## **MEASURE Evaluation in Liberia**

MEASURE Evaluation began a new activity focusing primarily on maternal and child health in Liberia in 2011. According to the Liberia Demographic and Health Survey 2007, the country's maternal mortality ratio is one of the world's highest, at 994 per 100,000 live births. And even though child mortality rates have declined significantly in the past decade, one in every nine children dies before the age of five, according to the same survey.

A major detriment to maternal and child health in Liberia is the country's persistent malaria epidemic. According to hospital records, malaria accounts for 38 percent of out-patient visits and 42.3 percent of all inpatient deaths, making it the leading cause of death in hospitals. Pregnant women are especially vulnerable to malaria. Malaria during pregnancy often causes anemia, which can be life-threatening and lead to babies being born at low birth-weights.

Civil wars dogged Liberia for 14 years before conflicting parties signed a peace agreement in 2003. The prolonged conflict wreaked havoc on the country's health infrastructure and workforce. The eight years since Liberia's civil war ended, though, have seen major efforts to rebuild and strengthen the country's health system.

In January 2011, MEASURE Evaluation began providing technical assistance to the USAID mission in Liberia for a pilot test to collect annual health behavior and health outcome monitoring data using Lot Quality Assurance Sampling (LQAS). The purpose of the LQAS tool is to provide information on key health indicators in order to make programmatic decisions. Furthermore, the implementation process is intended to build local capacity in Liberia to monitor health outcomes.

LQAS originated as a quality control tool in the manufacturing sector. To determine whether a batch, or



## **COUNTRY FLAG**



DEMOGRAPHY Population: 4,100,000 Population Growth Rate: 2.663% Age Structure: 0–14 years: 44.3% 15–64 years: 52.7% 65 years and over: 2.9% Death Rate: 11 deaths/1,000 population

## MALARIA-RELATED DATA

Population Living in Areas At Risk for Malaria: 100% Children (< 5 Years) Infected with Malaria Parasite: 66% (2006) Malaria-Attributed Outpatient Attendance: 40–45% Households with Mosquite Bednet: 30% (2007)

## **OTHER RELEVANT DATA**

Infant Mortality Rate: 95 infant deaths/1,000 live births Total Fertility Rate: 5.9 children born/woman Maternal Mortality Ratio: 994 maternal deaths/100,000 live births (2008)





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The method has been adapted for the public health context.

"The same concept has been taken to measure how a health indicator is performing," explained Stephanie Watson-Grant, a Country Portfolio Manager at MEASURE Evaluation.

LQAS is considered a relatively rapid and inexpensive approach to data collection in lieu of traditional surveys. It allows for small sample sizes and more frequent sampling than standard probability surveys. In the LQAS application, a pre-defined area is divided into lots, or "supervision areas", and sampled. The sample from each supervision area is then compared to a target. If the sample shows acceptable performance, the indicator is deemed as acceptable for that supervision area. If not, then the indicator is not performing acceptably, and the supervision area can be flagged.

"It gives programs useful information for programming and strategic planning," Watson-Grant said. "And it lets you target efforts and perhaps resources to program areas that are not meeting the acceptable level."

The LQAS activities are centered in the counties located in Liberia's development corridor, and most of the activity is taking place between January and June 2011. Initial discussions for future plans will hone in on capacity building.

"For the next implementation, the focus will need to be on capacity building at the Ministry of Health so that they can carry out LQAS independently," Watson-Grant said.