The Two-Stage Integrated Approach Methodology

Background

Efforts to assess and improve the quality of family planning (FP) data are often poorly planned and uncoordinated, leading to inconsistent findings, duplication of effort, and poor management of already limited resources. Decisions on where to target resources for data quality improvement are often based on where there may be partner resources and interest, as opposed to where resources may be most needed or well spent. Dependencies of this kind also lead to an increased burden on national programs to manage the application of multiple partner-developed tools and systems, and attempts to integrate or triangulate their information with existing health management information system (HMIS) data free from the duplication of reported data.

This integrated approach to data quality assessment represents a joint effort between the Bill & Melinda Gates Foundation Track20 Project and the United States Agency for International Development (USAID) Data for Impact (D4I) project to target data quality in a way that accounts for limited resources in FP programs by providing a framework to integrate two tools specifically developed for HMIS data quality and use through both a top-down and bottom-up approach. The combined approach was developed in partnership with Track20 monitoring and evaluation (M&E) officers seconded to Ministries of Health in Cameroon, Cote d'Ivoire, Democratic Republic of the Congo, and Togo, which provided input on how programs can use guidance practically in light of resource limitations.

Combining the routine data quality assessment (RDQA) approach with the Service Statistics to Estimated Modern Use (SS to EMU) approach for identifying sources of "quality issues" in data represents an important step toward improving targeted management of health information and moving this assessment to facilities and subnational levels with the greatest need. The implementation of the integrated approach will consist of (1) using the SS to EMU tool to conduct a data quality desk review at the management level to identify data inconsistencies in selected indicators, and (2) to use the RDQA to assess the quality of data at the health facility and community site levels. During implementation of the integrated approach, the assessor realized some indicators with inconsistent and irregular trends were falsely indicated to have potential data quality issues, when, in fact, changes in the service delivery led to the high or low performances. Within the process of rationalizing resources prior to conducting a health facility data quality assessment, review of data validation rules in the District Health Information Software, version 2 (DHIS2) will help to confirm if there are data inconsistencies.

1. Data Quality Desk Review with the Use of SS to EMU

The SS-to EMU desk review is a top-down method for identifying data quality issues. The tool allows users at the national level to identify which subnational regions and/or which FP methods are sources of inconsistencies in the data. The SS to EMU tool assists data mangers to review FP service statistics data—an important step in itself—and to convert data for comparison with modern contraceptive prevalence rate (mCPR) trends from surveys or other mCPR-modeled estimates.

The promotion of effective decision making at all levels of the health system is critical; therefore, the assurance of high-quality data is required. Use of the SS to EMU tool will facilitate understanding of the importance of data quality in the decision-making process. Training subnational supervisors in the different analysis techniques of the tool is essential. Coaching will help supervisors to practice and draw conclusions during each step of the data analysis and review process.

The tool will compare data from different sources such as the RHIS and surveys (Demographic and Health Surveys [DHS], Multiple Indicator Cluster Surveys [MICS], etc.) to compare family planning indicator trends over time. When the graphs show high increases or decreases in the indicator trends, supervisors will investigate to determine if observed changes are due to data reporting or recording errors, or increased use of one FP method over another—another potential justification for changes could be high or low performance in service delivery.

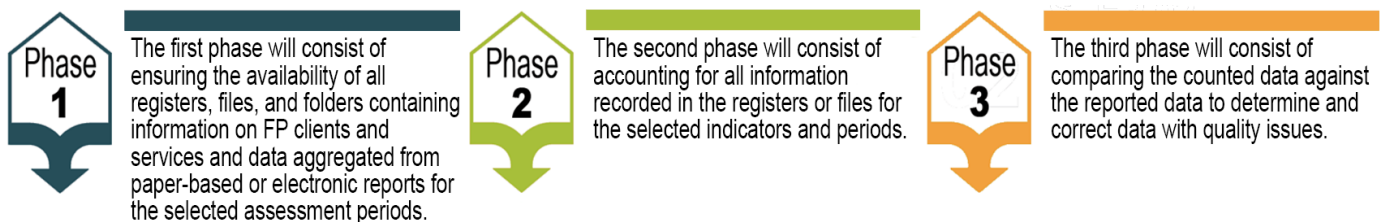## 2. Desk Data Review with Use of DHIS2 Data Validation Rules

Data verification will consist of crosschecking data consistency between indicators compared to defined validation rules in the DHIS2. The validation rules are defined with indicators that are related based on FP service management. The data review results show all health facilities with data inconsistencies for the indicators along with crosschecked indicators. Assessors will develop a plan to investigate the data accuracy between FP registers/file records and health facility reports at the health facility level.

3. Routine Data Quality Assessment at the Health Facility

The routine data quality review process takes place at the facility level, or at the lowest level of the health system where service statistics are generated, recorded, and later compiled for monthly or quarterly reporting. The assessment will consist of comparing recorded and reported data in terms of completeness, timeliness, and accuracy.

The strength of this tool lies in the comprehensiveness of the data review, which considers provider capacities so that data quality and the interpretation and use of that data improve over time. Importantly, the data quality review process takes place at the facility level, or at the lowest level of the health system where service statistics are generated, recorded, and later compiled for monthly or quarterly reporting.

Figure 1. RDQA phases

Phase 1: The first phase will consist of ensuring the availability of all registers, files, and folders containing information on FP clients and services and data aggregated from paper-based or electronic reports for the selected assessment periods.

Phase 2: The second phase will consist of accounting for all information recorded in the registers or files for the selected indicators and periods.

Phase 3: The third phase will consist of comparing the counted data against the reported data to determine and correct data with quality issues.

4. Development of the Plan of Action

Following the data quality assessment, assessors and health facility staff organized a meeting to discuss results and determine factors associated with data quality issues. Development of the plan of action will help to address the problems on a timeline and in the interim will enable health facility managers and district supervisors to monitor implementation progress quarterly.

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