

Routine Health Outcome Monitoring Using Lot Quality Assurance Sampling

LOFA COUNTY, LIBERIA (APRIL 2013)

Lot Quality Assurance Sampling (LQAS) is a relatively rapid and inexpensive approach to data collection for monitoring and evaluation purposes. It can be used to empower program managers to assess program performance, enabling them to determine whether program objectives and targets have been achieved within a specific unit of interest. Data was collected in Lofa County, Liberia in March of 2013 on five health indicators as part of a capacity building exercise with the Ministry of Health. Results are calculated for each indicator at both the Supervision Area level (Supervision Areas are associated with Health Districts) to determine whether the Supervision Area met or did not meet the county target, and at the county level to determine the weighted average coverage. The results are below:



Supervision Area	Health District	Communities Where Data was Collected
A	Foya	Foya Town (6), Kondobengu, Sakpawa, Bandenin, Willidu, Yegbedu, Yendema, Worsongar, Kwendemba, Mendequema, Sembesue, Lepaloe Tembio, Kporlornin, Kudu
B	Kolahun	Bafehun, Kimbalahun, Popalahun-A, Batchiwa, Gelema, Kpengbelahun, Lukasu, Bolahun, Manhotahun, Savalhun, Solamun (2), Wowulahun, Balohun Town, Masambolhun (4), Nyandemoilahun Town Center
C	Salayea	Gbotai Village, Gboyea, Gorlu (2), Pewee Village, Beyan, Ganglota, Salayie (4), Tinsue, Gbansu Village, Gbanway, Kpayea, Sucromu, Yarpua (2), Yarpuah Faryanpulu
D	Vahun	Airfield, Airfield 1 (2), Airfield 2 (2), Airfield 3 (2), Airfield 4 (2), Hengima, Fayama Village, Gbajobu, Levuma, Nyeyama, Dukor Gbondo, Gbongoma, Koyama, Memolahun (2)
E	Quardu Boundi & Voinjama	Barkadou, Barkedu (2), Mamekonnedu, Sarkonedu, David Selma's, Lormai, Tennebu, Kpolomai Town, Vezala, Koianmai Town, Lazelemai, Sammie Ta, Tobogizizu, Voinjama (5)
F	Zorzor	Wumuyeazu Village, Zolowu, Fissibu, Saquoiwu Village, Zorzor (4), Zorzor Bodoso Village, Barwen, Boi Village (2), Borkeza (2), Konia, Wakesu B, Zelemai, Ziggida (2)



This research has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement GHA-A-00-08-00003-00, which is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill, with Futures Group, ICF International, John Snow, Inc., Management Sciences for Health, and Tulane University. Views expressed are not necessarily those of PEPFAR, USAID, or the United States government. fs-14-109.

CHILD HEALTH

Children 12–23 Months Receiving DPT3/Pentavalent-3 Vaccination before 12 months

Coverage (CI)	Sample size	Target	Decision rule	Lot	Correct responses	Meets decision rule?
86% (80%–92%)	19	92.5%	16 (95%)	A	19	Yes
				B	17	Yes
				C	15	No
				D	14	No
				E	16	Yes
				F	13	No

With the target set at nearly 93%, only half of the health districts met the target for DPT3/Penta-3 coverage. The average coverage adjusted for population size for Penta-3 in Lofa in 2013 is about 86%. Despite this finding, only half of the health districts in Lofa met the set target; overall the Penta-3 coverage is high. Only 2 health districts, Vahun and Zorzor were below the average coverage.

MALARIA PREVENTION

Mothers of children 0-59 Months who received second dose of IPT during last pregnancy

Coverage (CI)	Sample size	Target	Decision rule	Lot	Correct responses	Meets decision rule?
61.2% (51.5%–70.9%)	19	80%	13 (80%)	A	12	No
				B	13	Yes
				C	12	No
				D	6	No
				E	11	No
				F	12	No

The overall performance of coverage for IPT-2 (61%) was much lower than expected by the Lofa County Health and Social Welfare Team (CHSWT). The average coverage in 2012 was 76%. In 2013, even after factoring in uncertainties around the coverage estimate, overall coverage was less than coverage in 2012. It was also lower than the target of 80%, which was thought to be achievable given evidence from previous year's coverage. With the target of 80%, only the Kolahun health district met this target. The other five health districts did not perform well in terms of meeting the set target. Assuming the current county average coverage, Vahun health district seems to be struggling more with meeting the county coverage for this indicator.

NURITION

Women 15-49 years meeting minimum acceptable dietary diversity

Coverage (CI)	Sample size	Target	Lot	Correct responses	Meets decision rule?
5 (4.9–5.07)	19	4.41	A	5.3158	Yes
			B	5.0526	Yes
			C	4.7368	Yes
			D	4.7895	Yes
			E	5.0000	Yes
			F	4.5789	Yes

The 2013 results for women’s dietary diversity score suggest that, compared to previous years, there seems to be more diversity in the diet and food consumption among women in Lofa. Overall the mean score is above computational average (4.5) and well above the mean score obtained in 2012. All health districts in Lofa seem to be faring better with regard to meeting the target average score of 4.4. However, if we compare individual health districts to the 2013 county average, Zorzor seems to be falling behind the rest of the health districts, followed by Salayea and Vahun.

MATERNAL HEALTH

Mothers of children 0–23 months attending at least four ANC visits during last pregnancy

Coverage (CI)	Sample size	Target	Decision rule	Lot	Correct responses	Meets decision rule?
65.4% (56.0%–74.8%)	19	69%	11 (70%)	A	13	Yes
				B	12	Yes
				C	11	Yes
				D	10	No
				E	11	Yes
				F	16	Yes

In Liberia, pregnant women are encouraged to attend antenatal clinic (ANC) during the course of the pregnancy, and it is recommended that they attend at least 4 of the ANC visits to ensure their health and well-being, together with the health and well-being of the child. The attendance rate for the first ANC visit among pregnant women in Liberia tends to be higher, but thereafter drops with subsequent follow up visits (as evident from HMIS data and other sources). The CHSWTs responsible for MCH are working closely with community members to encourage women to attend at least 4 visits during the duration of the pregnancy, and the Maternal and Child Health (MCH) program coordinators are hoping that the proportion attending at least 4 ANC visits will be much higher given the benefits. Despite the efforts by the county to encourage pregnant women to attend ANC clinics periodically during pregnancy, the average coverage estimate for women attending at least 4 ANC visits during pregnancy has not been as high as it is expected. In Lofa, about 65% of women completed at least 4 ANC visits during their last pregnancy. Based on the set target of 69%, all health districts with the exception of Vahun met this target.

MATERNAL HEALTH

Mothers of children age 0–23 months who gave birth in a facility attended by a skilled birth attendant

Coverage (CI)	Sample size	Target	Decision rule	Lot	Correct responses	Meets decision rule?
77.4% (69.1%–85.7%)	19	83%	14 (85%)	A	13	No
				B	15	Yes
				C	17	Yes
				D	10	No
				E	16	Yes
				F	16	Yes

Two (Vahun and Foya) of the six health districts in Lofa did not meet the set target of 83% coverage for births attended by a skilled birth attendant (SBA) in 2013, whereas all the 6 health districts met the target last year. Overall for Lofa County, the proportion of births attended by skilled birth attendant is higher. The results are encouraging and suggest that campaigns and mobilization efforts by the CHSWT to ensure that births are taking place at the health facilities and attended by SBA are having some impact.

SUMMARY

From the selected five indicators and respective targets for the four program areas in Lofa, overall findings suggests that health districts are meeting the set targets for these indicators, with the exception of IPT2. However, there is indication that, compared to performance of other health districts in 2013 in Lofa, Vahun is struggling to meet the county's benchmark for several of the indicators. Attention is needed in Vahun to determine the challenges the program teams are facing there and how best the district can be assisted to meet the targets.