

Rukungiri District Community Knowledge and Practices LQAS Survey Report

Management Sciences for Health (STAR-E)

April 2011

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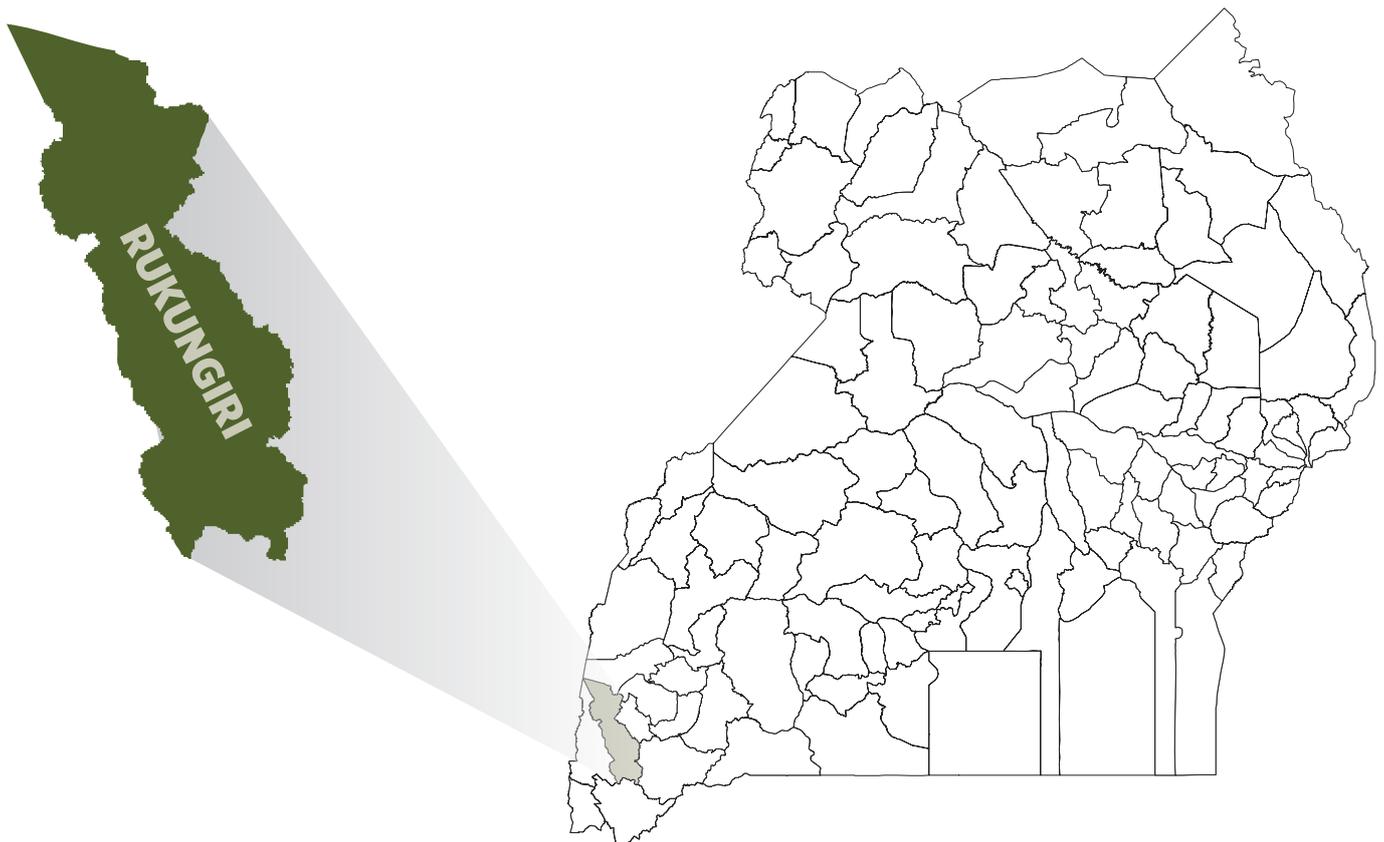
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RUKUNGIRI DISTRICT

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APRIL 2011





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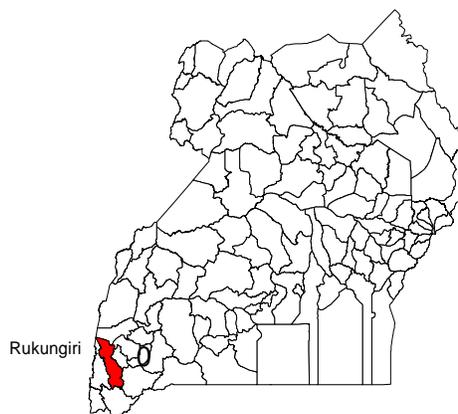


RUKUNGIRI DISTRICT

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APRIL 2011

Prepared by STAR- E LQAS



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Message from the Chief Administrative Officer

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IN ANY CORRESPONDENCE ON
THIS SUBJECT PLEASE QUOTE

REF: CR. 206/1



RUKUNGI DISTRICT LOCAL GOVERNMENT
MANAGEMENT SERVICES DIRECTORATE

P.O. Box 1
Rukungiri -Uganda.

26 May 2011

LQAS ENDORSEMENT MESSAGE FROM RUKUNGI DISTRICT ADMINISTRATION

While timely and up-to-date information is an essential element for district planning and monitoring service delivery, it is very often lacking for many reasons. The major reason for lack of information is shortage of human and financial resources to gather the necessary data as and when they are needed. I welcome the initiative taken by USAID in collaboration with the Government to support the strengthening of M&E system of Rukungiri District through training our people in the application of rapid community surveys. When the first community survey was done in Rukungiri we were able to obtain preliminary information on key health indicators immediately after the survey which we used for/during the formulation of the first ever, five year District Development Plan for the period 2010/11 – 2014/15, particularly enabling us to identify the problems/issues affecting Health service delivery and were able to come up with proper Interventions and or programmes of Action for implementation during the plan period, and we do hope the subsequent surveys will enable us to update the information, know the status and issues to solve at hand. This report, giving the district definitive information on the level of delivery of social services in the counties and Sub-Counties in Rukungiri District will guide us in directing the district resources towards improving the services in those poor performing areas in the district. We look forward to the next round of surveys and we commit ourselves to supporting them.

A handwritten signature in black ink, appearing to read 'Muhenda Rujumba', is written over a faint circular stamp.

Muhenda Rujumba
CHIEF ADMINISTRATIVE OFFICER
RUKUNGI DISTRICT LOCAL GOVERNMENT

CHIEF ADMINISTRATIVE OFFICER
RUKUNGI DISTRICT COUNCIL

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Abbreviations

AIDS	Acquired Immuno-Deficiency Syndrome
ANC	Antenatal care
CI	Confidence interval
DHS	Demographic Health Survey
DR	Decision rule
EGPAF	Elizabeth Glazer Pediatric AIDS Foundation
HCT	HIV counseling and testing
HIV	Human Immunodeficiency Virus
ITN	Insecticide treated nets
KPB	Knowledge, practices, and behavior
LC	Local Council
LQAS	Lot quality assurance sampling
MSH	Management Sciences for Health
MTCT	Mother to child transmission (of HIV)
NA	Not applicable
PMTCT	Prevention of mother to child transmission (of HIV)
SA	Supervision area
STAR-E	Strengthening TB and AIDS Response (project) in the Eastern Region
STAR-SW	Strengthening TB and AIDS Response (project) in the South Western Region
STI	Sexually transmitted infections
UBOS	Uganda Bureau of Statistics
USAID	US Agency for International Development

1. Introduction

Rukungiri district in South Western Uganda is bordered by Bushenyi District to the north and northeast, Ntungamo District to the southeast, Kabale District to the south, Kanungu District to the west and the Democratic Republic of the Congo to the northwest. The district is made up of eleven sub counties of, Buyanja, Bugangari, Bwambara, Nyakagyeme, Kebisoni, Ruhinda, Nyakishenyi, Buhunga, Nyarushangye, together with Western Division, Southern Division and Eastern Division. The district covers 1,524.28 square kilometres (588.5 sq miles), covering part of Lake Edward, 6.1% of the District area is open water and wetlands while 6.5% is forest reserve.

Rukungiri has a serene climate and environment. Average temperatures are about 15 °C to about 20 °C throughout the year.

The 2002 national census estimated the population of Rukungiri district at 308,700, with an annual population growth rate of 2.5%. In 2009 the population was estimated at 366,900 with a population density of 241 people per km² (624.2people per square mile).

2. Background to the survey

Rukungiri district carried out a community-based LQAS survey to assess the level of delivery of services for HIV/AIDS, TB, child health, reproductive health and malaria. The survey was conducted in November 2010 by the USAID funded STAR-SW project with technical support from the STAR-E project. The indicators assessed were selected in consultation with district managers as well as national program managers. The survey targeted orphans (5-17 years), the youth (15-24 years), women (15-49 years), men (15-54 years), mothers of babies under one year of age and mothers with babies between 12 and 23 months. The survey did not target pregnant women. Appendix 1 presents the list of indicators assessed by the survey.

Questionnaires were developed for each target group in consultation with various stakeholders at national and district levels to ensure conformity with national surveys such as the Demographic and Health Survey (DHS) and international survey requirements. Key terms and phrases in the questionnaires were translated into Rukiga and Runyankole language to allow uniform translation to, and understanding of, the local language phrases during face-to-face interviews in the communities.

This report presents district results based on “cleaned” data sets on those indicators that could not be reliably reported on using the hand tabulation process. Preliminary results were available to the district within a week of the end of the data collection exercise. Those results were obtained through hand tabulation by the district workers who had collected the data.

3. Selection of Interview Villages

The UBOS 2009 list of villages with corresponding number of households was used as a sampling frame. The district was partitioned by the district managers into five supervision areas (SAs) with STAR-E LQAS’ guidance. The SAs were non-overlapping and had a programmatic link to supervisory roles in the district.

A random sample of 19 villages was selected from each SA using the probability proportional to size (PPS) sampling technique. The randomly selected villages were verified by the district to confirm their existence and correcting the misspellings of village names.

4. Selection of Households and Respondents

A starting household for conducting the interview was randomly selected using, as far as possible, up-to-date LC1 household registers. In situations where it was not possible to establish such a list of households, community maps were used to partition the village into small sections with evenly distributed known household sizes, with one section then randomly selected and a household list

developed for the selected village section. This list would form a sampling frame from which a starting household would be identified at random.

A randomly selected starting household was used to minimize sampling errors. Movement from household to household followed specific instructions. Households were judged as nearest to each other by the distance *walked* from door to door.

Eligible respondents for the six target groups in a household were listed and one randomly selected. If the selected respondent qualified for more than one category, he/she was randomly assigned to one target group for interview. *Only one interview was conducted in any household.* Identification of other eligible respondents would continue in the households nearest to the front door of the previous interview until all the six categories of respondents were interviewed in each sampled village.

5. Data Collection

The data collection exercise was carried out in one week in November 2010 immediately after a week's training in the LQAS methodology and data collection tools. Each SA had a team of two data collectors and one supervisor. Community leaders supported data collectors in locating the villages and households. Data were collected from 19 respondents for each target population in each supervision area. 95 respondents were interviewed from each target group for the entire district. Apart from the orphans aged 5-12 years where caregivers were interviewed, the rest of the questionnaires were administered directly to the respondents.

6. Findings

Rukungiri district is comprised of five supervision areas of: Bugangari & Bwambara, Ruhinda & Buhunga, Nyakagyeme & Rukungiri Municipality, Buyanja / Kebisoni and Nyakishenyi / Nyarushanje. Since Rukungiri district had not set any targets for the assessed indicators, decisions on the level of delivery of services in the SAs were based on district average coverage for each indicator. The table in Appendix 2 was, therefore, used to determine the thresholds for each indicator.

The *thresholds* are based on the sample size (in this case 19 for each target group in each SA), the district average for the indicator estimate (20%, 30%, etc.) and a precision of the indicator estimate of 92%. Each district indicator average is given with a 95% confidence interval (CI).

The LQAS survey enables identification of SA that may be below the benchmark (in this case the district average) which are "red flagged" for special attention. Buyanja / Kebisoni was the most flagged supervision area for the indicators accessed well as Bugangari & Bwambari had 2 indicators flagged.

Table 1: Number of indicators below threshold by service and supervision areas (counts are pooled for target groups)

Service areas	Supervision areas					Indicators		
	Bugangari & Bwambara	Ruhinda & Buhunga	Nyakagyeme & Rukungiri Municipality	Buyanja / Kebisoni	Nyakishenyi / Nyarushanje	Flagged	Total	Percent flagged
HCT	2	6	0	12	0	20	140	14.3
PMTCT	0	3	0	2	1	6	80	7.5
HIV KPB	0	0	5	2	2	9	105	8.6
STI	0	1	0	7	1	9	100	9.0
TB	0	3	2	7	2	14	75	18.7
Malaria	0	4	1	1	0	6	40	15.0

RH/FP	3	0	0	0	0	3	20	15.0
Child survival	0	0	0	1	2	3	10	30.0
Sanitation	0	0	0	0	5	5	25	20.0
Total number of red flags	5	17	8	32	13	75	595	12.6

*Counts are pooled for the target group

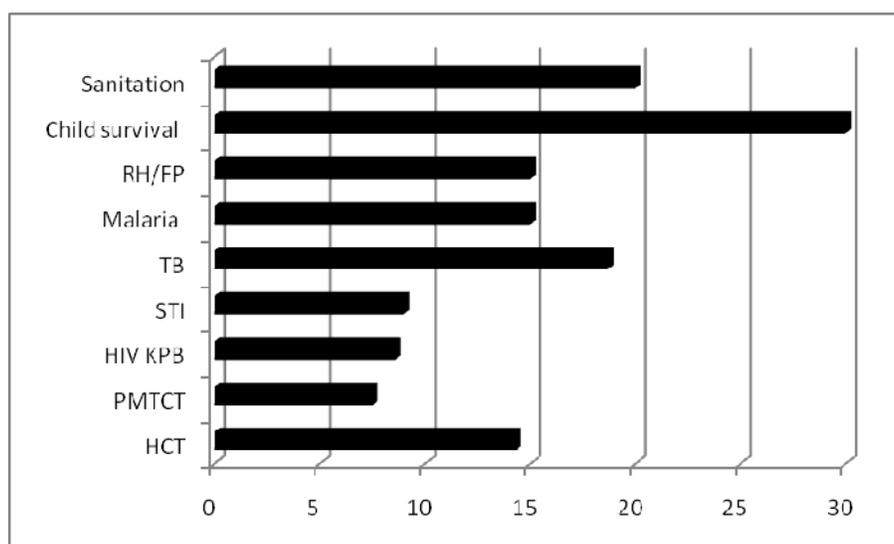


Figure 1: Percent of indicators below threshold out of the total indicators for the service area

In the following results tables, supervision areas with indicators below thresholds are marked by an asterisk (*). Thresholds of indicators with a district survey target population average below 20% are marked as “not applicable” (NA).

6.1. HIV counseling and Testing (HCT)

Figure 2 shows the distribution of flagged indicators for HCT in Rukungiri district SAs. Tables 2 – 10 gives survey results regarding of knowledge and practices in HIV Counseling and Testing (HCT) across the 5 SAs in the district.

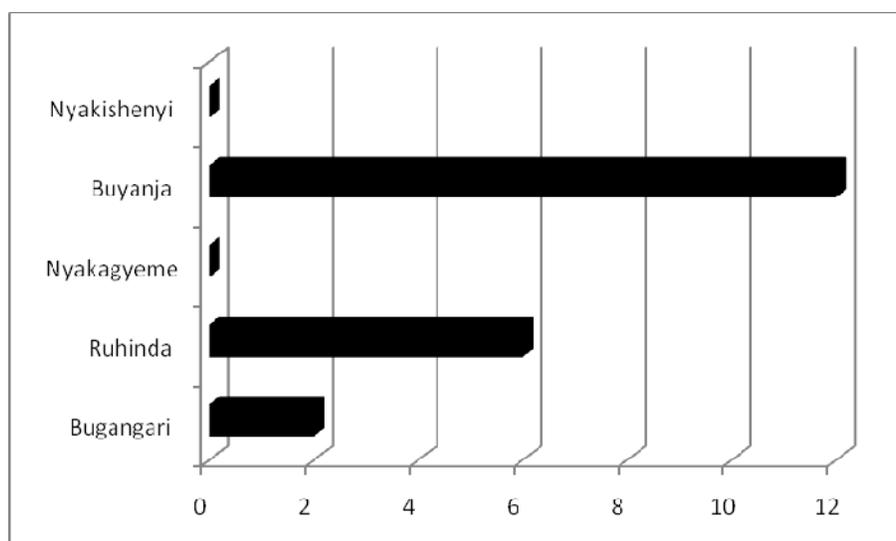


Figure 2: Number of indicators below thresholds for HCT

Table 2: Individuals who know where they can be tested for HIV

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	18	18	19	19	16
Ruhinda & Buhunga	12*	15	16	13*	14*
Nyakagyeme & Rukungiri Municipality	19	19	19	19	19
Buyanja / Kebisoni	18	17	18	19	17
Nyakishenyi / Nyarushanje	16	16	17	18	19
Average coverage (95% CI)	87.4 (80.6-94.2)	89.5 (83.2-95.8)	93.7 (88.7-98.6)	92.6 (87.3-97.8)	89.5 (83.2-95.8)
Threshold	15	15	16	16	15
Number of SAs below threshold	1	0	0	1	1

Table 2 shows that there is a very high level of knowledge of where HIV counseling and testing services can be found.

Table 3: Individuals who know two or more benefits of HCT

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	13	15	13	15	14
Ruhinda & Buhunga	12	11	10	12	8*
Nyakagyeme & Rukungiri Municipality	16	16	19	18	18
Buyanja / Kebisoni	7*	6*	8*	9*	9*
Nyakishenyi / Nyarushanje	16	15	17	16	18

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0- 11 months)	Mothers of children (12- 23 months)
Average coverage (95% CI)	67.4 (67.8-76.9)	66.3 (56.6-75.9)	70.5 (61.2-79.8)	73.7 (64.7-82.7)	70.5 (61.2-79.8)
Threshold	11	11	12	12	12
Number of SAs below threshold	1	1	1	1	2

There were little variations on levels of knowledge of HCT benefits among the supervision areas. Lack of knowledge of HCT benefits was more prominent in Buyanja / Kebisoni SA among all categories and in Ruhindi & Buhunga SA among mothers of children 12-23 months as shown in Table 3.

Table 4: Individuals who have ever been counseled and tested for HIV

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	7	11	16
Ruhinda & Buhunga	6	6	12
Nyakagyeme & Rukungiri Municipality	8	11	15
Buyanja / Kebisoni	4	5*	10*
Nyakishenyi / Nyarushanje	5	8	13
Average coverage (95% CI)	31.6 (22.1-41.1)	43.2 (33.0-53.2)	69.5 (60.1-78.9)
Threshold	4	6	11
Number of SAs below threshold	0	1	1

Table 5: Individuals who have ever been counseled, tested and received their HIV test results

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	6	10	16
Ruhinda & Buhunga	6	6	12
Nyakagyeme & Rukungiri Municipality	7	10	13
Buyanja / Kebisoni	4	5	10*
Nyakishenyi / Nyarushanje	4	7	12
Average coverage (95% CI)	28.4 (19.2-37.6)	40.0 (29.4-40.3)	66.3 (56.6-75.9)
Threshold	3	5	11
Number of SAs below threshold	0	0	1

Buyanja / Kebisoni SA was below the district average threshold for accessing HCT services among the women and men and again among women for accessing HCT services and receiving results for this indicator as shown in Table 4 and Table 5.

Table 6: Individuals who were counseled and tested for HIV in the past 12 months

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	3	5	6
Ruhinda & Buhunga	5	2	8
Nyakagyeme & Rukungiri Municipality	3	4	9
Buyanja / Kebisoni	3	2	5*
Nyakishenyi / Nyarushanje	3	3	13
Average coverage (95% CI)	17.9 (10.0-25.7)	16.8 (9.2-24.5)	43.2 (33.0-53.2)
Threshold	1	1	6
Number of SAs below threshold	0	0	1

Table 6 shows that Buyanja / Kebisoni SA was below the district average threshold among women with poor results for history of HIV counseling and testing.

Table 7: Individuals who were counseled and tested for HIV in the past 12 months and know their HIV results

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	3	5	6*
Ruhinda & Buhunga	3	2	9
Nyakagyeme & Rukungiri Municipality	2	4	11
Buyanja / Kebisoni	3	2	6*
Nyakishenyi / Nyarushanje	2	3	13
Average coverage (95% CI)	13.7 (6.6-20.7)	16.8 (9.2-24.5)	47.4 (37.1-57.6)
Threshold	NA	1	7
Number of SAs below threshold	0	0	2

The results in Table 7 show a possible improvement in the 12 months prior to the survey, completion of the HIV counseling, testing and informing the clients of their results compared with the results in Table 5. The women of Bugangari & Bwambara and Buyanja / Kebisoni SA were below the district average threshold.

Table 8: Mothers who were counseled and received an HIV test during the last pregnancy and know their results

Supervision Areas	Mothers of children (0-11 months)
Bugangari & Bwambara	13*
Ruhinda & Buhunga	16
Nyakagyeme & Rukungiri Municipality	17
Buyanja / Kebisoni	15
Nyakishenyi / Nyarushanje	17

Supervision Areas	Mothers of children (0-11 months)
Average coverage (95% CI)	82.1 (74.3-89.9)
Threshold	14
Number of SAs below threshold	1

The survey showed that expecting mothers in Rukungiri district have been counseled and tested for HIV and know their test results as shown in Table 8.

Table 9: Individuals who have ever tested for HIV and received their results as a couple

Supervision Areas	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	3	3
Ruhinda & Buhunga	1	2
Nyakagyeme & Rukungiri Municipality	3	5
Buyanja / Kebisoni	2	2
Nyakishenyi / Nyarushanje	2	3
Average coverage (95% CI)	11.6 (5.0-18.1)	15.8 (8.3-23.3)
Threshold	NA	1
Number of SAs below threshold	0	0

The good delivery of HCT services to pregnant women is not extended to the general public in any of the supervision areas among the men with an extremely low percentage among the women of the district (Table 9).

Table 10: Individuals who were tested for HIV and received their results and disclosed to their spouse/partner

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	6	18	15
Ruhinda & Buhunga	6	5*	8*
Nyakagyeme & Rukungiri Municipality	6	9	15
Buyanja / Kebisoni	3	6*	9*
Nyakishenyi / Nyarushanje	3	7	13
Average coverage (95% CI)	25.3 (16.4-34.2)	47.4 (37.1-57.5)	63.2 (63.2-73.1)
Threshold	3	7	10
Number of SAs below threshold	0	2	2

More than half the women and about half of the men who tested for HIV disclosed the results to their partners (Table 10).

Buyanja/Kebisoni SA performed poorly compared to other SAs in the district in terms of HCT knowledge and practices across all target population groups. Similarly, Ruhinda & Buhunga SA performed poorly among the youth, women and mothers of young babies while Bugangari & Bwambara SA performed poorly among women and mothers of under one year old babies. Focus

should be placed in improving performance among the poor performing target populations of Buyanja / Kebisoni, Ruhinda & Buhunga and Bugangari & Bwambara.SAs

6.2. PMTCT knowledge and practices

Tables 11 – 14 give the details of the results for PMTCT knowledge and practices in Rukungiri district. Figure 3 shows that three of the five SAs had below district average performance for PMTCT across target groups.

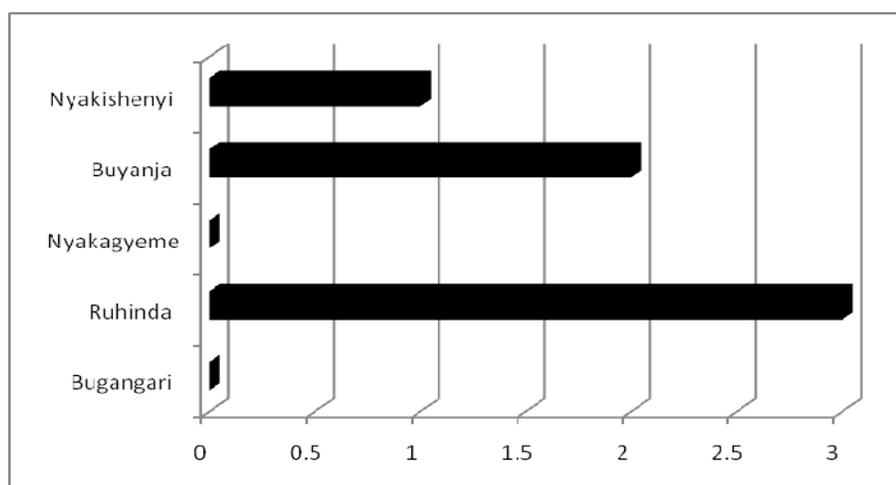


Figure 3: Number of flagged SAs for PMTCT

Table 11: Individuals who know all 3 ways when HIV transmission occurs from an infected mother to child

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	0	0	0	0	1
Ruhinda & Buhunga	0	0	0	0	0
Nyakagyeme & Rukungiri Municipality	2	2	1	2	3
Buyanja / Kebisoni	0	0	0	0	0
Nyakishenyi / Nyarushanje	1	0	5	1	2
Average coverage (95% CI)	3.2 (0.0-6.7)	2.1 (0.0-5.0)	6.3 (1.3-11.3)	3.2 (0.0-6.7)	6.3 (1.3-11.3)
Threshold	NA	NA	NA	NA	NA
Number of SAs below threshold	0	0	0	0	0

Table 11 shows the poor level of knowledge of HIV transmission from an infected mother to child in all target populations. All supervision areas for this indicator are a priority in Rukungiri district.

Table 12: Individuals who know at least two key actions that reduce MTCT of HIV

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	8	10	12	16	14
Ruhinda & Buhunga	11	8	8	11	6*
Nyakagyeme & Rukungiri Municipality	7	8	11	11	8
Buyanja / Kebisoni	8	3*	8	8*	9
Nyakishenyi / Nyarushanje	9	5	12	17	13
Average coverage (95% CI)	45.3 (35.1-55.4)	35.8 (25.9-45.6)	53.7 (43.3-63.8)	66.3 (56.6-75.9)	52.6 (42.4-62.8)
Threshold	7	5	8	11	8
Number of SAs below threshold	0	1	0	1	1

Knowledge on how HIV transmission from mother to child can be reduced is low in Buyanja / Kebisoni SA among the men and mothers of children 0-11 months while in Ruhinda & Buhunga SA, the mothers of children 12-23 months need education on how vertical transmission of HIV can be reduced (Table 12).

Table 13: Individuals who know where they can get information and services to reduce the risk of HIV MTCT

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	18	18	18	19	18
Ruhinda & Buhunga	14*	12	13	16	15*
Nyakagyeme & Rukungiri Municipality	16	15	18	19	19
Buyanja / Kebisoni	15	13	14	19	18
Nyakishenyi / Nyarushanje	18	9*	13	19	17
Average coverage (95% CI)	85.3 (78.0-92.5)	70.5 (61.2-79.8)	80.0 (71.8-88.2)	96.8 (93.2-100)	91.5 (85.8-97.3)
Threshold	15	12	13		16
Number of SAs below threshold	1	1	0	0	1

Table 13 shows that the people in Rukungiri district know where information on reduction of HIV MTCT can be obtained in spite of the youth and mothers of children 12-23 months and men in Ruhinda & Buhunga and Nyakishenyi / Nyarushanje SAs respectively were below the district average threshold.

Table 14: Mothers of children (0-11 months) who were counseled for PMTCT services during last pregnancy

Supervision Areas	Mothers of children (0- 11 months)
Bugangari & Bwambara	15

Ruhinda & Buhunga	13
Nyakagyeme & Rukungiri Municipality	13
Buyanja / Kebisoni	15
Nyakishenyi / Nyarushanje	16
Average coverage (95% CI)	75.8 (67.0-84.5)
Threshold	13
Number of SAs below threshold	0

Knowledge of ways when HIV transmission occurs from an infected mother to child is extremely low in Rukungiri across all survey target groups in all supervision areas. Ruhinda & Buhunga and Buyanja / Kebisoni SAs tended to have below average levels of knowledge on prevention of HIV mother to child transmission especially among the men and mothers of young children. Although the survey results show that not all recently pregnant women were counseled on how to prevent HIV vertical transmission, nearly 76% were counseled as shown in Table 14.

6.3. HIV/AIDS knowledge and sexual behavior

Tables 15 - 21 show details of the survey results for HIV/AIDS knowledge and sexual behavior. Figure 4 shows that apart from Ruhinda & Buhunga and Bugangari & Bwambara, the remaining three SAs had a red flag on this service area for at least one target group.

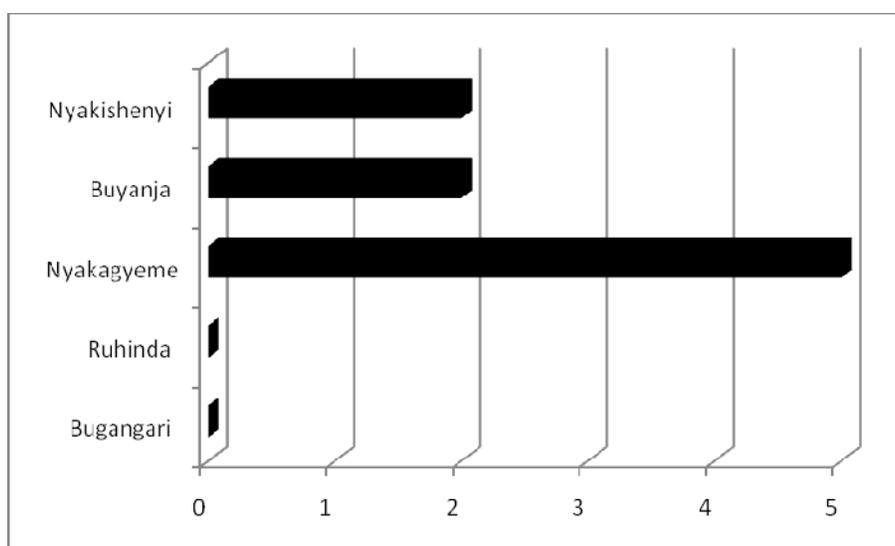


Figure 4: Number of flagged SAs for HIV/AIDS knowledge and sexual behavior

Table 15: Individuals who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0- 11 months)	Mothers of children (12- 23 months)
Bugangari & Bwambara	11	8	6	7	6
Ruhinda & Buhunga	9	11	7	6	2
Nyakagyeme & Rukungiri Municipality	5	6	1*	1*	4
Buyanja / Kebisoni	3*	5	3	4	5

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0- 11 months)	Mothers of children (12- 23 months)
Nyakishenyi / Nyarushanje	6	3*	7	10	5
Average coverage (95% CI)	35.8 (25.9-45.6)	34.7 (25.0-44.5)	25.3 (16.4-34.2)	29.5 (20.1-38.8)	23.2 (14.5-31.8)
Threshold	5	4	3	3	2
Number of SAs below threshold	1	1	1	1	0

The survey population in Rukungiri district demonstrated very poor knowledge of ways of preventing sexual transmission of HIV, and the majority do not reject major misconceptions about HIV transmission (Table 15). Nyakagyeme & Rukungiri Municipality, Buyanja / Kebisoni and Nyakishenyi / Nyarushanje each had at least one target group below average except for mothers with babies 12-23 months.

Table 16: Individuals who know at least two ways of preventing sexual transmission of HIV

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0- 11 months)	Mothers of children (12- 23 months)
Bugangari & Bwambara	14	15	9	12	9
Ruhinda & Buhunga	15	18	9	12	6
Nyakagyeme & Rukungiri Municipality	9	8*	5*	2*	7
Buyanja / Kebisoni	7*	12	8	11	9
Nyakishenyi / Nyarushanje	12	12	11	13	9
Average coverage (95% CI)	60.0 (49.9-70.0)	68.4 (58.9-77.9)	44.2 (34.1-54.4)	52.6 (42.4-62.8)	42.1 (31.9-52.2)
Threshold	9	11	6	8	6
Number of SAs below threshold	1	1	1	1	0

Table 16 shows that over 40% of the people in all target groups know at least two ways of preventing sexual transmission of HIV. There are, however, supervision areas where knowledge is below par for example in Nyakagyeme & Rukungiri Municipality SA among the men, women and mothers of very young children 12-23 and also in Buyanja / Kebisoni SA among the youth.

Table 17: Individuals who have ever used a condom when having sexual intercourse

Supervision Areas	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)
Bugangari & Bwambara	8	3	2
Ruhinda & Buhunga	6	4	3
Nyakagyeme & Rukungiri Municipality	10	3	5
Buyanja / Kebisoni	2*	2	6
Nyakishenyi / Nyarushanje	7	4	4
Average coverage (95% CI)	37.5 (27.2- 47.8)	18.6 (10.2- 27.0)	21.1 (12.7 – 29.4)
Threshold	5	1	2

Number of SAs below threshold	1	0	0
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Condom use is extremely low in Rukungiri district as shown in Table 17. Authorities need to identify reasons for the low condom use since this is a core HIV prevention strategy.

Table 18: Individuals who had sex with only one sexual partner in the last 12 month

Supervision Areas	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	16	14*
Ruhinda & Buhunga	15	16
Nyakagyeme & Rukungiri Municipality	15	16
Buyanja / Kebisoni	15	19
Nyakishenyi / Nyarushanje	15	17
Average coverage (95% CI)	80.0 (70.5-87.5)	86.3 (77.7-92.4)
Threshold	13	15
Number of SAs below threshold	0	1

Table 19: Individuals who have had sex with one sexual partner in last 12 months and report using a condom at last sexual intercourse

Supervision Areas	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	2	2
Ruhinda & Buhunga	5	1
Nyakagyeme & Rukungiri Municipality	2	0
Buyanja / Kebisoni	3	0
Nyakishenyi / Nyarushanje	2	1
Average coverage (95% CI)	17.1 (8.7-25.4)	4.9 (0.1-9.7)
Threshold	NA	NA
Number of SAs below threshold	NA	NA

The information on declared sexual behavior, Table 19, should be interpreted cautiously.

Table 20: Individuals who perceive low or no risk of getting HIV/AIDS infection

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	8	3	2
Ruhinda & Buhunga	8	1	2
Nyakagyeme & Rukungiri Municipality	7	4	2
Buyanja / Kebisoni	7	1	1
Nyakishenyi / Nyarushanje	11	2	3
Average coverage (95% CI)	43.2 (33.0-53.3)	11.6 (5.0-18.1)	10.5 (4.2-16.8)
Threshold	6	NA	NA
Number of SAs below threshold	0	0	0

Risk perception for HIV infection is extremely low among the men and women

Table 21: Sexual behavior and circumcision among the youth

Supervision Areas	Youth (15-24 yrs) who		
	initiated intercourse before 15yrs	know at least three correct steps on how to use a condom	are circumcised
Bugangari & Bwambara	11	2	6
Ruhinda & Buhunga	6	1	7
Nyakagyeme & Rukungiri Municipality	8	3	9
Buyanja / Kebisoni	6	0	3
Nyakishenyi / Nyarushanje	4*	1	3
Average coverage (95% CI)	36.8 (27.0-46.7)	7.4 (2.0-12.7)	29.5 (20.1-38.8)
Threshold	5	NA	3
Number of SAs below threshold	1	0	0

The district authorities need to reinforce proper condom use and circumcision strategies among all population groups.

6.4. Sexually Transmitted Infections (STI) knowledge

Tables 22 – 25 show survey results on knowledge of sexually transmitted infections (STIs). Figure 5 shows only two SAs: Nyakagyeme & Rukungiri Municipality and Bugangari & Bwambara had no groups whose knowledge about STIs was under par.

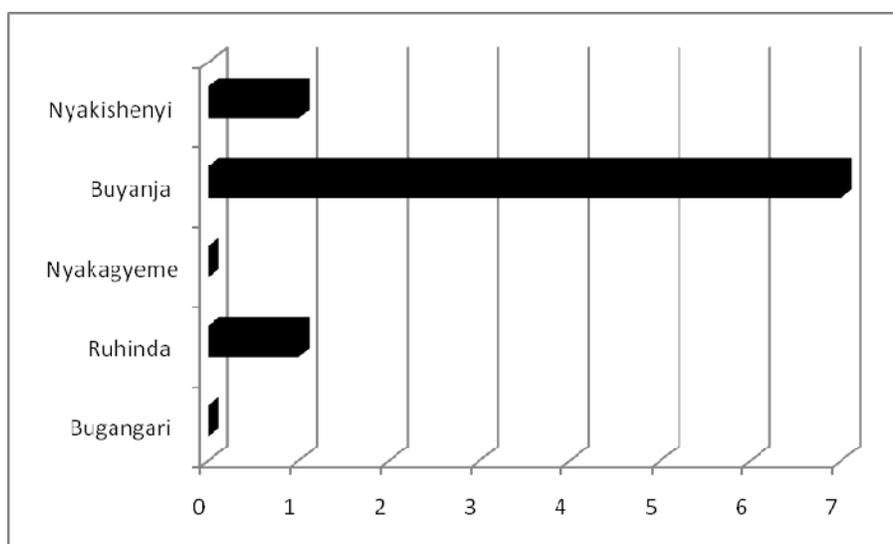


Figure 5: Number of flagged SAs for STI knowledge

Table 22: Individuals who correctly identify at least two common symptoms of STIs in men

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	12	15	8	9	5
Ruhinda & Buhunga	12	17	8	6	7
Nyakagyeme & Rukungiri Municipality	9	12	8	8	7
Buyanja / Kebisoni	4*	7	5	2*	4
Nyakishenyi / Nyarushanje	12	15	8	10	8
Average coverage (95% CI)	51.6 (41.3-61.8)	69.5 (60.0-78.9)	38.9 (28.9-48.9)	36.8 (26.9-46.7)	32.6 (23.1-42.2)
Threshold	8	11	5	5	4
Number of SAs below threshold	1	0	0	1	0

Table 23: Individuals who correctly identify at least two common symptoms of STIs in women

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	7	10	12	15	13
Ruhinda & Buhunga	12	10	15	12	11
Nyakagyeme & Rukungiri Municipality	4	6	16	12	13
Buyanja / Kebisoni	2*	1*	9*	7*	7*
Nyakishenyi / Nyarushanje	8	8	11	15	15
Average coverage (95% CI)	34.7 (24.9-44.5)	36.8 (26.9-46.7)	66.3 (56.6-75.9)	64.2 (54.3-74.0)	62.1 (52.2-72.0)
Threshold	4	5	11	10	10
Number of SAs below threshold	1	1	1	1	1

Buyanja / Kebisoni SA performed lowest as a supervision area in the district on this indicator, as shown in Table 22 and Table 23.

Table 24: Individuals who know three or more actions to take when she/he has a sexually transmitted infection

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	6	6	9	5	6
Ruhinda & Buhunga	6	4	4*	4	3
Nyakagyeme & Rukungiri Municipality	10	8	10	3	5
Buyanja / Kebisoni	5	5	5	6	5
Nyakishenyi / Nyarushanje	8	2*	8	3	5

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Average coverage (95% CI)	36.8 (27.0-46.7)	26.3 (17.3-35.3)	37.9 (27.9-47.8)	22.1 (13.6-30.6)	25.3 (16.4-34.2)
Threshold	5	3	5	2	3
Number of SAs below threshold	0	1	1	0	0

The LQAS community survey in Rukungiri highlighted the need for educating the population; youth, men, women and mothers of young children on STIs as the results in Table 24 show. People do not know the common symptoms and consequently do not know what to do if they have an STI. Ruhinda & Buhunga SA among women as well as Nyakishenyi / Nyarushanje SA among the youth performed poorly with regard to individuals identifying corrective actions to taken when they had an STI.

Table 25: Individuals who know a health facility where they can receive STI treatment

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	18	19	18	19	19
Ruhinda & Buhunga	18	19	17	18	17
Nyakagyeme & Rukungiri Municipality	19	19	18	19	18
Buyanja / Kebisoni	17	19	17	18	19
Nyakishenyi / Nyarushanje	19	19	17	18	19
Average coverage (95% CI)	95.8 (91.6-99.0)	100	91.6 (85.8-97.2)	96.8 (93.3-100)	96.8 (93.3-100)
Threshold			16		
Number of SAs below threshold	0	0	0	0	0

There is a very high level of knowledge of where to find treatment for STIs among all target population in Rukungiri district (Table 26)

6.5. Knowledge on Tuberculosis

Figure 6 shows there are TB-related issues that need to be addressed in all supervision areas except Bugangari & Bwambara. Tables 26 -30 provide details of population groups that need action for specific indicators.

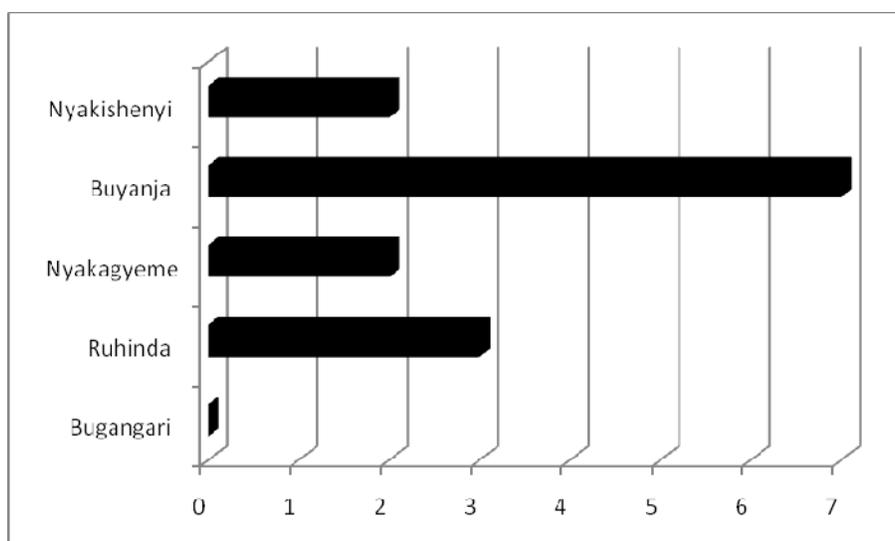


Figure 6: Number of flagged SAs for TB knowledge

Table 26: Individuals who know that TB is a curable disease

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	19	19	17
Ruhinda & Buhunga	14	18	13
Nyakagyeme & Rukungiri Municipality	14	17	16
Buyanja / Kebisoni	11*	17	12*
Nyakishenyi / Nyarushanje	14	17	16
Average coverage (95% CI)	75.8 (67.1-84.6)	92.6 (87.3-97.8)	77.9 (69.4-86.4)
Threshold	13	16	13
Number of SAs below threshold	1	0	1

While there is high knowledge that TB is a curable disease among the population, there are still pockets of low knowledge among the youth and women in Buyanja / Kebisoni supervision area (Table 26).

Table 27: Individuals who know at least two signs and symptoms of TB

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	12	16	15
Ruhinda & Buhunga	12	13	10
Nyakagyeme & Rukungiri Municipality	7	10	10
Buyanja / Kebisoni	5*	6*	6*

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Nyakishenyi / Nyarushanje	11	13	14
Average coverage (95% CI)	49.5 (39.2-59.7)	61.1 (51.2-71.0)	57.9 (47.8-68.05)
Threshold	7	10	9
Number of SAs below threshold	1	1	1

Table 28: Individuals who know how TB is transmitted

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
5.3 Individuals who know how TB is transmitted			
Bugangari & Bwambara	14	18	13
Ruhinda & Buhunga	16	19	15
Nyakagyeme & Rukungiri Municipality	11	11*	8*
Buyanja / Kebisoni	10*	13	9
Nyakishenyi / Nyarushanje	11	6*	8*
Average coverage (95% CI)	65.3 (55.5-75.0)	70.5 (61.2-79.8)	55.8 (45.6-65.9)
Threshold	11	12	9
Number of SAs below threshold	1	2	2

Knowledge on TB signs and mode of transmission ranged between 50% and 60% (See Table 27: Individuals who know at least two signs and symptoms of TB, but there are supervision areas below district average thresholds on knowledge such as Buyanja / Kebisoni (all survey categories) while Nyakagyeme & Rukungiri Municipality and Nyakishenyi / Nyarushanje (men & women) and Buyanja / Kebisoni (youth) were below the threshold for mode of transmission in Table 28

Table 29: Individuals who know the risk of not completing TB treatment

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	17	18	13
Ruhinda & Buhunga	7*	9*	6*
Nyakagyeme & Rukungiri Municipality	11	12	13
Buyanja / Kebisoni	9	12	9*
Nyakishenyi / Nyarushanje	10	15	17
Average coverage (95% CI)	56.8 (46.7-66.9)	69.5 (60.1-78.9)	61.1 (51.1-71.0)
Threshold	9	11	10
Number of SAs below threshold	1	1	2

Knowledge of the risks associated with not completing TB treatment was low across target populations, especially in Ruhinda & Buhunga and Buyanja / Kebisoni SAs (Table 29).

Table 30: Individuals who know the nearest place to receive TB treatment

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)
Bugangari & Bwambara	18	18	18
Ruhinda & Buhunga	16	19	19
Nyakagyeme & Rukungiri Municipality	18	19	19
Buyanja / Kebisoni	19	17	18
Nyakishenyi / Nyarushanje	17	19	18
Average coverage (95% CI)	92.6 (87.3-97.8)	96.8 (93.2-100)	96.8 (93.2-100)
Threshold			
Number of SAs below threshold	0	0	0

6.6. Knowledge and practices of Malaria prevention and treatment among mothers of children (0-11 months)

Figure 7 shows that Ruhinda & Buhunga performed poorly in comparison with other SAs for most malaria knowledge and prevention practices indicators. It was closely followed by Buyanja / Kebisoni and Nyakagyeme & Rukungiri Municipality SAs. Details of malaria indicators are given in Tables 31 and 32.

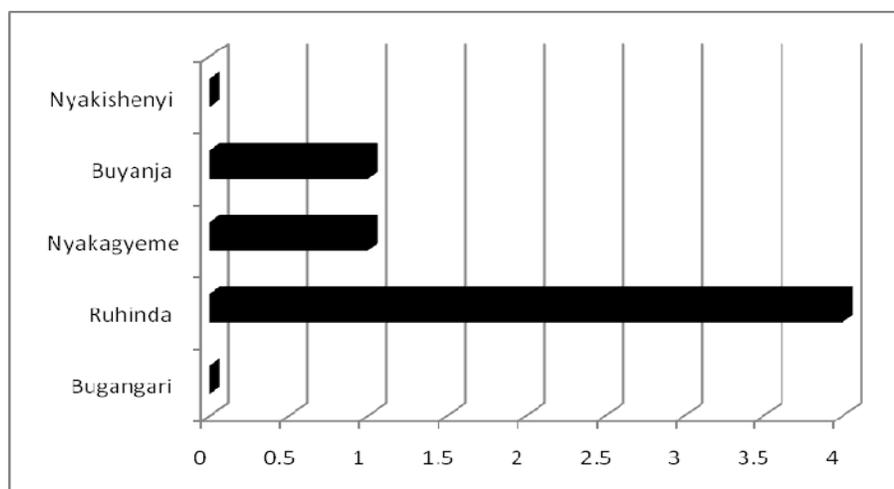


Figure 7: SAs flagged in knowledge and practices of Malaria prevention and treatment among mothers of children (0-11 months)

Table 31: Details of the results for malaria treatment and practices among mothers of children (0-11 months)

Supervision Areas	Malaria treatment and prevention among mothers of children 0 – 11 months
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	Children who had fever in the two weeks preceding the survey and received treatment with ACTs within 24 hours of onset of fever	Mothers who received two or more doses of IPTp during their last pregnancy in the last two years	Children who slept under a ITN the night preceding survey	Mothers who always slept under an ITN during last pregnancy
Bugangari & Bwambara	9	9	15	10
Ruhinda & Buhunga	2	5*	9*	8*
Nyakagyeme & Rukungiri Municipality	1	7	18	18
Buyanja / Kebisoni	1	10	17	17
Nyakishenyi / Nyarushanje	2	11	14	14
Average coverage (95% CI)	15.8 (8.3-23.2)	44.2 (34.0-54.3)	76.8 (68.2-85.5)	57.9 (47.8-68.0)
Threshold	1	6	13	9
Number of SAs below threshold	0	1	1	1

Table 32: Details of the results for knowledge of malaria prevention among mothers of children (0-11 months)

Supervision Areas	Malaria treatment and prevention among mothers of children 0 – 11 months			
	Mothers who know two or more ways to prevent malaria	Mothers who know two or more signs and symptoms of malaria	Mothers who know how malaria is transmitted	Households with at least 1 ITN
Bugangari & Bwambara	10	10	19	19
Ruhinda & Buhunga	7	13	19	9*
Nyakagyeme & Rukungiri Municipality	9	7*	16	18
Buyanja / Kebisoni	3*	9	19	16
Nyakishenyi / Nyarushanje	7	17	18	19
Average coverage (95% CI)	37.9 (28.0-47.8)	58.9 (48.9-69.0)	95.7 (91.6-99.9)	85.3 (78.0-92.5)
Threshold	5	9		15
Number of SAs below threshold	1	1	0	1

Table 31 shows that treatment for malaria among children is very low in the district as is IPT use to the minimum recommended dosage during the previous pregnancy. Although there was generally good levels of knowledge about how malaria is transmitted (Table 32), the knowledge among mothers on prevention from Buyanja / Kebisoni SA was lower than the district average, in Nyakagyeme & Rukungiri Municipality mothers did not know signs and symptoms and similarly, fewer households in Ruhinda & Buhunga SA had at least one ITN in comparison with other SAs.

6.7. Reproductive Health and Family planning

Most mothers did not attend the minimum required ANC visits during their previous pregnancy (see Table 33). The performance was lowest in Bugangari & Bwambara SA. Deliveries however tended to have a higher chance of occurring in a health facility, Bugangari & Bwambara SA performing below

average. In most deliveries (73%), a health worker was involved. Improvement however needs to be targeted at Bugangari & Bwambara SA.

Table 33: Details of the results for reproductive health and family planning knowledge and practices among women

Supervision Areas	Mothers of children 0 – 11 months who			Women (15-49 yrs) who
	attended ANC at least 4 times during last pregnancy	delivered their last baby in a health facility	were assisted by a skilled health worker during last delivery	desire to use a family planning method but cannot access it
Bugangari & Bwambara	3*	9*	11*	1
Ruhinda & Buhunga	5	15	17	2
Nyakagyeme & Rukungiri Municipality	12	15	14	3
Buyanja / Kebisoni	8	15	15	6
Nyakishenyi / Nyarushanje	9	13	12	0
Average coverage (95% CI)	38.9 (29.0-48.9)	70.5 (61.2-79.8)	72.6 (63.5-81.7)	12.6 (5.8-19.4)
Threshold	5	12	12	NA
Number of SAs below threshold	1	1	1	0

6.8. Child survival

Table 34 and 35 show details of the results for Child Survival practices among the women with 12-23 months old children. Buyanja / Kebisoni SA performed poorly in having children fully immunized and Nyakishenyi / Nyarushanje SA was below district average for children with any of fever, diarrhea or pneumonia seeking care.

Table 34: Children who are fully vaccinated

Supervision Areas	
Bugangari & Bwambara	15
Ruhinda & Buhunga	15
Nyakagyeme & Rukungiri Municipality	19
Buyanja / Kebisoni	11*
Nyakishenyi / Nyarushanje	18
Average coverage (95% CI)	82.1 (74.2-89.9)
Threshold	14
Number of SAs below threshold	1

Table 35: Children with any of fever, diarrhea or pneumonia seeking care from health workers within 24 hours of illness

Supervision Areas	
Bugangari & Bwambara	11
Ruhinda & Buhunga	7
Nyakagyeme & Rukungiri Municipality	10
Buyanja / Kebisoni	8

Supervision Areas	
Nyakishenyi / Nyarushanje	5*
Average coverage (95% CI)	43.2 (33.0-53.3)
Threshold	6
Number of SAs below threshold	1

6.9. Sanitation

Table 36, shows that hand washing with soap after visiting a toilet was very poor across all population groups surveyed in Nyakishenyi / Nyarushanje SA in comparison with the district average performance.

Table 36: Individuals who wash their hands with soap after visiting the toilet

Supervision Areas	Youth (15-24 yrs)	Men (15-54 yrs)	Women (15-49 yrs)	Mothers of children (0-11 months)	Mothers of children (12-23 months)
Bugangari & Bwambara	19	17	16	17	15
Ruhinda & Buhunga	18	19	17	18	19
Nyakagyeme & Rukungiri Municipality	19	18	17	16	19
Buyanja / Kebisoni	14	16	15	13	15
Nyakishenyi / Nyarushanje	9*	12*	10*	11*	7*
Average coverage (95% CI)	83.2 (73.5-90.9)	86.3 (79.3-93.3)	78.9 (70.6-87.3)	78.9 (70.6-87.3)	78.9 (70.5-87.3)
Threshold	14	15	13	13	13
Number of SAs below threshold	1	1	1	1	1

7. Conclusion

The LQAS survey results show that performance improvement effort is most required in the Buyanja / Kebisoni, Ruhinda & Buhunga and Nyakishenyi / Nyarushanje supervision areas. The district should investigate the reasons for pockets of poor performance in all service areas, apart from reproductive health and family planning.

Appendix 1: List of indicators

SN	Indicator	Status
1	HIV counseling and Testing (HCT)	
1.1	% of Individuals who know where they can be tested for HIV	Assessed
1.2	% of Individuals who know two or more benefits of HCT	Assessed
1.3	% of Individuals who have ever been counseled and tested for HIV	Assessed
1.4	% of Individuals who have ever been counseled, tested and received their HIV test results	Assessed
1.5	% of Individuals who were counseled and tested for HIV in the past 12 months	Assessed
1.6	% of Individuals who were counseled and tested for HIV in the past 12 months and know their HIV results	Assessed
1.7	% of Individuals who were counseled and received an HIV test during the last pregnancy and know their results	Assessed
1.8	% of Individuals who have ever tested for HIV and received their results as a couple	Assessed
1.9	% of Individuals who were tested for HIV and received their results as and disclosed to their spouse/partner	Assessed
2	Prevention of Mother to Child Transmission of HIV (PMTCT)	
2.1	% of Individuals who know how HIV transmission occurs from an infected mother to child	Assessed
2.2	% of Individuals who know two (2) key actions that reduce MTCT of HIV	Assessed
2.3	% of Individuals who know where they can get information and services to reduce the risk of MTCT of HIV	Assessed
2.4	% of Mothers of children (0-11 months) who were counseled for PMTCT services during last pregnancy	Assessed
3	HIV Knowledge and Behavior Change	
3.1	% of Individuals who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	Assessed
3.2	% of Individuals who know at least two ways of preventing sexual transmission of HIV	Assessed
3.3	% of Individuals who have ever used a condom when having sexual intercourse	Assessed
3.4	Percentage of individuals who had sex with more than one sexual partner in the last 12 months	Assessed
3.5	Percentage of individuals who have had sex with more than one sexual partner in last 12 months and report using a condom at last sexual intercourse	Assessed
3.6	Percentage of individuals who had sexual intercourse with a non marital or non cohabiting sexual partner in the last 12 months.	Not Assessed
3.7	Percentage of individuals who had sexual intercourse with a non marital or non cohabiting sexual partner in last 12 months and used a condom at last higher risk sex	Not Assessed
3.8	Percentage of individuals who ALWAYS used a condom when they had sexual intercourse with a non marital or non cohabiting sexual partner in the last 12 months	Not Assessed
3.9	% of Individuals who perceive low or no risk of getting HIV/AIDS infection	Assessed
3.10	Percentage of never-married Youth who have ever had sexual intercourse	Not Assessed
3.11	Percentage of Youth who have had sexual intercourse before the age of 15	Assessed
3.12	Percentage of Youth who know at least three correct steps on how to use a condom	Assessed
3.13	Percentage of Youth who report the use of a condom the first time they had sexual intercourse	Not Assessed
3.14	Percentage of males who are circumcised	Assessed
3.15	Percentage of Young Males who were circumcised at a health facility	Not Assessed

SN	Indicator	Status
3.16	Percentage of the general population aged 15+ years who know at least three benefits of ART	Not Assessed
4	Sexually Transmitted Infections (STI)	
4.1a	% of Individuals who correctly identify at least two common symptoms of STIs in men	Assessed
4.1b	% of Individuals who correctly identify at least two common symptoms of STIs in women	Assessed
4.2	% of Individuals who know three or more actions to take when she/he has a sexually transmitted infection	Assessed
4.3	% of Individuals who know a health facility where they can receive STI treatment	Assessed
5	Tuberculosis	
5.1	Percentage of individuals who know that TB is a curable disease	Assessed
5.2	Percentage of individuals who know at least two signs and symptoms of TB	Assessed
5.3	Percentage of individuals who know how TB is transmitted	Assessed
5.4	Percentage of individuals who know the risk of not completing TB treatment.	Assessed
5.5	Percentage of individuals who know the nearest place to receive TB treatment.	Assessed
6	Malaria Prevention and Treatment	
6.1	% of Children 0-11 months who had fever in the two weeks preceding the survey and received treatment with ACTs within 24 hours of onset of fever	Assessed
6.2	% of mothers of children 0-11 months who received two or more doses of IPTp during their last pregnancy in the last two years	Assessed
6.3	% of Children 0-11 months who slept under a ITN the previous night	Assessed
6.4	% of mothers of children 0-11 months who always slept under an ITN during last pregnancy	Assessed
6.5	% of Individuals who know two or more ways to prevent malaria	Assessed
6.6	% of Individuals who know 2 or more signs and symptoms of malaria	Assessed
6.7	% of Individuals who know how malaria is transmitted	Assessed
6.8	% of households with at least 1 ITN	Assessed
7	Reproductive Health and Family planning	
7.1	Percentage of currently married women aged 15-49 years who are using any family planning method.	Not Assessed
7.2	Percentage of sexually active women age women 15-49 years who are using any modern method of family planning.	Not Assessed
7.3	Percentage of Individuals who attended ANC at least 4 times during last pregnancy	Assessed
7.4	Percentage of Individuals who delivered their last baby in a health facility	Assessed
7.5	Percentage of Individuals who were assisted by a skilled health worker during last delivery	Assessed
7.6	Percentage of women 15-49 years who desire to use a family planning method but cannot access it.	Assessed
8	Child survival indicators	
8.1	Percentage of children 12-23 months who are fully vaccinated	Assessed
8.2	Percentage of children under 5 years with diarrhea in the last two weeks receiving ORT	Not Assessed
8.3	Percentage of children under 5 years with any of fever, diarrhea or pneumonia seeking care from health workers within 24 hours of illness	Assessed
8.4	Percentage of individuals who wash their hands with soap after visiting the toilet	Assessed

Tally of assessed indicators

Service area	Number of assessed indicators	Total number of indicators
HIV counseling and Testing (HCT)	9	9
Prevention of Mother to Child Transmission of HIV (PMTCT)	4	4
HIV Knowledge and Sexual Behavior	9	16
Sexually Transmitted Infections (STI)	4	4
Tuberculosis	5	5
Malaria Prevention and Treatment	8	8
Reproductive Health and Family planning	4	6
Child Health	2	3
Sanitation	1	1
Total	46	56

Appendix 2: LQAS Decision Rule table

Sample Size*	LQAS Table: Decision Rules for Sample Sizes of 12-30 and Coverage Targets/Average of 10%-95%																		
	Average Coverage (Baselines) / Annual Coverage Target (Monitoring and Evaluation)																		
	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	
12	N/A	N/A	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11	11
13	N/A	N/A	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11	11
14	N/A	N/A	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12	12
15	N/A	N/A	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13	13
16	N/A	N/A	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14	14
17	N/A	N/A	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15
18	N/A	N/A	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16	16
19	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	16
20	N/A	N/A	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25	25
30	N/A	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26	26

N/A: *Not Applicable*, meaning LQAS cannot be used in this assessment because the coverage is either too low or too high to assess an SA. This table assumes the lower threshold is 30 percentage points below the upper threshold.

light-shaded cells indicate where *alpha* or *beta* errors are greater than or equal to 10%.
 dark-shaded cells indicate where *alpha* or *beta* errors are greater than 15%.

STRENGTHENING DISTRICT MONITORING & EVALUATION SYSTEMS

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