Every Woman Every Newborn-Measurement Improvement for Newborn, Stillbirth & Maternal Indicators EWEN-MINSMI-PRISM Tools For Routine Health Information Systems

Tanzania Pilot Study Report

December 2024

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Acknowledgments

The Every Woman Every Newborn-Measurement Improvement for Newborn, Stillbirth & Maternal Indicators (EWEN-MINSMI) tools for routine health information systems (RHIS) have been developed as part of an extension to the EN-BIRTH-2 study, funded by the United States Agency for International Development (USAID) through Data for Impact (D4I). They are an adaptation of the Every Newborn-Measurement Improvement for Newborn and Stillbirth Indicators (EN-MINI Tools). The EWEN-MINSMI-PRISM tools in this document and the EN-MINI-PRISM tools are available at https://www.data4impactproject.org/resources/en-mini-tools/ewen-minsmi-and-en-mini-tools-overview/. Both sets of tools were adapted from the Performance of Routine Information System Management (PRISM) Series, which was developed by MEASURE Evaluation.

The EN-BIRTH-2 study was conceptualized and implemented in partnership with D4I, icddr,b, Ifakara Health Institute (IHI) Tanzania, and the London School of Hygiene & Tropical Health (LSHTM), United Kingdom. The extension to the EN-BIRTH-2 study that adapted the EN-MINI Tools to include maternal indicators was co-led by IHI and LSHTM with D4I.

We acknowledge the collaborating teams at IHI and LSHTM for leading the adaptation for the EWEN-MINSMI Tools and pilot testing efforts in Tanzania and for their technical contributions. From IHI: Donat Shamba, Josephine Shabani, Jacqueline Minja, and Honorati Masanja. From LSHTM: Louise Tina Day. From D4I: Gabriela Escudero, Barbara Knittel, Siân Curtis, and Kavita Singh for their technical support.

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For any questions about the tools or implementing any part of the assessment, please contact: enapmetrics3@lshtm.ac.uk.

Contents

Figures

Tables

Detailed list of results tables are shown in Appendix 1

Abbreviations

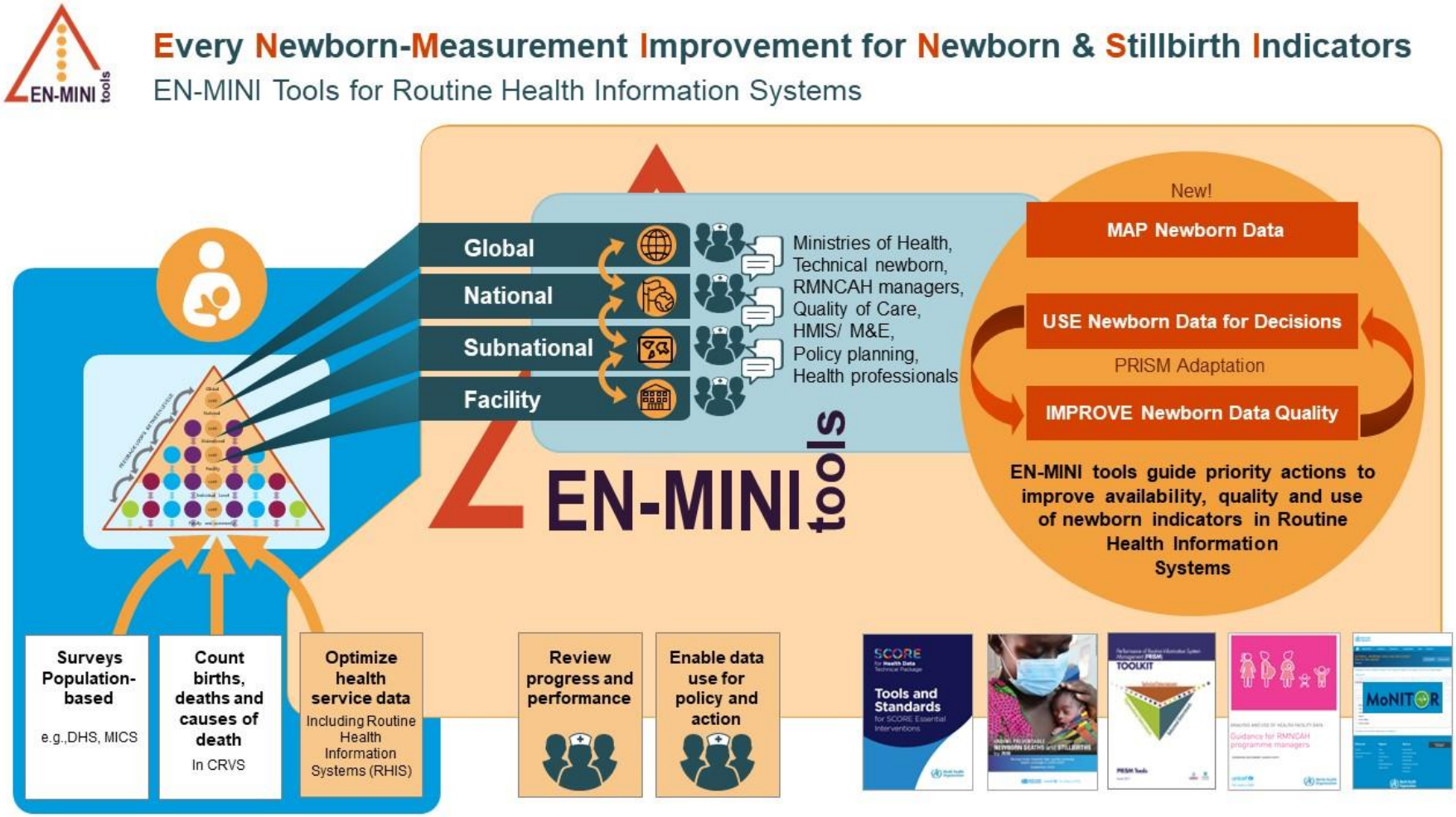
D4I	Data for Impact
DHIS 2	District Health Information Software version 2
EN-BIRTH	Every Newborn Birth Indicator Research Tracking in Hospitals study
EN-BIRTH-2	Every Newborn Birth Indicator Research Tracking in Hospitals 2 study
EN-MINI Tools	Every Newborn-Measurement Improvement for Newborn and Stillbirth Indicators Tools
EN-MINI-PRISM Tools	Every Newborn-Measurement Improvement for Newborn and Stillbirth Indicators—Performance of Routine Information System Management Tools
EWEN-MINSMI Tools	Every Woman Every Newborn-Measurement Improvement Newborn, Stillbirth and Maternal Indicators Tools
eRHIS	Electronic Routine Health Information Systems
HMIS	Health Management Information Systems
IHI	Ifakara Health Institute
KMC	Kangaroo mother care
LSHTM	London School of Hygiene & Tropical Medicine
MOH	Ministry of Health
OBAT	Organizational and Behavioral Assessment Tool
PRISM	Performance of Routine Information System Management
RHIS	Routine Health Information Systems
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

EWEN-MINSMI-PRISM Tools at a Glance

- Every Woman Every Newborn-Measurement Improvement Newborn, Stillbirth and Maternal Indicators Tools (EWEN-MINSMI Tools) were released in 2024.
- Designed to close the data gap for high-priority core maternal, newborn and stillbirth indicators for every woman and newborn to survive and thrive.
- Free, user-friendly practical tools for programmatic use to MAP, IMPROVE, and USE maternal, newborn and stillbirth data for coverage and quality of care.
- Full open access to digital data collection forms and automated analysis for reporting and synthesis provided on the EWEN-MINSMI Tools website.
- Facilitates implementation of existing World Health Organization (WHO) routine health information systems (RHIS) guidance.
- Enables users to comprehensively assess RHIS for maternal, newborn and stillbirth data, generating the detailed information needed to prioritize action to improve data quality and use.
- Flexibility for country contextualization with national priority indicators.
- Emphasizes subnational data and health facility routine source data documents.
- Parallel set of tools to the Every Newborn-Measurement Improvement for Newborn and Stillbirth Indicators Tools (EN-MINI Tools).
- EWEN-MINSMI and EN-MINI include adaptations of Performance Routine Information System Management (PRISM) tools already used in more than 40 countries.

Figure 1. Every Newborn-Measurement Improvement for Newborn & Stillbirth Indicators (EN-MINI) Tools infographic (for animated version see EN-MINI Tools website)



Overview of Actionable Findings

Maternal, newborn and stillbirth core indicator routine data assessment from the 2024 pilot EWEN-MINSMI-PRISM Tools assessment in the Tanga Region of the United Republic of Tanzania identified:

Areas of STRONG Performance:

- USE Maternal, Newborn and Stillbirth DATA FOR DECISIONS
    - Consistent use of data for key performance targets (primarily at the data office level rather than facility level)
    - Effective data analysis and visualizations (more pronounced at the data office level than facility level)
- IMPROVE Maternal, Newborn and Stillbirth DATA QUALITY
    - High data accuracy at all levels
    - Data accuracy improved after EN-MINI Tools pilot in 2021
    - Organizational factors' support for RHIS at regional and district data offices

GAPS Needing Focused Action:

- USE Maternal, Newborn and Stillbirth DATA FOR DECISIONS
    - Limited analysis, reporting, and visualizations of maternal, newborn and stillbirth data at the health facility level
    - Insufficient data use for monitoring coverage of maternal and newborn services and quality improvement
    - Need for strengthening "data/information culture" across all levels
- IMPROVE Maternal, Newborn and Stillbirth DATA QUALITY
    - Large confidence-competence gap in RHIS, greatest at the health facility level
    - Low motivation for RHIS-related tasks
    - Need for enhanced training, especially for health facility data management
    - Inadequate feedback and supervisory support with actionable discussions and reports
    - Gaps in data quality assurance processes at both the health facility and district levels

Introduction

Closing the Routine Data Gap for Women, Newborns and Stillbirths

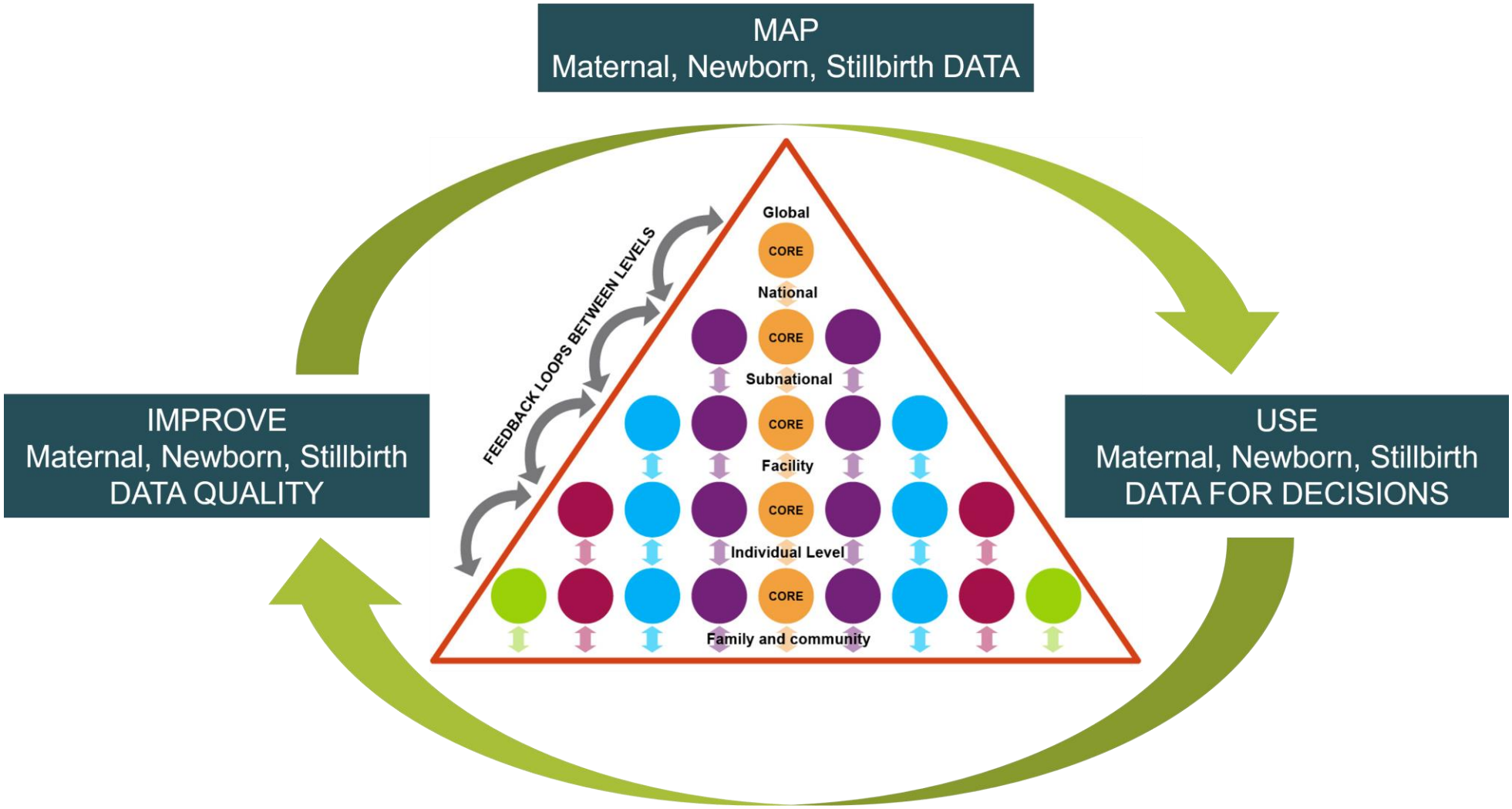
Every woman and every newborn has the right to survive and thrive, yet an estimated 4.4 million die globally each year as newborns and stillbirths.[1-3] Data improvement and use is a priority action to reduce maternal deaths, stillbirths, newborn deaths, and disabilities.[4] Timely and accurate data on coverage, equity, and quality of care are essential to track progress towards ending preventable stillbirths, newborn deaths, and disabilities.[5] However, the settings with the highest burden of deaths have the least data on coverage and quality of care—the "inverse data law."[6]

What are the EWEN-MINSMI Tools?

The EWEN-MINSMI tools and EN-MINI tools guide priority actions to improve the availability, quality, and use of maternal, newborn and stillbirth indicators in routine health information systems. The purpose of the Every Woman Every Newborn-Measurement Improvement Newborn, Stillbirth and Maternal Indicators Tools (EWEN-MINSMI Tools) for Routine Health Information Systems (RHIS) is to enable countries to have the right data at the right time and at the right level of the healthcare system (Figure 1). The EWEN-MINSMI Tools are free and have ready-to-use digital data collection platforms and generate automated reports. Improving maternal and newborn data is a priority of the Every Woman Every Newborn Everywhere (EWENE) to accelerate progress and ensure every woman and newborn survives and thrives.[5]

The tools are organized in three categories: (1) MAP maternal, newborn, stillbirth data availability; (2) assess USE maternal, newborn, stillbirth DATA FOR DECISIONS; and (3) identify how to IMPROVE maternal, newborn stillbirth data QUALITY (Figure 2). The USE and IMPROVE tools are adapted from the Performance of Routine Information System Management (PRISM) series.[7,8]

Figure 2. Every Woman Every Newborn-Measurement Improvement for Newborn, Stillbirth and Maternal Indicators (EWEN-MINSMI) Tools categories



Why focus on core indicator data?

Core indicator data are vital to guide action and track progress for health workers, managers, and policy makers at all levels in the data pyramid, as illustrated by the central gold data point circles in Figure 2.

The EWEN-MINSMI tools focus on maternal, newborn and stillbirth data in support of the Every Woman Every Newborn Everywhere (EWENE) initiative (Previously Every Newborn Action Plan (ENAP) and Ending Preventing Maternal Mortality (EPMM)).

The EWEN-MINSMI Tools are intended to identify gaps in maternal, newborn and stillbirth RHIS data availability, quality, and use. The tools capture the data-enabling environment for frontline health workers, documenting data elements, data transmission processes up the data pyramid, and use of data at all levels. The tools reinforce the dual focus needed to simultaneously strengthen USE of data, even though it is not perfect, with ongoing efforts to IMPROVE data quality (Figure 2).

What is the purpose of this EWEN-MINSMI report?

This report summarizes findings for the 2024 pilot of EWEN-MINSMI-PRISM Tools 1–6 in the Tanga Region of the United Republic of Tanzania. An accompanying Map Maternal Newborn Stillbirth Data EWEN-MINSMI Tool 0 report will detail data elements for maternal, newborn and stillbirth indicators.

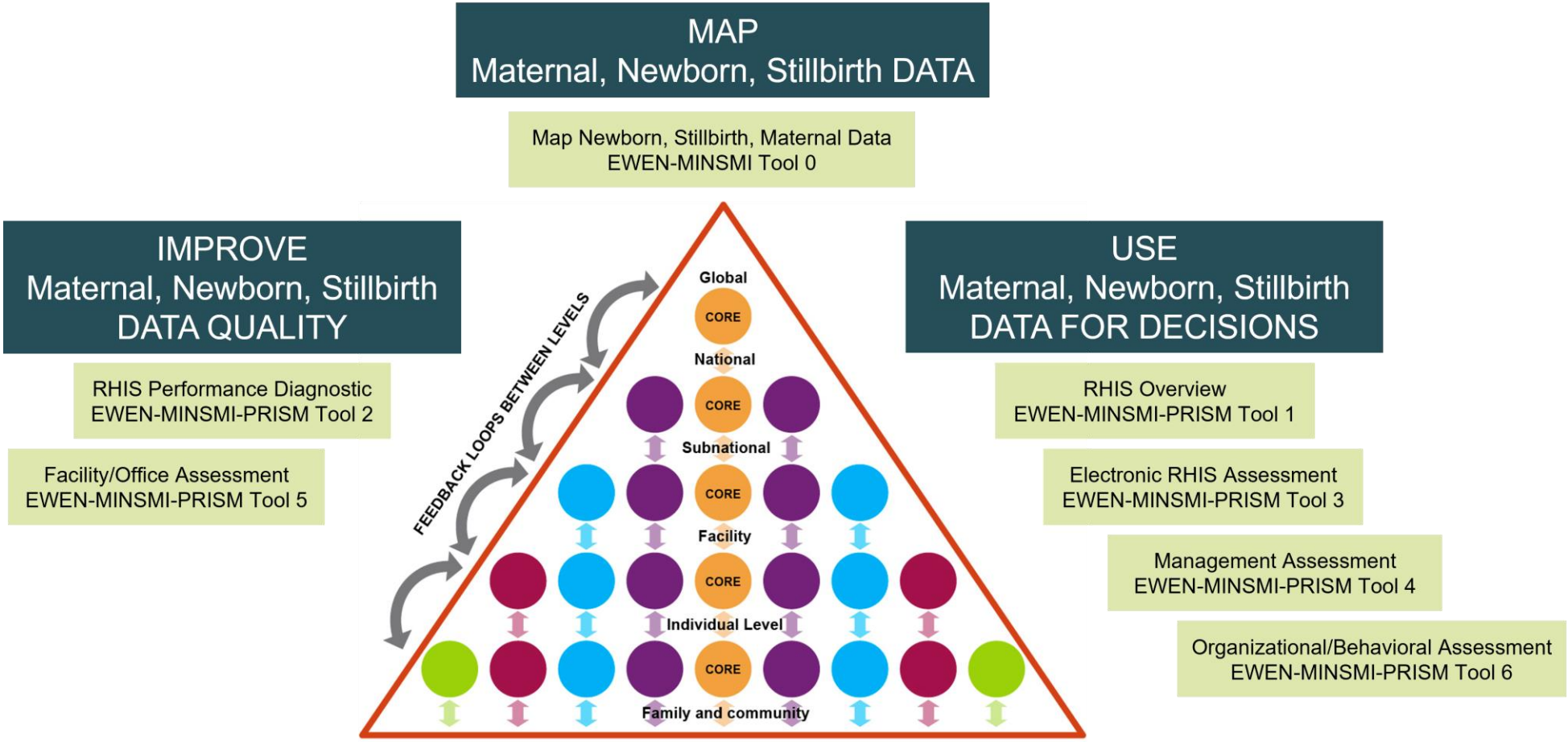
How were the EWEN-MINSMI Tools developed?

The EWEN-MINSMI tools were released in 2024 after pilot work in Tanzania by The London School of Hygiene & Tropical Medicine (LSHTM) UK and Ifakara Health Institute (IHI) Tanzania. The tools integrate maternal indicators into the EN-MINI Tools to assess the data quality and use of data for a set of maternal, newborn and stillbirth indicators.

What is included in the EWEN-MINSMI Tools?

The tools comprehensively measure RHIS performance for core maternal, newborn and stillbirth indicators collected at health facilities. The seven tools are organized in three categories: MAP maternal, newborn, stillbirth data availability, assess USE of maternal, newborn, stillbirth DATA FOR DECISIONS and identify how to IMPROVE maternal, newborn stillbirth data QUALITY (Figure 3).

Figure 3. Every Woman Every Newborn-Measurement Improvement for Newborn, Stillbirth and Maternal Indicators (EWEN-MINSMI) Tools



Adapted from: Day LT, Moran AC, Jackson D, et al. (2019). *Survive and Thrive: Transforming care for every small and sick newborn*. Chapter 5, Figure 5.1. Geneva, Switzerland.

The novel MAPPING tool (EWEN-MINSMI Tool 0) generates an automated report showing maternal, newborn and stillbirth data elements as they move up the data pyramid. The USE and IMPROVE Tools (EWEN-MINSMI-PRISM Tools 1–6) are adaptations of the Performance of Routine Information System Management (PRISM) tools designed by MEASURE Evaluation. [7,8] More details of the EWEN-MINSMI-PRISM Tools are shown in Appendix 2 and on the EWEN-MINSMI Tools website.

How do the EWEN-MINSMI and EN-MINI Tools link?

The novel Every Newborn-Measurement Improvement for Newborn and Stillbirth Indicators Tools (EN-MINI Tools) were designed and made available in 2022 through collaborative implementation research, the Every Newborn Birth Indicator Research Tracking in Hospitals 2 study (EN-BIRTH 2) (2020–2022). Research partners were The London School of Hygiene & Tropical Medicine (LSHTM) UK, Ifakara Health Institute (IHI) Tanzania, icddr,b Bangladesh, Data 4 Impact (D4I), and funded by the United States Agency for International Development (USAID). An expert advisory group of colleagues from WHO, UNICEF, the national governments of Bangladesh and the United Republic of Tanzania, and additional program newborn, measurement experts and academics provided important guidance. More details are available on the EN-MINI Tools website.

The EN-BIRTH 2 study was designed in response to previous research, the Every Newborn Birth Indicator Research Tracking in Hospitals (EN-BIRTH) study (2016–2020), which assessed measurement coverage and quality of newborn and maternal care in Bangladesh, Nepal, and the United Republic of Tanzania.[9-11] This EN-BIRTH study highlighted the potential for routine register newborn data but found newborn data quality in routine registers varied.

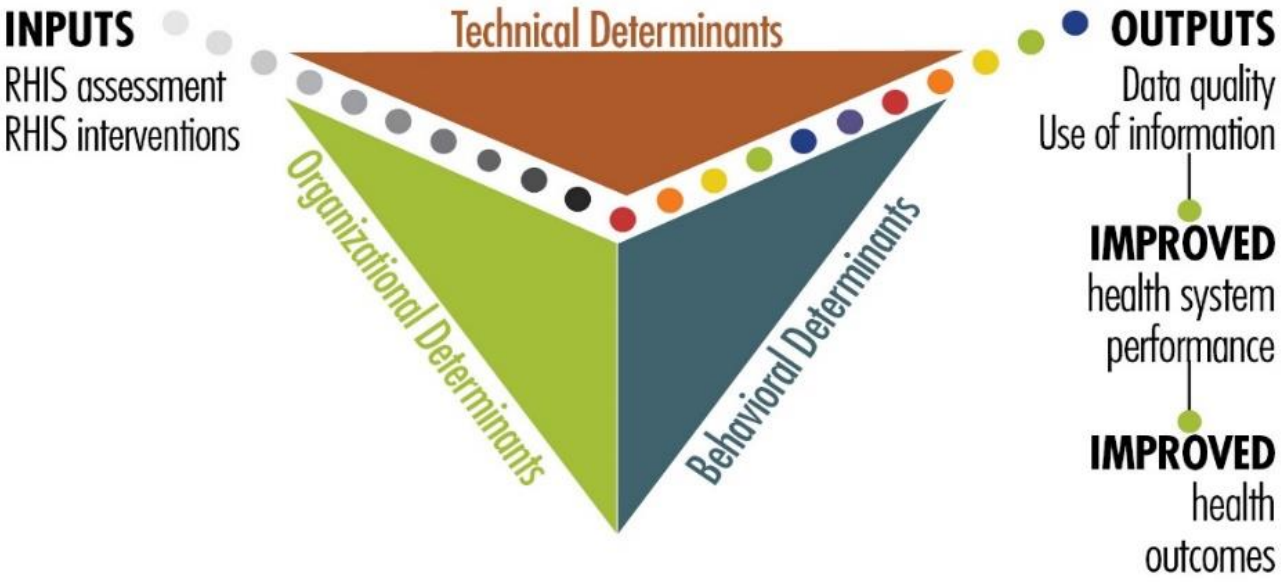
The EWEN-MINSMI Tools focus on maternal, newborn and stillbirth data and the EN-MINI Tools focus on newborn and stillbirth data. These parallel tools enable national and subnational programs to regularly assess data quality and data use to strengthen the data cycle (Figure 2).

How do the EWEN-MINSMI Tools link to the PRISM Series?

The EWEN-MINSMI-PRISM tools adaptation extends the reach of the PRISM series for maternal, newborn and stillbirth data.[6] The PRISM Framework conceptualizes the broad context affecting RHIS performance and is designed to identify gaps for sustainable improvement (Figure 4). Three categories of determinants that affect RHIS performance:

- **Behavioral determinants**: The knowledge, skills, attitudes, values, and motivation of the people who collect, analyze, and use health data.
- **Technical determinants**: The RHIS design, data collection forms, processes, systems, and methods.
- **Organizational determinants**: Information culture, structure, resources, roles, and responsibilities of key contributors at each level of the health system.

Figure 4. Performance of Routine Information Systems Management (PRISM) framework



EWEN-MINSMI-PRISM Tools Pilot Study in Tanzania

Methods

Location, Sampling, and Respondents

The EWEN-MINSMI-PRISM Tools pilot study was conducted at all levels of health facilities providing inpatient maternal and newborn health services to maximize learning for possible future scale-up nationally and beyond. Two districts in Tanga Region, Pangani District Council and Tanga City Councils, were selected. The sample frame listed all public government health facilities: hospitals, health centers, and dispensaries. Purposive sampling identified 51 health facilities providing delivery services for more than 20 births per year.

A total of 19 sites were assessed:

- Health facilities (n=16): one hospital from each district and a simple random sample of lower-level facilities from Tanga City council (n=7) and Pangani District Council (n=7)
- Data offices (n=3): the district office in each of the two districts, plus the regional office.

Training

The EWEN-MINSMI tools are mixed-methodology, including discussions with respondents of all cadres involved in data recording/reporting/analysis and data use.

Data collectors were trained over three days in July 2024 using the EN-MINI-PRISM Training materials available on the EN-MINI Tools website.

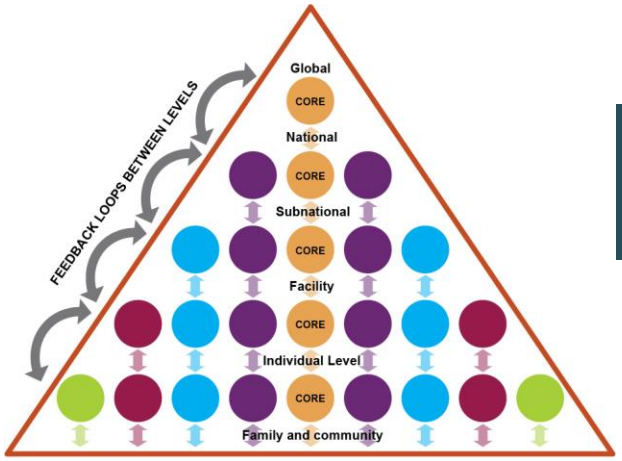
Data Collection and Management

A team of 6 data collectors conducted the EWEN-MINSMI-PRISM Tools assessment in 1 regional data office, 2 district data offices, and 16 health facilities during two weeks in August 2024. Version 1 of the EWEN-MINSMI Tools was used. Data quality was assessed using source and summary report data for April, May, and June 2024. All data were collected digitally using offline password protected tablets and uploaded to the General Data Protection Regulation (GDPR) compliant, secure Open Data Kit (ODK) server (SurveyCTO), using the customized EWEN-MINSMI-PRISM Tool forms available on the EWEN-MINSMI Tools website.

Analysis

The EWEN-MINSMI-PRISM Analysis Tool available on the EWEN-MINSMI Tools website was used for analysis following standard PRISM methodology.

RESULTS: USE Maternal, Newborn, Stillbirth Data for Decision Making



USE
Maternal, Newborn, Stillbirth
DATA FOR DECISIONS

Evidence for Existing Data Use

The purpose of routine data is to be used for action for women, newborns, stillbirths, and their families. Data requires processing and interpretation to be meaningful as does information used for decision making. This pilot EWEN-MINSMI-PRISM Tools assessment found evidence of maternal, newborn and stillbirth core indicator use at both the health facility level (n=16) and the district level data offices assessed (n=2) (Figure 5). Examples included discussion on key performance targets, 100% at the district, and 62% at the facility level. Evidence for data use was higher at district than facility level for data visualization (100% district, 63% facility) and similar for analytical data reports (67% district, 69% facility). Use of data for decisions is assessed by reviewing meeting minutes, which were not available during the assessment in the district offices. At the health facility level, data use ranged from 6–25% (Figure 4). The full EWEN-MINSMI-PRISM Tools assessment findings are shown in the results tables (Appendix 1).

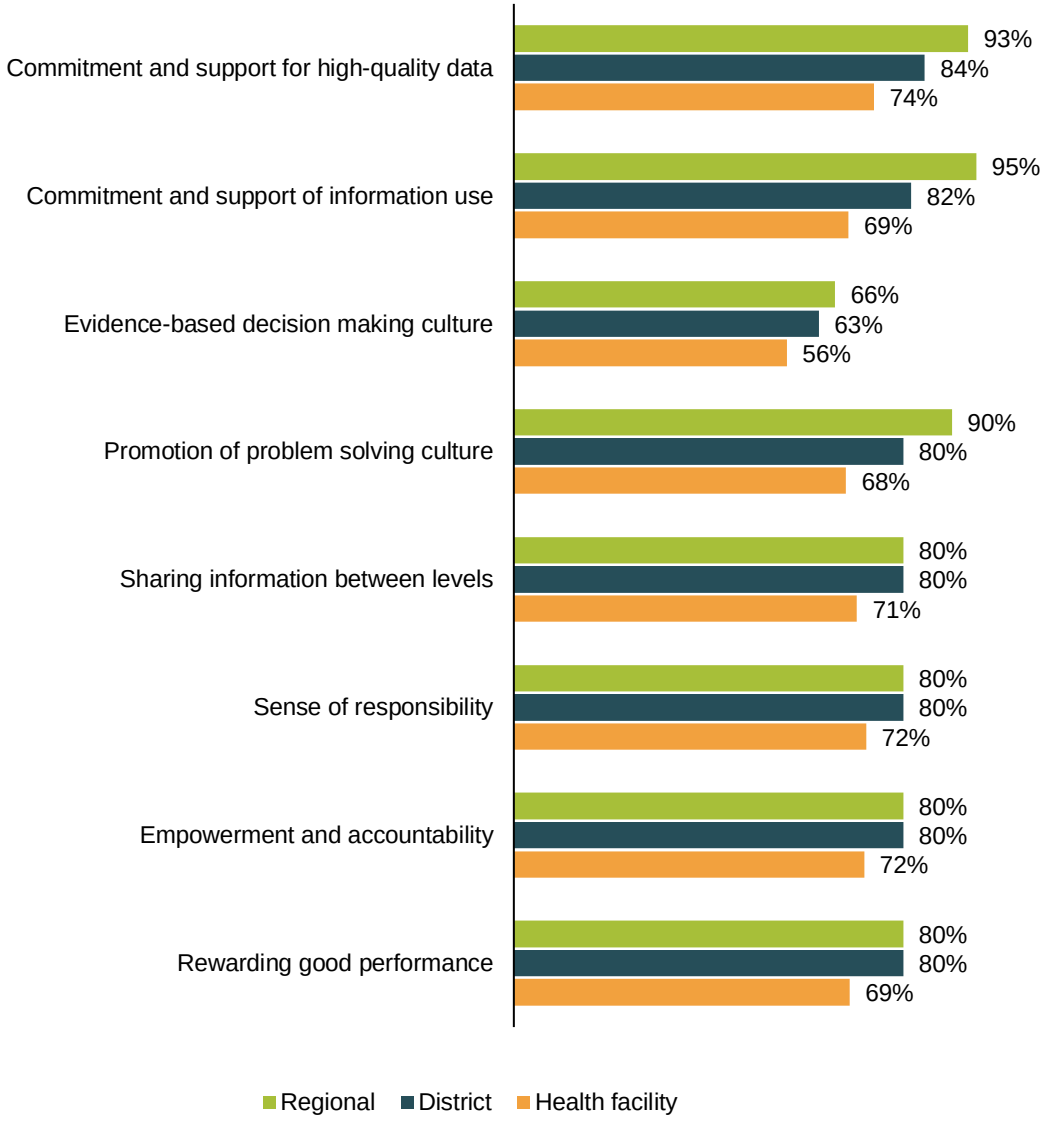
Figure 5. Evidence of existing data use from Tanzania EWEN-MINSMI-PRISM tools pilot (n=16 facilities, 2 facility offices)

		Regional	District	Facility
Organizational factors	Evidence data analysis taking place	100%	100%	62%
RHIS processes	Data Visualization	100%	100%	63%
	Use of data to produce narrative analytical reports	100%	50%	69%
Use Newborn data for decisions	Use information for discussion on key performance targets	0%	0%	86%
	Use information for coverage of services	0%	0%	25%
	Use sex-disaggregated data	0%	0%	6%
	Use information for human resources decisions	0%	0%	19%
	Use information for quality improvement	0%	0%	6%

Opportunities to Enable an Organizational Information Culture

A culture of information is defined as the capacity and control to promote values and beliefs among members of an organization for the collection, analysis, and use of information to achieve an organization's mission and goals. This EWEN-MINSMI-PRISM pilot assessed information culture components from 24 respondents working across the 19 sites. Perceived information culture components promotion ranged from 56% to 95% (Figure 6).

Figure 6. Promotion of information culture, Tanzania EWEN-MINSMI-PRISM tools pilot (n=24 respondents, 19 sites)



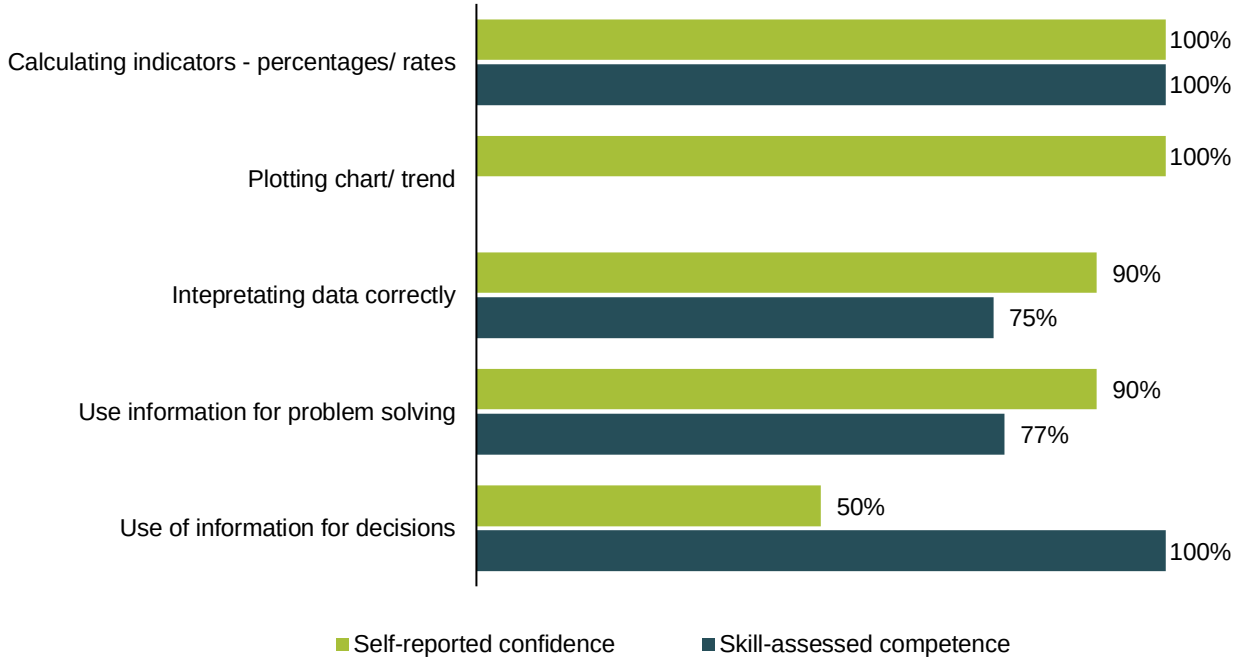
Opportunities to Develop RHIS Skills, Confidence, and Competence

The EWEN-MINSMI-PRISM Tools pilot captured 24 individual respondents' perceived confidence and measured competence on RHIS tasks through assessment with examples using maternal, newborn and stillbirth data.

At the regional data office level (n=1 respondent), self-reported confidence and skills-assessed competence matched for calculating indicators (100%) and with high confidence for plotting a chart/trend. There were gaps across the other measures. Confidence was higher than competence for interpreting data correctly (15%) and use of information for problem solving (13%). Competence was higher than confidence by 50% for use of information for decisions (Figure 7).

Figure 7. Regional data office RHIS task self-reported confidence and skill-assessed competence, Tanzania EWEN-MINSMI-PRISM Tools pilot (n=1 respondent)

(Note: the skill of plotting chart/trend is not assessed at the regional data office level in the EWEN-MINSMI tools)



At district data office level (n=2 respondents), self-reported confidence was mainly still high (90–97%) except for use of information for decisions at 43% . Confidence was 15% higher than competence for interpreting data correctly, and confidence was 81% higher than competence for use of information for problem solving. In contrast, competence was 24% higher than confidence for use of information for decisions (Figure 8).

Figure 8. District data office RHIS task self-reported confidence and skill-assessed competence, Tanzania EWEN-MINSMI-PRISM Tools pilot (n=2 respondents)

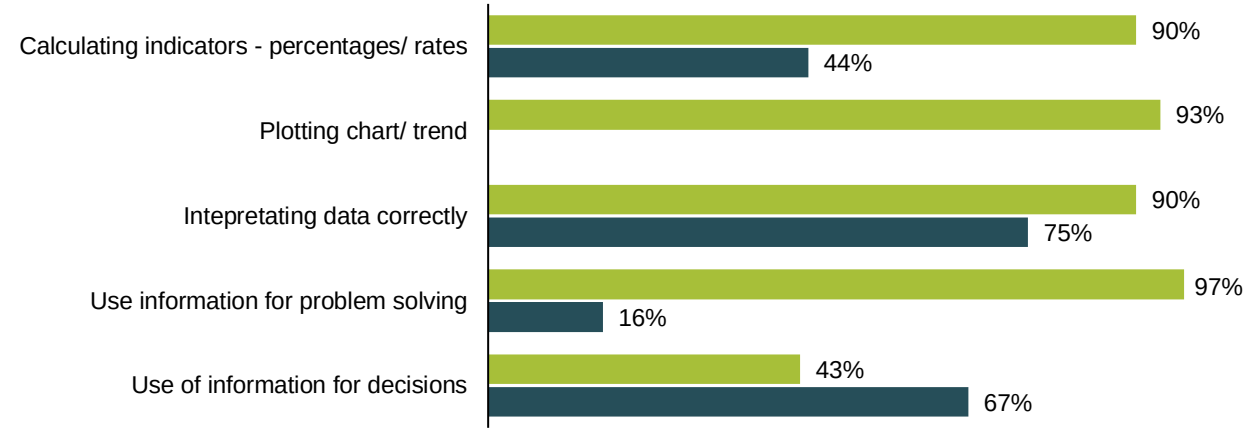
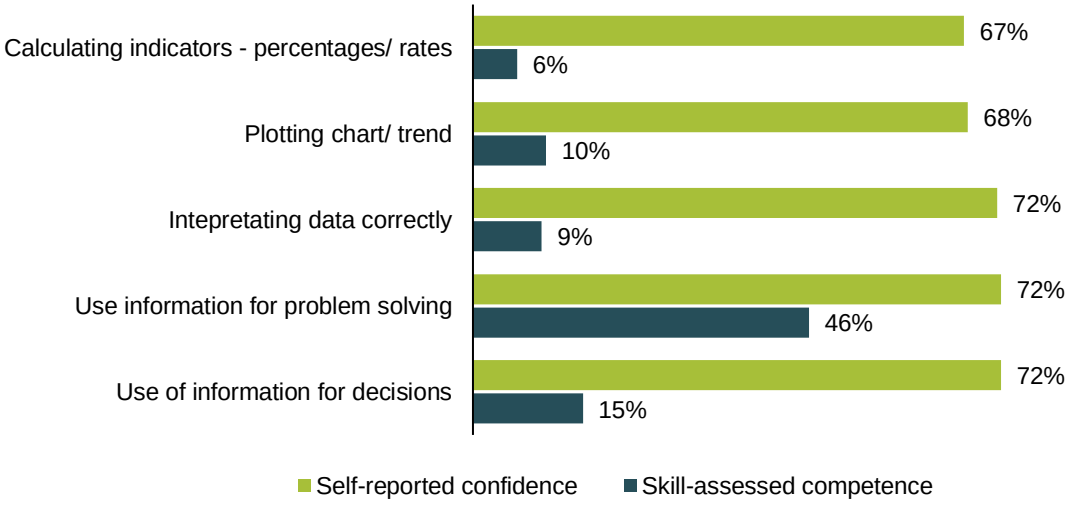


Figure 9. Health facility RHIS task self-reported confidence and skill-assessed competence, Tanzania EWEN-MINSMI-PRISM Tools pilot (n=21 respondents)

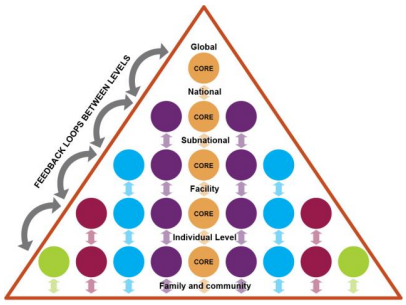


(Note: the skill of plotting chart/trend is not assessed at district data office level in the EWEN-MINSMI tools)

In the 16 health facilities assessed, respondents reported much less RHIS task confidence (67–72 %). Large confidence-competence gaps (26–63%) were seen across all domains measured (Figure 9).

RESULTS: IMPROVE Maternal, Newborn, Stillbirth Data Quality

IMPROVE
Maternal, Newborn, Stillbirth Data Quality

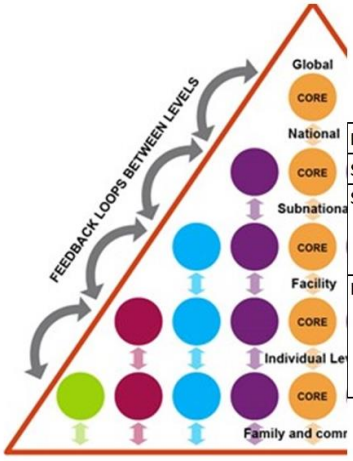


Evidence for Existing Data Quality

Accurate maternal/ newborn/stillbirth indicator measurement requires both numerator and denominator data elements to be accurately captured. This EWEN-MINSMI-PRISM pilot assessed ten priority EWENE core indicator data elements.

Figure 10 illustrates the data quality for the two denominators needed (total births and live births) at each level of the data pyramid across the EWEN-MINSMI-PRISM Tools pilot assessment in 19 sites. The denominators were highly available, complete and accurate (98–100%).

Figure 10. Data quality domains for newborn and stillbirth denominators, Tanzania EWEN-MINSMI-PRISM Tools pilot (n=16 facilities, 3 data offices)



				Denominators		Newborn Data Quality Criteria
				Total Birth	Live birth	
National -	Central	digital	eRHIS	entered district level		Accuracy - database entry exact match regional summary reports
Subnational -	Regional	digital	eRHIS			Accuracy - database entry exact match facility summary reports
Subnational -	District	digital	eRHIS	100%	100%	Accuracy - database entry exact match facility reports
				100%	100%	**Completeness** of facility monthly reports
		paper	Summary Form report	100%	100%	**Availability** of facility monthly reports
Facility		paper	Summary Form report	98%	98%	**Accuracy** of monthly report exactly matches register data
				100%	100%	**Completeness** of monthly report submitted
				100%	100%	**Availability** of monthly report
		paper	Register	100%	100%	**Completeness** of register primary source data

Figure 11 shows the numerators and denominators for all eight core indicators for this EWEN-MINSMI-PRISM Tools pilot. At the health facility, data elements were highly complete and accurate (96–100%).

The district office assessment monthly reports were missing for three indicators (bag-mask-ventilation, initiating family planning method of choice, and uterotonics to prevent postpartum hemorrhage). All other data elements were 100% available, complete and accurate.

Figure 11. District and facility level data quality domains for numerators and denominators for newborn/stillbirth/maternal indicator measurement, Tanzania EWEN-MINSMI-PRISM Tools pilot (n=16 facilities, 2 facility offices)

			District office review, n=2 offices			Facility review, n=16			
			Monthly reports, n=all facilities reportring			Monthly reports, n=3 months			Registers, n=3 months
			Availability	Completeness	Accuracy	Availability	Completeness	Accuracy	Completeness
			of facility monthly reports	of facility monthly reports	of database entry exactly matches facility reports	of monthly report	of monthly report	of monthly report from register	of register primary source data
Indicator domain	**Select Core Indicator data element**								
IMPACT	Stillbirth	Numerator	100%	100%	100%	100%	100%	100%	100%
	Institutional neonatal deaths	Numerator	100%	100%	100%	100%	100%	100%	100%
	Low birth weight	Numerator	100%	100%	100%	100%	100%	98%	100%
COVERAGE: Every Newborn	Early initiation Breastfeeding	Numerator	100%	100%	100%	100%	100%	97%	100%
COVERAGE: Small or sick newborns	Bag-mask-ventilation	Numerator	0%	0%	100%	100%	100%	100%	100%
	KMC	Numerator	100%	100%	100%	100%	100%	100%	100%
Maternal	Initiating family planing of choice	Numerator	0%	0%	100%	100%	100%	100%	100%
	Uterotonics prevent PPH	Numerator	0%	0%	100%	100%	100%	98%	100%
Indicator denominators	Total Births	Denominator	100%	100%	100%	100%	100%	98%	100%
	Live births	Denominator	100%	100%	100%	100%	100%	98%	100%

Opportunities to Improve Data Quality

This EWEN-MINSMI-PRISM Tools pilot assessment showed RHIS quality improvement activities were occurring at all levels (Figure 12).

Organizational factors were higher at the regional data office compared to the district data office with health facilities scoring much lower. For example, data quality assurance was 100% at the regional data office to 94% at the district data office and only 61% at health facility. Similarly, designated staff to check report data quality was 100% at regional and district data offices and 81% at health facilities.

Behavioral factors had a similar pattern with RHIS knowledge scores dropping from regional data office to district data office to health facility. However, motivation was low across all levels: 45% at health facilities and 60–64% in data offices.

There was no evidence of use of routine data for RHIS improvement at the regional level.

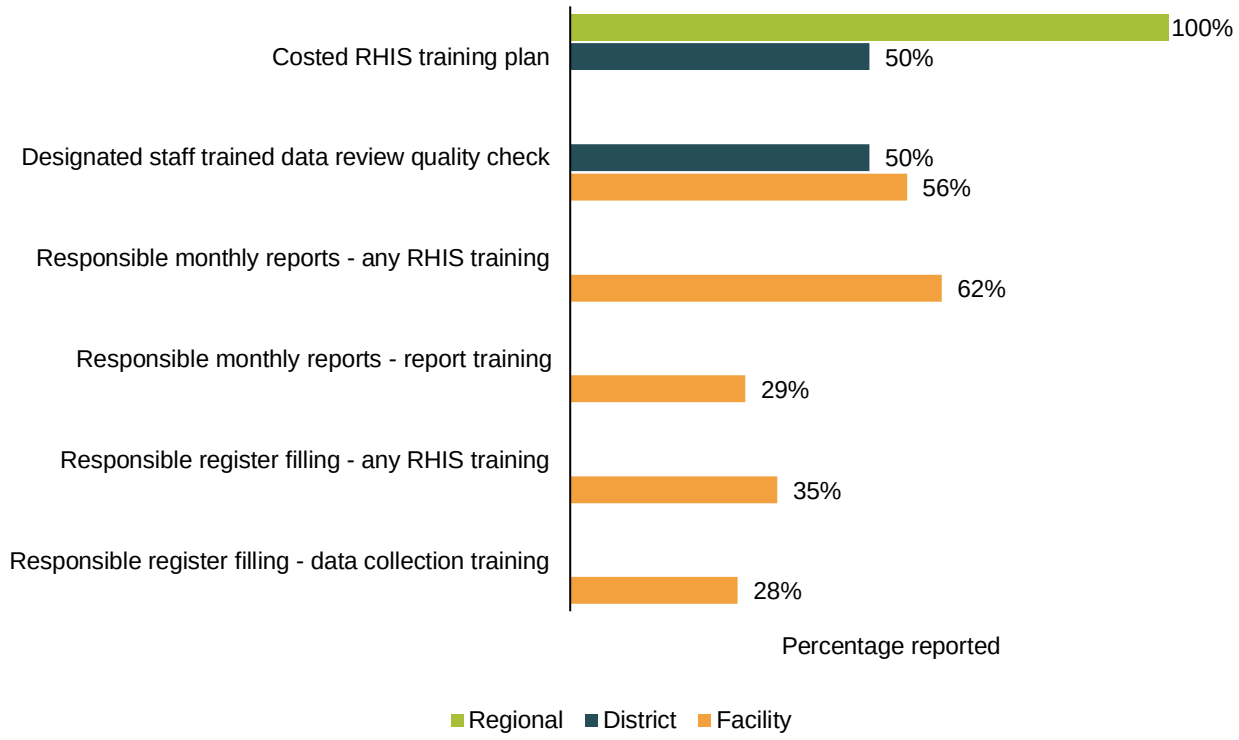
Figure 12. Factors to improve routine data quality from Tanzania EWEN-MINSMI-PRISM tools pilot (n=1 regional data office, 2 district data offices, 16 health facilities)

		Regional	District	Facility
Organizational factors	Good governance structures	83%	75%	not assess
	Planning for RHIS	100%	100%	not assess
	Use of quality improvement standards	100%	100%	not assess
	Supervision quality	50%	75%	not assess
	Financial resources allocated	100%	50%	not assess
	Training plan costed	100%	50%	not assess
	Data quality assurance score	100%	94%	61%
	Designated staff check report data quality	100%	100%	81%
Behavioral Factors	Knowledge HIS	100%	57%	60%
	Knowledge data quality checking methods	100%	89%	53%
	Motivation among staff	60%	64%	45%
Improve Newborn Data Quality	Use of routine data for RHIS quality improvement	0%		

Training

Despite the availability of costed RHIS training plans (100% regional, 50% at district), large gaps in training for data professionals and health professionals were identified (Figure 13). For data quality check, only 50% of designated district office staff and 56 of health facility staff were trained. At the health facility level, between 28 to 62% had any training in register filling or monthly reports, as shown in Figure 13

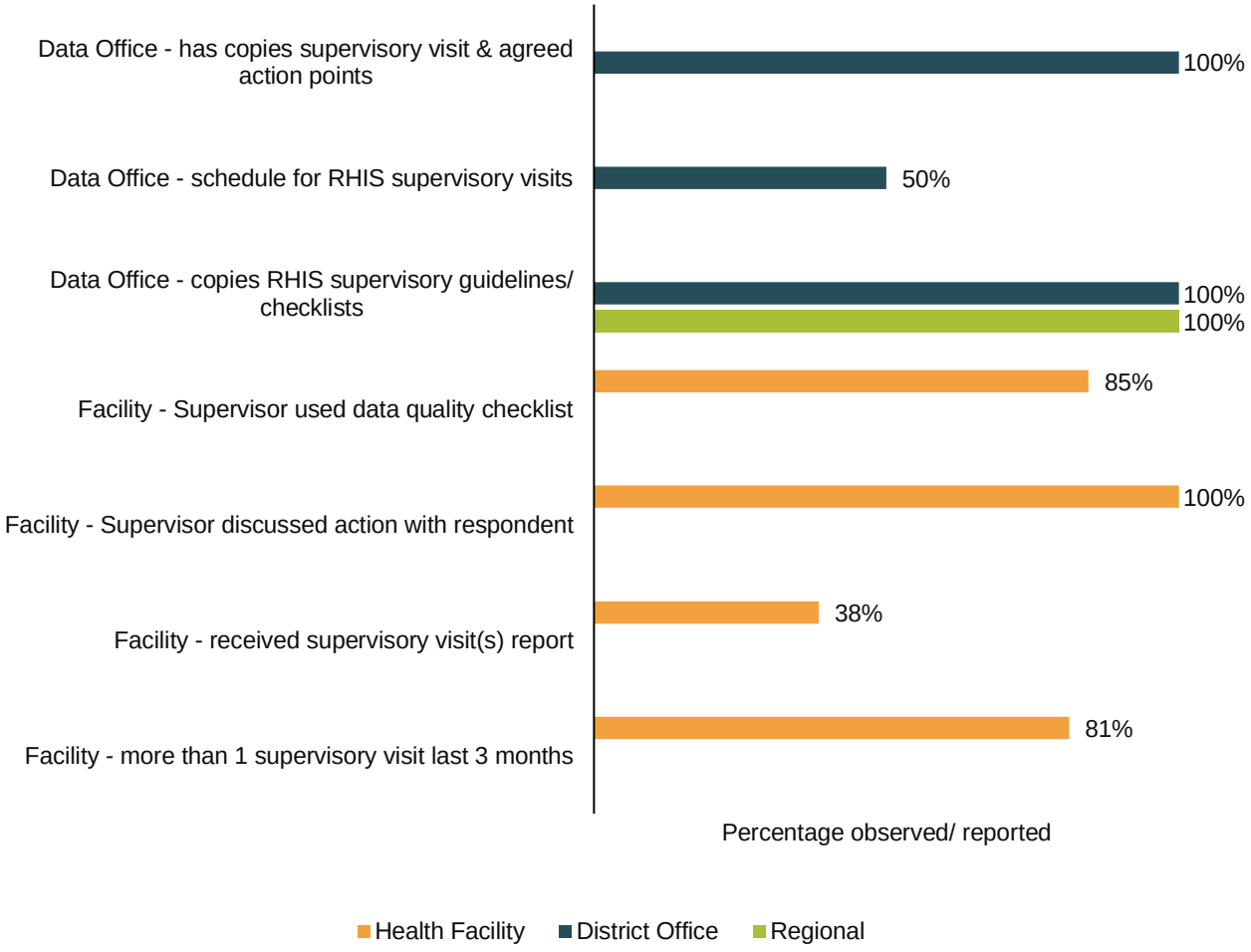
Figure 13. RHIS training at district office and health facility – Tanzania EWEN-MINSMI-PRISM Tools pilot, (n=1 regional data office, 2 district data offices, 16 health facilities)



Supervision

This EWEN-MINSMI-PRISM Tools pilot showed RHIS supervisory processes were established and among the 81% of facilities with a supervisory visit in the 3 months prior to the assessment and 85% of visits used a data quality checklist (Figure 14). All supervisory visits at district offices included a discussion regarding action points and 38% of facilities received a report.

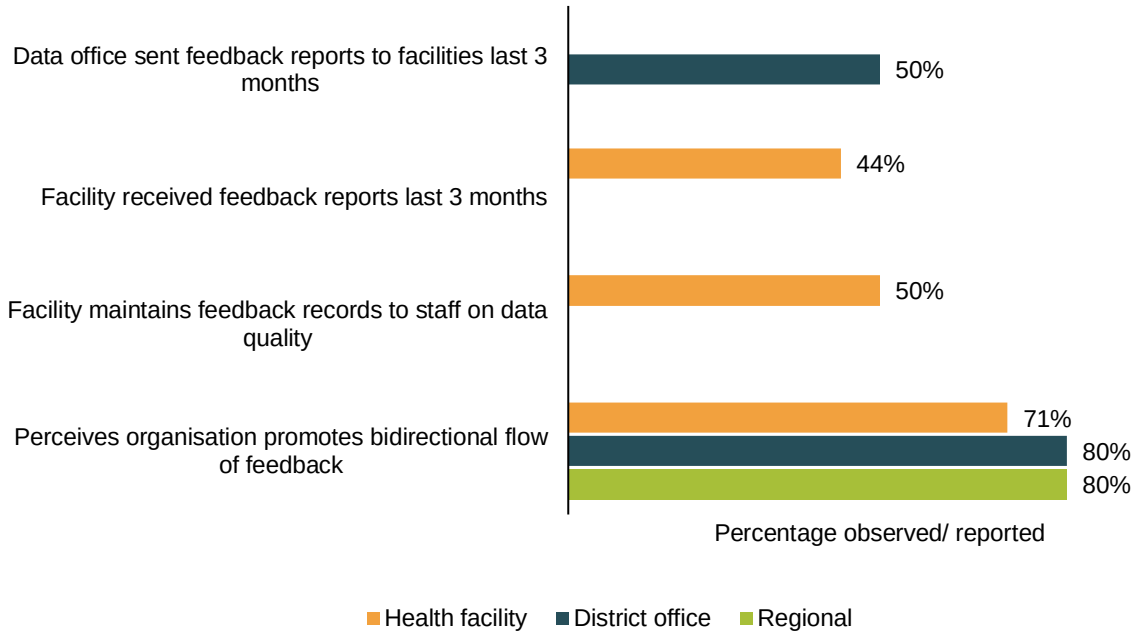
Figure 14. RHIS Supervision health facility and district office – EWEN-MINSMI-PRISM pilot, Tanzania (n=1 regional data office, 2 district data offices, 16 health facilities)



Feedback Loops

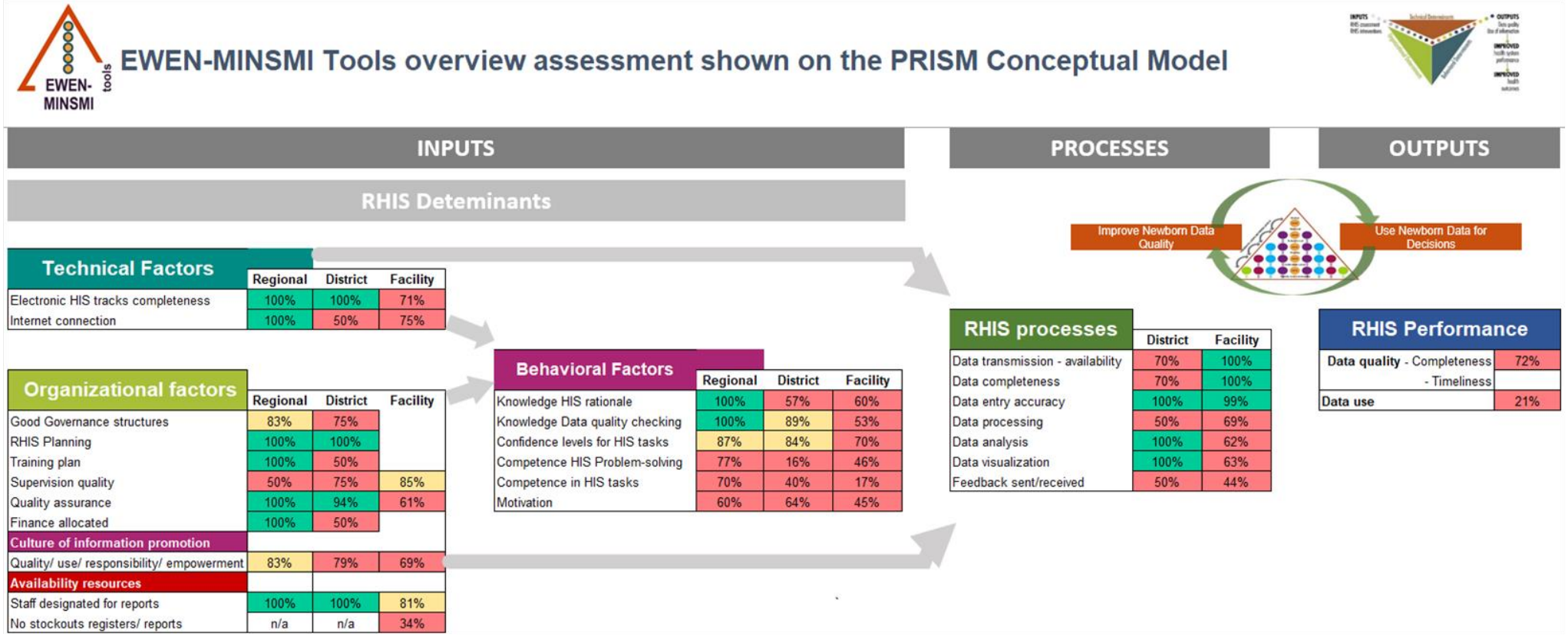
Despite 71–80% of respondents reporting that bidirectional feedback is promoted, only 50% of data offices had sent and only 44% of facilities had received a feedback report in the preceding 3 months. Fifty percent of facilities maintain feedback records to staff on data quality (Figure 15).

Figure 15. Feedback loops between levels, Tanzania EWEN-MINSMI-PRISM pilot (n=1 regional data office, 2 district data offices, 16 health facilities)



Overview of EWEN-MINSMI-PRISM Findings of Pilot study in Tanga Region, Tanzania

Figure 16. EWEN-MINSMI-PRISM overview using PRISM conceptual framework, Tanzania pilot (n=1 regional data office, 2 district data offices, 16 health facilities)



Conclusion

The 2024 EWEN-MINSMI-PRISM Tools pilot assessment in the Tanga Region of the United Republic of Tanzania identified strengths and weaknesses in RHIS performance for maternal, newborn and stillbirth core indicator data at regional and district data offices and health facilities at all levels of the health system.

Routine data from health facilities are not reaching their full potential for action to enable women and newborns to survive and thrive. Although overall data quality for these core indicators was assessed to be high during this EWEN-MINSMI-PRISM assessment, there was limited data use at health facilities or data offices.

Motivation for RHIS tasks was low at all levels assessed. Strengthening an information culture and data-enabling environment in the health facility is vital for frontline health workers to feel motivated to capture high-quality data and use this data themselves. Duplicative reporting through parallel systems continues to overburden, compromise data quality, and reduce staff commitment. Streamlined, efficient data systems are urgently needed so health workers can focus on providing high-quality patient care.

RHIS knowledge and skills training are urgently needed for health facility staff collecting maternal, newborn and stillbirth data. This includes increasing capacity for health facility staff to generate reports from electronic RHIS in addition to district office use. As RHIS competencies rise, confidence in data use for evidence-based decisions will grow, and enabled by feedback and supervision, data quality will further increase.

Factors to improve and sustain data quality had the largest gaps at the health facility level. Investing in RHIS governance systems at higher levels in the data pyramid will not ensure accurate data for use unless the health facility is included.

Strengthening the use of high-quality data for action at all levels—in health facilities, subnationally, and nationally—can make a major contribution to ensuring every Tanzanian woman and newborn survives and thrives.

References

1. United Nations Inter-agency Group for Child Mortality Estimation (UNIGME). Report of the United Nations Inter-agency Group for Child Mortality Estimation. Never Forgotten - The situation of stillbirth around the globe 2022. https://data.unicef.org/resources/never-forgotten-stillbirth-estimates-report/ (accessed 20 October 2024).
2. UNICEF, World Health Organization. Levels and Trends Child Mortality-Report 2023: Estimates Developed by the United Nations Inter-agency Group for Child Mortality Estimation. 2024. https://data.unicef.org/resources/levels-and-trends-in-child-mortality-2024/ (accessed 20 October 2024).
3. WHO, UNICEF, UNFPA, WORLD BANK GROUP, UNDESA/Population Division. Trends in Maternal Mortality 2000 to 2020: Estimates 2023. Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division (accessed 20 Oct 2024).
4. World Health Organization. Improving maternal and newborn health and survival and reducing stillbirth: progress report 2023.2023. https://www.who.int/publications/i/item/9789240073678 (accessed 20 Oct 2024).
5. World Health Organization. Global Strategy for Women's, Children's and Adolescents' Health, 2016-2030.2015. https://www.who.int/publications/i/item/the-global-strategy-for-women-s-children-s-and-adolescents-health-(2016-2030)-early-childhood-development-report-by-the-director-general (accessed 18 May 2020).
6. Lawn, J.E., Cousens, S., Zupan, J. 4 million neonatal deaths: when? Where? Why? *Lancet* 2005; **365**(9462): 891-900.
7. MEASURE Evaluation. PRISM: Performance of Routine Information System Management Series 2019. https://www.measureevaluation.org/resources/tools/health-information-systems/prism (accessed 26 November 2020).
8. Aqil, A., Lippeveld, T., Hozumi, D. PRISM framework: a paradigm shift for designing, strengthening and evaluating routine health information systems. *Health Policy Plan* 2009; **24**(3): 217-28.
9. Day, L.T., Ruysen, H., Gordeev, V.S., et al. "Every Newborn-BIRTH" protocol: observational study validating indicators for coverage and quality of maternal and newborn health care in Bangladesh, Nepal and Tanzania. *Journal of Global Health*, 2019. http://jogha.org/documents/issue201901/jogh-09-010902.htm (accessed 18 August 2022).
10. Day, L.T., Rahman, Q.S., Rahman, A.E., et al. Assessment of the validity of the measurement of newborn and maternal health-care coverage in hospitals (EN-BIRTH): an observational study. *The Lancet Global Health* 2021; **9**(3): E267-79.
11. Every Newborn - Birth Indicators Research Tracking in Hospitals (EN-BIRTH) Study Group. Every Newborn BIRTH multi-country validation study; informing measurement of coverage and quality of maternal and newborn care - Supplement2021. https://bmcpregnancychildbirth.biomedcentral.com/articles/supplements/volume-21-supplement-1 (accessed 2 May 2021).

Appendix 1. Full EWEN-MINSMI-PRISM Results Tables

The full cross-cutting EWEN-MINSMI-PRISM Tanzania pilot assessment results are presented in the following tables arranged by themes:

1. Data quality indicators
2. Use of information indicators
3. Data management indicators
4. Technical factors
5. Organization factors
6. Gender indicators

For this pilot study, data were collected at regional district and facility levels. Dummy tables for central and regional levels are shown for completeness to illustrate the potential for the EWEN-MINSMI-PRISM Tool assessment.

Tables of Results

1. RHIS Performance: Data Quality Indicators

1A. Data Quality Indicators—Central Level

Section 1A Tables: Data Quality Indicators—Central Level

A. RHIS Performance: Data Quality Indicators- Central Level

Table 1A.1 Completeness of reported data—Central Level

Completeness of reported data

Indicator: % of expected monthly facility reports received at the central level (target=95%)

$$\frac{\text{Total \# of facility reports received at the central level}}{\text{Total \# of expected facility reports at the central level}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)				
Health facilities (all types)	**Numerator**	**Denominator**	**%**	**Target**
mm/yyyy	*	*	*	95%
mm/yyyy	*	*	*	95%
mm/yyyy	*	*	*	95%
All months	*	*	*	95%

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 1A.2 Completeness of reported data—Central Level

Reasons for default of report completeness

Data Source—Module II: RHIS Performance Diagnostic Tool		
Variables	**#**	**%**
Storage or archiving problems	*	*
Staffing issues	*	*
Absence of reporting forms	*	*
Transportation issues	*	*
Internet connectivity issues	*	*
Presence of other vertical reporting requirements	*	*
Other (specify)	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 1A.3 Timeliness of facility reporting—Central Level

Timeliness of facility reporting

Indicator: % of facilities submitting monthly reports on time to the aggregation site (target=100%)

$$\frac{\text{Total \# of facilities that submitted reports on time to the aggregation site}}{\text{Total \# of expected facility reports at the aggregation site}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool			
Period for health facilities (all types)	**Numerator**	**Denominator**	**Value**
mm/yyyy	*	*	*
mm/yyyy	*	*	*
mm/yyyy	*	*	*
All months	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 1A.4 Accuracy of entered data—Central Level

Accuracy of entered data (only for manual compilation)

Indicator: % of accuracy between regional compiled data and the national data reported in the national database for selected indicators (target=100%)

$$\frac{\text{Sum of all region verification factor (VF) deviations}}{\text{Total \# of assessed site regions per selected indicator}} \times 100$$

The central global accuracy (CGA) = 100—Average central VF deviation

Data Source—Module IIa: RHIS Performance Diagnostic Tool					
Indicator	**Period**	**Numerator**	**Denominator**	**Value**	**CGA**
Total births	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Live births	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Stillbirths	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Low birthweight	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Early initiation of breastfeeding	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Bag-mask ventilation	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Uterotonics for postpartum hemorrhage	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
KMC (Kangaroo mother care)	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Institutional neonatal deaths	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*
Initiating family planning method of choice	**mm/yyyy**	*	*	*	*
	mm/yyyy	*	*	*	*
	mm/yyyy	*	*	*	*
	All months	*	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

(table is continued from previous page)

Extent to which regional reported data and data recorded for selected indicators in the database are meeting the set criteria for data accuracy													
		A						B					
		% <90%		90%<=%<110%		%>=110%		% <80%		80%<=%<120%		%>=120%	
Indicator	**Period**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Total births	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Live births	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Stillbirths	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Low birthweight	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Early initiation of breastfeeding	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Bag-mask ventilation	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Uterotonics for postpartum hemorrhage	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
KMC	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Institutional neonatal deaths	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*
Initiating family planning method of choice	**mm/yyyy**	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	mm/yyyy	*	*	*	*	*	*	*	*	*	*	*	*
	All months		*		*		*		*		*		*

Table 1A.5 Reasons for observed discrepancies—Central Level

Reasons for observed discrepancies
Indicator: Top three reasons that were given as possible reasons for observed discrepancy during the assessment
In this table, DQ026 corresponds to the first month, DQ027 to the second month, and DQ028 to the third month

Data Source—Module IIa: RHIS Performance Diagnostic Tool					
Indicator	**Data entry errors**	**Arithmetic errors**	**Information from submitted reports incorrectly compiled**	**Monthly reports unavailable**	**Other reason(s)**
Total births	*	*	*	*	*
Live births	*	*	*	*	*
Stillbirths	*	*	*	*	*
Low birthweight	*	*	*	*	*
Early initiation of breastfeeding	*	*	*	*	*
Bag-mask ventilation	*	*	*	*	*
Uterotonics for postpartum hemorrhage	*	*	*	*	*
KMC	*	*	*	*	*
Institutional neonatal deaths	*	*	*	*	*
Initiating family planning method of choice	*	*	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

1B. Data Quality Indicators—Regional Level

Section 1B Tables: Data Quality Indicators—Regional Level

Table 1B.1 Completeness of reported data—Regional Level

Completeness of facility reporting

Indicator: % of expected monthly reports received at the region level (target=95%)

$$\frac{\text{Total \# of facility reports received at the region level}}{\text{Total \# of expected facility reports at the region level}} \text{ X100}$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)				
Health facilities (all types)	**Numerator**	**Denominator**	**%**	**Target**
4/2024	472	472	100%	95%
5/2024	472	472	100%	95%
6/2024	472	472	100%	95%
All months	1416	1416	100%	95%

Table 1B.2 Completeness of reported data—Regional Level

Reasons for default of report completeness

Data Source—Module II: RHIS Performance Diagnostic Tool (Region Level)		
Variables	**#**	**%**
Storage or archiving problems	0	0%
Staffing issues	0	0%
Absence of reporting forms	0	0%
Transportation issues	0	0%
Internet connectivity issues	0	0%
Presence of other vertical reporting requirements	0	0%
Other (specify)	0	0%

Table 1B.3 Timeliness of facility reporting—Regional Level

Timeliness of facility reporting

Indicator: % of facilities submitting monthly reports on time to the aggregation site (target=100%)

$$\frac{\text{Total \# of facilities that submitted reports on time to the aggregation site}}{\text{Total \# of expected facility reports at the aggregation site}} \times 100$$

Data Source—Module Iia: RHIS Performance Diagnostic Tool (Region Level)			
Period for health facilities (all types)	**Numerator**	**Denominator**	**Value**
mm/yyyy	472	472	100%
mm/yyyy	472	472	100%
mm/yyyy	472	472	100%
All months	1416	1416	100%

Table 1B.4 Accuracy of entered data—Regional Level

Accuracy of entered data (only for manual compilation)

Indicator: % of accuracy between data entered in the region (or national) database and the facility monthly report for selected indicators (target=100%)

$$\frac{\text{Sum of all region verification factor (VF) deviations}}{\text{Total \# of assessed site regions per selected indicator}} \times 100$$

Data Source—Module iia: RHIS Performance Diagnostic Tool (Region Level)					Region accuracy
Indicator	**Period**	**Numerator**	**Denominator**	**Value**	**CGA**
Total births	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Live births	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Stillbirths	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Low birthweight	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Early initiation of breastfeeding	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Bag-mask ventilation	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Uterotonics for postpartum hemorrhage	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
KMC	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Institutional neonatal deaths	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%
Initiating family planning method of choice	**Mm/yyyy**	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	Mm/yyyy	0	1	0%	100%
	All months	0	1	0%	100%

(Table continues on next page)

Indicator: % of regions where districts data reported in monthly reports and the data recorded for selected indicators in the database are meeting the set criteria for data accuracy													
		A						B					
		% <90%		90%<=%<110%		%>=110%		% <80%		80%<=%<120%		%>=120%	
Indicator	Period	#	%	#	%	#	%	#	%	#	%	#	%
Total births	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Live births	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Stillbirths	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Low birthweight	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Early initiation of breastfeeding	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Bag-mask ventilation	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Uterotonics for postpartum hemorrhage	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
KMC	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Institutional neonatal deaths	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
Initiating family planning method of choice	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	mm/yyyy	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%
	All months	0	0%	1	100%	0	0%	0	0%	1	100%	0	0%

Table 1B.5 Reasons for observed discrepancies—Regional Level

Reasons for observed discrepancies

Indicator: Top three reasons that were given as possible reasons for observed discrepancy during the assessment

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)					
Indicator	**Data entry errors**	**Arithmetic errors**	**Information from submitted reports incorrectly compiled**	**Monthly reports unavailable**	**Other reason(s)**
Total births	0	0	0	0	0
Live births	0	0	0	0	0
Stillbirths	0	0	0	0	0
Low birthweight	0	0	0	0	0
Early initiation of breastfeeding	0	0	0	0	0
Bag-mask ventilation	0	0	0	0	0
Uterotonics for postpartum hemorrhage	0	0	0	0	0
KMC	0	0	0	0	0
Institutional neonatal deaths	0	0	0	0	0
Initiating family planning method of choice	0	0	0	0	0

C. RHIS Performance: Data Quality Indicators- District Level

Section 1C Tables: Data Quality Indicators—District Level

Table 1C.1 Completeness of reported data—District Level

I. RHIS Performance: Data Quality Indicators

Completeness of reported data

Indicator: % of monthly reports completely filled with data for selected indicators (i.e., reports contain the data relevant to the selected indicators) (target=100%)

$$\frac{\text{Total \# of facilities that submitted a complete report on the selected indicators}}{\text{Total \# of facilities expected to report on the selected indicators}} \times 100$$

At this level, the denominator is all those facilities expected to report on the selected data

Scenario 1

This scenario is valid when facilities are randomly sampled in a sampled district.

Data Source—Module iia: RHIS Performance Diagnostic Tool (District Level)

Indicator	Period	Numerator	Denominator	Value
Total births	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Live births	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Stillbirths	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Low birthweight	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Early initiation of breastfeeding	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Bag-mask ventilation	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%

Uterotonics for postpartum hemorrhage	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
KMC	4/2024	4	4	100%
	5/2024	4	4	100%
	6/2024	4	4	100%
	All months	12	12	100%
Institutional neonatal deaths	4/2024	25	25	100%
	5/2024	25	25	100%
	6/2024	25	25	100%
	All months	75	75	100%
Initiating family planning method of choice	4/2024	54	54	100%
	5/2024	54	54	100%
	6/2024	54	54	100%
	All months	162	162	100%

Table 1C.2 Reason for missing data—District Level

Reasons for missing data

Data Source—Module II: RHIS Performance Diagnostic Tool (District Level)		
Variables	**#**	**%**
Staffing issue(s)	0	0%
Not understanding the data element(s)	0	0%
Presence of other vertical reporting requirements	0	0%
Other	0	0%

Table 1C.3 Completeness of facility reporting—District Level—reports received

Completeness of facility reporting

Indicator: % of expected monthly reports received at the district level (target=95%)

$$\frac{\text{Total \# of facility reports received at the district level}}{\text{Total \# of expected facility reports at the district level}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)				
Health Facilities (all types)	**Numerator**	**Denominator**	**%**	**Target**
4/2024	55	55	100%	95%
5/2024	55	55	100%	95%
6/2024	55	55	100%	95%
All months	165	165	100%	95%

Table 1C.4 Completeness of facility form reporting—District Level—reasons for default

Completeness of facility form reporting
Reasons for default of report completeness

Data Source—Module II: RHIS Performance Diagnostic Tool (District Level)		
Variables	**#**	**%**
Storage or archiving problems	0	0%
Staffing issues	0	0%
Absence of reporting forms	0	0%
Transportation issues	0	0%
Internet connectivity issues	0	0%
Presence of other vertical reporting requirements	0	0%
Other (specify)	0	0%

Table 1C.5 Completeness of facility form reporting—District Level % of expected monthly reports available

Completeness of facility form reporting

Indicator: % of expected monthly reports of selected indicators that are available at the district level (target=95%)

$$\frac{\text{Total \# of facility reports on the selected indicators received at the district level}}{\text{Total \# of expected facility reports on the selected indicators at the district level}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)				
Indicator	**Period**	**Numerator**	**Denominator**	**Value**
Total births	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Live births	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Stillbirths	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Low birthweight	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Early initiation of breastfeeding	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Bag-mask ventilation	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
Uterotonics for postpartum hemorrhage	4/2024	55	55	100%
	5/2024	55	55	100%
	6/2024	55	55	100%
	All months	165	165	100%
KMC	4/2024	4	4	100%
	5/2024	4	4	100%
	6/2024	4	4	100%
	All months	12	12	100%
Institutional neonatal deaths	4/2024	25	25	100%
	5/2024	25	25	100%
	6/2024	25	25	100%
	All months	75	75	100%
Initiating family planning method of choice	4/2024	54	54	100%
	5/2024	54	54	100%
	6/2024	54	54	100%
	All months	162	162	100%

Table 1C.6 Timeliness of facility reporting—District Level—% of facilities submitting reports on time

Timeliness of facility reporting

Indicator: % of facilities submitting monthly reports on time to the aggregation site (target=100%)

$$\frac{\text{Total \# of facilities that submitted reports on time to the aggregation site}}{\text{Total \# of expected facility reports at the aggregation site}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Health facilities (all types)	**Numerator**	**Denominator**	**Value**
4/2024	25	55	45%
5/2024	25	55	45%
6/2024	25	55	45%
All months	75	165	45%

Table 1C.7 Accuracy of entered data—District Level

Indicator: % of accuracy between data entered in the district (or national) database and the facility monthly report for selected indicators (target=100%)

$$\frac{\text{Sum of all district VF deviations}}{\text{Total \# of assessed site districts per selected indicator}} \times 100$$

The district global accuracy = 100—Average district VF deviation

Not relevant for systems using DHIS2*

* District Health Information Software version 2

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)					District global accuracy
Indicator	**Period**	**Numerator**	**Denominator**	**Value**	**CGA**
Total births	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Live births	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Stillbirths	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Low birthweight	4/2024	0.53	2	0%	100%
	5/2024	0.47	2	0%	100%
	6/2024	0.60	2	0%	100%
	All months	1.61	6	0%	100%
Early initiation of breastfeeding	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Bag-mask ventilation	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Uterotonics for postpartum hemorrhage	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
KMC	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Institutional neonatal deaths	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%
Initiating family planning method of choice	4/2024	0.00	2	0%	100%
	5/2024	0.00	2	0%	100%
	6/2024	0.00	2	0%	100%
	All months	0.00	6	0%	100%

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Indicator: % of districts where data reported in monthly reports and data recorded in monthly reports and the data recorded for selected indicators in the database are meeting the set criteria for accuracy

		A						B					
		% <90%		90%<=%<110%		%>=110%		% <80%		80%<=%<120%		%>=120%	
Indicator	**Period**	#	%	#	%	#	%	#	%	#	%	#	%
Total births	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Live births	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Stillbirths	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Low birthweight	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Early initiation of breastfeeding	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Bag-mask ventilation	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Uterotonics for postpartum hemorrhage	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
KMC	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Institutional neonatal deaths	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%
Initiating family planning method of choice	4/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	5/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	6/2024	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	All months		0%		50%		0%		0%		50%		0%

Table 1C.8 Reasons for observed discrepancies—District Level

Reasons for observed discrepancies

Indicator: Top three reasons that were given as possible reasons for observed discrepancy during the assessment
In this next table, **DQ026** corresponds to the first month, **DQ027** to the second month, and **DQ028** to the third month.

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)					
Indicator	**Data entry errors**	**Arithmetic errors**	**Information from submitted reports incorrectly compiled**	**Monthly reports unavailable**	**Other reason(s)**
Total births	0	0	0	0	0
Live births	0	0	0	0	0
Stillbirths	0	0	0	0	0
Low birthweight	0	0	0	0	0
Early initiation of breastfeeding	0	0	0	0	0
Bag-mask ventilation	0	0	0	0	0
Uterotonics for postpartum hemorrhage	0	0	0	0	0
KMC	0	0	0	0	0
Institutional neonatal deaths	0	0	0	0	0
Initiating family planning method of choice	0	0	0	0	0

1D. Data Quality Indicators—Facility Level

D. RHIS Performance: Data Quality Indicators- Facility Level

Table 1D.1. Completeness of source documents—Facility Level

Completeness of source documents

Indicator: % of facilities with completely filled primary source documents, such as registers, patient records, etc. for selected indicators (i.e., source documents contain the data relevant to the selected indicators)

$$\frac{\text{Total \# of assessed facilities with a completely filled primary source document}}{\text{Total \# of assessed facilities expected to report on the selected indicators}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)				
Indicator	**Period**	**Numerator**	**Denominator**	**Value**
Total births	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Live births	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Stillbirths	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Low birthweight	4/2024	15	16	100%
	5/2024	15	16	100%
	6/2024	15	16	100%
	All months	45	48	100%
Early initiation of breastfeeding	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Bag-mask ventilation	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Uterotonics for postpartum hemorrhage	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
KMC	4/2024	5	5	100%
	5/2024	5	5	100%
	6/2024	5	5	100%
	All months	15	15	100%
Institutional neonatal deaths	4/2024	4	4	100%
	5/2024	4	4	100%
	6/2024	4	4	100%
	All months	12	12	100%
Initiating family planning method of choice	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%

Table 1D.2 Completeness of reported data—Facility Level

Completeness of reported data

$$\frac{\text{Total \# of assessed facilities that submitted a complete report for selected indicators}}{\text{Total \# of assessed facilities expected to report on the selected indicators}} \times 100$$

Scenario 2

This scenario is valid either: (1) when the assessment happens at health facility level only, or (2) when the sampled health facilities are located outside of the sampled woredas.

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)				
Indicator	**Period**	**Numerator**	**Denominator**	**Value**
Total births	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Live births	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Stillbirths	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Low birthweight	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Early initiation of breastfeeding	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Bag-mask ventilation	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Uterotonics for postpartum hemorrhage	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
KMC	4/2024	5	5	100%
	5/2024	5	5	100%
	6/2024	5	5	100%
	All months	15	15	100%
Institutional neonatal deaths	4/2024	4	4	100%
	5/2024	4	4	100%
	6/2024	4	4	100%
	All months	12	12	100%
Initiating family planning method of choice	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%

Table 1D.3 Reasons for lack of availability of data sources—Facility Level

Reasons for no availability of data sources

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)					
Indicator	**Storage or archiving problems**	**Staffing issue(s)**	**Not understanding the data element(s)**	**Presence of other vertical reporting requirements**	**Other (specify):**
Total births	0	0	0	0	0
Low birthweight	0	0	0	0	0
Stillbirths	0	0	0	0	0
Live births	0	0	0	0	0
Early initiation of breastfeeding	0	0	0	0	0
Bag-mask ventilation	0	0	0	0	0
Uterotonics for postpartum hemorrhage	0	0	0	0	0
KMC	0	0	0	0	0
Institutional neonatal deaths	0	0	0	0	0
Initiating family planning method of choice	0	0	0	0	0
Overall	0	0	0	0	0

Table 1D.4 Availability of facility reports

Availability of facility reports

Indicator: % of expected monthly reports of selected indicators that are available at the facility level

$$\frac{\text{Total \# of available facility reports containing the selected indicator(s) at the assessed facilities}}{\text{Total \# of assessed facilities expected to report on the selected indicator(s)}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)				
Indicator	**Period**	**Numerator**	**Denominator**	**Value**
Total births	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Live births	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Stillbirths	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Low birthweight	4/2024	15	15	100%
	5/2024	15	15	100%
	6/2024	15	15	100%
	All months	45	45	100%
Early initiation of breastfeeding	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Bag-mask ventilation	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
Uterotonics for postpartum hemorrhage	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%
KMC	4/2024	5	5	100%
	5/2024	5	5	100%
	6/2024	5	5	100%
	All months	15	15	100%
Institutional neonatal deaths	4/2024	4	4	100%
	5/2024	4	4	100%
	6/2024	4	4	100%
	All months	12	12	100%
Initiating family planning method of choice	4/2024	16	16	100%
	5/2024	16	16	100%
	6/2024	16	16	100%
	All months	48	48	100%

Timeliness of facility reporting (not applicable at the facility level)

Table 1D.5. Accuracy of facility reporting

Accuracy of reported data

Indicators:

% of facilities where data recorded in source documents are exactly matching reported data of selected indicator (target=95%)

% of facilities that scored VF between 95%–105% for selected indicator
% of facilities that scored VF between 90%–110% for selected indicator
% of facilities that over-reported the selected indicator (<90%)
% of facilities that under-reported the selected indicator (>110%)

$$\frac{\text{Sum of all Facility Verification Factors}}{\text{Total \# of assessed facilities}} \times 100$$

The facility global accuracy = 100—Average facility VF deviation
Data can be arranged according to the different indicators in the data analysis phase.

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)					Facility global Accuracy
Indicator	**Period**	**Numerator**	**Denominator**	**Value**	**CGA**
Total births	4/2024	0.81	16	5%	95%
	5/2024	0.08	16	5%	100%
	6/2024	0.02	16	0%	100%
	All months	0.91	48	2%	98%
Live births	4/2024	1.05	16	7%	93%
	5/2024	0.02	16	0%	100%
	6/2024	0.00	16	0%	100%
	All months	1.07	48	2%	98%
Stillbirths	4/2024	0.00	16	0%	100%
	5/2024	0.00	16	0%	100%
	6/2024	0.00	16	0%	100%
	All months	0.00	48	0%	100%
Low birthweight	4/2024	1.00	15	7%	93%
	5/2024	0.00	15	0%	100%
	6/2024	0.00	15	0%	100%
	All months	1.00	45	2%	98%
Early initiation of breastfeeding	4/2024	0.91	16	6%	94%
	5/2024	0.32	16	2%	98%
	6/2024	0.00	16	0%	100%
	All months	1.24	48	3%	97%
Bag-mask ventilation	4/2024	0.00	16	0%	100%
	5/2024	0.00	16	0%	100%
	6/2024	0.00	16	0%	100%
	All months	0.00	48	0%	100%
Uterotonics for postpartum hemorrhage	4/2024	0.80	16	5%	95%
	5/2024	0.00	16	0%	100%
	6/2024	0.00	16	0%	100%
	All months	0.08	48	2%	98%
KMC	4/2024	0.00	5	0%	100%
	5/2024	0.00	5	0%	100%
	6/2024	0.00	5	0%	100%
	All months	0.00	15	0%	100%
Institutional neonatal deaths	4/2024	0.00	4	0%	100%
	5/2024	0.00	4	0%	100%
	6/2024	0.00	4	0%	100%
	All months	0.00	12	0%	100%
Initiating family planning method of choice	4/2024	0.00	16	0%	100%
	5/2024	0.00	16	0%	100%
	6/2024	0.00	16	0%	100%
	All months	0.00	48	0%	100%

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Indicator: % of facilities where data recorded in source documents and reported data of selected indicator are meeting the set criteria for data accuracy

		A						B					
		% <90%		90%<=%<110%		%>=110%		% <80%		80%<=%<120%		%>=120%	
Indicator	**Period**	#	%	#	%	#	%	#	%	#	%	#	%
Total births	4/2024	1	6%	15	94%	0	0%	1	6%	15	94%	0	0%
	5/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	6/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	All months		2%		98%		0%		2%		98%		0%
Live births	4/2024	2	13%	14	88%	0	0%	2	13%	14	88%	0	0%
	5/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	6/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	All months		4%		96%		0%		4%		96%		0%
Stillbirths	4/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	5/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	6/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	All months		0%		100%		0%		0%		100%		0%
Low birthweight	4/2024	0	0%	14	93%	1	7%	0	0%	14	93%	1	7%
	5/2024	0	0%	15	100%	0	0%	0	0%	15	100%	0	0%
	6/2024	0	0%	15	100%	0	0%	0	0%	15	100%	0	0%
	All months		0%		98%		2%		0%		98%		2%
Early initiation of breastfeeding	4/2024	2	13%	14	88%	0	0%	1	6%	15	94%	0	0%
	5/2024	1	6%	15	94%	0	0%	1	6%	15	94%	0	0%
	6/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	All months		6%		94%		0%		4%		96%		0%
Bag-mask ventilation	4/2024	0	0%	15	94%	0	0%	0	0%	15	94%	0	0%
	5/2024	0	0%	15	94%	0	0%	0	0%	15	94%	0	0%
	6/2024	0	0%	15	94%	0	0%	0	0%	15	94%	0	0%
	All months		0%		94%		0%		0%		94%		0%
Uterotonics for postpartum hemorrhage	4/2024	1	6%	15	94%	0	0%	1	6%	15	94%	0	0%
	5/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	6/2024	0	0%	16	100%	0	0%	0	0%	16	100%	0	0%
	All months		2%		98%		0%		2%		98%		0%
KMC	4/2024	0	0%	4	80%	0	0%	0	0%	5	100%	0	0%
	5/2024	0	0%	5	100%	0	0%	0	0%	5	100%	0	0%
	6/2024	0	0%	5	100%	0	0%	0	0%	5	100%	0	0%
	All months		0%		93%		0%		0%		100%		0%
Institutional neonatal deaths	4/2024	0	0%	4	100%	0	0%	0	0%	4	100%	0	0%
	5/2024	0	0%	4	100%	0	0%	0	0%	4	100%	0	0%
	6/2024	0	0%	4	100%	0	0%	0	0%	4	100%	0	0%
	All months		0%		100%		0%		0%		100%		0%
Initiating family planning method of choice	4/2024	1	6%	15	94%	0	0%	1	6%	15	94%	0	0%
	5/2024	1	6%	15	94%	0	0%	1	6%	15	94%	0	0%
	6/2024	1	6%	15	94%	0	0%	1	6%	15	94%	0	0%
	All months		6%		94%		0%		6%		94%		0%

1E. Summary Tables for Data quality Indicators

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Completeness of facility reporting	**% of expected monthly facility reports received at the level**		*	*	*	1416	1416	100%	165	165	100%			
	Reasons for default of report completeness	Storage or archiving problems	*	*	*	0	0	0%	0	0	0%			
		Staffing issues	*	*	*	0	0	0%	0	0	0%			
		Absence of reporting forms	*	*	*	0	0	0%	0	0	0%			
		Transportation issues	*	*	*	0	0	0%	0	0	0%			
		Internet connectivity issues	*	*	*	0	0	0%	0	0	0%			
		Presence of other vertical reporting requirements	*	*	*	0	0	0%	0	0	0%			
		Other (specify)	*	*	*	0	0	0%	0	0	0%			
	% of expected monthly reports of selected indicators available at the level	Total births							165	165	100%	48	48	100%
		Live births							165	165	100%	48	48	100%
		Stillbirths							165	165	100%	48	48	100%
		Low birthweight							165	165	100%	45	45	100%
		Early initiation of breastfeeding							165	165	100%	48	48	100%
		Bag-mask ventilation							165	165	100%	48	48	100%
		Uterotonics for postpartum hemorrhage							165	165	100%	48	48	100%
		KMC							12	12	100%	15	15	100%
		Institutional neonatal deaths							75	75	100%	12	12	100%
		Initiating family planning method of choice							162	162	100%	48	48	100%
		Total births							165	165	100%	48	48	100%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Completeness of reported data	**% of monthly reports completely filled with data for selected indicators**	Live births							165	165	100%	48	48	100%
		Stillbirths							165	165	100%	48	48	100%
		Low birthweight							165	165	100%	45	45	100%
		Early initiation of breastfeeding							165	165	100%	48	48	100%
		Bag-mask ventilation							165	165	100%	48	48	100%
		Uterotonics for postpartum hemorrhage							165	165	100%	48	48	100%
		KMC							12	12	100%	15	15	100%
		Institutional neonatal deaths							75	75	100%	12	12	100%
		Initiating family planning method of choice							162	162	100%	48	48	100%
	Reasons for missing data	Staffing issue(s)							0	0	0%	0	0	0%
		Not understanding the data element(s)							0	0	0%	0	0	0%
		Presence of other vertical reporting requirements							0	0	0%	0	0	0%
		Storage or archiving problems							0	0		0	0	
		Other							0	0	0%	0	0	0%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Completeness of source documents	**% of facilities with completely filled primary source documents, such as registers, patient records, etc. for selected indicators (i.e., source documents contain the data relevant to the selected indicators)**	Total Births										48	48	100%
		Live births										48	48	100%
		Stillbirths										48	48	100%
		Low birthweight										45	45	100%
		Early initiation of breastfeeding										48	48	100%
		Bag-mask ventilation										48	48	100%
		Uterotonics for postpartum hemorrhage										48	48	100%
		KMC										15	15	100%
		Institutional neonatal deaths										12	12	100%
		Initiating family planning method of choice										48	48	100%
Timeliness of facility reporting	**Timeliness of facility reporting**	**% of facilities submitting monthly reports on time to the aggregation site**	*	*	*	1416	1416	100%	75	165	45%			

2. RHIS Performance: Use of Information Indicators

2A. Use of Information Indicators—Central Level

A. RHIS Performance: Use of Information Indicator- Central Level

Section 2A Tables: Use of Information Indicators—Central Level

Table 2A.1 Use of data to produce narrative analytical reports

Use of data to produce narrative analytical reports

Indicator: % of sites producing analytical reports

$$\frac{\text{Total \# of sites producing analytical reports}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Keep in mind that at the central level, the number of sites is 1.

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central office produces any report or bulletin based on analysis of RHIS data	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 2A.2 Use of information for performance review

Use of information for performance review

Indicator: Mean score on the use of routine data for RHIS quality improvement, performance review, and evidence-based decision making

$$\frac{\text{Sum of each site's score}}{\text{Total \# of sites assessed (1) x 5}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)				
	Indicator	**Numerator**	**Denominator**	**%**
Average score of use	Use of routine data for RHIS quality improvement, performance review, and evidence-based decision making	*	*	*
Individual scores of use	Discussion on RHIS management	*	*	*
	Decisions made on RHIS issues	*	*	*
	Follow-up of the decisions	*	*	*
	Discussion on key performance targets	*	*	*
	Decision made on health facility (HF) performance	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 2A.2a Indicator: Mean scores on discussions held to review key performance targets

Indicator: Mean scores on discussions held to review key performance targets

Were discussions held to review key performance targets (tracking progress against targets) based on RHIS data? Such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Coverage of services, like ANC, delivery, EPI, or TB	*	*	*
2. Hospital/health center performance indicators	*	*	*
3. Major neonatal morbidity diagnoses (e.g., top ten diseases: retinopathy, growth faltering, kernicterus, jaundice)	*	*	*
4. Identification of emerging issues/epidemics	*	*	*
5. Medicine stock outs	*	*	*
6. Human resource management	*	*	*
7. Sex-disaggregated data, e.g., total births	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 2A.2b Indicator: Mean scores for any decisions made based on health facility performance

Indicator: Mean scores for any decisions made based on health facility's performance

Decisions made based on the discussion of the district and/or health facility's performance			
Indicator	**Numerator**	**Denominator**	**%**
1. Formulation of plans	*	*	*
2. Budget preparation	*	*	*
3. Budget reallocation	*	*	*
4. Medicine supply and drug management	*	*	*
5. Human resource management (training, reallocation, etc.)	*	*	*
6. Advocacy for policy, programmatic, or strategic decisions from higher levels	*	*	*
7. Health services (preventive, promotive, clinical, rehabilitative) planning	*	*	*
8. Promotion of service quality/improvement	*	*	*
9. Reducing the gender gap in the provision of health services	*	*	*
10. Involvement of the community and local government	*	*	*
11. No action required at this time	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 2A.3 Types of issues covered in annual plans demonstrating RHIS data use

Type of issues covered in annual plans demonstrating RHIS data use

$$\frac{\text{Presence of specific issue area via activities or targets contained in annual plan}}{\text{Total \# of sites that have an annual plan for the current year (=1)}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)				
	Indicator	**Numerator**	**Denominator**	**%**
Annual plan contains activities and/or targets related to improving or addressing:	Service coverage	*	*	*
	Health facility performance	*	*	*
	Neonatal morbidity diagnoses	*	*	*
	Emerging issues/epidemics	*	*	*
	Medicine stock outs	*	*	*
	HR management	*	*	*
	Gender disparity	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 2A.4 Data dissemination outside the health sector

Data dissemination outside the health sector

Indicator: % of sites disseminating RHIS information to stakeholders outside of the health sector

$$\frac{\text{Total \# of sites with health indicator performance reports}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central level has to submit/present health indicator performance reports to a central council of public representatives/civil administration	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 2A.5 Proportion of sites using/sharing data from the health indicators performance report

Indicator: Proportion of sites using/sharing data from the health indicators performance report

$$\frac{\text{Total \# of sites with data shared or used}}{\text{Total \# of sites with health indicator performance reports}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports/presentations use data from the RHIS to report on the health sector's progress	*	*	*
Website is updated at least annually for accessing the central level's RHIS data by the general public	*	*	*
Central level performance data shared with the general public via bulletin board chalkboard, and/or local publication	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

2B. Use of Information Indicators—Regional Level

Section 2B. Tables: Use of information indicator—Regional Level

B. RHIS Performance: Use of Information Indicator- Regional Level

Table 2B.1. Use of data to produce narrative analytical reports—Region Level diagnostic

Use of data to produce narrative analytical reports
Indicator: % of sites producing analytical reports

$$\frac{\text{Total \# of sites producing analytical reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Regional office produces any report or bulletin based on analysis of RHIS data	1	1	100%

Table 2B.2. Use of information for performance review—Region Level diagnostic

Use of information for performance review

Indicators: Individuals and average scores on the use of routine data for RHIS quality improvement, performance review, and evidence-based decision making

$$\frac{\text{Sum of each site's score}}{\text{Total \# of sites assessed x 5}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)							
		Use of information among all regions			Use for information among regions with meeting minutes		
Indicator		Numerator	Denominator	%	Numerator	Denominator	%
Average score of use	Use of routine data for RHIS quality improvement, performance review, and evidence-based decision making	0	5	0%	0	0	0%
Individual scores of use	Discussion on RHIS management	0	1	0%	0	0	0%
	Decisions made on RHIS issues	0	1	0%	0	0	0%
	Follow-up of the decisions	0	1	0%	0	0	0%
	Discussion on key performance targets	0	1	0%	0	0	0%
	Decision made on HF performance	0	1	0%	0	0	0%

Table 2B.3 Indicator: Discussions held to review key performance targets

Indicator: Score individuals on discussions held to review key performance targets			
Were discussions held to review key performance targets (tracking progress against targets) based on RHIS data, such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Coverage of services, like ANC, delivery, EPI, or TB	0	1	0%
2. Hospital/health center performance indicators	0	1	0%
3. Major neonatal morbidity diagnoses (e.g., top ten diseases: retinopathy, growth faltering, kernicterus, jaundice)	0	1	0%
4. Identification of emerging issues/epidemics	0	1	0%
5. Medicine stock outs	0	1	0%
6. Human resource management	0	1	0%
7. Sex-disaggregated data, e.g., total births	0	1	0%

Table 2B.4 Indicator: Decisions made based on health facility's performance

Indicator: Scores individuals on any decisions made based on health facility's performance			
Decisions made based on the discussions of the health facility's performance, such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Formulation of plans	0	1	0%
2. Budget preparation	0	1	0%
3. Budget reallocation	0	1	0%
4. Medicine supply and drug management	0	1	0%
5. Human resource management (training, reallocation, etc.)	0	1	0%
6. Advocacy for policy, programmatic, or strategic decisions from higher levels	0	1	0%
7. Health services (preventive, promotive, clinical, rehabilitative) planning	0	1	0%
8. Promotion of service quality/improvement	0	1	0%
9. Reducing the gender gap in the provision of health services	0	1	0%
10. Involvement of the community and local government	0	1	0%
11. No action required at this time	0	1	0%

Table 2B.5 Types of issues covered in annual plans demonstrating RHIS data use—Region Level diagnostic

Type of issues covered in annual plans demonstrating RHIS data use

$$\frac{\text{Presence of specific issue area via activities or targets contained in current year annual plan}}{\text{Total \# of sites that have an annual plan for the current year}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)				
Indicator		**Numerator**	**Denominator**	**%**
Annual plan contains activities and/or targets related to improving or addressing:	Service coverage	1	1	100%
	Health facility performance	1	1	100%
	Neonatal morbidity diagnoses	0	1	0%
	Emerging issues/epidemics	0	1	0%
	Medicine stock outs	0	1	0%
	HR management	0	1	0%
	Gender disparity	1	1	100%

Table 2B.6 Data dissemination outside the health sector—Region Level diagnostic for RHIS performance

Data dissemination outside the health sector

Indicator: % of sites disseminating RHIS information to stakeholders outside of the health sector

$$\frac{\text{Total \# of sites with health indicator performance reports}}{\text{Total \# of sites assessed}} \text{ X } 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Region has to submit/present health indicator performance reports to a regional council of public representatives/civil administration	1	1	100%

Table 2B.7 Proportion of sites using/sharing data from the health indicators performance report

Indicator: Proportion of sites using/sharing data from the health indicators performance report

$$\frac{\text{Total \# of sites with data shared or used}}{\text{Total \# of sites with health indicator performance reports}} \text{ X } 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports/presentations use data from the RHIS to report on the health sector's progress	1	1	100%
Website is updated at least annually for accessing the region's RHIS data by the general public	1	1	100%
Region performance data are shared with the general public via bulletin board or chalkboard, and/or local publication	1	1	100%

2C. Use of Information Indicators—District Level

Section 2C. Tables: RHIS performance: use of information indicator—District Level

A. RHIS Performance: Use of Information Indicator- District Level

Table 2C.1. Use of data to produce narrative analytical reports—District Level RHIS Performance Diagnostic

Use of data to produce narrative analytical reports
Indicator: % of sites producing analytical reports

$$\frac{\text{Total \# of sites producing analytical reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District office produces any report or bulletin based on analysis of RHIS data	1	2	50%

Table 2C.2 Use of information for performance review—District Level

Use of information for performance review

Indicator: Average score on the use of routine data for RHIS quality improvement, performance review, and evidence-based decision making

$$\frac{\text{Sum of each site's score}}{\text{Total \# of sites assessed x 5}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)							
		Use of information among all districts			Use for information among districts with meeting minutes		
Indicator		**Numerator**	**Denominator**	%	**Numerator**	**Denominator**	%
Average score of use	Use of routine data for RHIS quality improvement, performance review, and evidence-based decision making	0	10	0%	0	0	0%
Individual scores of use	Discussion on RHIS management	0	2	0%	0	0	0%
	Decisions made on RHIS issues	0	2	0%	0	0	0%
	Follow-up of the decisions	0	2	0%	0	0	0%
	Discussion on key performance targets	0	2	0%	0	0	0%
	Decision made on health facility (HF) performance	0	2	0%	0	0	0%

Table 2C.3 Indicator for tracking progress against targets

Were discussions held to review key performance targets (tracking progress against targets) based on RHIS data, such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Coverage of services, like early initiation of breastfeeding, bag-mask ventilation, birthweight/low birthweight, etc.	0	2	0%
2. Hospital/health center performance indicators	0	2	0%
3. Major neonatal morbidity diagnoses (e.g., top ten diseases: retinopathy, growth faltering, kernicterus, jaundice)	0	2	0%
4. Identification of emerging issues/epidemics	0	2	0%
5. Medicine stock outs	0	2	0%
6. Human resource management	0	2	0%
7. Sex-disaggregated data, e.g., total births	0	2	0%

Table 2C.4. Indicator for discussions of health facility performance

Decisions made based on the discussions of the health facility's performance, such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Formulation of plans	0	2	0%
2. Budget preparation	0	2	0%
3. Budget reallocation	0	2	0%
4. Medicine supply and drug management	0	2	0%
5. Human resource management (training, reallocation, etc.)	0	2	0%
6. Advocacy for policy, programmatic, or strategic decisions from higher levels	0	2	0%
7. Health services (preventive, promotive, clinical, rehabilitative) planning	0	2	0%
8. Promotion of service quality/improvement	0	2	0%
9. Reducing the gender gap in the provision of health services	0	2	0%
10. Involvement of the community and local government	0	2	0%
11. No action required at this time	0	2	0%

Table 2C.5 Types of issues covered in the annual plans demonstrating RHIS data use

Indicator: Type of issues covered in the annual plans demonstrating RHIS data use

$$\frac{\text{Presence of specific issue area via activities or targets contained in current year annual plan}}{\text{Total \# of sites that have an annual plan for the current year}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)				
Indicator		**Numerator**	**Denominator**	**%**
Annual plan contains activities and/or targets related to improving or addressing:	Service coverage	2	2	0%
	Health facility performance	2	2	0%
	Diseases	2	2	0%
	Emerging issues/epidemics	2	2	0%
	Medicine stock outs	2	2	0%
	HR management	2	2	0%
	Gender disparity	2	2	0%

Table 2C.6. Data dissemination outside the health sector—District Level diagnostic for RHIS performance

Data dissemination outside the health sector

Indicator: % of sites disseminating RHIS information to stakeholders outside of the health sector

$$\frac{\text{Total \# of sites with health indicator performance reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District has to submit/present health indicator performance reports to a district council of public representatives/civil administration	2	2	0%

Table 2C.7. Proportion of sites using/sharing data from the health indicators performance reports—District Level

Indicator: Proportion of sites using/sharing data from the health indicators performance report

$$\frac{\text{Total \# of sites with data shared or used}}{\text{Total \# of sites with health indicator performance reports}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports/presentations use data from the RHIS to report on the health sector's progress	2	2	100%
Website is updated at least annually for accessing the district's RHIS data by the general public	1	2	50%
District performance data shared with the general public via bulletin board or chalkboard and/or local publication	2	2	100%

2D. Use of Information Indicators—Facility Level

Section 2D Tables: RHIS performance: Use of information indicator—Facility Level

B. RHIS Performance: Use of Information Indicator- Facility Level

Table 2D.1 Use of data to produce narrative analytical reports—RHIS performance—Facility Level

Use of data to produce narrative analytical reports
Indicator: % of sites producing analytical reports

$$\frac{\text{Total \# of sites producing analytical reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Health facility produces any report or bulletin based on the analysis of RHIS data	11	16	69%

Table 2D.2 Use of information for performance review—Facility Level

Use of information for performance review
Indicators: Average score on the use of routine data for RHIS quality improvement, performance review, and evidence-based decision making

$$\frac{\text{Sum of each site's score}}{\text{Total \# of sites assessed x 5}} \times 100$$

We consider the sum of FU016e = 1 to be the number of respondents who answered "yes" to any—but at least 1—of the 7 sub-questions under FU016e. The same weight is attributed to a respondent who answered "yes" to 1 or 7 of the sub-questions.

We consider the sum of FU017 = 1 to be the number of respondents who answered "yes" to any—but at least 1—of the 9 sub-questions under FU017. The same weight is attributed to a respondent who answered "yes" to 1 or 9 of the sub-questions.

Data Source—Module IIa: RHIS Performance Diagnostic Tool, use of information for all facilities							
		Use of information for all facilities			Use of information for facilities having meeting minutes		
Indicator		Numerator	Denominator	%	Numerator	Denominator	%
Average score of use	Use of routine data for RHIS quality improvement, performance review, and evidence-based decision making	20	80	**25%**	20	35	57%
Individual scores of use	Discussion of RHIS management	3	16	19%	3	7	43%
	Decisions made on RHIS issues	3	16	19%	3	7	43%
	Follow-up on the decisions	3	16	19%	3	7	43%
	Discussion of key performance targets	6	16	38%	6	7	86%
	Decision made on health facility (HF) performance	5	16	31%	5	7	71%

Table 2D.3 Indicator: Tracking progress against targets

Were discussions held to review key performance targets (tracking progress against targets) based on RHIS data, such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Coverage of services, like early initiation of breastfeeding, bag-mask ventilation, birthweight/low birthweight, etc.	4	16	25%
2. Hospital/health center performance indicators	2	16	13%
3. Major neonatal morbidity diagnoses (e.g., top ten diseases: retinopathy, growth faltering, kernicterus, jaundice)	4	16	25%
4. Identification of emerging issues/epidemics	1	16	6%
5. Medicine stock outs	3	16	19%
6. Human resource management	3	16	19%
7. Sex-disaggregated data, e.g., total births	1	16	6%

Table 2D.4 Indicator: Decisions made based on discussions of health facility performance

Were any decisions made based on the discussions of the health facility's performance, such as:			
Indicator	**Numerator**	**Denominator**	**%**
1. Formulation of plans	5	16	31%
2. Budget preparation	2	16	13%
3. Budget reallocation	1	16	6%
4. Medicine supply and drug management	1	16	6%
5. Human resource management (training, reallocation, etc.)	3	16	19%
6. Advocacy for policy, programmatic, or strategic decisions from higher levels	1	16	6%
7. Promotion of service quality/improvement	3	16	19%
8. Reducing the gender gap in the provision of health services	1	16	6%
9. No action required at this time	1	16	6%

Table 2D.5 Issues covered in annual plans demonstrating RHIS data use—Facility Level

Type of issues covered in the annual plans demonstrating RHIS data use

$$\frac{\text{Presence of specific issue area via activities or targets contained in current year annual plan}}{\text{Total \# of sites that have an annual plan for the current year}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)				
Indicator		**Numerator**	**Denominator**	**%**
Annual plan contains activities and/or targets related to improving or addressing:	Service coverage	13	15	87%
	Health facility performance	12	15	70%
	Diseases	11	15	73%
	Emerging issues/epidemics	11	15	73%
	Medicine stock outs	15	15	100%
	HR management	14	15	93%
	Gender disparity	8	15	53%

Table 2D.6 Data dissemination outside the health sector—Facility Level

Data dissemination outside the health sector

Indicators: % of sites disseminating RHIS information to stakeholders outside the health sector

$$\frac{\text{Total \# of sites with health indicator performance reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Health facility has to submit/present performance reports to a council/district administration	10	16	63%

Table 2D.7 Proportion of sites using/sharing data from the health indicators performance report—Facility Level

Indicator: Proportion of sites using/sharing data from the health indicators performance report
$\frac{\text{Total \# of sites with data shared or used}}{\text{Total \# of sites with health indicator performance reports}} \times 100$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports/presentations use data from the RHIS to report on the health sector's progress	8	10	80%
Website is updated at least annually for accessing the health facility's RHIS data by the general public	2	10	20%
Health facility performance data are shared with the general public via bulletin boards chalkboard, and/or local publications	7	10	70%

2E. Summary Tables for Use of Information Indicators

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Use of data to produce narrative analytical reports	**Produces any report or bulletin based on analysis of RHIS data**	% of sites producing analytical reports	*	*	*	1	1	100%	1	2	50%	11	16	69%
		Discussion on RHIS management	*	*	*	0	1	0%	0	0	0%	3	7	43%
		Decisions made on RHIS issues	*	*	*	0	1	0%	0	0	0%	3	7	43%
		Follow-up of the decisions	*	*	*	0	1	0%	0	0	0%	3	7	19%
		Discussion on key performance targets	*	*	*	0	1	0%	0	0	0%	6	7	19%
		Decision made on health facility (HF) performance	*	*	*	0	1	0%	0	0	0%	5	7	86%
Use of information for performance review	**Use of routine data for RHIS quality improvement, performance review, and evidence-based decision making**	**Average score of use**	*	*	*	0	5	0%	0	0	0%	20	35	57%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
	Mean scores on discussions held to review key performance targets based on RHIS data?	1. Coverage of services, like early initiation of breastfeeding, bag-mask ventilation, birthweight/low birthweight, etc.	*	*	*	0	1	0%	0	2	0%	4	16	25%
		2. Hospital/health center performance indicators	*	*	*	0	1	0%	0	2	0%	2	16	13%
		3. Major neonatal morbidity diagnoses (e.g., top ten diseases: retinopathy, growth faltering, kernicterus, jaundice)	*	*	*	0	1	0%	0	2	0%	4	16	25%
		4. Identification of emerging issues/epidemics	*	*	*	0	1	0%	0	2	0%	1	16	6%
		5. Medicine stock outs	*	*	*	0	1	0%	0	2	0%	3	16	19%
		6. Human resource management	*	*	*	0	1	0%	0	2	0%	3	16	19%
		7. Sex-disaggregated data, e.g., total births	*	*	*	0	1	0%	0	2	0%	1	16	6%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
	Mean scores for any decisions made based on the discussion of performance	1. Formulation of plans	*	*	*	0	1	0%	0	2	0%	5	16	31%
		2. Budget preparation	*	*	*	0	1	0%	0	2	0%	2	16	13%
		3. Budget reallocation	*	*	*	0	1	0%	0	2	0%	1	16	6%
		4. Medicine supply and drug management	*	*	*	0	1	0%	0	2	0%	1	16	6%
		5. Human resource management (training, reallocation, etc.)	*	*	*	0	1	0%	0	2	0%	3	16	19%
		6. Advocacy for policy, programmatic, or strategic decisions from higher levels	*	*	*	0	1	0%	0	2	0%	1	16	6%
		7. Health services (preventive, promotive, clinical, rehabilitative) planning	*	*	*	0	1	0%	0	2	0%			
		8. Promotion of service quality/ improvement	*	*	*	0	1	0%	0	2	0%	1	16	6%
		9. Reducing the gender gap in the provision of health services	*	*	*	0	1	0%	0	2	0%	1	16	6%
		10. Involvement of the community and local government	*	*	*	0	1	0%	0	2	0%			
		11. No action required at this time	*	*	*	0	1	0%	0	2	0%	0	16	0%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Type of issues covered in annual plans demonstrating RHIS data use	**Annual plan contains activities and/or targets related to improving or addressing:**	Service coverage	*	*	*	1	1	100%	2	2	100%	13	15	87%
		Health facility performance	*	*	*	1	1	100%	2	2	100%	12	15	80%
		Neonatal morbidity diagnoses	*	*	*	0	1	0%	2	2	100%	11	15	73%
		Emerging issues/epidemics	*	*	*	0	1	0%	2	2	100%	11	15	73%
		Medicine stock outs	*	*	*	0	1	0%	2	3	100%	15	15	100 %
		HR management	*	*	*	0	1	0%	2	3	100%	14	15	93%
		Gender disparity	*	*	*	1	1	100%	2	3	100%	8	15	53%
Data disseminati on outside the health sector	**Need to submit/present health indicator performance reports to a central council of public representatives/ civil administration**		*	*	*	*	1	100%	2	2	100%	8	15	63%
	Proportion of sites using/sharing data from the health indicators performance report	Reports/presentations use data from the RHIS to report on the health sector's progress	*	*	*	1	1	100%	2	2	100%	8	10	80%
		Website is updated at least annually for accessing the central level's RHIS data by the general public	*	*	*	1	1	100%	1	2	50%	2	10	20%
		Central level performance data shared with the general public via bulletin board chalkboard, and/or local publication	*	*	*	1	1	100%	2	2	100%	7	10	70%

3. RHIS Performance: Data Management Indicators

3A. Data Management Indicators—Central Level

Section 3A Tables: Data management indicators—Central Level

A. RHIS Performance: Data Management Indicators- Central Level

Table 3A.1. Data quality assurance in place at Central Level

Data quality assurance in place

Indicator: Mean score for data quality control standards in place

$$\frac{\text{Sum of data quality control scores}}{8} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Site data quality score	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 3A.2 Individual scores for indicators related to data quality control standards—Central Level

Indicator: Individual scores for indicators related to data quality control standards in place
$\frac{\text{Total score for each item of DQ control standards in place}}{1}$ X 100

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central has a designated person to review the quality of compiled data prior to submission to the next level	*	*	*
Central has written guidelines for data review and quality control	*	*	*
Designated staff are trained on data review and quality control	*	*	*
Central has written guidelines on routine health data quality assessment/assurance	*	*	*
Central conducts data quality assessments at health facilities	*	*	*
Central uses data quality assessment tools (e.g., lot quality assurance sampling [LQAS], routine data quality assessment [RDQA], in-built electronic data quality validation rules/system)	*	*	*
Central maintains a record of health facility data quality assessments conducted in the past 12 months	*	*	*
Central maintains a record of feedback to health facilities on data quality assessment findings	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 3A.3 Evidence of data analysis taking place at the Central Level

Evidence of data analysis taking place

Indicator: Mean score and individual scores for data analysis practice

$$\frac{\text{Sum of the site's score for carrying out data analysis}}{\text{Total \# of sites assessed x 8}} \text{ X } 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
AVERAGE SCORE FOR DATA ANALYSIS PRACTICE	*	*	*
DATA AGGREGATION	*	*	*
DEMOGRAPHIC DATA FOR CATCHMENT AREA (CE)	*	*	*
CALCULATE COVERAGE INDICATORS FOR EACH CATCHMENT AREA	*	*	*
COMPARISON BY REGIONS	*	*	*
COMPARISON WITH REGIONS AND CENTRAL TARGETS	*	*	*
COMPARISON OF DATA OVER TIME	*	*	*
COMPARISON OF SEX DISAGGREGATION	*	*	*
COMPARISON OF SERVICE COVERAGE	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 3A.4 Data visualization at the Central Level

Data visualization

Indicator: Existence of use of raw RHIS data to produce data visuals

$$\frac{\text{Score of the existence of proof of using raw RHIS data to produce data visuals}}{\text{Total \# of sites assessed (=1)}} \text{ X } 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central office prepares data visuals showing achievements toward targets	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 3A.5 Feedback mechanisms in place—Central Level

Feedback mechanism in place

Indicators: Proof of existence of written feedback to the lower level based on reported RHIS data

$$\frac{\text{Existence of proof of written feedback to lower level based on reported RHIS data}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central level sent feedback reports using RHIS information to health facilities in the past 3 months	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

3B. Data Management Indicators—Regional Level

Section 3B. Tables: Data Management Indicators—Regional Level

B. RHIS Performance: Data Management Indicators- Regional Level

Table 3B.1 Data quality assurance in place—Regional Level

Data quality assurance in place

Indicator: Average score for data quality control standards in place

$$\frac{\text{Sum of the site's data quality control score}}{\text{Total \# of sites assessed x 8}} \text{ X } 100$$

Data Source—Module Iia: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Site data quality score	8	8	*

Table 3B.2 Individual scores for indicators related to data quality control standards—Regional Level

Indicator: Individual scores for indicators related to data quality control standards in place

$$\frac{\text{Total \# of regions assessed with data quality control standards in place}}{\text{Total \# of regions assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Region has a designated person to review the quality of compiled data prior to submission to the next level	1	6	17%
Region has written guidelines for data review and quality control	1	1	100%
Designated staff are trained on data review and quality control	1	1	100%
Region has written guidelines on routine health data quality assessment/assurance	1	1	100%
Region conducts data quality assessments at health facilities	1	1	100%
Region uses data quality assessment tools (e.g., lot quality assurance sampling [LQAS], routine data quality assessment [RDQA], in-built electronic data quality validation rules/system)	1	1	100%
Region maintains a record of health facility data quality assessments conducted in the past 12 months	1	1	100%
Region maintains a record of feedback to health facilities on data quality assessment findings	1	1	100%

Table 3B.3 Evidence of data analysis—Regional Level

Evidence of data analysis taking place

Indicator: Average score for level of data analysis practice

$$\frac{\text{Sum of the site's score for carrying out data analysis}}{\text{Total \# of sites assessed x 8}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
AVERAGE SCORE FOR DATA ANALYSIS PRACTICE	8	8	100%
DATA AGGREGATION	1	1	100%
DEMOGRAPHIC DATA FOR CATCHMENT AREA (CE)	1	1	100%
CALCULATE COVERAGE INDICATORS FOR EACH CATCHMENT AREA	1	1	100%
COMPARISON BY DISTRICT	1	1	100%
COMPARISON WITH REGIONS AND REGIONAL TARGETS	1	1	100%
COMPARISON OF DATA OVER TIME	1	1	100%
COMPARISON OF SEX DISAGGREGATION	1	1	100%
COMPARISON OF SERVICE COVERAGE	1	1	100%

Table 3B.4 Data visualization—Regional Level

Data visualization

Indicator: % of sites assessed that are using raw RHIS data to produce data visuals

$$\frac{\text{Total \# of sites assessed that are using raw RHIS data to produce data visuals}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Region office prepares data visuals showing achievements toward targets	1	1	100%

Table 3B.5 Feedback mechanisms in place—Regional Level

Feedback mechanism in place

Indicator: % of regions assessed providing written feedback to the lower level based on reported RHIS data

$$\frac{\text{Total \# of regions providing written feedback to lower level based on reported RHIS data}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Region sent feedback reports using RHIS information to health facilities in the last 3 months	1	1	100%

3C. Data Management Indicators—District Level

Section 3C. Tables: Data Management Indicators—District Level

C. RHIS Performance: Data Management Indicators- District Level

Table 3C.1 Data quality assurance in place—average score for data quality control

Data quality assurance in place

Indicator: Average score for data quality control standards in place

$$\frac{\text{Sum of the site's data quality control score}}{\text{Total \# of sites assessed x 8}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
Site data quality score	15	16	94%

Table 3C.2 Data quality assurance in place—individual scores for indicators

Indicator: Individual scores for indicators related to data quality control standards in place

$$\frac{\text{Total \# of districts assessed with data quality control standards in place}}{\text{Total \# of districts assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District has a designated person to review the quality of compiled data prior to submission to the next level	2	2	100%
District has written guidelines for data review and quality control	2	2	100%
Designated staff are trained on data review and quality control	1	2	50%
District has written guidelines on routine health data quality assessment/assurance	2	2	100%
District conducts data quality assessments at health facilities	2	2	100%
District uses data quality assessment tools (e.g., lot quality assurance sampling [LQAS], routine data quality assessment [RDQA], in-built electronic data quality validation rules/system)?	2	2	100%
District maintains a record of health facility data quality assessments conducted in the past 12 months	2	2	100%
District maintains a record of feedback to health facilities on data quality assessment findings	2	2	100%

Table 3C.3 Evidence of data analysis taking place

Evidence of data analysis taking place

Indicator: Average score for level of data analysis practice

$$\frac{\text{Sum of the site's score for carrying out data analysis}}{\text{Total \# of sites assessed x 8}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
Average score for data analysis practice	16	16	100%
Data aggregation	2	2	100%
Demographic data for catchment areas	2	2	100%
Calculate coverage indicators for each catchment area	2	2	100%
Comparison by regions or districts	2	2	100%
Comparison with regions and district targets	2	2	100%
Comparison of data over time	2	2	100%
Comparison of sex disaggregation	2	2	100%
Comparison of service coverage	2	2	100%

Table 3C.4 Data visualization

Data visualization

Indicator: % of sites that are using raw RHIS data to produce data visuals

$$\frac{\text{Total \# of sites that are using raw RHIS data to produce data visuals}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District office prepares data visuals showing achievements toward targets	2	2	100%

Table 3C.5 Feedback mechanism in place

Feedback mechanism in place

Indicator: % of districts providing written feedback to the lower level based on reported RHIS data

$$\frac{\text{Total \# of districts providing written feedback to lower level based on reported RHIS data}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District sent feedback reports using RHIS information to health facilities in the last 3 months	1	2	50%

3D. Data Management Indicators—Facility Level

Section 3D. Tables: Data Management Indicators—Facility Level

D. RHIS Performance: Data Management Indicators- Facility Level

Table 3D.1 Data quality assurance in place—average score for data quality

Data quality assurance in place

Indicator: Average score for data quality control standards in place

$$\frac{\text{Sum of the site's data quality control score}}{\text{Total \# of sites assessed x 7}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Site data quality score	68	112	61%

Table 3D.2 Data quality assurance in place—individual scores

Indicator: Individual scores for indicators related to data quality control standards in place

$$\frac{\text{Total \# of facilities with data quality control standards in place}}{\text{Total \# of facilities assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Facility has designated person to review the quality of compiled data prior to submission to the next level	13	16	81%
Staff trained in data quality review or data quality check	8	16	50%
Facility has written instructions/guidelines on how to perform a data quality review or data quality check	9	16	56%
Facility conducts regular data accuracy checks (data quality self-assessment)	12	16	75%
Facility has access to data quality self-assessment tools (paper or electronic)	10	16	63%
Facility maintains a record of health facility data accuracy self-assessments conducted in the past three months	8	16	50%
Facility maintains records of feedback to staff on data quality self-assessment findings	8	16	50%

Table 3D.3 Evidence of data analysis taking place at site

Evidence of data analysis taking place

Indicator: Average score for level of data analysis practice

$$\frac{\text{Sum of the site's score for carrying out data analysis}}{\text{Total \# of sites assessed x 7}} \text{ X } 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Site data analysis score	69	112	62%
Data aggregation	11	16	75%
Demographic data for catchment areas	12	16	69%
Calculate coverage indicators for each catchment area	11	16	69%
Comparison with regions and district targets	7	16	44%
Comparison of data over time	11	16	69%
Sex disaggregation	10	16	63%
Service coverage	7	16	44%

Table 3D.4 Data visualization

Data visualization

Indicator: % of sites that are using raw RHIS data to produce data visuals

$$\frac{\text{Total \# of sites that are using raw RHIS data to produce data visuals}}{\text{Total \# of sites assessed}} \text{ X } 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Health facility prepares data visuals showing achievements toward targets	10	16	63%

Table 3D.5 Feedback mechanism in place

Feedback mechanism in place

Indicator: % of facilities confirming receiving feedback on the reported RHIS data from the district or higher level

$$\frac{\text{Total \# of facilities confirmed receiving feedback on reported RHIS data from district or higher level}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Health facility received feedback reports from the district office/Ministry of Health (MOH) based on RHIS information in the last 3 months	7	16	44%

3E. Summary of Data Management Indicators

		Central			Regional			District			Facility		
Domain	**Indicator**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Data quality assurance in place	Designated person to review the quality of compiled data prior to submission to the next level	*	*	*	1	6	17%	2	2	100%	13	16	81%
	Written guidelines for data review and quality control	*	*	*	1	1	100%	2	2	100%	8	16	50%
	Designated staff are trained on data review and quality control	*	*	*	1	1	100%	1	2	50%	9	16	56%
	Written guidelines on routine health data quality assessment/assurance	*	*	*	1	1	100%	2	2	100%	12	16	75%
	Conducts data quality assessments at health facilities	*	*	*	1	1	100%	2	2	100%	10	16	63%
	Uses data quality assessment tools (e.g., lot quality assurance sampling [LQAS], routine data quality assessment [RDQA], in-built electronic data quality validation rules/system)	*	*	*	1	1	100%	2	2	100%	8	16	50%
	Maintains a record of health facility data quality assessments conducted in the past 12 months	*	*	*	1	1	100%	2	2	100%	8	16	50%
	Maintains a record of feedback to health facilities on data quality assessment findings	*	*	*	1	1	100%	2	2	100%	0	0	0%
	Mean score for data quality control standards in place	*	*	*	8	8	100%	15	16	**94%**	68	112	**61%**

		Central			Regional			District			Facility		
Domain	**Indicator**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Evidence of data analysis taking place	Data aggregation	*	*	*	1	1	100%	2	2	100%	12	16	75%
	Demographic data for catchment area (ce)	*	*	*	1	1	100%	2	2	100%	11	16	69%
	Calculate coverage indicators for each catchment area	*	*	*	1	1	100%	2	2	100%	11	16	69%
	Comparison by regions	*	*	*	1	1	100%	2	2	100%			
	Comparison with regions and central targets	*	*	*	1	1	100%	2	2	100%	7	16	44%
	Comparison of data over time	*	*	*	1	1	100%	2	2	100%	11	16	69%
	Comparison of sex disaggregation	*	*	*	1	1	100%	2	2	100%	10	16	63%
	Comparison of service coverage	*	*	*	1	1	100%	2	2	100%	7	16	44%
	Average score for level of data analysis practice	*	*	*	8	8	100%	16	16	**100%**	69	112	**62%**
	Indicator	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Data Visualization	Prepares data visuals showing achievements toward targets	*	*	*	1	1	100%	2	2	100%	10	16	63%
	Indicator	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Feedback mechanism in place	Sent feedback reports using RHIS information to health facilities in the past 3 months	*	*	*	1	1	100%	1	2	50%	7	16	44%

4. RHIS Performance Determinants: Technical Factors

4A. Technical Factors—Central Level

Section 4A. Tables: Technical Factors—Central Level

A. RHIS Performance Determinants: Technical Factors—Central Level

Table 4A.1 Existing information system overlaps and distinction

Existing information system overlaps and distinction **Indicator: Linkage or overlap of existing RHIS**	
Data Source—Module I: Overview Tool	
Indicators	**Facility**
Number of different names of reports generated by community/health facility/district	*
Paper, electronic, or both	*
Type of electronic tool (e.g., Excel, Access, DHIS2)	*
Number of different recipients of reports generated by community/health facility/district	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.2 Standardization of RHIS tools—number and type parallel reports

Standardization of RHIS tools **Indicator: Number and type of parallel reports that are produced at each level of the health system**		
Data Source—Module I: Overview Tool		
Indicators		**Facility**
Number of different names of reports generated by community/health facility/district		*
Type of data reported	Maternal health services—Labour and delivery	*
	Maternal health services—Operation theatre	*
	Maternal health services—Postnatal ward	*
	Child health services—Postnatal ward	*
	Child health services—Kangaroo mother care ward/corner	*
	Child health services—Neonatal inpatient care ward	*
	Child health services—Special care newborn ward	*
	Child health services—Intensive care newborn ward	*
	Other (specify)	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.3 Standardization of RHIS tools—number and type of report recipient

Indicator: Number and type of report recipient		
Data Source—Module I: Overview Tool		
Indicators		**Facility**
Organization that introduced the report generated by community/health facility/district	MOH (standardized national HIS tool)	*
	MOH (program—specific name)	*
	UN agency (name)	*
	Regional/state government	*
	Other partner/donor (name)	*
	Locally customized/developed	*
	Other (specify)	*
Organization that introduced the paper-based data recording tools	MOH (standardized national HIS tool)	*
	MOH (program—specific name)	*
	UN agency (name)	*
	Regional/state government	*
	Other partner/donor (name)	*
	Locally customized/developed	*
	Other (specify)	*
Organization that introduced the electronic data recording tools	MOH (standardized national HIS tool)	*
	MOH (program—specific name)	*
	UN agency (name)	*
	Regional/state government	*
	Other partner/donor (name)	*
	Locally customized/developed	*
	Other (specify)	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

RHIS SOFTWARE FUNCTIONALITY (ONLY FOR CENTRAL LEVEL)

Table 4A.4 Electronic routine health information systems (eRHIS) reporting capability

eRHIS reporting capability **Indicator: eRHIS allows for the tracking of reporting completeness and timeliness**		
Data Source—Module III: eRHIS Assessment Tool		
Indicators	**Value (0 or 1)**	**Outcome**
RHIS software allows users to determine the number and percentage of monthly reports received of a total number of expected reports	*	*
System allows users to analyze the trend in reporting completeness for a year by facility	*	*
System allows users to determine the number and percentage of reports which were received on time	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.5 eRHIS generating a summary report by administrative levels

Indicator: eRHIS generating a summary report by administrative levels				
Data Source—Module III: eRHIS Assessment Tool				
Indicators			**Value (0 or 1)**	**Outcome**
RHIS software generates summary reports	**Monthly**	National	*	*
		Regional	*	*
		District	*	*
		Health facility	*	*
		Community-level SPD	*	*
	Quarterly	National	*	*
		Regional	*	*
		District	*	*
		Health Facility	*	*
		Community-level SDP	*	*
	Annual	National	*	*
		Regional	*	*
		District	*	*
		Health Facility	*	*
		Community-level SDP	*	*
	Customized reporting period	National	*	*
		Regional	*	*
		District	*	*
		Health Facility	*	*
		Community-level SDP	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.6 Population estimates and coverage

Population estimates and coverage **Indicator: eRHIS enables the calculation of service coverage by administrative levels**			
Data Source—Module III: eRHIS Assessment Tool			
Indicator		**Value (0 or 1)**	**Outcome**
Level at which RHIS software has population estimates to calculate denominators	Region	*	*
	District	*	*
	Facility	*	*
	Community-level SDP	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.7 System capturing age and sex disaggregated data

System capturing age and sex disaggregated data **Indicator: eRHIS capturing data disaggregated by age group**		
Data Source—Module III: eRHIS Assessment Tool		
Indicator	**Value (0 or 1)**	**Outcome**
RHIS software captures data disaggregated by age	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.8 eRHIS capturing data disaggregated by sex

Indicator: eRHIS capturing data disaggregated by sex		
Data Source—Module III: eRHIS Assessment Tool		
Indicator	**Value (0 or 1)**	**Outcome**
RHIS software captures data disaggregated by sex	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.9 Data integration and interoperability—eRHIS with other systems

Data integration and interoperability **Indicator: Interoperability of eRHIS with other disease or program-specific parallel systems**		
Data Source—Module III: eRHIS Assessment Tool		
Indicator	**Value (0 or 1)**	**Outcome**
RHIS software interoperates with parallel disease or program-specific software applications in use	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.10 Data integration and interoperability—eRHIS with other systems—details

Indicator: Integration or interoperability of eRHIS with other program specified/parallel electronic information systems		
Data Source—Module III: eRHIS Assessment Tool		
Indicators	**Value (0 or 1)**	**Outcome**
RHIS software has human resources information or integrates with a human resource information system	*	*
RHIS software has or integrates with logistics information	*	*
RHIS software has financial information	*	*
RHIS software has or integrates with integrated disease surveillance and response (IDSR)	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.11 Unique identifiers and master facility list

Unique identifiers and master facility list **Indicator: Availability of unique facility and district identifiers**		
Data Source—Module III: eRHIS Assessment Tool		
Indicator	**Value (0 or 1)**	**Outcome**
RHIS software uses unique identifiers for districts and regions	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.12 Unique identifiers and master facility list—eRHIS using geographical coordinates

Indicator: eRHIS using master facility list with geographical coordinates			
Data Source—Module III: eRHIS Assessment Tool			
Indicator		**Value (0 or 1)**	**Outcome**
Health facilities have geographic coordinates attached to them	None	*	*
	1–25%	*	*
	26–50%	*	*
	51–75%	*	*
	76–100%	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.13 Unique identifiers and master facility list—use by other programs

Indicator: Use of unique facility and district identifiers by other programs		
Data Source—Module III: eRHIS Assessment Tool		
Indicator	**Value (0 or 1)**	**Outcome**
A framework or agreement is in place such that those unique identifier lists are available for general use y other programs	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.14 Data analysis—eRHIS generate top causes of morbidity and mortality by administrative levels

Data analysis **Indicator: Capability of eRHIS to generate top causes of morbidity and mortality by administrative levels**		
Data Source—Module III: eRHIS Assessment Tool		
Indicators	**Value (0 or 1)**	**Outcome**
RHIS software generates the major causes of institution-based (inpatient, emergency) neonatal mortality (preterm, birth asphyxia, sepsis)	*	*
RHIS software generates the major morbidity diagnoses for inpatient and outpatient services (e.g., top ten diseases: retinopathy, growth faltering, kernicterus, jaundice)	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.15 Data visualization—eRHIS presents data in graphs, charts, and tables

Data visualization **Indicator: eRHIS software allows user to present data in graphs, charts, and tables**			
Data Source—Module III: eRHIS Assessment Tool			
Indicators		**Value (0 or 1)**	**Outcome**
RHIS software generates tabular data arranged in listing format	Indicator 1	*	*
	Indicator 2	*	*
	Indicator 3	*	*
RHIS software allows users to present data in time trend graphs	Indicator 1	*	*
	Indicator 2	*	*
	Indicator 3	*	*
RHIS software allows users to visualize data using graphs for comparing facilities/districts/regions	Indicator 1	*	*
	Indicator 2	*	*
	Indicator 3	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.16 Data visualization—eRHIS presents data using thematic maps

Indicator: eRHIS software allows user to visualize data using thematic maps			
Data Source—Module III: eRHIS Assessment Tool			
Indicator		**Central**	**Outcome**
RHIS software allows users to visualize data using thematic maps	Region	*	*
	District	*	*
	Facility	*	*
	Community-level SDP	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Central Level RHIS—Software Usability Tables

RHIS SOFTWARE USABILITY

Table 4A.17 RHIS reporting capability—track completeness using eRHIS

RHIS reporting capability
Indicator: % of staff able to track report completeness using eRHIS

$$\frac{\text{Total \# of staff able to track report completeness using RHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software produces a report on the number and percentage of reports received of the total number of expected reports	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.18 RHIS reporting capability—generate summary reports using eRHIS

Indicator: % of staff demonstrating capacity to generate summary reports using eRHIS Total # of staff demonstrating capacity to generate summary reports using eRHIS / Total # of sites assessed X 100					
Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software generates summary reports for aggregate levels and time periods	National/regional summary	Monthly	*	*	*
		Quarterly	*	*	*
		Annually	*	*	*
	District summary	Monthly	*	*	*
		Quarterly	*	*	*
		Annually	*	*	*
	Health facility summary	Monthly	*	*	*
		Quarterly	*	*	*
		Annually	*	*	*
	Community-level SDP summary	Monthly	*	*	*
		Quarterly	*	*	*
		Annually	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.19 Ability to calculate coverage indicators with eRHIS

Ability to calculate coverage indicators

Indicator: % of staff able to calculate coverage indicators using eRHIS

$$\frac{\text{Total \# of staff able to calculate coverage indicators using eRHIS}}{\text{Total \# of respondents in sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can calculate coverage for	Indicator 1	National	*	*	*
		Region	*	*	*
		District	*	*	*
		Health facility	*	*	*
		Community-level SDP	*	*	*
	Indicator 2	National	*	*	*
		Region	*	*	*
		District	*	*	*
		Health facility	*	*	*
		Community-level SDP	*	*	*
	Indicator 3	National	*	*	*
		Region	*	*	*
		District	*	*	*
		Health facility	*	*	*
		Community-level SDP	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.20 Data analysis features eRHIS used

Data analysis

Indicator: % of staff demonstrating the use of data analysis features of the eRHIS

$$\frac{\text{Total \# of staff demonstrating the use of data analysis features of the eRHIS}}{\text{Total \# of respondents in sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool			
Indicators	**Numerator**	**Denominator**	**%**
User can generate major causes of institution-based (in-patient, emergency) mortality (e.g., preterm birth, birth asphyxia, sepsis)	*	*	*
User can generate major morbidity diagnoses for inpatient and outpatient services (e.g., top ten diseases)? (e.g., retinopathy, growth faltering, kernicterus, jaundice)	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 4A.21 Data visualization—eRHIS present data in graphs and maps

Data visualization
Indicator: % of staff able to use the data visualization features of the eRHIS to analyze and present data in graphs and maps

$$\frac{\text{Total \# of staff able to use data visualization features to analyze and present data}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can generate	Indicator 1	Time trend graphs	*	*	*
		Bar graphs for comparing facilities, districts, or regions	*	*	*
		Thematic maps, by region, district, or health facility	*	*	*
	Indicator 2	Time trend graphs	*	*	*
		Bar graphs for comparing facilities, districts, or regions	*	*	*
		Thematic maps, by region, district, or health facility	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

4B. Technical Factors—Regional Level

Section 4B. Tables: Technical Factors—Regional Level

B. RHIS Performance Determinants: Technical Factors- Regional Level

Table 4B.1 Existing information system overlaps and distinction

RHIS Performance Determinants: Technical Factors ***Existing information system overlaps and distinction*** **Indicator: Linkage or overlap of existing RHIS**	
Data Source—Module I: Overview Tool	
Indicators	**Facility**
Number of different names of reports generated by community/health facility/district	0
Paper, electronic, or both	0
Type of electronic tool (e.g., Excel, Access, DHIS2)	0
Number of different recipients of reports generated by community/health facility/district	0

Table 4B.2 Standardization of RHIS tools—number and type parallel reports

Standardization of RHIS tools **Indicator: Number and type of parallel reports that are produced at each level of the health system**		
Data Source—Module I: Overview Tool		
Indicators		**Facility**
Number of different names of reports generated by community/health facility/district		0
Type of data reported	Maternal health services—Labour and delivery	0
	Maternal health services—Operation theatre	0
	Maternal health services—Postnatal ward	0
	Child health services—Postnatal ward	0
	Child health services—Kangaroo mother care ward/corner	0
	Child health services—Neonatal inpatient care ward	0
	Child health services—Special care newborn ward	0
	Child health services—Intensive care newborn ward	0
	Other (specify)	0

Table 4B.3 Standardization of RHIS tools—number and type of report recipient

Indicator: Number and type of report recipient		
Data Source—Module I: Overview Tool		
Indicators		**Facility**
Organization that introduced the report generated by community/health facility/ district	MOH (standardized national HIS tool)	0
	MOH (program—specific name)	0
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	0
	Other (specify)	0
Organization that introduced the paper-based data recording tools	MOH (standardized national HIS tool)	1
	MOH (program—specific name)	1
	UN agency (name)	1
	Regional/state government	1
	Other partner/donor (name)	1
	Locally customized/developed	1
	Other (specify)	0
Organization that introduced the electronic data recording tools	MOH (standardized national HIS tool)	1
	MOH (program—specific name)	0
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	0
	Other (specify)	0

Table 4B.4 RHIS reporting capability—track completeness using eRHIS

RHIS reporting capability **Indicator: % of staff able to track report completeness using eRHIS** Total # of staff able to track report completeness using RHIS / Total # of sites assessed X 100			
Data Source—Module III: eRHIS Assessment Tool			
Indicator	Numerator	Denominator	**%**
User can carry out the following function: RHIS software produces a report on the number and percentage of reports received of the total number of expected reports	1	1	100%

Table 4B.5 RHIS reporting capability—generate summary reports using eRHIS

Indicator: % of staff demonstrating capacity to generate summary reports using eRHIS Total # of staff demonstrating capacity to generate summary reports using eRHIS / Total # of respondents X 100					
Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software generates summary reports for aggregate levels and time periods	Region summary	Monthly	1	1	100%
		Quarterly	1	1	100%
		Annually	1	1	100%
	Health facility summary	Monthly	1	1	100%
		Quarterly	1	1	100%
		Annually	1	1	100%
	Community-level SDP summary	Monthly	0	1	0%
		Quarterly	0	1	0%
		Annually	0	1	0%

Table 4B.6 Ability to calculate coverage indicators with eRHIS

Ability to calculate coverage indicators

Indicator: % of staff able to calculate coverage indicators using eRHIS

$$\frac{\text{Total \# of staff able to calculate coverage indicators using eRHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
			Region		
Indicators			Numerator	Denominator	%
User can calculate coverage for	Indicator 1	National	1	1	100%
		Region	1	1	100%
		Region	1	1	100%
		Health facility	1	1	100%
		Community-level SDP	0	1	0%
	Indicator 2	National	1	1	100%
		Region	1	1	100%
		Region	1	1	100%
		Health facility	1	1	100%
		Community-level SDP	0	1	0%
	Indicator 3	National	1	1	100%
		Region	1	1	100%
		Region	1	1	100%
		Health facility	1	1	100%
		Community-level SDP	0	1	0%

Table 4B.7 Data analysis features eRHIS used

Data analysis

Indicator: % of staff demonstrating the use of data analysis features of the eRHIS

$$\frac{\text{Total \# of staff demonstrating the use of data analysis features of the eRHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool			
Indicators	Numerator	Denominator	%
User can generate major causes of institution-based (in-patient, emergency) mortality (e.g., preterm birth, birth asphyxia, sepsis)	1	1	100%
User can generate major morbidity diagnoses for inpatient and outpatient services (e.g., top ten diseases)? (e.g., retinopathy, growth faltering, kernicterus, jaundice)	1	1	100%

Table 4B.8 Data visualization—eRHIS present data in graphs and maps

Data visualization

Indicator: % of staff able to use the data visualization features of the eRHIS to analyze and present data in graphs and maps

$$\frac{\text{Total \# of staff able to use the data visualization features to analyze and present data}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can generate	Indicator 1	Time trend graphs	1	1	100%
		Bar graphs for comparing facilities, regions, or regions	1	1	100%
		Thematic maps, by region, region, or health facility	1	1	100%
	Indicator 2	Time trend graphs	1	1	100%
		Bar graphs for comparing facilities, regions, or regions	0	1	0%
		Thematic maps, by region, region, or health facility	1	1	100%

4C. Technical Factors—District Level

Section 4C. Tables: Technical Factors—District Level

C. RHIS Performance Determinants: Technical Factors- District Level

Table 4C.1 Existing information system overlaps and distinction

I. RHIS Performance Determinants: Technical Factors ***Existing information system overlaps and distinction*** **Indicator: Linkage or overlap of existing RHIS**	
Data Source—Module I: Overview Tool	
Indicators	**Value**
Number of different names of reports generated by community/health facility/district	2
Paper, electronic, or both	2
Type of electronic tool (e.g., Excel, Access, DHIS2)	2
Number of different recipients of reports generated by community/health facility/district	0

Table 4C.2 Standardization of RHIS tools—number and type parallel reports

Standardization of RHIS tools **Indicator: Number and type of parallel reports that are produced at each level of the health system**		
Data Source—Module I: Overview Tool		
Indicators		**District**
Number of different names of reports generated by community/health facility/district		2
Type of data reported	Maternal health services—Labour and delivery	2
	Maternal health services—Operation theatre	2
	Maternal health services—Postnatal ward	2
	Child health services—Postnatal ward	2
	Child health services—Kangaroo mother care ward/corner	0
	Child health services—Neonatal inpatient care ward	1
	Child health services—Special care newborn ward	0
	Child health services—Intensive care newborn ward	0
	Other (specify)	0

Table 4C.3 Standardization of RHIS tools—number and type of report recipient

Indicator: Number and type of report recipient		
Data Source—Module I: Overview Tool		
Indicators		**Facility**
Organization that introduced the report generated by community/ health facility/ district	MOH (standardized national HIS tool)	2
	MOH (program—specific name)	0
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	0
	Other (specify)	0
Organization that introduced the paper-based data recording tools	MOH (standardized national HIS tool)	2
	MOH (program—specific name)	2
	UN agency (name)	2
	Regional/state government	2
	Other partner/donor (name)	2
	Locally customized/developed	2
	Other (specify)	0
Organization that introduced the electronic data recording tools	MOH (standardized national HIS tool)	2
	MOH (program—specific name)	1
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	0
	Other (specify)	0

Table 4C.4 RHIS reporting capability—track completeness using eRHIS

RHIS reporting capability **Indicator: % of staff able to track report completeness using eRHIS** Total # of staff able to track report completeness using RHIS / Total # of sites assessed X 100			
Data Source—Module III: eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software produces a report on the number and percentage of reports received out of the total number of expected reports	1	1	100%

Table 4C.5 RHIS reporting capability—generate summary reports using eRHIS

Indicator: % of staff demonstrating capacity to generate summary reports using eRHIS Total # of staff demonstrating capacity to generate summary reports using eRHIS / Total # of respondents X 100					
Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software generates summary reports for aggregate levels and time periods	District summary	Monthly	1	1	100%
		Quarterly	1	1	100%
		Annually	1	1	100%
	Health facility summary	Monthly	1	1	100%
		Quarterly	1	1	100%
		Annually	1	1	100%
	Community-level SDP summary	Monthly	0	1	0%
		Quarterly	0	1	0%
		Annually	0	1	0%

Table 4C.6 Ability to calculate coverage indicators with eRHIS

Ability to calculate coverage indicators

Indicator: % of staff able to calculate coverage indicators using eRHIS

$$\frac{\text{Total \# of staff able to calculate coverage indicators using eRHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
			District		
Indicators			Numerator	Denominator	%
User can calculate coverage for	Indicator 1	National	1	1	100%
		Region	1	1	100%
		District	1	1	100%
		Health facility	1	1	100%
		Community-level SDP	0	1	0%
	Indicator 2	National	1	1	100%
		Region	1	1	100%
		District	1	1	100%
		Health facility	1	1	100%
		Community-level SDP	0	1	0%
	Indicator 3	National	1	1	100%
		Region	1	1	100%
		District	1	1	100%
		Health facility	1	1	100%
		Community-level SDP	0	1	0%

Table 4C.7 Data analysis features eRHIS used

Data analysis

Indicator: % of staff demonstrating the use of data analysis features of the eRHIS

$$\frac{\text{Total \# of staff demonstrating the use of data analysis features of the eRHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool			
Indicators	Numerator	Denominator	%
User can generate major causes of institution-based (inpatient, emergency) mortality (e.g., preterm birth, birth asphyxia, sepsis)	1	1	100%
User can generate major morbidity diagnoses for inpatient and outpatient services (e.g., top ten diseases)	1	1	100%

Table 4C.8 Data visualization—eRHIS present data in graphs and maps

Data visualization
Indicator: % of staff able to use the data visualization features of the eRHIS to analyze and present data in graphs and maps

$$\frac{\text{Total \# of staff able to use data visualization features to analyze and present data}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can generate	Indicator 1	Time trend graphs	1	1	100%
		Bar graphs for comparing facilities, districts, or regions	1	1	100%
		Thematic maps, by region, district, or health facility	1	1	100%
	Indicator 2	Time trend graphs	1	1	100%
		Bar graphs for comparing facilities, districts, or regions	1	1	100%
		Thematic maps, by region, district, or health facility	1	1	100%

4D. Technical Factors—Facility Level

Section 4D. Tables: Technical Factors—Facility Level

D. RHIS Performance Determinants: Technical Factors—Facility Level

Table 4D.1 Existing information system overlaps and distinction

Existing information system overlaps and distinction

Indicator: Linkage or overlap of existing RHIS

Data Source—Module I: Overview Tool	
Indicators	**Value**
Number of different names of reports generated by community/health facility/district	22
Paper, electronic, or both	22
Type of electronic tool (e.g., Excel, Access, DHIS2)	13
Number of different recipients of reports generated by community/health facility/district	0

Table 4D.2 Standardization of RHIS tools—number and type parallel reports

Standardization of RHIS tools

Indicator: Number and type of parallel reports that are produced at each level of the health system

Data Source—Module I: Overview Tool		
Indicators		**Facility**
Number of different names of reports generated by community/health facility/district		22
Type of data reported	Maternal health services—Labour and delivery	19
	Maternal health services—Operation theatre	10
	Maternal health services—Postnatal ward	13
	Child health services—Postnatal ward	12
	Child health services—Kangaroo mother care ward/corner	6
	Child health services—Neonatal inpatient care ward	2
	Child health services—Special care newborn ward	0
	Child health services—Intensive care newborn ward	0
	Other (specify)	0

Table 4D.3 Standardization of RHIS tools—number and type of report recipient

Indicator: Number and type of report recipient		
Data Source—Module I: Overview Tool		
Indicators		**Value**
Organization that introduced the report generated by community/ health facility/ district	MOH (standardized national HIS tool)	0
	MOH (program—specific name)	0
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	1
	Other (specify)	0
Organization that introduced the paper-based data recording tools	MOH (standardized national HIS tool)	73
	MOH (program—specific name)	0
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	0
	Other (specify)	0
Organization that introduced the electronic data recording tools	MOH (standardized national HIS tool)	14
	MOH (program—specific name)	0
	UN agency (name)	0
	Regional/state government	0
	Other partner/donor (name)	0
	Locally customized/developed	0
	Other (specify)	0

Table 4D.4 RHIS reporting capability—Track completeness using eRHIS

RHIS reporting capability

Indicator: % of staff able to track report completeness using electronic RHIS (eRHIS)

$$\frac{\text{Total \# of staff able to track report completeness using RHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software produces a report on the number and percentage of reports received of the total number of expected reports	12	17	71%

Table 4D.5 RHIS reporting capability—Generate summary reports using eRHIS

Indicator: % of staff demonstrating capacity to generate summary reports using eRHIS

$$\frac{\text{Total \# of staff demonstrating capacity to generate summary reports using eRHIS}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can carry out the following function: RHIS software generates summary reports for aggregate levels and periods	Health facility summary	Monthly	13	17	76%
		Quarterly	13	17	76%
		Annually	13	17	76%
	Community-level SDP summary	Monthly	5	17	29%
		Quarterly	5	17	29%
		Annually	5	17	29%

Table 4D.6 Ability to calculate coverage indicators with eRHIS

Ability to calculate coverage indicators

Indicator: % of staff able to calculate coverage indicators using eRHIS

$$\frac{\text{Total \# of staff able to calculate coverage indicators using eRHIS}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can calculate coverage for	Indicator 1	Health facility	8	17	47%
		Community-level SDP	0	17	0%
	Indicator 2	Health facility	8	17	47%
		Community-level SDP	0	17	0%
	Indicator 3	Health facility	8	17	47%
		Community-level SDP	0	17	0%

Table 4D.7 Data analysis features used

Data analysis **Indicator: % of staff demonstrating the use of data analysis features of the eRHIS** Total # of staff demonstrating the use of data analysis features of the eRHIS / Total # of sites assessed X 100			
Data Source—Module III: eRHIS Assessment Tool			
Indicators	**Numerator**	**Denominator**	**%**
User can generate major causes of institution-based mortality	9	17	53%
User can generate major morbidity diagnoses for inpatient and outpatient services	10	17	59%

Table 4D.8 Data visualization—eRHIS present data in graphs and maps

Data visualization **Indicator: % of staff able to use the data visualization features of the eRHIS to analyze and present data in graphs and maps** Total # of staff able to use data visualization features to analyze and present data / Total # of sites assessed X 100

Data Source—Module III: eRHIS Assessment Tool					
Indicators			**Numerator**	**Denominator**	**%**
User can generate	Indicator 1	Time trend graphs	7	17	41%
		Bar graphs for comparing facilities, districts, or regions	6	17	35%
		Thematic maps, by region, district, or health facility	5	17	29%
	Indicator 2	Time trend graphs	7	17	41%
		Bar graphs for comparing facilities, districts, or regions	6	17	35%
		Thematic maps, by region, district, or health facility	5	17	29%

4E. Summary Table for Technical Factors

			Central		Regional		District		Facility	
Domain	**Indicator**		**Number**		**Number**		**Number**		**Number**	
Existing information system overlaps and distinction	Linkage or overlap of existing RHIS	Number of different names of reports generated by community/health facility/district	*		0		2		22	
		Paper, electronic, or both	*		0		2		22	
		Type of electronic tool (e.g., Excel, Access, DHIS2)	*		0		2		13	
		Number of different recipients of reports generated by community/health facility/district	*		0		0		0	
Standardization of RHIS tools	Number and type of parallel reports that are produced at each level of the health system	Number of different names of reports generated by community/health facility/district	*		0		2		22	

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
RHIS reporting capability	% of staff able to track report completeness using electronic RHIS (eRHIS)		*	*	*	1	1	100%	1	1	100%	12	17	71%
	% of staff demonstrating capacity to generate summary reports using eRHIS	Region summary—monthly	*	*	*	1	1	100%						
		Region summary—quarterly	*	*	*	1	1	100%						
		Region summary—annually	*	*	*	1	1	100%						
		District summary—monthly	*	*	*				1	1	100%			
		District summary—quarterly	*	*	*				1	1	100%			
		District summary—annually	*	*	*				1	1	100%			
		Health facility summary—monthly	*	*	*	1	1	100%	1	1	100%	13	17	76%
		Health facility summary—quarterly	*	*	*	1	1	100%	1	1	100%	13	17	76%
		Health facility summary—annually	*	*	*	1	1	100%	1	1	100%	13	17	76%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Ability to calculate coverage indicators	% of staff able to calculate coverage indicators using eRHIS	National coverage—indicator 1	*	*	*	1	1	100%	1	1	100%			
		Regional coverage—indicator 1	*	*	*	1	1	100%	1	1	100%			
		District coverage—indicator 1	*	*	*	1	1	100%	1	1	100%			
		Health facility coverage—indicator 1	*	*	*	1	1	100%	1	1	100%	8	17	47%
		National coverage—indicator 2	*	*	*	1	1	100%	1	1	100%			
		Regional coverage—indicator 2	*	*	*	1	1	100%	1	1	100%			
		District coverage—indicator 2	*	*	*	1	1	100%	1	1	100%			
		Health facility coverage—indicator 2	*	*	*	1	1	100%	1	1	100%	8	17	47%
		National coverage—indicator 3	*	*	*	1	1	100%	1	1	100%			
		Regional coverage—indicator 3	*	*	*	1	1	100%	0	1	0%			
		District coverage—indicator 3	*	*	*	1	1	100%	1	1	100%			
		Health facility coverage—indicator 3	*	*	*	1	1	100%	1	1	100%	8	17	47%
Data analysis	% of staff demonstrating the use of data analysis features of the eRHIS	User can generate major causes of institution-based mortality	*	*	*	1	1	100%	1	1	100%	9	17	53%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
		User can generate major morbidity diagnoses for inpatient and outpatient services	*	*	*	1	1	100%	1	1	100%	10	17	59%
Data visualization	% of staff able to use the data visualization features of the eRHIS to analyze and present data in graphs and maps	Time trend graphs—Indicator 1	*	*	*	1	1	100%	1	1	100%	7	17	41%
		Bar graphs for comparing facilities, districts, or regions—Indicator 1	*	*	*	1	1	100%	1	1	100%	6	17	35%
		Thematic maps, by region, district, or health facility—Indicator 1	*	*	*	1	1	100%	1	1	100%	5	17	29%
		Time trend graphs—Indicator 2	*	*	*	1	1	100%	1	1	100%	7	17	41%
		Bar graphs for comparing facilities, districts, or regions—Indicator 2	*	*	*	1	1	100%	1	1	100%	6	17	35%
		Thematic maps, by region, district, or health facility—Indicator 2	*	*	*	1	1	100%	1	1	100%	5	17	29%

5. RHIS Performance Determinants: Organizational Factors

5A. Organizational Factors—Central Level

Section 5A. Tables: Organizational Factors—Central Level

A. RHIS Performance Determinants: Organizational Factors—Central Level

Table 5A.1 RHIS Governance—Structures

RHIS governance

Indicator: Good RHIS governance structures in place

$$\frac{\text{Total \# of sites with good RHIS governance structures in place}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has a written document describing the RHIS mission, roles, and responsibilities that are related to strategic and policy decisions at central and higher levels	*	*	*
Has current health service organizational and staff charts showing positions related to health information	*	*	*
Has overall framework and plan for information and communication technology (ICT), (e.g., describing the required equipment and plans for training in the use of ICT for RHIS)	*	*	*
Office maintains documentation of the dissemination of the RHIS monthly/ quarterly reports to the various health program staff at the central level, the community, local administration, NGOs, etc.	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.2 RHIS Governance—Data management guidelines

Indicator: Existence of RHIS data management guidelines

$$\frac{\text{Total \# of sites with RHIS data management guidelines}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process **(Completely)**	*	*	*
Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process **(Partially)**	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.3 RHIS planning—national documents

RHIS planning

Indicator: % of sites with copies of national HIS documents

$$\frac{\text{Total \# of sites with copies of national HIS documents}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has a copy of the national HIS situation analysis/assessment report that is less than three years old	*	*	*
Has a copy of the national three or five-year HIS strategic plan	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.4 Use of quality improvement standards

Use of quality improvement standards

Indicator: % of Centrals that have RHIS quality improvement standards

$$\frac{\text{RHIS quality improvement standards}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**Numerator**	**Denominator**	**%**
Has set RHIS performance targets RHIS performance targets for data accuracy for their respective administrative areas	*	*	*
Has set RHIS performance targets RHIS performance targets for data completeness for their respective administrative areas	*	*	*
Has set RHIS performance targets RHIS performance targets for data timeliness for their respective administrative areas	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.5 Supervision quality

Supervision quality

Indicator: Existence effective supportive supervision practices /tools availability to improve RHIS performance

$$\frac{\text{Total \# of sites with documents related to supervision}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
	Central		
Indicators	**Numerator**	**Denominator**	**%**
Office has copies of RHIS supervisory guidelines and checklists	*	*	*
Office maintains a schedule for RHIS supervisory visits	*	*	*
Office has copies of the reports from RHIS supervisory visits conducted during the current fiscal year	*	*	*
HFa that received a supervisory visit have copies of the report from latest supervisory visit and commonly agreed action points are listed	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.6 Financial resources to support RHIS activities

Financial resources to support RHIS activities

Indicator: Existence of financial resource allocation for RHIS activities

$$\frac{\text{Existence of financial resource allocation at central level for RHIS activities}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Office has a copy of the long-term financial plan for supporting RHIS activities	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.7 Infrastructure for RHIS data management

Infrastructure for RHIS data management

Indicator: Existence of Internet connectivity at the central level

$$\frac{\text{Existence of Internet connectivity at the central level}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module V: Facility/Office Checklist			
Indicator	**Numerator**	**Denominator**	**%**
Access to an Internet network	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.8 RHIS supplies for data collection and aggregation—total recording and reporting forms

RHIS supplies for data collection and aggregation

Indicator: Existence of adequate supply of RHIS recording/ reporting forms at the central level

$$\frac{\text{Availability of RHIS recording/ reporting forms at central level}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Tool Availability	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	*	*	*
Maternal health services—Operation theatre printed register	5.2	*	*	*
Maternal health services—Postnatal ward printed register	5.3	*	*	*
Maternal health services—Printed death register	5.4	*	*	*
Child health services				
Child health services—Postnatal ward printed register	6.1	*	*	*
Child health services—Kangaroo mother care ward/corner printed register	6.2	*	*	*
Child health services—Neonatal inpatient care ward printed register	6.3	*	*	*
Child health services—Special care newborn ward printed register	6.4	*	*	*
Child health services—Intensive care newborn ward printed register	6.5	*	*	*
Child health services—Printed death register	6.6	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.9 RHIS supplies for data collection and aggregation—standard recording and reporting forms

Indicator: % of sites with an adequate supply of standard RHIS recording and reporting forms	
Total # of standard RHIS tools available at central level office	
Total # of sites assessed (=1)	X100

Data Source: Module 5. Facility/Office Checklist				
Standard RHIS tool	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	*	*	*
Maternal health services—Operation theatre printed register	5.2	*	*	*
Maternal health services—Postnatal ward printed register	5.3	*	*	*
Maternal health services—Printed death register	5.4	*	*	*
Child health services				
Child health services—Postnatal ward printed register	6.1	*	*	*
Child health services—Kangaroo mother care ward/corner printed register	6.2	*	*	*
Child health services—Neonatal inpatient care ward printed register	6.3	*	*	*
Child health services—Special care newborn ward printed register	6.4	*	*	*
Child health services—Intensive care newborn ward printed register	6.5	*	*	*
Child health services—Printed death register	6.6	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.10 Facilities or offices with no stock-outs of recording and reporting tools within the past six months

Indicator: % of facilities or offices with no stock-outs of recording and reporting tools within the past six months

$$\frac{\text{Total \# of offices that experienced stockouts in last 6 months}}{\text{Total \# of offices assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Stockout	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	*	*	*
Maternal health services—Operation theatre printed register	5.2	*	*	*
Maternal health services—Postnatal ward printed register	5.3	*	*	*
Maternal health services—Printed death register	5.4	*	*	*
Child health services				
Child health services—Postnatal ward printed register	6.1	*	*	*
Child health services—Kangaroo mother care ward/corner printed register	6.2	*	*	*
Child health services—Neonatal inpatient care ward printed register	6.3	*	*	*
Child health services—Special care newborn ward printed register	6.4	*	*	*
Child health services—Intensive care newborn ward printed register	6.5	*	*	*
Child health services—Printed death register	6.6	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.11 Availability of staff—designated to compile and analyze data

Availability of staff to compile and analyze data

Indicator: Existence of designated staff responsible for compiling reports at the central level

$$\frac{\text{Existence of designated staff responsible for report compiling}}{1} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central level has a designated person responsible for entering data/compiling reports from health facilities	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.12 Availability of staff—designated for internal data quality review

Indicator: Existence of designated staff for internal data quality review at the central level

$$\frac{\text{Existence of designated staff for internal data quality review at the central level}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Central level has a designated person to review the quality of compiled data prior to submission to the next level **(Yes)**	*	*	*
Central level has a designated person to review the quality of compiled data prior to submission to the next level **(Partially)**	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.13 Availability of staff—designated for data analysis and dissemination

Indicator: Existence of designated staff for data analysis and dissemination at the central level

$$\frac{\text{Total \# of sites that have designated staff for data analysis and dissemination}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module V: Facility/Office Checklist										
Staff Code	**Title**	**Responsible for data compilation of reports submitted that are coming from the lower levels**			**Responsible for checking the quality of reports submitted from the lower levels**			**Responsible for data analysis (producing comparison tables, graphs, dashboards)**		
		Numerator	**Denominator**	**Ratio**	**Numerator**	**Denominator**	**Ratio**	**Numerator**	**Denominator**	**Ratio**
1	Head of central health office	*	*	*	*	*	*	*	*	*
2	Program officer	*	*	*	*	*	*	*	*	*
3	Disease surveillance officer	*	*	*	*	*	*	*	*	*
4	M&E/HMIS** officer	*	*	*	*	*	*	*	*	*
5	Data clerk	*	*	*	*	*	*	*	*	*
96	Other (specify)	*	*	*	*	*	*	*	*	*
Any designated staff		*	*	*	*	*	*	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

** Health Management Information Systems

Table 5A.14 Ratio designated staff for data analysis and dissemination per site

Any designated staff				
Variables		**Numerator**	**Denominator**	**Ratio**
Responsible for data compilation of reports submitted that are coming from the lower levels	Any designated staff	*	*	*
Responsible for checking the quality of reports from the lower level	Any designated staff	*	*	*
Responsible for data analysis	Any designated staff	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.15 RHIS capacity development—plan

RHIS capacity development

Indicator: Existence of staff capacity development plan at the central level

$$\frac{\text{Existence of staff capacity development plan at the central level (=1 if yes)}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**Numerator**	**Denominator**	**%**
Has a costed training and capacity development plan that has benchmarks, timelines, and mechanism for on-the-job RHIS training, RHIS workshops, and orientation for new staff	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.16 RHIS capacity development—RHIS training

Indicator: % of staff who have received RHIS training (among those who are responsible for performing various RHIS tasks)

$$\frac{\text{Total \# of staff who have received RHIS training}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of three denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist (Central)								
Staff Code	**Staff**	**Numerator**	**Among those responsible for data compilation of reports from the lower levels**		**Among those responsible for checking the quality of reports from the lower levels**		**Among those responsible for data analysis (producing comparison tables, graphs, dashboards)**	
			Denominator	**%**	**Denominator**	**%**	**Denominator**	**%**
1	Head of central health office	*	*	*	*	*	*	*
2	Program officer	*	*	*	*	*	*	*
3	Disease surveillance officer	*	*	*	*	*	*	*
4	M&E/HMIS officer	*	*	*	*	*	*	*
5	Data clerk	*	*	*	*	*	*	*
96	Other (specify)	*	*	*	*	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.17 RHIS capacity development—received training by type

Indicator: % of staff who have received training, by type of training

$$\frac{\text{Total \# of staff receiving training by type of training}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of three denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist Central										
Variables		Responsible for data compilation of reports from the lower levels			Responsible for checking the quality of reports from the lower level			Responsible for data analysis		
		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
Subject of last training	Data entry	*	*	*	*	*	*	*	*	*
	Check and verify quality of data	*	*	*	*	*	*	*	*	*
	Generating aggregate reports	*	*	*	*	*	*	*	*	*
	Data analysis and interpretation	*	*	*	*	*	*	*	*	*
	Using data for decision making	*	*	*	*	*	*	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.18 Commitment and support for high-quality data

Commitment and support for high-quality data

Indicator: Mean score of respondents who perceive that the organization gives due emphasis to data quality

$$\frac{\text{Sum of 3 respondent scores on perceived organizational emphasis on data quality}}{\text{(Total \# of respondents x 5) x 3}} \times 100$$

5 being the highest possible score on every answer.
3 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S2, S6, and S8.

Data Source—Module VI: Organizational and Behavioral Assessment Tool (OBAT)			
	Central		
Indicator	Numerator	Denominator	%
Respondent perceives that the organization gives due emphasis to data quality	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.19 Commitment and support of information use

Commitment and support of information use

Indicator: Mean score of respondents who perceive that the organization supports information use

$$\frac{\text{Sum of 4 respondent scores on perceived organizational support of information use}}{\text{(Total \# of respondents x 5) x 4}} \times 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S4, S7, P5, and P8.

Data Source—Module VI: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization supports information use	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.20 Evidence-based decision making

Evidence-based decision making

Indicator: Mean score of respondents who perceive that the organization promotes a culture of evidence-based decision making

$$\frac{\text{Sum of 9 respondent scores on perceived organizational culture of evidence-based decision making}}{\text{(Total \# of respondents x 5) x 9}} \times 100$$

5 being the highest possible score on every answer.
9 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions D1 through D9.

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives the organization as promoting a culture of evidence-based decision making	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.21 Promotion of problem solving

Promotion of problem solving

Indicator: Mean score of respondents who perceive that the organization promotes a culture of problem solving

$$\frac{\text{Sum of 4 respondent scores on perceived organizational promotion of a problem-solving culture}}{\text{Total \# of respondents x 5 x 4}} \times 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S5, P6, P7, and P9.

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes a culture of problem solving	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.22 Sharing information between levels

Sharing information between levels

Indicator: Mean score of respondents who perceive that the organization promotes bidirectional flow of feedback

$$\frac{\text{Sum of 2 respondent scores on perceived organizational promotion of bidirectional flow of feedback}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S1 and S3.

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes bidirectional flow of feedback	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.23 Sense of responsibility

Sense of responsibility

Indicator: Mean score of respondents who perceive that the organization has a culture that instills a sense of responsibility

$$\frac{\text{Sum of 5 respondent scores on perceived organizational culture of instilling a sense of responsibility}}{\text{(Total \# of respondents x 5) x 5}} \times 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume the same number of people answered questions P1, P2, P3, P4, and P12.

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization has a culture that instills a sense of responsibility	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.24 Empowerment and accountability

Empowerment and accountability

Indicator: Mean score of respondents who perceive that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information

$$\frac{\text{Sum of 2 respondent scores on perceived organizational empowering for learning and improvement}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions P10 and P11.

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.25 Rewarding good performance

Rewarding good performance

Indicator: Mean score of respondents who perceive that the organization recognizes and rewards good performance

$$\frac{\text{Sum of respondent scores on perceived organizational recognition and reward of performance}}{\text{Total \# of respondents x 5}} \times 100$$

5 being the highest possible score on every answer

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization recognizes and rewards good performance	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.26 Data quality assurance

Data quality assurance

Indicator: Mean score of level of perceived ability to perform data quality checks

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to perform data quality checks}}{\text{Total \# of respondents X10}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can check data accuracy	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.27 Calculating indicators

Calculating indicators

Indicator: Mean score of level of perceived ability to calculate indicators

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to calculate indicators}}{\text{Total \# of respondents X10}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can calculate percentages/rates correctly	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.28 Data presentation

Data presentation

Indicator: Mean score of level of perceived ability to prepare data visuals

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to prepare data visuals}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can plot a trend on a chart	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.29 Data interpretation

Data interpretation

Indicator: Mean score of level of perceived ability to interpret data

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to interpret data}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can explain the implication of the results of the data analysis	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.30 Use of information

Use of information

Indicator: Mean scores of level of perceived ability to use information for problem-solving or making decisions

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to use information for problem-solving or decision making}}{\text{Total \# of respondents x10}} \times 100$$

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Data Source—Module IV: OBAT			
	Central		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can use data for identifying service performance gaps and setting performance targets	*	*	*
Respondent believes that they can use data for making operational/ management decisions	*	*	*
Combined score			*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.31 Motivation among staff

The motivation among staff **Indicator: Mean score of Staff motivation level to perform RHIS tasks** $\frac{\text{Sum of 5 respondent scores on perceived staff motivation to perform RHIS tasks}}{\text{(Total \# of respondents x 5) x 7}}$ X 100
5 being the highest possible score on every answer. *5 being the number of questions asked to calculate this specific indicator.* *We assume that the same number of people answered questions BC1 through BC5.*

Indicator	Numerator	Denominator	%
Respondent's motivation to perform RHIS tasks	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.32 Knowledge—Rationale for RHIS data

Knowledge **Indicator: Mean scores of knowledge of the rationale for RHIS data** $\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}}$ X 100

Data Source—Module IV: OBAT				
		Central		
		Numerator	Denominator	%
Indicator				
Describe at least three reasons for collecting or using the following data on a monthly basis	Maternal or Newborn diseases/ conditions/ diagnoses on a monthly basis	*	*	*
	Maternal or Newborn Immunization	*	*	*
	Maternal age	*	*	*
	Age of newborn	*	*	*
	Geographical data or residence of families	*	*	*
	Why population data is needed	*	*	*
Knowledge of the rationale for RHIS data				*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.33 Knowledge—data quality checking methods

Indicator: Mean scores of knowledge of data quality checking methods

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Questions	**Numerator**	**Denominator**	**%**
Describe at least three aspects of data quality	*	*	*
Describe at least three ways of ensuring data quality relevant to your job classification/responsibilities	*	*	*
Knowledge of data quality checking methods			*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.34 Actual skills to perform RHIS tasks—competence level in calculating indicators

Actual skills to perform RHIS tasks

Indicator: Mean scores of competency level in calculating indicators

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Questions	**Numerator**	**Denominator**	**%**
Calculate the percentage of pregnant mothers at the central level attending antenatal care in the current period	*	*	*
What is the neonatal mortality rate?	*	*	*
Calculate the number of newborns who died.	*	*	*
Competence level in calculating indicators			*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.35 Actual skills to perform RHIS tasks—competence level in plotting data/preparing charts

Indicator: Mean score of competency level in plotting data/preparing charts
Sum of respondent scores on the selected different items / Total # of respondents X 100

Data Source—Module IV: OBAT			
	Central		
Questions	**Numerator**	**Denominator**	**%**
Develop a bar chart depicting the distribution across the maternal ages of newborns with a low birthweight at the four facilities.	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.36 Actual skills to perform RHIS tasks—competence level in interpreting data

Indicator: Mean scores of competency level in interpreting data
Sum of respondent scores on the selected different items / Total # of respondents x2 X 100

Data Source—Module IV: OBAT			
	Central		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **CD2b**: Interpret the graph presented in CD2b	*	*	*
Scoring for CD2c (CD2c1 +CD2c2): Does the central level have the coverage rate (80%) by the end of 2020 for CD2c1? What guidance could you provide on these data for CD2C2?	*	*	*
Competence level in interpreting data			*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.37 Actual skills to perform RHIS tasks—competence level in problem solving

Indicator: Mean scores of competency level in problem solving

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x n (n=2, 3, or 5)}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **PSa**: Description of data quality problem	*	*	*
Scoring for **PSb:** Potential reasons for data quality problem	*	*	*
Scoring for **PSc:** Major activities to improve the data quality	*	*	*
Competence level in problem solving			*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 5A.38 Actual skills to perform RHIS tasks—competence level in use of information

Indicator: Mean scores of competency level in use of information

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	Central		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **CD2d1**: Provide at least one use of the chart findings at the facility level	*	*	*
Scoring for **CD2d2**: Provide at least one use of the chart findings at the community level	*	*	*
Scoring for **CD2d3**: Provide at least one use of the chart findings at the central level	*	*	*
Competence level in use of information			*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

5B. Organizational Factors—Regional Level

Section 5B. Tables: Organizational Factors—Regional Level

B. RHIS Performance Determinants: Organizational Factors- Regional Level

Table 5B.1 RHIS governance—structures

RHIS governance

Indicator: % of sites with good RHIS governance structures in place

$$\frac{\text{Total \# of sites with good RHIS governance structures in place}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has written document describing the RHIS mission, roles, and responsibilities that are related to strategic and policy decisions at the region and higher levels	1	1	100%
Has current health service organizational and staff chart showing positions related to health information	1	1	100%
Office has an overall framework and plan for information and communication technology (ICT), for example, describing the required equipment and plans for training in the use of ICT for RHIS	1	1	100%
Office maintains a list/documentation of the dissemination of the RHIS monthly/quarterly reports to the various health program staff in the region, the community, local administration, nongovernmental organizations (NGOs), etc.	1	1	100%

Table 5B.2 RHIS governance—Data management guidelines

Indicator: % of sites with RHIS data management guidelines

$$\frac{\textbf{Total \# of sites with RHIS data management guidelines}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process **(Completely)**	1	1	100%
Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process **(Partially)**	0	1	0%

Table 5B.3 RHIS planning

RHIS planning

Indicator: % of sites with copies of national HIS documents

$$\frac{\text{Total \# of sites with copies of national HIS documents}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has a copy of the national HIS situation analysis/assessment report that is less than three years old	1	1	100%
Has a copy of the national three or five-year HIS strategic plan	1	1	100%

Table 5B.4 Use of quality improvement standards

Use of quality improvement standards

Indicator: % of regions that have RHIS quality improvement standards

$$\frac{\text{Total \# of regions that have RHIS quality improvement standards}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**Numerator**	**Denominator**	**%**
Has set RHIS performance targets RHIS performance targets for data accuracy for their respective administrative areas	1	1	100%
Has set RHIS performance targets RHIS performance targets for data completeness for their respective administrative areas	1	1	100%
Has set RHIS performance targets RHIS performance targets for data timeliness for their respective administrative areas	1	1	100%

Table 5B.5 Supervision quality

Supervision quality

Indicator: % of regions that have effective supportive supervision practices /tools available to improve RHIS performance

$$\frac{\text{Total \# of sites with documents related to supervision}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
	Region		
Indicators	**Numerator**	**Denominator**	**%**
Office has copies of RHIS supervisory guidelines and checklists	1	1	100%
Office maintains a schedule for RHIS supervisory visits	0	1	0%
Office has copies of the reports from RHIS supervisory visits conducted during the current fiscal year	1	1	100%
HFs that received a supervisory visit have copies of the report from latest supervisory visit and commonly agreed action points are listed	0	1	0%

Table 5B.6 Financial resources to support RHIS activities

Financial resources to support RHIS activities

Indicator: % of regions that allocated financial resources for RHIS activities

$$\frac{\text{Total \# of regions that allocated financial resources for RHIS activities}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Office has a copy of the long-term financial plan for supporting RHIS activities	1	1	100%

Table 5B.7 Infrastructure for RHIS data management

Infrastructure for RHIS data management
Indicator: % of sites with Internet connectivity
Total number of sites with available recording and reporting forms / Total # of sites assessed X 100

Data Source—Module V: Facility/Office Checklist			
Indicator	**Numerator**	**Denominator**	**%**
Access to an Internet network	1	1	100%

Table 5B.8 RHIS supplies for data collection and aggregation—total recording and reporting forms

RHIS supplies for data collection and aggregation
Indicator: Indicator: % of sites with an adequate supply of RHIS recording and reporting forms
Total number of sites with available recording and reporting forms / Total # of sites assessed X 100

Data Source: Module 5. Facility/Office Checklist				
Tool Availability	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	1	1	100%
Maternal health services—Operation theatre printed register	5.2	0	1	0%
Maternal health services—Postnatal ward printed register	5.3	1	1	100%
Maternal health services—Printed death register	5.4	0	1	0%
Child health services				
Child health services—Postnatal ward printed register	6.1	1	1	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	1	1	100%
Child health services—Neonatal inpatient care ward printed register	6.3	1	1	100%
Child health services—Special care newborn ward printed register	6.4	0	1	0%
Child health services—Intensive care newborn ward printed register	6.5	1	1	100%
Child health services—Printed death register	6.6	1	1	100%

Table 5B.9 RHIS supplies for data collection and aggregation—standard recording and reporting forms

Indicator: % of sites with an adequate supply of standard RHIS recording and reporting forms	
Total # of standard RHIS tools available at the facility or office	X 100
Total # of tools available at the facility or office	

Data Source: Module 5. Facility/Office Checklist				
Standard RHIS tool	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	1	1	100%
Maternal health services—Operation theatre printed register	5.2	0	1	0%
Maternal health services—Postnatal ward printed register	5.3	1	1	100%
Maternal health services—Printed death register	5.4	0	1	0%
Child health services				
Child health services—Postnatal ward printed register	6.1	1	1	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	1	1	100%
Child health services—Neonatal inpatient care ward printed register	6.3	1	1	100%
Child health services—Special care newborn ward printed register	6.4	0	1	0%
Child health services—Intensive care newborn ward printed register	6.5	1	1	100%
Child health services—Printed death register	6.6	1	1	100%

Table 5B.10 Facilities or offices with no stock-outs of recording and reporting tools within the past six months

Indicator: % of facilities or offices with no stock-outs of recording and reporting tools within the past six months

$$\frac{\text{Total \# of offices that experienced stockouts in last 6 months}}{\text{Total \# of offices assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Stockout	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	1	1	100%
Maternal health services—Operation theatre printed register	5.2	0	1	0%
Maternal health services—Postnatal ward printed register	5.3	1	1	100%
Maternal health services—Printed death register	5.4	0	1	0%
Child health services				
Child health services—Postnatal ward printed register	6.1	1	1	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	1	1	100%
Child health services—Neonatal inpatient care ward printed register	6.3	1	1	100%
Child health services—Special care newborn ward printed register	6.4	0	1	0%
Child health services—Intensive care newborn ward printed register	6.5	1	1	100%
Child health services—Printed death register	6.6	1	1	100%

Table 5B.11 Availability of staff—designated to compile and analyze data

Availability of staff to compile and analyze data
Indicator: % of sites that have designated staff responsible for entering data/compiling reports

$$\frac{\text{Total \# of sites with designated staff responsible for entering data/compiling reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Region has a designated person responsible for entering data/compiling reports from health facilities	1	1	100%

Table 5B.12 Availability of staff—designated for internal data quality review

Indicator: % of sites that have designated staff for internal data quality review
Total number of sites that have designated staff for internal data quality review / Total # of sites assessed X 100

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Region level has a designated person to review the quality of compiled data prior to submission to the next level **(Yes)**	1	1	100%
Region level has a designated person to review the quality of compiled data prior to submission to the next level **(Partially)**	0	1	0%

Table 5B.13 Availability of staff—designated for data analysis and dissemination

Indicator: % of sites that have designated staff for data analysis and dissemination
Total # of sites that have designated staff for data analysis and dissemination / Total # of sites assessed X 100

Data Source—Module V: Facility/Office Checklist											
Staff Code	**Title**	**Responsible for data compilation of reports submitted that are coming from the lower levels**			**Responsible for checking the quality of reports submitted from the lower levels**			**Responsible for data analysis (producing comparison tables, graphs, dashboards)**			
		Numerator	**Denominator**	**Percent**	**Numerator**	**Denominator**	**Percent**	**Numerator**	**Denominator**	**Percent**	
1	Head of regional health office	0	1	0%	0	1	0%	0	1	0%	
2	Program officer	1	1	100%	1	1	100%	1	1	100%	
3	Disease surveillance officer	0	1	0%	0	1	0%	1	1	100%	
4	M&E/HMIS officer	1	1	100%	1	1	100%	1	1	100%	
5	Data clerk	0	1	0%	0	1	0%	0	1	0%	
96	Other (specify)	0	1	0%	0	1	0%	0	1	0%	

Table 5B.14 Ratio designated staff for data analysis and dissemination per site

Any designated staff				
Variables		**Numerator**	**Denominator**	**Ratio**
Responsible for data compilation of reports submitted that are coming from the lower levels	Any designated staff	2	6	0.3
Responsible for checking the quality of reports from the lower level	Any designated staff	2	6	0.3
Responsible for data analysis	Any designated staff	3	6	0.5

Table 5B.15 RHIS capacity development—plan

RHIS capacity development

Indicator: % of regions with staff capacity development plan

$$\frac{\text{Total \# of regions with staff capacity development plan}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**Numerator**	**Denominator**	**%**
Has a costed training and capacity development plan that has benchmarks, timelines, and mechanism for on-the-job RHIS training, RHIS workshops, and orientation for new staff	1	1	100%

Table 5B.16 RHIS capacity development—RHIS training

Indicator: % of staff who have received RHIS training (among those who are responsible for performing various RHIS tasks)

$$\frac{\text{Total \# of staff who have received RHIS training}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of three denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist (Region)								
Staff Code	**Staff**	**Among those responsible for data compilation of reports from the lower levels**			**Among those responsible for checking the quality of reports from the lower levels**		**Among those responsible for data analysis (producing comparison tables, graphs, dashboards)**	
		Numerator	**Denominator**	**%**	**Denominator**	**%**	**Denominator**	**%**
1	Head of regional health office	0	2	0%	2	0%	3	0%
2	Program officer	1	2	50%	2	50%	3	33%
3	Disease surveillance officer	1	2	50%	2	50%	3	33%
4	M&E/HMIS officer	1	2	50%	2	50%	3	33%
5	Data clerk	0	2	0%	2	0%	3	0%
96	Other (specify)	0	2	0%	2	0%	3	0%

Table 5B.17 RHIS capacity development—received training by type

Indicator: % of staff who have received RHIS training (among those who are responsible for performing various RHIS tasks)

$$\frac{\text{Total \# of staff receiving training by type of training}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of three denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist (Region)										
Variables		**Responsible for data compilation of reports from the lower levels**			**Responsible for checking the quality of reports from the lower level**			**Responsible for data analysis**		
		Numerator	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Subject of last training	Data entry	3	2	150%	3	2	150%	3	3	100%
	Check and verify quality of data	3	2	150%	3	2	150%	3	3	100%
	Generating aggregate reports	3	2	150%	3	2	150%	3	3	100%
	Data analysis and interpretation	3	2	150%	3	2	150%	3	3	100%
	Using data for decision making	3	2	150%	3	2	150%	3	3	100%

Table 5B.18 Commitment and support for high-quality data

Commitment and support for high-quality data

Indicator: Mean score of respondents who perceive that the organization gives due emphasis to data quality

$$\frac{\text{Sum of 3 respondent scores on perceived organizational emphasis on data quality}}{\text{(Total \# of respondents x 5) x 3}} \times 100$$

5 being the highest possible score on every answer.
3 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S2, S6, and S8.

Data Source—Module VI: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization gives due emphasis to data quality	14	15	93%

Table 5B.19 Commitment and support of information use

Commitment and support of information use

Indicator: Mean score of respondents who perceive that the organization supports information use

$$\frac{\text{Sum of 4 respondent scores on perceived organizational support of information use}}{\text{(Total \# of respondents x 5) x 4}} \text{ X } 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S4, S7, P5, and P8.

Data Source—Module VI: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization supports information use	19	20	95%

Table 5B.20 Evidence-based decision making

Evidence-based decision making

Indicator: Mean score of respondents who perceive that the organization promotes a culture of evidence-based decision making

$$\frac{\text{Sum of 9 respondent scores on perceived organizational culture of evidence-based decision making}}{\text{(Total \# of respondents x 5) x 9}} \text{ X } 100$$

5 being the highest possible score on every answer.
9 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions D1 through D9.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives the organization as promoting a culture of evidence-based decision making	33	50	66%

Table 5B.21 Promotion problem solving

Promotion of problem solving

Indicator: Mean score of respondents who perceive that the organization promotes a culture of problem solving

$$\frac{\text{Sum of 4 respondent scores on perceived organizational promotion of a problem-solving culture}}{\text{Total \# of respondents x 5 x 4}} \text{ X } 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S5, P6, P7, and P9.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes a culture of problem solving	18	20	90%

Table 5B.22 Sharing information between levels

Sharing information between levels

Indicator: Mean score of respondents who perceive that the organization promotes bidirectional flow of feedback

$$\frac{\text{Sum of 2 respondent scores on perceived organizational promotion of bidirectional flow of feedback}}{\text{(Total \# of respondents x 5) x 2}} \text{ X } 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S1 and S3.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes bidirectional flow of feedback	8	10	80%

Table 5B.23 Sense of responsibility

Sense of responsibility

Indicator: Mean score of respondents who perceive that the organization has a culture that instills a sense of responsibility

$$\frac{\text{Sum of 5 respondent scores on perceived organizational culture of instilling a sense of responsibility}}{\text{(Total \# of respondents x 5) x 5}} \times 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume the same number of people answered questions P1, P2, P3, P4, and P12.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization has a culture that instills a sense of responsibility	20	25	80%

Table 5B.24 Empowerment and accountability

Empowerment and accountability

Indicator: Mean score of respondents who perceive that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information

$$\frac{\text{Sum of 2 respondent scores on perceived organizational empowering for learning and improvement}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions P10 and P11.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information	8	10	80%

Table 5B.25 Rewarding good performance

Rewarding good performance

Indicator: Mean score of respondents who perceive that the organization recognizes and rewards good performance

$$\frac{\text{Sum of respondent scores on perceived organizational recognition and reward of performance}}{\text{Total \# of respondents x 5}} \times 100$$

5 being the highest possible score on every answer.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization recognizes and rewards good performance	4	5	80%

Table 5B.26 Data quality assurance

Data quality assurance

Indicator: Mean score of level of perceived ability to perform data quality checks

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to perform data quality checks}}{\text{Total \# of respondents X10}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can check data accuracy	9	10	90%

Table 5B.27 Calculating indicators

Calculating indicators

Indicator: Mean score of level of perceived ability to calculate indicators

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to calculate indicators}}{\text{Total \# of respondents X10}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can calculate percentages/rates correctly	10	10	100%

Table 5B.28 Data presentation

Data presentation

Indicator: Mean score of level of perceived ability to prepare data visuals

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to prepare data visuals}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can plot a trend on a chart	10	10	100%

Table 5B.29 Data interpretation

Data interpretation

Indicator: Mean score of level of perceived ability to interpret data

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to interpret data}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can explain the implication of the results of the data analysis	9	10	90%

Table 5B.30 Use of information

Use of information

Indicator: Mean scores of levels of perceived ability to use information for problem-solving or making decisions

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to use information for problem-solving or decision making}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can use data for identifying service performance gaps and setting performance targets	9	10	90%
Respondent believes that they can use data for making operational/ management decisions	5	10	50%
Combined score			**70%**

Table 5B.31 Motivation among staff

The motivation among staff

Indicator: Mean score of Staff motivation level to perform RHIS tasks

$$\frac{\text{Sum of 5 respondent scores on perceived staff motivation to perform RHIS tasks}}{\text{(Total \# of respondents x 5) x 7}} \times 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions BC1 through BC5.

Data Source—Module IV: OBAT			
	Region		
Indicator	**Numerator**	**Denominator**	**%**
Respondent's motivation to perform RHIS tasks	21	35	60%

Table 5B.32 Knowledge of the rationale for RHIS data

Knowledge

Indicator: Mean scores of Knowledges of the rationale for RHIS data

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT				
	Region			
		Numerator	**Denominator**	**%**
	Indicator			
Describe at least three reasons for collecting or using the following data on a monthly basis	Maternal or Newborn diseases/conditions/diagnoses on a monthly basis	3	3	100%
	Maternal or Newborn Immunization	3	3	100%
	Maternal age	3	3	100%
	Age of newborn	3	3	100%
	Geographical data or residence of families	3	3	100%
	Why population data is needed	3	3	100%
			Knowledge of the rationale for RHIS data	100%

Table 5B.33 Knowledge of data quality checking methods

Indicator: Mean scores of Knowledge of data quality checking methods

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Questions	**Numerator**	**Denominator**	**%**
Describe at least three aspects of data quality	3	3	100%
Describe at least three ways of ensuring data quality relevant to your job classification/responsibilities	3	3	100%
Knowledge of data quality checking methods			**100%**

Table 5B.34 Actual skills to perform RHIS tasks—competence level in calculating indicators

Actual skills to perform RHIS tasks

Indicator: Mean scores of competency level in calculating indicators

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Questions	**Numerator**	**Denominator**	**%**
Calculate the percentage of pregnant mothers at the region level attending antenatal care in the current period	1	1	100%
What is the neonatal mortality rate?	1	1	100%
Calculate the number of women or newborns who died.	1	1	100%
Competence level in calculating indicators			**100%**

Table 5B.35 Actual skills to perform RHIS tasks—competence level in plotting data/preparing charts

Indicator: Mean score of competency level in plotting data/preparing charts

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Questions	**Numerator**	**Denominator**	**%**
Develop a bar chart depicting the distribution across the maternal ages of newborns with a low birthweight at the four facilities	1	1	100%

Table 5B.36 Actual skills to perform RHIS tasks—competence level in interpreting data

Indicator: Mean scores of competency level in interpreting data

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x2}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **CD2b**: Interpret the graph presented in CD2b	1	2	50%
Scoring for CD2c (CD2c1 +CD2c2): Does the region level have the coverage rate (80%) by the end of 2020 for CD2c1? What guidance could you provide on these data for CD2C2?	2	2	100%
Competence level in interpreting data			**75%**

Table 5B.37 Actual skills to perform RHIS tasks—competence level in problem solving

Indicator: Mean scores of competency level in problem solving

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x n (n=2, 3, or 5)}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **PSa**: Description of data quality problem	1	2	50%
Scoring for **PSb:** Potential reasons for data quality problem	3	3	100%
Scoring for **PSc:** Major activities to improve the data quality	4	5	80%
Competence level in problem solving			**77%**

Table 5B.38 Actual skills to perform RHIS tasks—competence level in use of information

Indicator: Mean scores of competency level in use of information

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	Region		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **CD2d1**: Provide at least one use of the chart findings at the facility level	1	1	100%
Scoring for **CD2d2**: Provide at least one use of the chart findings at the community level	1	1	100%
Scoring for **CD2d3**: Provide at least one use of the chart findings at the region level	1	1	100%
Competence level in use of information			**100%**

5C. Organizational Factors—District Level

Section 5C. Tables: Organizational Factors—District level

C. RHIS Performance Determinants: Organizational Factors- District Level

Table 5C.1 RHIS governance—structures

RHIS governance

Indicator: % of sites with good RHIS governance structures in place

$$\frac{\text{Total \# of sites with good RHIS governance structures in place}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has written document describing the RHIS mission, roles, and responsibilities that are related to strategic and policy decisions at the district and higher levels	1	2	50%
Has current health service organizational and staff chart showing positions related to health information	2	2	100%
Office has an overall framework and plan for information and communication technology (ICT), for example, describing the required equipment and plans for training in the use of ICT for RHIS	2	2	100%
Office maintains a list/documentation of the dissemination of the RHIS monthly/quarterly reports to the various health program staff in the district, the community, local administration, nongovernmental organizations (NGOs), etc.	2	2	100%

Table 5C.2 RHIS governance—data management guidelines

Indicator: % of sites with RHIS data management guidelines

$$\frac{\text{Total \# of sites with RHIS data management guidelines}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process **(Completely)**	2	2	100%
Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process **(Partially)**	0	2	0%

Table 5C.3 RHIS planning

RHIS planning

Indicator: % of sites with copies of national HIS documents

$$\frac{\text{Total \# of sites with copies of national HIS documents}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**Numerator**	**Denominator**	**%**
Has a copy of the national HIS situation analysis/assessment report that is less than three years old	2	2	100%
Has a copy of the national three or five-year HIS strategic plan	2	2	100%

Table 5C.4 Use of quality improvement standards

Use of quality improvement standards

Indicator: % of districts that have RHIS quality improvement standards

$$\frac{\text{Total \# of districts that have RHIS quality improvement standards}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**Numerator**	**Denominator**	**%**
Has set RHIS performance targets RHIS performance targets for data accuracy for their respective administrative areas	2	2	100%
Has set RHIS performance targets RHIS performance targets for data completeness for their respective administrative areas	2	2	100%
Has set RHIS performance targets RHIS performance targets for data timeliness for their respective administrative areas	2	2	100%

Table 5C.5 Supervision quality

Supervision quality

Indicator: % of districts that have effective supportive supervision practices /tools available to improve RHIS performance

$$\frac{\text{Total \# of sites with documents related to supervision}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicators	**District**		
	Numerator	**Denominator**	**%**
Office has copies of RHIS supervisory guidelines and checklists	2	2	100%
Office maintains a schedule for RHIS supervisory visits	1	2	50%
Office has copies of the reports from RHIS supervisory visits conducted during the current fiscal year	1	2	50%
HFs that received a supervisory visit have copies of the report from latest supervisory visit and commonly agreed action points are listed	2	2	100%

Table 5C.6 Financial resources to support RHIS activities

Financial resources to support RHIS activities

Indicator: % of districts that allocated financial resources for RHIS activities

$$\frac{\text{Total \# of districts that allocated financial resources for RHIS activities}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**District**		
	Numerator	**Denominator**	**%**
Office has a copy of the long-term financial plan for supporting RHIS activities	1	2	50%

Table 5C.7 Infrastructure for RHIS data management

Infrastructure for RHIS data management

Indicator: % of sites with Internet connectivity

$$\frac{\text{Total number of sites with available recording and reporting forms}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module V: Facility/Office Checklist			
Indicator	**Numerator**	**Denominator**	**%**
Access to an Internet network	1	2	50%

Table 5C.8 RHIS supplies for data collection and aggregation—total recording and reporting forms

RHIS supplies for data collection and aggregation

Indicator: Indicator: % of sites with an adequate supply of RHIS recording and reporting forms

$$\frac{\text{Total number of sites with available recording and reporting forms}}{\text{Total \# of sites assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Tool Availability	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	2	2	100%
Maternal health services—Operation theatre printed register	5.2	2	2	100%
Maternal health services—Postnatal ward printed register	5.3	2	2	100%
Maternal health services—Printed death register	5.4	2	2	100%
Child health services				
Child health services—Postnatal ward printed register	6.1	2	2	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	0	2	0%
Child health services—Neonatal inpatient care ward printed register	6.3	0	2	0%
Child health services—Special care newborn ward printed register	6.4	0	2	0%
Child health services—Intensive care newborn ward printed register	6.5	0	2	0%
Child health services—Printed death register	6.6	2	2	100%

Table 5C.9 RHIS supplies for data collection and aggregation—standard recording and reporting forms

Total # of standard RHIS tools available at the facility or office X 100
Total # of tools available at the facility or office

Data Source: Module 5. Facility/Office Checklist				
Standard RHIS tool	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	2	2	100%
Maternal health services—Operation theatre printed register	5.2	2	2	100%
Maternal health services—Postnatal ward printed register	5.3	2	2	100%
Maternal health services—Printed death register	5.4	2	2	100%
Child health services				
Child health services—Postnatal ward printed register	6.1	2	2	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	0	0	
Child health services—Neonatal inpatient care ward printed register	6.3	0	0	
Child health services—Special care newborn ward printed register	6.4	0	0	
Child health services—Intensive care newborn ward printed register	6.5	0	0	
Child health services—Printed death register	6.6	2	2	100%

Table 5C.10 Facilities or offices with no stock-outs of recording and reporting tools within the past six months

Indicator: % of facilities or offices with no stock-outs of recording and reporting tools within the past six months

$$\frac{\text{Total \# of offices that experienced stockouts in last 6 months}}{\text{Total \# of offices assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Stockout	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	2	2	100%
Maternal health services—Operation theatre printed register	5.2	2	2	100%
Maternal health services—Postnatal ward printed register	5.3	2	2	100%
Maternal health services—Printed death register	5.4	2	2	100%
Child health services				
Child health services—Postnatal ward printed register	6.1	2	2	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	0	2	0%
Child health services—Neonatal inpatient care ward printed register	6.3	0	2	0%
Child health services—Special care newborn ward printed register	6.4	0	2	0%
Child health services—Intensive care newborn ward printed register	6.5	0	2	0%
Child health services—Printed death register	6.6	2	2	100%

Table 5C.11 Availability of staff—designated to compile and analyze data

Availability of staff to compile and analyze data

Indicator: % of sites that have designated staff responsible for entering data/compiling reports

$$\frac{\text{Total \# of sites with designated staff responsible for entering data/compiling reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District has a designated person responsible for entering data/compiling reports from health facilities	3	3	100%

Table 5C.12 Availability of staff—designated for internal data quality review

Indicator: % of sites that have designated staff for internal data quality review

$$\frac{\text{Total number of sites that have designated staff for internal data quality review}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District level has a designated person to review the quality of compiled data prior to submission to the next level **(Yes)**	3	3	100%
District level has a designated person to review the quality of compiled data prior to submission to the next level **(Partially)**	0	3	0%

Table 5C.13 Availability of staff—designated for data analysis and dissemination

Indicator: % of sites that have designated staff for data analysis and dissemination

$$\frac{\text{Total \# of sites that have designated staff for data analysis and dissemination}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module V: Facility/Office Checklist										
Staff Code	**Title**	**Responsible for data compilation of reports submitted that are coming from the lower levels**			**Responsible for checking the quality of reports submitted from the lower levels**			**Responsible for data analysis (producing comparison tables, graphs, dashboards)**		
		Numerator	**Denominator**	**Percent**	**Numerator**	**Denominator**	**Percent**	**Numerator**	**Denominator**	**Percent**
1	Head of district health office	0	2	0%	0	2	0%	0	2	0%
2	Program officer	1	2	50%	1	2	50%	1	2	50%
3	Disease surveillance officer	0	2	0%	0	2	0%	0	2	0%
4	M&E/HMIS officer	1	2	50%	1	2	50%	1	2	50%
5	Data clerk	0	2	0%	1	2	50%	1	2	50%
96	Other (specify)	0	2	0%	0	2	0%	0	2	0%

Any designated staff				
Variables		**Numerator**	**Denominator**	**Ratio**
Responsible for data compilation of reports submitted that are coming from the lower levels	Any designated staff	2	12	0.17
Responsible for checking the quality of reports from the lower level	Any designated staff	3	12	0.25
Responsible for data analysis	Any designated staff	3	12	0.25

Table 5C.14 RHIS capacity development—plan

RHIS capacity development

Indicator: % of districts with staff capacity development plan

$$\frac{\text{Total \# of districts with staff capacity development plan}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IV: MAT			
Indicator	**Numerator**	**Denominator**	**%**
Has a costed training and capacity development plan that has benchmarks, timelines, and mechanism for on-the-job RHIS training, RHIS workshops, and orientation for new staff	1	2	50%

Table 5C.15 RHIS capacity development—RHIS training

Indicator: % of staff who have received RHIS training (among those who are responsible for performing various RHIS tasks)

$$\frac{\text{Total \# of staff who have received RHIS training}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of three denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist (District)								
Staff Code	**Staff**	**Numerator**	**Among those responsible for data compilation of reports from the lower levels**		**Among those responsible for checking the quality of reports from the lower levels**		**Among those responsible for data analysis (producing comparison tables, graphs, dashboards)**	
			Denominator	**%**	**Denominator**	**%**	**Denominator**	**%**
1	Head of district health office	1	3	33%	3	33%	3	33%
2	Program officer	1	3	33%	3	33%	3	33%
3	Disease surveillance officer	0	3	0%	3	0%	3	0%
4	M&E/HMIS officer	2	3	67%	3	67%	3	67%
5	Data clerk	0	3	0%	3	0%	3	0%
96	Other (specify)	1	3	33%	3	33%	3	33%

Table 5C.16 RHIS capacity development—Received training by type

Total # of staff receiving training by type of training
Total # of staff who are responsible for RHIS tasks *(one of three denominators possible)* X 100

Data Source—Module V: Facility/Office Checklist (District)										
Variables		**Responsible for data compilation of reports from the lower levels**			**Responsible for checking the quality of reports from the lower level**			**Responsible for data analysis**		
		Numerator	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Subject of last training	Data entry	4	3	133%	4	3	133%	4	3	133%
	Check and verify quality of data	4	3	133%	4	3	133%	4	3	133%
	Generating aggregate reports	4	3	133%	4	3	133%	4	3	133%
	Data analysis and interpretation	6	3	200%	6	3	200%	6	3	200%
	Using data for decision making	4	3	133%	4	3	133%	4	3	133%

Table 5C.17 Commitment and support for high-quality data

Commitment and support for high-quality data

Indicator: Mean score of respondents who perceive that the organization gives due emphasis to data quality

Sum of 3 respondent scores on perceived organizational emphasis on data quality
(Total # of respondents x 5) x 3
X 100

5 being the highest possible score on every answer.
3 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S2, S6, and S8.

Data Source—Module VI: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization gives due emphasis to data quality	38	45	84%

Table 5C.18 Commitment and support of information use

Commitment and support of information use

Indicator: Mean score of respondents who perceive that the organization supports information use

$$\frac{\text{Sum of 4 respondent scores on perceived organizational support of information use}}{\text{(Total \# of respondents x 5) x 4}} \times 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S4, S7, P5, and P8.

Data Source—Module VI: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization supports information use	49	60	82%

Table 5C.19 Evidence-based decision making

Evidence-based decision making

Indicator: Mean score of respondents who perceive that the organization promotes a culture of evidence-based decision making

$$\frac{\text{Sum of 9 respondent scores on perceived organizational culture of evidence-based decision making}}{\text{(Total \# of respondents x 5) x 9}} \times 100$$

5 being the highest possible score on every answer.
9 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions D1 through D9.

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives the organization as promoting a culture of evidence-based decision making	94	150	63%

Table 5C.20 Promotion of problem solving

Promotion of problem solving

Indicator: Mean score of respondents who perceive that the organization promotes a culture of problem solving

$$\frac{\text{Sum of 4 respondent scores on perceived organizational promotion of a problem-solving culture}}{\text{Total \# of respondents x 5 x 4}} \times 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S5, P6, P7, and P9.

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes a culture of problem solving	48	60	80%

Table 5C.21 Sharing information between levels

Sharing information between levels

Indicator: Mean score of respondents who perceive that the organization promotes bidirectional flow of feedback

$$\frac{\text{Sum of 2 respondent scores on perceived organizational promotion of bidirectional flow of feedback}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S1 and S3.

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes bidirectional flow of feedback	24	30	80%

Table 5C.22 Sense of responsibility

Sense of responsibility

Indicator: Mean score of respondents who perceive that the organization has a culture that instills a sense of responsibility

$$\frac{\text{Sum of 5 respondent scores on perceived organizational culture of instilling a sense of responsibility}}{\text{(Total \# of respondents x 5) x 5}} \times 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume the same number of people answered questions P1, P2, P3, P4, and P12.

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization has a culture that instills a sense of responsibility	60	75	80%

Table 5C.23 Empowerment and accountability

Empowerment and accountability

Indicator: Mean score of respondents who perceive that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information

$$\frac{\text{Sum of 2 respondent scores on perceived organizational empowering for learning and improvement}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions P10 and P11.

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information	24	30	80%

Table 5C.24 Rewarding good performance

Rewarding good performance

Indicator: Mean score of respondents who perceive that the organization recognizes and rewards good performance

$$\frac{\text{Sum of respondent scores on perceived organizational recognition and reward of performance}}{\text{Total \# of respondents x 5}} \times 100$$

5 being the highest possible score on every answer.

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization recognizes and rewards good performance	12	15	80%

Table 5C.25 Data quality assurance

Data quality assurance

Indicator: Mean score of level of perceived ability to perform data quality checks

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to perform data quality checks}}{\text{Total \# of respondents X10}} \times 100$$

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can check data accuracy	28	30	93%

Table 5C.26 Calculating indicators

Calculating indicators

Indicator: Mean score of level of perceived ability to calculate indicators

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to calculate indicators}}{\text{Total \# of respondents X10}} \times 100$$

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can calculate percentages/rates correctly	27	30	90%

Table 5C.27 Data presentation

Data presentation

Indicator: Mean score of level of perceived ability to prepare data visuals

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to prepare data visuals}}{\text{Total \# of respondents x10}} \text{ X } 100$$

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can plot a trend on a chart	28	30	93%

Table 5C.28 Data interpretation

Data interpretation

Indicator: Mean score of level of perceived ability to interpret data

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to interpret data}}{\text{Total \# of respondents x10}} \text{ X } 100$$

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can explain the implication of the results of the data analysis	27	30	90%

Table 5C.29 Use of information

Use of information

Indicator: Mean scores of level of perceived ability to use information for problem-solving or making decisions

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to use information for problem-solving or decision making}}{\text{Total \# of respondents x10}} \text{ X } 100$$

Data Source—Module IV: OBAT			
	District		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can use data for identifying service performance gaps and setting performance targets	29	30	97%
Respondent believes that they can use data for making operational/ management decisions	13	30	43%
Combined score			70%

Table 5C.30 Motivation among staff

The motivation among staff

Indicator: Mean score of Staff motivation level to perform RHIS tasks

$$\frac{\text{Sum of 5 respondent scores on perceived staff motivation to perform RHIS tasks}}{\text{(Total \# of respondents x 5) x 7}} \text{ X } 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions BC1 through BC5.

Indicator	Numerator	Denominator	%
Respondent's motivation to perform RHIS tasks	67	105	64%

Table 5C.31 Knowledge of the rationale for RHIS data

Knowledge

Indicator: Mean scores of knowledge of the rationale for RHIS data

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT				
		District		
		Numerator	**Denominator**	**%**
Indicator				
Describe at least three reasons for collecting or using the following data on a monthly basis	Maternal or newborn diseases/conditions/diagnoses on a monthly basis	7	9	78%
	Maternal or Newborn Immunization	6	9	67%
	Maternal age	6	9	67%
	Age of newborn	5	9	56%
	Geographical data or residence of families	4	9	44%
	Why population data is needed	3	9	33%
Knowledge of the rationale for RHIS data				**57%**

Table 5C.32 Knowledge of data quality checking methods

Indicator: Mean scores of knowledge of data quality checking methods

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT			
	District		
Questions	**Numerator**	**Denominator**	**%**
Describe at least three aspects of data quality	8	9	89%
Describe at least three ways of ensuring data quality relevant to your job classification/responsibilities	8	9	89%
Knowledge of data quality checking methods			89%

Table 5C.33 Actual skills to perform RHIS tasks—competence level in calculating indicators

Actual skills to perform RHIS tasks

Indicator: Mean scores of competency level in calculating indicators

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	District		
Questions	**Numerator**	**Denominator**	**%**
Calculate the percentage of pregnant mothers at the district level attending antenatal care in the current period	2	3	67%
What is the neonatal mortality rate?	1	3	33%
Calculate the number of women or newborns who died	1	3	33%
Competence level in calculating indicators			**44%**

Table 5C.34 Actual skills to perform RHIS tasks—competence level in plotting data/preparing charts

Indicator: Mean score of competency level in plotting data/preparing charts

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}} \times 100$$

Data Source—Module IV: OBAT			
	District		
Questions	**Numerator**	**Denominator**	**%**
Develop a bar chart depicting the distribution across the maternal ages of newborns with a low birthweight at the four facilities	2	3	67%

Table 5C.35 Actual skills to perform RHIS tasks—interpreting data

Indicator: Mean scores of competency level in interpreting data
$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x2}}$ X 100

Data Source—Module IV: OBAT			
	District		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **CD2b**: Interpret the graph presented in CD2b	3	6	50%
Scoring for CD2c (CD2c1 +CD2c2): Does the district level have the coverage rate (80%) by the end of 2020 for CD2c1? What guidance could you provide on these data for CD2C2?	3	6	50%
Competence level in interpreting data			50%

Table 5C.36 Actual skills to perform RHIS tasks—competence level in problem solving

Indicator: Mean scores of competency level in problem solving
$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x n (n=2, 3, or 5)}}$ X 100

Data Source—Module IV: OBAT			
	District		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **PSa**: Description of data quality problem	1	6	17%
Scoring for **PSb:** Potential reasons for data quality problem	1	9	11%
Scoring for **PSc:** Major activities to improve the data quality	3	15	20%
Competence level in problem solving			**16%**

Table 5C.37 Actual skills to perform RHIS tasks—competence level in use of information

Indicator: Mean scores of competency level in use of information
$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents}}$ X 100

Data Source—Module IV: OBAT			
	District		
Scoring	**Numerator**	**Denominator**	**%**
Scoring for **CD2d1**: Provide at least one use of the chart findings at the facility level	2	3	67%
Scoring for **CD2d2**: Provide at least one use of the chart findings at the community level	2	3	67%
Scoring for CD2d3: Provide at least one use of the chart findings at the district level	2	3	67%
Competence level in use of information			67%

Section 5D. Tables: Organizational Factors—Facility Level

D. RHIS Performance Determinants: Organizational Factors-Facility Level

Table 5D.1 Supervision quality

Supervision quality

Indicator: % of districts that have effective supportive supervision to improve RHIS performance

Indicator: % of districts that have effective supportive supervision practices /tools to improve RHIS performance

$$\frac{\text{Sum of site's points}}{\text{Total \# of sites assessed x 6}} \times 100$$

The method to calculate a site's score is outlined below. Add the number of points based on the respondent's answers. These point are your numerator. Numerator scores can range from 1 to 6.

Frequency of district's supervision visits at facilities

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)				
Indicators		**Numerator**	**Denominator**	**Global score of quality of supervision**
Frequency of district supervisor's visit(s) over the past three months, among the facilities that received supervision visit(s)	>4 times	1	16	6%
	4 times	0	16	0%
	3 times	3	16	19%
	2 times	3	16	19%
	1 time	6	16	38%
Facility did not receive a supervision visit		3	16	19%
% of facilities supervised at least once		13	16	81%

Table 5D.2 Supervision quality—overall score

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicators	**Points to add to numerator**	**Denominator**	**%**
Overall quality of supervision	55	65	85%

Table 5D.3 Supervision quality at facility level—individual and mean scores

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicators	**Numerator**	**Denominator**	**%**
Supervisor checked the data quality	13	13	100%
Supervisor used checklist to assess data quality	11	13	85%
During visit, district supervisor discussed health facility's performance based on RHIS information	13	13	100%
Supervisor helped respondent make a decision or take corrective action based on the discussion	13	13	100%
Supervisor sent a report/written feedback on the last supervisory visit(s)	5	13	38%
Global quality of supervision			85%

Table 5D.4 Infrastructure for RHIS—data management

Infrastructure for RHIS data management

Indicator: % of sites with Internet connectivity

$$\frac{\text{Total number of sites with available recording and reporting forms}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module V: Facility/Office Checklist			
Indicator	**Numerator**	**Denominator**	**%**
Access to an internet network	12	16	75%

Table 5D.5 RHIS supplies for data collection and aggregation—total recording and reporting forms

RHIS supplies for data collection and aggregation
Indicator: % of sites with an adequate supply of RHIS recording and reporting forms

$$\frac{\text{Total \# of sites with available recording and reporting forms}}{\text{Total \# of sites assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Tool Availability	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	16	16	100%
Maternal health services—Operation theatre printed register	5.2	1	16	6%
Maternal health services—Postnatal ward printed register	5.3	16	16	100%
Maternal health services—Printed death register	5.4	4	16	25%
Child health services				
Child health services—Postnatal ward printed register	6.1	9	16	56%
Child health services—Kangaroo mother care ward/corner printed register	6.2	1	16	6%
Child health services—Neonatal inpatient care ward printed register	6.3	2	16	13%
Child health services—Special care newborn ward printed register	6.4	0	16	0%
Child health services—Intensive care newborn ward printed register	6.5	1	16	6%
Child health services—Printed death register	6.6	4	16	25%

Table 5D.6 RHIS supplies for data collection and aggregation—standard recording and reporting forms

Indicator: % of sites with an adequate supply of standard RHIS recording and reporting forms

$$\frac{\text{Total \# of standard RHIS tools available at the facility or office}}{\text{Total \# of tools available at the facility or office}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Standard RHIS tool	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	16	16	100%
Maternal health services—Operation theatre printed register	5.2	1	1	0%
Maternal health services—Postnatal ward printed register	5.3	16	16	100%
Maternal health services—Printed death register	5.4	4	4	50%
Child health services				
Child health services—Postnatal ward printed register	6.1	9	9	100%
Child health services—Kangaroo mother care ward/corner printed register	6.2	1	1	100%
Child health services—Neonatal inpatient care ward printed register	6.3	2	2	100%
Child health services—Special care newborn ward printed register	6.4	0	0	100%
Child health services—Intensive care newborn ward printed register	6.5	1	1	100%
Child health services—Printed death register	6.6	4	4	100%

Table 5D.7 Facilities or offices with no stock-outs of recording and reporting tools within the past six months

Indicator: % of facilities or offices with no stock-outs of recording and reporting tools within the past six months

$$\frac{\text{Total \# of offices that experienced no stockouts (always available) in last 6 months}}{\text{Total \# of offices assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist				
Stock available	**Tools ID**	**Numerator**	**Denominator**	**%**
Maternal health services				
Maternal health services—Labour and delivery printed register	5.1	16	16	100%
Maternal health services—Operation theatre printed register	5.2	1	16	6%
Maternal health services—Postnatal ward printed register	5.3	16	16	100%
Maternal health services—Printed death register	5.4	4	16	25%
Child health services				
Child health services—Postnatal ward printed register	6.1	9	16	56%
Child health services—Kangaroo mother care ward/corner printed register	6.2	1	16	6%
Child health services—Neonatal inpatient care ward printed register	6.3	2	16	13%
Child health services—Special care newborn ward printed register	6.4	0	16	0%
Child health services—Intensive care newborn ward printed register	6.5	1	16	6%
Child health services—Printed death register	6.6	4	16	25%

Table 5D.8 Availability of staff—Designated to compile and analyze data

Availability of staff to compile and analyze data

Indicator: % of sites that have designated staff responsible for entering data/compiling reports

$$\frac{\text{Total \# of sites with designated staff responsible for entering data/compiling reports}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	%
A designated person enters data/compiles reports from the different units in the health facility	13	16	81%

Table 5D.9 Availability of staff—designated for internal data quality review

Indicator: % of sites that have designated staff for internal data quality review

$$\frac{\text{Total number of sites that have designated staff for internal data quality review}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
District level has a designated person to review the quality of compiled data prior to submission to the next level **(Yes)**	13	16	81%
District level has a designated person to review the quality of compiled data prior to submission to the next level **(Partially)**	0	16	0%

Table 5D.10 Availability of staff—designated for data analysis and dissemination

Indicator: % of sites that have designated staff for data analysis and dissemination

$$\frac{\text{Total \# of sites that have designated staff for data analysis and dissemination}}{\text{Total \# of sites assessed}} \times 100$$

Data Source: Module 5. Facility/Office Checklist							
Staff Code	**Title**	**Filling out registers**			**For preparing or completing reports**		
		Numerator	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
1	Medical officer	5	16	31%	3	16	19%
2	Comprehensive nurse registered	11	16	69%	9	16	56%
3	Comprehensive nurse enrolled	11	16	69%	10	16	63%
4	Nursing assistant	6	16	38%	5	16	31%
5	Clinical officer	10	16	63%	8	16	50%
6	Laboratory assistant	2	16	13%	1	16	6%
7	Health assistant	0	16	0%	1	16	6%
8	Dispenser	0	16	0%	0	16	0%
9	Health information assistant	1	16	6%	1	16	6%
10	Health educator	0	16	0%	0	16	0%
11	Health inspector	0	16	0%	0	16	0%
12	Laboratory technician	0	16	0%	1	16	6%
13	Public health dental assistant	0	16	0%	0	16	0%
14	Anesthetic officer	0	16	0%	1	16	6%
15	Midwife	4	16	25%	1	16	6%
16	Support staff	0	16	0%	0	16	0%
96	Other (specify)	0	16	0%	0	16	0%

Table 5D.11 Ratio designated staff for data analysis and dissemination per facility

Data Source—Module V: Facility/Office Checklist				
		Facility		
Variables		Numerator	Denominator	Ratio
Someone responsible for filling out registers	Any designated staff	50	16	3.13
Someone responsible for preparing or completing the HMIS monthly reports	Any designated staff	41	16	2.56

Table 5D.12 RHIS capacity development—RHIS training

RHIS capacity development

Indicator: % of staff who have received RHIS training (among those who are responsible for performing various RHIS tasks)

$$\frac{\text{Total \# of staff received RHIS training among those responsible for RHIS tasks}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of two denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist						
			Among those responsible for filling out registers at facility		Among those responsible for preparing/ completing monthly HMIS reports	
Staff Code	Staff	Numerator	Denominator 1	%	Denominator 2	%
1	Medical officer	4	5	80%	3	133%
2	Comprehensive nurse registered	4	11	36%	9	44%
3	Comprehensive nurse enrolled	5	11	45%	10	50%
4	Nursing assistant	0	6	0%	5	0%
5	Clinical officer	3	12	25%	8	36%
6	Laboratory assistant	0	2	0%	1	0%
7	Health assistant	0	0		1	0%
8	Dispenser	0	0		0	
9	Health information assistant	1	1	100%	1	100%
10	Health educator	0	0		0	
11	Health inspector	0	0		0	0%
12	Laboratory technician	0	0		1	0%
13	Public health dental assistant	0	0		0	0%
14	Anesthetic officer	0	0		1	
15	Midwife	1	4	25%	1	100%
16	Support staff	0	0		0	
96	Other (specify)	0	6		0	

Table 5D.13 RHIS capacity development—received training by type

Indicator: % of staff who have received training, by type of training

$$\frac{\text{Total \# of staff receiving training, by type of training}}{\text{Total \# of staff who are responsible for RHIS tasks } \textit{(one of two denominators possible)}} \times 100$$

Data Source—Module V: Facility/Office Checklist							
		Responsible for filling out the registers			Responsible for preparing or completing the HMIS monthly reports		
Variables		Numerator	Denominator	%	Numerator	Denominator	%
Subject of last training	Data collection	14	50	28%	14	41	34%
	Data analysis	7	50	14%	7	41	17%
	Data display	7	50	14%	7	41	17%
	Data reporting	12	50	24%	12	41	29%
	Using data for decision making	7	50	14%	7	41	17%

Table 5D.14 Commitment and support for high-quality data

Commitment and support for high-quality data

Indicator: Mean score of respondents who perceive that the organization gives due emphasis to data quality

$$\frac{\text{Sum of 3 respondent scores on perceived organizational emphasis on data quality}}{\text{(Total \# of respondents x 5) x 3}} \times 100$$

5 being the highest possible score on every answer.
3 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S2, S6, and S8.

Data Source—Module VI: OBAT			
	Health Facility		
Indicator	Numerator	Denominator	%
Respondent perceives that the organization gives due emphasis to data quality	222	300	74%

Table 5D.15 Commitment and support of information use

Commitment and support of information use

Indicator: Mean score of respondents who perceive that the organization supports information use

$$\frac{\text{Sum of 4 respondent scores on perceived organizational support of information use}}{\text{(Total \# of respondents x 5) x 4}} \times 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S4, S7, P5, and P8.

See additional instructions above in section J.

Data Source—Module VI: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization supports information use	275	400	69%

Table 5D.16 Evidence-based decision making

Evidence-based decision making

Indicator: Mean score of respondents who perceive that the organization promotes a culture of evidence-based decision making

$$\frac{\text{Sum of 9 respondent scores on perceived organizational culture of evidence-based decision making}}{\text{(Total \# of respondents x 5) x 9}} \times 100$$

5 being the highest possible score on every answer.
9 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions D1 through D9.

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives the organization as promoting a culture of evidence-based decision making	561	1000	56%

Table 5D.17 Promotion of problem solving

Promotion of problem solving

Indicator: Mean score of respondents who perceive that the organization promotes a culture of problem solving

$$\frac{\text{Sum of 4 respondent scores on perceived organizational promotion of a problem-solving culture}}{\text{Total \# of respondents x 5 x 4}} \times 100$$

5 being the highest possible score on every answer.
4 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions S5, P6, P7, and P9.

See additional instructions above in section J.

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes a culture of problem solving	273	400	68%

Table 5D.18 Sharing information between levels

Sharing information between levels

Indicator: Mean score of respondents who perceive that the organization promotes bidirectional flow of feedback

$$\frac{\text{Sum of 2 respondent scores on perceived organizational promotion of bidirectional flow of feedback}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.

2 being the number of questions asked to calculate this specific indicator.

We assume that the same number of people answered questions S1 and S3.

See additional instructions above in section J.

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization promotes bidirectional flow of feedback	141	200	71%

Table 5D.19 Sense of responsibility

Sense of responsibility
Indicator: Mean score of respondents who perceive that the organization has a culture that instills a sense of responsibility

$$\frac{\text{Sum of 5 respondent scores on perceived organizational culture of instilling a sense of responsibility}}{\text{(Total \# of respondents x 5) x 5}} \times 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume the same number of people answered questions P1, P2, P3, P4, and P12.

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization has a culture that instills a sense of responsibility	362	500	72%

Table 5D.20 Empowerment and accountability

Empowerment and accountability

Indicator: Mean score of respondents who perceive that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information

$$\frac{\text{Sum of 2 respondent scores on perceived organizational empowering for learning and improvement}}{\text{(Total \# of respondents x 5) x 2}} \times 100$$

5 being the highest possible score on every answer.
2 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions P10 and P11.

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information	144	200	72%

Table 5D.21 Rewarding good performance

Rewarding good performance **Indicator: Mean score of respondents who perceive that the organization recognizes and rewards good performance** $\frac{\text{Sum of respondent scores on perceived organizational recognition and reward of performance}}{\text{Total \# of respondents x 5}}$ X 100
5 being the highest possible score on every answer.

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent perceives that the organization recognizes and rewards good performance	69	100	69%

Table 5D.22 Data quality assurance

Data quality assurance **Indicator: Mean score of level of perceived ability to perform data quality checks** $\frac{\text{Sum of all self-ratings from 0–10 on ability to perform data quality checks}}{\text{Total \# of respondents X10}}$ X 100

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can check data accuracy	145	200	73%

Table 5D.23 Calculating indicators

Calculating indicators **Indicator: Mean score of level of perceived ability to calculate indicators** $\frac{\text{Sum of all self-ratings from 0–10 on ability to calculate indicators}}{\text{Total \# of respondents x10}}$ X 100

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can calculate percentages/rates correctly	134	200	67%

Table 5D.24 Data presentation

Data presentation

Indicator: Mean score of level of perceived ability to prepare data visuals

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to prepare data visuals}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can plot a trend on a chart	135	200	68%

Table 5D.25 Data interpretation

Data interpretation

Indicator: Mean score of level of perceived ability to interpret data

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to interpret data}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can explain the implication of the results of the data analysis	143	200	72%

Table 5D.26 Use of information

Use of information

Indicator: Mean scores of level of perceived ability to use information for problem-solving or making decisions

$$\frac{\text{Sum of all self-ratings from 0–10 on ability to use information for problem-solving or decision making}}{\text{Total \# of respondents x10}} \times 100$$

Data Source—Module IV: OBAT			
	Health Facility		
Indicator	**Numerator**	**Denominator**	**%**
Respondent believes that they can use data for identifying service performance gaps and setting performance targets	144	200	72%
Respondent believes that they can use data for making operational/ management decisions	144	200	72%
Combined score			72%

Table 5D.27 The motivation among staff

The motivation among staff

Indicator: Mean score of Staff motivation level to perform RHIS tasks

$$\frac{\text{Sum of 5 respondent scores on perceived staff motivation to perform RHIS tasks}}{\text{(Total \# of respondents x 5) x 7}} \times 100$$

5 being the highest possible score on every answer.
5 being the number of questions asked to calculate this specific indicator.
We assume that the same number of people answered questions BC1 through BC5.

Indicator	Numerator	Denominator	%
Respondent's motivation to perform RHIS tasks	316	700	45%

Table 5D.28 Knowledge

Knowledge

Indicator: Mean scores of knowledge of the rationale for RHIS data

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT				
		Health Facility		
		Numerator	Denominator	%
Indicator				
Describe at least three reasons for collecting or using the following data on a monthly basis	Maternal or newborn diseases/ conditions/ diagnoses on a monthly basis	36	60	60%
	Maternal or newborn Immunization	35	60	58%
	Maternal age	40	60	67%
	Age of newborn	34	60	57%
	Geographical data or residence of families	31	60	62%
	Why population data is needed	40	60	67%
Knowledge of the rationale for RHIS data				**60%**

Table 5D.29 Knowledge of data quality checking methods

Indicator: Mean scores of knowledge of data quality checking methods

$$\frac{\text{Sum of respondent scores on the selected different items}}{\text{Total \# of respondents x 3}} \times 100$$

Data Source—Module IV: OBAT			
	Health Facility		
Questions	**Numerator**	**Denominator**	**%**
Describe at least three aspects of data quality	33	60	55%
Describe at least three ways of ensuring data quality relevant to your job classification/ responsibilities	31	60	52%
Knowledge of data quality checking methods			**53%**

Table 5D.30 Actual skills to perform RHIS tasks—competence level in calculating indicators

Actual skills to perform RHIS tasks
Indicator: Competence level in calculating indicators

Data Source—Module VI: OBAT			
	Health Facility		
	Numerator	**Denominator**	**%**
Calculate the % of eligible newborns receiving KMC (head of the facility)	1	20	5%
What is the neonatal mortality rate—boys? (head of the facility)	1	20	5%
What is the neonatal mortality rate—girls? (head of the facility)	2	20	10%
What is the neonatal mortality rate? (agents)	1	20	5%
Calculate the number of newborns who died (agent)	1	20	5%
Competence level in calculating indicators			**6%**

Table 5D.31 Actual skills to perform RHIS tasks—competence level in plotting data/preparing charts

Indicator: Competence level in plotting data/preparing charts

Scoring for CS2a: Correct presentation of the line graph gets one point. Wrong answers (or no answers) get a score of zero.

Data Source—Module VI: OBAT			
	Facility		
Question	**Numerator**	**Denominator**	**%**
Develop a line graph depicting the trend over one year of KMC coverage among eligible babies born at X health facility	2	20	10%

Table 5D.32 Actual skills to perform RHIS tasks—competence level interpreting data

Indicator: Competence level in interpreting data

Data Source—Module VI: OBAT			
	Numerator	**Denominator**	**%**
Scoring for **CF2b**: What the graph tells you	7	40	18%
Scoring for **CF2c**: Calculate target	5	40	13%
Scoring for **CS2b**: Interpret a graph	1	40	3%
Scoring for **CS2c**: Pointing out specificity of a graph, trend, or irregularity	1	20	5%
Competence level in interpreting data			**9%**

Table 5D.33 Actual skills to perform RHIS tasks—competence level in problem solving (individual)

Indicator: Competence level in problem solving (individual)

Data Source—Module VI: OBAT			
	Numerator	**Denominator**	**%**
Scoring for **PSa**: Description of data quality problem	15	40	38%
Scoring for **PSb:** Potential reasons for data quality problem	36	60	60%
Scoring for **PSc:** Major activities to improve the data quality	40	100	40%
Competence level in problem solving			**46%**

Table 5D.34 Actual skills to perform RHIS tasks—competence level in problem solving (group)

Indicator: Competence level in problem solving (group)

Data Source—Module VI: OBAT			
	Numerator	**Denominator**	**%**
Scoring for **PSb-X1:** Potential reasons for data quality problem	3	60	5%
Scoring for **PSc-X2:** Major activities to improve the data quality	5	100	5%
Competence level in problem solving			5%

Table 5D.35 Actual skills to perform RHIS tasks—competence level in use of information

Indicator: Competence level in use of information

Data Source—Module VI: OBAT			
	Numerator	**Denominator**	**%**
Scoring for **CS2d1**: Provide at least one use of chart findings at the facility level.	5	20	25%
Scoring for **CS2d2**: Provide at least one use of chart findings at the community level.	5	20	25%
Scoring for CS2d1: Provide at least one use of chart findings at the facility level.	1	20	5%
Scoring for CS2d2: Provide at least one use of chart findings at the community level.	1	20	5%
Competence level in use of information			**15%**

5E. Summary Tables for Organizational Factors

Table 5E.1 Summary tables for Organizational Factors—overall

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
RHIS governance	Good RHIS governance structures in place	Has a written document describing the RHIS mission, roles, and responsibilities that are related to strategic and policy decisions at central and higher levels	*	*	*	1	1	100%	1	2	50%			
		Has current health service organizational and staff charts showing positions related to health information	*	*	*	1	1	100%	2	2	100%			
		Has overall framework and plan for information and communication technology (ICT), (e.g., describing the required equipment and plans for training in the use of ICT for RHIS)	*	*	*	1	1	100%	2	2	100%			
		Office maintains documentation of the dissemination of the RHIS monthly/ quarterly reports to the various health program staff at the central level, the community, local administration, NGOs, etc.	*	*	*	1	1	100%	2	2	100%			

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
	Existence of RHIS data management guidelines	Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process (Completely)	*	*	*	1	1	100%	2	2	100%			
		Has written SOPs and procedural guidelines for RHIS with data definition, data collection and reporting, data aggregation, processing, and transmission, data analysis, dissemination and use, data quality assurance, MFL, ICD classification, data security, and performance improvement process (Partially)	*	*	*	0	1	0%	0	2	0%			
RHIS planning	% of sites with copies of national HIS documents	Has a copy of the national HIS situation analysis/assessment report that is less than three years old	*	*	*	1	1	100%	2	2	0%			
		Has a copy of the national three or five-year HIS strategic plan	*	*	*	1	1	100%	2	2	50%			

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Use of quality improvement standards	% of sites that have RHIS quality improvement standards	Has set RHIS performance targets RHIS performance targets for data accuracy for their respective administrative areas	*	*	*	1	1	100%	2	2	100%			
		Has set RHIS performance targets RHIS performance targets for data completeness for their respective administrative areas	*	*	*	1	1	100%	2	2	100%			
		Has set RHIS performance targets RHIS performance targets for data timeliness for their respective administrative areas	*	*	*	1	1	100%	2	2	100%			
Supervision quality	Existence effective supportive supervision practices /tools availability to improve RHIS performance	Office has copies of RHIS supervisory guidelines and checklists	*	*	*	1	1	100%	1	2	100%			
		Office maintains a schedule for RHIS supervisory visits	*	*	*	0	1	0%	1	2	50%			
		Office has copies of the reports from RHIS supervisory visits conducted during the current fiscal year	*	*	*	1	1	100%	1	2	50%			
		HFa that received a supervisory visit have copies of the report from latest supervisory visit and commonly agreed action points are listed	*	*	*	0	1	0%	2	2	100%			

			Central			Regional			District			Facility		
Domain	Indicator		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
	% of districts that have effective supportive supervision to improve RHIS performance	Frequency of district supervisor's visit(s) over the past three months, among the facilities that received supervision visit(s) >4 times										1	16	6%
		Frequency of district supervisor's visit(s) over the past three months, among the facilities that received supervision visit(s) 4 times										0	16	0%
		Frequency of district supervisor's visit(s) over the past three months, among the facilities that received supervision visit(s) 3 times										3	16	19%
		Frequency of district supervisor's visit(s) over the past three months, among the facilities that received supervision visit(s) 2 times										3	16	19%
		Frequency of district supervisor's visit(s) over the past three months, among the facilities that received supervision visit(s) 1 time										6	16	38%
		Facility did not receive a supervision visit										3	16	19%
		% of facilities supervised at least once										13	16	81%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
	Quality of Supervision	Supervisor checked the data quality										13	13	100%
		Supervisor used checklist to assess data quality										11	13	85%
		During visit, district supervisor discussed health facility's performance based on RHIS information										13	13	100%
		Supervisor helped respondent make a decision or take corrective action based on the discussion										13	13	100%
		Supervisor sent a report/written feedback on the last supervisory visit(s)										5	13	38%
		Overall quality of supervision										55	65	85%
Financial resources to support RHIS activities	Existence of financial resource allocation for RHIS activities	Office has a copy of the long-term financial plan for supporting RHIS activities	*	*	*	1	1	100%	1	2	50%			
Infrastructure for RHIS data management	Existence of Internet connectivity	Access to an Internet network	*	*	*	1	1	100%	1	2	50%	12	16	75%

			Central			Regional			District			Facility		
Domain	Indicator		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
RHIS supplies for data collection and aggregation	Existence of adequate supply of RHIS recording/ reporting forms at the central level	Maternal health services—Labour and delivery printed register	*	*	*	1	1	100%	2	2	100%	16	16	100%
		Maternal health services—Operation theatre printed register	*	*	*	0	1	0%	2	2	100%	1	16	6%
		Maternal health services—Postnatal ward printed register	*	*	*	1	1	100%	2	2	100%	16	16	100%
		Maternal health services—Printed death register	*	*	*	0	1	0%	2	2	100%	4	16	25%
		Child health services—Postnatal ward printed register	*	*	*	1	1	100%	2	2	100%	9	16	56%
		Child health services—Kangaroo mother care ward/corner printed register	*	*	*	1	1	100%	0	2	0%	1	16	6%
		Child health services—Neonatal inpatient care ward printed register	*	*	*	1	1	100%	0	2	0%	2	16	13%
		Child health services—Special care newborn ward printed register	*	*	*	0	1	0%	0	2	0%	0	16	0%
		Child health services—Intensive care newborn ward printed register	*	*	*	1	1	100%	0	2	0%	1	16	6%
		Child health services—Printed death register	*	*	*	1	1	100%	2	2	100%	4	16	25%

			Central			Regional			District			Facility		
Domain	Indicator		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
	Existence of adequate supply of standard RHIS recording/ reporting forms at the central level	Maternal health services—Labour and delivery printed register	*	*	*	1	1	100%	2	2	100%	16	16	100%
		Maternal health services—Operation theatre printed register	*	*	*	0	0		2	2	100%	1	1	100%
		Maternal health services—postnatal ward printed register	*	*	*	1	1	100%	2	2	100%	16	16	100%
		Maternal health services—Printed death register	*	*	*	0	0		2	2	100%	4	4	100%
		Child health services—Postnatal ward printed register	*	*	*	1	1	100%	2	2	100%	9	9	100%
		Child health services—Kangaroo mother care ward/corner printed register	*	*	*	1	1	100%	0	0		1	1	100%
		Child health services—Neonatal inpatient care ward printed register	*	*	*	1	1	100%	0	0		2	2	100%
		Child health services—Special care newborn ward printed register	*	*	*	0	0		0	0		0	0	
		Child health services—Intensive care newborn ward printed register	*	*	*	1	1	100%	0	0		1	1	100%
		Child health services—Printed death register	*	*	*	1	1	100%	2	2	100%	4	4	100%

			Central			Regional			District			Facility		
Domain	Indicator		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
	Experienced no stock-outs in last 6 months	Maternal health services—Labour and delivery printed register	*	*	*	1	1	100%	2	2	100%	16	16	100%
		Maternal health services—Operation theatre printed register	*	*	*	0	1	0%	2	2	100%	1	16	6%
		Maternal health services—Postnatal ward printed register	*	*	*	1	1	100%	2	2	100%	16	16	100%
		Maternal health services—Printed death register	*	*	*	0	1	0%	2	2	100%	4	16	25%
		Child health services—Postnatal ward printed register	*	*	*	1	1	100%	2	2	100%	9	16	56%
		Child health services—Kangaroo mother care ward/corner printed register	*	*	*	1	1	100%	0	2	0%	1	16	6%
		Child health services—Neonatal inpatient care ward printed register	*	*	*	1	1	100%	0	2	0%	2	16	13%
		Child health services—Special care newborn ward printed register	*	*	*	0	1	0%	0	2	0%	0	16	0%
		Child health services—Intensive care newborn ward printed register	*	*	*	0	1	0%	0	2	0%	1	16	6%
		Child health services—Printed death register	*	*	*	1	1	100%	2	2	100%	4	16	25%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Availability of staff to compile and analyze data	Existence of designated staff responsible for compiling reports	Site level has a designated person responsible for entering data/compiling reports from health facilities	*	*	*	1	1	100%	2	2	100%	13	16	81%
	Existence of designated staff for internal data quality review	Site level has a designated person to review the quality of compiled data prior to submission to the next level (Yes)	*	*	*	1	1	100%	2	2	100%	13	16	81%
		Site level has a designated person to review the quality of compiled data prior to submission to the next level (Partially)	*	*	*	0	1	0%	0	2	0%	0	16	0%

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**Ratio**	**Numerator**	**Denominator**	**Ratio**	**Numerator**	**Denominator**	**Ratio**	**Numerator**	**Denominator**	**Ratio**
Availability of staff to analyze and disseminate data	Existence of designated staff for data analysis and dissemination at the level	Responsible for data analysis	*	*	*	3	6	0.50	3	12	0.25			
		Responsible for checking the quality of reports from the lower level	*	*	*	2	6	0.33	3	12	0.25			
		Responsible for data compilation of reports submitted that are coming from the lower levels	*	*	*	2	6	0.33	2	12	0.17			
		for preparing or completing the RHIS monthly reports										41	16	2.56
		Responsible for filling out registers										50	16	3.13

			Central			Regional			District			Facility		
	Indicator		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
RHIS capacity development	Existence of staff capacity development plan at the site level	Has a costed training and capacity development plan that has benchmarks, timelines, and mechanism for on-the-job RHIS training, RHIS workshops, and orientation for new staff	*	*	*	1	1	100%	1	2	50%			
	% of staff who are responsible for filling out registers who have received RHIS training	Received any RHIS training										18	52	35%
		Received training on data collection										14	50	28%
	% of staff responsible for preparing or completing the RHIS monthly reports who have received RHIS training	Received any RHIS training										18	29	62%
		Received training on data reporting										12	41	29%
		Received any RHIS training	*	*	*	3	2	150%	5	2	250%			

			Central			Regional			District			Facility		
	Indicator		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
	% of staff responsible for data compilation of reports from the lower levels who have received RHIS training	Received training on data aggregation	*	*	*	3	2	150%	4	2	200%			
	% of staff responsible for checking the quality of reports from the lower levels from the lower levels who have received RHIS training	Received any RHIS training	*	*	*	3	2	150%	5	3	167%			
		Received training on check and verify quality of data	*	*	*	3	2	150%	4	3	133%			
	% of staff responsible for data analysis (producing comparison tables, graphs, dashboards) who have received RHIS training	Received any RHIS training	*	*	*	3	3	100%	3	3	100%			
		Received training on data analysis and interpretation	*	*	*	3	3	100%	6	3	200%			

Promotion of an information culture

		Central			Regional			District			Facility		
Domain	**Indicator**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Commitment and support for high-quality data	Respondent perceives that the organization gives due emphasis to data quality	*	*	*	14	15	93%	38	45	84%	22	300	74%
Commitment and support of information use	Respondent perceives that the organization supports information use	*	*	*	19	20	95%	49	60	82%	275	400	69%
Evidence-based decision making	Respondent perceives the organization as promoting a culture of evidence-based decision making	*	*	*	33	50	66%	94	150	63%	561	1000	56%
Promotion of problem solving	Respondent perceives that the organization promotes a culture of problem solving	*	*	*	18	20	90%	48	60	80%	273	400	68%
Sharing information between levels	Respondent perceives that the organization promotes bidirectional flow of feedback	*	*	*	8	10	80%	24	30	80%	141	200	71%
Sense of responsibility	Respondent perceives that the organization has a culture that instills a sense of responsibility	*	*	*	20	25	80%	60	75	80%	362	500	72%

		Central			Regional			District			Facility		
Domain	**Indicator**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Empowerment and accountability	Respondent perceives that the organization empowers people to ask questions, seek improvement, learn, and improve quality through useful information	*	*	*	8	10	80%	24	30	80%	144	200	72%
Rewarding good performance	Respondent perceives that the organization recognizes and rewards good performance	*	*	*	4	5	80%	12	15	80%	69	100	69%

Individual skills and behaviour

Self-perception confidence in RHIS tasks			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Data quality assurance	Respondent believes that they can check data accuracy		*	*	*	9	10	90%	28	30	93%	145	200	73%
Calculating indicators	Respondent believes that they can calculate percentages/rates correctly		*	*	*	10	10	100%	27	30	90%	134	200	67%
Data presentation	Respondent believes that they can plot a trend on a chart		*	*	*	10	10	100%	28	30	93%	135	200	68%
Data interpretation	Respondent believes that they can explain the implication of the results of the data analysis		*	*	*	9	10	90%	27	30	90%	143	200	72%
Use of information	Mean scores of level of perceived ability to use information for problem-solving or making decisions	Respondent believes that they can use data for identifying service performance gaps and setting performance targets	*	*	*	9	10	90%	29	30	97%	144	200	72%
		Respondent believes that they can use data for making operational/ management decisions	*	*	*	5	10	50%	13	30	43%	144	200	72%
		Combined score	*	*	*			70%			70%			72%

Knowledge of the RHIS			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Knowledge rationale RHIS Data	Describe at least three reasons for collecting or using the following data on a monthly basis	Maternal or newborn diseases/ conditions/ diagnoses on a monthly basis	*	*	*	3	3	100%	7	9	78%	36	60	60%
		Maternal or newborn Immunization	*	*	*	3	3	100%	6	9	67%	35	60	58%
		Maternal age	*	*	*	3	3	100%	6	9	67%	40	60	67%
		Age of newborn	*	*	*	3	3	100%	5	9	56%	34	60	57%
		Geographical data or residence of families	*	*	*	3	3	100%	4	9	44%	31	60	52%
		Why population data is needed	*	*	*	3	3	100%	3	9	33%	40	60	67%
	Mean score of knowledge of the rationale for RHIS data	**Combined score**			*			100%			57%			60%
Knowledge Data quality checking methods	Describe at least three aspects of data quality		*	*	*	3	3	100%	8	9	89%	33	60	55%
	Describe at least three ways of ensuring data quality relevant to your job classification/ responsibilities		*	*	*	3	3	100%	8	9	89%	31	60	52%
	Mean scores of knowledge of data quality checking methods				*			100%			89%			53%

Skills to perform RHIS tasks			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
Actual skills to perform RHIS tasks	Competence level in calculating indicators	Calculate the percentage of pregnant mothers at the central level attending antenatal care in the current period	*	*	*	1	1	100%	2	3	67%			
		Calculate the % of eligible newborns receiving KMC (head of the facility)										1	20	5%
		What is the neonatal mortality rate—boys? (head of the facility)										1	20	5%
		What is the neonatal mortality rate—girls? (head of the facility)										2	20	10%
		What is the neonatal mortality rate? (agents)	*	*	*	1	1	100%	1	3	33%	1	20	5%
		Calculate the number of women or newborns who died (agent)	*	*	*	1	1	100%	1	3	33%	1	20	5%

Skills to perform RHIS tasks			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
		Combined score						100%			44%			**6%**
	Competence level in plotting data/preparing charts	Develop a bar chart depicting the distribution across the maternal ages of newborns with a low birthweight at the four facilities.	*	*	*	1	1	100%	2	3	67%			
		Develop a line graph depicting the trend over one year of KMC coverage among eligible babies born at X health facility										2	20	10%
	Competence level in interpreting data	Scoring for graph 2b: What the graph tells you	*	*	*	1	2	50%	3	6	50%	7	40	18%
		Scoring for graph 2c: Calculate target	*	*	*	2	2	100%	3	6	50%	5	40	13%
		Scoring for graph 2b: Interpret a graph										1	40	3%
		Scoring for graph 2c: Pointing out specificity of a graph, trend, or irregularity										1	20	5%

Skills to perform RHIS tasks			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
		Combined score						75%			75%			**9%**
	Competence level in problem solving	Scoring for PSa: Description of data quality problem	*	*	*	1	2	50%	1	6	17%	15	40	38%
		Scoring for PSb: Potential reasons for data quality problem	*	*	*	3	3	100%	1	9	11%	36	60	60%
		Scoring for PSc: Major activities to improve the data quality	*	*	*	4	5	80%	3	15	20%	40	100	40%
		Combined score						77%			16%			**46%**
	Competence level in use of information	Scoring for CD/ CF2d1: Provide at least one use of chart findings at the facility level.	*	*	*	1	1	100%	2	3	67%	5	20	25%
		Scoring for CD/ CF 2d2: Provide at least one use of chart findings at the community level.	*	*	*	1	1	100%	2	3	67%	5	20	25%

Skills to perform RHIS tasks			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
		Scoring for CD/ CF 2d2: Provide at least one use of chart findings at the central/ district level.	*	*	*	1	1	100%	2	3	67%			
		Scoring for CS2d1: Provide at least one use of chart findings at the facility level.										1	20	5%
		Scoring for CS2d2: Provide at least one use of chart findings at the community level.										1	20	5%
		Combined score						100%			67%			15%

Motivation		Central			Regional			District			Facility		
Domain	**Indicator**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
The motivation among staff	Respondent's motivation to perform RHIS tasks	*	*	*	21	35	60%	67%	105	64%	316	700	**45%**

6. Gender Indicators

6A. Gender Factors—Central Level

Section 6A. Tables: Gender Factors—Central Level

Gender Indicators: Central Level

Table 6A.1: System capturing gender disaggregated data

A. System capturing gender disaggregated data

Indicator: eRHIS capturing data disaggregated by sex

Data Source—Module III: eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
RHIS software captures data disaggregated by sex	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 6A.2: Analysis of data by gender

B. Analysis of data by gender

Indicator: existence of practice of carrying out gender analysis

$$\frac{\text{Total \# of sites (0 or 1) carrying out gender analysis)}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicator	**Numerator**	**Denominator**	**%**
Up-to-date documents containing comparisons of sex-disaggregated data were shown	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 6A.3: Use of gender disaggregated data for decision making and planning

C. Use of gender disaggregated data for decision making and planning

Indicator: % of sites using gender disaggregated data for decision making

$$\frac{\text{Total \# of sites (0 or 1) using gender disaggregated data for decision-making}}{\text{Total \# of sites assessed (=1)}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Central Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports and/or bulletins contain discussions and decisions based on key performance targets based on RHIS sex-disaggregated data	*	*	*
Discussions were held to review key performance targets based on RHIS sex disaggregated data	*	*	*
Decisions were made based on the discussion of the district and/or health facility's performance regarding reducing the gender gap in the provision of health services	*	*	*
Annual plan exists and contains activities and/or targets related to improving or addressing gender disparity in health services coverage	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 6A.4: Use of gender disaggregated data—identify and address gender disparities in service delivery

Indicator: % of respondents who perceive that the organization emphasizes the need to use RHIS to identify and address gender disparities in service delivery

$$\frac{\text{Sum of respondent score on perceived emphasis in data use to address gender inequity}}{\text{5 being the highest possible score on every answer}} \times 100$$

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Respondent perceives that superiors in the health department emphasize the need to use RHIS data to identify potential gender-related disparities in service delivery or use	*	*	*
Respondent perceives that staff in the health department use sex-disaggregated or gender-sensitive RHIS data to identify and/or solve gender-related problems in service delivery	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 6A.5: Percentage of respondents able to show age and sex disaggregation for an indicator

Indicator: % of respondents able to show age and sex disaggregation for an indicator

$$\frac{\text{Total \# of respondents able to show age- and sex-disaggregation for an indicator}}{\text{Total \# of respondents}} \times 100$$

Data Source: Module 3. eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
Respondent can show age and sex disaggregation for the selected indicator	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

Table 6A.6: Percentage of respondents describe importance of age and sex disaggregation for an indicator

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Describes information acquired by disaggregating the data by sex and how it helps in planning/improving service delivery	*	*	*
Describe at least three reasons for collecting, or uses of, data on a monthly basis on sex of patients	*	*	*

* not collected during this EWEN-MINSMI-PRISM Tools pilot assessment

6B. Gender Factors—Regional Level

Section 6B. Tables: Gender Factors—Regional Level

Gender Indicators: Regional Level

Table 6B.1: System capturing gender disaggregated data

A. System capturing gender-disaggregated data

Indicator: eRHIS capturing data disaggregated by sex

Data Source—Module III: eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
RHIS software captures data disaggregated by sex	1	1	100%

Table 6B.2: Analysis of data by gender

B. Analysis of data by gender

Indicator: % of sites carrying out gender analysis

$$\frac{\text{Total \# of sites carrying out gender analysis}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicator	**Numerator**	**Denominator**	**%**
Up-to-date documents containing comparisons of sex-disaggregated data were shown	1	1	100%

Table 6B.3: C. Use of gender-disaggregated data for decision making and planning

C. Use of gender-disaggregated data for decision making and planning

Indicator: % of sites using gender-disaggregated data for decision making

$$\frac{\text{Total \# of sites using gender-disaggregated data for decision making}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (Region Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports and/or bulletins contain discussions and decisions based on key performance targets based on RHIS sex-disaggregated data	1	1	100%
Discussions were held to review key performance targets based on RHIS sex disaggregated data	0	1	0%
Decisions were made based on the discussion of the district and/or health facility's performance regarding reducing the gender gap in the provision of health services	0	1	0%
Annual plan exists and contains activities and/or targets related to improving or addressing gender disparity in health services coverage	1	1	100%

Table 6B.4: Use of gender-disaggregated data to identify and address gender disparities in service delivery

Indicator: % of respondents who perceive that the organization emphasizes the need to use RHIS to identify and address gender disparities in service delivery

$$\frac{\text{Sum of respondents' score on perceived emphasis in data use to address gender inequity}}{\text{Total \# of respondents x 5}} \times 100$$

5 being the highest possible score on every answer

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Respondent perceives that superiors in the health department emphasize a need to use RHIS data to identify potential gender related disparities in service delivery or use	5	5	100%
Respondent perceives that staff in the health department use sex disaggregated or gender sensitive RHIS data to identify and/or solve gender related problems in service delivery	4	5	80%

Table 6B.5 Knowledge of the rationale for disaggregating data by gender

D. Knowledge

Indicator: Health workers' knowledge of the rationale for disaggregating data by gender

Indicator: % of respondents able to show age- and sex-disaggregation for an indicator

$$\frac{\text{Total \# of respondents able to show age- and sex- disaggregation for an indicator}}{\text{Total \# of respondents x (1 or 3)}} \text{ X } 100$$

Data Source: Module III. eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
Respondent can show age and sex disaggregation for the selected indicator	1	1	100%

Table 6B.6 Percentage of respondents describe importance of age and sex disaggregation for an indicator

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Describes information acquired t by disaggregating the data by sex and how it helps in planning/improving service delivery	0	3	0%
Describe at least three reasons for collecting, or uses of, data on a monthly basis on sex of patients	3	3	100%

6C. Gender Factors—District Level

Section 6C. Tables: Gender Factors—District Level

Gender Indicators: District Level

Table 6C.1: System capturing gender-disaggregated data

A. System capturing gender-disaggregated data

Indicator: eRHIS capturing data disaggregated by sex

Data Source—Module III: eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
RHIS software captures data disaggregated by sex	2	2	100%

Table 6C.2: System capturing gender-disaggregated data

B. Analysis of data by gender

Indicator: % of sites carrying out gender analysis

$$\frac{\text{Total \# of sites carrying out gender analysis}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicator	**Numerator**	**Denominator**	**%**
Up-to-date documents containing comparisons of sex-disaggregated data were shown	2	2	100%

Table 6C.3: Use of gender-disaggregated data for decision making and planning

C. Use of gender-disaggregated data for decision making and planning

Indicator: % of sites using gender-disaggregated data for decision making

$$\frac{\text{Total \# of sites using gender disaggregated data for decision-making}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIa: RHIS Performance Diagnostic Tool (District Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports and/or bulletins contain discussions and decisions based on key performance targets based on RHIS sex-disaggregated data	1	2	50%
Discussions were held to review key performance targets based on RHIS sex disaggregated data	0	2	0%
Decisions were made based on the discussion of the district and/or health facility's performance regarding reducing the gender gap in the provision of health services	0	2	0%
Annual plan exists and contains activities and/or targets related to improving or addressing gender disparity in health services coverage	2	2	100%

Table 6C.4: Use of gender-disaggregated data to identify and address gender disparities in service delivery

Indicator: % of respondents that perceive that the organization emphasizes the need to use RHIS to identify and address gender disparities in service delivery

$$\frac{\text{Sum of respondent score on perceived emphasis in data use to address gender inequity}}{\text{Total \# of respondents x 5}} \times 100$$

5 being the highest possible score on every answer

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Respondent perceives that superiors in the health department emphasize a need to use RHIS data to identify potential gender related disparities in service delivery or use	13	15	87%
Respondent perceives that staff in the health department use sex disaggregated or gender sensitive RHIS data to identify and/or solve gender related problems in service delivery	12	15	80%

Table 6C.5: Indicator: Health workers' knowledge of the rationale for disaggregating data by gender

D. Knowledge

Indicator: Health workers' knowledge of the rationale for disaggregating data by gender

$$\frac{\text{Total \# of respondents able to show age and sex disaggregation for an indicator}}{\text{Total \# of districts or facilities assessed}} \times 100$$

Data Source: Module III. eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
Respondent can show age and sex disaggregation for the selected indicator	1	1	100%

Table 6C.6: Percentage of respondents describe importance of age and sex disaggregation for an indicator

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Describes information acquired by disaggregating the data by sex and how it helps in planning/improving service delivery	0	9	0%
Describe at least three reasons for collecting, or uses of, data on a monthly basis on sex of patients	5	9	56%

6D. Gender Factors—Facility Level

Section 6D. Tables: Gender Factors—Facility Level

Gender Indicators: Facility Level

Table 6D.1: Analysis of data by gender

B. Analysis of data by gender

Indicator: % of sites carrying out gender analysis

$$\frac{\text{Total \# of sites carrying out gender analysis}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicator	**Numerator**	**Denominator**	**%**
Up-to-date documents containing comparisons of sex-disaggregated data were shown	10	16	63%

Table 6D.2: Use of gender-disaggregated data for decision making and planning

C. Use of gender-disaggregated data for decision making and planning

Indicator: % of sites using gender disaggregated data for decision making

$$\frac{\text{Total \# of sites using gender disaggregated data for decision making}}{\text{Total \# of sites assessed}} \times 100$$

Data Source—Module IIb: RHIS Performance Diagnostic Tool (HF Level)			
Indicators	**Numerator**	**Denominator**	**%**
Reports and/or bulletins contain discussions and decisions based on key performance targets based on RHIS sex-disaggregated data	7	16	44%
Discussions were held to review key performance targets based on RHIS sex disaggregated data	1	16	6%
Decisions were made based on the discussion of the district and/or health facility's performance regarding reducing the gender gap in the provision of health services	1	16	6%
Annual plan exists and contains activities and/or targets related to improving or addressing gender disparity in health services coverage	8	16	50%

Table 6D.3: Use of gender-disaggregated data for decision making and planning

Indicator: % of respondents who perceive that the organization emphasizes the need to use RHIS to identify and address gender disparities in service delivery

$$\frac{\text{Sum of respondent score on perceived emphasis in data use to address gender inequity}}{\text{Total \# of respondents x 5}} \times 100$$

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Respondent perceives that superiors in the health department emphasize a need to use RHIS data to identify potential gender related disparities in service delivery or use	76	100	76%
Respondent perceives that staff in the health department use sex disaggregated or gender sensitive RHIS data to identify and/or solve gender related problems in service delivery	70	100	70%

Table 6D.4: Health workers knowledge of the rationale for disaggregating data by gender

D. Knowledge

Indicator: Health workers knowledge of the rationale for disaggregating data by gender

$$\frac{\text{Total \# of respondents able to show age and sex disaggregation for an indicator}}{\text{Total \# of districts or facilities assessed}} \times 100$$

Data Source: Module III. eRHIS Assessment Tool			
Indicator	**Numerator**	**Denominator**	**%**
Respondent can show age and sex disaggregation for the selected indicator	8	17	47%

Table 6D.5 Percentage of respondents describe importance of age and sex disaggregation for an indicator

Data Source—Module VI: OBAT			
Indicators	**Numerator**	**Denominator**	**%**
Describes information acquired by disaggregating the data by sex and how it helps in planning/improving service delivery	5	60	8%
Describe at least three reasons for collecting, or uses of, data on a monthly basis on sex of patients	34	60	57%

6E. Summary Table for Gender Indicators

			Central			Regional			District			Facility		
Domain	**Indicator**		**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**	**Numerator**	**Denominator**	**%**
System capturing gender disaggregated data	eRHIS capturing data disaggregated by sex		*	*	*	1	1	100%	2	2	100%			
Analysis of data by gender	% of sites carrying out gender analysis	Up-to-date documents containing comparisons of sex-disaggregated data were shown	*	*	*	1	1	100%	2	2	100%	10	16	63%
Use of gender disaggregated data for decision making and planning	% of sites using gender disaggregated data for decision making	Reports and/or bulletins contain discussions and decisions based on key performance targets based on RHIS sex-disaggregated data	*	*	*	1	1	100%	1	2	50%	7	16	44%
		Discussions were held to review key performance targets based on RHIS sex disaggregated data	*	*	*	0	1	0%	0	2	0%	1	16	6%
		Decisions were made based on the discussion of the district and/or	*	*	*	0	1	0%	0	2	0%	1	16	6%

			Central			Regional			District			Facility		
Domain	Indicator		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
		health facility's performance regarding reducing the gender gap in the provision of health services												
		Annual plan exists and contains activities and/or targets related to improving or addressing gender disparity in health services coverage	*	*	*	1	1	100%	2	2	100%	8	16	50%
	% of respondents who perceive that the organization emphasizes the need to use RHIS to identify and address gender disparities in service delivery	Respondent perceives that superiors in the health department emphasize the need to use RHIS data to identify potential gender-related disparities in service delivery or use	*	*	*	1	1	100%	13	15	87%	76	100	76%

			Central			Regional			District			Facility		
Domain	Indicator		Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
		Respondent perceives that staff in the health department use sex-disaggregated or gender-sensitive RHIS data to identify and/or solve gender-related problems in service delivery	*	*	*	4	5	80%	12	15	80%	70	100	70%
	% of respondents able to show age and sex disaggregation for an indicator	Respondent can show age and sex disaggregation for the selected indicator	*	*	*	1	1	100%	1	1	100%	8	17	47%
		Describes information acquired by disaggregating the data by sex and how it helps in planning/improving service delivery	*	*	*	0	3	0%	0	9	0%	5	60	8%
		Describe at least three reasons for collecting, or uses of, data on a monthly basis on sex of patients	*	*	*	3	3	100%	5	9	56%	34	60	57%

Appendix 2. Overview: The EWEN-MINSMI-PRISM Tools

RHIS Overview EWEN-MINSMI-PRISM Tool 1

This tool examines technical determinants including the structure and design of existing information systems for newborns, information flows, and interaction of different information systems. It looks at the extent of RHIS fragmentation and redundancy and helps to initiate discussion of data integration and use.

RHIS Performance Diagnostic EWEN-MINSMI-PRISM Tool 2

This tool determines the overall level of RHIS performance: the level of data quality and use of information. This tool also captures technical and organizational determinants such as indicator definitions and reporting guidelines; the level of complexity of data collection tools and reporting forms; and the existence of data-quality assurance mechanisms, RHIS data use mechanisms, and supervision and feedback mechanisms.

Electronic RHIS Functionality and Usability Assessment EWEN-MINSMI-PRISM Tool 3

This tool examines the functionality and user-friendliness of the technology employed for generating, processing, analyzing, and using routine health data.

Management Assessment EWEN-MINSMI-PRISM Tool 4

The Management Assessment Tool takes rapid stock of RHIS management practices and supports the development of action plans for better management.

Facility/Office Checklist EWEN-MINSMI-PRISM Tool 5

This checklist assesses the availability and status of resources needed for RHIS implementation at supervisory levels.

Organizational and Behavioral Assessment Tool EWEN-MINSMI-PRISM Tool 6

The Organizational and Behavioral Assessment Tool (OBAT) questionnaire identifies behavioral and organizational determinants such as motivation, RHIS self-efficacy, task competence, problem-solving skills, and the organizational environment promoting a culture of information.

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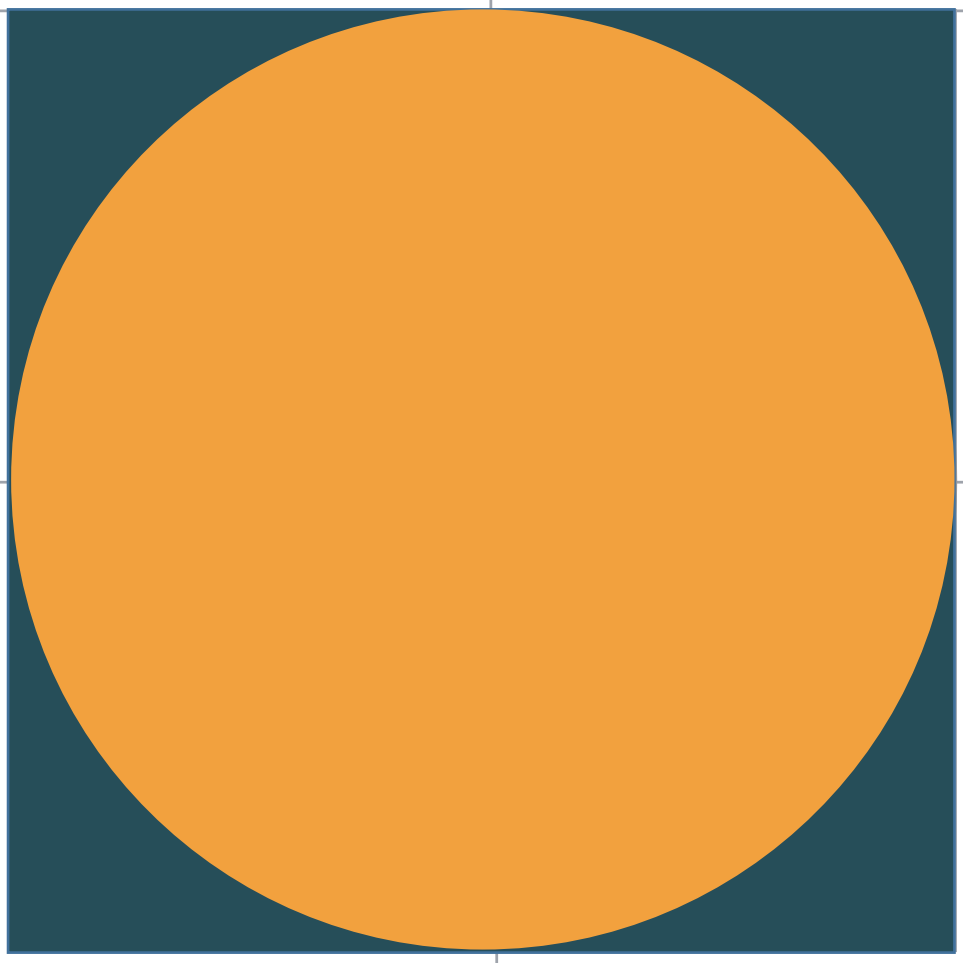

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