



# Utilizing Evidence to drive Program Implementation

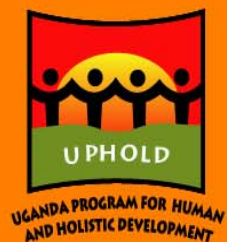
*LQAS surveys make a difference in district level planning in Uganda*

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*Uganda Program for Human and Holistic Development (UPHOLD)*

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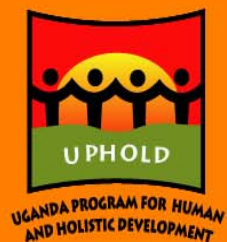




# Purpose of the Presentation

- To share with the audience the Lot Quality Assurance Sampling (LQAS) survey methodology
- Present some practical examples of LQAS application in the field
- To share lessons learned, challenges and conclusions from this experience





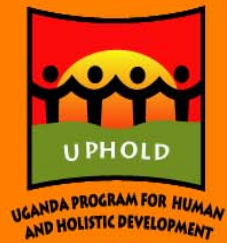
# What is LQAS?

## LQAS refers to Lot Quality Assurance Sampling

LQAS is a sampling method that:

- Can be used locally, at the level of a “supervision area,” to identify priority areas (e.g., county, sub-county) or indicators that are not reaching average coverage or an established benchmark
- Can provide an accurate measure of coverage or health system quality at a more aggregate level (e.g., program catchment area, district or refugee camp)
- Can enable targeting of interventions within a district





## About UPHOLD

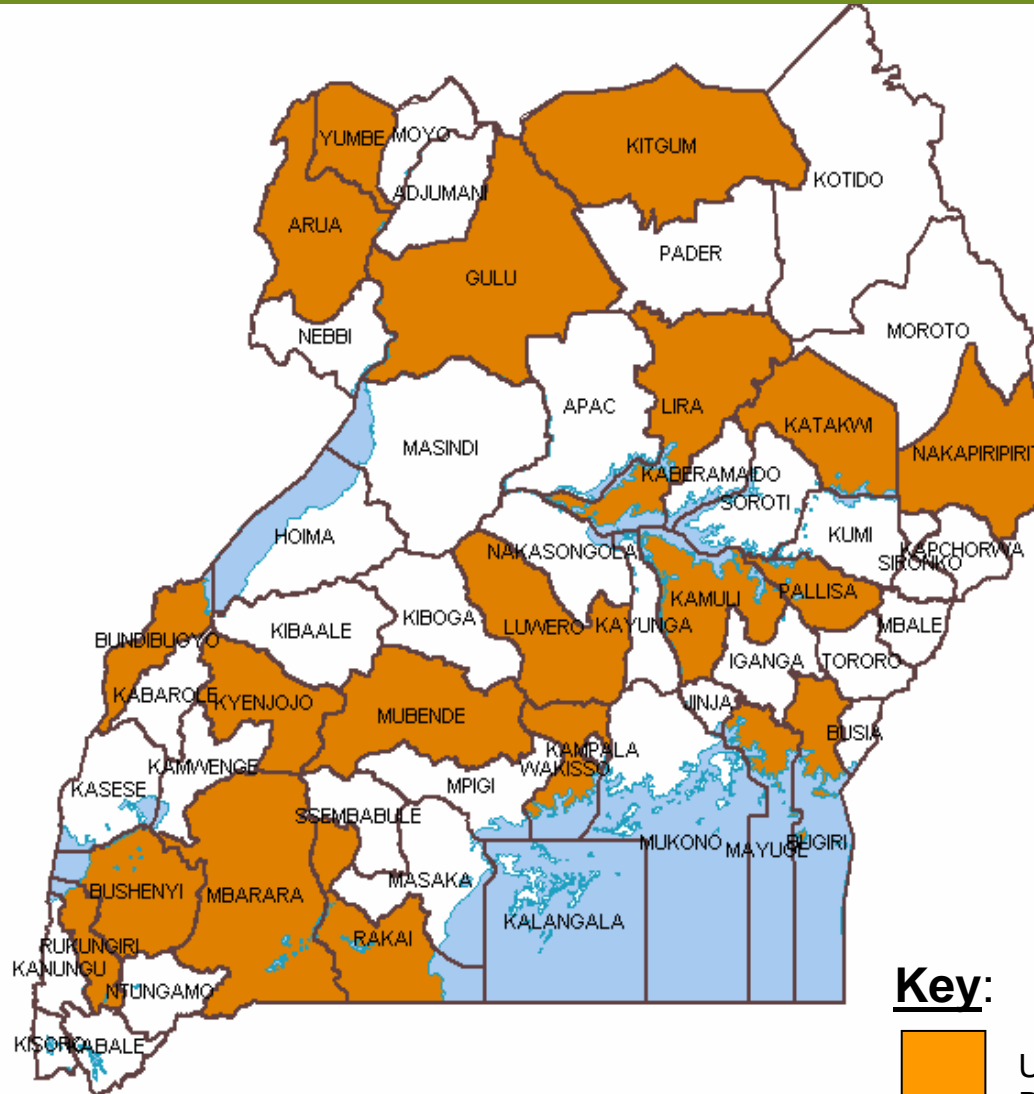
- \$96m USAID funded five-year bilateral project (Oct. 2002- Sept 2007) with GoU
- Currently operating in 34 districts (up from 20), covering 42% Uganda's population (~ 11.6m people)
- Supports interventions in three areas of **Education, Health** and **HIV/AIDS** through an integrated approach





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# UPHOLD's Geographical Coverage



**Key:**



UPHOLD Supported District

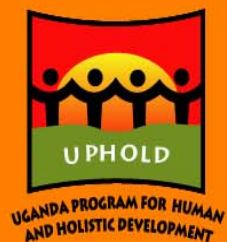


**USAID**  
FROM THE AMERICAN PEOPLE



The Republic of Uganda

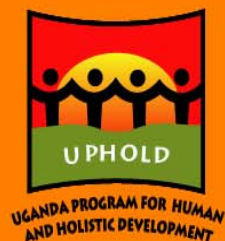




# The UPHOLD 'Information' Mandate

- Strengthen existing data collection and information systems for Grantees (LGs and CSOs)
- Build district capacities in planning and evidence-based decision-making by making accurate annual data available
- Utilize performance results to target interventions
- Document and share key lessons learned

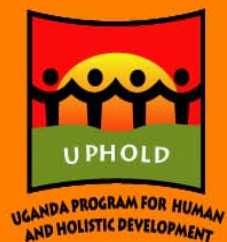




# LQAS is a simple, low cost random sampling methodology

- Originally developed in the 1920s to control the quality of output in industrial production processes
- Involves taking a small random sample of a manufactured batch (lot) and test the sampled items for quality
- If the number of defective items in the sample exceeds a pre-determined criteria (decision rule), then the lot is rejected
- The decision rule is based on the desired production standards and a statistically determined sample size
- 'n' is chosen so that the manager has a high probability of accepting lots that meet the quality standards and rejecting lots that fail to meet those standards





# Some Useful LQAS Definitions

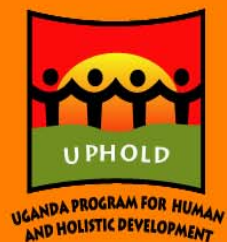
## Standard LQAS theory

## UPHOLD 'LQAS' Adaptation

<p><b>Production standard:</b> % of items that must “pass” before a lot is accepted</p>	<p><b>Coverage:</b> e.g., % of clients who received a service in a defined period of time</p>
<p><b>Production unit:</b> The machine or team that produced or assembled the lot</p>	<p><b>Supervision Unit:</b> The district where these services are delivered</p>
<p><b>Lot:</b> A batch of items produced in given time by the production unit</p>	<p><b>Supervision area:</b> A county or sub-county in a given district where services are being delivered</p>







# Implementation of LQAS in Uganda - I

- LQAS is done on an annual basis in UPHOLD supported districts
- Districts are divided into supervision areas
- For the conflict areas:
  - ✓ Military clearance and support is sought for security
  - ✓ Sampling follows original administrative structures before displacement
  - ✓ Within the IDP camps, households are identified according to the original village from which people came from

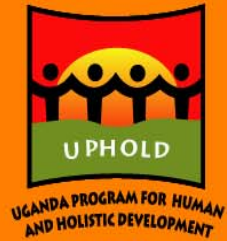




## Implementation of LQAS in Uganda - II

- ~ 200 District level Officials (including CDWs, DDHS, DEO and District Planning personnel) were trained for 2 weeks in the LQAS methodology in 2004
- 19 villages are sampled from each of the five 'Supervision Areas' in each district
- 5 households are sampled from each village and a different questionnaire administered to each of the sampled households (~12,300 households covered in last survey)
- Schools and Health Facilities also surveyed in Baseline (423 Health Units and 1,449 Schools)





# Data is Collected From...

- Households
- Schools
- Health Facilities

*School and Health facility Data is collected only for Baseline and End-of-Project Surveys*





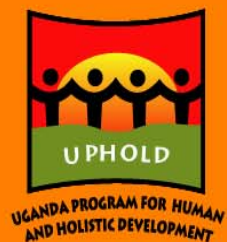
# Surveys cover Three Technical Areas

- Education
- Health (Child and Reproductive)
- HIV/AIDS

Data is collected from:

- ✓ Mothers of Children under 2 years
- ✓ Parents/Guardians of Children 2-5 Years
- ✓ Parents/Guardians of Children 6-14 Years
- ✓ Women (15-49 years) and Men (15-54 years)
- ✓ Heads of facilities or their designated deputies

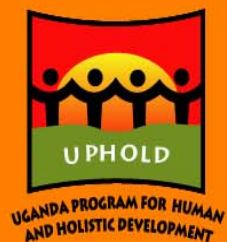




# Why use LQAS at district level?

- Low sample size needs (n=19 in most cases)
- Simple to apply yet has very specific conclusions
- District level people can be trained to entirely 'own' this methodology
- Provides high quality information at low & affordable cost
- Fast – 'supervision areas' are able to conduct self-evaluation and obtain results immediately after the survey
- Results are locally relevant and can be utilized in district level annual planning and decision-making





# How Households for Interview are identified

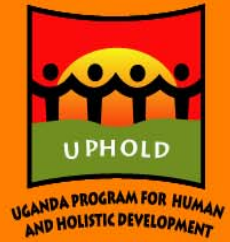
- Step 1. List Communities and Total Population
- Step 2. Calculate the Cumulative Population
- Step 3. Calculate the Sampling Interval
- Step 4. Choose a Random Number
- Step 5. Beginning with the random number, use the sampling interval to identify communities for the 19 sets of interviews





# Illustrative Results from Malaria Interventions in Bushenyi District





# What are the LQAS Principles?



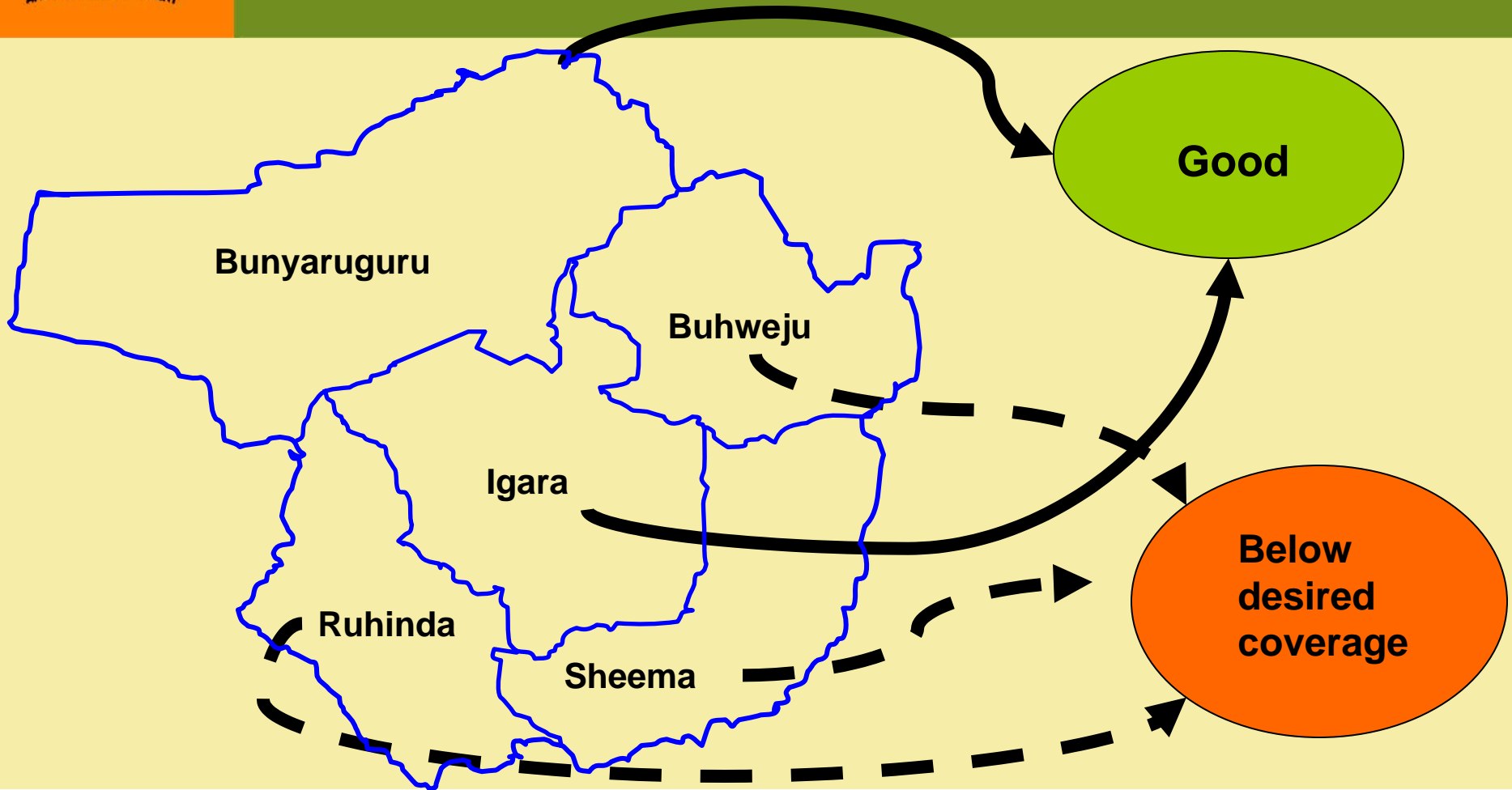
- Assume a program covers a whole district
- Each county is then called a 'supervision area' and district a 'supervision unit'
- LQAS would choose a minimum of 19 items (e.g. households, schools, health units) from each 'supervision area' in order to assess an indicator





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# What are the LQAS Principles?





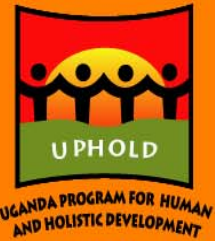
# Bushenyi had a problem of frequent Malaria Epidemics...

## Findings in 2004:

- Bed net coverage was very low in Bushenyi. The county with the lowest coverage was Buhweju
- Malaria upsurges and epidemics were more common in the same area

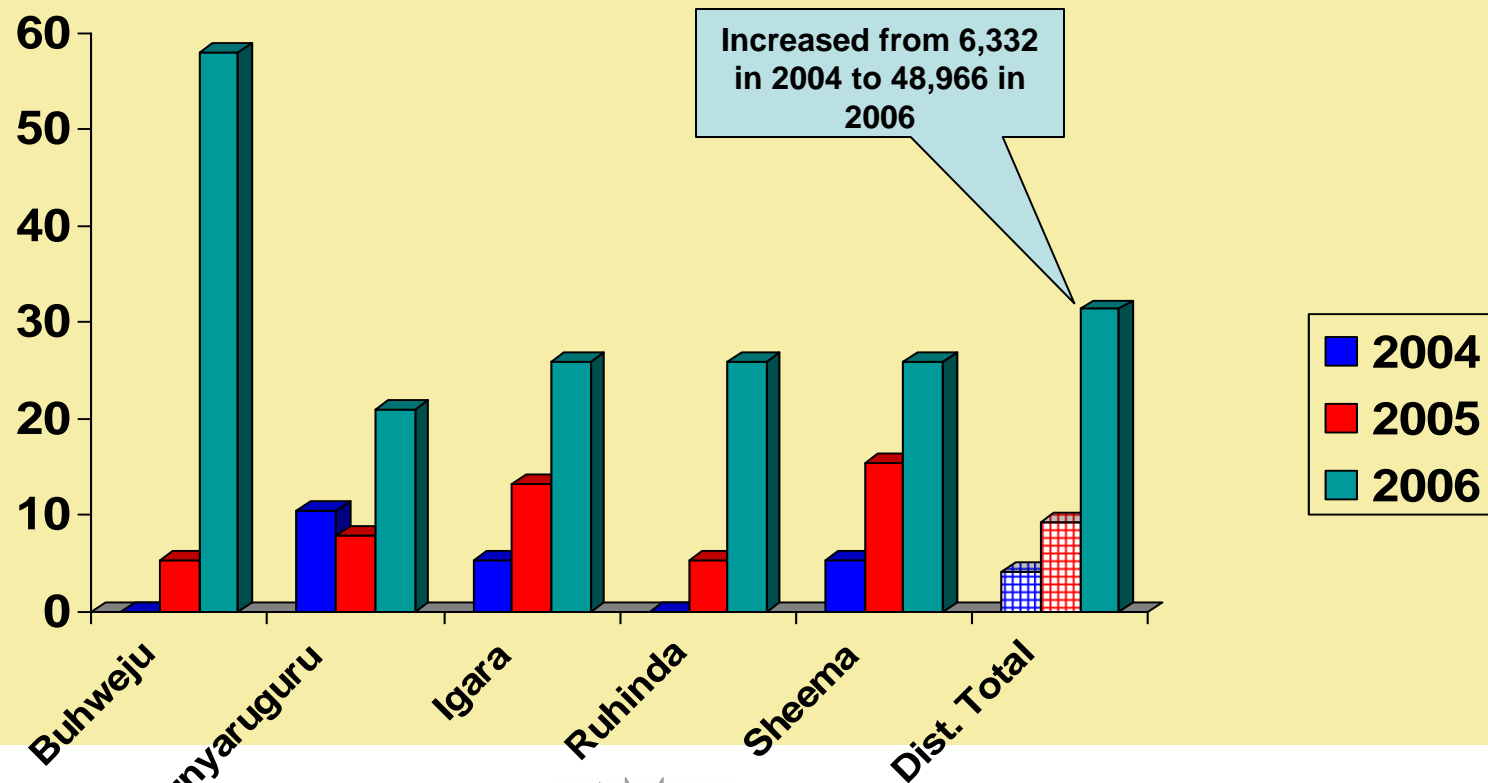
## Response:

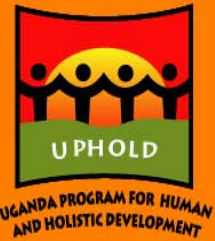
- UPHOLD provided 22,800 treated bed nets with Buhweju county being first priority. Over 60% of under-fives benefited in this county alone
- Indoor Residual Spraying was selectively done there
- Intensified community mobilization and sensitization on Malaria Control



# Progressively more children have slept under bed nets since 2004

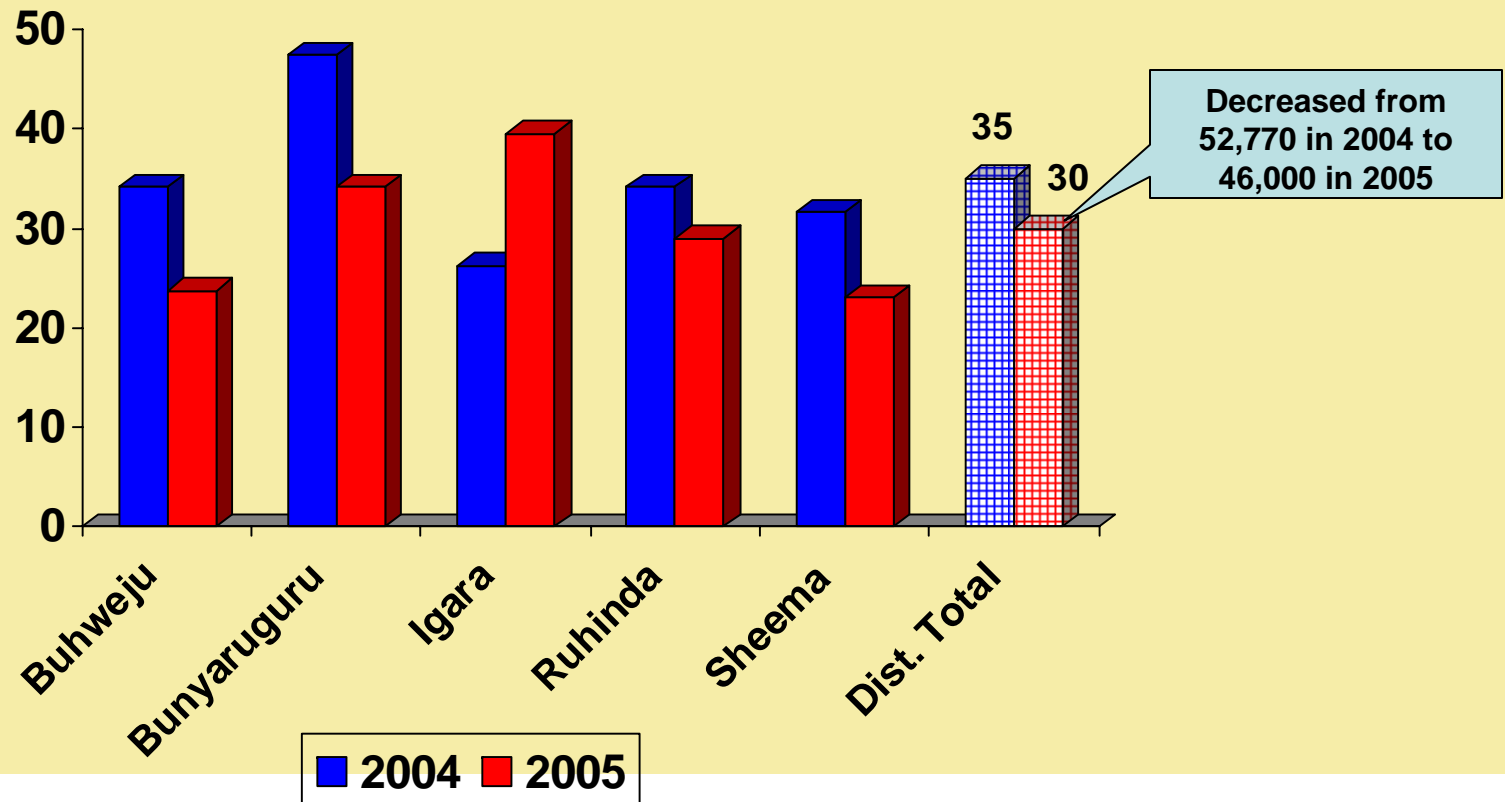
Percent of under-fives sleeping under a treated mosquito net in the previous night before survey

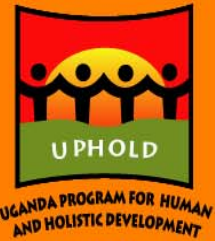




# Fewer Children under five are reported with fever

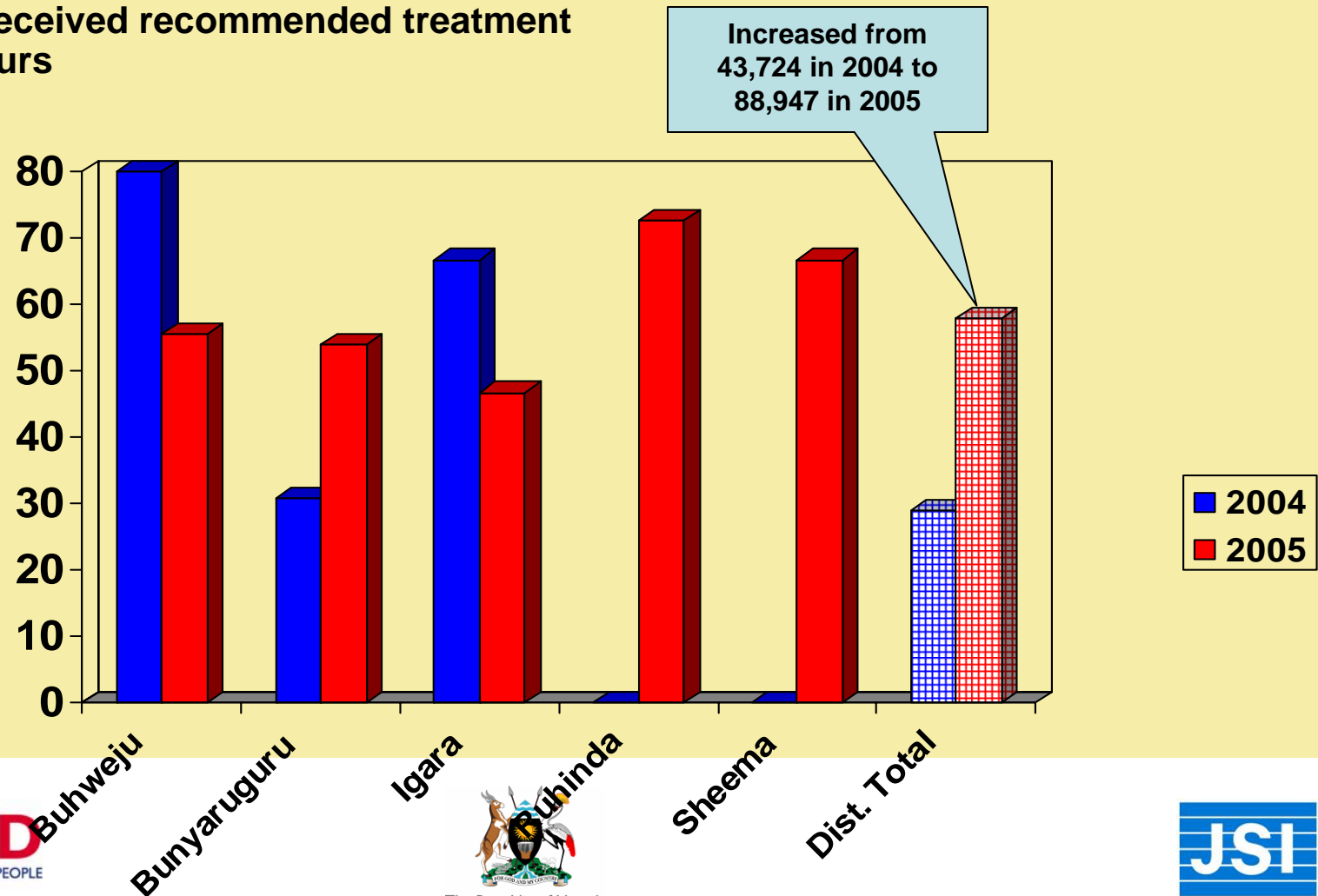
Percent of under-fives who had fever in the past two weeks preceding survey

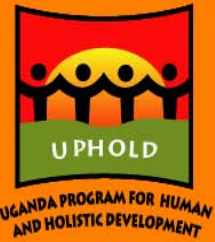




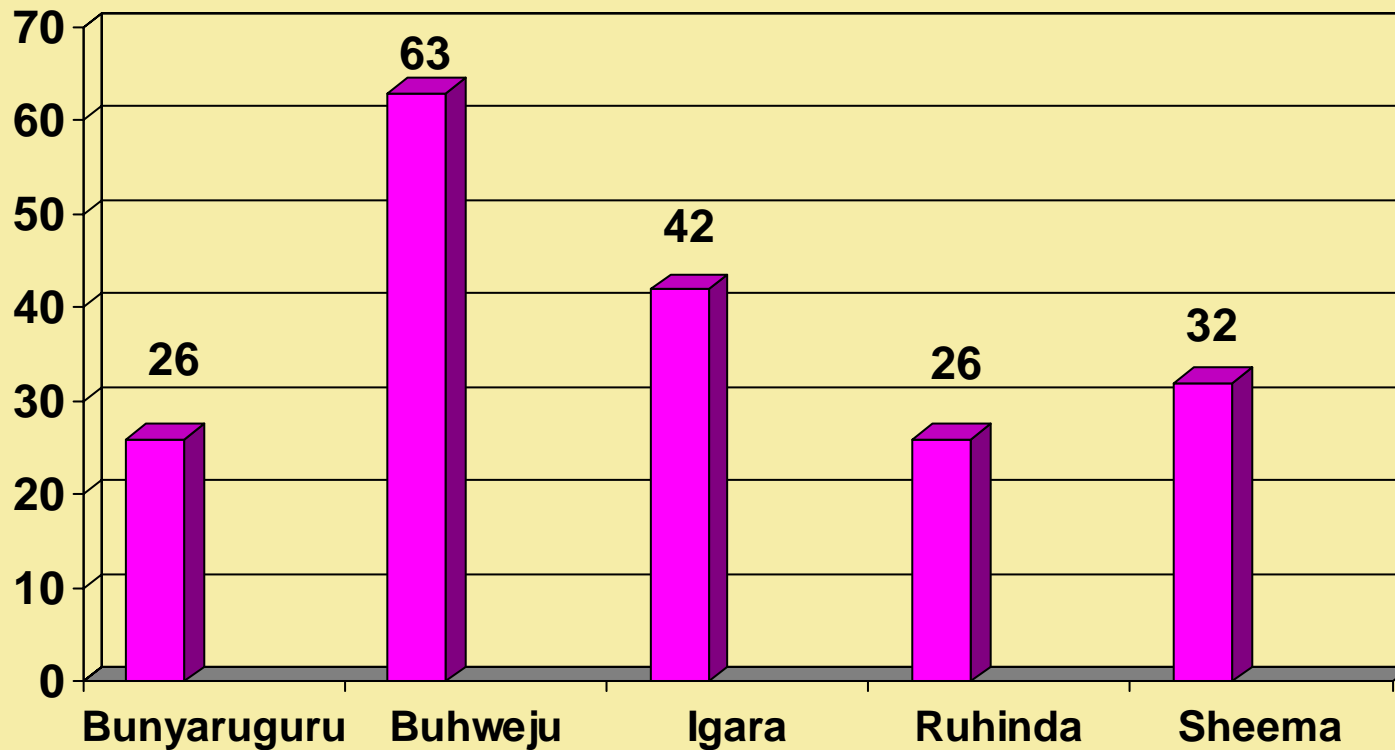
# More Children have access to timely treatment of fever

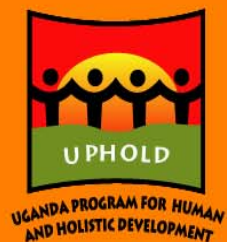
Percent of under-fives who had fever in past 2 weeks and received recommended treatment within 24 hours





# Proportion of households with nets in 2006 has increased due to interventions

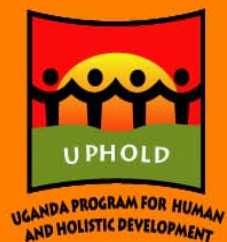




## Lessons learned - I

- Demand for localized population-based data by districts and sub-counties and CSOs for planning and decision-making is easily met by LQAS
- Method is good for monitoring short term programs (like most USAID Five Year Projects) that need to allocate resources appropriately and demonstrate effectiveness/impact
- Empowers community ownership and builds consensus during data collection and analysis of results



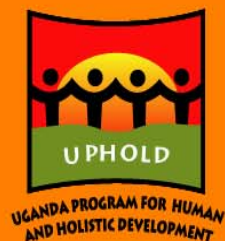


## Lessons learned - II

- UPHOLD has found no statistically significant differences in results generated using other sampling methodologies when comparing similar indicators in same localities
- LQAS is simple, robust, cost effective and generates timely data
- Innovation and adaptation can be applied to the methodology to fit contextual settings (e.g., the conflict districts in the North)



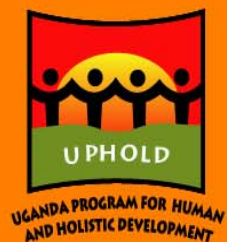




# Comparison of LQAS with other Survey Results

Comparison of UPHOLD Household survey with Other studies on selected indicators	LQAS (2004)	DHS (2001)	HMIS (2004)
% of births (last 2 years) in a health facility	41	36.6	38
% of births (last 5 years) in a health facility (DHS)			
% of under-fives who slept under an ITN last night	11.7	7.3	
Average months since last treatment of net	4.8	4.4	
% of children 12-23 months of age who received DPT3 by age of 12 months (card & mother's report)	45.0	42.0	78
% of children 12-23 months of age who received DPT3 (card & mother's report)	45.0	46.1	
% of men and women who have ever talked to their partners about protecting themselves from HIV/AIDS			
1. Women	62	62.7	
2. Men	78	84.2	

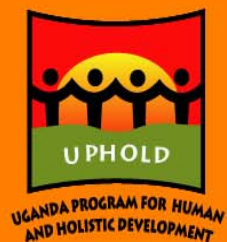




# Challenges

- Initial costs for training and capacity building may be quite high
- Being a relatively new methodology, there are concerns about the validity and reliability
- May require significant district personnel time and hence requires appropriate pre-planning
- Cannot answer the ‘why?’ Follow up studies are required to establish the reasons for low coverage/poor performance





# Acknowledgements

**UPHOLD would wish to thank the following for their contribution to this work**

- USAID for provision of funding for the Annual LQAS survey
- District Local Governments for participation in the surveys
- UNICEF for participation and funding in the 2005 Survey
- All respondents at household and facility level

