



## **Integrating Family Planning Data in Kenya's DHIS 2**

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### **1. Introduction**

Kenya's health information system (HIS) for family planning (FP) is fragmented, therefore preventing data from a range of sources from being integrated into meaningful information products. This prevents data from being accessible and used as recommended by the World Health Organization (WHO) Health Metrics Network Framework. Despite FP being the second most funded health program in Kenya in terms of money spent on commodities (which is comprised primarily of short-term contraceptive methods), FP funding is not equitably distributed to other components of the health system such as human resources, infrastructure, and HIS resources and trainings, including the DHIS 2. Matibabu Foundation undertook a research study to investigate the level of integration of FP data into the web-based health management information system, DHIS 2, used to monitor health indicators at the county and national levels; understand the factors pertaining to lack of integration; and identify ways of remedying the situation.

### **2. The Problem**

Pregnancies that occur too early, too late, too closely spaced, or too frequently can lead to poor health outcomes for the mother and child. High unintended pregnancy and high fertility are linked to high maternal mortality rates, and 30 percent of maternal deaths are pregnancy-related (WHO, 2010). Kenya's fertility rate is 4.6 children per woman; the contraceptive prevalence rate (CPR) is 46 percent; and the unmet need for FP is 24 percent. Twenty percent of pregnancies are unintended, and about a quarter (26%) are mistimed (Kenya National Bureau of Statistics, Kenya Ministry of Health, Kenya National AIDS Control Council, Kenya Medical Research Institute, Kenya National Council for Population and Development, and ICF International. (2015). Kenya demographic and health survey, 2015).

Despite its good intentions, the M&E system in Kenya is still fragmented, largely reflecting donor priorities rather than actual health needs. The programs given more national attention, such as those for HIV and AIDS, represent most indicators in the monitoring system, and the lower-priority programs, such as FP, lack key indicators in DHIS 2.

### **3. Objectives**

The main objective of this study is to contribute towards improving the integration of FP data in DHIS 2. The findings will specifically help in advocating and prioritization of key



FP programmatic indicators at the county and national levels during seminars. The specific questions that contribute achieve this main objective were as follows:

What is the status of FP data (using the WHO Health Management Network framework) in DHIS 2?

- I. Why is this the case? (What factors are associated with FP data's status in DHIS 2)
- II. How can this situation be remedied? (How can the status of FP data be improved in accord with the WHO framework)?

#### **4. Literature Review**

Promoting FP in countries with high birth rates has the potential to reduce poverty and hunger and avert up to 32 percent of all maternal deaths and nearly 10 percent of childhood deaths. Family planning also contributes substantially to women's empowerment, achievement of universal primary schooling, and long-term environmental sustainability (Cleland, 2006). Kenya is one of the 24 countries where USAID is focusing its efforts on preventing child and maternal deaths (USAID, 2014). Kenya's maternal mortality ratio is 488 per 100,000 live births, although some urban slums in Kenya have an estimated maternal mortality rate as high as 706 deaths per 100,000 births (Institute, 2006).

Successful FP programs can dramatically reduce fertility, unintended pregnancy, and maternal mortality. Effective use of information systems to accurately track FP use and trends is vital to a strong FP program. Bangladesh's FP program achieved success through routine monitoring of the information system using routine data quality audits (DQAs) and adopting key FP indicators. The country's CPR increased nearly eightfold over 36 years, from just eight percent in 1975 to 61 percent in 2011, and the total fertility rate fell from 6.3 to 2.3 lifetime births per woman (National Institute of Population Research and Training (NIPORT), Mitra and Associates, and ICF International, 2016).

Correct and timely information can help governments organize their resources to tackle high-priority health problems. In recognition of this, Kenya's Ministry of Health (MOH), guided by the National Health Sector Strategic and Investment Plan 2013–2017 and the Kenya Health Policy Framework, developed a monitoring & evaluation (M&E) framework with DHIS 2 as a cornerstone. DHIS 2 is free, open-source computer software used to monitor health indicators in a health information system (HIS) at the county and national levels. It connects all county health departments as well as some high-volume health facilities in Kenya (Health, 2015).

Despite its good intentions, the M&E system in Kenya is still fragmented, largely reflecting donor priorities rather than actual health needs. The programs given more national attention, such as those for HIV and AIDS, represent most indicators in the monitoring system, and the lower-priority programs, such as FP, lack key indicators in DHIS 2. After Matibabu Foundation-Kenya (MFK)—a nonprofit community health organization—implemented a reproductive health (RH) program, we realized that some indicators required by donors are not available in DHIS 2. Missing indicators include the number of males receiving information on modern contraceptive methods and the number of HIV-positive clients receiving modern contraceptive methods. Existing indicators in DHIS 2 are generally disaggregated by age, FP method, and new and returning clients (FP2020, 2015).

When comparing the Kenya National M&E Framework for HIV and the WHO Health Management Network framework, we found that the Kenya FP and RH M&E framework is



still struggling to align with the national M&E framework for health and DHIS 2. Although a few indicators are listed in the Kenya FP and RH M&E framework, several widely available and internationally recognized FP indicators are missing.

## **5. Methodology**

### *5.1.1 Study Setting*

The study was conducted in Siaya and Nairobi Counties, and the pre-test was done in Kisumu County. These are urban (Nairobi), peri-urban (Kisumu), and rural (Siaya) settings. The interviewees were drawn from both public and private health facilities at all levels, from the primary level to county referral hospitals.

### *5.1.2 Study Design*

A cross-sectional qualitative evaluation was employed using KIIs and FGDs. The information collected from these was supplemented with a document review and informal observations.

### *5.1.3 Sampling*

We adopted a purposive sampling approach that was useful in identifying information-rich cases from users and generators of FP data at the various levels, such as partners implementing FP projects; healthcare providers at MOH facilities (including health records information officers and RH coordinators); and subcounty, county, and national teams.

### *5.1.4 Data Collection*

Semi structured, open-ended, in-depth interview guides and FGD guides were developed with close consultation between the MFK team and research experts and consultants. The interviews were administered in person and through Skype calls and videos. The data collection instruments were pilot- tested to assure validity and reliability of the questions through an iterative process. The interviews were conducted in a language convenient to the respondents—mostly English and Kiswahili. All the interviewers were competent in both languages

## **6. Results**

### **6.1.1 Demographic Analysis**

Four FGDs were completed with facility-level and sub-county-level officers across five sub-counties. An additional eight KIIs were conducted with MOH officers from the sub-



county and county and an MOH representative from the National Health Information and Records Office.

Most (59%) FGD participants were clinicians and nurses; about a quarter (24%) were health records and information officers; and the remaining 17 percent were sub-county RH coordinators. Current work experience was lacking, with the majority (88%) of the 36 participants interviewed reporting five years or less work experience in their current positions and 67 percent reporting no previous training on or exposure to DHIS 2.

### **6.1.2 Status of FP Data in DHIS 2**

The interviews revealed that few of the MOH officials, including the records and information officers across different cadres, were aware of the components of the FP data management system or DHIS 2 framework, as recommended in the WHO framework. (Those components include HIS resources, data sources, indicators, data management, information products, and dissemination and use.) However, interviewees did mention some elements relating generally to DHIS 2, and a few referenced the national policy guidelines and strategic plans that support implementation of the HIS in Kenya. The following elements were among those mentioned: staffing, equipment, and policies as elements of the HIS; indicators; daily reporting tools as components of data sources; and monthly aggregate reporting tools and DHIS 2 as elements of data management.

Access to DHIS 2 is restricted based on the type of user rights assigned to an individual (data entry and editing rights, data entry rights only, and viewing rights only). Most participants do not have user rights. Consequently, most facility-level staff are unable to enter data directly in DHIS 2. The lack of user rights was cited as the main hindrance to using DHIS 2. Data entry and editing rights are restricted to the sub-county health records and information officers, only. The interviews revealed a lack of clear criteria to guide how access is granted to DHIS 2 user privileges.

### **6.1.3 Indicators**

The respondents expressed mixed feelings regarding the adequacy of the FP indicators in DHIS 2. Most participants reported that the indicators are adequate but have some limitations—that is, they only capture output and input levels.

In addition, a lot of service delivery information does not get into DHIS 2, such as the number of clients tested for HIV at FP clinics, FP method discontinuation, changing methods, and reasons for change. Because of these inadequacies, DHIS 2 does not accurately represent what is happening on the ground. Incomplete, inconsistent, or poor-quality data cannot be used as a reliable source for secondary data analysis, and therefore cannot inform decisions beyond the output level.

### **6.1.4 Data Sources and Management**

Routine data that are collected at the point of service delivery in health facilities, such as FP method, age of client, and total commodities used, are entered manually in a daily activity register. At the end of the month, all the data from the registers at public health facilities throughout the country are manually aggregated, and the information is entered in a paper-



based MOH summary tool, known as the MOH 711. The MOH 711 also contains aggregated data from the commodities consumption report. The MOH 711 tool is used as a template to transfer data to DHIS 2. Though it is the sole responsibility of the subcounty health records and information officers to transfer the data from the MOH 711 to DHIS 2, a few facilities—especially high-volume facilities—reportedly enter their own data at the facility level.

Nearly all healthcare providers involved in the FGDs mentioned that health facilities do not designate an accessible, fixed location for safekeeping of the FP registers. This makes consistent data entry difficult for healthcare providers, who, in nearly all cases, are responsible for recording FP data, in addition to their primary responsibility of offering FP services.

### **6.1.5 Data Use**

Most study participants used data for decision making and analyzed the data in their raw form to make decisions. They obtained the data directly from the paper-based reports. Those with DHIS 2 user rights accessed the data directly from the site. Most participants used the FP data for performance management and to track stocks of FP commodities.

## **7. Recommendations and Areas for further Studies**

Although integration of FP data in DHIS 2 is problematic, study participants repeatedly pointed out that integration cannot be expected when some very basic requirements have not been met. Strengthening the health system is therefore a prerequisite to successful integration of FP data in DHIS 2. This is a resource-intensive endeavour that cannot be completed in the short term; it requires long-term planning, management, and funding. To specifically address the lack of integration of FP data in DHIS 2, we have developed one key recommendation.

### **7.1.1 Prioritization of the FP Program**

A few participants stressed the need for FP to stand on its own, like the HIV and AIDS program and the EPI. As with HIV reporting, FP reporting should be detached from the RH program and moved from the community to the national level, with officers focusing on specific FP indicators at each level. Advocating a greater focus on FP is essential to achieving disaggregation. Advocacy is needed at the highest levels of government, and internationally, for full integration of FP data to occur in health M&E systems, such as DHIS 2. Resources for FP M&E systems are just as integral to an effective HIS as those for EPI and HIV programs.

## **Conclusion**



The findings of this evaluation point to an important intervention gap regarding DHIS 2 mainstreaming in the MOH data system. The findings also reveal useful insights on data collection, management, and an integration issue in Kenya's HIS, including the DHIS 2 platform. We found a lack of integration of FP data in DHIS 2, which the study participants confirmed, and inadequate integration of the WHO framework in DHIS 2. Some of the following factors contribute to this lack of integration: rampant lack of knowledge and access to DHIS 2; competing interests among intergovernmental agencies, leading to lack of focus on FP data collation and use; inadequate preparation in building the infrastructure for integrating FP data, which has led to low usage of DHIS 2; and ill-trained and ill-prepared staff who are not able to use DHIS 2. However, with minor improvements in these areas, the necessary data can be integrated in DHIS 2 to address the needs of stakeholders and become "one unified and integrated, country-owned, country-led, national health information system" (USAID/Namibia, 2012).

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