

In-Country Working Session: FASTR Implementation & RMNCAH-N Service Monitoring Analysis

January 27-30, 2026 | Lusaka

GFF FASTR Team

Agenda

Day 1 -- Laying the Foundation: Introducing FASTR and Configuring the Analytics Platform

Time	Agenda	Facilitator/Presenter
Opening Session		
08:30-09:00	Participant registration	MoH team
09:00-09:10	Welcome and opening remarks	MoH team
09:10-09:20	Icebreakers/Introductions	MoH team
09:20-09:35	Overview of agenda, workshop objectives	GFF FASTR team
Session 1: Overview of the FASTR approach		
09:35-10:30	Overview: FASTR Approaches	GFF FASTR team
Session 2: HMIS data extraction		
10:30-11:30	Data extraction: Rationale and methods	GFF FASTR team
Session 3: Introduction to the FASTR analytics platform		
11:30-12:30	Introduction to the FASTR analytics platform	GFF FASTR team
12:30-14:00	<i>Lunch Break</i>	
14:00-14:30	Getting participants into the platform	GFF FASTR team
Session 4: Configuring the FASTR analytics platform		
14:30-16:30	Configuring the analysis platform	GFF FASTR team

Agenda

Day 2 -- Building the Analysis: Applying FASTR Methods and Generating Outputs

Time	Agenda	Facilitator/Presenter
09:00-09:15	Overview of Day 2 agenda	GFF FASTR team
Session 5: Overview of FASTR methods and analytical outputs		
09:15-10:15	Data quality, service utilization, coverage	GFF FASTR team
Session 6: Creating a project		
10:15-11:15	Project creation and settings	GFF FASTR team
Session 7: Creating visualizations		
11:15-12:30	Creating and editing visualizations	GFF FASTR team
12:30-14:00	<i>Lunch Break</i>	
Session 8: Creating reports		
14:30-16:30	Practice creating and editing reports	GFF FASTR team

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Day 3 -- From Analysis to Action: Interpreting Results and Using FASTR for Decision-Making

Time	Agenda	Facilitator/Presenter
09:00-09:15	Overview of Day 3 agenda	GFF FASTR team
Session 8: Interpretation of visualizations		
09:15-10:15	Approaches to support interpretation	GFF FASTR team
Session 9: Creating a Q4 2025 report		
10:15-12:30	Creating short and long reports with country context	GFF FASTR team
12:30-14:00	<i>Lunch Break</i>	
Session 9 (cont'd): Creating a Q4 2025 report		
14:00-15:00	Continue report creation with country context	GFF FASTR team
Session 10: Presenting reports		
14:30-15:30	Present reports, group feedback	GFF FASTR team
Session 11: Action planning		
15:30-16:30	Activity: Action planning	GFF FASTR team

Agenda

Day 4 -- Designing the Health Facility Assessment

Time	Agenda	Facilitator/Presenter
09:00-09:15	Overview of Day 4 agenda	GFF FASTR team
Session 12: Overview of FASTR HFA phone survey		
09:15-10:15	HFA overview and questionnaire adaptation guidelines	GFF FASTR team
Session 13: Questionnaire adaptation to the Zambian context		
10:15-12:30	Review questionnaire + hands-on adaptation	GFF FASTR team
12:30-14:00	<i>Lunch Break</i>	
Session 14: Questionnaire adaptation (cont'd)		
14:00-15:00	Continue questionnaire adaptation (in groups)	GFF FASTR team
Session 15: Discussion: HFA adapted questionnaire		
14:30-15:30	Discuss adapted questionnaire in plenary	GFF FASTR team
Session 16: Discussion: HFA priorities and data use		
15:30-16:30	HFA priorities and data use case in Zambia	GFF FASTR team
16:30-17:00	Key messages and wrap-up	

Workshop Objectives

- Prepare MoH for participation in the multi-country workshop
- Strengthen capacity for disruption analysis and data extraction
- Configure the FASTR analytics platform for Zambia
- Produce the first quarterly report
- Adapt the phone survey questionnaire to the Zambian context
- Use data downloader tools for DHIS2

Scope of Work

Disruption Analysis Activities

- Data extraction and configuration of analytics platform
- Produce first quarterly report
- Review results and contextualize findings (with relevant program teams)

Phone Survey Activities

- Adaptation of questionnaire (with program input)

Capacity Building

- Training on data downloader for all with DHIS2 access
- Hybrid format: face-to-face and online

Expected Outputs

- Adapted phone survey questionnaire
- First quarterly report draft
- Trained MoH team on data downloader tools
- Roadmap for participation in Abuja workshop

Session 1: Overview of the FASTR approach

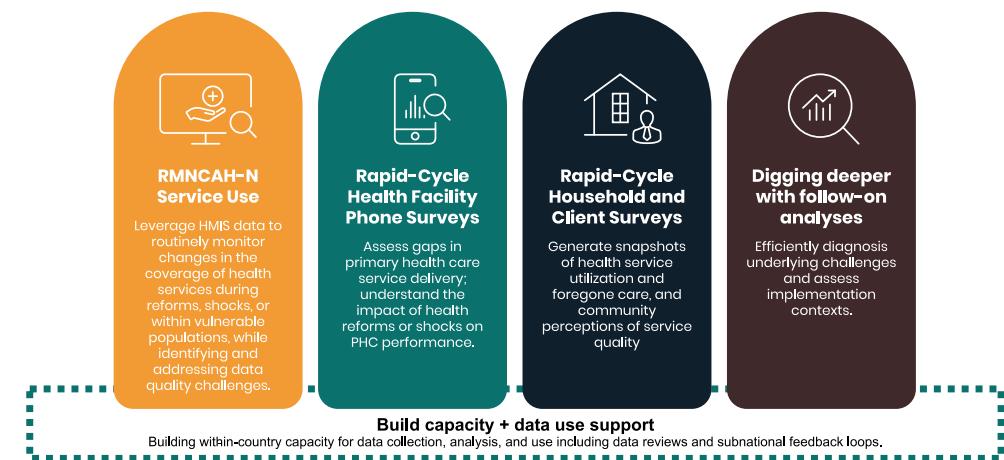
Introduction to FASTR

The Global Financing Facility (GFF) supports country-led efforts to strengthen the use of timely data for decision-making, with the goal of improving primary healthcare (PHC) performance and RMNCAH-N outcomes.

Frequent Assessments and Health System Tools for Resilience (FASTR) is the GFF's rapid-cycle analytics framework for monitoring health system performance using high-frequency data.

FASTR brings together four complementary technical approaches:

1. Routine HMIS data analysis
2. Health facility phone surveys
3. High-frequency household phone surveys
4. Follow-on, problem-driven analyses



What FASTR does with routine HMIS data

FASTR works directly with Ministries of Health to transform routine HMIS data into actionable evidence for policy and program management.

Using facility-level data, the approach focuses on three core analytic functions:

Assess data quality

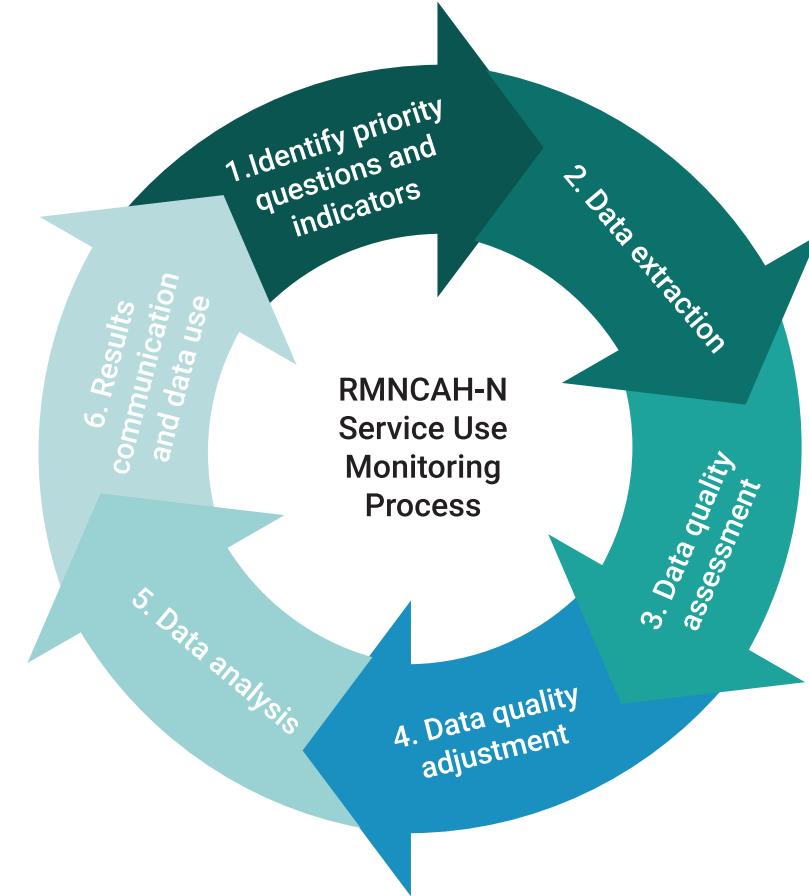
Identify key issues related to completeness, outliers, and internal consistency.

Adjust for data quality limitations

Apply transparent, indicator-specific methods to improve the reliability of trend analysis.

Analyze service use and coverage trends

Track changes in priority RMNCAH-N services and compare progress against country priorities and benchmarks.



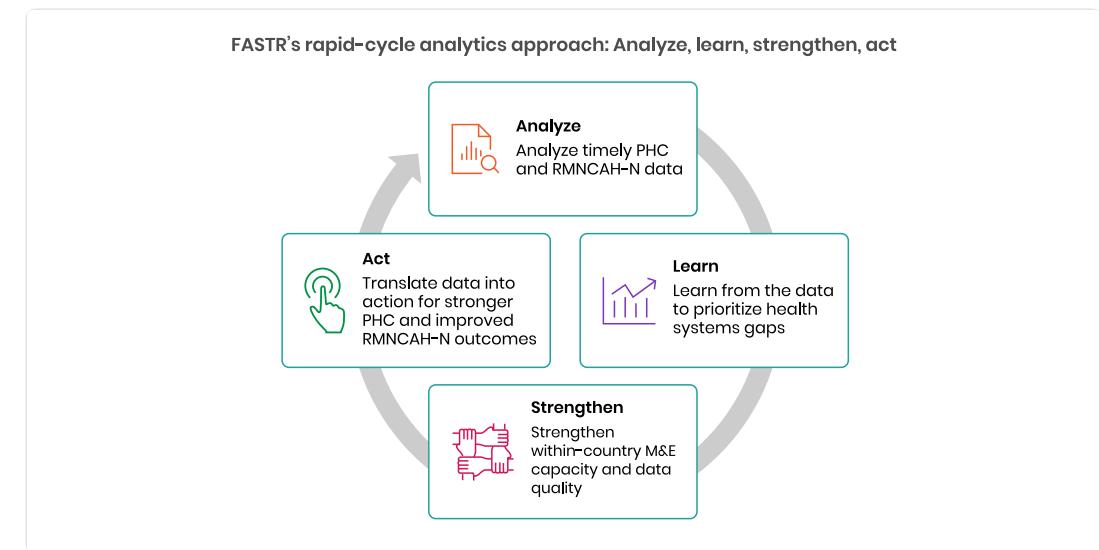
Why rapid-cycle analytics?

Routine health information systems are a critical source of data, but they are often underused due to concerns about data quality and long delays between data collection and analysis. Traditional household and facility surveys, while essential, are resource-intensive and infrequent.

FASTR's rapid-cycle analytics address this gap by providing:

- Timely insights aligned with country decision cycles
- Continuous learning rather than one-off assessments
- Direct feedback loops between data, analysis, and action

During the COVID-19 pandemic, this approach was applied in over 20 countries to monitor disruptions to essential RMNCAH-N services and inform response and recovery planning.



Focus of the analysis

Core indicators

FASTR prioritizes a core set of RMNCAH-N indicators that:

- Represent key service delivery contacts across the continuum of care
- Have relatively high reporting completeness and volumes
- Serve as proxies for broader service delivery performance

Outpatient consultations are included as a proxy for overall health service use. The indicator set can be expanded to reflect country-specific priorities.

Core data quality metrics

Analysis is anchored in a standardized set of data quality metrics, including:

- Reporting completeness
- Extreme value (outlier) detection
- Consistency across related indicators

These metrics are summarized into an overall data quality score to support interpretation and comparison across areas.

FASTR approach to routine data analysis

The FASTR approach follows a three-step workflow:

1. Assess data quality

Identify issues related to completeness, outliers, and internal consistency at national and subnational levels.

2. Adjust for data quality limitations

Apply transparent, indicator-specific corrections to improve the reliability of trend analysis.

3. Analyze service delivery

Quantify changes in priority service volumes and compare coverage trends against country targets.

This enables continuous, subnational monitoring while data quality is systematically improved.

Session 2: HMIS data extraction

Why extract data from DHIS2?

| Data quality adjustment

The FASTR approach focuses on data quality adjustments to expand the analyses countries can do with DHIS2 data and to generate more robust estimates.

The FASTR methodology includes specific approaches to:

- Identify and adjust for outliers
- Adjust for incomplete reporting
- Apply consistent data quality metrics

These adjustments require processing that cannot be done within DHIS2's native analytics.

Why extract data from DHIS2?

| Analysis complexity

The FASTR approach uses more advanced statistical methods, such as regression analysis, which are not available in DHIS2. While DHIS2 can plot trends over time using raw data, FASTR can go further by:

- Identifying significant increases or decreases in service volume
- Adjusting for data quality issues
- Accounting for expected seasonal variations
- Comparing key periods, such as before and after a reform

The choice between DHIS2 and the FASTR approach should be guided by the specific purpose of your analysis.

Data format and granularity

Data should be downloaded for each **indicator of interest**, at **facility level**, and **monthly** for the **period of interest**.

- Data should be saved in **long format** meaning each row represents a single observation or measurement
- Data should be saved in **.csv format** and can be saved in either a single .csv file or multiple .csv files

| Why monthly facility level data?

We want to use the most granular data we have access to in order to make more fine tuned assessments for data quality. Using monthly facility level data allows us to conduct the most robust analysis.

Key variables

The data extracted should include the following required elements:

Element	Description
Org units	Organizational unit identifier
Period	Time period of the data
Indicator name	Name of the indicator
Total/count	The aggregated value

How much data?

| Initial FASTR analysis

- Download approximately **five years** of historical data
- Exact period depends on data availability and consistency in indicator definitions

| Routine update to FASTR analysis

- Download new data covering the most recent months not previously included (usually **three months** for quarterly implementation)
- Include the **three preceding months** as recent data is often subject to changes due to late reporting or data quality adjustments

Data extraction tools

We offer two tools for bulk DHIS2 data extraction:

API Script (Google Colab)

- Input login credentials, specify timeframes, indicators, and administrative levels
- Download data as a .csv file

Data Downloader

- More intuitive, streamlined interface
- Recommended for most users

Both tools enable efficient data extraction, and we provide training resources to support their use.

DHIS2 Data Downloader

The Data Downloader is a desktop application for extracting data from DHIS2.

Key features:

- Connect to any DHIS2 instance
- Browse and select data elements and indicators
- Download facility-level data in CSV format
- Maintain download history

Download from GitHub:

<https://github.com/worldbank/DHIS2-Downloader/releases/>

Facilitator will demonstrate the Data Downloader

Session 3: Introduction to the FASTR analytics platform

Introduction to the FASTR Analytics Platform

The FASTR analytics platform is a web-based tool for data quality assessment, adjustment, and analysis of routine health data.

Key features:

- Upload and analyze data from DHIS2 and other sources
- Built-in statistical methods for data quality adjustment
- User-friendly interface for running analyses
- Flexible visualization and export options

In this session, we will provide a conceptual walkthrough of the platform and its capabilities.

Live Demo: Platform Access & Roles

In this demo, we will:

- Navigate to the FASTR platform
- Explore user roles: Administrator, Editor, Viewer
- Review user management and permissions
- Understand the workflow for uploading data and making analytical decisions

Facilitator will demonstrate in the live platform



Lunch Break

90 minutes

Back at 14:00

Session 4: Configuring the FASTR analytics platform

Activity: Setting Up Admin Areas

In this hands-on session, we will configure:

- Admin areas (regions, districts)
- Facility structure
- Indicator definitions

Participants will work directly in the platform

Activity: Importing Data

In this hands-on session, we will:

- Review data format requirements
- Walk through the import process
- Handle validation and error checking

Participants will import their country's data

Activity: Installing and Running Modules

In this hands-on session, we will:

- Review available analysis modules
- Install required modules
- Run initial analyses

Participants will configure and run modules on their data

Day 2

Recap

On Day 1, we covered:

- The FASTR approach and rapid-cycle analytics methodology
- Data extraction from DHIS2 using the Data Downloader
- Introduction to the FASTR Analytics Platform
- Platform configuration: admin areas, data import, modules

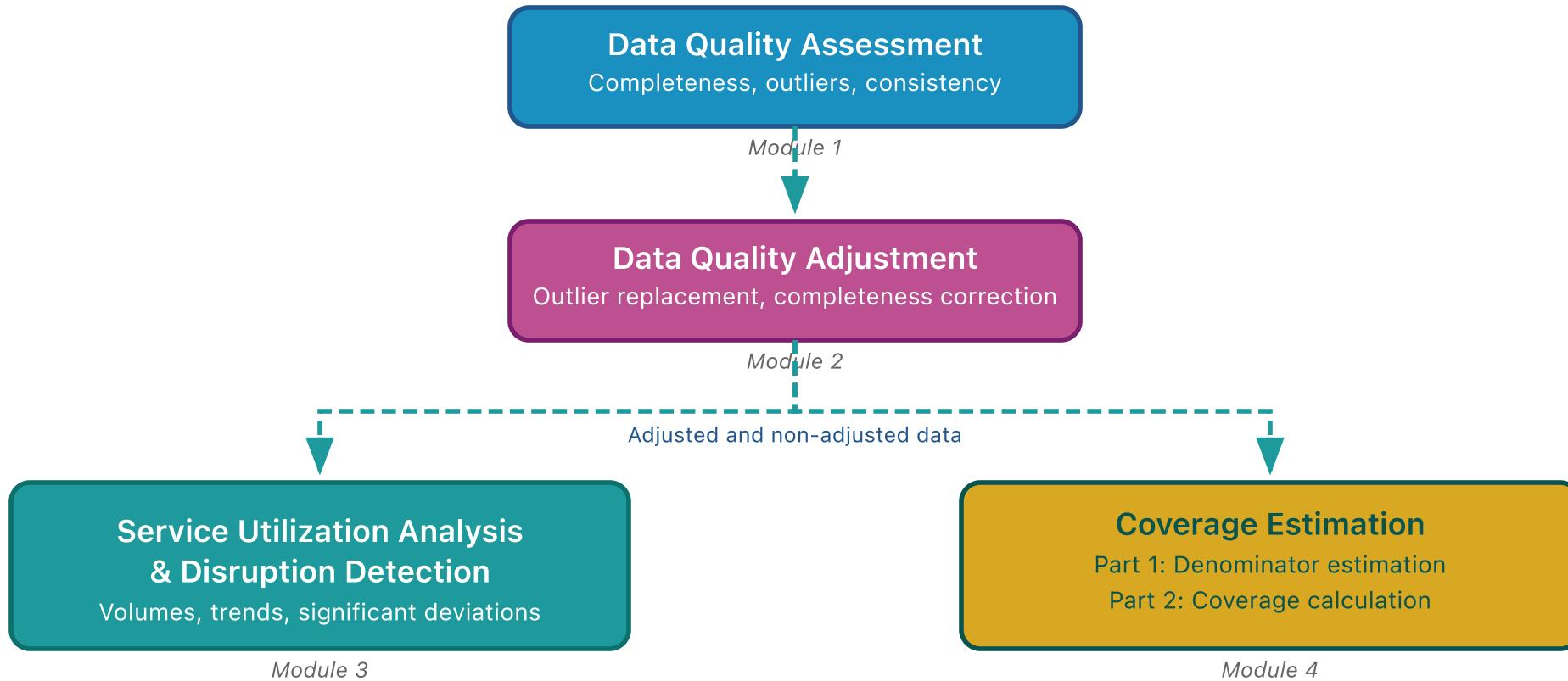
Day 2 Focus

Today we will:

- Explore FASTR methods for data quality and analysis
- Create and configure projects
- Build visualizations
- Generate reports

Session 5: Overview of FASTR methods and analytical outputs

FASTR Analytical Pipeline



The components are interdependent: first assess data quality, then apply adjustments, then use the adjusted data for analysis.

Data quality assessment

Understanding the reliability of routine health data

Why talk about data quality?

The challenge: Health facilities report data every month, but sometimes:

- Numbers seem too high or too low
- Facilities forget to report
- Related numbers don't match up

The impact: Bad data leads to bad decisions

- We might think services are improving when they're not
- We might miss real problems in certain areas
- Resources might go to the wrong places

FASTR's solution: Check data quality systematically, fix what we can, and be transparent about limitations

Objectives of FASTR Data Quality Assessment

Objective 1: Analytical adjustment

Assessing data quality allows you to adjust for data quality issues, improving the ability to use DHIS2 data for decision-making

Objective 2: Monitor data quality over time

Key learning questions include:

- **What is the quality of data for different indicators in DHIS2?** (can inform indicators you select for analysis)
- **Which areas report higher vs. lower quality data?** (can inform targeted data quality validation and supportive supervision)
- **How has data quality improved over time?** (can assess the result of data quality investments, training, etc.)

Three simple questions about data quality

1. Are facilities reporting regularly?

- Completeness: Did we get reports from facilities this month?

2. Are the numbers reasonable?

- Outliers: Are there any suspiciously high values?

3. Do related numbers make sense together?

- Consistency: Do related services show expected patterns?

These three questions help us understand if we can trust the data for decision-making.

Question 1: Are facilities reporting?

Completeness: Did we get reports?

What we're checking:

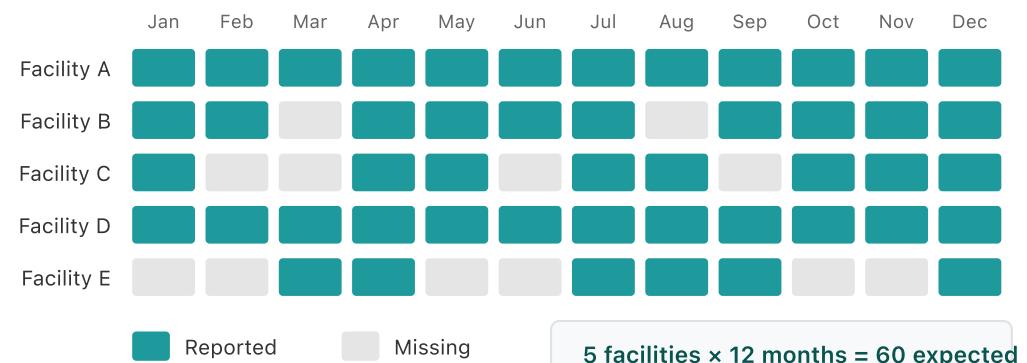
Each month, are facilities sending in their reports?

Why it matters:

- If many facilities don't report, we're missing part of the picture
- Trends might look like services dropped, when really facilities just didn't report

Region A: Indicator Completeness

5 health facilities reporting monthly on ANC1 visits



What's good completeness?

It depends on your health system:

- 90%+ is excellent
- 80-90% is good
- Below 80% means we're missing a lot of information

Important: Even 100% completeness doesn't mean we have the full picture - some services might happen outside facilities or some facilities might not be in the reporting system.

What to look for: Is completeness improving over time? Which areas have low completeness?

Completeness: FASTER output

Indicator Completeness

Percentage of facility-months with complete data, Jan 2022 to Apr 2025

	Antenatal care 1	Antenatal care 4	Institutional delivery	Postnatal care 1 (newborns)	Postnatal care 1 (mothers)	BCG vaccine	Penta vaccine 1	Penta vaccine 3	Outpatient visit
District 001	93.9%	90.3%	83.3%	70.8%	82.8%	92.3%	91.9%	90.4%	94.9%
District 002	88.5%	85.9%	82.0%	64.2%	79.8%	90.8%	88.6%	88.1%	88.4%
District 003	89.8%	87.0%	85.4%	53.4%	78.5%	86.2%	86.3%	85.5%	88.3%
District 004	90.7%	82.6%	84.5%	67.6%	82.1%	89.1%	90.4%	89.7%	90.4%
District 005	89.7%	84.0%	81.3%	60.4%	80.9%	84.3%	84.2%	83.6%	89.5%
District 006	85.5%	79.4%	74.5%	56.8%	74.5%	85.3%	82.9%	79.2%	85.6%
District 007	97.2%	93.8%	91.8%	73.5%	90.8%	91.3%	95.2%	87.9%	97.0%
District 008	93.1%	87.6%	85.5%	44.6%	71.8%	79.9%	87.2%	87.5%	95.0%
District 009	95.7%	75.8%	85.0%	34.9%	77.6%	83.5%	92.2%	78.1%	95.9%
District 010	99.2%	99.6%	95.8%	98.4%	94.2%	94.6%	93.2%	88.7%	100.0%
District 011	98.0%	95.2%	94.4%	66.6%	91.7%	96.1%	95.4%	91.8%	98.2%
District 012	92.6%	86.4%	83.7%	64.5%	84.7%	84.7%	87.2%	86.7%	92.6%
District 013	93.4%	90.8%	90.7%	77.1%	88.2%	90.3%	90.8%	87.7%	93.1%
District 014	88.8%	79.1%	81.2%	77.9%	81.2%	90.0%	89.8%	86.3%	91.2%
District 015	93.0%	88.2%	85.3%	63.9%	83.1%	86.7%	88.8%	88.7%	93.1%
District 016	96.0%	85.1%	92.0%	65.7%	91.6%	96.1%	95.5%	88.6%	96.8%
District 017	90.1%	84.8%	90.4%	53.4%	83.0%	72.7%	79.3%	76.0%	89.5%
District 018	97.1%	95.9%	93.2%	79.8%	92.3%	95.4%	95.8%	92.9%	97.9%

90% or above

80% to 89%

Below 80%

Higher completeness improves the reliability of the data, especially when completeness is stable over time. Completeness is defined as the percentage of reporting facilities each month out of the total number of facilities expected to report. A facility is expected to report if it has reported any volume for each indicator anytime within a year. A high completeness does not indicate that the HMIS is representative of all service delivery in the country, as some services may not be delivered in facilities, or some facilities may not report.

Question 2: Are numbers reasonable?

Outliers: Spotting suspicious numbers

What we're checking:

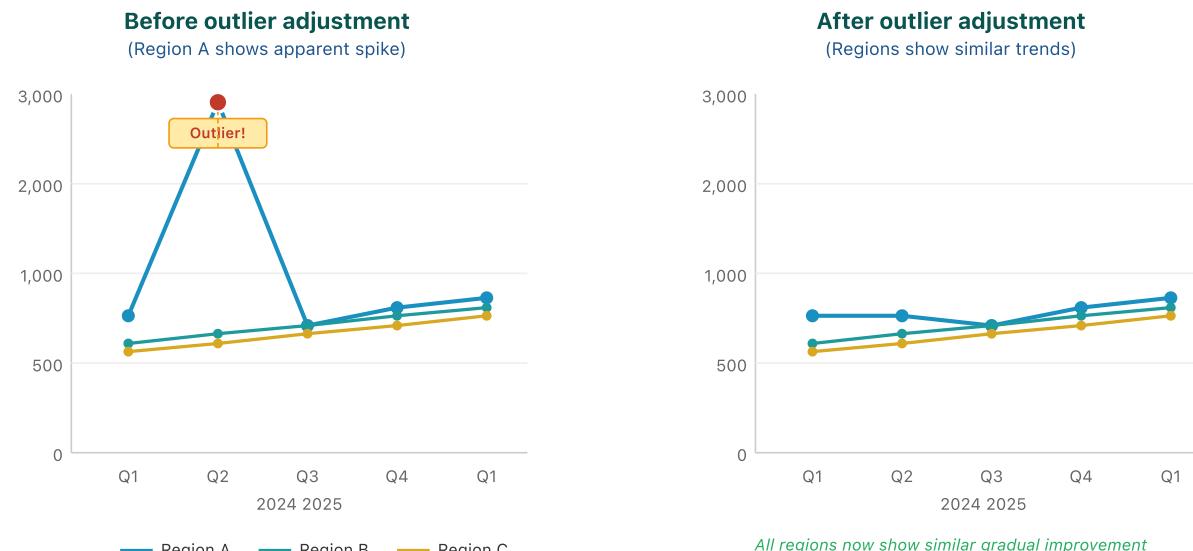
Are there any values that seem way too high compared to what that facility normally reports?

Real example:

- Health Center A normally reports 20-25 deliveries per month
- In March, they reported 450 deliveries
- **This is likely a data entry error**

Why it matters:

- One extreme value can make it look like there was a huge service increase
- Skews totals and trends for the whole region



How we spot outliers

Outliers are identified by assessing the within-facility variation in monthly reporting for each indicator.

A value is flagged as an outlier if it meets EITHER of two criteria:

1. A value greater than 10 times the Median Absolute Deviation (MAD) from the monthly median value for the indicator,
OR
2. A value for which the proportional contribution in volume for a facility, indicator, and time period is greater than 80%

AND for which the count is greater than 100.

Outlier example

Health Center B - Malaria tests:

Month	Tests Reported	Normal?
January	245	Normal
February	267	Normal
March	2,890	Outlier
April	256	Normal

What happened? Probably someone entered "2890" instead of "289" (extra zero)

Impact if we don't fix it: March would show a huge "spike" in malaria that didn't really happen.

Outliers: FASTR output

Outliers

Percentage of facility-months that are outliers, May 2024 to Apr 2025

	Antenatal care 1	Antenatal care 4	Institutional delivery	Postnatal care 1 (newborns)	Postnatal care 1 (mothers)	BCG vaccine	Penta vaccine 1	Penta vaccine 3	Outpatient visit
Region 001	0.6%	0.2%	0.2%	1.9%	1.2%	0.6%	0.9%	0.6%	0.9%
Region 002	0.6%	0.0%	1.2%	1.0%	1.8%	0.2%	0.2%	0.1%	2.7%
Region 003	0.5%	0.4%	0.1%	0.0%	0.1%	0.1%	0.4%	0.6%	1.4%
Region 004	0.4%	0.0%	0.0%	0.8%	0.0%	0.5%	0.8%	0.9%	0.1%
Region 005	0.5%	0.9%	0.5%	0.8%	0.5%	0.6%	0.8%	0.3%	3.3%
Region 006	0.4%	0.0%	0.1%	0.3%	0.1%	1.3%	2.3%	2.5%	0.6%



Outliers are reports which are suspiciously high compared to the usual volume reported by the facility in other months. Outliers are identified by assessing the within-facility variation in monthly reporting for each indicator. Outliers are defined observations which are greater than 10 times the median absolute deviation (MAD) from the monthly median value for the indicator in each time period, OR a value for which the proportional contribution in volume for a facility, indicator, and time period is greater than 80%. Outliers are only identified for indicators where the volume is greater than or equal to the median, the volume is not missing, and the average volume is greater than 100.

Question 3: Do related numbers match up?

Consistency: Do related services make sense together?

What we're checking:

Health services are related - certain patterns are expected.

Example 1 - ANC visits:

- More women should get their **1st** ANC visit (ANC1)
- Fewer should complete all **4** visits (ANC4)
- We expect: ANC1 \geq ANC4

Example 2 - Vaccinations:

- More babies should get their **1st** Penta dose (Penta1)
- Fewer should complete all **3** doses (Penta3)
- We expect: Penta1 \geq Penta3

If these relationships are backwards, something's wrong with the data.

Why check consistency at district level?

Patients move between facilities:

- Woman might get ANC1 at Health Center A
- But deliver at District Hospital B
- If we only look at each facility separately, numbers might not match

Solution: Check consistency at district level

- Add up all ANC1 visits in the district
- Add up all ANC4 visits in the district
- Compare the totals

This accounts for patients visiting different facilities for different services.

Consistency example

District X - ANC Services:

Indicator	District Total	Expected Relationship
ANC1	5,200 visits	Should be higher
ANC4	4,100 visits	Should be lower

This passes the consistency check - more women started ANC (5,200) than completed 4 visits (4,100).

If it was reversed (more ANC4 than ANC1), we'd know there's a data quality problem.

Consistency: FASTR output

Internal consistency

Percentage of sub-national areas meeting consistency benchmarks, May 2024 to Apr 2025

	ANC1 is larger than ANC4	Delivery is approximately equal to BCG	Penta1 is larger than Penta3
Region 001	100.0%	0.0%	97.2%
Region 002	100.0%	0.0%	100.0%
Region 003	100.0%	45.8%	83.3%
Region 004	100.0%	37.5%	87.5%
Region 005	100.0%	0.0%	87.5%
Region 006	100.0%	49.0%	84.4%

90% or above

80% to 89%

Below 80%

Internal consistency assesses the plausibility of reported data based on related indicators. Consistency metrics are approximate - depending on timing and seasonality, indicator definitions, and the nature of service delivery and reporting, values may be expected to sit outside plausible ranges. Indicators which are similar are expected to have roughly the same volume over the year (within a 30% margin). The data in this analysis is adjusted for outliers.

Putting it all together: Overall data quality

Overall quality score

For each facility and month, we combine all three checks:

Complete: Did the facility report?

No outliers: Are the numbers reasonable?

Consistent: Do related numbers make sense?

Binary DQA Score:

- $dqa_score = 1$ if all consistency pairs pass
- $dqa_score = 0$ if any consistency pair fails

DQA Mean: Average of completeness-outlier score and consistency score

This score helps us:

- Decide which data to use for analysis
- Identify facilities that need support
- Track if data quality is improving over time

Overall DQA score: FASTR output

Overall DQA score

Percentage of facility-months with adequate data quality over time

	2022	2023	2024	2025
Region 001	60.8%	76.6%	76.4%	84.4%
Region 002	55.3%	61.2%	58.2%	52.0%
Region 003	69.3%	73.4%	60.6%	47.0%
Region 004	54.6%	70.7%	70.0%	84.9%
Region 005	57.9%	69.5%	56.6%	55.4%
Region 006	74.0%	84.7%	72.2%	71.7%



Adequate data quality is defined as: 1) No missing data or outliers for OPD, Penta1, and ANC1, where available 2) Consistent reporting between Penta1/Penta3 and ANC1/ANC4.

Mean DQA score: FASTR output

Mean DQA score

Average data quality score across facility-months

	2022	2023	2024	2025
Region 001	90.2%	95.5%	95.5%	96.5%
Region 002	87.3%	89.0%	88.2%	85.6%
Region 003	92.8%	94.8%	91.0%	84.3%
Region 004	88.0%	93.9%	93.0%	97.0%
Region 005	89.5%	93.6%	91.1%	88.6%
Region 006	93.2%	96.3%	93.4%	93.4%

80% or above

70% to 79%

Below 70%

Items included in the DQA score include: No missing data for 1) OPD, 2) Penta1, and 3) ANC1, where available; No outliers for 4) OPD, 5) Penta1, and 6) ANC1, where available; Consistent reporting between 7) Penta1/Penta3, 8) ANC1/ANC4, 9)BCG/Delivery, where available.

Approach to data quality adjustment

The FASTR analytics platform provides an option for adjusting data for outliers, indicator completeness, or both.

Adjustment for outliers

The FASTR approach makes adjustment to service volume to replace outlier values (recommended).

Each individual outlier is replaced by the mean volume, excluding any outlier values, of services delivered for the same indicator and the same month but amongst facilities of the same type within the same admin area (province, district, and/or state).

Adjustment for completeness

The FASTR approach allows for adjustment to service volume to replace missing/incomplete values (optional).

Each incomplete/missing value is replaced by the mean volume of services delivered for the same indicator and same facility, calculated as a rolling average of the 12 months surrounding the missing point and excluding any outliers or missing values.

Service utilization analysis

Monitoring changes in the volume of priority health services over time.

Example question: How has ANC1 utilization changed from 2020 to 2024? Which regions have seen the greatest increases or declines?

What we assess

Service utilization trends:

- Absolute yearly/quarterly volume for selected services
- Percent change over time
- Comparison across regions

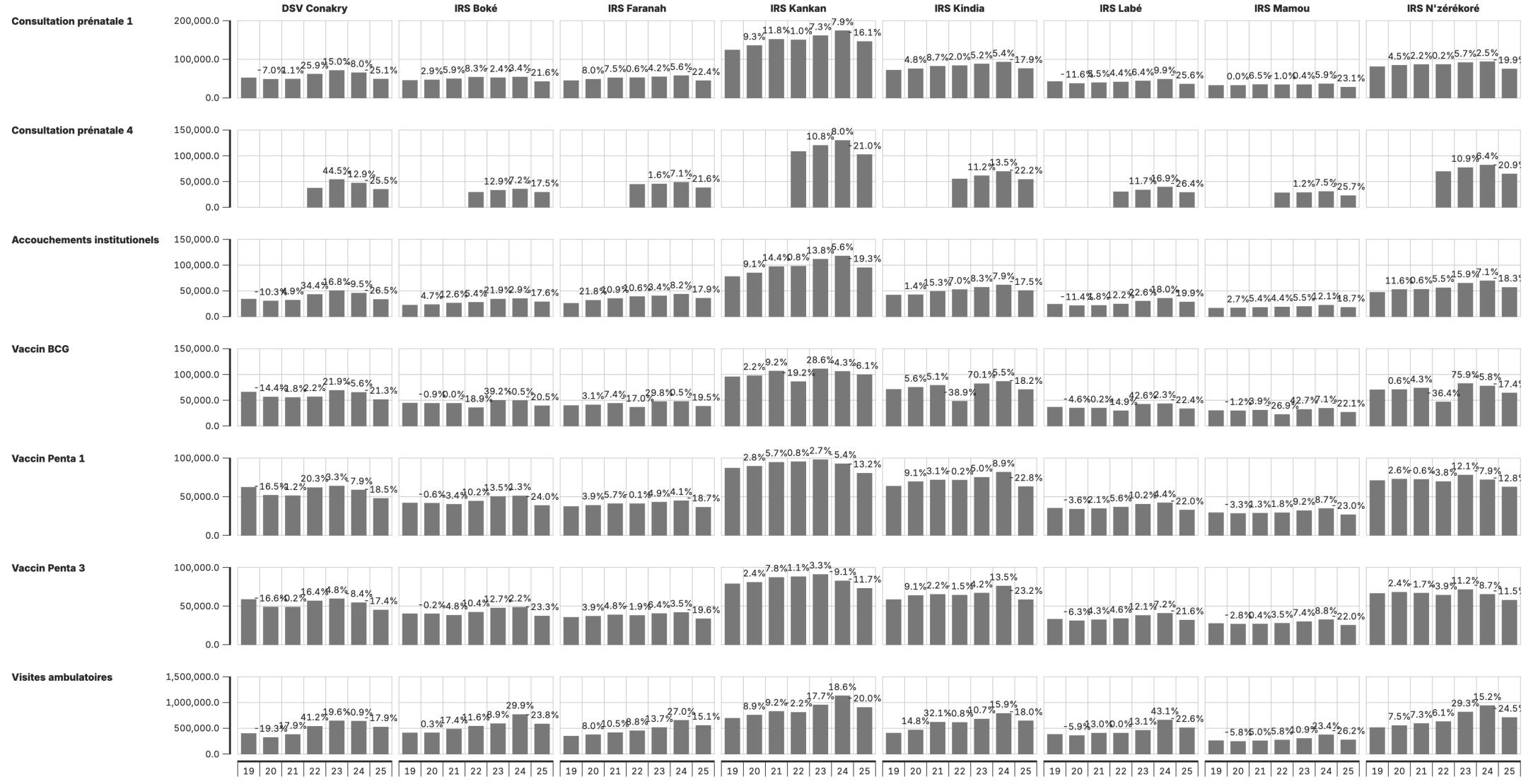
Any year with more than a **10% change** compared to the previous year is flagged for review.

Data can use: raw values, outlier-adjusted, completeness-adjusted, or both adjustments.

Change in service volume over time

Service volume by year & year-on-year change

Janv 2019 à Sept 2025

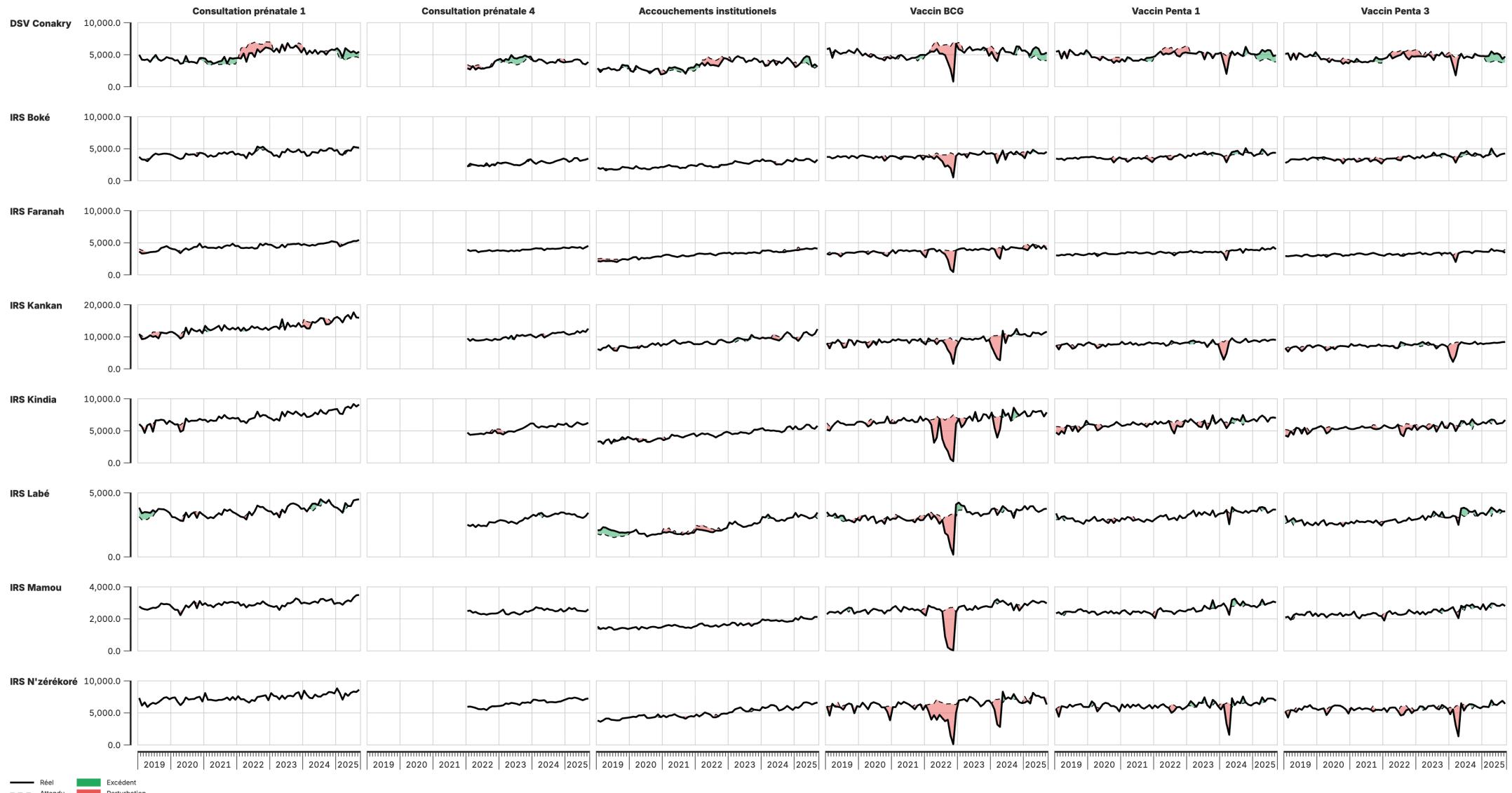


Augmentation de plus de 10% d'un trimestre à l'autre
Diminution de plus de 10% d'un trimestre à l'autre

Comparing volumes across regions

Perturbations et excédents du volume de service, au niveau infranational

Janv 2019 à Sept 2025



DHIS2 vs FASTR comparison

Aspect	DHIS2	FASTR
Data quality	Raw data	Adjusts for outliers and/or completeness
Visualization	Standard trend charts	Percent change to flag meaningful fluctuations
Analysis	Trends only	Trends + disruption quantification

Disruption analysis

Beyond simple trends, FASTR can detect and quantify service disruptions.

How it works:

1. Model expected service volumes based on historical patterns and seasonality
2. Compare actual volumes to expected volumes
3. Quantify shortfalls or surpluses in absolute numbers

Types of disruptions detected

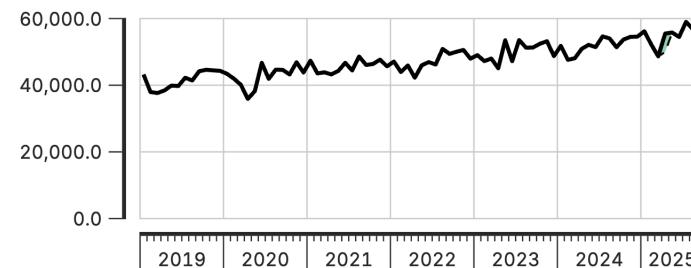
Type	What it captures
Sharp disruptions	Single months with extreme deviations
Sustained drops	Gradual declines over several months
Sustained dips	Periods consistently below expected
Sustained rises	Periods consistently above expected

Actual vs expected at national level

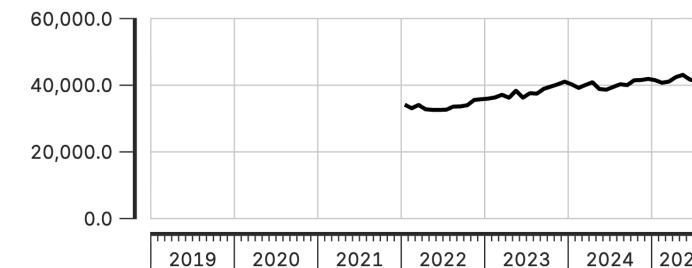
Perturbations et excédents du volume de service, au niveau national

Janv 2019 à Sept 2025

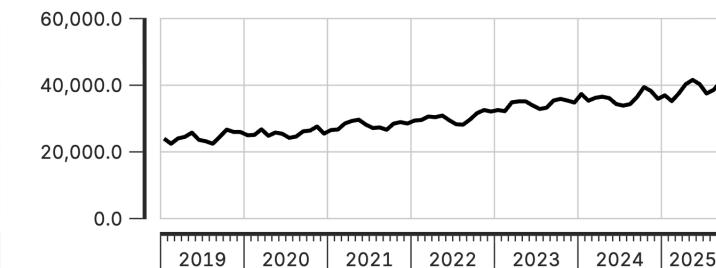
Consultation prénatale 1



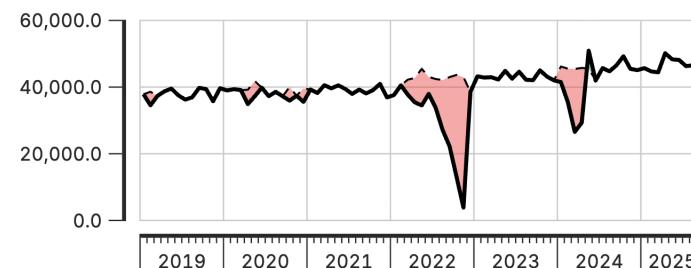
Consultation prénatale 4



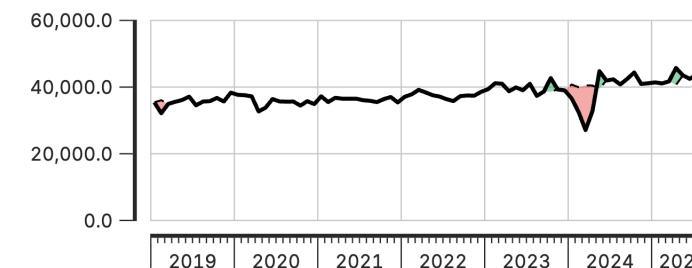
Accouchements institutionnels



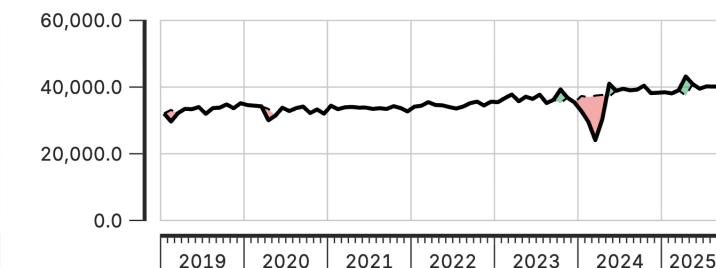
Vaccin BCG



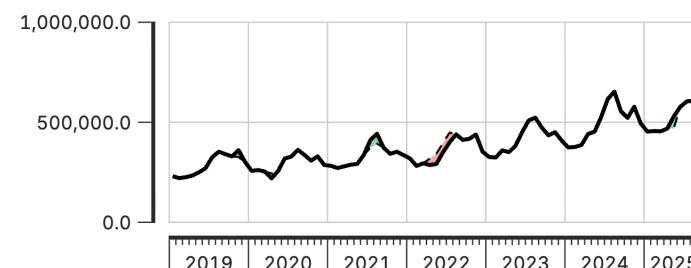
Vaccin Penta 1



Vaccin Penta 3



Visites ambulatoires



— Réel
— Attendu
— Perturbation

Ce graphique quantifie les variations au niveau du volume de services, par rapport aux tendances historiques, en tenant compte de la saisonnalité. Ces signaux doivent être triangulés avec d'autres données et connaissances contextuelles, pour déterminer s'ils résultent d'une qualité de données inadéquate. Les variations inattendues de volume sont estimées en comparant le volume observé au volume attendu, selon les tendances historiques et la saisonnalité. Les variations inattendues importantes dans les données historiques sont exclues. Cette analyse repose sur une régression de séries chronologiques interrompues avec effets fixes au niveau des établissements.

Service coverage estimates

The Coverage Estimates module (Module 4 in the FASTR analytics platform) estimates health service coverage by answering: "**What percentage of the target population received this health service?**"

Three data sources integrated:

- 1.** Adjusted health service volumes from HMIS
- 2.** Population projections from United Nations
- 3.** Household survey data from MICS/DHS

| Two-part process

Part 1: Denominator calculation

- Calculate target populations using multiple methods (HMIS-based and population-based)
- Compare against survey benchmarks
- Automatically select best denominator for each indicator

Part 2: Coverage estimation

- Override automatic selections based on programmatic knowledge
- Project survey estimates forward using HMIS trends
- Generate final coverage estimates

What is service coverage?

Coverage answers: *What percentage of the target population received this health service?*

$$\text{Service coverage} = \frac{\text{Population who received the service}}{\text{Population who need the service (target population)}}$$

Numerator comes from DHIS2 data, count of services adjusted for outliers

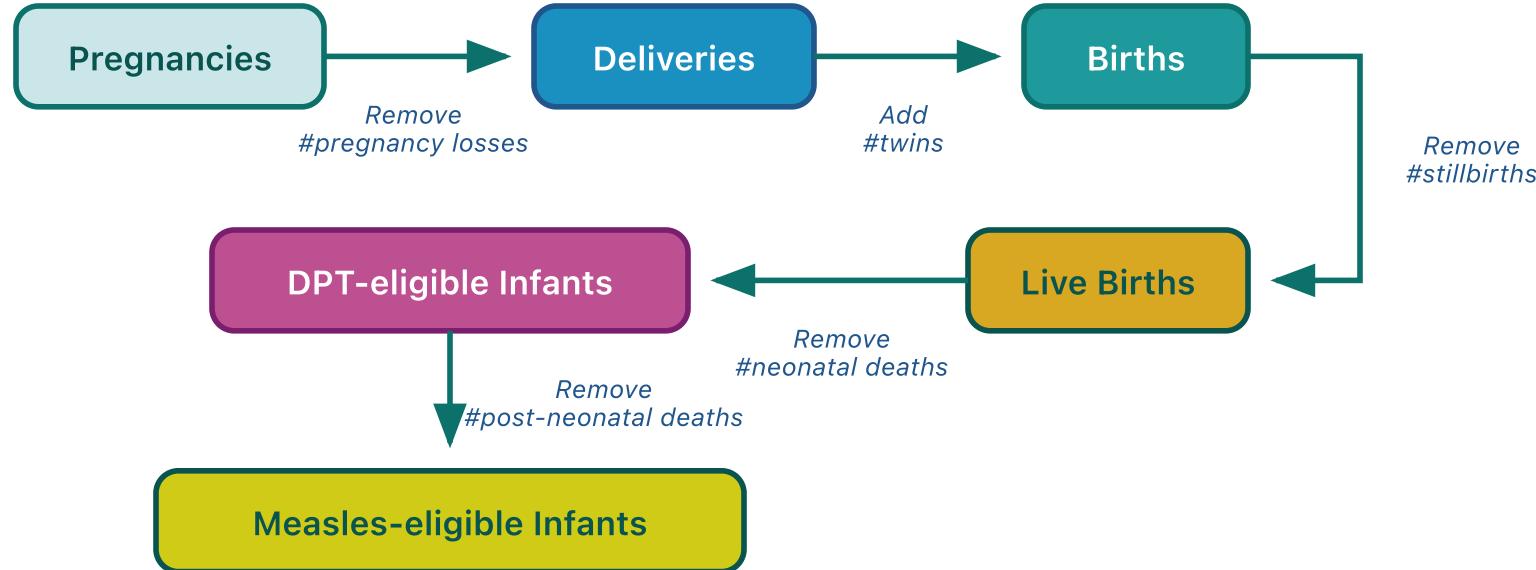
Several options for estimating the denominator

Types of denominators for FASTR core analysis

Type of service	Denominator
ANC	Pregnancies
Delivery	Live births
BCG	Live births
Penta1	Infants eligible for Penta (infants surviving 1+ months)
Penta3	Infants eligible for Penta (infants surviving 1+ months)

Expected relationships which help with estimating denominators

Starting from pregnancies, apply demographic factors to estimate other denominators:



Default values:

Pregnancy loss rate = 0.03 | Twin rate = 0.015 | Stillbirth rate = 0.02 | NMR = 0.03 | PNMR = 0.02

Use country-specific values for stillbirth rate, NMR, PNMR, and IMR when available from DHS/MICS.

Estimating denominators from ANC-1

If ANC-1 coverage is known from survey data, we can derive other denominators:

Example calculation:

- ANC-1 count from DHIS2: **100,000**
- Survey ANC-1 coverage: **95%**
- Estimated pregnancies = $100,000 \div 0.95 = \mathbf{105,263}$

Applying the cascade:

Step	Calculation	Result
Pregnancies	$100,000 \div 0.95$	105,263
Deliveries	$105,263 \times (1 - 0.03)$	102,105
Births	$102,105 \times (1 + 0.015)$	103,637
Live births	$103,637 \times (1 - 0.02)$	101,564
DPT 3+ doses	$101,564 \times (1 - 0.001)$	101,517

Session 6: Creating a project

Activity: Creating a Project

In this hands-on session, we will:

- Set up a new project
- Configure project settings
- Select indicators and time periods
- Apply best practices for project organization

Participants will create their first project

Session 7: Creating visualizations

Activity: Creating Visualizations

In this hands-on session, we will:

- Explore available chart types
- Create and customize visualizations
- Export charts for use in reports

Participants will build visualizations from their analysis



Lunch Break

90 minutes

Back at 14:00

Session 8: Creating reports

Activity: Creating Reports

In this hands-on session, we will:

- Use report templates
- Generate automated reports
- Customize report content and layout

Participants will create their first quarterly report draft

Day 3

Recap

On Day 2, we covered:

- FASTR methods for data quality assessment and adjustment
- Creating and configuring projects in the platform
- Building visualizations from Zambia data
- Generating reports

Day 3 Focus

Today we move from analysis to action:

- Deep dive into interpretation of results
- Create the Q4 2025 quarterly report
- Present findings to the group
- Develop action plans for continued work

Session 8: Interpretation of visualizations

Analytical thinking & interpretation

Content to be developed

This section will cover:

- Frameworks for interpreting FASTR outputs
- Connecting data patterns to programmatic meaning
- Common interpretation pitfalls to avoid
- Building analytical thinking skills

Session 9: Creating a Q4 2025 report

Generating quarterly reporting products

Content to be developed

This section will cover:

- Quarterly reporting workflow
- Using the FASTR platform for automated reports
- Quality assurance for reports
- Distribution and feedback mechanisms



Lunch Break

90 minutes

Back at 14:00

Session 10: Presenting reports

End user mapping

End user mapping helps ensure that our outputs will meet the real needs of our end users.

| Key questions

1. Who is my end user?
2. What does this end user need to accomplish with the report?
3. What information are they most interested in?
4. What do they like/not like about current reports?
5. How do they like to receive their information?

Next Steps & Action Planning

Key actions to take after this working session:

- Finalize adapted phone survey questionnaire
- Complete first quarterly report draft
- Train remaining MoH team on data downloader tools
- Prepare roadmap for participation in Abuja workshop

Quarterly Reporting Cycle

Establish a sustainable reporting rhythm:

- Define quarterly report timeline and responsibilities
- Set up data extraction schedule
- Establish review and approval process
- Plan dissemination to stakeholders

Continued Platform Usage

Maintain momentum with the FASTR platform:

- Regular data updates and quality checks
- Expanding analysis to additional indicators
- Building capacity across MoH teams
- Documentation of lessons learned

Day 4

Recap

On Day 3, we covered:

- Interpretation of FASTR visualizations
- Creation of the Q4 2025 quarterly report
- Presentation of findings and group feedback
- Action planning for continued platform use

Day 4 Focus

Today we design the Health Facility Assessment:

- Overview of the FASTR HFA phone survey
- Review questionnaire structure
- Adapt questionnaire for Zambia context
- Plan HFA priorities and data use

Session 12: Overview of FASTR HFA phone survey

Health Facility Assessment Phone Survey

Complementing routine data with facility-level insights

Survey Objectives

The FASTR HFA phone survey is designed to:

- 1. Monitor** service availability, readiness, and functioning of PHC facilities over time (with emphasis on RMNCAH-N services)
- 2. Characterize** and assess effect of shocks on PHC functioning
- 3. Inform** and assess implementation of interventions for resilient PHC systems
- 4. Enhance timeliness** by supplementing large-scale in-person surveys with a rapid-cycle phone approach

Tool Design

Framework alignment:

- Aligned with WHO/UNICEF Primary Health Care Measurement Framework (2022)

Question sources:

- WHO Harmonized Health Facility Assessment
- WHO Service Availability and Readiness Assessment (SARA)
- World Bank Service Delivery Indicators (SDI)
- DHS Service Provision Assessment (SPA)
- USAID MOMENTUM

Implementation:

- Phone-based survey to facility managers/Officers in Charge
- Target duration: 30 minutes
- Quarterly contacts
- Modular design for flexibility

Why phone surveys?

Routine HMIS data tells us *what* is happening:

- How many services were delivered
- Which facilities reported
- Where there might be data quality issues

But HMIS data can't tell us *why*:

- Is the facility actually open?
- Are essential supplies available?
- Are trained staff present?
- What challenges are facilities facing?

Phone surveys fill this gap by contacting facilities directly to understand context.

What the survey covers

1. Is the facility open and functioning?
2. Which services are currently available?
3. Are essential medicines in stock?
4. What staff are present today?
5. What challenges is the facility facing?

Results help explain *why* routine data might show certain patterns.

Questionnaire adaptation guidelines

Why adapt the questionnaire?

The standard FASTR questionnaire is a **starting point**, not a final product.

Every country needs to:

- Translate into local language(s)
- Use local health system terminology
- Focus on nationally relevant indicators
- Adjust for local facility types
- Match local supply/medicine names

Adaptation principles

Keep what matters:

- Core questions on operational status
- Essential supply availability
- Basic service provision

Adapt to context:

- Local terminology and naming
- Country-specific priority services
- Relevant response categories

Don't add too much:

- Phone surveys should stay short (15-30 min)
- Focus on actionable information
- Avoid "nice to know" questions

Session 13: Questionnaire adaptation to the Zambian context

Questionnaire structure and review

Note: Content generated with AI - human review needed

Survey blocks

Block	Content
A	Health Facility and Respondent Information
B	Shocks
B.1	Resilience to Shocks
B.2	Challenges in Past Three Months
C	Services
D	Infrastructure
E	Financing
F	Workforce and Staffing
G	Supplies
H	Leadership and Coordination
I	Community Engagement
J	Quality Improvement Processes

Review process

For each block, ask:

1. Is this question relevant for our context?
2. Is the wording clear in local language?
3. Are the response options complete?
4. Should we add country-specific items?
5. Can we remove anything non-essential?

Goal: A questionnaire that is locally relevant while maintaining comparability with the FASTR standard.

Hands-on questionnaire adaptation

Note: Content generated with AI - human review needed

Activity overview

What we'll do:

Work in groups to adapt the standard FASTR questionnaire to our country context.

Groups:

- Group 1: Blocks A-B (Facility info, Shocks, Resilience, Challenges)
- Group 2: Blocks C-D (Services, Infrastructure)
- Group 3: Blocks E-F (Financing, Workforce)
- Group 4: Blocks G-J (Supplies, Leadership, Community, QI)

Adaptation checklist

For each question in your block:

- [] Is the question clear in local language?
- [] Are response options appropriate?
- [] Should we add country-specific items?
- [] Can we simplify without losing information?
- [] Does skip logic make sense?

Document your changes for group discussion.

Group discussion

After working in groups, we'll:

- 1. Present adaptations** - Each group shares key changes
- 2. Discuss trade-offs** - What did we add vs. remove?
- 3. Reach consensus** - Agree on final adaptations
- 4. Plan pre-testing** - How will we test the adapted questionnaire?



Lunch Break

90 minutes

Back at 14:00

Session 16: Discussion: HFA priorities and data use

HFA priorities and data use

Note: Content generated with AI - human review needed

Using survey results

Phone survey results should inform:

1. Routine data interpretation

- Explain patterns in HMIS data
- Validate data quality concerns

2. Targeted support

- Identify facilities needing intervention
- Prioritize supervision visits

3. Supply chain management

- Track stockout patterns
- Inform distribution planning

Linking survey to routine data

Example use cases:

HMIS pattern	Survey question	Insight
Facility stopped reporting	Is facility open?	Closed vs. reporting failure
Sudden drop in services	Stock availability?	Stockout impact
Low immunization numbers	Vaccine in stock?	Supply vs. demand issue

Goal: Triangulate multiple data sources for better decision-making.

Next steps for HFA implementation

1. Finalize adapted questionnaire
2. Train enumerators
3. Establish call schedule
4. Conduct pilot round
5. Analyze and link to HMIS
6. Report and use findings

Key question: How will HFA results feed into your routine monitoring and decision-making processes?

Next Steps & Action Planning

Key actions to take after this working session:

- Finalize adapted phone survey questionnaire
- Complete first quarterly report draft
- Train remaining MoH team on data downloader tools
- Prepare roadmap for participation in Abuja workshop

Quarterly Reporting Cycle

Establish a sustainable reporting rhythm:

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Continued Platform Usage

Maintain momentum with the FASTR platform:

- Regular data updates and quality checks
- Expanding analysis to additional indicators
- Building capacity across MoH teams
- Documentation of lessons learned

Workshop Closing

Thank you for your participation!

Over the past four days, we have:

- Configured the FASTR platform for Zambia
- Created the first quarterly RMNCAH-N report
- Adapted the HFA questionnaire for local context
- Built capacity for ongoing analysis and reporting

Stay Connected

Continue the journey:

- Platform access and support
- Quarterly report submissions
- Multi-country workshop in Abuja
- Ongoing technical assistance from GFF team

Thank You

FASTR Working Session - Zambia
January 27-30, 2026
Lusaka

Contact Information

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