- Pages 21-23 from Ghana NMCP M&E Plan 2014-2020

M&E Implementation

Health Information Management

During the 2008-2015 M&E Strategic Plan, the Health Sector developed and successfully deployed the District Health Information Management System (DHIMS) software in 2008 to facilitate the management and analysis of routine health facility service data for decision-making. The DHIMS is a web-based system centrally hosted by the Centre for Health Information Management (CHIM), a unit within Policy, Planning, Monitoring and Evaluation (PPME). DHIMS provides a platform for managing nationwide health facility service data that comes primarily from government facilities, and some private, faith-based and quasi-government facilities. In 2012 the platform was upgraded to DHIMS2 and rolled out nationally. DHIMS2 provided for improved functionality in terms of data analysis and data presentation. Health facility service registers are provided at service points in health facilities for collecting client demographic and health care information. These are the primary data sources for M&E within the service. Standard forms are used to manually summarize malaria data from the service registers monthly for transmission to the District level. At the District level, DHIMS2 is used as a platform for data entry to collate and analyze the data. Data in the DHIMS2, which includes data on malaria, can be accessed by users through the use of username and password. However the level of access depends on the user's rights and the proposed use of the data.

Although DHIMS2 was successfully implemented nationwide, the existing malaria reporting system remained in place until the data validity of DHIMS2 was deemed adequate. This system was the Centre for Health Information (CHIM) and Integrated Disease Surveillance and Response (IDSR) System.

Sources of Malaria Data

In addition to the facility level data that was fed into DHIMS2, there were numerous other sources of data used to monitor and evaluate malaria program performance.

National Household Surveys
Large national representative household surveys have been conducted to measure outcome and impact of malaria control and prevention interventions. Surveys in Ghana include the Demographic and Health Surveys (DHS), which are conducted every five years, with the most

recent DHS conducted in 2014. The DHS collects malaria indicators on ITN ownership and use, IPTp uptake, and ACT use in symptomatic children. In 2014 malaria biomarkers (anemia and malaria parasitemia) were also measured. Additional household surveys conducted every 2 – 3 years include the Multiple Indicator Cluster Survey (MICS) and Malaria Indicator Survey (MIS), by UNICEF and Health Research Unit/NMCP/GHS respectively. In 2011, the MICS measured anemia and malaria parasitemia among children under five. These surveys are normally conducted by external agencies, however the NMCP provides technical and programmatic input on the malaria indicators collected, in order to track malaria program performance.

Entomological, Vector, and Resistance Monitoring

Entomological surveys were conducted by qualified research institutions to provide data on vector transmission dynamics, insecticide resistance profiles, insecticide batch potencies, and the effectiveness of spray applications, efficacy of insecticides used for vector control activities, the elucidation of mechanisms of insecticide resistance and its impact on the control of malaria in the country. Institutions such as the AngloGold Ashanti Malaria Control Centre, the Noguchi Memorial Institute for Medical Research (NMIMR) in collaboration with the PMI, the Kumasi Center for Collaborative Research (KCCR) and the Navrongo Health Research Center have been conducting entomological monitoring and surveys in the country.
Vector monitoring uses standard WHO field collection methods including; pyrethrum spray catches (PSC), indoor resting collections (IRC), human landing catches (HLC) and larval collections (LC) to obtain mosquitoes to study their densities, diversities & distribution, biting & feeding behaviour, infectivity rates & entomological inoculation rates (EIRs) within the sentinel districts as well as their insecticide resistance profiles. A total of twenty (20) sentinel districts were involved in vector monitoring.

Effective resistance management depends on early detection of problems and rapid assimilation of information on the resistant insect population so that rational insecticide choices can be made. Baseline resistance testing was conducted in sentinel districts by implementing agencies working in collaboration with a suitably qualified and recognized research institution. Routine vector resistance monitoring were conducted at these sites as part of the insecticide resistance management plan.

Sentinel Surveillance for Monitoring Epidemiologic Malaria Data

Twenty six (26) health facilities (12 in the three northern regions and 14 in the remaining seven regions) have been established for tracking routine data on malaria mortality and morbidity and captured in the DHIMS. The reporting onto the DHIMS is done on a monthly basis as part of the routine reporting system. (See table 3 for complete list).

Drug Efficacy Testing

Ten (10) additional health facilities (Wa Hospital, Yendi Hospital, Navrongo War Memorial Hospital, Sunyani Hospital, Prampram Health Centre, Begoro District Hospital, Bekwai District Hospital, Ewim {Cape Coast} Health Centre, Hohoe District Hospital and Tarkwa Government Hospital) will continue the provision of information on malaria drug efficacy testing. In addition to the drug efficacy monitoring, studies are conducted to also define the characteristics of P. falciparum resistance to combinations therapies. This generates a database on clinical and parasitological response to anti malaria in the country.