ROUTINE DATA QUALITY ASSESSMENT (RDQA): FINDINGS FROM SELECTED MCSP/NEGA IMPLEMENTATION WOREDAS, ETHIOPIA

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Background and Rationale

The Maternal and Child Survival Program's Newborns in Ethiopia Gaining Attention (MCSP/NEGA) project rolled out community-based newborn care (CBNC) in 135 woredas in 12 zones and two special woredas located in Oromia, Amhara, SNNP, and Tigray National Regional States. In the first two years of implementation, the project focused on strengthening the capacity of the Primary Health Care Units (PHCUs) to avail newborn health services to the community. In addition to supporting the institutionalization of newborn health services in the PHCUs, the project focused on creating a "culture" of data use – e.g., reviewing routine data, improving quality of reporting and building the capacity of health managers on the use of data for decision-making. To assess what quality related challenges exist and design strategies to address them as necessary, MCSP/NEGA conducted a one-time Routine Data Quality Assessment (RDQA) in selected woredas from nine zones and one special woreda of the four regions. The main objectives of the RDQA included:

- Verifying the quality of reported data,
- Assessing the underlying data management and reporting systems for standard program-level output indicators, and
- Based on the findings, developing the capacity of Woreda and PHCU staff to improve the quality of data and its reporting.

Methodology

MCSP/NEGA adopted the RDQA approach from MEASURE Evaluation for this study. The study was a joint undertaking with the respective Regional Health Bureaus (RHB) and Zonal Health Bureaus (ZHB).

Sampling of Woredas and Health Centers

As per the sampling instructions in the MEASURE Evaluation RDQA guideline, a three-stage cluster sampling method was used. Taking into consideration accessibility of the zones and staff time availability, a total of 10 zones from the four clusters (regions) were identified to be eligible for the RDQA. Woredas in the zones and health centers in select woredas were ranked based on review of coverage of selected routine service indicators in the HMIS, which was shared with RHBs and ZHBs for discussion and final decision on selection of the woredas.

Indicators

Indicator selection was conducted in close consultation with the RHBs and ZHBs. MCSP NEGA proposed four project-specific indicators:

Key Findings

- HMIS focal persons were well trained on HMIS data across all PHCUs and woredas.

- Service delivery registration books in selected health centers had complete client information.

- Across all regions, the system appears to be strong in controlling for double counting. The system also appears to enable tracking of drop outs or cases lost to follow up.

- As evidenced from review of ICCM and CBNC registration book, knowledge of HEWs on ICCM/CBNC and CHIS was excellent.

- Data are being reported through a single channel per the national HMIS reporting system.

- Number of mothers with first Antenatal Care (ANC) visit,
- Number of mothers with Postnatal Care (PNC) visits within 7 days,
- Number of newborns identified by HEWs, and
- Total number of newborns treated with Very Severe Disease (VSD)

Per recommendations from RHBs and ZHBs, the following additional indicators were added for some regions:

- Number of mothers with four ANC visits (both HP and HCs),
- Number of mothers with PNC visits within 2 days (both HPs and HCs),
- Number of women using a long-acting family planning method (both HPs and HCs),
- Number of children fully immunized before first birthday (both HPs and HCs), and
- Skilled birth delivery (by health workers, at HCs)

Data Collection

The team adapted the standard MEASURE Evaluation RDQA tool. Before beginning the data collection, MCSP NEGA, jointly with the respective regional, zonal and woreda health managers that made up the assessment team, determined the appropriate data sources for each indicator varying by Service Delivery Points (SDPs). For each selected indicator, the assessment team conducted document review, data verification, and interviews with relevant staff engaged in HMIS data processing. Through this process, the assessment team examined if (1) the service delivery and intermediate aggregation sites are collecting and reporting data accurately, completely and on time, and (2) whether the data agrees with reported results from the other available data sources. After the completion of the RDQA for each SDP, each team entered data into the Excel database at the SDPs, which automatically generated the findings for on-the-spot feedback.

Analysis/Preparation

Upon entering data, the RDQA tool automatically presents the results of each SDP and summary of service sites into a bar graph and a spider chart. The bar graph reflects if the indicator reported by the facility and recount result is within the acceptable range, underreported or over reported, using a percentage called the verification factor. The spider chart offers recommendations to decision makers where to invest resources for systems strengthening, based on the relative strengths and weaknesses of the different functional areas of the reporting system identified via the RDQA, as well as considerations of practicality and feasibility. Assessments were conducted from the 10 selected zones covering a total of 10 woredas, 10 PHCUs and 49 HPs, with a 96% coverage of HPs.

Results

The findings of this assessment are described below in four separate sections based on the structure of the RDQA tool.

Documentation Review

Variability was seen across the regions, with facilities in Amhara having higher availability of source documents and timeliness of the reporting, followed by Tigray and Oromia. Facilities in SNNPR had the lowest availability of source documents, completeness of information and timeliness of the report.
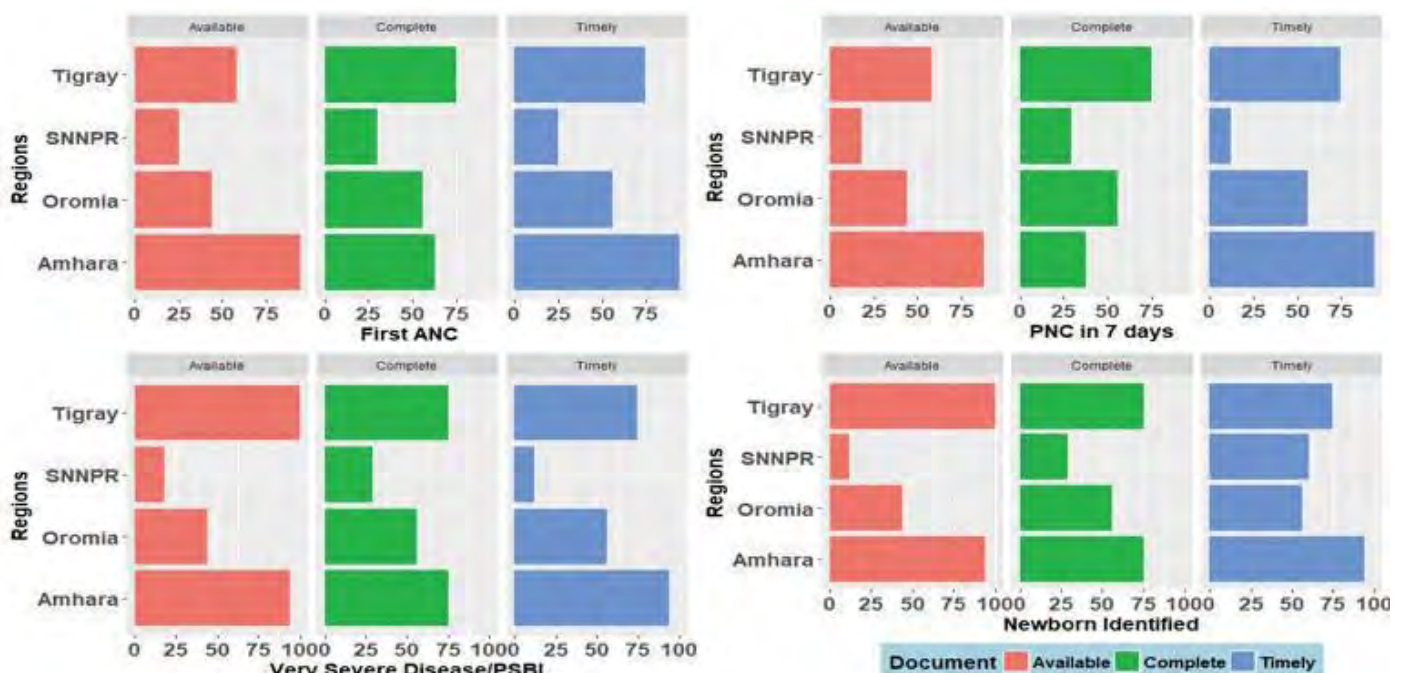

Figure 1: Availability, completeness, and timeliness of source documentation, by region

Data Verification

A verification factor range of 91%-110% is an acceptable range, <90% reflects over-reporting and >110% reflects underreporting. Overall, more over-reporting was observed than underreporting across all indicators and regions, with the exception of Amhara which showed considerable underreporting.

System Assessment

The RDQA tool enables qualitative assessment of the relative strengths and weaknesses of functional areas of a data management and reporting system, hence allowing the identification of potential threats to data quality posed by the design and implementation of data management and reporting systems. The spider-charts in Figure 2 (below) display qualitative data generated from the assessment of the data management and reporting system by region, and can be used to prioritize areas for improvement.

For example, overall, sites in Oromia had relatively stronger data management and reporting system compared to the other regions. Based on these findings, for Oromia, resources should be directed to strengthen the linkage with the national reporting system and data collection and reporting forms and tools. For the remaining regions, it is advised to invest more on indicator definitions and reporting guidelines than the rest of the data dimensions.
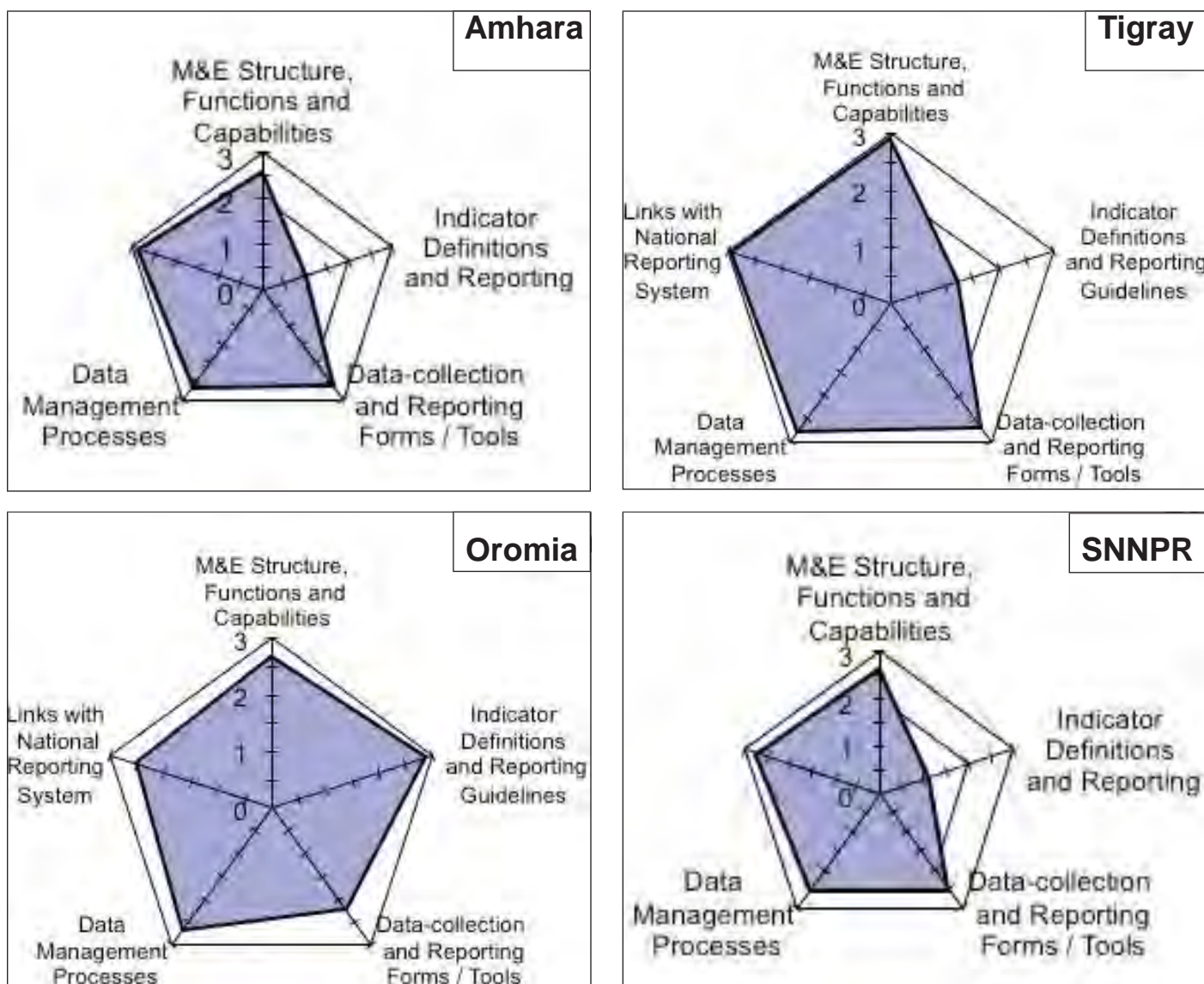

Figure 2: Result of system assessment by region

Strengths and Areas that Need Improvement

Major strengths identified include: data is reported through a single channel; the system controls for double counting and tracks any drop-outs or loss to follow-up; HMIS focal persons were well trained on HMIS data across all PHCUs and woredas; service delivery registration books had complete client information; most health posts used Health Post Monthly Recording and Reporting tool (HPMRR) and Bin Card for drug resupply and managements; and there were designated staff at each level responsible for reviewing reports prior to submission to the higher level.

Areas needing improvement were as follows: availability of data collection forms, tools, and reporting formats; documents

have missing information that will affect precision of indicators; standard pregnancy and newborn identification register for HPs is being used unevenly; some PHCUs were lacking electricity; organization and updating of CHIS Integrated MNCH cards is not happening systematically; use of different registers for the same service resulting in inconsistencies; and significant inconsistency for reporting with very few SDPs falling in the acceptable verification threshold for various indicators assessed.

Recommendations

Based on the findings of the study, the following recommendations were made: use high-performing HPs identified through the RDQA exercise as learning sites to share their experiences to other HPs and HCs; integrate data quality into the agenda of periodic review meetings between HPs and HCs, and woreda level review meetings; regions, zones and woredas should introduce periodic RDQA for selected indicators to help identify and address gaps and ensure all required recording and reporting tools are available at all levels; integrate elements of DQA into routine supportive supervision visits and provide on-the-job mentoring focused on the specific gaps identified, including the importance of completing each field in a reporting tool.

Limitations

This study was conducted in selected SDPs and thus is not representative of entire regions.

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