

Monitoring Health Outcomes in Liberia Using Lot Quality Assurance Sampling



OVERVIEW

Lot Quality Assurance Sampling (LQAS) is a relatively rapid approach to data collection that provides a viable alternative to traditional surveys. The method allows for smaller sample sizes than standard probability surveys, and the lower associated costs allow for more frequent sampling. LQAS data can also be used in conjunction with other sources of health information, such as service statistics, to obtain information on coverage and quality of care at the population level. In Liberia, LQAS has provided county-level estimates of coverage of selected indicators and information whether supervision areas within the county meet performance targets. LQAS is designed to assess whether a target has been “met” or “not met” in a designated program supervisory area. The small sample size required to provide the binary estimates is a key feature of an LQAS. While this can provide important information for program managers, point estimates will not be available for the supervisory areas.

METHODS

Four county field teams interviewed mothers between the ages of 15 and 49 in order to gather information on three target groups:

- Mothers of reproductive age
- Children aged 0–59 months
- Children aged 0–59 months with a cough, fever, or diarrhea in the past two weeks

QUICK FACTS

- 4 pilot counties: Bomi, Bong, Lofa and Nimba
- Each county represents a stand-alone LQAS and can be analyzed individually
- 95 data records for each county
- 1 main questionnaire and 8 separate sub-questionnaires
- 26 different indicators on maternal and child health, sanitation, malaria and childhood diseases
- Indicator estimates available at the county level
- Provides useful information at the local supervision area-level

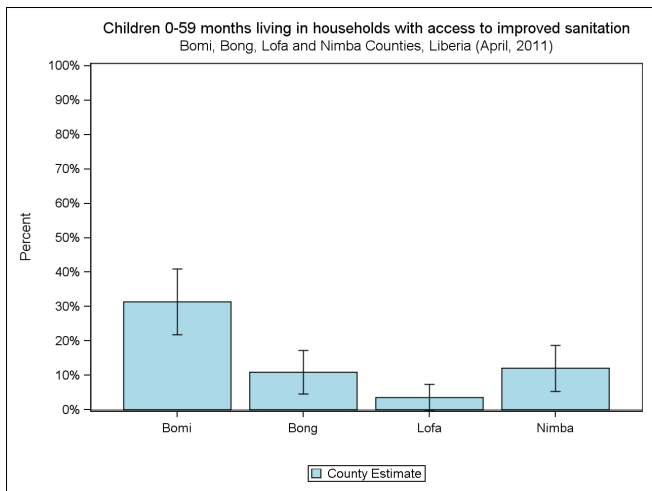


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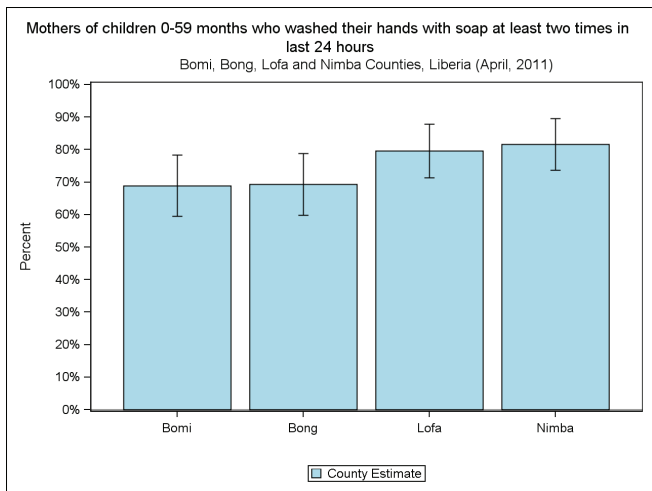
RESULTS

Water, Sanitation, and Hygiene (WASH) Indicators

Soap was commonly found in the sampled households of all four counties. Likewise, the majority of mothers reported washing their hands with soap at least two appropriate times during the last 24 hours (see figure below).



Less than half of sampled households in the four counties had access to improved sanitation¹ (see figure at below).



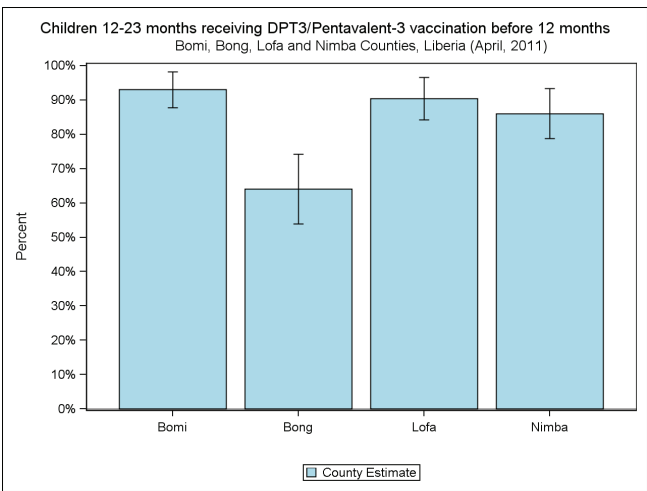
Treatment of diarrhea with oral rehydration solution (ORS) and zinc varied from 30% in Bong and Nimba to almost 60% in Bomi and Lofa.

¹ Access to improved sanitation is defined as the use of a flushed toilet, a community latrine, or a ventilated improved pit latrine.

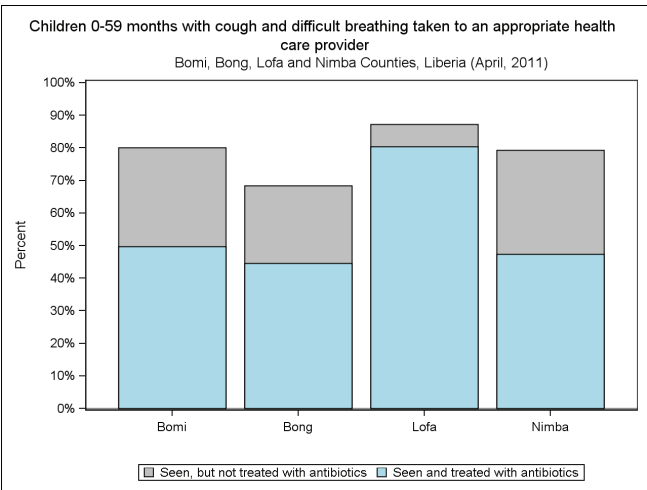
Immunization and Child Health Indicators

Possession of a child health card was very high in all counties; however, interviewers had difficulty collecting information from the cards because they were often incomplete or were an older version.

Coverage of complete vaccination was at or over 85% for three of the counties. Coverage for Bong was lower, around 55%. Likewise, the percentage of children receiving DPT3/pentavalent-3 vaccination before twelve months was low for Bong (64%) (see figure below).



Most children with a fever, or a cough and/or difficult breathing, were taken to a health care provider. Children with a cough and/or difficult breathing were likely to receive antibiotics from an appropriate health care provider in Lofa (80%), but less likely in other counties (approximately 50%).



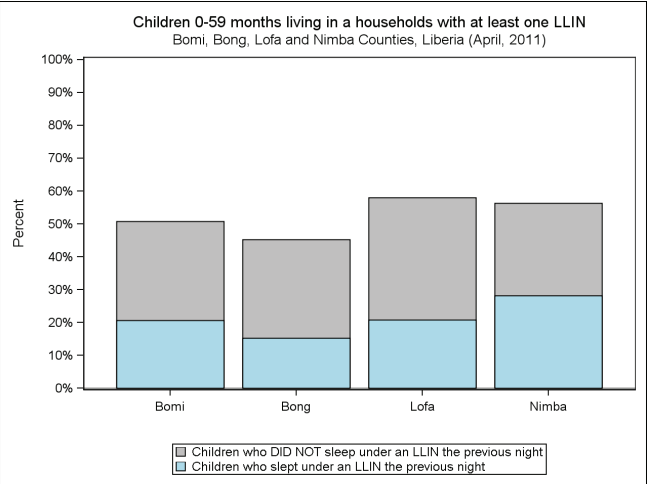
Nutrition Indicators

Exclusive breastfeeding appears to be the norm, as all counties reported over 75% coverage with Nimba at 93%. Coverage for mothers who initiated breastfeeding immediately after birth was lower, approaching 70% for three of the counties, while Bomi reported coverage at about 40%. Recent Vitamin A supplementation was high, especially in Lofa, with over 90% coverage; Bong was lower at approximately 60%. All counties reported at least 50% coverage of age-appropriate feeding²—Lofa had the highest coverage at approximately 70%.

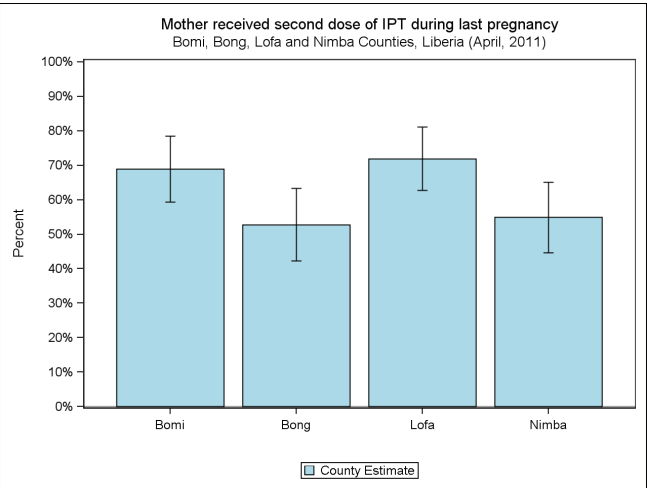
² Age-appropriate feeding is defined as breastfeeding in the last 24 hours and serving porridge or grains; pumpkins and roots/tubers; green leafy vegetables; fruit; poultry, fish, or eggs; legumes; yogurt/curd; or any food prepared with palm butter or palm oil.

Malaria Indicators

Approximately half of households in the four counties had a bednet, but the percentage of children age 0–5 who slept under a bednet the previous night was much lower (see figure below). This indicates a gap between bednet distribution and actual use.

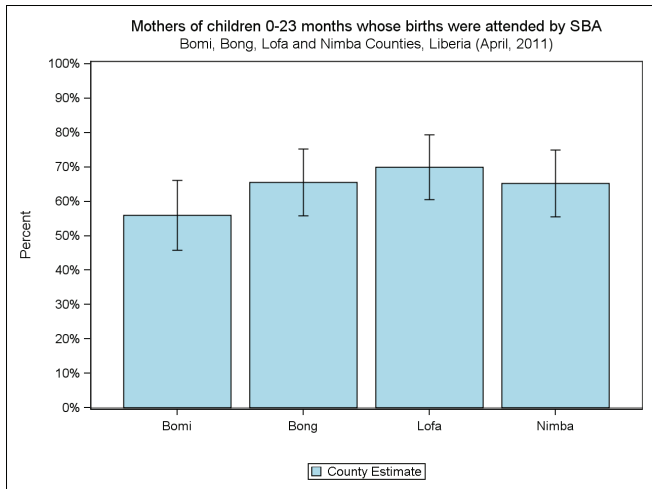


Mothers who received a second intermittent preventive treatment (IPT) dose for malaria ranged from 53–72% across counties.



Maternal Health Indicators

The percentage of births attended by a trained attendant, in and out of a facility, range from approximately 55% to 70% across the four counties (see figure below).



The extent to which mothers were provided iron and folic acid tablets during last pregnancy varied; Bomi reported the highest coverage at 70% and Nimba the lowest at <20%.

Also, the extent to which mothers received two tetanus toxoid or booster during pregnancy varied between counties; Lofa reported almost 90% coverage and Bong reported almost 50%.

Sixty to seventy-five percent of women reported having at least four antenatal care (ANC) visits in the four counties. Fewer women had a first ANC visit during the first trimester. In some counties, the coverage of these two indicators is approximately the same; however, in Lofa there is a gap of about 25% between the percent of women having four ANC appointments and the percent of women having an ANC appointment in the first trimester. Mothers who received vitamin A eight weeks after delivery ranged between 60% and 75% for all counties.

Family Planning Indicators

County estimates show that use of a modern family planning method is very low, especially in Nimba (<1%), but that demand for use is much higher. This indicates a high level of unmet (or latent) demand for modern family planning methods among all four counties (65–85%).

