

Measuring the Quality of HIV/AIDS Client-Level Data Using Lot Quality Assurance Sampling (LQAS)



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> **MEASURE Evaluation** September 2019







Context

- Good quality data is essential for effective planning, monitoring, and evaluation.
- Most of data quality tools focus on aggregate data.
- Errors are more difficult to uncover in the aggregate data.
- Reviewing source documents is timeconsuming and laborintensive.



- The LQAS Triage System is a shortcut
- "Triage" definition:
 "assignment of degrees of urgency"
- Identify the worst of the worst in order to prioritize resources for corrective measures
- Works best as part of already scheduled supervision visits.



- LQAS uses "classification" rather than estimating parameters
- based on a pre-defined standard for quality
- Groups of records, constitute the 'lot'
- lots not meeting the standard targeted for more extensive reviews
- Those meeting the standard are left until the next round of supervision.



Review tracer data elements for groups of records for certain criteria, e.g.:

- Completeness: the value is recorded when it should be
- Consistency: values are present and consistent across data sources
- Outcomes: check whether or not a record has a given status



- LQAS uses systematic random sampling to select a pre-determined number of individual records from a collection
- Records are evaluated according to specific criteria
- Each record is assigned a status of pass or fail according to the established criteria.
- If the number of 'passes' are
 > or = 'decision rule' the lot passes



- The sample size and decision rule are determined by;
 - The size of the population from which the sampling units are selected
 - Pu: Benchmark for quality established equal to or above which data quality is deemed acceptable.
 - PL: Benchmark for quality below which service quality is deemed very unacceptable.
 - a (consumer) error: The risk/probability of misclassifying a lot with unacceptable data quality as acceptable.
 - β (provider) error: The risk/probability of misclassifying a lot with acceptable data quality as unacceptable.
- The sample size and decision rule are derived from the hypergeometric distribution.

Quality thresholds

- Pu = estimate
 of the actual
 value of the
 parameter
 (determined
 from
 experience)
- PL = the value below which the program would be forced to react
- Width of the range impacts on sample size



*OC Curve for PU = 0.9, PL = 0.75, a error < 0.05, β < 0.1, population size = 600

Provider vs. consumer risk

- How much sampling error is acceptable?
- a (consumer) error: The risk/probability of misclassifying a lot with unacceptable data quality as acceptable.
- β (provider) error: The risk/probability of misclassifying a lot with acceptable data quality as unacceptable.
- the consumer is the beneficiary of service delivery, or client.
- The provider is the entity providing services, usually the government.

Sample size calculation

unicef

• Sample sizes and their associated decision rules can be determined with the use of a sample size calculator available on the internet.

LQAS Sampling Plan Calculator

• For example: http://lqas.spectraanalytics.com/



Outputs

- The sample size, decision rule, and precise a and β errors
- OC Curve plots the probability of accepting a lot against the value of the parameter in the population (e.g. coverage)



Provider Risk

Measuring quality of HIV data

Guidelines and tool for a standardized approach to data quality checks using LQAS:

"Measuring the Quality of HIV/AIDS Client-Level Data Using Lot Quality Assurance Sampling"

<u>www.measureevaluation.org</u> /resources/publications/ms-19-176





Before visiting health facilities **Step 1**

- Select the health program (e.g., HIV/AIDS, ART).
- Several factors should be considered when selecting health programs, such as:

 How problematic a health program is in terms of its data quality
 - The level of investment in a health program
 - The complexity of the data
 - Data management capacity and practices of health facility staff

Step 2 - Determine the source document(s) and data elements to be assessed.

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Step 3 – Define the assessment period.

- Determine the period for which the data completeness assessment will be performed
- If supervisory visits occur frequently, start the assessment period from the date of the last supervisory visit and end on the date of the upcoming site visit.
- If supervisory visits are irregular or infrequent, pick a recent period of time (e.g., the last quarter).
- Consider the volume of patients (and the data) over the period

Step 4 – Determine the sample size and decision rule to apply to the records within a lot.

- Select the quality thresholds. The method presupposes two scenarios:
 - 1) Facilities with suspected good completeness / consistency of data:

○ P_U = 95%; P_L = 85%

2) Facilities with poor or average completeness / consistency of data:

○ P_U = 90%; P_L = 75%

- Select your own depending on the needs of your program
- Use an online sample size calculator
- Each facility will have a different sample size and decision rule depending on the client volume.

Step 5 – Determine the data elements to be assessed within a record.

1) Date of last ART	6) Date medically eligible for ART
2) Regimen at last ART	7) ART start date
3) Date of last viral load test	8) Client functional status at six months
4) Result of last viral load test	9) Adherence to treatment regimens
5) Clinical stage at diagnosis	10) Client treatment status (i.e., alive and on treatment or not)

During the site visit:

- **Step 6** –Determine the total number of records from which the sample will be drawn
- Count the total number of records within the identified period (e.g., the last quarter, the last 12 months).



During the site visit:

- Step 7 Sample the records:
 - Obtain the source document(s) that contains the data elements that were chosen in Step 2.
 - Use systematic random sampling to select the records



During the site visit:

- **Step 8** Assess the completeness and consistency of the data elements.
- Completeness check to see the value has been recorded
- Consistency check to see whether the value match between the two data sources
- Outcomes check that the criteria is met
- Record findings directly in the Excel tool or on the standardized data collection form

Data analysis:

- **Step 9** Summarize the results of the assessment.
 - If the number of complete or consistent records meets or exceeds the decision rule, the lot passes and the facility data quality meets the standard.
 - If this is conducted routinely at all facilities, eventually all poor quality lots will be found.
 - Develop a data quality remediation plan for facilities that fail the test.

Summary Findings from Data Consistency Check with LQAS Triage System Tool

										Viral I	load test dor	ie anu						
				D	ate of last Al	RT	Regi	imen at last	ART	Date o	f last viral lo	ad test		suppressed		С	urrent on Al	RT
	Active on	LOAS Sample		Electronic medical record / Paper-	Electronic medical	Paper-based medical record /	Electronic medical record / Paper-	Electronic medical	Paper-based medical record /	Electronic medical record / Paper-	Electronic medical	Paper-based medical record /	Electronic medical record / Paper-	Electronic medical	Paper-based medical record /	Electronic medical record / Paper-	Electronic medical	Paper-based medical record
Facility	(DHIS 2)	Size	Decision Rule	record	based register	register	record	based register	register									
H NGOZI	75	0 67	7 61	yes	yes	yes	s yes	yes	yes	no	no	nc	yes	no	nc	yes	yes	
H BUYE	30	0 58	8 53	yes	yes	yes	s yes	yes	yes	yes	-		- yes	-		yes	yes	
H KIREMBA	50	0 66	5 60	yes	yes	yes	s yes	yes	yes	yes	-		- yes	-		yes	yes	
H CANKUZO	37	5 66	5 60	no	yes	yes	s yes	yes	yes	no	no	nc	o no	no no	nc	yes	yes	
H MURORE	10	0 46	5 42	yes	yes	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
	10	U 40	5 42 5 60	no		yes	s yes	yes	yes	10	10	nc			nc	yes	yes	
H KINYINYA	25	0 58	s 53	ves	ves	ves	s yes	ves	ves	no	no	nc	o no	no no	nc	ves	ves	
NLLE ESPERENCE BUY	EI 47.	5 67	7 61	no	ves	nc	yes	ves	ves	no	-		ves	-		ves	ves	
CDS CHUK	22	5 56	5 51	yes	yes	nc	yes	yes	yes	yes	-		yes	-		yes	yes	
NLLE ESPE KANYOSHA	. 12	5 46	5 42	no	no	yes	s yes	yes	yes	no	-		- no	-		yes	yes	
H NTITA	30	0 58	8 53	-	-	yes	5 -	-	yes	-	-	nc	- 0	-			-	
H Mutoyi	25	0 58	8 53	-	-	yes	- 5	-	nc	-	-			-			-	
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H KIGANDA	17	5 56	5 51	yes	no	nc	no no	yes	nc	no	no	nc	no no	no	nc	yes no	yes	
H MURAMVYA	40	0 66	5 60	no	no	nc	yes	no	nc	-	-		no	-		no	no	
CDS Marembo	15	0 49	9 45	no	no	nc	yes	yes	yes	-	-		no no	-		no	yes	
CDS Gasura	25	0 58	8 53	-	-	yes	5 -	-	yes	-	-			-		· -	-	
H Mukenke	60	0 67	7 61	no	no	nc	yes	yes	yes	no	-		- no	-		yes	yes	
ANSS Kirundo	110	0 68	8 62	no	no	nc	yes	yes	yes	no	-		- no	-		yes	yes	
H Nyanza-Lac	27	5 65	5 59 7 61	no	no	yes	s yes	yes	yes	-	-			-		yes	yes	
CDS RUZO	35	0 58	7 01 R 53	10	no 10	yes	no no	no	yes		-	IIC			inc.	yes no	yes	
H MUYINGA	90	0 67	7 61	no	-		no no	-		no	-		- no	-		no	-	
H KIBUMBU	55	0 67	7 61	no	yes	nc	o no	yes	nc	no	-		- no	-		yes	-	
H FOTA	12	5 46	5 42	yes	yes	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
H RUTANA	27	5 65	5 59	no	no	nc	o no	no	nc	no	no	nc	o no	no no	nc	no no	no	
H GIHOFI	22	5 56	5 51	-	-			-		-	-			-		· -	-	
H KAYANZA	90	0 67	7 61	no	no	nc	yes	yes	yes	no	-			-		yes	yes	
H MUSEMA	25	0 58	5 53	no	no	nc	yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
H Rumonge	60	0 67	7 61		_			_	yes	_	_						_	
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H MUTOYI	25	0 58	8 53	-	-			-		-	-						-	
H BUHIGA	40	0 66	5 60	-	-			-		-	-			-			-	
H GIHANGA	30	0 58	8 53	-	-	nc	- 0	-	yes	-	-						-	
H CIBITOKE	55	0 67	7 61	no	yes	nc	yes	yes	yes	-	-			-		yes	yes	
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Lot Quality Assurance Sampling Triage System Using the LQAS Data Collection and Analysis Tool

MEASURE Evaluation September 2019







LQAS Triage System Data Collection and Analysis Tool

- MS Excel-based tool to facilitate data collection and analysis
- The tool consists of the following elements:
 - LQAS sample size table
 - Facility Info tab to record pertinent data on health facilities to be assessed on this round of supervision
 - Parameters tab to configure the tool for a particular analysis, that is, particular data sources and data elements
 - Analysis page to summarize findings for completeness and consistency
 - Up to 40 health facility pages to record data for up to five data elements from up to three data sources
 - Printable versions of the data collection form for doing data collection on hard copy



LQAS Triage System Data Collection and Analysis Tool – Facility Info tab

- The facility Info page records important information on each facility in the sample of facilities to be assessed on a given assessment or round of supervision, including:
- Reporting period of review (for example, Quarter 1, 2019)
- Quality thresholds (2 choices, 85%-95% = good quality, 75%-90% = needs improvement
- Number of facilities to be reviewed (select from the drop-down list and the facility pages will be revealed)
- Facility name
- Geographic identifiers (region and district)
- Facility size (patient volume)
- LQAS sample size
- Decision rule

filled automatically after entering the facility size

• Date of the assessment at the facility

Period of review:		Q1 2019				
Quality thresholds:		85%-95%				
Number of facilities for review:	40	-				
			Facility Size (Patient			
Facility Name	Region	District	Volume)	LQAS Sample Size	Decision Rule	Date of Assessmen
H NGOZI		719	750	67	61	
H BUYE		302	300	58	53	
H KIREM BA		489	500	66	60	
H CANKUZO		379	375	66	60	
H MURORE		101	100	46	42	
H BUTEZI		110	100	46	42	
SWAA RUYIGI		383	375	66	60	
h Kinyinya		246	250	58	53	
NLLE ESPERENCE BUYENZI		476	475	67	61	
CDS CHUK		224	225	56	51	
NLLE ESPE KANYOSHA		119	125	46	42	
INTITA		307	300	58	53	
H Mutoyi		257	250	58	53	
1 KIBUYE		358	350	58	53	
CDS KIGUTU		456	450	67	61	
MATANA		225	225	56	51	
h KIGANDA		171	175	56	51	
H MURAMVYA		399	400	66	60	
CDS Marembo		161	150	49	45	
CDS Gasura		235	250	58	53	
H Mukenke		580	600	67	61	
ANSS Kirundo		106/	1100	68	62	
H Nyanza-Lac		261	275	65	59	
ANSS MAKAMBA		616	600	67	61	
LDS KUZO		338	350	58	53	
1 MUTINGA		8/4	900	67	61	
1 NDUMDU		51/	550	6/	61	
		119	125	46	42	
H KUTANA		268	2/5	65	59	
1 GHUFI		230	225	56	51	
		911	900	6/	61	
T MUJEWIA		239	230	38	33	
LOS MARANIY (A		132	130	49	43	
		392	1000	6/	61	
		057	1200	00	62	
RILLICA		23/	230	30	23	
I GIUANGA		402	400	58	53	
		203	300	30	33	
IGDITORE		JZ4	330	8/	01	

LQAS Triage System Data Collection and Analysis Tool – Parameters Tab

- Configure the tool for a particular assessment using the Parameters tab.
- Select up to five data elements from up to three data sources.
- Use the drop-down lists to select the program area.
- Use the drop-down lists to select the data sources.
- Use user-defined values by selecting "other (specify)" from the list.
- Use the drop-down lists to select data elements.
- indicate the data element format in the cell provided.
- If a date format, indicate the number of days difference between dates whereby a comparison will yield a "match."

LQAS Triage System Data Collection and Analysis Tool – Parameters Tab

Configure Comparisons: Enter program area, data sources, and data elements.													
Health Program: Health Program: HIV_AIDS	Data Elements: Data Element 1: Date of last ART	close a match? (number of days 30											
Data Sources:	Data Element 2: Regimen at last ART												
Data Source 1: Electronic medical record	Data Element 3: Date of last viral load test Date	30											
Data Source 2: Paper-based medical record	Data Element 4: Viral load test done and suppressed												
Data Source 3: Paper-based register	Data Element 5: Current on ART												

LQAS Triage System Data Collection and Analysis Tool – Analysis Tab

RESULTS: Table 1: Number of matches between data sources (concordance) by data element and data s

Table 3: Completeness of data elements, number compl	ete
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											Viral	load test dor	ne and						
				Da	ite of last Al	स	Reg	imen at last	ART	Date o	f last viral lo	ad test		suppressed		C	urrent on AF	स	
Facility	Facility Size (Patient Volume)	LQAS Sample Size	Decision Rule	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper-based medical record / Paper-based register	Electronic medica record / Paper- based medical record	Electronic medica record / Paper- based register	Paper-based medical record / Paper-based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper-based medical record / Paper-based register	Electronic medica record / Paper- based medical record	Electronic medical record / Paper- based register	Paper-based medical record / Paper-based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper-based medical record / Paper-based register	Comments
1 HINGOZI	750	67	61	68	67	67	7 68	3 68	68	57	9		7 6!	9	5	68	68	61	0
2 H BUYE	300	58	53	66	65	65	5 66	5 66	66	63	0		D 63	0		66	66	61	0
3 H KIREMBA	500	66	60	66	66	66	5 66	5 66	66	61	0		0 64	0	0	66	66	66	0
H MURORF	3/3	45	47	39	44	41	, o	4	47	75	37		D 31 5 21	43	***	47	47	41	
6 H BUTEZI	100	46	42	41	41	47	7 43	4	47	30	30	3	2 3	31	33	47	47	4	0
SWAA RUYIGI	375	66	60	8	8	67	7 67	7 67	67	17	18	11	8 19	20	18	67	67	63	0
H KINYINYA	250	58	53	54	54	58	58	58	58	18	18	24	4 2	21	24	58	58	58	0
CDS CHUK	4/5	6/	61	50	64	55	60	, bi	62	19	0		5	u 0		60	63	6	
I NILE ESPE KANYOS	125	46	42	20	3	49	6	1 67	62	17	ő		D 33			67	67	6	ő
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3 H Mutovi	250	58	53	0	0	58) (52	0	0		D (ı 0	0) O		58	0
4 H KIBUYE	350	58	53	0	64	0	66	5 66	66	27	0		D 21	0		66	66	61	0
A MATANA	450	6/	63	0	65	45	1 51	60	51		0						66		0
7 H KIGANDA	175	56	51	38	44	38	4	4	46	13	13	1	2 1	14	14	46	45	4	ő
8 H MURAMVYA	400	66	60	30	34	43	66	50	50	0	0		D 9		c	3 44	43	35	0
CDS Marembo	150	45	45	30	34	43	66	5 50	50	0	0		D !	0	0	3 44	43	35	0
CDS Gasura	250	58	53	0	0	58	8 0) (58	0	0		D (ı 0	c	ם נ		58	0
H Mukerke	600	67	61	51	60	51	65	63	62	45	0		0 5			64	63	63	0
H Nyanza-Lac	275	65	59	40	44	61	. 66	5 66	66		ő		D 1			66	66	6	ő
ANSS MAKAMBA	600	67	61	54	54	67	56	5 53	63	44	43	41	1 53	52	53	66	66	66	0
CDS RUZO	350	58	53	33	32	33	2 43	2 53	42	0	0		D (ı 0	0	J 46	50	4	0
6 H MUYINGA	900	67	61	28	0	c	3 28	8 0	a	21	0		D 21	ı 0	c	35	a		0
H KIBUMBU	550	67	61	59	62 //S	55	60	61	60	18	0		D 41 7 1	1 0		62	0		0
HRUTANA	225	40	42	45	45	42					35	31	/ 1. 5 31	1/	30				
H GIHOFI	225	56	51	0	0				0	0	0		0 1	0			0		0
H KAYANZA	900	67	61	60	37	41	63	2 63	61	1	0		D (ı 0	c	1 64	64	64	0
2 H MUSEMA	250	58	53	51	52	51	L 55	5 57	55	48	39	4	D 45	47	43	57	57	57	0
CDS M ARAM VYA	150	45	45		0	43	3 (55	0	0						0	54	0
ANSS CITEGA	1200	6/	61		67					0	0						60		
HMUTOYI	250	58	53		02					0	0	i i					0		
HBUHIGA	400	66	60	0	0					0	0		D 1						0
H GIHANGA	300	58	53	0	0	45			57	0	0		D (0) (i i	57	0
39 H CIBITOKE	550	67	61	48	63	49	63	3 63	63	0	0		0 0	0		61	63	61	0

Table 2: Concordance of data elements across data sources

			1	Viral load test done and						ie and								
				Da	ite of last AF	π	Regi	imen at last i	ART	Date o	f last viral lo	ad test		suppressed			urrent on AR	т
				Electronic medical			Electronic medical			Electronic medical			Electronic medical			Electronic medical		Paper-based
	Active on Treatment	LOAS Sample		record / Paper- hason medical	Electronic medical record / Paner-	medical record / Paner-baced	record / Paper- based medical	Electronic medical record / Paner-	medical record / Paner.hased	record / Paper- hased medical	Electronic medical rerost / Paner-	medical record / Paner-based	record / Paper- haced medical	Electronic medical rarout / Paner-	medical record / Paner,hased	record / Paper- based medical	Electronic medical record / Paner-	medical record / Paner,hased
Facility	(DHIS 2)	Size	Decision Rule	record	based register	register												
h Ngozi	750	67	61	yes	yes	yes	yes	yes	yes	no	no	no	yes	no	no	yes	; yes	yes
H BUYE	300	58	53	yes	yes	yes	yes	yes	ye	yes			yes			yes	yes	yes
H KIREMBA H CANKUZO	375	65	60 60	yes	yes yes	yes yes	yes	yes ves	ye: ve:	yes	no	10	yes	00	00	yes ves	yes ves	yes yes
H MURORE	100	46	42	yes	yes	yes	yes	yes	yes	no	no	no	nc		no	yes	yes	yes
H BUTEZI	100	46	42	no	no	yes	yes	yes	yes	no	no	no		no no	no	yes	i yes	yes
SWAA RUYIGI	375	66	60	no	no	yes	yes	yes	yes	no	no	no	nc	no	no	yes	yes	yes
NLLE ESPERENCE BUYE	EI 475	67	61	10	yes yes	yes no	162	yes ves	ye: ve:	10			VES	10	10	yes ves	, yes , yes	75
CDS CHUK	225	56	51	yes	yes	no	yes	yes	yes	yes			yes			yes	yes	yes
NLLE ESPE KANYOSHA	125	46	42	no	no	yes	yes	yes	yes	no			nc			yes	i yes	yes
H NIITA	300	58	53			yes			yes			no						yes
H KIBUYE	250	58	53		ves	yes	ves	ves	ver	no						ves	Ves	yes
CDS KIGUTU	450	67	61		yes		no	yes	nc				nc				yes	
H MATANA	225	56	51	yes	no	no	yes	yes	ye:							yes	i yes	yes
H KIGANDA	175	56	51	no	no	no	no	no	nc	no	no	no	00	no	no	no	no no	no
CDS Marembo	400	49	45	10	10	10	yes	IID WPS	10				10			00	VIIS	10
CDS Gasura	250	58	53			yes			yes									yes
H Mukenke	600	67	61	no	no	no	yes	yes	yes	no			nc			yes	a yes	yes
ANSS Kirundo	1100	68	62	no	no	no	yes	yes	yes	no			nc			yes	yes	yes
ANSS MAKAMBA	2/3	67	53	10	10	yes	905	yes	ye:	80						yes	yes wes	10
CDS RUZD	350	58	53	no	no	no	no	no	nc							no	no	no
H MUYINGA	900	67	61	no			no			no			nc			no		
H KIBUMBU	550	67	61	no	yes	no	no	yes	nc	no			nc			yes		
H FUTANA	1/5	46	42	yes	yes	yes	yes	yes	yes	no	no	10		, no	00	yes	yes	yes
H GIHOFI	225	56	51															
H KAYANZA	900	67	61	no	no	no	yes	yes	yes	no						yes	a yes	yes
H MUSEMA	250	58	53	no	no	no	yes	yes	yes	no	no	no		no 10	no	yes	i yes	yes
CDS MARAMVYA	150	49	45			no			yes									yes
ANSS GITEGA	1200	68	62		VES			no									Ves	
H MUTOYI	250	58	53															
H BUHIGA	400	66	60															
H GIHANGA	300	58	53			00		-	yes									yes
Kahezi	336		01	10	yes	10	, inc	yes	ye							yes	yes	yes.
				_				_		_	_			_			_	
		facilities meeting																26
	Number of facil	ities not meeting																5
. Neg	ander or rabible	a la sere compan	administratione:							18		28						9
			Total:															40
																		84%
									219			100%	79%					16%
			% not does						199									725
			terror district						10%	4376	/ 300	7000		75%	75%			

										Viral I	oad test do	ne and			
	Di	ate of last A	RT	Regi	men at last	ART	Date of	f last viral lo	oad test		suppressed		C	urrent on AR	т
Facility	Electronic medical record	Paper-based medical record	Paper-based register	Electronic medical record	Paper-based medical record	Paper-based register	Electronic modical record	Paper-based medical record	Paper-based register	Electronic medical record	Paper-based medical record	Paper-based register	Electronic modical record	Paper-based medical record	Paper-bas register
HNG07	63	68	68	68	68		66	67		66	67		68	68	
HBUYE	66	65	66	66	66	66	63	67		63	67		66	65	
H KIDEMARA				66			64	-							
H CANKUZO	55	65	66	66	69	66	48	45		45	47	51	66	65	
HAUPOPE	47	47	47	47	43	47		25					47	47	
W BLITE7I	47	47	47	47		47	25	21		20	21	27	47	47	
SWAA PINCI		67	67			67	31	10			10				
H KINYINYA	50		59	50	50	50	24					20	50	50	
NULE ESPERENCE RUVENT	55	50	50	59	50	50	24		-			-	52	20	
CDS CHUK		60	55	60	60	55	60			61	67		60	60	
NULL EFERE KANIVOEUA														63	
UNITA	0.0	50	50	67	67	50	30	20		3 30	33		67	67	
HAL down															
LI VIDI IVE		50	36		50	36					33			55	
COEVICUTU	00		00	00	00	00					20		00	00	
CD3 N/5010	00	00	00	00	00	00	33						00	00	
HKICANDA	55	55	50	55	55	55							55	55	
HALIDAAAVYA		40	40	40		40						-	40	40	
CDC LL COLOR VIA	00	00	30	00	00	50		10			10		00	51	
CDS Mdrembo	66	65	50	66	65	50	11	18		9 11	18		66	51	
CDS Gasura		58	58	U	58	58	0	5			5			58	
H MUKERKE	6.	65	64	6/	65	65	59	60		3 55	60		6/	66	
ANSS KRUNDO	68	68	64	68	62	68	60	6/		3 60	6/		68	68	
H NYONZO-LOC	66	. 65	66	66	65	60	u			, i			66	66	
ANDS MAKAMBA	68	68	68	68	65	68	60	53	8 5	3 66	53	54	66	65	
CDS RUZO	53	52	51	52	52	52	0	15			15		52	52	
HMUTINGA	55	31	U	29	33	. 0	52			3 53			6/	35	
HKIBUMBU	63	62	62	62	62	62	20	1 47		0 41	46		62	62	
HFOIA	49	45	45	45	45	45	17	17	1 1	7 17	17	11	45	45	
HRULANA	55	55	55	55	55	55	35	i 35	5 3	5 39	i 35	39	55	55	
H GIHCHI	· · · · ·	54	0	0	54	0	0) (0	54	
HKATANZA	64	64	64	64	64	64	52	59		5 52			64	64	
H MUSEM A	57	57	57	57	57	57	49	45	4	8 45	45	41	57	57	
CUS MARAM VYA	0	55	54	0	55	55	0	28	5 I		28		. 0	55	
<u>n kumonge</u>		62	0	0	63	0	0	20		, (18		. 0	63	
ANSS GILEGA	66	0	64	66		65	49			D 45			66	0	
HMUIOTI	58	0	0	58		0	53			54			58	0	
HBUHIGA	56	. 0	0	57		0	57) (57 57) 0	0	
H GIHANGA	(58	57	0	58	57	0	20) (20		0 0	58	
H CIBITOKE	63	65	63	63	65	63	0	18	8 1) (18		63	64	
Kabezi															

Table 4: Completeness of data elements, % compl

Date of last AFT Regime at last AFT Date of last AF											Viral I	oad test do	ne and			
bits		Da	ite of last A	RT	Regi	men at last	ART	Date of	last viral lo	ad test		suppressed	1	C	irrent on Af	π
backy matrixe model and proper mod		Flattonic	Paner,hacef	Panerchastert	Flattonic	Paner,hacef	Panerchastert	Flattonic	Paner,hacef	Paner, hased	Flattrooir	Paner, hassed	Paner, hassed	Flattonic	Parer,based	Panarchasa
HACCD 106 006 206 </th <th>Facility</th> <th>medical record</th> <th>medical record</th> <th>register</th>	Facility	medical record	medical record	register	medical record	medical record	register	medical record	medical record	register	medical record	medical record	register	medical record	medical record	register
Hart 100 000 <td>H NGOZI</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>97%</td> <td>99%</td> <td>13%</td> <td>97%</td> <td>99%</td> <td>13%</td> <td>100%</td> <td>100%</td> <td>1</td>	H NGOZI	100%	100%	100%	100%	100%	100%	97%	99%	13%	97%	99%	13%	100%	100%	1
HANDAL 100 500 500 500 500 500 500 770<	HBUYE	100%	100%	100%	100%	100%	100%	95%	95%	0%	95%	94%	0%	100%	100%	1
NCARGE 100 186 200 186 200 176 776 776 776 776 776 776 776 776 776 776 776 776 176 10000 1000 1000	H KIREMBA	100%	100%	100%	100%	100%	100%	97%	98%	0%	979	98%	0%	100%	100%	1
NAME 100 000 <td>H CANKUZO</td> <td>100%</td> <td>98%</td> <td>100%</td> <td>100%</td> <td>98%</td> <td>100%</td> <td>73%</td> <td>73%</td> <td>77%</td> <td>739</td> <td>71%</td> <td>77%</td> <td>100%</td> <td>100%</td> <td>1</td>	H CANKUZO	100%	98%	100%	100%	98%	100%	73%	73%	77%	739	71%	77%	100%	100%	1
HART2 100 200 </td <td>H MURORE</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>53%</td> <td>53%</td> <td>536</td> <td>539</td> <td>53%</td> <td>53%</td> <td>100%</td> <td>100%</td> <td>1</td>	H MURORE	100%	100%	100%	100%	100%	100%	53%	53%	536	539	53%	53%	100%	100%	1
State Large	H BLITEZI	100%	100%	100%	100%	100%	100%	74%	68%	68%	74%	68%	68%	100%	100%	1
Name 100 98	SWAA RIMGI	100%	99%	99%	100%	99%	99%	31%	28%	29%	319	28%	29%	100%	100%	1
	H KINYINYA	100%	0.01	0.9%	100%	0.01	0.9%	41%	41%	4190	419	41%	4196	100%	0.9%	
CDC CLUCK DDD DDD <thdd< th=""> <thdd< <="" td=""><td>NULE ESPERENCE BUYEN7</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>94%</td><td>94%</td><td>0%</td><td>96%</td><td>95%</td><td>0%</td><td>100%</td><td>100%</td><td></td></thdd<></thdd<>	NULE ESPERENCE BUYEN7	100%	100%	100%	100%	100%	100%	94%	94%	0%	96%	95%	0%	100%	100%	
Martine formation DDS DDS <thdds< th=""> DDS <thdds< th=""></thdds<></thdds<>	CDS CHUK	100%	100%	81%	100%	100%	81%	88%	90%	0%	90%	91%	0%	100%	100%	
Harth All Los Dot Dot <thdot< th=""> Dot <thdot< th=""> <thdot<< td=""><td>NULE ESBE KANVOSHA</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>57%</td><td>97%</td><td>0%</td><td>579</td><td>99%</td><td>0%</td><td>100%</td><td>100%</td><td></td></thdot<<></thdot<></thdot<>	NULE ESBE KANVOSHA	100%	100%	100%	100%	100%	100%	57%	97%	0%	579	99%	0%	100%	100%	
Name 1	UNTITA	100%	100%	100%	00	100%	100%		40%	E 196		47%	0%	00	100%	
Name Dist Dist <thdis< th=""> Dist Dist D</thdis<>	1 Moderal	0%	100%	100%	0%	100%	100%	0%		21/0		47.5		0%	100%	
Constraint Loss 200 <th< td=""><td>H Mulby</td><td>100%</td><td>100%</td><td>100%</td><td>0%</td><td>100%</td><td>100%</td><td>0.5</td><td>63%</td><td>0%</td><td></td><td>91%</td><td>0%</td><td>0%</td><td>100%</td><td></td></th<>	H Mulby	100%	100%	100%	0%	100%	100%	0.5	63%	0%		91%	0%	0%	100%	
Unit Name Integra Open	CDS KIGUTU	100%	1006	100%	100%	100%	100%	41%	41%	0%	925	42%	0%	100%	100%	
Normation Loss		100%	100%	20070	100%	100%	1007	20/1		0.0				100%	100%	
Name Disc Disc <thdis< th=""> Disc Disc D</thdis<>	n Malana Ukicanda	100%	100%	31%	100%	100%	100%	25	200	10%	20	200	20%	100%	100%	
Constraints Labors Labors <td>H NIGARDA</td> <td>100%</td> <td>100%</td> <td>200%</td> <td>100%</td> <td>100%</td> <td>200%</td> <td>30%</td> <td>30%</td> <td>30%</td> <td>50%</td> <td>30%</td> <td>30%</td> <td>100%</td> <td>100%</td> <td></td>	H NIGARDA	100%	100%	200%	100%	100%	200%	30%	30%	30%	50%	30%	30%	100%	100%	
La classificación de la classi	H MORANYIA	100%	100%	76%	100%	100%	76%	17%	27%	0.00	1/%	27%	0.96	100%	17%	
Data Dist Dist <thdis< th=""> Dist Dist D</thdis<>	CDS Materido	100%	100%	70%	100%	100%	70%	1/%	27%	0%	1/1	27%	0%	100%	1756	
Adversion Loop Total	CDS Gasora	0.95	100%	100%	0.56	100%	100%	0.55	10%	0.00	0.0	10%	0.96	0.56	100%	
NALL MARKAR MALA MALA MARKAR MALA MALA MARKAR MALA MALA MARKAR MALA MALA MARKAR MALA MALA MARKAR MALA MALA MALA MALA MALA MALA MALA MALA	HMUKENKE	100%	99%	36%	100%	99%	97%	88%	90%	0%	88%	90%	0%	100%	99%	
Marging Disk Disk <thdisk< th=""> Disk Disk <</thdisk<>	ANSS KIRUNDO	100%	100%	94%	100%	100%	100%	88%	99%	0%	88%	99%	0%	100%	100%	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	H Nyanza-Lac	100%	100%	100%	100%	100%	100%	0%	0%	0%	090	0%	0%	100%	100%	
La characterization and a characterization of the char	ANSS MAKAMBA	100%	100%	100%	100%	100%	100%	88%	78%	78%	97%	78%	79%	97%	97%	
Maximum Max	CDS RU2U	100%	100%	58%	100%	100%	100%	0%	29%	0%	090	29%	0%	100%	100%	1
All ALA Lobic Lobic <thlobic< th=""> Lobic Lobic <t< td=""><td>H MUTINGA</td><td>88%</td><td>48%</td><td>0%</td><td>88%</td><td>49%</td><td>0%</td><td>/8%</td><td>33%</td><td>0%</td><td>/8%</td><td>33%</td><td>0%</td><td>100%</td><td>52%</td><td></td></t<></thlobic<>	H MUTINGA	88%	48%	0%	88%	49%	0%	/8%	33%	0%	/8%	33%	0%	100%	52%	
Hold A Look Dote Dote Dote Dote Bits <	H KIBUMBU	100%	100%	100%	100%	100%	100%	32%	76%	0%	66%	74%	0%	100%	100%	
Hall MAA 120% 200% 200% 200% 200% 64% <	H FOTA	100%	100%	100%	100%	100%	100%	38%	38%	38%	38%	38%	38%	100%	100%	1
Constraint Constra	H RUTANA	100%	100%	100%	100%	100%	100%	64%	64%	64%	6490	64%	64%	100%	100%	2
ALLANAL 120% 20	H GIHOFI	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Autoritation 200%	H KAYANZA	100%	100%	100%	100%	100%	100%	81%	92%	0%	819	0%	0%	100%	100%	1
CS (MAMAYA) ON DOX SPR DOX DOX <thd< td=""><td>H MUSEMA</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>86%</td><td>86%</td><td>84%</td><td>86%</td><td>86%</td><td>82%</td><td>100%</td><td>100%</td><td>1</td></thd<>	H MUSEMA	100%	100%	100%	100%	100%	100%	86%	86%	84%	86%	86%	82%	100%	100%	1
Hammage ON SBK ON D.X D.N D.N </td <td>EDS MARAMVYA</td> <td>0%</td> <td>100%</td> <td>98%</td> <td>0%</td> <td>100%</td> <td>100%</td> <td>0%</td> <td>51%</td> <td>0%</td> <td>0%</td> <td>51%</td> <td>2%</td> <td>0%</td> <td>100%</td> <td></td>	EDS MARAMVYA	0%	100%	98%	0%	100%	100%	0%	51%	0%	0%	51%	2%	0%	100%	
Autor offsack 200% OK 97% 200% OK 98% 75% OK OK 76% OK 76% OK 76% OK 26% 26% OK 26%	H Rumonge	0%	98%	0%	0%	100%	0%	0%	32%	0%	0%	29%	0%	0%	100%	
MATCP1 200% 0% 0% 0% 0% 9% 0% <	ANSS GITEGA	100%	0%	97%	100%	0%	98%	74%	0%	0%	7490	0%	0%	100%	0%	1
HEAD-CL BFM ON ON SON ON	H MUTOYI	100%	0%	0%	100%	0%	0%	91%	0%	0%	93%	0%	0%	100%	0%	
GLAMACA OF 2006 91% 01% 105% 91% 01% 91% 91% 91% 100% 91% 91% 100% 91%	H BUHIGA	89%	0%	0%	90%	0%	0%	90%	0%	0%	90%	0%	0%	0%	0%	
Accention 97% 100% 97%	H GIHANGA	0%	100%	98%	0%	100%	98%	0%	34%	0%	0%	34%	0%	0%	100%	
Check · · · · · · · · · · · · · · · · · · ·	H CIBITOKE	97%	100%	97%	97%	100%	97%	0%	28%	0%	0%	28%	0%	97%	98%	
Average completeness of data elementations facilities at SIX BEX BEX BEX BEX BEX BEX BEX BEX AVER S0X 4EX 50X 4EX 15X 79X 90X Number of facilities with Jano S completeness 7 4 5 7 3 5 10 6 27 10 7 27 8 3	fabezi															
	Average completeness of data element across facilities															

Summary Findings from Data Consistency Check with LQAS Triage System Tool

										Viral I	load test dor	ie anu						
				D	ate of last Al	RT	Reg	imen at last	ART	Date o	f last viral lo	ad test		suppressed		С	urrent on Al	RT
	Active on Treatment	LQAS Sample		Electronic medical record / Paper- based medical	Electronic medical record / Paper-	Paper-based medical record / Paper-based	Electronic medical record / Paper- based medical	Electronic medical record / Paper-	Paper-based medical record / Paper-based	Electronic medical record / Paper- based medical	Electronic medical record / Paper-	Paper-based medical record / Paper-based	Electronic medical record / Paper- based medical	Electronic medical record / Paper-	Paper-based medical record / Paper-based	Electronic medical record / Paper- based medical	Electronic medical record / Paper-	Paper-based medical record Paper-based
Facility	(DHIS 2)	Size	Decision Rule	record	based register	register	record	based register	register									
H NGOZI	75	0 67	7 61	yes	yes	yes	s yes	yes	yes	no	no	nc	yes	no	nc	yes	yes	;
H BUYE	30	0 58	3 53	yes	yes	yes	s yes	yes	yes	yes	-		- yes	-		yes	yes	;
H KIREMBA	50	0 66	5 60	yes	yes	yes	s yes	yes	yes	yes	-		- yes	-		yes	yes	;
H CANKUZO	37	5 66	5 60	no	yes	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	;
H MURORE	10	0 46	5 42	yes	yes	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	;
H BUTEZI	10	0 46	5 42	no	no	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
	3/	5 bt	D 60	no	no	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
	23 EI 47	5 67	5 33 7 61	yes	yes	yes	yes	yes	yes	10	110	nc	- V05	110	nc	yes	yes	
	22	5 56	5 51	Ves	yes ves	nc	yes ves	yes	yes yes		_		yes ves	_		yes ves	yes ves	
NLLE ESPE KANYOSHA	12	5 46	5 42	no	no	ve	s ves	ves	ves	no	-		- no	-		ves	ves	
H NTITA	30	0 58	3 53	_	-	ves	,	,	ves		-	nc) -	-			,	
H Mutoyi	25	0 58	3 53	-	-	yes	5 -	-	nc	-	-			-			-	. ,
H KIBUYE	35	0 58	3 53	-	yes		- yes	yes	yes	no	-		no	-		yes	yes	
CDS KIGUTU	45	0 67	7 61	-	yes		- no	yes	nc	-	-		no	-			yes	
H MATANA	22	5 56	5 51	yes	no	nc	yes	yes	yes	-	-			-		yes	yes	;
H KIGANDA	17	5 56	5 51	no	no	nc	o no	no	nc	no	no	nc	o no	no	nc	no	no	
H MURAMVYA	40	0 66	5 60	no	no	nc	yes	no	nc	-	-		- no	-		no	no	
CDS Marembo	15	0 49	9 45	no	no	nc	yes	yes	yes	-	-		- no	-		no	yes	
CDS Gasura	25	0 58	3 53	-	-	yes	- 5	-	yes	-	-			-				
H Mukenke	60	0 6/	61	no	no	nc	yes	yes	yes	no	-		- no	-		yes	yes	
	110	U 68	5 62	no	no	nc	yes	yes	yes	no	-		- 10	-		yes	yes	
	27	0 67	7 61	10	10	ye:	yes	yes	yes ves	no	no	nc) no	no	nc	yes ves	yes	
CDS RUZO	35	0 58	3 53	no	no	nc	no no	no	nc	-	-			-	inc.	no yes	yes	
H MUYINGA	90	0 67	7 61	no	-		no			no	-		no	-		no	-	
H KIBUMBU	55	0 67	7 61	no	yes	nc	o no	yes	nc	no	-		no	-		yes	-	
H FOTA	12	5 46	5 42	yes	yes	yes	s yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
H RUTANA	27	5 65	5 59	no	no	nc	o no	no	nc	no	no	nc	o no	no	nc	no no	no	
H GIHOFI	22	5 56	5 51	-	-			-		-	-			-			-	
H KAYANZA	90	0 67	7 61	no	no	nc	yes	yes	yes	no	-			-		yes	yes	
H MUSEMA	25	0 58	3 53	no	no	nc	yes	yes	yes	no	no	nc	o no	no	nc	yes	yes	
CDS MARAMVYA	15	0 49	9 45	-	-	nc		-	yes	-	-			-		· -	-	
H Rumonge	60	0 67	7 61	-	-			-		-	-			-			-	
ANSS GITEGA	120	0 50	5 62 D 53	-	yes			no		-	-						yes	
	25	0 56	5 50	-	-			-		-	-			-				
H GIHANGA	40	0 58	3 53	_		nc	- -	_	Vec		_							
	55	0 67	7 61	no	ves	nc	ves	ves	ves	-	_			_		ves	ves	
Kabezi				_	-			-		-	-			-			-	
	Number of	facilities meeting	g the standard:	8	14	15	5 22	23	26	3	0	() 5	0	C) 22	24	
	Number of faci	lities not meeting	g the standard:	19		16		6		19	11	12	2 19	11	11	. 6	4	
Nı	umber of facilitie	es where compar	ison not done:	13	11) 11	11		18	29	28	3 16	29	29	12	12	
			Total:	_40	40	4) 40	40	40	40	40	4() 40	_40	40	40	40	
		of focilities	ting atom doud#	20%	4004				-704		-004							
	%	or facilities meet	ung standard*:	30%	48%	48%	. 76%	79%	/9%	14%			. 21%			/9%	86%	8
	% of facili	ties not meeting	the standard*:	70%	52%	52%	5 24%	21%	21%	86%	100%	100%	6 79%	100%	100%	21%	14%	1
			% not done	33%	28%	23%	28%	28%	18%	45%	73%	70%	40%	73%	73%	30%	30%	

LQAS Triage System Data Collection and Analysis Tool – Facility Tabs

Health Facility Data Collection Tabs

- Health facility identifiers auto-populated in a table at the top of each page.
- For each sampled record, record the client number, name, date of birth, and gender.
- The column headings are auto populated once the assessment parameters are entered into the parameters tab.
- Enter data for up to three data sources.

	Health facility name: Facility size (client volume):	H NGOZI 750		Region: Sample size:	- 67	District: Decision rule:	719	Health program: Date of assessment:	HIV_AIDS	Retun to Analysis page
	Period of review:	Q1 2019						·		
		ACTUAL SAM	MPLE SIZE =	68			Elect	ronic medical	record	
	Client Number	Client Name	Date of Birth	Sex	Date of last ART	Regimen at last ART	Date of last viral load test	Viral load test done and suppressed	Current on ART	Comments
1	003367		15-Jul-75	F	20-03-19	TDF/3TC/EFV	15-06-18	ind	Active	
2	003318		15-Jul-85	F	07-03-19	TDF/3TC/EFV			Active	
3	003304		01-Jan-10	F	30-03-19	ABC/3TC+EFV	07-06-18	det	Active	
4	003279		15-Jun-77	F	20-03-19	TDF/3TC/EFV	20-06-18	ind	Active	
5	003274		15-Aug-87	F	22-03-19	TDF/3TC/EFV	14-09-18	ind	Active	
6	003213		15-Jul-80	F	10-03-19	TDF/3TC/EFV	14-03-19	ind	Active	

LQAS Triage System Data Collection and Analysis Tool – Facility Tabs

Health Facility Data Collection Tabs

- Once the data are entered into the appropriate fields data elements are compared in the grid to the right.
- The values by data source are grouped and the degree of matching indicated.

Concordance between data sources for 'Date of last ART'				Conco	rdance bet	ween data so	ources for 'R	egimen at lo	ast ART'	Concorda	ince betwee	en data sour	ces for 'Date	e of last vira	ıl load test'	Concord	lance betwe	en data soi suppi	urces for 'Vir ressed'	al load test (done and	Conc	cordance b	etween data	a sources for	'Current on	ART'			
Electronic medical record	Paper- based medical record	Paper- based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper- based medical record / Paper- based register		Electronic medical record	Paper- based medical record	Paper- based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper- based medical record / Paper- based register	Electronic medical record	Paper- based medical record	Paper- based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper- based medical record / Paper- based register	Electronic medical record	Paper- based medical record	Paper- based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper- based medical record / Paper- based register	Electronic medical record	Paper- based medical record	Paper- based register	Electronic medical record / Paper- based medical record	Electronic medical record / Paper- based register	Paper- based medical record / Paper- based register
20-03-19	20-03-19	20-03-19	(0 0	0	TC	DF/3TC/EFV	F/3TC/EFV	F/3TC/EFV	1	1	1	15-06-18	15-06-18	15-06-18	0) () 0	inc	lind	ind	1	1	1	Active	Active	Active	1	1	
07-03-19	07-03-19	26-02-19	() 11	11	TC	DF/3TC/EFV	F/3TC/EFV	F/3TC/EFV	1	1	1													Active	Active	Active	1	1	
30-03-19	30-03-19	30-03-19	(0 0	0	ABC	C/3TC+EFV	:/3TC+EFV	/:/3TC+EFV	1	1	1	07-06-18	07-09-18	07-06-18	90) () 90	det	det	det	1	1	1	Active	Active	Active	1	1	
20-03-19	20-03-19	20-03-19	(0 0	0	TC	DF/3TC/EFV	F/3TC/EFV	F/3TC/EFV	1	1	1	20-06-18	20-06-18	20-06-18	0) (0 0	ind	ind	ind	1	1]	Active	Active	Active	1	1	
22-03-19	29-03-19	22-03-19	7	7 0	7	TC	DF/3TC/EFV	F/3TC/EFV	F/3TC/EFV	1	1	1	14-09-18	14-09-18	14-09-18	0) () 0	ind	ind	ind	1	1	1	Active .	Active	Active	1	1	
10-03-19	10-03-19	09-03-19	() 1	1	TC	DF/3TC/EFV	F/3TC/EFV	F/3TC/EFV	1	1	1	14-03-19	14-03-19	14-03-19	0) () 0	ind	ind	ind	1	1	1	Active	Active	Active	1	1	
25-03-19	25-03-19	25-03-19	(0 0	0	TC	DF/3TC/EFV	F/3TC/EFV	F/3TC/EFV	1	1	1	16-04-18	22-02-18	16-04-18	54	1 C	54	ind	ind	ind	1	1	1	Active	Active	Active	1	1	

LQAS Triage System Data Collection and Analysis Tool – Facility Tabs

Health Facility Data Collection Tabs

- The completeness and consistency of data elements is summarized for each data element at the bottom of the page.
- Summary data presented include:
 - Number of matches
 - The effective denominator
 - % matching
 - Number of missing values
 - % complete

Number of			
Matches:	68	67	67
Denominator:	68	68	68
% Match:	100%	99%	99%
Number missing:	0	0	0
% Complete:	100%	100%	100%

Number of Matches:	68	68	68	
Denominator:	68	68	68	
% Match:	100%	100%	100%	
Number missing:	0	0	0	
% Complete:	100%	100%	100%	

Momber of Matches:	57	9	7
Denominator:	68	68	68
% Match:	84%	13%	10%
Number missing:	2	1	59
% Complete:	97%	99%	13%

Number of	/5	0	0
maicnes:	65	У	9
Denominator:	68	68	68
% Match:	96%	13%	13%
Number missing:	2	1	59
% Complete:	97%	99%	13%

Matches: 68 68 68 Denominator: 68 68 68 68 % Match: 100% 100% 100 Number missing: 0 0 0	% Complete:	100%	100%	100%
Matches: 68 68 68 Denominator: 68 68 68 68 % Match: 100% 100% 100% 100	Number missing:	0	0	(
Matches: 68 68 Denominator: 68 68	% Match:	100%	100%	100%
Matches: 68 68 68	Denominator:	68	68	68
Number of	Number of Matches:	68	68	68

LQAS Triage System Data Collection and Analysis Tool – Best Practices

Best practices for effective implementation

- Standard data collection forms located in the tool (Print for paper data collection)
- Standardize the coding conventions prior to the assessment so that results are consistent across teams.
- If you are conducting a larger data quality assessment concurrently, ensure that the sampled records are kept apart from the larger recount to avoid double-counting
- Try to avoid being at the facility during clinic hours so that all the records will be available (be mindful to avoid disrupting patient care)
- If an electronic data source exists (e.g. EMR) export a line list of patients with relevant data elements to facilitate the assessment
- Paste only 'values' in the Excel tool (not formatting and formulas)

Burundi Test of LQAS Triage System

DQA of HIV/AIDS program indicators

- Current on ART
- New on ART
- Viral load test done and suppressed
- May/June 2019
- 140 sites (80% of current on ART)
- Cross checks between data sources



Data Quality Assessment (DQA) for HIV Program Indicators in Burundi Final Report

September 2019





The Global Fund

Results – Data Element Completeness

Data Element	Data Source	% Data Element Compl. (Avg. across Sites)	# Facilities with 0% Compl.	% Facilities with 0% Compl.	Avg. Compl. Data Sources across Data Elements	Avg. Compl. Data Elements across Data Sources
	SIDA Info	77%	10	23%	63%	84%
Date of last ART	Medical record	89%	4	9%	70%	
	Register	87%	5	11%	51%	
	SIDA Info	81%	8	18%		87%
at last	Medical record	92%	3	7%		
	Register	87%	5	11%		
	SIDA Info	47%	11	25%		38%
Date of last VL	Medical record	51%	6	14%		
	Register	16%	26	59%		
	SIDA Info	48%	11	25%		37%
Last VL result	Medical record	48%	7	16%		
	Register	15%	26	59%		

Results – Concordance across data sources

		# Facilities Standard Met	# Facilities Standard Not Met	# Facilities Comparison Not Done	Total	% Facilities Meeting Standard	% Facilities Not Meeting Standard	% Facilities Comparison Not Done	Average for Data Element	Average for Specific Comparison
Date of Last ART	Medical record/register	18	18	8	44	50%	50%	5 18%	50%	46%
	Register/EMR	18	13	13	44	58%	42%	30%		47%
	Medical record/EMR	12	17	15	44	41%	59%	34%		48%
Regimen Last ART	Medical record/register	33	5	6	44	87%	13%	5 14%	86%	
	Register/EMR	28	5	11	44	85%	15%	5 25%		
	Medical Record / EMR	28	5	11	44	85%	15%	5 25%		
Date of Last VL	Medical record/register	C	12	32	44	0%	100%	73%	4%	
	Register/EMR	C	10	34	44	0%	100%	5 77%		
	Medical record/EMR	2	17	25	44	11%	89%	57%		
Result of Last VL	Medical record/register	C	11	33	44	0%	100%	5 75%	4%	
	Register/EMR	C	11	33	44	0%	100%	5 75%		
	Medical record/EMR	3	20	21	44	13%	87%	48%		
Status on Treatment	Medical record/register	33	3	8	44	92%	8%	5 18%	92%	
	Register/EMR	30	2	12	44	94%	6%	27%		
	Medical record/EMR	29	3	12	44	91%	9%	27%		

Agreement between sample and exhaustive review

Results	Number of facilities	Percent
Active on Treatment		
Standard met (sample proportion ≥ 95%)	40	91%
Standard not met (sample proportion < 95%)	4	9%
True facility proportion ≥ 95%	31	72%
True facility proportion < 95%	12	28%
Sample and true facility proportion ≥ 95%	30	70%
Sample and true facility proportion < 95%	3	7%
Sample proportion ≥ 95% and true facility proportion < 95%	9	21%
Sample proportion < 95% and true facility proportion ≥ 95%	1	2%
Concordant	33	77%
Discordant	10	23%
Viral Load Test Conducted and Viral Load Suppressed		
Standard met (sample proportion ≥ 95%)	1	7%
Standard not met (sample proportion < 95%)	13	93%
True facility proportion ≥ 95%	4	29%
True facility proportion < 95%	10	71%
Sample and true facility proportion ≥ 95%	1	7%
Sample and true facility proportion < 95%	10	71%
Sample proportion \geq 95% and true facility proportion < 95%	0	0%
Sample proportion < 95% and true facility proportion ≥ 95%	3	22%
Concordant	11	78%
Discordant	3	22%

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