FREQUENT ASSESSMENTS AND SYSTEM TOOLS FOR RESILIENCE CO-DESIGN PROCESS IN GHANA

WORKSHOP REPORT

© 2024 International Bank for Reconstruction and Development / Global Financing Facility

1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
www.globalfinancingfacility.org

This work is a product of the Global Financing Facility Secretariat at The World Bank with external contributions. The findings, interpretations, andconclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, the governments they represent, or the Global Financing Facility's Investor's Group.

The World Bank does not guarantee the accuracy of the data includedin this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgmenton the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

RIGHTS AND PERMISSIONS

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, shouldbe addressed to:

World Bank Publications
The World Bank Group
1818 H Street NW, Washington, DC 20433, USA
Fax: 202-522-2625
Email: pubrights@worldbank.org

ACRONYM

Table of Contents

ACKNOWLEDGMENTS

This document summarizes discussions from a co-creation workshop on implementing the Frequent Assessments, Systems, and Tools for Resilience (FASTR) approach in Ghana, facilitated by GHS, R4D, and GFF. The workshop introduced FASTR methodologies, engaged key health stakeholders, and developed an implementation plan to enhance data use for improving RMNCAH&N outcomes. Key activities include capacity-building on data quality and analytics, rapid health facility surveys, and dissemination of outputs from FASTR. FASTR is an approach to catalyzing continuous 'analyze, learn, strengthen, act cycles to drive the systematic use of timely data for decision making. More information is available at https://data.gffportal.org/key-theme/FASTR/resource-repository/index.php

Contributors

Name	Institution
Alberta Adjebeng Biritwum-Nyarko	Ghana Health Service, Headquarters
Marion Okoh-Owusu	Ghana Health Service, Headquarters
Andrews Ayim	Ghana Health Service, Headquarters
Lydia A Sekybiea Larbi	Ghana Health Service, Headquarters
Isaac Akumah	Ghana Health Service, Headquarters
Gifty Ampah	Ghana Health Service, Headquarters
Peter Darkwa Gyasi	Ghana Health Service, Headquarters
Edith Akosua Mansah	Ghana Health Service, Headquarters
Henry Safori	Ghana Health Service, Headquarters
Solomon Boamah	Ghana Health Service, Headquarters
Winifred Addo-Cobbiah	Ghana Health Service, Headquarters
Isaac Akumah	Ghana Health Service, Headquarters
Aseye Kpodotsi	Ghana Health Service, Headquarters
Martha Serwaa Omanir	Ghana Health Service, Headquarters
Gloria Ntow Kumi	Ghana Health Service, Headquarters

Abraham Baidoo	Ghana Health Service, Headquarters
Chris Fofie	Ghana Health Service, Headquarters
Emmanuel Mwini	Ministry of Health
Esther Degbor	Ministry of Health
Chrysantus Kubio	Ghana Health Service, Volta Region
Florance Gyaase-Nketiah	Ghana Health Service, Volta Region
Dzidefo Kofi Agbavor	Ghana Health Service, Volta Region
Othniel Nee-Koteifio Kotey	Ghana Health Service, Volta region
Alphonse Makafui Dzakpasu	Ghana Health Service, Volta Region
Robert Kwaku Adatsi	Ghana Health Service, Volta region
Ruth Yeboah	Ghana Health Service, Volta region
Ruth Aggor	Ghana Health Service, Volta region
Faustine Asante	Ghana Health Service, Volta region
Senanu Kwesi Djokoto	Ghana Health Service, Volta region
Michael Zigah	Ghana Health Service, Volta region
Beatrice Sam Omidiji	Ghana Health Service, Western region
Marian Sophia Quaye	Ghana Health Service, Western region
Gifty Amugi	Ghana Health Service, Western region
Matilda Aglonoo	Ghana Health Service, Western region
Yaw Ofori Yeboah	Ghana Health Service, Western region
David Kofi Owusu	Ghana Health Service, Western region
Mutala Abdulia	Ghana Health Service, Headquarters
Gabriel Yelgliereh	Ghana Health Service, Western region
Johnny Nash Osei	Ghana Health Service, Western region
Margaret Esson	Ghana Health Service, Western region
Olivia Timpo	Ghana Health Service, Headquarters
Nathaniel Kwami Akorli	Ghana Health Service, Western region
Stephen Dubik	Results for Development
Adwoa Twum	Results for Development
Charity Sarpong	Results for Development
Maame Amo-Addae	Results for Development
Cheickna Toure	Results for Development
Rachel Vernee Neill	Results for Development/GFF
Pearl Opoku Youngman	GFF

Stephen Duku	USAID
Aimee Ogunro	USAID
Brian Ahanotu	USAID
Erin Sullivan	USAID
Duah Dwomoh	School of Public Health, University of Ghana
Genevieve Cecilia Aryeetey	School of Public Health, University of Ghana

ABBREVIATIONS

FASTR	Frequent Assessments, Health Systems, and Tools for Resilience
GHS	Ghana Health Service
NOP	Network of Practice
RMNCAH & N	Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition
R4D	Results for Development
GFF	Global Financing Facility
PPME	Policy Planning, Monitoring and Evaluation
FHD	Family Health Division
RHDHSs	Regional Directors of Health Services
DQA	Data Quality Assessment
BEmONC	Basic Emergency Obstetric and Newborn Care
BMGF	Bill and Melinda Gates Foundation
USAID	United States Agency for International Development
PHC	Primary Health Care
DDHS	District of Directors of Health Services
DHMTs	District Health Management Teams
DHIMS2	District Health Information Management System 2
SORMAS	Surveillance Outbreak Response and Analysis System
GHILMIS	Ghana Integrated Logistics Management Information System
GMP	Growth Monitoring and Promotion
STIs	Sexually Transmitted Infections
HHFA	Harmonized Health Facility Assessment
MCH	Maternal and Child Health
MCHRB	Maternal and Child Health Record Book
SPA	Service Provision Assessment
SARA	Service Availability and Rapid Assessment

EXECUTIVE SUMMARY

The Frequent Assessments, Health Systems, and Tools for Resilience (FASTR) approach to data analytics aims to increase the frequency and reduce the costs at which health systems data is collected, analyzed and applied to inform decisions. The Ghana Health Service (GHS) has decided to test FASTR approaches in Ghana to improve data availability and data use at the national and sub-national levels to improve reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH &N) outcomes. FASTR approaches will be introduced at the national, regional, district and facility-level (Networks of Practice (NOP) primary healthcare delivery points in the Volta and Western Regions. GHS, Results for Development (R4D) and the Global Financing Facility (GFF) jointly organized and facilitated a co-creation workshop to introduce FASTR to a wider group of GHS stakeholders and co-design the modalities for operationalizing FASTR in Ghana.

Key stakeholders from the GHS who participated in the workshop included the Directors and staff of the Policy Planning, Monitoring and Evaluation (PPME), Family Health (FHD), Regional Directors of Health Services (RDHSs) from the Volta and Western Regions, and selected district and facility-level staff involved in RMNCAH&N service provision, data handling and data use for decision-making.

The objectives of the workshop were:

- review Ghana's data analytics landscape
- introduce stakeholders to FASTR tools and methodologies
- identify areas for FASTR application
- develop a shared FASTR implementation plan for Ghana.

To achieve these, the workshop was organized into presentations, plenary question and answer session, group work, and a panel discussion. The presentations provided an overview of existing data analytics practices and introduced the FASTR toolbox, which includes tools for routine data quality assessments and advanced analytics, rapid health facility surveys, rapid household surveys, and other rapid qualitative approaches. In the plenary and group work sessions, participants discussed the anticipated challenges, opportunities and capacity within the NOPs and RMCAH & N service delivery to utilize FASTR and developed a FASTR work plan. In the panel discussion, the GHS Directors highlighted examples of data use activities within their directorates and regions.

Implementation Plan

Key activities in the FASTR implementation plan for the national, regional and sub-regional levels include

- organizing a FASTR Data Quality Assessment (DQA) and Advanced Analytics Learning Lab as a capacity building process for tools and methods on DHIMS-2 data quality, analysis, and data use;
- exploring the adaptation and validation of a rapid-cycle health facility phone survey focused on key health facility level indicators related to service availability and readiness (especially for BEmONC readiness) and NOP indicators.
- development of dashboards, and routine infographics and factsheets;
- refresher training of facility and regional staff on data collection, entry, extraction, verification and validation;
- identification of existing forums for dissemination and incorporation into reports;
- community forums to share data bulletins.

Following the workshop, GHS, R4D and GFF teams will engage to refine and finalize the workplan.

Introduction

The FASTR project is a strategic initiative which aims to support countries in generating and using rapid-cycle analytics to significantly improve RMNCAH & N outcomes. FASTR has tools to address many of the challenges associated with data generation and usage, particularly using new techniques for modeling and decision support tools and analysis and the ability to track the health facility indicators on a more regular basis over time.

In Ghana, introduction of FASTR is being facilitated by the R4D and GFF, and with funding from the Bill and Melinda Gates Foundation (BMGF). It is anticipated that FASTR will be implemented through existing Networks of Practice and at all levels within the hierarchy of the GHS, namely regional, district and facility levels.

Through a series of stakeholder engagements and advocacy with the Director-General, Directors of PPME and FHD, the GHS opted to adopt the FASTR approach. The GHS and partners organized a three-day stakeholder consultation and co-creation workshop from 11th June 2024 to 13th June, 2024 at the Oak Plaza Hotel in Accra to co-design the implementation strategy. The participants were mainly from the GHS at the national, regional, district and facility levels, and included Directors, Deputy Directors, Data Managers from the national level, Regional Directors of Health Service from Volta and Western regions, District Directors, Medical Superintendents, and their clinical and health information management teams. There were also representatives from the Ministry of Health, USAID, World Bank, GFF and R4D.

The theme for the co-creation workshop was **"Strengthening Health Systems and RMNCAH&N Outcomes through Rapid Cycle Analytics and Data use"**

The workshop was organized under the following objectives[1]:

- **Review the data analytics, NOPs and RMNCAH & N landscape in Ghana** - To gain a comprehensive understanding of the current state of data analytics and its application within the context of RMNCAH & N and the scale-up of the NOPs in Ghana.
- **Introduce key Stakeholders to FASTR approaches and tools** - To familiarize participants with the methodologies and tools associated with the FASTR initiative, highlighting its potential to enhance data-driven decision-making

[1] See annex 1 for the agenda

- **Collectively identify areas to adapt and apply FASTR to meet Ghana's data use needs** - To collaboratively pinpoint specific areas within the healthcare system where the FASTR approach can be effectively implemented to address existing gaps and challenges.
- **Develop a shared plan for implementation** – To formulate a cohesive and actionable plan for the implementation of the FASTR initiative, ensuring alignment with the needs and priorities of the Ghanaian healthcare system

Key Highlights

Objective 1 - Review the routine data analytics, NOPs and RMNCAH & N landscape in Ghana[2]

GHS presented the current landscape of the provider networks, data systems and RMNCAH-N service delivery in Ghana.

Overview of NOPs in Ghana: The NoP initiative is part of Ghana's broader strategy to strengthen primary healthcare systems and improve outcomes in reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH-N). It is designed to foster collaboration and efficient data use among healthcare facilities. Although the Primary Health Care (PHC) system operates at three levels: District, Sub-District, and Community, the District Director of Health Services (DDHS) and the District Health Management Teams (DHMTs) are key decision makers and influencers of the systems and culture of routine data analysis and data use.

NOPs are designed to strengthen capacity and leadership at the sub-district level and improve coordination and linkages with the next level:

1. Promote sub-district structure to promote leadership in a network arrangement.
2. Shift the responsibility of health workers to promote co-responsibility for health outcomes.
3. Appraise the performance of a network – rather than individual facilities – to promote co-responsibility for the population's health.
4. Promote the guiding principles of the NOP of: Improved referrals, collaboration, relationship building, partnerships, flexibility, community engagement, learning agenda, monitoring/supervision/mentoring.

[2] See appendix A for details of the Q and A session for objective 1

Overview of GHS DHIMS2, e-tracker and data systems: Ghana adopted DHIMS2, a web-based platform, in 2011 to store aggregated data from health facilities, support data collection and reporting for various health services. It has in-built validation rules, analytics, and visualization capabilities and supports interoperability with other health databases including GhiLMIS (Logistics Management), SORMAS (Surveillance), COVID-19 datasets and others. The companion e-tracker is a client-based individual case-management record system for collecting, managing, and analyzing transactional case-based records. It supports real-time data collection and reporting, enhancing surveillance and monitoring capabilities. It is deployed for Maternal and Child Health (MCH), TB, HIV and COVID-19 case-based records, but is not yet available nationwide. There is ongoing training to scale up use for MCH services.

DHIMS2 challenges include data format incompatibility, data duplication and inconsistencies, interoperability challenges with other systems. Challenges with the e-tracker include lack of nation-wide scale up and use of at service delivery points, inadequate supervision, trained staff attrition and re-assignment, poor internet connectivity, limited electronic tablets for data capture, and limited data use and feedback.

To address these challenges, there is frequent training of users to improve data quality, capacity building in data visualization, integrating DHIMS2 with other health information systems and developing decision support tools. The GHS is also identifying champions and advocates to promote the use of these systems, while regular feedback and evaluation help identify areas for improvement. Feedback is also helping managers ensure a user-friendly interface to optimize use.

Data Quality Assessment and DHIMS2: Within GHS, DQAs are conducted biannually, checking for the accuracy, timeliness, and completeness of health service delivery data. DQAs are conducted in-person and the methods include data validation, verification, quality checks, audits, and providing feedback and training for data collectors. A live DHIMS2 Data Validation exercise at the workshop DHIMS2demonstrated that DHIMS2 can also be used for more frequent remote DQA.

Tracking Network of Practice (NoP) Performance on DHIMS2: Disbursement Linked Indicators (DLIs) of an ongoing World Bank-supported project have been configured into DHIMS2 to track NoP scale-up and performance. The DLIs focus on the development of networks, model health center maturity checklist; network maturity checklist; solar systems use; availability of medicines, improvement of capacities and accountability, and enhanced utilization of selected primary health care services. DHIMS2 is however, not currently configured for analyses of service delivery

performance at the network level, but managers are able to select individual facilities within a network to assess collective outputs. The expectation is to eventually configure DHIMS2 for network level analysis.

Key RMNCAH&N Indicators: The GHS is tracking several indicators including:

Maternal Health Indicators: Antenatal coverage, average Antenatal care visits, skilled delivery rates, caesarean section deliveries, maternal deaths, postnatal coverage.

Family Planning: Family planning acceptor rates, long-term couple year protection, adolescent family planning acceptors, and family planning visits.

Newborn Care: Early initiation of breastfeeding, exclusive breastfeeding at various stages, stillbirth rates, neonatal deaths, and institutional neonatal mortality rate.
Child Health Indicators: OPV1, OPV3, PENTA3 coverage, measles coverage, and childhood mortality rates.
Adolescent Health Indicators: Adolescent pregnancy rates, access to family planning services, STI management, and nutrition counseling.
Nutrition and Child Health: Underweight rates, stunting prevalence, wasting prevalence, micronutrient deficiency control, and coverage of Growth Monitoring and Promotion (GMP).
All indicators are not available within DHIMS2 and are tracked through other data collection systems such as Maternal Death Surveillance and Response (MDSR) system.

Data Use within the GHS: The GHS utilizes data to drive decisions and shared examples of these processes at the national and regional levels. Challenges persist, particularly at the primary care level and interventions are needed to improve the culture for utilizing data. GHS shared examples of situations where teams use data to drive decisions:

- Annual review of institutional mortality showed figures slightly above the previous year. Additional analysis of regional distribution revealed spikes in the Ashanti and Northern Regions. In Ashanti for example, most deaths were centered around one teaching hospital, with women traveling long distances to access care. Further analysis of cause of death from the Maternal Death Surveillance and Response (MDSR) system also showed that the main drivers of maternal mortality within the period were due to hemorrhage and pre-eclampsia. The Safe Motherhood Steering Committee formed an expert working group on obstetric haemorrhage to determine the root causes of those conditions.

- The Western Region conducts a weekly Monday discussion on maternal deaths. Any findings of an increase results in a convening of stakeholders to develop a roadmap to reduce maternal mortality in the region. In 2023 the process was successful in reducing the rate from 125 to 84 deaths per 100,000. The stakeholder convening showed that weak referral systems were contributing to the increases in maternal mortality; patients were often referred to facilities without qualified personnel. As a solution, referral managers were appointed in every district health office and hospital, and a platform was created to coordinate referrals.
- The example from Volta Region was about using the RMNCAH-N data to conduct a bottleneck analysis to identify root causes of high child mortality rates. Findings showed that infant mortality within the teach hospital occurred mainly from referral cases and additional analysis was used to identify the districts responsible for those referrals to improve the referral capacity.

Challenges and Critical needs to using RMNCAH-N Data at the primary care level.

- **Bridging the divide between data generation and data use**: data generated and entered at the primary care level is led by healthcare workers who may have limited understanding of the importance and use of the data. Interventions are needed at that level to support health workers to understand the importance of the data, improve the quality of data, interpret and use the data to enhance services. Such interventions can empower individuals to utilize it for actions within their control.
- Beyond the facility level, district, regional and national managers should be supported to report more than the basic numbers (e.g., number of women delivered, number of children at post-natal etc). They should perform additional analysis to explain trends, demonstrate the impact of service delivery interventions and generate visuals to accompany reports.
- **Other strategies to Improve data use include:** visualizing data and engaging the community with the results during durbars to help understand the health status of their community and encourage community participation in health; generate interest of managers in tracking both revenue and results for accountability; introduce metrics to ensure data is used effectively; designate review performance time to discuss the findings from weekly/monthly/annual data; Identify appropriate levels of analysis and tools for different staff levels, starting

small and gradually building capacity; using real examples to show how data usage can improve service delivery

Objective 2 – Introduce key stakeholders to FASTR approaches and tools

Participants were introduced to the FASTR tools and approaches throughout the three-day workshop. The sessions included deep dives into the FASTR tools, highlighting the value-add of FASTR approaches to existing GHS systems and describing how FASTR tools could be tailored to address GHS data use challenges. Examples of how the tools have been applied in different countries were provided. GFF also presented the results of the Greater Accra Rapid diagnostic exercise using data from a public and private hospital.

The FASTR initiative aims to accelerate improvements in RMNCAH-N outcomes by increasing the systematic use of data for decision-making. The goal is to overcome common challenges to the use of routine health management information systems data and to complement traditional, infrequent surveys with more timely, continuous data to support real-time decision-making in the health sector via four main tools:

1. **Service Use Monitoring:** Using routine health management information systems data. This tool involves analyzing routine data (eg., DHIS-2) to identify and adjust for data quality issues, compare trends in service coverage, quantify changes in service use, and develop specific analyses based on reforms and policies. Most GHS staff prioritized the methods under the service use monitoring tool and intending to utilize them to improve the culture of routine analysis, routinely assess the quality of data, analyze outliers, check the internal consistency and indicator completeness.

   Routine DQA can enhance the biannual GHS in-person validation exercise and provide questions that can be addressed during those meetings. Value adds from the FASTR approaches include supporting data cleaning approaches that improve the quality of the data for analysis purposes and the additional analyses that can explore trends and patterns overtime, creating visualization and interpretation, making data more accessible and useful for decision-makers.

The GHS participants were keen in strengthening remote DQA processes using the tools to build cleaner data sets for complex analysis and trends, visualization, and data use capacity strengthening. They prioritized these tools to dive into regional-level, district/sub-district-level and facility-level data to gain additional insights, including

how service use is changing over time. However, GFF noted that defining specific use cases and burning questions for analysis would be crucial to tailor the tools effectively. The discussions highlighted that engaging health information officers and data scientists in the process would be essential for building capacity and ensuring sustainability. Additionally, the presenter also noted that some of the DQA processes were in-built in DHIMS2 and FASTR could enhance those capabilities.

2. **Rapid Health Facility Surveys:** This tool builds on existing tools like the Harmonized Health Facility Assessment (HHFA), Service Provision Assessment (SPA) and Service Availability and Rapid Assessment (SARA)` to gather rapid information from health facilities through a 30 -35-minute phone survey. A significant portion of the discussions focused on the Health Facility Assessment Tool, which had interest from the participants and could be essential for regular monitoring of service availability and readiness at health facilities.

Key takeaways from participants included the importance of capturing human resources for health (HRH) availability, skills mix, functionality of equipment, and supply availability. There was also keen interest from PPME in monitoring BEmONC readiness and aspects of the NOP reform such as referrals and collaboration across providers. Maintaining comparability with other health facility assessment tools was emphasized to track progress over time effectively.

Workshop participants discussed the design of the HFA Tool and the sampling process, emphasizing the tool's flexibility to adapt to specific questions and needs. GFF stressed the importance of involving various stakeholders in the design and implementation process to ensure the tool's relevance and effectiveness.

GFF also provided concrete examples and a walkthrough of the survey tool to make the concept tangible for participants. The presenter demonstrated how different modules could be tailored to capture relevant information and track changes over time. She highlighted the importance of including perception questions to gather insights from facility managers, which could provide valuable context to the data collected.

The last two approaches in the FASTR Toolbox; **The Rapid Household Surveys** and **Rapid Qualitative Approaches** were the least prioritized and considered for a "Part 2" of FASTR tools after the DQA and HFA have been implemented and used to address the

pressing GHS needs of changing the data use culture and facility survey for NoP scale-up. GFF gave examples from Nigeria on how these tools were used to answer contextual questions and provide the reasons behind the quantitative data trends. In Nigeria, local leadership and the availability of human resources were identified, through the HFA, as key drivers of service recovery during the COVID-19 pandemic.

Rapid Diagnostic Exercise in Greater Accra Region: The FASTR team presented results from a 'Remote DQA' activity, analysis data quality and trends in one public and private health facility in the region from 2019-2023. The analysis was an example of a 'Remote DQA' that assessed internal consistency, outliers and completeness.

Participants reflections, take-home messages and questions about the prioritized tools:

Routine Analysis (DQA) Key Take-Aways	**Questions**
• Analyzing and using data at shorter intervals can improve the quality of decisions made and in turn, service delivery • Do not wait to get perfectly accurate data before you analyse and use it • Real time analysis of data enables early interpretation and intervention implementation • FASTR can help me do quick analysis of data for decision making in order to improve service delivery • There is an opportunity to analyse the data further than we usually do"	• What is the cost implication of doing the remote DQA? This will inform sustainability when the donor supported phase is over. • How do proceed to do coverage analysis with routine data when the routine data quality is very poor? • Is the FASTR approach a software than can be made available to all facilities in the country? • How can we get the private facilities to improve and report more? • Is there a visualisation dashboard that can then display the outputs of the analysis?
HFA Key Take-Aways	**Questions**
• Perception questions can help understand the root causes of a problem • Phone survey is a flexible tool that can necessitate quick responses to easily	• How does the cost impact the frequency of the surveys? • How comparable are the results of the surveys to recent HHFAs that have • been conducted?

• analyse the situation at the facility level" • Data can be collected remotely without visiting the facility • Get rapid feedback from facility managers" • The design is complementary to SARA, SDI, HHFA but can be used more frequently • Can help the facility identify their operational challenges that are affecting service delivery. This is a crucial step which promotes resolution of the • challenges within their control in the shortest possible time	• How to overcome logistics challenges that are beyond my control? • How is the sampling done?
Reflections on FASTR	
• The FASTR initiative provides a structured approach to using rapid cycle analytics for real-time data use and decision-making in the health sector. • The tools available in the FASTR toolbox can be adapted to the specific context of a country or region to address data gaps and support health system improvements. • Data quality is a critical component, and regular assessments and validations are necessary to ensure reliable data for decision-making. • Combining quantitative data analysis with qualitative follow-up research provides a comprehensive understanding of health system performance and the factors influencing it.	

Objective 3 - Collectively identify areas to adapt and apply FASTR to meet Ghana's data use needs.

The Volta and Western Regions presented their peculiar challenges with RMNCAH & N and NoPs scale up. They presented issues with data inconsistencies in TD2+ between the Form A and the EPI reporting form, delays in conducting maternal audits and non-functional data validation teams to identify and correct inconsistencies before validating and approving.

Throughout the three days, we also described the data landscape within the GHS, identified the gaps and the areas where FASTR approaches can add value, discussed the existing capacities for data analytics, and the processes and tools being utilized by the teams.

- **Tools for analysis:** Several software and tools are utilized for analysis and visualization of DHIMS-2 data. The sub-districts mostly use excel pivot tables, the district levels and above use the in-built DHIMS2 pivot tables, GIS and R for visualization, and other tools including scorecards.
- **Responsibility for data analysis:** Across the different levels, various staff are involved in the data analytics chain of activities. Some district level staff manage data entry and analysis, but in areas with lower capacity, health information officers (HIO) support data entry and analysis (although the CHPS policy prescribes the capacity for staff to manage at their level). District HIOs are responsible for analyzing and providing feedback to sub-district staff, whilst Regional HIOs supervise analysis from the district staff. Most technical and program officers have the capacity and are responsible for analyzing data from their program areas.
- **Frequency of data analysis:** Standard Operating Guidelines (SOPs) provide instructions for the frequency of data analysis. Some data are analyzed and reported monthly, quarterly, bi-annually or annually e.g. stock levels. Other events require weekly reporting.
- **Uses of data:** Service delivery uses it for logistics forecasting and stocktaking, planning and budgeting, determining progress, procurement; Decision-making e.g. engaging a facility with increasing facility mortality and providing feedback during in-person meetings;

Figure 1: Example of outputs from discussions on FASTR-value add to existing systems.

FASTR Tools and Approaches

- **How can FASTR be used to fill data gaps?**

Obtaining routine service data from all health facilities.

- **Routine rapid analysis**
- **Quarterly facility surveys can help us determine the lack of registers**
  - **Other indicators that are not being reported on or do not have frequent data sources.**

Using data for decision-making

- **Rapid Qualitative surveys can be used to get managers' perception on using data for planning budgeting and decision making.**

- **Which FASTR tools can be used to fill the data gaps?**

- **Tracking of non-reporting and reporting facilities.**
  - Routine analysis to improve the quality of data
  - Facility surveys to be used
- **Monitoring and evaluation**
  - **All the compliments of the analyse to action cycle will help to address the challenge of M&E**

Objective 4: Develop a shared plan for implementation

On the final day, participants prioritized activities and developed an implementation plan for the first 12 months of implementing FASTR tools in their respective areas. The national level prioritized capacity building for additional tools and the set-up of working groups to ensure the quality of data, dissemination and use. The Volta Region prioritized improving existing capacities on data generation and recording and analyzing as part of routine activities. The Western Region identified avenues to use to generate interest in the analysis and use of data, including community engagement and staff engagement avenues.

Figure 2: Snapshot of the 12-month implementation plans

Volta Region	Western Region

Priority Activities

Priority Activities	Anticipated Milestones	Who is responsible
Training of facility management team on data entry and extraction	Improved data quality (Completeness, Timeliness and consistency)	RHMT DHMT
Training of facility management on data analysis in DHIMS2 (GIS, Power Bi, Excel, DHIMS 2 Pivot table and Data visualizer)	Improved data quality (Completeness, Timeliness and consistency)	RHMT DHMT
Training of facility managers on data interpretation and use of data for decision making	Improved data use for decision making (Data visibility)	RHMT DHMT
Conduct quarterly facility survey on RMNCAH-N data quality	Improved RMNCAH-N indicators (Equipment, HR, ANC, Delivery, PNC, etc.)	RHMT DHMT

12 Month Implementation plan

Priority Activities	FASTR Tool	Milestones
Periodic refresh training on data collection and analysis		Yearly
Orientation during induction on HR / Health Information		As when new staff are posted
Data analysis by HIOs (monthly)	Routine analysis	Monthly
Share data bulletin with community on quarterly basis	Routine analysis	Quarterly
Strengthen Supportive Supervision	Routine analysis	Quarterly
Logistics Acquisition – registers, Desktop PC, reports formats	Facility Surveys	September 2024

National

BUILDING A ROADMAP –FIRST 12 MONTHS

Priority Activities	Timelines
Training on FASTR approaches	4th Quarter 2024
Capacity building for data analysis and interpretation using Stata, Data Quality Assessment (accuracy timelines and consistency),	4th Quarter 2024
Development of Dashboard for easy data visualization (infographics, factsheet, etc)	First Quarter 2025
Data Review Forum	Quarterly (2nd and 3rd)
Set up of Data Quality Assessment Committee	4th Quarter 2024
Dissemination of DQA Results Forum - SMM Reports /programatic sub-committee meetings/ Health Summit/parliamentary select committee)	2nd Quarter 2025
Develop Business case for RMNCAH-N data for advocacy (Resource Mobilisation)	3rd Quarter 2025
Supervision on the use of FASTR approaches at the lower levels (Supervision Reports)	2nd Quarter 2025
Hold Experience Sharing and Learning meetings on the use of FASTR approaches	3rd Quarter 2025

Next Steps

The FASTR team has synthesized information from the individual roadmaps to build a composite implementation road map for activities in Ghana (Annex B). The GHS and FASTR teams would validate the composite workplan with two streams of activities at the national and regional levels.

The team proposes to start implementation with a participant Learning Lab applying FASTR DQA and advanced analytics tools to DHIMS2 data. A follow-on activity would

harmonize existing health facility assessment (HFA) tools adapted for Ghana with the FASTR rapid-cycle health facility phone survey and validating with stakeholders.

APPENDIX

A. Summary of Q and A discussions following Objective 1 presentations

Transactional Data and Technology Integration	**Concern:** There were questions regarding the use of transactional data and the integration of technology in data collection processes, specifically how to move from paper-based registers to digital systems. **Response:** GHS is aware of the challenges associated with the reliance on paper-based registers. Efforts are underway to transition to electronic systems, although issues such as cost, training, and infrastructure need to be addressed. The policy level is actively seeking solutions to improve the adoption of digital tools in health facilities
Policy Implementation and Data Use	**Concern:** Participants expressed concerns about the gap between policy development and implementation. They pointed out that policies are often developed quickly to secure funding or support, but their implementation and the data generated from these policies are not always prioritized or effectively utilized. **Response:** GHS acknowledged this gap and emphasized the need for sustained efforts in both policy implementation and data utilization. He suggested that incentives driving policy development should also focus on ensuring thorough and effective implementation at all levels.
Registers and Data Collection Tools	**Concern:** Shortages of physical registers were noted, impacting the quality of data collected at health facilities. The lack of sufficient registers hinders accurate data entry and reporting. **Response:** Efforts are being made to address these shortages by improving resource allocation and exploring digital alternatives.

	However, logistical challenges and budget constraints remain significant hurdles.
Challenges with Linking Systems	**Concern:** Participants raised issues about the integration of various health information systems, such as the lack of effective links between DHIMS2 and other systems like GhiLMIS and SORMAS. There were concerns about data format incompatibility and the need for seamless integration. **Response:** There are ongoing efforts to establish clear protocols for data sharing and synchronization. Upgrading infrastructure, engaging system developers, and ensuring robust security measures are part of the strategy to address these challenges.
Data Quality and Reporting	**Concern:** There were questions about the quality of data reported from health facilities, with specific issues about incomplete or inaccurate data entries. There was a discussion on the practice of leaving data fields empty rather than marking them as zero, leading to confusion in data interpretation. **Response:** To preserve server space, the data officers do not enter zero in DHMIS2, however, where 0s are included, there are concerns about interpretation; are they missing observations, or do they indicate that the facility did not provide the service Other participants shared that staff who collect, and store data need to understand the reasons for data collection. Volta region gave an example of analysing data with a mid-wife during a routine session and showing the comparisons between her facility and others to 'tell the stories' behind the data as an approach to change the mindset of data collection and storage.

Capacity Building and Training	**Concern:** The importance of continuous training for health workers on new systems and data management practices was stressed. There was a call for more robust training programs to ensure effective use of data collection tools. **Response:** Both presenters agreed on the necessity of ongoing capacity building. Programs are being developed to train health workers on data management, the use of digital tools, and the importance of data-driven decision-making.

ANNEX

Workshop Agenda

Meeting Objectives:

1. Review the Data Analytics, NoPs and RMNCAH-N landscape in Ghana
2. Introduce key stakeholders to FASTR approaches and tools
3. Collectively identify areas to adapt and apply FASTR to meet Ghana's data use needs
4. Develop a shared plan for implementation

Day 1 - 11 June: RMCNCH-N Landscape, challenges and synergies with FASTR approaches

Time	Agenda	Facilitator/Presenter
Opening Session		Dr Andrews Ayim
0730-0830	Participant Registration	GHS, R4D
	Opening Prayer	Participant
0830-0845	Welcome and Opening Remarks	Dr Anthony Ofosu, Dep. DG - GHS
0845-0900	Partner Remarks R4D GFF	 Maame Amo-Addae, Country Director, R4D Pearl Adwoa Opoku, GFF Liaison Officer
0900-0915	Icebreaker and introductions	Adwoa Twum
0915-0930	Overview of Agenda, workshop objectives and expectations	
0930-0945	Group Photograph	All
Session 1: Understanding the context: RMNCAH-N and NOPs in Ghana		
0945-1015	**Presentation:** NOPs in Ghana: Objectives, Expectations and Tracking Q&A Session	PPME Henry Safori
1015-1045	**Presentation:** Utilising the e-tracker/DHIMS2 and managing data quality.	PPME
1045-1115	**Presentation:** Making linkages: Other ongoing data systems activities	PPME

Time	Agenda	Facilitator/Presenter
	Q&A Session	Henry Safori
1115-1145	**HEALTH BREAK**	
1145-1215	**Presentation:** RMNCAH-N Challenges and Opportunities: Tracking and Measuring Outcomes.	FHD
1215-1245	**Presentation:** RMNCAH-N Data Analysis and Use: From the Facilities to the National level. Q&A Session	FHD Henry Safori
1300-1400	**LUNCH**	
Session 2: Rapid Cycle Data Analytics: The FASTR Approach to analysis and using data		
1405-1630	**Morning Presentations Synthesis** **Presentation:** Overview of FASTR Toolbox and Results from the GAR Rapid-Analytics **Facilitated Q&A**	Rachel McNeil
	Deep Dive Presentation: Routine Analysis and Facility Survey Toolbox: What's in the box? How have they been Used? What are the future expectations?	Rachel McNeil
	Deep Dive Presentation: Household Surveys and Rapid Qual Toolbox: What's in the box? How have they been Used? What are the future expectations?	Rachel McNeil
	Group Work: How can FASTR be used to fill the data gaps identified in the morning and which tools can be utilised.	
1630-1700	Key Messages and Wrap-up	Cheickna Toure
1700-1730	**HEALTH BREAK AND CLOSING**	

Day 2 - 12 June: Identifying approaches and strategies for implementation

Time	Agenda	Facilitator/Presenter
0830-0900	Participant Registration	GHS/R4D
	Day 2 Opening	**Dr Chris Fofie** **Dr Charity Sarpong**
0900-0945	Day 1 Recap Overview of Day 2 Agenda	Western Region Dr Chris Fofie PPME

	Refresher on Day 1 presentation on data quality and data use	
Session 3: Selecting and Prioritising Questions and Indicators for Rapid Analytics		
0945-1100	**Synthesis and Validation:** Deeper Walk through the FASTR Approaches based on demand expressed on day one	Rachel Neill
1100-1130	**HEALTH BREAK**	
1130-1230	**Presentations:** RMNCAH and NoPs in the Western and Volta Regions: What are the peculiar challenges?	Regional Representatives
1230-1300	**Facilitated Discussions**	
1300-1400	**LUNCH**	
Session 4: Getting Granular: What do we need in the Western and Volta Regions?		
1405-1500	**Group Discussions:** Reinforcing what exists: How do we utilise rapid-cycle analytics? What capacities exist to facilitate that?	3 Group facilitators
1500-1530	Report Back	
1530-1600	Key Messages and Wrap-up	GHS
1600-1630	**HEALTH BREAK AND CLOSING**	

Day 3 - 13 June: Bringing it all together: Designing an Implementation roadmap

Time	Agenda	Facilitator/Presenter
0800-0830	Participant Registration	GHS/R4D
	Day 3 Opening	**Dr Andrew Ayim** **Dr Chris Fofie**
0830-0900	Day 2 Recap Overview of Day 3 Agenda	Volta Dr Chris Fofie
Session 5: Identifying Users and Driving Demand		

0900-1030	**Panel discussions with three GHS staff from National, Volta and Western Regions.** Who are the stakeholders and how do we meet their needs to drive demand for using results from data analytics and visualization?	**Panelist:** Dr Andrew Ayim Dr Chris Fofie Dr Chrystantus Kubio Dr Yaw Ofori-Yeboah **Facilitator:** Cheickna Toure
1030-1100	**HEALTH BREAK**	
Session 6: Building a plan for the next 12 months		
1100-1130	**Quick Refresher:** A reminder of the FASTR Tools and opportunities.	Rachel Neill
1130-1230	**Group Work** Building a Roadmap: Identifying priority activities and milestones for the first 12 months.	3 Group Facilitators
1230-1300	Report Back	
1300-1330	**Closing Remarks and Next Steps** Maame Amo-Addae, Country Director Dr Marion Okoh-Owusu, Family Health Director	 R4D GHS
1330-1430	**LUNCH BREAK AND CLOSING**	

2. Implementation Roadmap

Composite implementation plan: 2024.07.8 Ghana FASTR Implementation PLAN.xlsx

3. Presentations

a) RMNCAH-N data analysis and use: From the facilities to the national level
https://drive.google.com/file/d/1OZhwltzsQ3XiRr2zfvEmUlriffkQn48M/view?usp=drive_link

b) Network of practice
https://drive.google.com/file/d/1O7XkfneVkQPSudNXM3bvFZhBYmCwRB3a/view?usp=sharing

c) RMNCAH-N data challenges and opportunities: tracking measurement and outcomes
https://drive.google.com/file/d/13wYUSL-v39rjcMA0DTALSmt5kyEgBmjy/view?usp=drive_link

d) Utilising DHIMS2/e-tracker and managing data quality
https://drive.google.com/file/d/1zACILga8D2asS1cxkcd6crICx_fcEX9-/view?usp=drive_link

e) Strengthening Health systems and RMNCAH&N outcomes through Rapid Cycle Monitoring for Data use.
https://drive.google.com/file/d/1Cd-aVkjcm7iPyKWiKfFsFF25OOs799JG/view?usp=drive_link

f) Understanding tools and capacities
https://drive.google.com/file/d/1HIJ3S1fP9oDc1qRzD1GVeH2go0ak7Vwh/view?usp=drive_link

g) Understanding tools and capacities
https://drive.google.com/file/d/1FLuwnbJ6kdfOy-W83ZFRXtqSnii2P_dc/view?usp=drive_link

h) Understanding tools and capacities
https://drive.google.com/file/d/1tKmwLh8zpQ_-ahe94w1l-OJENPzwS5Ko/view?usp=drive_link

i) Synthesis and validation from day 1
https://drive.google.com/file/d/1QEefxzjqcHRnw19iWUmdxSTWAURdHkWS/view?usp=drive_link

j) A quick reminder of FASTR tools and opportunities
https://drive.google.com/file/d/1v6BjAP1MNT5uiLNps683Cg0w6aIXy7mT/view?usp=drive_link

k) RMNCAH-N and NoPs in Western region: Peculiar challenges
https://drive.google.com/file/d/1Iw2kbeBlsm6AmzKMNxUZQ5aourb2sYLj/view?usp=drive_link

l) RMNCAH-N and NoPS in Volta region
https://drive.google.com/file/d/19bHjg0Q9Rd9a8-5-5ctsxtTrZJQuRxdS/view?usp=drive_link

GLOBAL FINANCING FACILITY

ABOUT THE GFF's FREQUENT ASSESSMENTS AND SYSTEMS TOOLS FOR RESILIENCE (FASTR) RAPID-CYCLE ANALYTICS AND DATA USE INITIATIVE

The GFF supports country-led efforts to improve the timely use of data for decision-making, ultimately leading to stronger primary healthcare (PHC) systems and better reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH-N) outcomes. This set of initiatives and technical support is referred to as Frequent Assessments and System Tools for Resilience (FASTR). FASTR's technical approaches enable countries to use rapid-cycle analytics for strengthening PHC systems and improving RMNCAH-N outcomes through the timely and high-frequency analysis and use of data. For more information on the GFF's FASTR initiative, visit our website and the FASTR Resource Repository.

Contact us at fastr@worldbank.org.

International Bank for Reconstruction and Development

Global Financing Facility for Women, Children, and Adolescents

1818 H Street NW, Washington D.C. 20433

https://www.globalfinancingfacility.org/