer for Focus Groups to Post at Site](#)
- [Supply list for research teams](#)
- [Thank You Letter for Facilities Visited](#)
- [Sample Agenda for Mid-Point Meeting with Research Team](#)

A light snack and sodas or tea were provided to health workers participating in focus groups. Getting food for the focus groups on site was very difficult, so we found that it worked well to buy it from biscuits and candies from Kampala, and then bring those along with us to distribute at the focus groups. Health workers appreciated the treats from the city, especially in rural areas.

If possible, don't leave recruitment for focus groups up to the managers. Set a schedule for focus groups times, and then have the field team let the health workers they meet with know that schedule when they are administering questionnaires. This will help avoid letting supervisors hand pick participants they think will give positive answers.

Focus groups should be conducted in a room with a door and privacy so that the participants can speak freely without concerns about being heard by a supervisor.

## **Budget**

It takes considerable resources to carry out a study like this. Funds are needed for supplies, transport, per diem, stipends for team members and leaders, airtime, printing of materials, and to support the leadership on the project. A copy of the budget for the 2006 study is included below as an example of the expenses that can be expected for this study.

#### Tools

- [Copy of Final Budget](#)

## **Data Entry**

Both the quantitative data (questionnaires) and the qualitative data (focus group notes) had to be entered in order to prepare for data analysis and report writing. This process takes considerable time and resources.

### **Quantitative Data Entry**

In the 2006 study, we used a free data entry and analysis tool created by the Centers for Disease Control and Prevention (CDC) called “Epi Info” to enter the data from the questionnaires. Epi Info can be downloaded from the CDC website for free at <http://www.cdc.gov/EpiInfo>.

We created three separate Epi Info forms for data entry – one for the stayers questionnaire, one for the leavers questionnaire, and one for the managers questionnaire. These forms were built to look like the questionnaire and each section of the questionnaire was on a new page of the form. The purpose of using Epi Info was to make data entry easy for all participants, even those with limited experience doing data entry on a computer.

Because Epi Info is a free tool, CDC offers only very limited support and tutorials on its website. During the 2006 data entry process, we ran into a number of challenges creating forms and entering data with Epi Info, and no one on the research team had experience using the software. We finally found a staff member from WHO at the UVRI that was experienced with Epi Info, who was able to help us troubleshoot some of the problems. We strongly recommend that the Study Manager hire someone who has extensive experience with Epi Info to create the data entry forms and train the data entry staff if Epi Info is used again in the future. If no one with Epi Info experience is available, consider using Excel or another spreadsheet program to enter data.

We loaded the Epi Info forms on three laptop computers. Paid data entry staff entered the questionnaires exactly as they were filled out, including typing the open-ended text answers from the questionnaire word for word. Data entry of a single questionnaire took between four and ten minutes depending on the typing skills of the person doing data entry and the length of the responses to open-ended questions. All in all, the study team had three to four people doing data entry for three full weeks in order to enter all the questionnaires from the 2006 study.

### **Qualitative Data Entry**

All of the notes and the tapes from the focus groups also needed to be transcribed and typed for analysis. One research team member was in charge of typing up all the written notes from the focus group, which included typing in the demographics collected on participants from the sign-in sheets (Initials, Years at Facility, Cadre) and the information from the evaluations collected at the end of each focus group. A template for entering focus group notes is included in the tools below.

The tapes of each focus group were also transcribed. Professional staff from Makerere University who had experience transcribing tapes of focus groups and interviews were hired to complete the transcriptions. For the purposes of analysis, it was important for all transcriptions to be consistent. Instructions for consistent and accurate transcriptions are included in the tools below.

Since the data from this study belongs to the Ministry of Health, a data user agreement was created to facilitate decisions and permissions for others who request access to the data collected. This data user agreement is included in the tools.

Tools

- [Focus Group Template](#)
- [Instructions for Transcribing Focus Group Data](#)
- [Data User Agreement](#)

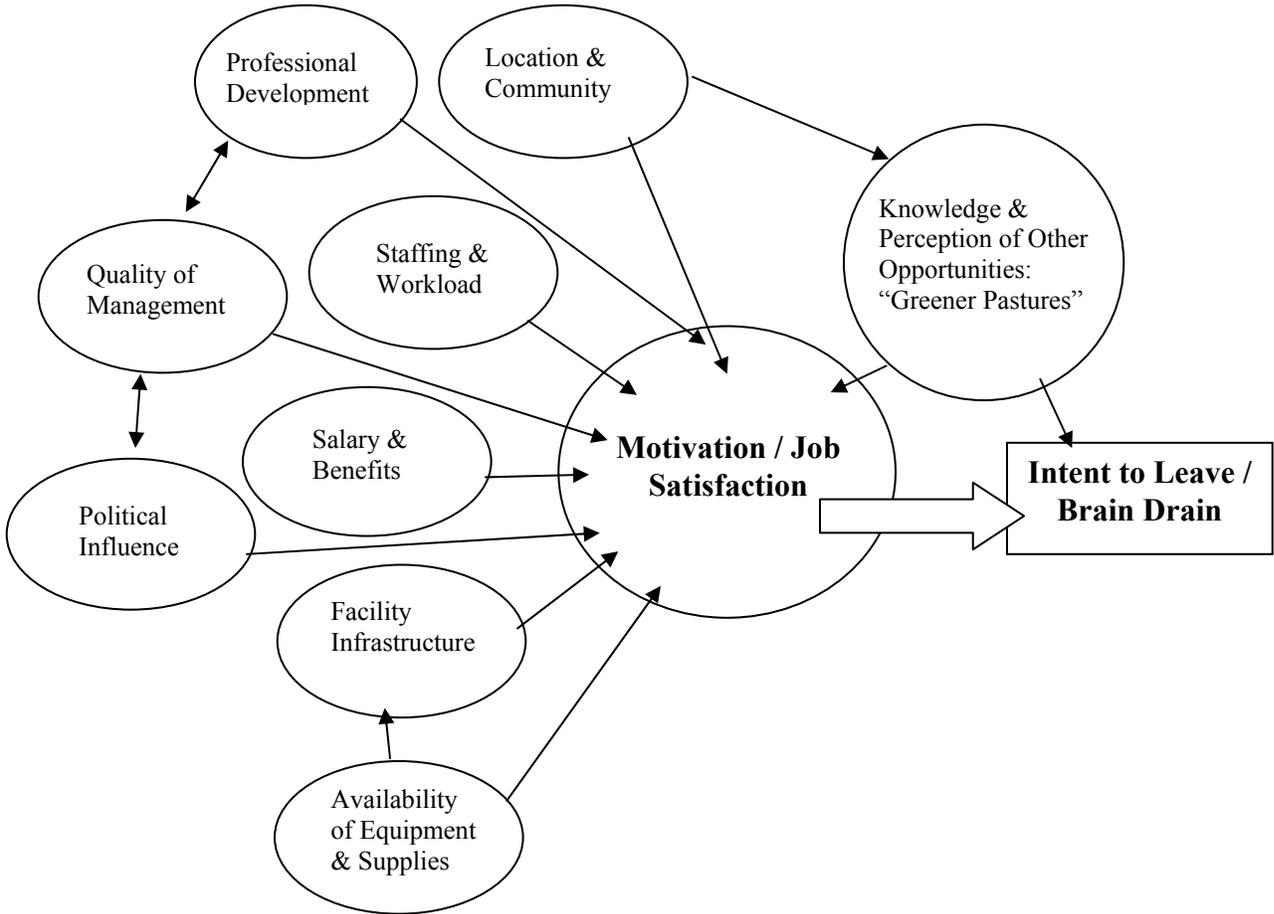
## **Overall Study Recommendations & Conclusions**

Although this study was titled the Uganda Health Workforce Retention Study, we discovered that the resources needed to look specifically at retention far surpassed the resources available for this research. In our facility visits, we met with those who were still in the health workforce. Although job satisfaction was often low among the health workers in our study and working conditions at the facilities were often lacking, these health workers were by default still in the health workforce. Very important information about the motivation, job satisfaction and working conditions of health workers in Uganda was collected, but data that would help the Ministry understand the decision-making process for health workers who leave the workforce have not yet been collected.

The underlying structure of this study assumed that there were a number of factors that influence a health worker's job satisfaction. Some of these factors are personal in nature (family location, location of birth, gender, personal mission or calling), while others have to do with working conditions, environmental issues, or financial issues. But, as we discovered in our research, job satisfaction alone does not seem to completely explain actual intent to leave a job. Other factors surrounding an individual's personal sense of agency, knowledge of other opportunities, and perception of those other opportunities all seem important in influencing final decision to leave a job.

Based on this analysis, a new conceptual model (Figure 2) was created which refines the push factors from the original Capacity Working Paper based on the themes that were most often raised in our data collection in 2006. This new conceptual model shows that the pull factors and their influence on a health worker are not necessarily linear in manner and are often interconnected. This model also shows that knowledge and perception of other opportunities (often called "greener pastures" by those participating in the study) does not just influence intent to leave or brain drain, but also impacts job satisfaction. This updated model is meant to also demonstrate that intent to leave a job is a complicated and non-linear decision for health workers in Uganda.

**Figure 2: An Updated Conceptual Model**



An important next step for this research is to further explore the hypothesis put forth in the model above that knowledge and perception of opportunities has a major influence, above and beyond job satisfaction, on intent to leave. This could be explored by doing in-depth interviews and questionnaires with health workers who have left the health workforce. The Ministry has provided a list of such health workers to the Capacity Project, and this next phase of research is already in discussion.

By using the Ministry of Health and Catholic Medical Bureau’s personnel files to track down people who have left the health workforce, the Ministry could collect very important information on what actually motivates someone to leave the health workforce or leave the country of Uganda. A systematic study with enough resources to track and interview a sample of health workers that the Ministry knows have left the work force could provide very important data to add to the current study findings.

Our study also found that there are many health workers who are not technically listed as leaving the workforce, but are no longer showing up for their jobs. Future studies should investigate this phenomenon in more detail, as there are many health workers who were reported as going on leave and never returning, especially in rural areas.

There are also those people who are no longer providing direct care and have moved into management or research positions. Understanding the factors that drove this change may also provide the Ministry with very important information.

As we discovered in this study, it is extremely challenging to make the link between retention and factors involving job satisfaction and working conditions. The Ministry of Health has made incredible strides through this very important body of research, but there is still more that could be done. Health workers make very complicated decisions about their jobs that take into account a multitude of factors. Truly understanding all these factors will take continued research using multiple approaches to reach both current and former health workers.

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