



LQAS Survey Report 2006



Household and Facility Survey on HIV/AIDS, Health and Education Interventions in 34 Ugandan Districts



Recommended citation:

Peter Kintu, Elizabeth Ekochu, Denis Businge, Samson Kironde (2007). *UPHOLD LQAS Survey Report 2006: Household and Facility Survey on HIV/AIDS, Health and Education Interventions in 34 Ugandan Districts.*



This report was made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of UPHOLD and do not necessarily reflect the views of USAID or the United States Government.

UPHOLD is implemented by JSI Research Institute Inc. with Funding from USAID under Cooperative Agreement number 617-A-00-02-00012-00 in Collaboration with the Education Development Centre (EDC), Costella Futures, The Malaria Consortium, The Manoff Group Inc. and World Education.

Table of Contents

List of Acronyms	iii
Acknowledgements	v
Foreword	vi
Highlights	1
Introduction	4
Program Design: UPHOLD's Conceptual Framework	4
Meeting Stakeholder Information Needs	4
Lot Quality Assurance Sampling (LQAS).....	5
Methods.....	5
Questionnaire Preparation.....	6
Training	6
Sampling	7
Sampling in Conflict Areas	8
Sample Size	8
Ethical Considerations.....	9
Data Analysis.....	9
Limitations to the LQAS survey	10
Results on HIV & AIDS Indicators	11
HIV Prevention and Mitigation	11
Misconceptions about HIV	12
HIV/AIDS Stigma	12
HIV Counseling and Testing.....	13
Prevention of Mother-to-Child Transmission (PMTCT) of HIV	16
HIV/AIDS Palliative Care	18
PIASCY	20
Results on Integrated Health Indicators	22
Integrated Child Health.....	22
Immunization	22
Diphtheria, Pertussis and Tetanus (DPT-HepB+Hib) Coverage.....	23
Measles Vaccination.....	24
Vitamin A Supplementation	24
Integrated Reproductive Health	25
Goal-Oriented Antenatal Care	25
Deliveries in Health Facilities.....	29
Malaria Prevention and Control	31
Home-Based Management of Fever.....	31
Insecticide Treated Mosquito Nets (ITNs)	32
Health Management Strengthening.....	33
Behavior Change Communication (BCC)	34
Integrated Primary School Education	36
Primary School Attendance	36
Community Involvement in Education (CIE)	37
Parents' Visitation to Schools and Participation in Meetings	37
Support to School Homework.....	38
Findings from the Education Facility Survey.....	39
Conclusions, Recommendations and Way Forward	44
Comparison of LQAS results with other studies	44
Key Conclusions.....	44
Lessons Learned	47
Challenges.....	47
Recommendations and the Way Forward	47
References	50
Appendices	51

Acronyms

ACT	Artemisinin-based Combination Therapy
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ASRH	Adolescent Sexual and Reproductive Health
BCC	Behavior Change Communication
CDO	Community Development Officer
CL	Cooperative Learning
CMD	Community Medical Distributor
CSO	Civil Society Organization
CIE	Community Involvement in Education
DDHS	District Directorate of Health Services
DHS	Demographic Household Survey
EMIS	Education Management Information System
EMS	Educational Management Strengthening
FP	Family Planning
GOU	Government of Uganda
HBMF	Home-Based Management of Fever
HIV	Human Immunodeficiency Virus
HC	Health Centre
HCT	HIV Counseling and Testing
HMIS	Health Management Information System
HSD	Health Sub-District
HW	Health Worker
IDP	Internally Displaced Person
IEC	Information Education and Communication
IPT	Intermittent Presumptive Treatment
JSI	JSI Research & Training Institute, Inc
LQAS	Lot Quality Assurance Sampling
LSS	Life Saving Skills
M&E	Monitoring and Evaluation

MOES	Ministry of Education and Sports
MOH	Ministry of Health
MOLG	Ministry of Local Government
MTCT	Maternal-To-Child Transmission (of HIV)
NGO	Nongovernmental Organization
PLWHA	People Living With HIV or AIDS
PMTCT	Prevention of Mother-To-Child Transmission (of HIV)
PTA	Parent Teacher Association
SC	Sub-County
SDP	Service Delivery Point
SHN	School Health and Nutrition
SMC	School Management Committee
STI	Sexually Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
TE	Teacher Effectiveness
UNICEF	United Nations Children’s Fund
UPE	Universal Primary Education
UPHOLD	Uganda Program for Human and Holistic Development
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
YSP	Yellow Star Program

Acknowledgements

The 2006 Lot Quality Assurance Sampling (LQAS) survey provides vital information for assessing progress in implementing HIV/AIDS, education, and health programs. It provides a good picture of areas in which program indicators are below-average coverage and therefore need to be prioritized for additional interventions. UPHOLD therefore acknowledges the contribution of various stakeholders who participated during the execution of this LQAS survey.

UPHOLD wishes to thank all Chief Administrative Officers of the 34 districts who assisted in identifying the appropriate district officials for the training and data collection and provided logistical support. We are grateful to the district officials from the departments of Planning, Education, Health and Community Development who executed the survey and the respondents in the communities, schools, and health facilities who spared their time to answer the multitude of questions.

This work would not be possible without the support of the United States Agency for International Development and the American people. Last but not least, we wish to acknowledge the input of the various stakeholders within and outside UPHOLD. Special thanks go to the Northern Uganda Malaria AIDS and Tuberculosis (NUMAT) Program which co-financed the execution of this LQAS survey in the nine northern districts.

Thank you all for your tremendous contribution.



Dr. Samson Kironde
Chief of Party, UPHOLD

Foreword

The Uganda Program for Human and Holistic Development (UPHOLD) tracks progress in achievement of key indicators in health, HIV/AIDS, and education services using the Lot Quality Assurance Sampling (LQAS) survey methodology. The first survey which gathered both household and facility-based data was conducted in 2004 and the results were used as a baseline for carrying out program interventions. In 2005, a follow-up survey collected information from households only, while the 2006 LQAS survey assessed program indicators at both household and facility levels. LQAS helps districts in evidence-based decisionmaking and annual planning since the results are disaggregated to lower units like counties and sub-counties. Due to the re-districting process during 2005/06, the number of UPHOLD-supported districts has increased from 20 in 2004 to 34 in 2006. The 2006 LQAS survey considered all new and old districts as independent entities.

This report outlines achievements at household and facility level by the districts together with UPHOLD and other partners in 34 districts of Uganda. The Northern Uganda Malaria, HIV/AIDS and Tuberculosis (NUMAT) Program, which partnered with UPHOLD in the implementation of the 2006 LQAS survey, supports six of them. The results therefore present NUMAT with baseline information in their six districts of operation.

The results of this survey will be used by UPHOLD, NUMAT, district local governments, as well as national partners to monitor the progress of program implementation and identify under-performing districts, counties, and sub-counties that require more inputs in education, health, and HIV/AIDS services.

We urge all district managers to disseminate these report findings to all stakeholders as soon as possible in order to facilitate timely decision-making for improved social services. We believe addressing the issues that arise from this report will make a difference in the lives of Ugandans.

Highlights

Overall, most of the indicators assessed in 2006 show significant improvements over the last three years as discussed in the different sections of this report. It should be noted, however, that some program indicators may not have been assessed in all the three surveys as program direction changed over the years.

Indicator	2004	2005	2006	notes
HEALTH				
Households with any mosquito bed net.		28.4%	38.7%	($p < 0.001$)
Households with a treated mosquito bed net.		23.4%	33.5%	($p < 0.001$)
Households with children under 5 years sleeping under a treated mosquito bed net the night prior to the survey.	11.7%	17.2%	26.8%	(χ^2 for trend=9.7, $p=0.002$)
Children under 5 years who had fever in the two weeks prior to the survey.	55.8%	53.4%	43.3%	(χ^2 for trend=31.2, $p < 0.001$)
Children who had had fever in the two weeks prior to the survey who received recommended malaria treatment within 24 hours.	30.7%	39.7%	76.6%	(χ^2 for trend=42.2, $p < 0.001$)
Children aged between 12-23 months who received DPT3 by 12 months.	50.8%	72.2%	84.3%	(χ^2 for trend=25.4, $p < 0.001$)
Vitamin A supplementation coverage for children aged 6-59 months.	79%	82%	91.0%	(χ^2 for trend=5.3, $p=0.021$)
Pregnant women who attended antenatal care (ANC) clinics at least four times during their last pregnancy.		48.3%	53.1%	($p < 0.001$)
Pregnant women who reported receiving IPT 1 and IPT 2 doses during their last pregnancy. (Indicator was not assessed in 2004 or 2005).			35.8%	
The proportion of women who reported giving birth from health facilities within the last two years.	41.0%	45.9%	50%	(χ^2 for trend=1.6, $p=0.202$).
Health providers in health units who received in-service training in the management of severe and complicated malaria within three years prior to the survey.			61.8%	

Health facilities that had at least two staff fully trained in managing malaria using Artemisinin-based combination therapy (ACT).			77.2%	
HIV and AIDS				
Knowledge on the three modes of HIV prevention (abstinence, being faithful and condom use) among adults above 15 years.	46.0%	48.0%	51.5%	(χ^2 for trend=0.7, $p=0.397$) There were no significant differences between males and females.
Proportion of adults who have ever tested and received their HIV results.	16.4%	18.7%	28.0%	(χ^2 for trend=4.3, $p=0.038$)
Proportion of households that had persons who had been terminally ill for a period of three or more months, or persons who died after being sick for three or more months.		21.2%	13.5%	($p<0.001$)
The proportion of households that reported having any orphaned children.		17.1%	12.7%	($p<0.001$)
The proportion of pregnant women who tested and received their HIV results for the prevention of mother-to-child transmission (PMTCT) of HIV.	11.0%	18.9%	26.0%	(χ^2 for trend=7.4, $p=0.007$)
There were no significant changes in the proportion of both men and women who knew that a mother can transmit HIV to her infant.				
Overall, of health facility staff had received in-service training for HIV counseling and testing (HCT) in the last three years.			76.8%	
Health facilities that had private space for the provision of HCT services.			65.1%	However, only one third of the facilities met the minimum HCT set of standards (trained counseling staff, private space and minimum laboratory facilities).
Education				
The proportion of primary school children aged 6-12 years attending school regularly increased (though not significantly).	76.9%	82.2%	85.6%	(χ^2 for trend=2.7, $p=0.101$)
The proportion of children who have never attended school.		13.3%	3.6%	($p<0.001$)
Slightly more than half of parents	33.9%	48.5%	52.8%	(χ^2 for trend=7.3, $p=0.007$).

reported their children bringing homework from school.				
There was no improvement in the proportion of parents or caretakers who assist their children in doing school homework.	70.1%	78.1%	69.6%	(χ^2 for trend=0.0, p=1.000).
Proportion of parents or caretakers who reported visiting their children's school to see the head teacher or other teachers about their children's learning.	63.0%	63.3%	64.0%	(χ^2 for trend=0.02, p=0.884).
There were no significant change in the schools that had separate latrines for boys and girls with of the schools.	85%		82.7%	(p=0.700)
Parents who talked to their children aged 6-12 years about HIV/AIDS.			18%	It was difficult to compare these indicators with the 2005 results because a bigger age group (under 15 years) was considered in the earlier survey.
Parents who had talked to their children about delaying sex.			16%	
Parents who had discussed safer sex practices with their children in the past three months.			14%	

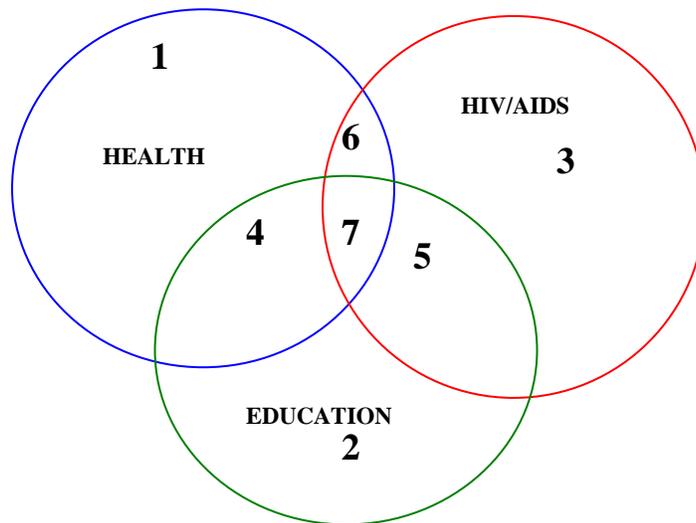
Introduction

Program Design: UPHOLD's Conceptual Framework

The Uganda Program for Human and Holistic Development (UPHOLD) is a USAID-funded program designed with the Government of Uganda (GoU) to strengthen human capacity through the delivery of improved services in education, health, and HIV/AIDS prevention and care in 34 districts of Uganda. UPHOLD's broad mandate includes supporting the achievement of a range of results in the following areas: improved use of social services; increased capacity to sustain social services, and a stronger enabling environment for social services delivery.

UPHOLD's activities are implemented in seven broad technical domains, as shown in Figure 1 below. Some of UPHOLD's technical activities are implemented strictly within one of the three sectors: Education (domain #1), health (domain #2), or HIV/AIDS (domain #3). Other technical activities are implemented through four areas of integration between the sectors: education/health (domain #4), education/HIV/AIDS (domain #5), health/HIV/AIDS (domain #6), and education/HIV/AIDS/health (domain #7).

Figure 1: UPHOLD's Seven Technical Domains



Meeting Stakeholder Information Needs

One of UPHOLD's major strategies is to increase the collection and utilization of information for decisionmaking among all its partners. To this effect, UPHOLD has a strong monitoring and evaluation system that utilizes, among others, the Lot Quality Assurance Sampling (LQAS) methodology to conduct an annual survey which tracks key results across the sectors to inform stakeholders on where and how to target interventions for better results. The quest for localized information at the district and

sub-district levels justified the introduction and adoption of LQAS as the main means of monitoring program performance. The major goal was to enhance staff skills and competencies at the district level in the use of evidence-based information for planning and decisionmaking, and to sustain a low-cost and rapid method of collecting information for monitoring and evaluation. A detailed discussion on the rationale for adopting LQAS and its significance to the districts and other stakeholders is included in the report of the baseline survey¹.

The 2006 annual LQAS survey was conducted between October and December 2006 in 37 districts, with support from the USAID-funded Northern Uganda Malaria, AIDS and Tuberculosis (NUMAT) Program in the conflict-affected Northern Uganda districts. Three of these districts are entirely supported by NUMAT while the rest are shared with UPHOLD. The 2006 survey, conducted in both households and facilities (primary schools and health facilities), was a follow up to the baseline and follow-up surveys conducted in 2004 and 2005. The household surveys measured and collected quantitative data on utilization of services and community social behaviors regarding community involvement in education, HIV/AIDS, reproductive and child health, whereas the facility surveys focused on the availability, accessibility and effectiveness of services in both health and education settings.

Lot Quality Assurance Sampling (LQAS)

The LQAS methodology involves the division of a program area into smaller management units or 'supervision areas' and for each area, assessing the level of performance compared to an established benchmark. A minimum of five supervision areas per unit are required to obtain an acceptable 95% confidence level using LQAS. Program area coverage is used as a benchmark or threshold against which supervision area coverage is measured. If the coverage of a supervision area is below the threshold, then it is considered a priority for a particular improvement or enhanced intervention. Details of the history and statistics behind the method have been discussed in UPHOLD's 2004 LQAS survey and elsewhere². As in the other surveys, the existing lower-level administrative structures such as counties or sub-counties were used as supervision areas and the districts as program areas or 'supervision units.'

Methods

The methods and training used in implementing this survey are similar to those applied in the 2004 baseline survey and are discussed in detail in the baseline survey report.

¹ Joseph Mbirizi, Nosa Orobato, Patricia David, Xavier Nsabagasani. UPHOLD LQAS Survey Report 2004: Results from 20 Districts of Uganda. August 2004.

² Lemeshow S, Taber S. Lot quality assurance sampling: single and double-sampling plans. World Health Statistics Quarterly 44, 115-132

Questionnaire Preparation

As with the 2004 and 2005 LQAS surveys, the questionnaires used for the 2006 survey were based on the program indicators and intervention areas of interest for the GoU, local governments, UPHOLD and NUMAT. Consideration was given to the local governments' reporting requirements, and indicators useful for comparison with routinely collected service statistics. The questions were structured according to the standard questions used internationally to measure the chosen indicators. The questionnaires were pre-tested in Mukono District (a non-UPHOLD-supported district) and thereafter revised accordingly.

A set of two facility (primary school and health facility) and five household questionnaires was designed to collect data on the prescribed program indicators. The facility survey focused on the availability, accessibility, and effectiveness of services in both health and education settings. The main respondents for the facility survey included in-charges or heads of departments in Health Centers III, IV, and hospitals and head teachers or their deputies in primary schools.

The household survey explored the current levels of population knowledge, use of services, and behaviors in the community. The household questionnaires were designed for mothers with children under two years of age, parents/caretakers with children aged 24 to 59 months, parents/caretakers with children aged 5 to 14 years (inclusive), women aged 15 to 49 years, and men aged 15 to 54 years. To ensure comparability across groups, each household questionnaire contained some common blocks of questions, such as the household listing and personal identification data. In addition, each questionnaire included some specific questions relevant to the target group. For instance, questions on birth preparedness as well as maternal and newborn health were posed only to mothers with children aged less than two years.

Training

District authorities selected officials from their departments of planning, health, education, and community development to participate in the LQAS 2006 survey. The selected officials who had not participated in a LQAS survey before were trained in the entire LQAS methodology for the initial four days, and together with those officials trained in 2005, household and facility survey questionnaires were reviewed and pre-tested for another four days in communities neighboring the training venues. Modifications were made—especially on the interview approach and guidelines.



Survey coordinator takes North-Eastern LOAS trainees through the questionnaires, Soroti District



North-Eastern Region participants in a field practical training session (selecting households) with the Local Council Official, Soroti District

A total of 306 district officials were trained and of these, 45% had been trained during 2005. It should be noted that the low retention rate is due to the new districts that have been created since 2004 and since each district was taken as an independent entity, more new district officials had to be selected for the training to enable them to conduct the survey in their districts. For the 2005 exercise which was based on the original 20 districts, there was a 97% retention rate among those who participated in the exercise in 2004—meaning that experience in the LQAS methodology and capacity at the district level had been built and the costs of the annual surveys was further lowered.



Western Region participants practising tabulation of data using LOAS methodology, Mbarara District



Central Region participants in a group discussion on interviewing techniques, Kawempe District

Sampling

Each district was considered an independent 'supervision unit' and divided into five supervision areas. The considerations for this division included population size and geography. A two-stage sampling plan first randomly selected 19 villages per supervision area by use of proportionate to size sampling. The second step randomly selected a household within each village. This step involved using the village/Local Council I household listings or registers that are periodically updated when in or out-migration and movement within the villages take place. These are the most up-to-date household lists, and in cases where one was not available, the interviewer compiled a

list together with the village leader(s) based on a village map. Interview locations for the household survey were therefore selected using the updated household listings obtained from local authorities.

For the facility surveys, an inventory of all schools in the 37 districts was obtained from the Ministry of Education and Sports. Sampling of schools in the district was derived by supervision area and a census of schools was done in some districts which had supervision areas with schools less than 19. The same principle of “a sample of 19” was followed through in the selection of schools from supervision areas which had more than 19 schools. The health facility inventory from the Ministry of Health was also utilized and only health facility levels III, IV, and hospitals were assessed during this survey because they offer most of the services that were considered relevant to provide the status on the program indicators. There was no single district with a supervision area which had more than 19 health facilities of this level (hospitals, Health Centre III and IV) and therefore a census of these defined health facilities was done across all the 37 districts.

Sampling in Conflict Areas

With respect to LQAS activities in displaced populations such as those living in internally displaced people’s (IDP) camps in the northern part of Uganda, every effort was made to preserve the principle of a county or sub-county as the ‘supervision area.’ Local authorities were consulted and it was found out that in the IDP camps, locations of residents from a displaced village were documented and well-known. The displaced residents of a randomly sampled village in a supervision area were tracked to the camps. Thereafter, households were followed-up in the respective camps that had been sampled for interviews. Military clearance and security protection services were provided for data-collection personnel during the survey.

Sample Size

Household and facility data was collected from 37 districts of the country, including 34 which are UPHOLD-supported and three exclusively NUMAT-supported districts (Pader, Oyam and Apac).

Overall, the survey involved a sample of 17,574³ individual households with 17,574 individual index and target respondents (16,150 from UPHOLD-supported and 1,424 from exclusively NUMAT supported districts).

³ In Apac District, one island (Kitgum Sudd) on Lake Kyoga did not have any household with a child aged 5-14 years so the questionnaire was not administered. It is a government policy to keep all school-going children on the mainland since there are no school facilities on this floating island.

Ethical Considerations

Informed Consent

Every respondent had the right to refuse the interview, or to refuse to answer specific survey questions. In this survey, the interviewers respected this right and verbally administered informed consent before conducting the interview.

Privacy

For increased validity and to assure respondents' privacy, it was important that the interview with each respondent be conducted in a manner that was comfortable for them, and in which they were able to speak openly and honestly. Therefore, all interviews were conducted within the respondent's home and in a private area. Interviewers assured that no other adult man, woman or older child was present or able to hear details of the interview. Younger children in some instances were allowed to be present during the interview. If the respondent indicated that she or he was uncomfortable holding the interview at home, the interview was then done at another location of the interviewee's preference.



A household interview with the mother of a child under two years in Mubende District.



An interview with a health worker in one of the health facilities in Wakiso District.

Data Analysis

Data analysis focused on assessing coverage levels for the different program indicators and comparisons with the two past LQAS surveys. Proportions were computed to determine the status of each indicator and statistical tests (z-test, chi-square for trend) were applied to assess whether the resultant changes were significant at the 5% level. Desegregation by district, respondent's age and sex, and other key variables was done to some extent to understand the possible factors behind the variations. The *Stata* statistical software was used to compute the proportions and significance levels.

Limitations to the LQAS survey

Unlike other stratified sampling methods, LQAS allows programs to identify areas with levels of coverage that are at or above the expectation versus those that are below the expectation. When a program divides the target population into socioeconomic characteristics such as ethnicity, religion, or socioeconomic status, it is acknowledging that there might be certain confounders (external factors) that affect the desired outcomes⁴. However, those factors are not very responsive to short-term interventions. More specifically, it is very hard to change long-standing and deeply rooted cultural or religious practices within a five-year period and demonstrate effectiveness. Instead, dividing the catchment area into lots or supervision areas and determining whether coverage in each subdivision is at or above, or below desired expectation helps the program to re-allocate resources accordingly and scale up activities in order to demonstrate overall effectiveness. Therefore, *interpretation of the results in this survey should take into consideration that likely confounding factors may not have been controlled for.*

Furthermore, demonstrating a change in behavior or practices due to a rare consequence or in a small population group requires a big sample size. Given the small size of the sample used in the LQAS survey, it might not be possible to demonstrate changes in certain indicators, for instance, the proportion of babies aged zero to three months who are exclusively breastfed. In this case, such indicators are excluded from the survey.

⁴ Eric Sarrot, Peter Winch, William M Weiss, Jennifer Wagman. *Methodology and sampling issues for KPC surveys*, 1999.

Results on HIV and AIDS Indicators

Since 2003, UPHOLD has been supporting the delivery of quality HIV and AIDS services and promoting effective use of these services. The core areas supported include: counseling and testing for HIV; prevention of mother-to-child transmission (PMTCT) of HIV; facility and home-based palliative care, including prevention and treatment of tuberculosis; support to orphans and vulnerable children (OVC); as well as HIV prevention through behavior change programs focusing on promotion of abstinence, being faithful, or other prevention methods. These interventions have been implemented through grants to district local governments and civil society organizations as well as direct technical support to the districts.

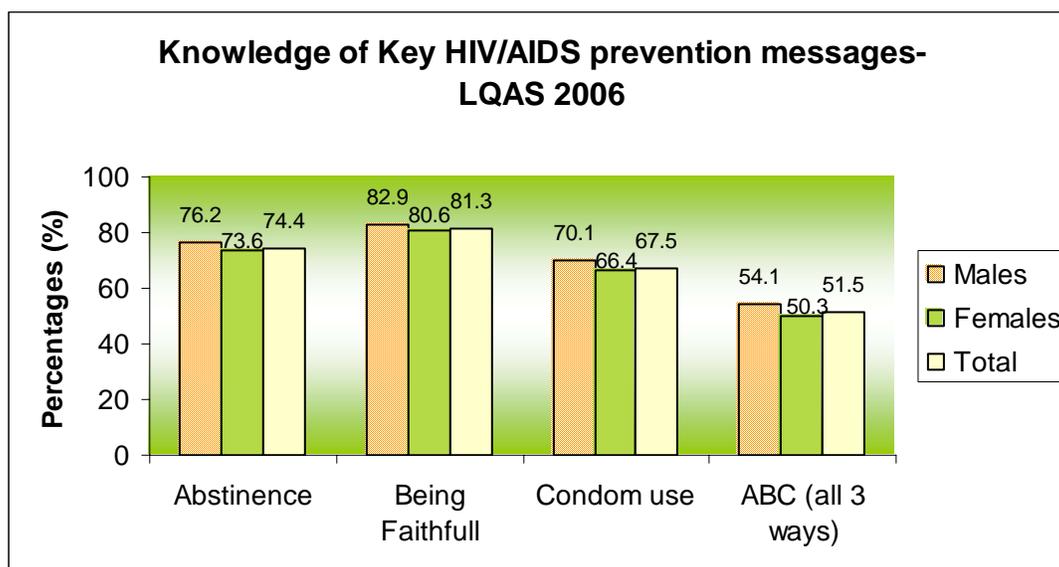
HIV Prevention and Mitigation

Abstaining from sexual activity, mutual faithfulness and condom use are three behaviors that can prevent or reduce the likelihood of sexual transmission of HIV. These behaviors are often included together under a comprehensive “ABC” approach—A for abstinence (or delayed sexual initiation among youth), B for being faithful (or reducing one’s number of sexual partners), and C for correct and consistent condom use, especially for casual sexual activity and other high-risk situations.

Adult men and women aged 15 years and above were interviewed on several aspects of HIV prevention and mitigation. The survey established current levels of knowledge of the three programmatically recognized ways to avoid contracting HIV: abstaining from sex, limiting the number of sexual partners, and using condoms.

There has been an increase (though not significant) in the proportion of adults who correctly mentioned the three major ways of preventing HIV transmission since the baseline study in 2004 was done. In 2006, 51.5% (n=16,150) reported knowing all the three major ways, compared to 48% (n=2,394) in 2005 and 46% (n=1,828) in the 2004 baseline study (χ^2 for trend=0.7, $p=0.397$). In 2006, knowledge of the three major ways of HIV prevention was higher among men (54.1%, n=4,766) than in women (50.3%, n=11,325) as it was in previous years. The slight improvement in HIV prevention knowledge could be partly attributed to the behavior change communication (BCC) interventions promoted by the Ministry of Health and districts with support from UPHOLD. However, this improvement could have been more significant if there was less fatigue in communities receiving HIV messages. The BCC interventions included sensitization and mobilization of the communities for HIV and AIDS services using music, dance and drama, accompanied with community dialogue and radio listening clubs.

Figure 2: Knowledge of key HIV prevention messages



Results from the survey as shown in **Figure 2** suggest that the most common preventive measure known by people over 15 years old was being faithful to their partners (81.3%) followed by abstinence (74.4%).

Misconceptions about HIV

Belief in some wrong modes of HIV transmission has decreased over the last two years. In 2005, about 16.1% (n=805) of the adult respondents believed that one can get the virus because of witchcraft or other supernatural means compared to 13.6% (n=16,150) in 2006. There were, however, no significant gender differences as 13.1% of males and 13.8% of females believed that witchcraft or other supernatural means was a possible HIV transmission route ($p=0.333$). There were almost no changes in some other indicators on misconception. For instance, 15.0% (n=743) of adults in 2005 compared to 15.8% (n=16,150) in 2006 believed that HIV was spread through sharing food with an infected person.

Although no significant changes were observed on the belief that HIV can be transmitted through mosquito bites, this remains the worst misconception in the communities. In 2006, nearly a third (31.6%, n=16,150) of the adult respondents compared to 30.9% (n=1,544) in 2005 believed that people can get the HIV virus from mosquito bites.

HIV/AIDS Stigma

Respondents were asked whether they would be able to disclose HIV sero-status of their family members if they were HIV-positive. Four in ten (41.9%, n=16,150) respondents preferred not to disclose. However, 88.6% of these same respondents answered that they would be willing to care for an AIDS patient in their family. These results show that care attitudes towards AIDS patients have improved in the

communities. Another one third of the respondents, however, reported that they would not buy vegetables from a shopkeeper or vendor if they knew of their (vendor's) HIV-positive status, most probably because they believed they would contract the virus. There is still a big stigma problem regarding discussing the cause of ailment in the patients with other community members and this might deter sharing information on available care and treatment options.

HIV Counseling and Testing

Respondents were asked whether they knew where HIV testing services were offered in their respective areas and whether they had undergone an HIV test and received their results. **Table 1** presents the HIV counseling and testing patterns among adult respondents in the 34 districts.

Characteristics	Females						Males					
	Know where testing services are offered		Have ever tested		Have ever tested and received HIV results		Know where testing services are offered		Have ever tested		Have ever tested and received HIV results	
	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
Age in Years												
15-24	435 60.8%	2,174 71.5%	168 23.5%	1,042 34.3%	136 19.0%	927 31.1%	273 67.1%	464 78%	75 18.4%	172 28.9%	56 13.8%	153 26.2%
25-35	623 67.7%	3,440 72.5%	245 26.6%	1,615 34.0%	207 22.5%	1,455 31.4%	610 71.4%	1,227 77.5%	217 25.4%	463 29.3%	185 21.6%	422 27.1%
36+	497 58.0%	2,288 69.1%	160 18.7%	974 29.4%	117 13.7%	3,239 26.6%	879 71.1%	1,832 74.6%	286 23.1%	672 27.4%	232 18.8%	592 24.8%
Region												
Central	340 66.8%	1,871 79.3%	129 25.3%	866 37.3%	102 20.0%	788 34.7%	369 72.6%	780 81.8%	123 24.2%	280 30.2%	110 21.7%	260 28.8%
Eastern	290 48.0%	1,145 55.8%	96 15.9%	468 23.5%	71 11.8%	408 21.1%	378 62.1%	513 64.5%	134 22.0%	190 24.7%	106 17.4%	163 21.8%
Western	483 73.6%	2,103 80.6%	154 23.5%	942 36.9%	129 19.7%	856 33.9%	506 77.1%	958 82.6%	125 19.1%	301 26.6%	98 14.9%	269 24.2%
Northern	442 61.1%	2,947 68.5%	194 26.8%	1,355 32.0%	158 21.8%	1,187 28.9%	509 70.2%	1,372 73.9%	196 27.0%	536 29.7%	159 21.9%	475 26.9%
Totals (15+)	1555 62.4%	7,902 71.2%	573 23%	3,631 32.7%	460 18.5%	3,239 29.9%	1,762 70.5%	3,523 76.0%	578 23.1%	1,307 28.2%	473 18.9%	1,167 25.7%

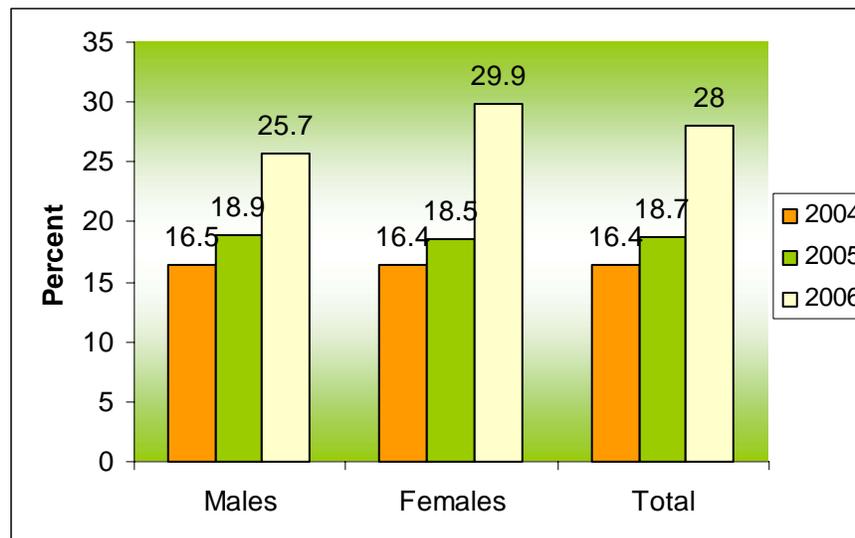
Overall, knowledge on where testing services are offered was reported by 72.6% (n=16,150) of respondents. This was significantly higher than in the previous years

where it was reported by 66.5% and 58.0% of the respondents in 2005 and 2004 respectively (χ^2 for trend=5.0, $p=0.025$). Knowledge was also significantly higher ($p<0.001$) in males (76%, $n=4,766$) than in females (71.2%, $n=11,325$), highest in the districts of Mbarara (89.1%), Kyenjojo (87.6%), Luwero (85.9%) and lowest in Budaka (43.6%), Nakapiripirit (53.9%) and Pallisa (55.2%).

Significant decreases ($p<0.001$) were reported during LQAS 2006 as 56.5% of the respondents were reported to have asked for the HIV test themselves compared to 63.7% in 2005. Other respondents (27.4%) in 2006 mentioned being offered an HIV test by health providers and though not significant, this finding was lower than the 2005 results of 29.7%. Regarding actual testing, there was an increase (though not significant) over the last two years in the proportion of adult respondents who reported to have taken an HIV test from 20% ($n=795$) during the baseline survey of 2004 to 23.1% ($n=1,151$) in 2005 and 31.4% ($n=16,150$) in 2006 (χ^2 for trend=3.3, $p=0.072$).

Similarly, among those who tested and received their HIV test results, there was a significant increase in the reported proportions between baseline and follow up household surveys. In the 2004 baseline survey, 16.4% ($n=653$) of adult individuals were reported to have taken HIV tests and received their results. This increased to 18.7% ($n=933$) in 2005 and 28.0% ($n=15,726$) in 2006 (χ^2 for trend=4.3, $p=0.038$). Additionally, there were significant increases in the proportion of men and women who reported having taken an HIV test and received their results. As in the previous year, HIV testing is still higher in adults in the age range of 24-35 years and in females.

Figure 3: Proportion of adults testing and receiving results



UPHOLD support to HIV/AIDS interventions has been targeted to 12 districts in which the former AIDS Integrated Model District Program (AIM) was not supporting. The support has been in form of local government and CSO grants in the intervention areas outlined above. The 2006 LQAS survey results on the proportion of adult respondents

who tested and received their results show significant increases in Wakiso (44.0%), Gulu (42.1%) and Mbarara (39.0%). These results are attributable to CSO grant activities in these districts, notably *StraightTalk* Foundation, Kisubi Mission Hospital and AIC. The lowest coverage was noted in the districts of Budaka (10.1%) and Mubende (15.2%), both former AIM districts which may have not been able to sustain outreach HCT activities after AIM support ended. Bushenyi, however, is an exception because despite being a former AIM district, the proportion testing and receiving results has remained high (55.4%)—and even increased significantly—probably due to intervention by ICOBI, a CSO which has established home-based HCT with CDC-support. Notably, although the district of Nakapiripirit was supported with HIV grants, coverage for HIV counseling and testing services remained poor with only 15% of respondents reporting that they had been tested and received the results. This may be due to the unique setting of the district which has mobile pastoral communities and the low level of development of the health system.

Of those who reported ever taking an HIV test, only 9.3% (n=473) had never received their test results. UPHOLD's support to the Ministry of Health in increasing the number of HIV/AIDS service outlets through refurbishment/upgrading of existing facilities and facilitation of community outreach has contributed to the increase in the accessibility of HIV testing services. Nearly two-thirds of the health facilities surveyed were found to conduct HCT in private rooms, while 73% of the facilities had the capability for routine HIV testing for pregnant women. The biggest shortcoming is the opt-in approach, where the client must request to be tested (i.e., voluntary testing), and this contributes to fewer people being tested and receiving results. This is evident from the survey findings whereby respondents who took the HIV test were asked whether they had been offered the test or they had to request it.

Health facility staff who are responsible for providing specific services were asked various questions on service provision, effectiveness, and availability. Overall, 76.7% (n=313) of health facility staff had received in-service training for HCT in the last three years and 65.1% (n=329) of the health facilities were found to have private space for HCT services. When health facility staff were asked whether post-test counseling sessions were held on a one-on-one basis, 89.8% (n= 304) of the health facilities were found to have this practice. The majority (87.3%, n= 393) of the health facilities reported counseling HIV-positive clients on TB treatment and 40.2% (n=328) of the health facilities reported having an HIV post-test club.

Though there has been a significant improvement in the number of individuals turning up for HCT, the numbers of those ever tested still remains low partly because stock-outs for HIV-test kits remain a considerable drawback. This is evidenced by the finding that half of the surveyed health facilities (n=396) had experienced stock-outs for HIV test kits in the three months prior to the survey. *Generally, the positive trend in HCT indicators can be attributed to the increase in counseling and testing sites from 47 in 2004 to 683 in 2006 and mobilization of communities to use these services.*

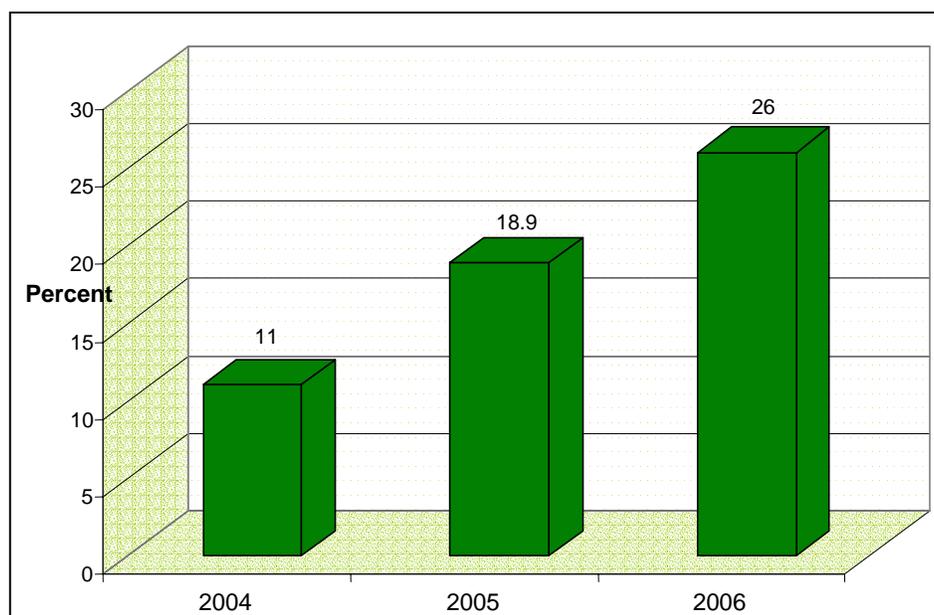
Prevention of Mother-to-Child Transmission (PMTCT) of HIV

Respondents (15 years and above) were asked about their knowledge of mother-to-child transmission of HIV (MTCT) and at which stages of child development it could be avoided. The majority of respondents (91.2%, n=16,150) knew that it was possible for a child to get HIV from its mother. When more analysis was done, 42.4% were found to know all the three ways MTCT and overall, there was no significant difference between sexes as 91.1% (11,323) women and 91.4% (4,768) of men were found knowledgeable about any mode of transmission of HIV from mother-to-child.

When asked about specific ways through which MTCT can occur, 54.8% (n=4,766) of the men compared to 56.5% (n=11,325) of the women interviewed knew that MTCT is possible through pregnancy while 84% of the men compared to 83.2% of the women mentioned delivery and 66.7% of men compared to 69.8% of women mentioned MTCT through breast milk. Females (69.8%) were more knowledgeable about MTCT through breast milk than males (66.7%), with $p < 0.001$.

Among mothers attending antenatal care (ANC) whose pregnancy and birth took place in the 24 months preceding the survey, 36% (n=1,253) reported being offered an HIV test by health providers and 29.9% (n=1,253) reported taking an HIV test as part of ANC. **Figure 4** shows a significant increase from 18.9% in 2005 to 26% in 2006 in the proportion of mothers who tested and received their HIV results during ANC. These findings represent a highly significant trend (χ^2 for trend=7.4, $p < 0.007$) when a comparison is done with the 2004 baseline whose results reported this indicator at 11% (n=219).

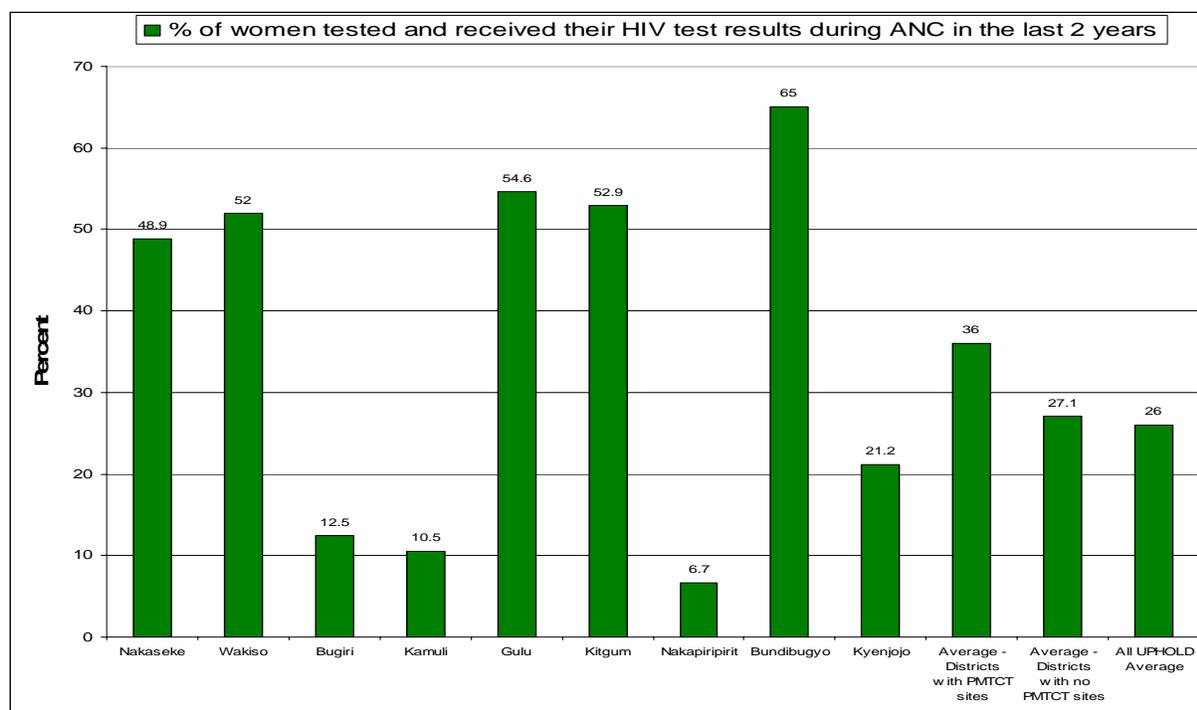
Figure 4: Proportion of pregnant women who tested and received HIV results in PMTCT settings



As in the previous years, the 2006 LQAS findings revealed that Bundibugyo District⁵ still had the highest proportion (65%) of pregnant women who had tested and received their HIV results in the two years preceding the survey, followed by Wakiso (52%) and Mbarara (50%). Among the poorly performing districts last year, improvement was reported for Pallisa whose coverage increased from 6.5% to 11.1%, while Bugiri more than doubled coverage from 4.9% to 12.5% and Nakapiripirit reported a non-significant improvement from 6.5% to 6.7%. The newly formed Kiruhura District reported the lowest coverage results of 4.9% followed by Mubende⁶ at 6.4% regarding the proportion of pregnant women testing and receiving their HIV test results during ANC visits. The increase in pregnant women testing and receiving HIV results especially in Bundibugyo and other districts could probably be attributed to the continuing PMTCT grants awarded to local governments and CSOs to promote social transformation and improve access to social services at both facility and community level.

It should be noted that UPHOLD directly supports 55 PMTCT sites (both local government and CSO sites) distributed across nine districts. These districts were compared with those where no such support had been extended. **Figure 5** shows that districts with UPHOLD-supported PMTCT sites performed better with an average of 36% compared to a national average of 26% and this is directly attributed to the community mobilization, training of health workers and improvements in the delivery of PMTCT services supported by UPHOLD.

Figure 5: Comparison of districts with and without PMTCT-supported sites



⁵ In 2005, LQAS results revealed that Bundibugyo district had the highest coverage (44.2%) of pregnant women tested and who received results in the last one year preceding the survey followed by Bushenyi (40%), Wakiso (34.7%), and Rakai (30.3%). Pallisa (4.8%), Bugiri (4.9%), and Nakapiripirit (8.2%) had the lowest coverage.

⁶ The current Mubende district covers an area which excludes the new break-away district of Mityana.

Similar to the 2005 results, there was an association between HIV testing during antenatal care and delivery at health facility. A border-line significant increase ($p=0.047$) from 63.5% (n=181) in 2005 to 68.9% (n=815) in the follow up year was observed in the proportion of women who tested and received their HIV test results during antenatal care and thereafter delivered at a health facility. Despite pregnant women attending antenatal care in health facilities and thereafter being tested for HIV and receiving their results, one quarter (25.4%) still delivered in their own or other person's home and 5.5% delivered at a traditional birth attendant's home.

From the facility survey, nearly three quarters of the health facilities revealed that pregnant women were routinely tested for HIV as part of their ANC package. Health facility providers were asked whether HIV counseling and testing for pregnant women was available upon request from their clients, required, or recommended by themselves. Results show that half of the health facilities (n=306) recommend to their pregnant clients to take an HIV test, 27.8% reported that an HIV test is required for all pregnant women who turn up for ANC, while 19.3% reported that clients had to request it themselves. Additionally, 56.8% (n=315) of health facilities provide ARVs to HIV-positive mothers for PMTCT and 21% have a support group for these HIV-positive pregnant women.

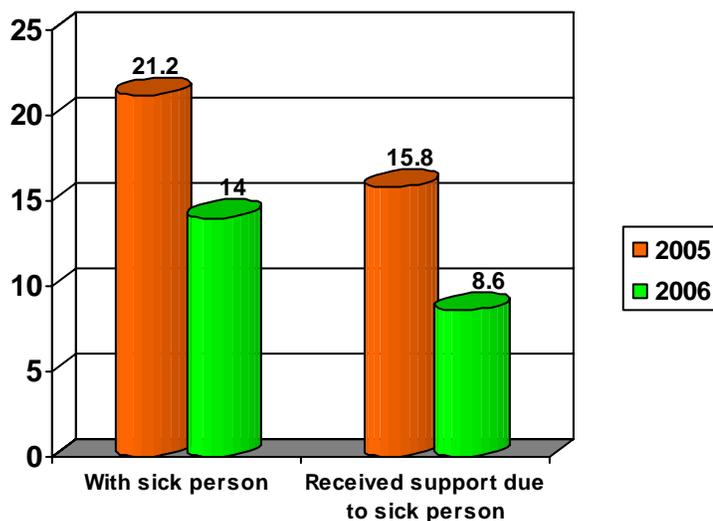
Significant increases in both HCT and PMTCT testing services have been reported in 2006. It would be logical to argue that the more knowledge women (especially pregnant women) possess on PMTCT, the more they will turn up for HIV testing. However, comparing the last two years, results show that there were no significant changes in both men and women who had knowledge about PMTCT. Therefore, significant increases in HCT and PMTCT intake may among other explanations be attributed to UPHOLD and other partners' interventions in the promotion of home-based HCT, gender-based violence prevention programs, the availability of ARVs, goal-oriented antenatal care, and increased community awareness. The increase in PMTCT static sites from 30 in 2005 to 55 in 2006 and HCT sites from 119 in 2005 to 683 (76 static) in 2006 has also led to increased access and availability of PMTCT and HCT services in communities.

HIV/AIDS Palliative Care

Over the last three years, UPHOLD has been promoting the palliative care approach for people living with HIV/AIDS (PLWAs) with emphasis on both home and facility-based care.

Respondents were asked if their households had ever had a person who was very sick or bedridden for a period of three or more months, or whether any household member had died after being sick for more than three months in the 12 months prior to the survey. Figure 6 shows that 14% (n=6,460) of the households reported affirmatively, a significantly lower ($p<0.001$) finding than 21.2% (n=403) in 2005.

Figure 6: Proportion of households with a bedridden person and those receiving support



This significant change can be attributed to the increased availability of antiretroviral therapy (ART) and prophylaxis in the country over the last year. In some districts where there has been concentration of UPHOLD as well as other partner support, results show remarkable improvements, for instance in Kamuli where the indicator improved from 19.8% to 5.8%, Kitgum from 18% to 6.3% and Gulu from 33% to 14.2%. This argument can further be strengthened by the fact that the proportion of households with any orphaned children was found to have decreased significantly from 17.1% (n=325) in 2005 to 12.7% (n=6,460) in 2006 ($p<0.001$) thus mirroring the fact that ARVs and prophylaxis have improved the lifespan of PLWHAs and reduced their mortality levels.

Orphans

Results also show that 29.1% (n=819) of households received care and support because of the presence of an orphan in 2006 compared to 42.8% in 2005. Respondents from households which had the presence of an orphan were further asked whether their orphans had ever been tested HIV. Close to one in ten orphans (9.2%, n=819) had ever tested for HIV and 8.7% of all the orphans had ever tested and received their HIV test results.

Additionally, it is also possible that a sizeable proportion of children who were earlier identified as orphans have crossed into the above 18 year age group, thus making the group. Subsequently the proportion of households receiving care and support because of the sick or bedridden persons have probably been reduced due to the fact that fewer persons are falling sick and therefore need less support.

PIASCY

The (Ugandan) Presidential Initiative on AIDS Strategy for Communication to Youth (PIASCY) is singularly devoted to helping pupils stay safe from HIV/AIDS. PIASCY is a behavior change communication (BCC) program which targets children in primary schools⁷. The goal is that of a mainstreamed, sustainable HIV/AIDS program in primary schools which helps pupils delay sexual debut until marriage. PIASCY emphasizes that abstaining from sex is the best and only certain way to protect one from exposure to HIV and other sexually transmitted infections. In addition, the behavior change messages aim to reduce stigma toward children and adults affected by and infected with HIV and AIDS.

In the 2006 household survey, parents or caretakers were asked whether they had made opportunities to talk to their 6-12 year old children about HIV/AIDS, delaying sex, or safer sex practices. Results indicate poor results on these indicators as only 18% (n=16,183) of parents had talked to their 6-12 year children about HIV/AIDS, 16% (n=16,231) had talked to these children about delaying sex and 14% (n=15,807) had discussed with the children about safer sex practices in the three months prior to the survey. Comparing these indicators with the 2005 results was difficult because the age bracket used was bigger (under 15 years) and definitely the results better then. During 2005, 34.2% of the parents or guardians reported talking to their children 15 years of age and younger about sex or delaying sex. The change in age bracket for this indicator was prompted by the standardized government policy on age of children in primary school (6-12 years).

During the 2004 baseline survey, schools were asked whether they had held at least one HIV activity other than at the school assembly (for instance peer training, anti-AIDS, or straight talk clubs, etc.) during the school term and 47% responded in the affirmative. The 2006 question was broadened to the cover the period of the last 12 months and 70% (n=2,746) of schools reported conducting such activities in the past 12 months. Although the length of the period of assessment varies, this finding is a significant improvement in line with broadening the range of PIASCY activities, especially performing arts festivals.

In the 2006 survey, head teachers or their deputies were asked about a range of additional PIASCY activities in their schools implemented in the past 12 months. 63% (n=2,743) of the head teachers or their deputies reported that their schools had had at least one functional/active school club with integrated PIASCY/HIV-prevention activities in the past year. More than half of the schools (56%, n=2,779) had carried out PIASCY-oriented debates and 61% had carried out PIASCY performing arts in the last 12 months prior to the survey. Three-quarters of the schools interviewed had also carried out at least one action-oriented meeting to address risky situations for the children (for instance, meetings on defilement, stigma, etc.). Furthermore, 61% of the schools had carried out at least one meeting involving care-givers, focusing on HIV communication

⁷ Efforts are underway to extend this program to post-primary institutions

to children. All these results show that PIASCY as a strategy has been taken up by most of the schools thereby providing valuable information that can save many children from risky situations that would have impacted their lives and potentially resulted in HIV infection.

Results on Integrated Health Indicators

In order to assist the Government of Uganda in achieving its goals of ensuring access to the National Minimum Health Care Package, UPHOLD is strategically positioned to increase the utilization, quality, and sustainability of health services within four main core interventions, namely integrated child and adolescent health, HIV/AIDS, integrated reproductive health, and communicable disease prevention.

Integrated Child Health

UPHOLD's Child Health sub-component is focused on disease prevention through two strategies—increased routine and supplemental immunization services including bi-annual Child Days and Community-Based Growth Promotion to improve child health at the household level. This intervention mainly focuses the health, growth, and development for the age group 0-5 years.

Immunization

UPHOLD contributes to national and district efforts to improve immunization indicators through assistance in national-level coordination and planning; training and follow up of service providers; technical assistance in program design; monitoring and evaluation; social mobilization; and BCC and job aids to support health personnel in districts where enhanced activities like the bi-annual Child Days and sub-National Immunization Days have been carried out.

Results from the 2006 LQAS survey indicate that at least one third (34.2%) of the children aged 0-23 months were immunized after community outreach activities in the 12 months prior to the survey. This shows that a sizable number of children benefit from outreach programs, especially bi-annual Child Days and sub-National Immunization Days, to which UPHOLD contributes significantly.

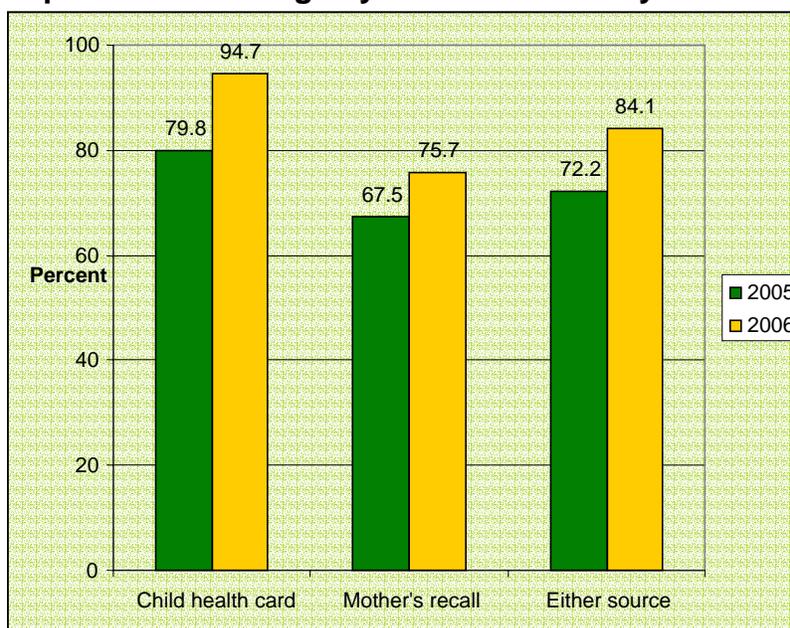
As a follow-up to the 2005 survey, mothers with children under-two years of age and mothers or caretakers with children aged between 24 to 59 months were asked to present their child health cards or recall whether their children had been immunized. There were no significant improvements in availability of child health cards as 38.8% (n=2,172) of the mothers with children aged between 12 to 23 months presented a child health card in 2006 compared to 38.6% (n=499) the previous year. Child health card retention remained consistently high in most West Nile districts, with Yumbe (73.7%) and Nyadri (62.5%) reporting the highest average coverage, with the lowest coverage reported in Lira (21.4%). There were improvements reported in Nakapiripirit (from 11.5% to 24.2%) and Luwero (from 14.3% to 24.6%). The practice of keeping child health cards and other personal documents at the sub-county offices and health units still exist in Nakapiripirit as mothers do not keep their children's health cards in their houses for fear of their homes getting burnt during cattle rustling.

Diphtheria, Pertussis and Tetanus (DPT-HepB+Hib) Coverage

Immunization coverage for the third dose of DPT-HepB+Hib is a key indicator for progress and performance of the Health Sector Strategic Plan (HSSPII) and the national Poverty Eradication Action Plan (PEAP). In this survey, DPT-HepB+Hib immunization coverage was measured as the proportion of children aged between 12 to 23 months who had received a third dose of DPT-HepB+Hib before the age of 12 months. Data on DPT-HepB+Hib 3 immunization coverage was obtained from the child health cards that were presented by the mothers and through the mother's recall.

Analysis shows a significant increase in DPT-HepB+Hib 3 immunization coverage during the last three years. **Figure 7** shows that overall, 84.3% (n=1,267) of the mothers with children aged 12-23 months in 2006 compared to 72.2% (n=937) in 2005 and 50.8% in 2004 reported through documentation or recall that their children had received a third dose of DPT-HepB+Hib by the age of 12 months (χ^2 for trend=25.4, $p<0.001$). DPT-HepB+Hib 3 immunization coverage significantly differed by mother's recall as well as presentation of the child health card ($p<0.001$).

Figure 7: DPT-HepB+Hib 3 coverage by data source and year



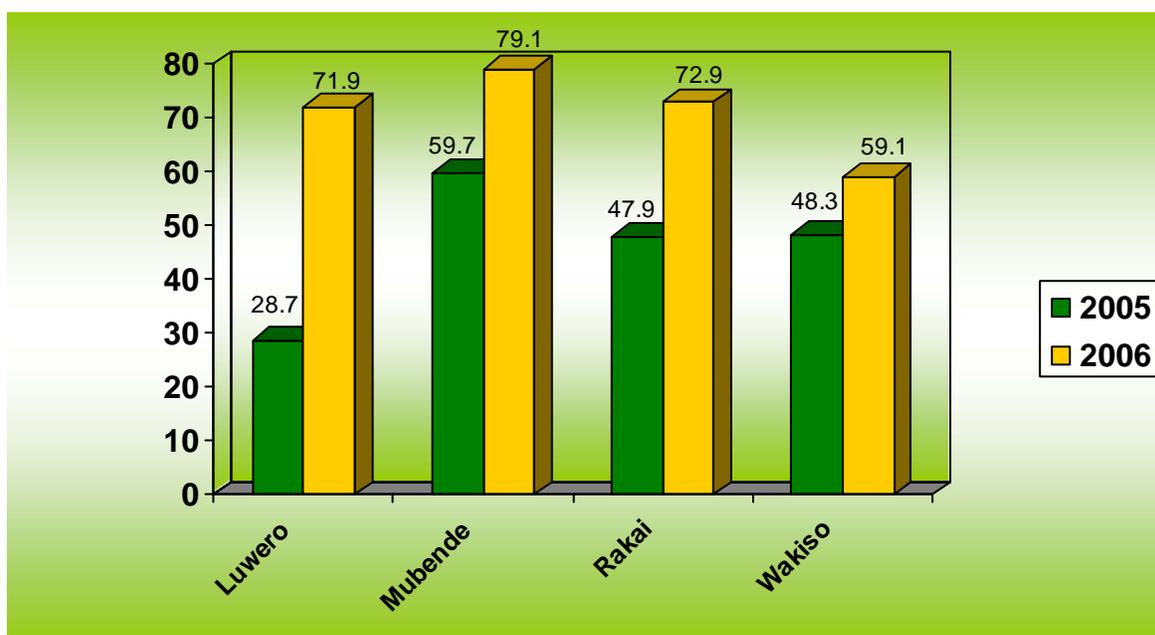
The highest coverage was reported in Yumbe District (97.5%) and the lowest in Dokolo District (65.5%). Compared to 2005, tremendous improvements in DPT-HepB+Hib 3 immunization coverage were observed in the districts of Kyenjojo from 58.2% to 95.2% and Mbarara from 75% to 91.5% in 2005 and 2006 respectively. Some decrease, though not significant, was observed in Kamuli (from 89.7% to 84.6%).

Measles Vaccination

Overall, 73.4% (n=1,595) of children 12-23 months of age had received measles vaccination by age 12 months and this was a highly significant increase ($p<0.001$) from the 49.5% reported in 2005 for children whose mothers presented immunization cards during the interviews, 80.3% (n=842) of the children aged 12-23 months had been immunized by age 12 months while 69.1% (n=1,330) had been immunized among those whose cards had not been seen.

UPHOLD's contribution towards national measles campaigns has been significant and these improvements seem to demonstrate the impact of this effort. During September-October 2006, a national measles campaign was conducted in the central districts of Uganda. This likely boosted the coverage for measles immunization in these districts as reflected in **Figure 8** below.

Figure 8: Comparison of measles immunization coverage in selected Central Districts



Vitamin A Supplementation

Vitamin A is essential for the functioning of the immune system. While most people know that Vitamin A deficiency can lead to blindness, many are unaware that even before blindness occurs, a Vitamin A deficient child faces a 25% greater risk of dying from a range of childhood ailments such as measles, malaria, or diarrhea. Providing children aged 6-59 months with two supplements of high-dose Vitamin A capsules a year has been identified as a safe, cost-effective and efficient strategy for ending Vitamin A deficiency.

There has been a significant increase in children who received Vitamin A supplementation in the six months prior to the survey from 79% (n=3,154) during the 2004 baseline to 82% (n=3,627) in 2005 and 90.1% (n=4,121) in 2006 (χ^2 for trend=5.3, $p=0.021$). The highest coverage was reported in Pallisa (98.6%) and Kyenjojo (97.9%) whereas the lowest was in Nyadri (74.8%) and Kamuli where a reduction was reported from 82.1% to 70.4%.

Since its inception, UPHOLD has been supporting the Ministry of Health in implementing routine and national immunization campaigns. This has paid off as most immunization indicators have significantly improved. The tremendous achievements in immunization indicators can partly be attributed to UPHOLD support, which includes training of district vaccinators, mass media campaigns targeting immunization, bi-annual child days support, SNIDs campaigns in selected districts as well as evidence-based planning in the utilization of LQAS results when identifying areas of low-service coverage.

Integrated Reproductive Health

UPHOLD's integrated reproductive health interventions include family planning, goal-oriented antenatal care, clean deliveries and emergency obstetric care including post-abortion care, integrated with PMTCT.

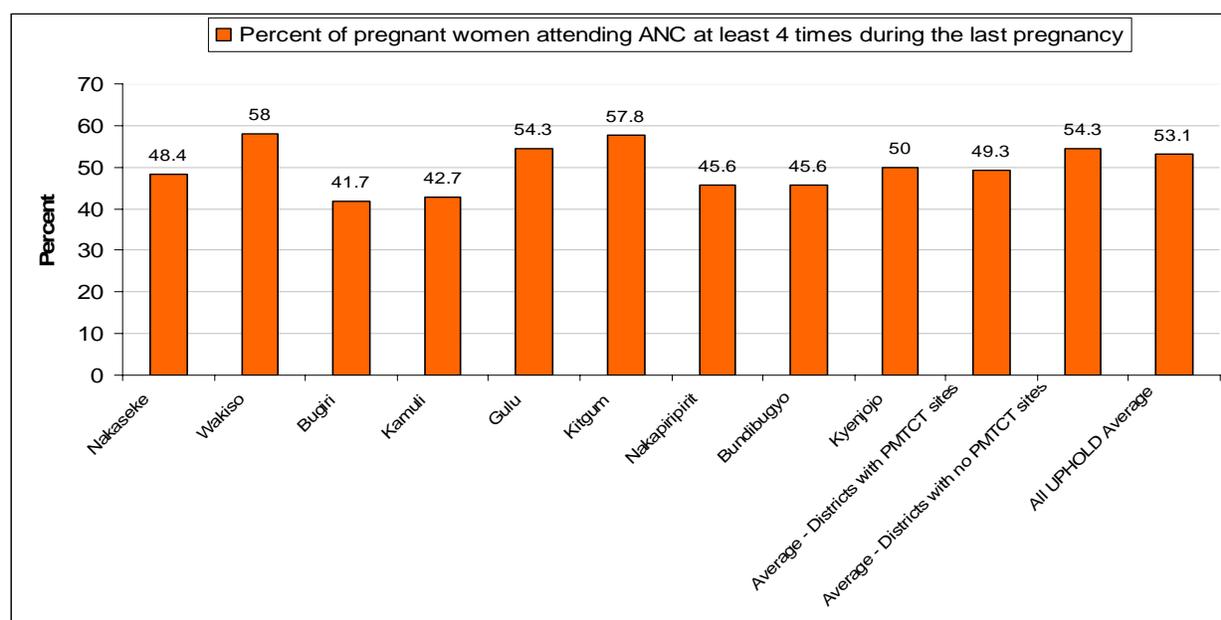
Goal-Oriented Antenatal Care

Goal-oriented antenatal care refers to a minimum number of four antenatal clinic visits during pregnancy. Each of the four visits has specific items of client assessment, education and care to ensure the prevention, early detection, and prompt management of complications. A major new focus for ANC is put on birth planning and emergency preparedness in line with the Uganda National Policy Guidelines for Reproductive Health. The package includes educating and counseling pregnant women about eating a balanced diet (especially protein, iron and folic acid-rich foods); prescription of iron/folic acid supplement and counseling on the importance of compliance; prescription of Mebendazole to treat suspected or confirmed hookworm infestation; and promotion of intermittent presumptive treatment (IPT) of malaria with two doses of Sulfadoxine-pyrimethamine (SP).

During the 2006 LQAS survey, mothers with children aged below 2 years were asked whether they had visited any facility or health worker during the last pregnancy for purposes of ANC. Overall, 88% (n=3,670) of mothers attended ANC at health facilities. The results reveal a significant increase ($p<0.001$) of pregnant mothers attending ANC at least four times during their pregnancy from 48.3% (n=1,104) in 2005 to 53.1% (n=1,598) in 2006. However, of those who attended ANC in health units, only 36.0% (n=1,253) were given information and counseled about HIV/AIDS and the PMTCT package.

Over the past 2 years, UPHOLD has supported nine districts with PMTCT interventions through direct support to local government health facilities and CSOs. As part of the training for PMTCT service providers, goal-oriented ANC is emphasized. **Figure 9** shows the performance of these districts during 2006.

Figure 9: Antenatal attendance in PMTCT-supported districts



Source: UPHOLD 2006 LQAS Survey

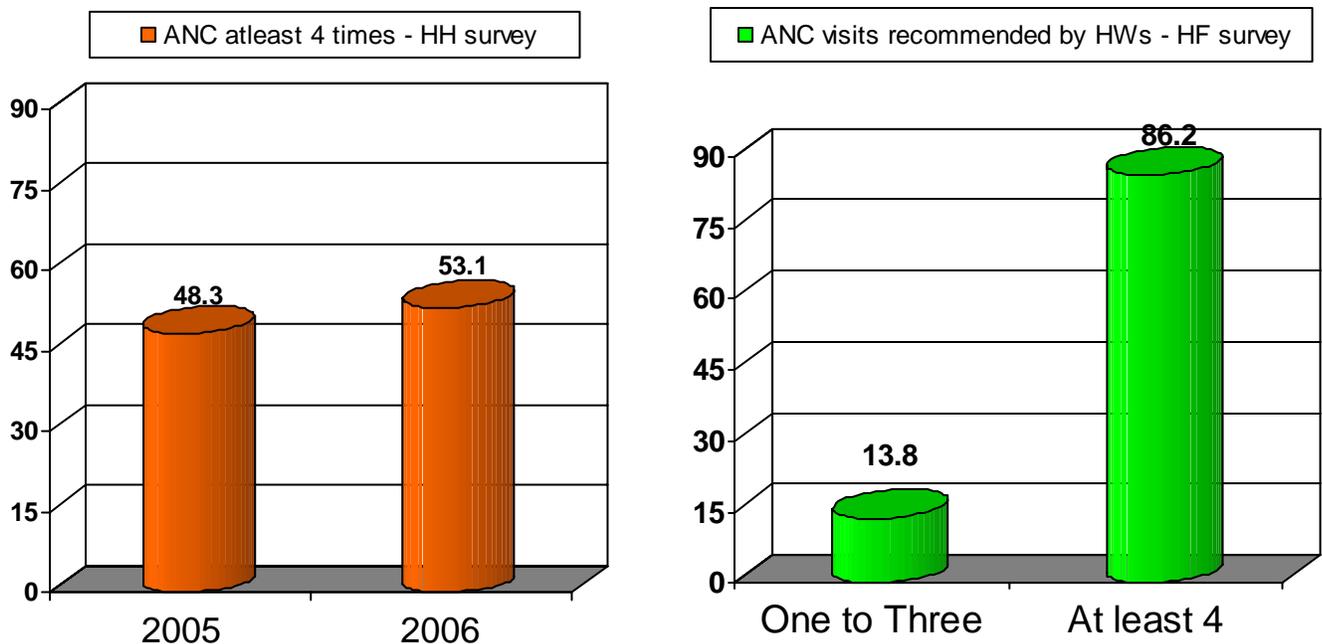
These results indicate that the average coverage in UPHOLD-supported districts for four ANC visits (53.1%) has surpassed the national 2010 target of 50%⁸. However, overall the districts with UPHOLD-supported PMTCT sites performed poorly compared with non-PMTCT supported sites. It should be noted that there were no PMTCT-supported sites in the nine districts in 2004, which has increased to 55 sites in 2006. The distribution of these sites also explains the performance. For instance, only two sites in Nakaseke district (Ngoma Health Centre III and Nakaseke Hospital) and four sites in Bundibugyo district (Kikyo Health Centre IV, Kakuka Health Centre III, Ntoroko Health Centre III and Rwebisengo Health Centre III) are supported by UPHOLD, with no CSOs implementing PMTCT interventions. The results further show that districts with UPHOLD-supported CSOs for PMTCT activities, including Kyenjojo, Wakiso, and Kitgum, performed better, demonstrating the positive contribution of CSO partnerships. The significant contribution of other partners including the Elizabeth Glaser Pediatric AIDS Foundation in districts with no UPHOLD-supported PMTCT sites and the constant lack of test kits during 2006 in districts like Kamuli could explain the better performance in districts with no UPHOLD-supported PMTCT sites.

Health workers were asked about the number of times that they usually recommend to pregnant women to visit the health facility for antenatal care. Eighty-six percent (n=451) of the facilities recommended that mothers visit for ANC at least four times. ANC visit

⁸ Health Sector Strategic Plan 2006-2010, Ministry of Health

results were compared between household responses and those at the health facilities. **Figure 10** shows that although the majority of health workers recommend four ANC visits during pregnancy, only about half of the pregnant mothers actually act on that advice. This could be attributed to lack of transport to health facilities, little community sensitization, and cultural beliefs in using traditional medicine.

Figure 10: Comparison of ANC visits by mothers and recommendations by health workers



Source: UPHOLD 2005 & 2006 LQAS Survey

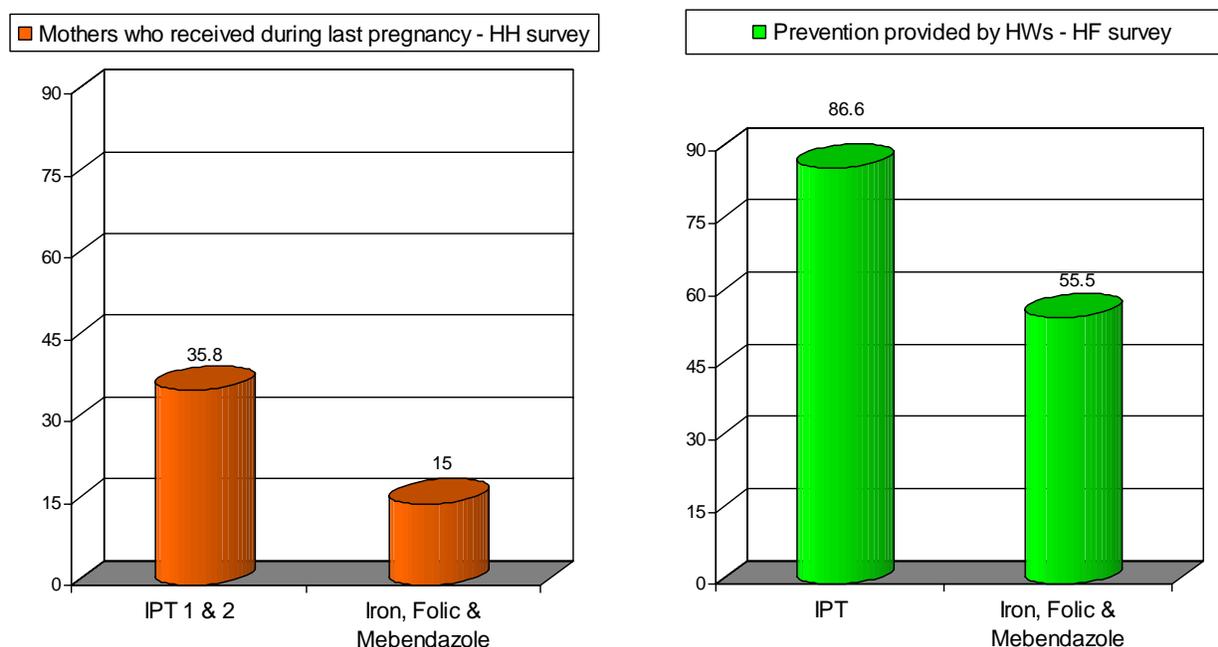
Nearly four in every ten (n=469) of the health facilities had at least two health workers trained in goal-oriented ANC in the past two years. Health providers in health units surveyed were asked about emergency obstetric care (EmOC) services and 73% of the health units provided these services. About half (n=308) of these health facilities had had EmOC staff who were trained in reproductive health life-saving skills within the past three years. Of the health facilities providing EmOC services, only 51.8% (n=332) administer anti-convulsants for pre-eclampsia and eclampsia by injection or intravenous infusion while half of them (52.5%, n=99) provide surgery or caesarian section.

Women who had children under age two were also asked if they had received iron, folic acid and mebendazole to prevent anaemia during their last pregnancy. The most common anaemia prevention medication given at ANC was iron (93.9%) while mebendazole (71.3%) was the least given. Only 15.0% (n=2,162) had received the entire package of this medication. This may be due to the limited knowledge of health workers that they had to give the three medications as a package during the four visits or problems of stock-outs of any one of these drugs in the health facilities.

As part of antenatal care (ANC), IPT is recommended to be administered to every pregnant woman during their second and third trimesters. During the 2006 LQAS survey, mothers were asked about the doses of IPT that they received during the last pregnancy. Overall, 35.8% (n=2,042) of mothers with children aged below two years had received IPT1 and IPT2 during their previous pregnancy. The highest finding was observed in Bushenyi District at 54.7% and Mbarara District at 51.6% whereas the lowest finding was recorded in Kaliro District at 21.1% and Dokolo District at 23.2%.

Furthermore, health workers were asked about provision of IPT to pregnant mothers and this was accompanied by a records review to justify the answer. Eighty-six percent (n=457) of the facilities confirmed (with documented evidence) that mothers receive the recommended doses of IPT. Fifty-six percent (n=469) of the health facilities provide iron, folic acid and mebendazole to pregnant women for the prevention of anaemia. Comparisons between household and health facility responses on malaria and anaemia prevention during pregnancy also showed differences like ANC visits (**Figure 11**). Although the majority of health workers were available to provide IPT and anaemia prevention (also verified by records in health facility registers), fewer mothers actually received this medication. It could be argued that stock out of essential drugs at the facilities could be a factor for the low uptake of prevention medicine. However, analysis of the LQAS 2006 results show, for instance, that 85.1% and 77.7% of the health facilities interviewed did not experience any stock out of SP and mebendazole respectively in the three months prior to the survey. The low uptake of IPT and anaemia-prevention medicine can therefore be explained to be a direct result of the low ANC attendance (or attendance for fewer than four times) as mothers miss out on these prevention medications given during antenatal visits at health facilities.

Figure 11: Comparison of malaria and anaemia prevention received by mothers and actual provision by health workers



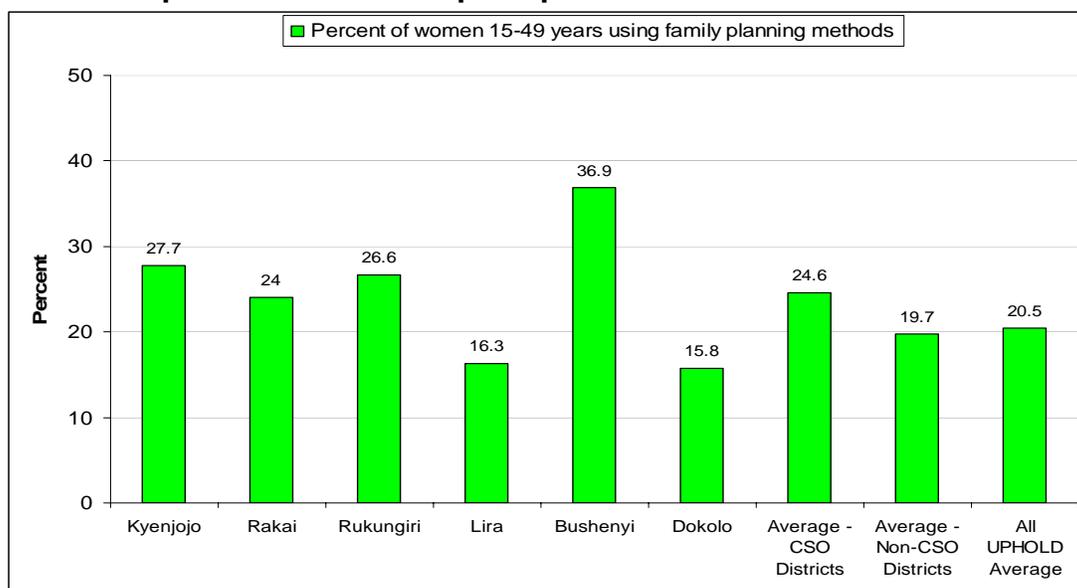
Source: UPHOLD 2006 LQAS Survey

Family Planning

Women of reproductive age who were not pregnant at the time of the survey were asked whether they were currently using a family planning method. Health facilities were assessed to find out whether they were providing family planning services and whether they had experienced any stock-outs of essential family planning methods in the past three months. One fifth (20.5%) of women aged 15-49 years reported using modern family planning methods while 88.6% of the health facilities were found to provide family planning services. During the three months prior to the survey, there were no stock-outs of injectables, male condoms, or contraceptive pills in 64.2%, 64.8%, and 70.7% of the facilities respectively. These results show that although the majority of the facilities provide family planning services and are relatively stocked with the essential family planning commodities, the uptake of these services is still low.

Family planning use among women of reproductive age was compared across districts to assess the influence of CSOs implementing integrated reproductive health (IRH) activities supported by UPHOLD. **Figure 12** demonstrates this influence. Most of the districts with UPHOLD-supported IRH interventions performed above the national average, but for Lira and Dokolo. The UPHOLD-supported CSO working in Lira and Dokolo districts (RUHECO) experienced implementation problems and did not fully undertake all the planned activities during 2005/6. This could explain the low performance of the two sister districts in terms of contraceptive prevalence.

Figure 12: Comparison of contraceptive prevalence across districts



Source: UPHOLD 2006 LQAS Survey

Deliveries in Health Facilities

The place where a mother delivers her baby influences the safety of the delivery, as well as the health of the mother and the infant. It is very important, therefore, that all

births are delivered at health facilities under the supervision of qualified health personnel.

Although not significant, there has been a continuous increase in the proportion of deliveries reported to have taken place at health facilities. Half of the mothers (n=3,230) with children under two years of age reportedly delivered from a health unit or facility in 2006 compared to 45.9% (n=1,144) in 2005 and 41.0% (n=819) in 2004 (χ^2 for trend=1.6, $p=0.202$).

Table 2: Place of delivery and HIV testing for mothers

Background characteristics	Place of Delivery								Total Number	
	Home		TBAs Home		Govt Facility		Private Facility		2005	2006
Year	2005	2006	2005	2006	2005	2006	2005	2006		
HIV test during ANC										
Tested and received test	30.2	25.4	6.3	5.5	42.1	57.8	21.4	11.0	285	816
Did not test	50.0	42.4	10.9	9.9	27.4	33.7	11.7	9.5	1,150	2,282
Region										
Central	21.4	21.7	20.0	12.3	33.3	47.2	25.3	14.6	285	665
Eastern	43.1	31.4	6.3	10.4	32.6	44.0	18.0	13.7	383	570
Western	40.0	36.5	10.3	8.0	30.6	39.1	19.1	12.4	350	760
Northern	64.3	50.6	2.4	6.6	25.9	34.9	7.4	4.3	417	1,235
Total	44.2	37.9	8.9	8.8	30.3	40.0	16.6	10.0	1,435	3,230

Despite most of the women (91%, n=3,120) receiving antenatal care from health facilities, only 54% of these delivered their babies at health units. Nakaseke (84.2%), Kamuli (81.1%) and Wakiso (74.7%) had the highest district coverage of mothers delivering from health units in the two years prior to the survey while the lowest coverage was reported in Nakapiripirit and Dokolo at 15.8% and 22.1% respectively. Highly significant increases in deliveries at health facilities were noted in some districts and some of these included Yumbe District from 25.7% in 2005 to 46.3% in 2006 ($p=0.0015$), as well as Kitgum District from 40.4% in 2005 to 64.2% in 2006 ($p<0.001$). Luwero District reported a reduction from 71.3% to 56.8%.

The mama kit is a small packet of two plastic sheets, a gauze roll, two razor blades, two pairs of gloves, one small piece of soap and a small cord tie and tape. It is packed locally in Uganda. During 2005/06, UPHOLD distributed mama kits to four of its supported districts—Nakapiripirit, Gulu, Kitgum, and Katakwi—while other districts received mama kits with the help of other development partners. Findings revealed that 29.5% in Gulu, 22.1% in Katakwi, 24.2% in Lira, and 7.4% in Nakapiripirit district received clean delivery/mama kits making an overall coverage of 20.8% (n=380) for the 4 districts.

Malaria Prevention and Control

Malaria continues as a major health problem in Uganda, contributing significantly to morbidity and mortality especially in under-five children. UPHOLD support to districts focuses on the most vulnerable groups namely pregnant women, under-five children, and people living with HIV/AIDS (PLWHA). UPHOLD supports interventions that increase access to and effective use of insecticide treated nets (ITNs), intermittent preventive treatment (IPT) of malaria in pregnancy, and home-based management of fever (HBMF), which are the Ministry of Health (MOH) recommended cost-effective approaches for prevention and control of malaria.

Results from the health facility survey indicated that all health facility providers (100%) at any time were involved in the treatment of malaria and can handle the treatment of malaria. Of all the health providers available in health units, 61.8% (n=447) had received in-service training in the management of severe and complicated malaria within the three years prior to the survey, while 77.2% (n=362) of health facilities had at least two staff fully trained in managing malaria using artemisinin-based combination therapy (ACT).

At the time of survey, all health facilities had in stock at least one anti-malarial drug. When asked separately if they had in stock Chloroquine, SP or Coartem, almost all (97.2%) of health units had all the three mentioned anti-malarials in stock on the day of the survey. About a quarter (n=123) of the health facilities reported ACT (Coartem) stock-outs in a period of three months prior to the survey.

Home-Based Management of Fever

UPHOLD and partners use the home-based management of fever (HBMF) strategy to distribute free pre-packaged anti-malarials (Homapak) using community medicine distributors (CMDs). Homapak is distributed in color-coded individual boxes for ease of prescription: children aged two to 24 months are given red packs, and children aged 24 to 59 months receive green packs.

Parents/caretakers of children under five years of age were asked whether their children had had fever over the two weeks preceding the survey. Over the past three years, the prevalence of reported fever within the two weeks preceding the survey had reduced (though not significantly) from 55.8% (n= 2,226) in 2004 to 53.4% (n=2,654) in 2005 and 43.3% (n=6,460) in 2006 (χ^2 for trend=3.4, $p=0.066$). Furthermore, of those children who had had fever in the two weeks prior to the survey, in 2006 76.6% received recommended malaria treatment within 24 hours of fever onset compared to 39.7% in 2005 and 30.7% in 2004 (χ^2 for trend=42.2, $p<0.001$).

Homapak utilization doubled significantly from 8% (n=240) in the baseline to 16.1% (n=542) during follow up in 2005. In 2006, findings revealed further significant increases. Of those children whose caretakers respond to anti-malarial treatment before or without seeking care at a health facility care, 26% (n=1,483) had received and used Homapak from community medicine distributors (CMDs) while 6.6% (n=1,950) had

received and used Homapak from health units. These findings reinforce the improvements recorded in using appropriate and prompt malaria treatment.

Insecticide-Treated Mosquito Nets (ITNs)

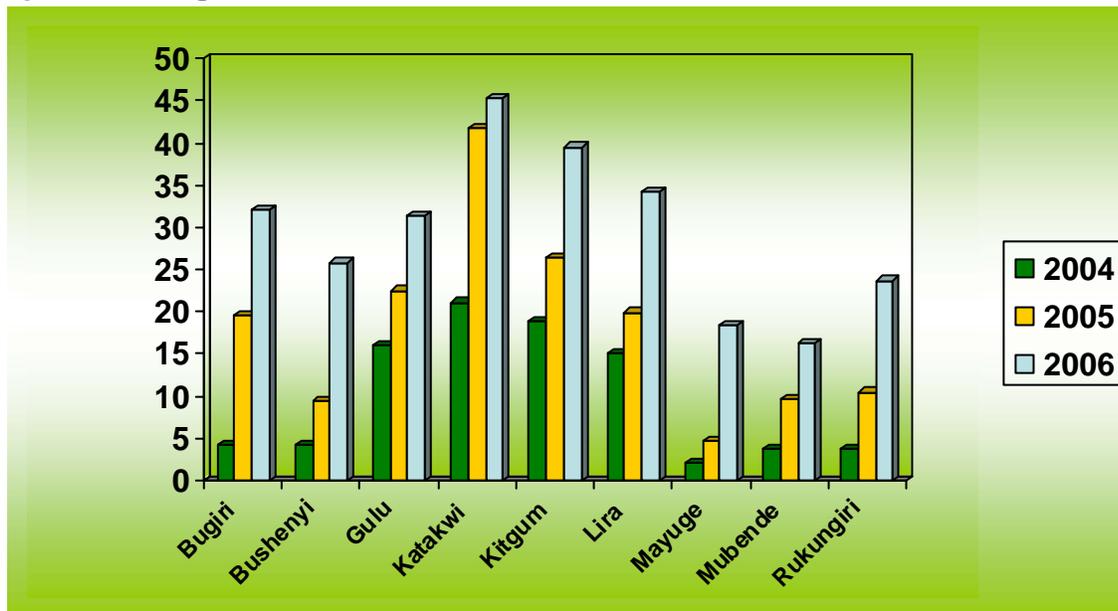
In all households surveyed, respondents were asked whether they had a mosquito net and if that mosquito net had been treated with an insecticide solution. More than a third (38.7%, n=16,150) of the households in 2006 compared to 28.4% (3,521) in 2005 had a mosquito net that was used keep mosquitoes at bay. This finding represents a highly significant increase ($p<0.001$). Furthermore, there was a significant increase in the proportion of households that had an ITN from 23.4% (n=2,901) in 2005 to 33.5% (n=16,150) in 2006 ($p<0.001$). This improvement in household ownership of mosquito nets can be attributed to the UPHOLD ITN distribution exercise of December 2005-March 2006 where a total of 224,183 ITNs were distributed to the most needy districts. Additionally, UPHOLD facilitated re-treatment of 174,716 bed nets in 12 districts during the 2006 national net re-treatment exercise.

The highest district ITN coverage was reported among the newly created districts of Amolatar (51.6%) and Amuria (50%). Others included Katakwi (40.5%), Yumbe (40.5%) and Gulu (39%) while the lowest coverage was reported in Luwero (15.8%), Kyenjojo (15.3%), Ibanda (12.6%), and Mubende (12.1%).

Owning a mosquito net does not necessarily imply its use. Parents or caretakers of children under five years were asked whether their children slept under a mosquito bed net the night before the survey and whether the mosquito bed net was treated. Nearly one third of the respondents (31.6%, n=6,460) reported that their children slept under a mosquito net of any kind whereas 26.8% slept under an insecticide treated bed net the night prior to the survey. This was a highly significant finding compared to the 2005 and 2004 results of 17.2% and 11.7% respectively (χ^2 for trend=9.7, $p=0.002$).

As a result of the 2004 LQAS findings, UPHOLD noted that ITN coverage for under five year olds was very low. Districts with poor coverage or those which did not have other partner interventions were singled out and earmarked for ITN distribution. They included Bugiri, Bushenyi, Gulu, Katakwi, Kitgum, Lira, Mayuge, Mubende and Rukungiri. The overall estimated average increment in these nine selected districts was calculated at 39.2%. Ultimately, from the LQAS 2006 survey, 29.6% was the average finding for ITN coverage (percent of under five year olds sleeping under an ITN the night before the survey). **Figure 13** shows the trend in the proportion of children under five years sleeping under a treated net in the previous night in these supported districts. Although there are general improvements across all districts, the northern districts of Gulu, Katakwi, Kitgum and Lira exhibit high-coverage levels for this indicator because of net distribution by many development partners including UPHOLD.

Figure 13: Percent of children under-5 years sleeping under a treated net the previous night



Among the non-conflict districts of Bugiri, Bushenyi, Mayuge, Mubende and Rukungiri, it had been estimated that the average coverage for under-five-year olds sleeping under ITNs would be 30.7% and ultimately average coverage results from LQAS 2006 on this same indicator were almost there at 29.1%. However, more research needs to be done in the conflict districts to ascertain why there is a disparity between LQAS 2006 findings and the aftermath expectations on ITN distribution. It should also be noted that coverage in the conflict districts was expected to be higher as there are many other partners distributing ITNs among other interventions.

Health Management Strengthening

Health management strengthening is a Ministry of Health initiative that UPHOLD has supported over the years. Part of it includes the Yellow Star Program (YSP) which focuses on improving service delivery through a system of supervision, certification, and recognition of health facilities that achieve and maintain basic standards of health care. These basic standards are communicated to stakeholders who are given skills in promoting supportive supervision and community dialogues to create linkages between the facilities and communities. The goal is to improve quality of services as well as client satisfaction and increase the utilization of services.



Health officials from the MoH, District and Health Sub-district are trained in the supervision and assessment of health facilities that qualify for the Yellow Star. 68% (n=304) of the health facilities reported receiving Yellow Star supervision during the last quarter prior to the survey.

Additionally, health facility staff were asked whether their health facilities do receive regular support supervision from the Ministry of Health (MoH), the District Director of Health Services' office (DDHS) as well as the health sub-district. 61% (n=274) reported receiving support supervision in the past year from the MoH, 86% (n=397) from the DDHS' office, and 88% (n=383) from the Health Sub-District.

Support supervision visits are expected to be conducted at health facilities by the MoH, DDHS, and health sub-district on a monthly, quarterly, bi-annual, and annual basis. When asked about the frequency of support supervision visits made to health units, 38% (n=131) reported receiving visits from the MoH at least once every quarter, 86% (n=367) from the DDHS' office, and 91% (n=367) from the health sub-district.

Internal management and decisionmaking at health facilities can be tracked by the regularity of health unit management committee meetings. Results show that this is still a weak indicator as only 30% (n=133) of health facilities reported holding at least 4 health unit management committee meetings in the previous 12 months prior to the survey. Mayuge District scored the highest on this indicator at 85.7%—most likely because of the efforts of the Uganda National Health Consumers Organization (UNHCO), a CSO supported by UPHOLD to strengthen health systems in the district. Almost all health facilities surveyed reported summarizing and reporting health information to the health sub-district/DDHS. On observing the HMIS-105 monthly report records, the interviewers were able to ascertain that 80% (n=352) of the health facilities had reported on the previous month's activities before the deadline of the 7th day of the subsequent month.

Behavior Change Communication (BCC)

UPHOLD's behavior change communication (BCC) strategy is designed to guide the achievement of positive behaviors, including the effective utilization of social sector services, provision of quality services and other key practices. UPHOLD recognizes that BCC is most effective when designed and implemented as an integrated component of a comprehensive strategy aimed at achieving clear objectives. Communication plays an important role in behavior change by increasing demand—but usually communication must be complemented by an enabling environment and other activities so as to improve the effective utilization and delivery of services. Therefore, UPHOLD has supported behavior change activities through training, community mobilization, service delivery improvement, and policy/advocacy by implementing various activities among which include: Mass media (radio listening clubs, radio talks, and spots), traditional

media (music, dance and drama), as well as interpersonal communication (local council leaders advocacy orientation, counseling for child feeding, and support groups).

Respondents were asked whether they had heard any BCC messages on the radio or seen any drama groups spreading these messages in their community in the last 12 months prior to the survey. More than four in every ten households (44.8%, n=16,150) reported receiving at least one BCC message from an education-focused drama activity (on sanitation, girls' retention in school, open days, etc.) in their community. Additionally, 47.5% of the households reported getting at least one BCC message from an HIV/AIDS focused drama activity held in their community. The North Eastern UPHOLD region⁹ reported the highest finding, 58%, on the latter indicator.

As part of UPHOLD's malaria interventions, messages on the new ACT/Coartem treatment were aired on radio to various districts during 2006. Overall, 61% (n=16,150) of the households reported hearing any such kind of messages while 72% reported having heard at least 1 BCC radio message on treatment by community medicine distributors in the last 12 months prior to the survey.

The LQAS survey ascertained that most people had received messages on ITN utilization and malaria treatment in the last 12 months prior to the survey. This is probably one of the factors that can explain why there was increased ITN utilization for under five-year olds and the subsequent reduction in the proportion of those falling sick due to malaria in the two weeks prior to the survey. Although 26.8% (n=6,460) of the households reported that children under five years had slept in ITNs the night prior to the survey, this indicator improved significantly ($p=0.004$) among those who had listened to BCC radio programs on ITNs (29.2%, n=5,028).

Interestingly, BCC messages on HIV, general health, and girls' retention in schools have been heard by less than half of the population. This could be because there was more concentration on disseminating messages on malaria prevention and treatment in the 12 months prior to the survey. Another factor could be listener fatigue for HIV messages, which have been constantly broadcast since the epidemic began in the late 1980s. There is therefore a need to adjust and strengthen the way in which BCC messages on HIV are relayed in order to captivate audiences.

⁹ North Eastern UPHOLD region comprises of Nakapiripirit, Amolatar, Lira, Dokolo, Amuria and Katakwi districts.

Integrated Primary School Education



UPHOLD supports primary education through an integrated education strategy (IES). The strategy includes the following core components: community involvement in education (CIE); education management strengthening (EMS); and teacher effectiveness (TE) using the cooperative learning (CL) methodology. The EMS component aims to improve the performance of education managers at district, county, sub-county level and in schools through training and other support activities. The TE component's objective is to strengthen teachers' capacity to plan and deliver child-centered and participatory lessons, while the CIE component is intended to increase community support towards quality education. The three components comprise the *whole school approach* which promotes a holistic school-based quality reform in order to improve primary education.

Primary School Attendance

Regular school attendance is critical for children to learn and is therefore an important indicator tracked by the Ministry of Education and Sports (MoES) and education-sector stakeholders. As part of the household survey, parents/caretakers were asked whether their children attend school and how many days they had attended school out of the total number of days the school was officially opened during the week preceding the

survey. Responses to these questions were used to calculate the school attendance rates among the official primary school-going pupils (aged between 6 to 12 years). Overall, information on education was collected from 3,230 households from 34 UPHOLD-supported districts.

There was a significant decrease in the proportion of school-aged children who had never attended school from 13.3% (n=2,192) in 2005 to 3.8% (n=2,636) in 2006. There was also an increase (though not significant) in the proportion of parents who reported that their school-age children had attended all the days the school had been opened in the week prior to the survey from 76.9% in 2004 and 82.3% (n=13,326) in 2005¹⁰ to 85.6% (n=2,037) in 2006 (χ^2 for trend=2.7, $p=0.101$).

Remarkable achievements have been reported in Nakapiripirit District as there were highly significant achievements ($p<0.001$) from 38.5% in 2005 to 95.2% in 2006 making it one of the highest performing districts after Luwero, Mbarara, and Koboko. The lowest coverage findings were reported in Mayuge district at 56.3%.

The improvements in these indicators are attributed to the general government policy on universal primary education (UPE) to which UPHOLD interventions contribute, especially community involvement in education (CIE) through action-oriented meetings where decisions such as re-inviting the girls back to school after childbirth are taken.

Community Involvement in Education (CIE)

UPHOLD supports the MoES to improve community involvement in education (CIE) based on the concept that, “it takes a community to raise a responsible child and children are a social capital to society.” The CIE strategy promotes school-community partnerships for quality pupils’ learning by encouraging dialogue between parents and teachers, teachers and pupils, and schools and community leaders. CIE encourages parents and communities to actively participate in their children’s learning in schools by visiting schools to monitor teaching and learning—as well as hygiene—in the classroom, discussing pupils’ performance with teachers, and providing support to their children’s quality learning both at home and at school.

Parents’ Visitation to Schools and Participation in Meetings

The 2006 household survey examined whether children’s parents or caretakers were able to visit any teachers or head teachers in relation to their children’s education. There was a slight, although not significant, improvement in the proportion of parents or caretakers who reported visiting their children’s school to see the head teacher or other teachers about their children’s learning; 63.0% in 2004, 63.3% in 2005, and 64.0% in 2006 (χ^2 for trend=0.02, $p=0.884$). Parents were also asked if they had ever visited their

¹⁰The sample size in the 2005 survey was bigger than in 2006 as all school-going children in each individual household were examined on this indicator whereas in 2006 the LQAS principle of sample size “19” was followed thereby assessing only one child per household on this indicator.

children's school to attend a school celebration, performance, or sports event. About half (53.2%, n=2,468) had ever visited their children's school for this purpose in the 12 months prior to the survey.

Parents or caretakers were also asked about their participation in parent/teachers association (PTA) and school management committee meetings or community meetings to discuss issues concerning their children's education and the school for the 12 months prior to the survey. Two-thirds (n=2,850) of the parents/caretakers had participated in PTA meetings while 46% had attended meetings called by the school management committees. Of those who had attended meetings of the school management committee, two-thirds thought that the school management committee at their children's school was doing a good job and 41% reported attending a community meeting called to discuss issues related to their children's learning and the school.

Community Contribution to Schools

During the 2006 survey, parents or caretakers of children currently in school were asked whether they had provided any kind of support to any school in the past 12 months. This support included financial, material or labour for construction or renovation of school buildings, grounds or teachers' houses. Of the 2,794 parents or caretakers interviewed, the biggest contribution given was money (51%) followed by material support (31%) and labour (29%). Only 14.6% (n=407) of the parents or caretakers had contributed all the three items. The best district in terms of contributing to schools was Katakwi (43.7%) while the lowest was Wakiso (2.4%).

Parents or caretakers of children currently in school were further asked whether they had provided support in form of money, labour or food to a teacher for the teacher's own use. The biggest contribution given was again in the form of money reported by 22% (n=2,773) of the parents or caretakers, followed by food (18%, n=2,708) and labour (17%, n=2,706).

Support to School Homework

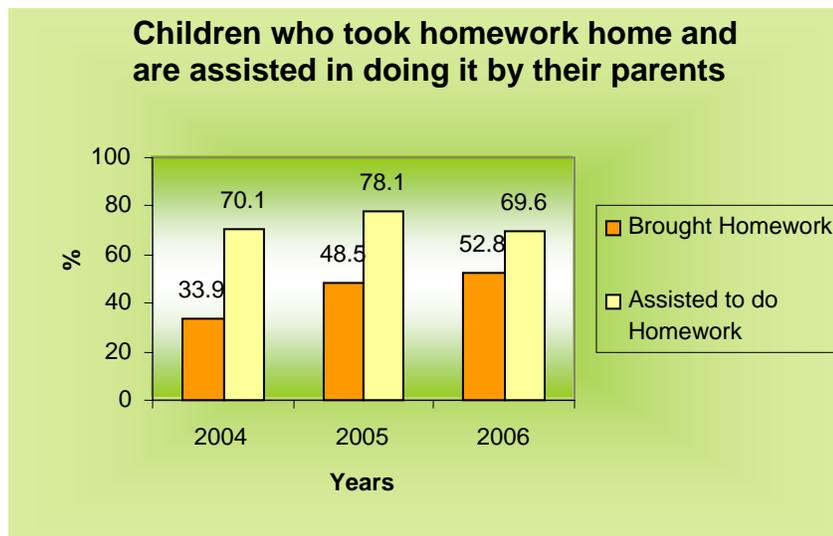
As part of CIE, schools and communities are encouraged to provide and support homework for pupils in order to ensure continuity of learning. UPHOLD supports action-oriented meetings involving parents and teachers during which school homework is one of the main discussion topics.

In the household survey, parents/caretakers were asked about knowledge regarding their children's homework and whether they had offered them any kind of support in doing this homework¹¹. The nature of assistance surveyed relates to any kind of support that creates a conducive environment (providing a peaceful and suitable place, and

¹¹ Assistance provided by parents to children in doing their homework ranges from the provision of supplemental teaching assistance to the provision of a conducive environment to these children. A conducive environment may consist of exempting children from performing domestic chores or provision of lighting during the time when home work is being done by the children.

allowing the child to complete their homework especially by relieving them of any household chores). For parents who may be knowledgeable in a given homework subject matter, supplemental parental teaching is also encouraged as part of parental-homework support.

Figure 14: Homework and parental assistance



Slightly more than half (52.8%) of parents reported that their children had brought homework from school and this was a significant improvement compared to 48.5% in 2005 and 33.9% in 2004 (χ^2 for trend=7.3, $p=0.007$). Of those districts with parents who reported their children bringing homework home, those in the South-Western Region (57.6%) were found with the highest coverage while the lowest was reported from the North Eastern districts at 48.3%. Despite the fact that there has been an improvement in the proportion of parents who reported that their children brought homework home (**Figure 14**), there has been no change in the proportion of parents or caretakers who assist their children with homework: 70.1% in 2004, 78.1% in 2005, and 69.6% in 2006 (χ^2 for trend=0.0, $p=1.000$). This could be due to the cultural norms which need to be changed to ensure homework support occurs. Such cultural norms are more difficult to change over a short period, for example collecting water is difficult to delegate to others in a homestead since water is a vital necessity and parents are often busy with other duties.

Findings from the Education Facility Survey

The Education Facility Survey focused on the various primary school education services which work towards achieving objectives of EMS, TE and CIE. School head teachers or their deputies were asked questions which centered around infrastructure, sanitation, nutrition, teaching practice, school management, and community involvement in

education. In the 34 surveyed UPHOLD-supported districts, 86.5% of the schools were government-aided, 8.7% private, and 4.7% community-owned.

School Infrastructure

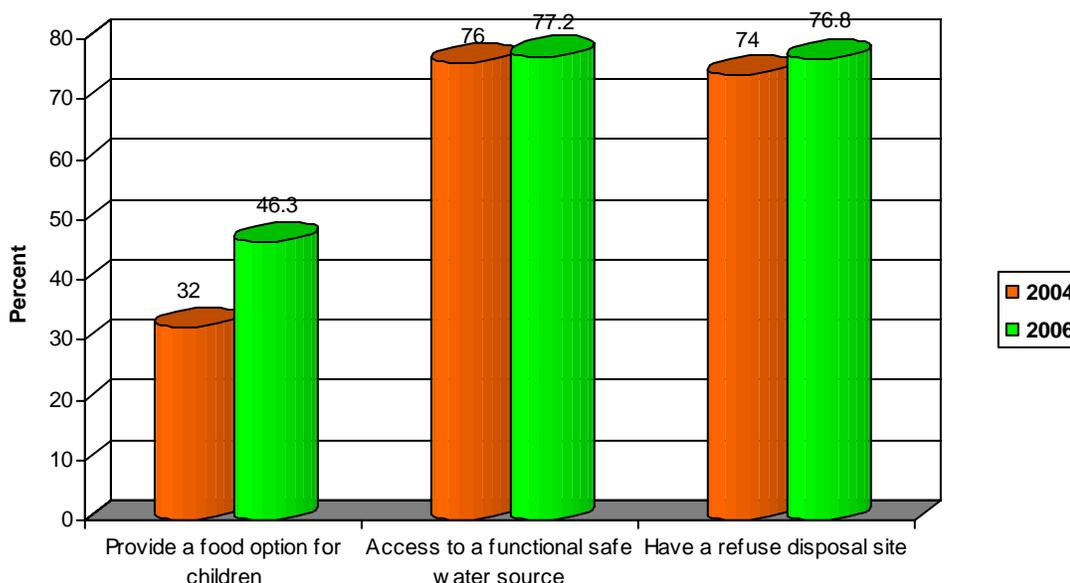
UPHOLD addresses school infrastructure improvement indirectly through its CIE component, whereby parents are encouraged to contribute to construction efforts of their children's schools and the school management is encouraged to make plans in the school development plan for infrastructural development. There were three key elements of infrastructure development which were assessed during the surveys, namely availability of separate latrines for boys and girls, availability of safe water sources, and disposal of rubbish.

To ensure general hygiene and reproductive health rights of the girl child, schools are encouraged to have clean and separate latrines for boys and girls. There was no significant change in this indicator as 83% (n=2,763) of the schools in 2006 compared to 85% in the 2004 baseline had separate latrines for boys and girls ($p=0.700$). This decrease can be attributed to the increased school enrollment under the Universal Primary Education policy that increases the pupil-stance ratio. There was, however, a significant difference in this indicator for the three categories of school ownership. Community-owned schools were less likely to have separate latrines for girls and boys (57%) compared to private (78%) and government-aided (86%) schools ($p<0.001$). This reflects the investment that the GoU and partners have put into improving water and sanitation facilities in school facilities.

Results further show improvements in sanitation and feeding at schools (**Figure 15**). Improvements were recorded in the proportion of schools that had refuse disposal sites from 74% during the 2004 baseline survey to 76.8% in the 2006 survey, while 77.2% of the schools had access to a functional safe water source¹² compared to 76% in 2004 and more schools (46.3%) provided a food option for children at school than what was observed during the 2004 baseline (32%).

¹² Safe water sources include: Boreholes, protected wells, protected springs, rain water tanks, piped water, gravitational flow water, and public water tap.

Figure 15: Feeding options and sanitation at schools

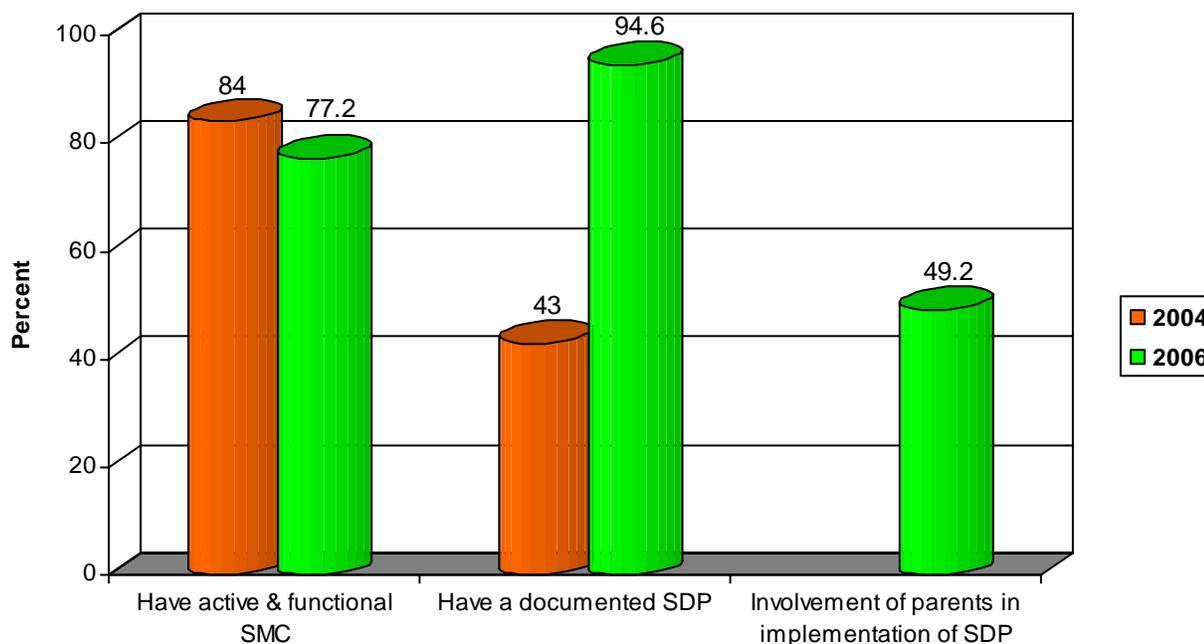


School Management and Community Involvement in Education

Head-teachers or their deputies were asked whether the schools had functional management committees and to confirm this, interviewers requested to view documentation, including lists of members and minutes of recent meetings. Close to eight out of every ten (77.2%, n=2,763) schools were reported to have active and properly functioning school management committees. This was not significantly different from the 2004 baseline finding where 84% (n=1,140) of the schools presented SMC members' lists to the interviewers.

Almost all the schools surveyed (n=2,763) were reported to have documented school development plans (**Figure 16**). Half of the schools reported that school management committees (SMCs) and PTAs had participated in the development and implementation of the school development plans. These are very significant findings ($p < 0.001$) compared to the 2004 baseline in which only 43% (n=620) of the schools had a school development plan. UPHOLD has contributed to this achievement through EMS training activities which encourage all school to revise or develop a school development plan.

Figure 16: School management and development



Head-teachers or their deputies were also asked whether parents had visited their schools in the past 12 months for several reasons, including meeting with school management, observing teaching in classes, or reviewing their children's performance with teachers. Half of the schools (53%) reported parents' visits at the school for at least one of these reasons in the past year. Eighty percent of the schools reported parents' visits to review children's performances; 64% to observe the teachers teaching in class, and 95% to meet with school management. These were all significant improvements ($p < 0.001$) compared to the 2004 baseline findings and reflect UPHOLD's contribution to education quality through EMS, TE, and CIE interventions.

An enabling environment for the delivery of effective education services is crucial for the proper functioning of schools. This was assessed through support to schools received from local authorities and the private sector in terms of grants, in-kind material support, or facilitation in implementation of local by-laws to improve education quality. Over half of the schools (54%) reported receiving grants, other non-financial support, or support in implementation of by-laws from the local council in the past 12 months. This was a significant improvement ($p < 0.001$) compared to the 2004 baseline finding of only 7% of schools reporting local council participation in education programs. The proportion of government-aided schools with evidence of private-sector involvement also slightly improved from 31% in 2004 to 35% in 2006.

Action-oriented meetings are a key tool that UPHOLD promotes to revitalize school-community partnerships for improving school environments for children and the quality of primary education in Uganda. In order to assess this effort, information was sought on whether schools held any action-oriented meetings in the past year (other than annual general meetings) that involved school management and parents or guardians

and whether the schools held open days in the past year. Seventy three percent (73%) of the schools reported holding at least one action-oriented meeting, while only 45% had held open days in the past 12 months. This assessment was not, however, done in the 2004 baseline survey.

Conclusions, Recommendations, and the Way Forward

The UPHOLD LQAS survey is conducted to monitor on-going activities and to provide a sense of direction for technical programs on an annual basis as opposed to waiting for the final program evaluation. LQAS also helps districts in evidence based decision-making and annual planning. Compared to other survey methodologies, LQAS is a quick and low-cost survey methodology which helps to give disaggregated results to existing administrative structures within the district. This also helps in identifying priority areas for interventions by directing resources where they are most needed.

Comparison of LQAS results with other studies

Interestingly, when UPHOLD results are compared with other partner results derived using the same or different survey methodologies, there are similar findings on most of the key indicators. In this report, comparisons are drawn using the Uganda Demographic and Health Survey (UDHS) preliminary report 2006, Uganda EPI Plus Coverage Survey 2005, the Uganda HIV/AIDS Control Project (UACP) LQAS survey 2006, as well as the Uganda HIV/AIDS Sero-Behavioral Survey 2004/05.

- As reported by the UPHOLD 2006 LQAS results, 31.4% of adults have ever tested for HIV/AIDS. This compares very well with the UACP LQAS survey 2006 which reported an average of 31.3%.¹³
- UPHOLD LQAS 2006 results reveal that 38.7% of the households had at least one mosquito bed net while the UDHS preliminary report reveals 34.3%.
- Looking at PMTCT results for both the UACP and UPHOLD LQAS surveys, 34.5% and 29.4% respectively have been reported from both surveys as the proportion of pregnant women who took an HIV test for PMTCT.
- UPHOLD 2006 results show that 53.2% of women with children under one year delivered from health units while the UDHS 2006 preliminary report revealed 41.1% and the UACP LQAS reported 57.6%.
- Both the Uganda HIV/AIDS Sero-Behavioral survey 2004/05 and UPHOLD LQAS 2005 survey reported that 15.2% and 15.8% respectively of households received care and support for a sick and bed-ridden person or someone who died after being sick for 3 months in last one year prior to the survey.
- The UPHOLD 2006 findings of 76.6% on the proportion of children under 5 years old who had fever in the previous two weeks prior to the survey who received recommended treatment within 24 hours compares well with 73% reported by the EPI Plus survey 2005.

¹³ UACP result recomputed to get average of 33.9% women and 28.6% men who reported testing for HIV.

- UPHOLD 2005 LQAS results show that 48.3% of pregnant women attended ANC at least 4 times during the last pregnancy and this improved to 53.1% in 2006. The EPI Plus 2005 result of 47% therefore compares very well with the UPHOLD LQAS 2005 result.
- UPHOLD result of 73.4% on children aged 12-23 months who received measles vaccination by age 12 months also compares very well with the EPI Plus 2005 results of 71.2%.

These comparisons therefore show that UPHOLD LQAS results compared to other national partner results and different survey methodologies derives results that are mostly of no significant difference. Therefore, one can conclude that the utilisation of UPHOLD's LQAS methodology leads to acceptable results.

Key Conclusions

HIV/AIDS

- Significant improvements were reported in HIV counseling and testing (18.7% to 28%) and PMTCT (18.9% to 26%) due to gender-based violence prevention programs, home-based HCT and increased community awareness among other interventions. However, test kits remained a big problem as half of the health facilities were found to have run out of HIV test kits within 3 months prior to the survey.
- Couples trained as trainers in "Be Faithful" by TUKO in 25 districts have replicated from 15 to 4,000 with evidence of reduction in gender-based violence (GBV) and this has also increased HCT and PMTCT service intake.
- Households with orphaned children and terminally ill persons have decreased because of the presence of free ARVs and other support mechanisms. Consequently material or other support for the terminally ill has decreased because more people that had been terminally ill can now fend for themselves as their lives have been improved.

Health

- Children falling sick from malaria have greatly reduced in number due to various interventions, including free ITN distribution, net re-treatment, as well as BCC messages on malaria prevention.
- Beyond the half of all women giving birth in health facilities, a bigger proportion of women give birth in their own or another person's home compared to those who delivered at a traditional birth attendant's home. The majority of women who did

not give birth in health units cited lack of transport at time of delivery as their biggest reason.

- If more mothers are encouraged to seek for PMTCT services, then there is a great likelihood that more deliveries will occur in health facilities.
- Increased UPHOLD support to national immunization programs has led to improved immunization services and consequently increased scores of under-five-year old children who have been vaccinated against different killer diseases.

Education

- Increased and regular school attendance has been influenced by the increased provision of packed lunches for children by their parents. Additionally, schools that have a meal option for those children who do not carry lunch from home is also another factor that influences regular school attendance.
- More children are bringing home homework and more are being assisted by their parents in doing it. This can be attributed to UPHOLD's Community Involvement in Education programs (CIE) which have helped to increase in parents' involvement in their children's school learning and other school-related affairs.
- The slight decrease in toilet coverage for schools that have separate latrines for both boys and girls may be attributed to the lack of sustainability and maintenance budgets or funding as well as the demand caused during the school peak hours of break and lunch time where both sexes are forced to share stances that are meant for different sex.
- Increased school management committee, PTA and local council involvement in education has strengthened schools including improving an enabling environment, among other facets.

Lessons Learned

The continuity of the LQAS exercise can only be ensured if districts and their program staff can be fully trained to understand and utilize the results that are generated by the survey in their annual planning.

District involvement in the planning and execution of LQAS activities promotes ownership of the activity. This has also helped to improve the partnership between districts and UPHOLD as some districts provided various resources during the data collection (i.e., umbrellas, cars, motorcycles etc.).

Challenges

UPHOLD was originally supporting its interventions in 20 districts countrywide but during 2005/06, the Ugandan Parliament went through a redistricting exercise. Some UPHOLD supported districts (Mbarara, Mubende, Rakai, Pallisa, Lira, Gulu, Arua, Kamuli, Katakwi, Luwero) were split into several districts thereby increasing the total number of UPHOLD-supported districts to 34. This inevitably increased the data collection costs by over 70%¹⁴ as each of the new 14 districts was handled as a different entity.

In newly created districts, UPHOLD had to contend with new participants who were not experienced in the data-collection process. With the exception of disaggregated results generated by the LQAS methodology through the collection of data by supervision area (SA), there was no baseline data for these newly created districts (lots). Therefore, comparisons for the 2006 survey results with the previous years can only be made by SAs (proxy) for these new districts.

The security situation in Northern Uganda has lately improved but nothing should be taken for granted. To reach certain parts of Northern Uganda, army clearance had to be sought and sometimes army convoys had to escort data collectors to their destinations. This stood as a serious tailback in the data collection process.

The rainy season was also another challenge as most districts experienced wet spells during the data collection exercise. This disrupted most of the slated plans as feeder roads became impassable and even



Survey teams sometimes got stuck in remote villages. Village residents were usually supportive, however, enabling them to reach the sampled households and facilities. Picture taken in Mayuge District.



Bicycles were sometimes handy in ferrying interviewers across flooded roads to reach sampled villages and households. Picture taken in Kaliro District.

¹⁴ The increase in proportion of survey costs does not include costs derived as a result of training new participants from both new and old districts.

households unreachable therefore increasing on the amount of time scheduled for certain individual district exercises.



Umbrellas were a great resource to enable interviewers easy access to sampled villages on time during the rainy season. Picture taken from Mubende District.

Recommendations and Way Forward

It is advisable to minimize the use of district department heads in the data collection process. Experience shows that junior district officers are more likely to be committed to the entire exercise and they work more steadfastly compared to their seniors. Most district department heads would like to participate in the exercise but they are extremely busy and likely to be performing other major district roles at the same time. Some ended-up withdrawing midway through the exercise when other important district demands arose.

Although dissemination of LQAS results is done at the district level, there is a need to help districts to utilize the knowledge gained from these annual LQAS survey exercises. They should be able to individually conduct surveys on subjects of interest not covered in the UPHOLD survey and use the information learned in the district planning. The result will be a clear demonstration of increased human capacity at district level. Furthermore, dissemination of results should be part of the routine support supervision to ensure that the lowest levels—such as health facilities—get feedback on their performance in order for them to address the areas of low coverage.

There is a need for increased partnerships at both district and national levels in using the LQAS methodology to bring down the costs of survey execution. This is because results from the LQAS survey compare favorably with those generated by other partners. Joint efforts in assessing program indicators at both district and national levels will further strengthen the coordination efforts in delivering services to the deserving population using the best possible resource mix.

References

Joseph Mbirizi, Nosa Orobato, Patricia David, Xavier Nsabagasani. *UPHOLD LQAS Survey Report 2004: Results from 20 Districts of Uganda*. August 2004.

Joseph Mbirizi, Nosa Orobato, Samson Kironde, Xavier Nsabagasani. *UPHOLD LQAS Survey Report 2005: Results from 20 Districts of Uganda*. August 2005.

Lemeshow S, Taber S. Lot quality assurance sampling: single and double-sampling plans. *World Health Statistics Quarterly* 44, 115-132

Martin Odiit, David Kaweesa, Charles Nkolo, *et al.* *LQAS Monitoring Report. Evaluation of the impact of interventions on HIV/AIDS-related knowledge, practices and coverage in 12 Districts of Uganda*. Uganda HIV/AIDS Control Project (MAP), September 2006

Ministry of Health. *Uganda HIV/AIDS Sero-Behavioral Study 2004-2005*

Ministry of Health and UNICEF. *Uganda EPI Plus Coverage Survey 2005: National Summary Report, 2006*

Uganda Bureau of Statistics, ORC Macro. *Uganda Demographic and Health Survey 2006 Preliminary Report, November 2006*

Appendices