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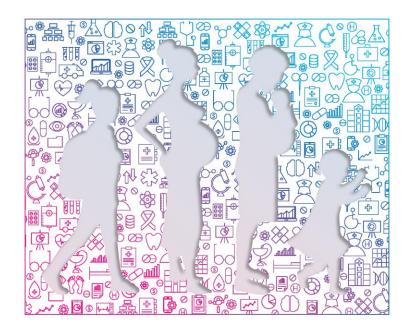


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Series Overview

- Training of trainers (ToT) on strengthening data use and analysis
- Based on WHO guidance <u>Analysis and use of health facility data: Guidance for maternal, newborn, child and adolescent health programme managers</u>



Analysis and use of health facility data

Guidance for maternal, newborn, child and adolescent health programme managers





Series Overview

Each session in the webinar series will:

- Introduce key concepts related to analysis and use of routine data
- Feature examples from MOMENTUM awards
- Highlight tools and resources to support technical assistance activities

Date	Session
August 1	Introduction to Health Facility Data
August 13	Data Quality
September 5	Data Triangulation and Analysis
September 12	Data Interpretation and Use for Decision-Making
September 26	Bonus Session: Data Viz

Today's Presenters



ZACHARY CROSSER

Research, Monitoring, and
Evaluation Advisor,
MOMENTUM Knowledge
Accelerator



VISHAL AGARWAL

Monitoring and Evaluation Specialist, MOMENTUM Routine Immunization Transformation and Equity



CARMEL TOUPÉ

Monitoring and
Evaluation Coordinator,
MOMENTUM Private
Healthcare Delivery

Session Objectives

- Provide an overview of the WHO data quality assurance (DQA) framework and dimensions of data quality
- Outline key tools and resources for supporting work to improve the quality of routine health facility data for maternal, newborn, child, and adolescent health (MNCAH)
- Present and discuss real-world examples of how colleagues with the MOMENTUM Routine Immunization Transformation and Equity (MRITE) and MOMENTUM Private Healthcare Delivery (MPHD) projects worked with the Ministry of Health in India and private sector in Benin, respectively, to improve routine health information systems (RHIS) data quality

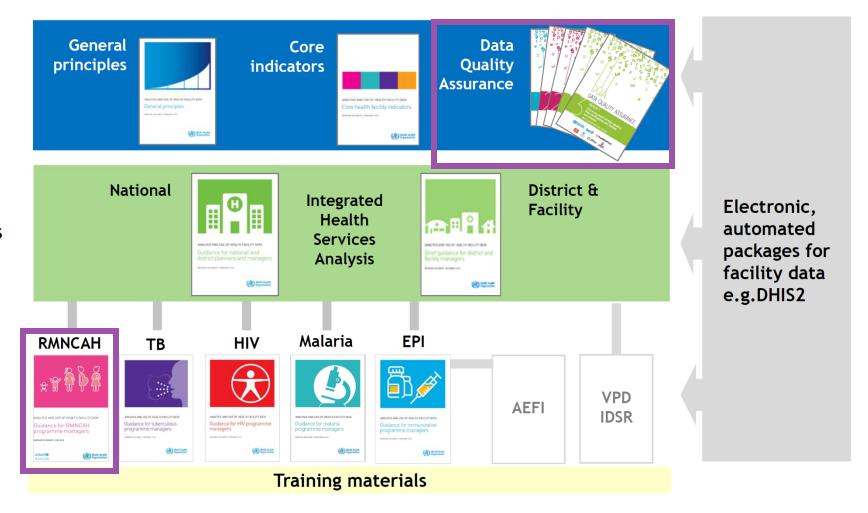
WHO Data Quality Assurance Framework

WHO Toolkit for Routine Health Information Systems Data

Standards for Measurement and Analysis

Integrated Health Services Analysis

Programme specific Guidance



Data Quality Review Methodology

The data quality review (DQR) methodology comprises two separate processes.

- **1.** A desk review A review of the quality of existing aggregated reported data, using standardized data-quality metrics
 - Done as part of routine and regular data quality checks or as a discrete assessment
- **2. A site assessment** An assessment of data quality that requires visits to health facilities and district offices and includes verification of source data and an assessment of system capabilities to produce quality data
 - Done as part of a routine data quality assurance cycle that includes supervision or may be conducted as a discrete assessment



Selecting Indicators to Include in DQRs

Indicators included in a DQR should be:

- Important for programme monitoring and evaluation
- "Tracer" indicators (i.e., results can be traced from the source to the national level and are indicative of data quality for all indicators within a programme area)
- Widely available and expected to be reported from most or all facilities that are offering services for the selected disease/programme area
- Relatively straightforward to verify the data quality of the indicators

Dimensions of Data Quality

1

Completeness and timeliness

2

Internal consistency of reported data

3

External comparison/ cross-checks (with other data sources) 4

Consistency of population data

Dimension 1: Completeness and Timeliness of Data

"The completeness of the data is assessed by measuring whether all the entities that are supposed to report actually do so. This applies to health-facility reporting to districts and to district reporting to the regional or provincial levels. Timeliness of data is assessed by measuring whether the entities which submitted reports did so before a predefined deadline."

Data quality metrics for completeness and timeliness

- Completeness and timeliness of district reporting
- Completeness and timeliness of facility reporting
- Completeness of indicator data (data element)
- Consistency of reporting completeness

¹ WHO. (2022). <u>Data quality assurance: Module 1. Framework and metrics</u>. Geneva: WHO.

Dimension 2: Internal Consistency of Reported Data

"Internal consistency of the data relates to the coherence of the data being evaluated. Internal consistency metrics examine:

- 1. Coherence between the same data items at different points in time;
- 2. Coherence between related data items; and
- 3. Comparison of data in source documents and in aggregated reports."1

Data quality metrics for internal consistency of reported data

- Presence of outliers
- Consistency over time
- Consistency between indicators
- Consistency of reported data and original records

¹ WHO. (2022). <u>Data quality assurance: Module 1. Framework and metrics</u>. Geneva: WHO.

Dimension 3: External Comparison / Cross-checks

"External comparison refers to the assessment of the level of agreement between two sources of data measuring the same health indicator."1

Data quality metrics for external comparison of data sources

• Consistency between routine data from the health management information system (HMIS) and data from population-based surveys (or other alternative data sources)

Dimension 4: Consistency of Population Data

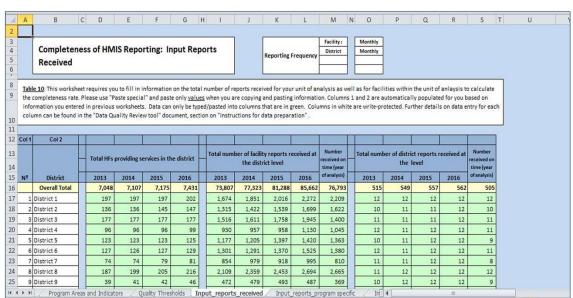
Consistency of population data "involves determining the adequacy of the population data used in evaluating the performance of health indicators." 1

Data quality metrics for consistency of population data

Consistency of population trends and comparison of related population estimates (i.e., between the
population data used for calculating health service coverage and other sources of population estimates)

Standardized Data Quality Review Tools







Unit	Data	Jan 14	Feb 14	Mar 14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14
Kawe dispensary	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	26.0	20.0	30.0	60.0	19.0	4647.0	24.0		7.0	18.0	20.0	26.0
Katesh Health Center	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	30.0	4345.0	53.0		54.0	63.0		32.0	37.0	36.0	34.0	38.0
ST. Aloyce Health Center	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	25.0	23.0	23.0		33.0	34.0	22.0	26.0	3432.0	35.0	21.0	49.0
RC/K/Ndege Dispensary	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	19.0	3021.0	18.0	15.0	28.0	35.0	22.0	42.0	36.0	32.0		39.0
Mlali Health Center	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	13.0	16.0	1710.0	17.0	13.0	17.0	9.0	12.0	6.0	12.0		
Kandashi Dispensary	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	17.0	13.0	24.0	15.0	14.0	20.0	16.0	1328.0	15.0	14.0	26.0	18.0
Balang`a Dispensary	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	1.0	6.0	13.0	5.0	3.0	11.0	9.0		1212.0	11.0	13.0	27.0
Ruanda Health Center	Penta vaccines given (KE, Under 1, Dose 3, Inside Service Area)	178.0	151.0	171.0	143.0	136.0	168.0	155.0	188.0	1110.0	121.0		169.0

Benchmarks & Cut-offs

Additional indicators can be selected ac			rs: antenatal care, immunization, HIV, TB and malaria. nent.			
Data quality metric	Definition					
Completeness of district reporting ¹	% of expected district n that are actually receive	nonthly reports (previous 1 year) ed	Number and % of districts that submitted 100% of expected monthly reports			
Timeliness of district reporting		monthly reports (previous 1 on time (i.e. by the deadline for	Number and % of districts that submitted on time least 75% of the monthly reports received at natio level from the district ²			
Completeness of facility reporting ³	% of expected facility m that are actually receive	nonthly reports (previous 1 year) ed	Number and % of districts with at least 90% of monthly facility reports received			
Timeliness of facility reporting		monthly reports (previous 1 on time (i.e. by the deadline for	Number and % of districts that received on time at least 75% of monthly facility reports that were submitted			
Completeness of indicator data (% of data elements that are non-zero	ANC first visit		Number and % of districts with < 90% 1) non-zero values; 2) non-missing values			
values, % of data elements that are non-missing values)	3rd dose DTP-containing	g vaccine⁴	Number and % of districts with < 90% 1) non-zero values; 2) non-missing values			
Carry out each analysis separately	Newly on ART		Number and % of districts with < 90% 1) non-zero values; 2) non-missing values ⁵			
	Notified cases of all form	ms of TB ⁶	Number and % of districts with < 100% ⁷ 1) non-zero values; 2) non-missing values			
	Confirmed malaria case	s	Number and % of districts with < 100% 1) non-zero values; 2) non-missing values			
Consistency of reporting completeness	Each information system	Evaluate the trend in completeness of reporting from district to national level over the past 3 years	Evaluate the trend in completeness from facility to district level over the past 3 years			

Dimension 2: Internal consistency of reported data							
Data quality metric	Definition						
		Subnational level					
Outliers¹ Complete for each of 5 indicators: - ANC 1st visit - 3rd dose DTP-containing vaccine	Extreme: % of monthly subnational unit values that are extreme outliers (at least 3 SD from the mean)	Number and % of subnational units in which 1 or more of the monthly subnational unit values over the course of 1 year is an extreme outlier					
- ART coverage - Notified cases of all forms	Moderate: % of subnational unit values that are moderate outliers (\pm 2–3 SD from the mean or > 3.5 on modified z-score method).	Number and % of subnational units in which 2 or more of the monthly subnational unit values for the indicator over the course of 1 year are moderate outliers					
Consistency over time Complete for each of 5 indicators: - ANC 1st visit - 3rd dose DTP-containing vaccine - ART coverage - Notified cases of all forms of TB - Proportion of suspects tested for malaria	trend of the indicator: 1st visit dose DTP-containing vaccine coverage ified cases of all forms of TB portion of suspects tested for						
Consistency between related indicators	Maternal health: ANC1 — IPT1 or TT1 (should be approximately equal)	Number and % of subnational units where there is an extreme difference (≥ ±10%)					
	Immunization: DTP3 dropout rate: (DTP1 – DTP3)/ DTP1 – should not be negative	Number and % of subnational units with the number of DTP3 immunizations higher than DTP1 immunizations (negative dropout)					
	HIV: Ratio of # enrolled on treatment: # tested positive in the previous reporting period < 1 in a TREAT ALL setting	Number# and % of subnational units meeting the test of consistency between testing and treatment indicators					
	TB: TB cases notified — TB cases put on treatment (in the past year) (should be roughly approximately equal)	Number and % of subnational units where there is an extreme difference ($\geq \pm 10\%$)					
	Malaria. Number of confirmed malaria cases reported >= number of confirmed malaria cases treated with 1 st line treatment courses (incl ACT)	Number and % of subnational units where there is an extreme difference ($\geq \pm 10\%)$					
	% agreement between verified counts for selected indicators in sampled facility records, and reported values for the same facilities	Maternal health: ANC 1st visit					
Verification of reporting	% agreement between verified counts for selected	Immunization: Penta/DTP 1-3 in children < 1 year					
consistency through a site assessment, e.g. facility and	indicators in sampled facility records, and reported values for the same facilities	HIV: Newly on ART					
district	Talled to the same racinges	TB: ² Notified cases of all forms of TB					
		Malaria: Confirmed malaria cases					

Resource Spotlight

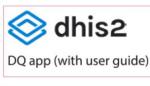
WHO Data Quality Assurance (DQA) Toolkit - <u>LINK</u>

Overall framework and implementation



Desk review of data quality





Training materials for desk review of data quality





Site assessment of data quality



Data collection tool for discrete site assessment in (MS-Word and CSPro) with a user manual for CSPro application

Training materials for data verification and system assessments

MS Excel analysis tool for facility/district data verification and system assessment (with user guides)

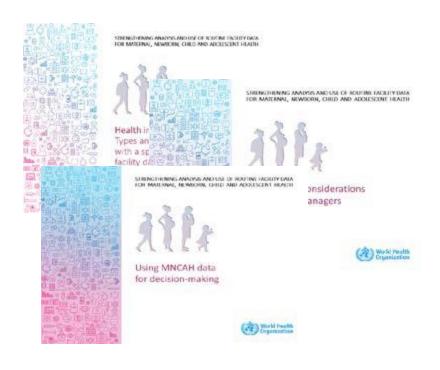
Supervisory checklists in MS Excel (with user guide)



Data Quality Considerations for MNCAH Managers

Analysis and use of health facility data: Guidance for maternal, newborn, child, and adolescent health (MNCAH) programme managers

Presentation materials

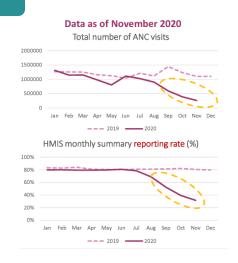


- 1. <u>Health information system: Types and sources of health data</u>
- 2. Routine health facility data indicators for MNCAH
- 3. Data quality considerations for MNCAH managers
- Data triangulation: Using multiple sources of MNCAH data together
- Analysis, visualization, and interpretation of MNCAH data
- 6. <u>Data communication products for MNCAH</u>
- 7. <u>Using MNCAH data for decision-making</u>

Objectives of Presentation #3

- Describe common data quality problems with routine health information system (RHIS)
 data
- Explain the importance of data quality with respect to using RHIS data on maternal, newborn, child, and adolescent health (MNCAH) for decision-making

Interpreting MNCAH Data Through a Data Quality Lens

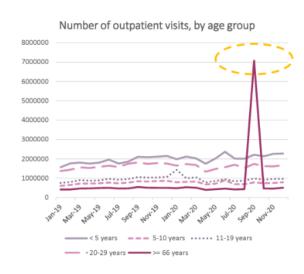


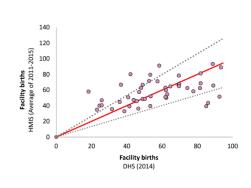
1

Completeness and timeliness

2

Internal consistency of reported data





3

External comparison/ cross-checks (with other data sources) 4

Consistency of population data

District	National Bureau of Statistics (NBS) estimate of surviving infants	Expanded programme on immunization (EPI) estimate of surviving infants	Ratio of NBS to EPI estimates
District 1	12,216	16,248	0.75
District 2	10,824	12,612	0.86
District 3	7,393	8,988	0.82
District 4	5,884	6,204	0.95
District 5	4,567	4,812	0.95
National	1,553,306	1,678,858	0.93

Example: Management Process for Addressing Data Quality Issues

Identified when reviewing data Many outliers and errors Errors introduced at district level Confirmed through data verification Regional level not reviewing Discovered during field review data No guidance exists for review Found during assessment Create SOPs for data review Actionable



Data Quality Assessment: Strengthening Data Quality for Evidence-based Planning and Management

Vishal Agarwal, MOMENTUM Routine Immunization Transformation and Equity India

August 13, 2024





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SECTION 1

Context

MOMENTUM Routine Immunization Project Context

- The primary source to measure immunization coverage is data reported from the Health Management Information System (HMIS) portal
- Despite being a valuable resource, the quality of reported data is seldom systematically assessed against standard protocols
- This lack of assessment hampers the identification of barriers to enhancing immunization coverage and highlights the critical need for robust data management assessment within routine immunization programs to ensure their effectiveness and impact
- Project Goal: To strengthen data quality for use in effective program management by:
 - Improving data quality
 - Enhancing monitoring and evaluation capabilities
 - Supporting informed decision-making
 - Facilitating capacity building among local stakeholders

Today's Focus: Overview of the **data quality assessment activity**, which focuses on strengthening data reporting processes and ultimately improving data use

SECTION 2

Goals & Objectives of DQA

DQA: Data Quality Assessment

DQA Goal: Strengthen the data recording and reporting system for immunization coverage **DQA Objectives:**

To assess the quality of the data captured in the immunization records and report for four main measures:

- 1. Availability Physical availability of records and reports were assessed out of the total expected records/reports
- 2. Completeness Measured whether all the specified immunization related data fields were filled
- **3. Agreement** Measured if two documents that were supposed to have the same data were identical or not
- 4. Consistency Measured if the reported data follows the logic that is expected from an immunization system

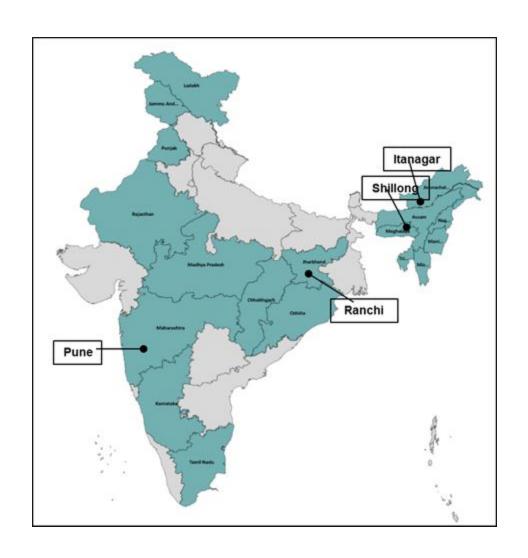
To understand strengths/weaknesses/opportunities in the data recording and reporting system

To **develop data quality improvement plans** for addressing barriers in improving the quality of reported data to strengthen existing data systems

SECTION 3

Geography

Geography



What: The DQA reviewed of all routine immunization-related records and reports

Where: Conducted in 4 City Embrace Model (CEM) cities across 4 states; 6 urban primary health centers (UPHC) visited in each CEM city

When: June 2023 to November 2023

How: Data was collected during Feb-May 2024 and analysed using an Excel-based tool; findings were shared with state/district health authorities

SECTION 4

Methodology

Mother and Child Protection (MCP) Card

- Captures individual-level data
- Carried by the caregiver



Tally Sheet

- Captures individual-level data from one single session
- Used by auxiliary nurse member (ANM) at the session site



Reproductive and Child Health (RCH) Register

- Stores individual-level data for all vaccination
- Used by ANM at the session site



Routine Immunization Data Flow in India

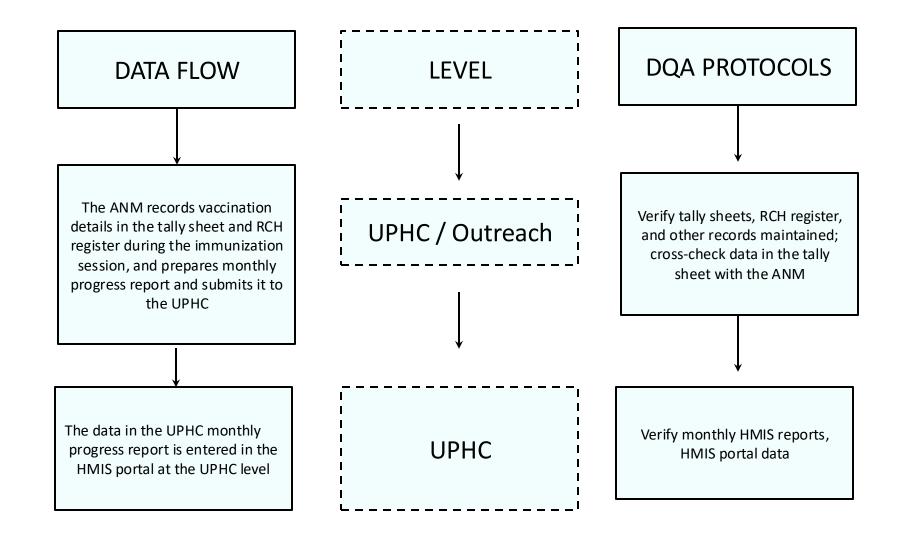
Monthly Progress Report (MPR)

 Stores all compiled antigen-wise data for the urban primary health center (UPHC) Health Management Information System (HMIS)

 Stores UPHC-level data (antigen-wise) electronically



Conceptual Framework



Methodology

To contextualize methodology for the DQA in the Indian context, methodological approaches adopted by the following organizations were **systematically reviewed**:

- Data Quality Self-Assessment manual (DQA-S) developed by World Health Organization (WHO)
- Immunization Data Quality Assessment-DQA manual developed by Global Alliance on Vaccines and Immunization (GAVI)

The following records and reports generated in the system were assessed for four main measures of quality:

- Tally sheet / Session register
- 2. RCH register
- 3. Monthly progress report (MPR) paper copy
- 4. MPR e-copy in the HMIS portal

Reference Period for the Assessment

- The records and reports will be verified for a period of 6 months
- These are the 6 months prior to the month of field visit, excluding the month immediately prior to field visit month
- For example, if the team is planning to conduct a DQA in the month of May 2024, the period of assessment will be from October 2023 to March 2024

Field visit conducted in May 2024					
Month & Year	Included in Assessment (Yes/No)				
May 2024	No				
April 2024	No				
March 2024	Yes				
February 2024	Yes				
January 2024	Yes				
December 2023	Yes				
November 2023	Yes				
October 2023	Yes				

Assessment Steps

Compilation and verification of the data from the HMIS portal

2

Compilation and verification of the data from the HMIS portal:

- Tally sheets
- RCH register
- MPRs
- Any other paper-based document

3

Sample validation in the community

BEFORE THE FIELD VISIT

DURING THE FIELD VISIT

DURING & AFTER THE FIELD VISIT

DQA Indicator Summary Table

No.	Indicator	Definition
1	Availability	The proportion of records and reports (e.g., tally sheets, MPRs, HMIS portal data) available out of the total expected records/reports
2	Completeness	The proportion of MPRs (paper copies and e-copies) wherein all the specified immunization fields are filled up
3	Consistency	Measurement on whether the reported data follows the logic expected from an immunization system; for example, in a UPHC it is expected that oral polio vaccine (OPV)-1 coverage will be equal to or greater than OPV-3 coverage
4	Agreement	Measurement comparing data between two documents—that are expected to have the same data—on whether the data are identical

Indicator 1: Availability

Data Source Measured	Indicator Definition
Tally sheets	The proportion of tally sheets physically available for all immunizations sessions conducted at selected UPHC for the study period
MPRs	The proportion of MPRs (paper copies) physically available for all selected UPHCs for the study period
HMIS portal data	The proportion of MPRs (e-copies) available in the HMIS portal for all selected UPHCs for the study period

Indicator 2: Completeness

Data Source Measured	Indicator Definition
Tally sheets	N/A - Completeness of tally sheet is not analysed due to the limitation in the design of the format
MPRs	The proportion of MPRs (paper copies) with all the specified immunization fields are filled up
HMIS portal data	The proportion of MPRs (e-copies in the HMIS portal) with all the specified immunization fields are filled up

Indicator 3: Consistency

Data Source Measured	Indicator Definition	Precise Definition
MPRs	Measurement on whether the reported data in the MPR follows the logic expected from an immunization system Example: In a UPHC it is expected that OPV-1 coverage will be equal to or greater than OPV-3 coverage	Aggregate data for 6 months must maintain the following patterns for ensuring data consistency in each data source: OPV 1= > OPV2=> OPV 3
HMIS portal data	Measurement of whether reported data in the HMIS portal follows the logic expected from an immunization system Example: In a UPHC it is expected that Penta-1 coverage will be equal to or greater than Penta-3 coverage	Penta 1=>Penta 2=> Penta 3

Indicator 4: Agreement

Data Sources Measured	Indicator Definition
Tally sheet aggregate data = MPR data	To ensure data agreement, data from the two data source must match. Data agreement has been checked between two data sources at the following five levels:
Tally sheet data (one month) = RCH register data	1. Aggregate tally sheet - MPR
MPR data = RCH register data fully immunised child (FIC)	 Tally sheet (one month) - MPR (one month) MPR data (FIC – one month) – RCH register (FIC – one
MPR data = HMIS portal data	month)
RCH register data = MCP card data	4. MPR - HMIS portal data 5. RCH register data - MCP card data (community validation)

SECTION 5

Data Collection Tools

Data Collection Tool Summary

Tool	Source	Description
DQA-1	Session tally sheet/Session register (numbers only)	Month-wise data posted by the ANMs in the UPHC during the assessment period
DQA-1.1	Session tally sheet / Session register (name-wise information)	Beneficiary-wise information of all the antigens given on a particular date during the last month of the assessment period
DQA-2	RCH register/Immunization register	Beneficiary-wise information of all the antigens given on a particular date during the last month of assessment period (back tracking of all beneficiaries who have received MCV-1 during the last month of the assessment period)
DQA-3	MPR	Month-wise and antigen-wise aggregate numbers (consolidated data for UPHC)
DQA-4	HMIS portal	Month-wise and antigen-wise aggregate numbers (consolidated data for UPHC)
DQA-5	MCP card (community validation)	Date of all vaccinations (BCG, OPV 1-2-3, Penta 1-2-3, MCV-1) for children received MCV-1 in the last month of the assessment period

	SUB-CENTER/UPHC DATA COLLECTION TOOL FROM DUE LIST /TALLY SHEET (Number Only) FORM: DQA-1										
Page	District:		Date of data collection:				Starting Time: Name of Sub Center / UPHC-1: 0				0
1	Block-1:	0	PHC/CHC-1: 0			Ending Time:				Name of ANM-1:	
Sessio	n Tally Sheet	t		Total No of Childre	en	HMS data	reporting cycle:	01-11-2023	lo	30-11-2023	
Sr No	Month of Data Collection	Name of session site held	Date of session To be entered (dd·m m·yy) Duelist / Tallyshee Available (Y/N)		OPV-1	OPV-2	OPV-3	PENTA-1	PENTA-2	PENTA-3	MR-1
1	Jun-23										
2	Jun-23										
3	Jun-23										
4	Jun-23										
5	Jun-23										
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12	Jun-23										
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14	Jun-23										
15	Jun-23										
Total	Jun-23	0	0	0	0	0	0	0	0	0	0

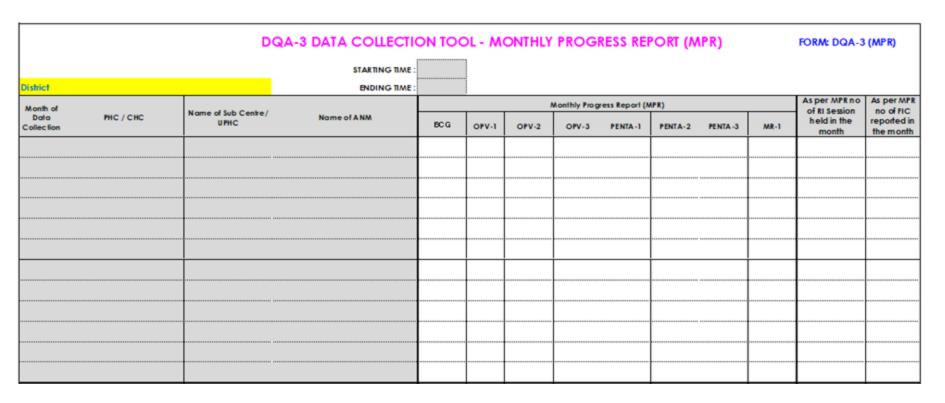
- This tool will be used to capture the session-wise numbers from the session tally sheet
- · Need to fill for all ANMs posted in the UPHC during the assessment period
- Data should be collected for the specified 6 months
- Source required to fill this tool will be tally sheet/session register in which date-wise antigen numbers are available/any other document in which date-wise information is available

	SUE	CENTER / UPHO	NAME WISE DAT	A COLLECTION	ON TOOL-IM/	MUNIZATI	ON DATA FR	OM DUE LI	ST/ TALLY SHE	EET	FO	RM : DQA-1.1
	Name of District:		Sub Center/ UPHC-1:	0					Na	me of ANMs:		
Page	Name of Block-1:	0	Starting Time:						Date of dat	a collection:		
1	Name of PHC/UCHC- 1:	0	Ending Time:						Month of Date	a Collection:	Jan-1900	
S.N.	Child De	rtails .	Source of information	Date of vaccinat	tion (dd-mm-yy)		HMIS dala reporti	ing cycle:	01-11-2023	to	30-11-2023	
3. N.	Name of child-father's Name	Date of Birth	Source of information	BCG	OPV-1	OPV-2	OPV-3	PENTA-1	PENTA-2	PENTA-3	MR-1	
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- This tool will be used to capture the name-wise immunization details from the session tally sheet for the last month of the assessment period
- Need to fill for all ANMs posted in the UPHC during the assessment period
- Write the name of the child with the name of the father to avoid duplication in names; e.g., child-father/mother
- Source required to fill this tool will be tally sheet/session register in which name-wise information of antigen administered is available
- Source should not be a RCH register or any other register in which tracking of beneficiaries is available

		SUB CENT	TER / UPHC DATA	COLLECTION	N TOOL-IMA	MUNIZATION	DATA FRO	M RCH REG	SISTER		FO	RM: DQA-2
	Name of District:		Sub Center/UPHC-1	0					No	ame of ANMs:		
Done		0	Starting Time:						Date of do	rta collection:		
Page 1	Name of PHC/ UCHC-1:	0	Ending Time:						Month of Da	ta Collection:	Nov-2023	
	Child De	tails		Date of vaccinat	fion (dd-mm-yy)	HMIS date	a reporting cycle:	01-11-2023	to	30-11-2023	FIC STATUS
S.N.	Name of child-Father's Name	Date of Birth	Source of information	8CG	OPV-1	OPV-2	OPV-3	PENTA-1	PENTA-2	PENTA-3	MR-1	(Y/N)
			RCH									
			RCH									
			RCH									
			RCH									
			RCH									
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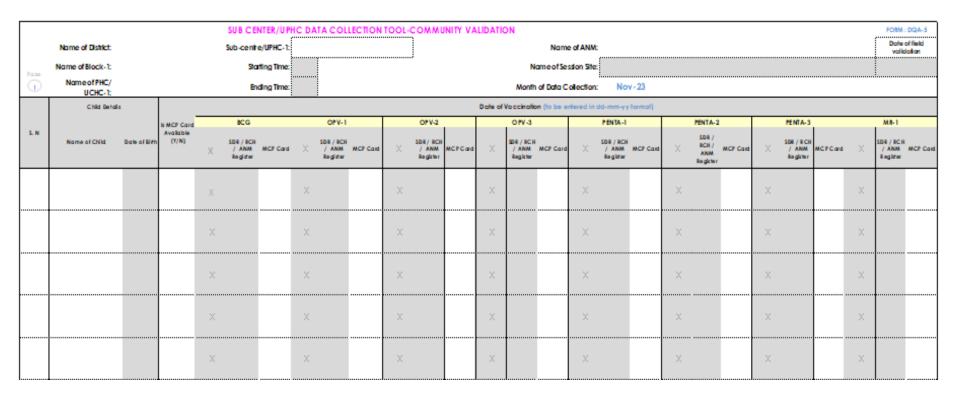
- This tool will be used to capture the name-wise immunization details from the RCH/immunization register (try to find all the children recorded in DQA-1.1 and write the name the same in DQA2)
- Need to fill for all ANMs posted in the UPHC during the assessment period
- Write the name of the child with the name of the father to avoid duplication in names; e.g., child-father/mother
- Data should be collected for a single month (last month of the assessment period)
- Source required to fill this tool will be the RCH register or any other register in which tracking of beneficiaries is available
- Source should not be a tally sheet/session register in which name-wise information of antigen administered is available



- This tool will be used to capture the aggregate antigen-wise numbers by month
- Data should be collected for the specified 6 months
- Source required to fill this tool will be the MPR of the UPHC (consolidated report of all ANMs)

	DQ	ом ни	IS				FOR	RM: DQ	A-4 (HMIS	5)				
District			STARTING TIME : ENDING TIME :											
Month of Data Collection	PHC / CHC	Name of Sub Centre/ UPHC	Name of ANM	BCG	OPV-1	OPV-2	OPV-3	ress Report (A		NTA-3	MR-1	Completeness of HMIS Data (Child Immunisation Section) (Y/N)	As per HMIS no. of RI Session held in the month	As per HMIS no. of FIC reported in the month

- This tool will be used to capture the aggregate antigen-wise numbers by month
- Data should be collected for the specified 6 months
- Source required to fill this tool will be the MPR of the UPHC (e-copies from the HMIS portal)



- This tool will be used to capture the immunization details of identified children from the MCP card
- Use during community validation in the field
- Need to fill for at least 8 to 10 children who have received MCV-1 in the last month of the assessment period
- Need to get all the dates from BCG to MCV-1 from the MCP cards
- Write the name of the child with the name of the father to avoid duplication in names; e.g., child-father/mother.

Overview of Data Quality Assessment Processes

Data Forms Assessed	Level of Data Collection/Facility	Type of DQA Conducted
Tally sheet	Contains individual-level data from a single session and is used by the auxiliary nurse member (ANM) at the session site	Availability Agreement
Mother and child protection (MCP) card	Contains individual-level data and is carried by the caregivers (contains the same individual-level data that is entered into the tally sheet for a given session)	Agreement
Reproductive and child health (RCH) register	Compiles data from the tally sheets and contains individual-level data from multiple sessions at the session-site level ; it is used by the ANM to track child vaccination details and health information	Agreement
Monthly progress report (MPR)	Compilation of data from the tally sheet stored as aggregated data (antigen-wise) at the UPHC level	Availability Completeness Consistency Agreement
Health management information system (HMIS)	MPR data entered into the HMIS, which stores UPHC-level data (antigenwise) electronically	Availability Completeness Consistency Agreement

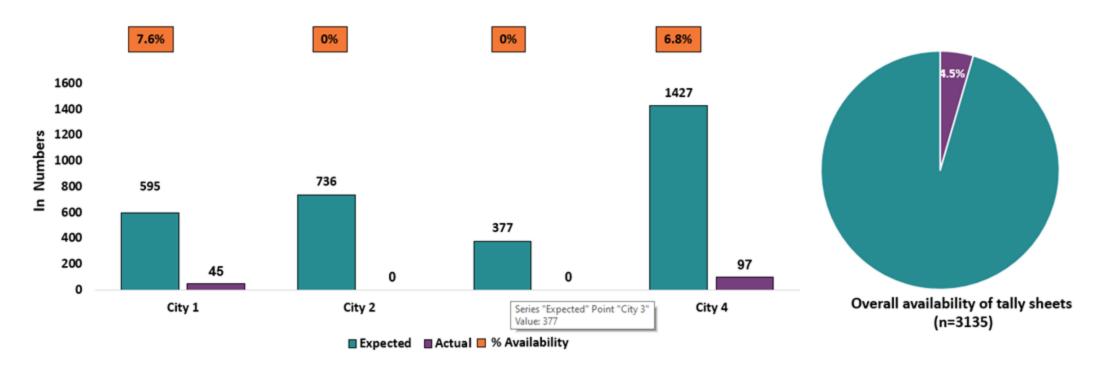
SECTION 6

Findings

Indicator 1: Physical Availability of Immunization Records/Reports

- Physical availability of records and reports were assessed out of the total expected records/reports
- Availability was assessed for tally sheets and MPRs at UPHCs, HMIS report (e-copy) for six months

Physical availability of tally sheets used at session sites



Result: Limited availability of tally sheets observed in the city's reviewed UPHCs

Indicator 1: Availability of Monthly Progress Report (MPR)

- Availability of data in the HMIS for the reviewed UPHCs is found to be 100%
- Availability of MPRs was assessed for 6 months in each UPHC reviewed

Availability of monthly progress reports



Result: Out of 144 MPRs, 140 (97%) were found to be available at the UPHCs

Indicator 2: Completeness

Completeness measures whether all the specified immunization-related data fields were filled.

Completeness was assessed for:

- MPRs at UPHCs
- HMIS reports (e-copy) at the district level
 - District data manager can see/download the data of all district UPHCs from the portal; e-copy refers to the data availability in HMIS web portal

Completeness of monthly progress reports



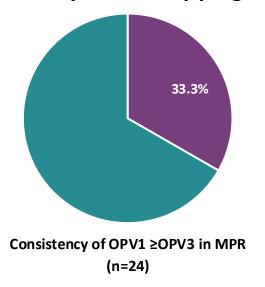
Indicator 3: Consistency

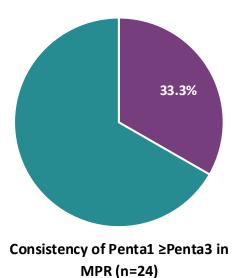
Consistency measures if the reported data follows the logic expected from an immunization system **Example:** In a UPHC it is expected that OPV-1 coverage will be equal to or greater than OPV-3 coverage

Consistency was assessed for a period of 6 months in MPRs and HMIS reports for:

- OPV1 and OPV3
- Penta 1 and Penta 3

Consistency in monthly progress reports





- 8 (33%) out of 24 reviewed UPHCs were found to be consistent for OPV and Penta
- Same pattern of consistency was observed for HMIS reports (e-copy) in the reviewed UPHCs

Indicator 4: Agreement of Immunization-Related Records/Reports

Agreement measures if two documents that are supposed to have the same data are identical

Agreement was assessed between:

- MPRs and the HMIS
- Reproductive and child health (RCH) register and mother and child protection (MCP) card
- MPRs and the RCH register

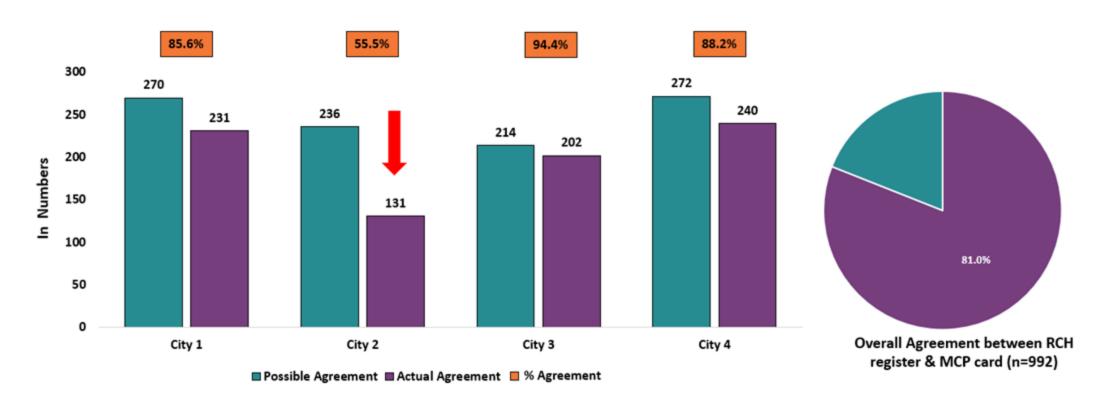
Agreement between MPRs and the HMIS

Agreement between available MPRs and HMIS (e-copy) reports was assessed for 8 selected antigens (BCG, OPV 123, Penta 123, MR1)



Indicator 4: Agreement between the Reproductive and Child Health (RCH) Register and the Maternal and Child Protection (MCP) Card

Agreement was assessed for 8 selected antigens (BCG, OPV 123, Penta 123, MR1) by matching the date of administration recorded in the RCH register (recorded by the ANM) and the MCP cards (through community assessment)



SECTION 7

Observations and Recommendations

Observations and Recommendations

Overall, engagement of all relevant government stakeholders from each level was the key element that helped the team successfully assess the data capture process from the field.

Challenges	Recommendations	Key Action Points	Status
Lack of tally sheet in the UPHCs	Develop tally sheet and share a printed copy with the UPHCs	Develop uniform tally sheet and support rollout in all UPHCs (MRITE)	In process
Incomplete MPR observed at the UPHC	Ensure review of the MPR during field visits at the UPHC	Build capacity of data handlers and health workers on recording and reporting formats (MRITE)	Completed
Inadequate data review and analytics at the UPHC level	Ensure timely data analysis	Regularly review data system and tools from the district level each month and analyze data (MOHFW)	In process
Issue of agreement observed between various tools (MPR and HMIS, RCH	Conduct frequent cross validation of records and reports	Further build the capacity of state/district officials on how to conduct a DQA (MRITE)	In process
register and MCP card)		Advocacy of DQA of state and district health authorities (MRITE)	In process



Plan

SECTION 1

Overview

Involvement with Partner Centers

SECTION 2

Practices and Lessons Learned

- 1. RDQA methodology and procedure
- 2. Results
- 3. Lessons learned

SECTION 3

Data Usage

- 1. Appropriate bodies to use the data
- 2. Data usage challenges

APPENDIX

- 1. Problem-solving plan
- 2. Recommendation monitoring plan
- 3. Consumer data protection sheet

SECTION 1

Overview

Overview

- Information system role: Data collection, processing, and analysis for informed decisionmaking
- Statistical reports must be exhaustive and reliable
- Consistency between data collected in health facilities and those in the DHIS2 MIS database
- Purpose: To improve the completeness, promptness, reliability, and use of data

Involvement with Partner Centers

- Written agreement between two parties: Partner center and ABMS
- Rewarding the best centers based on performance
- Training in FP/MNI, including collection tools
- Care providers sign the consumer data protection sheet (see appendix 3)

SECTION 2

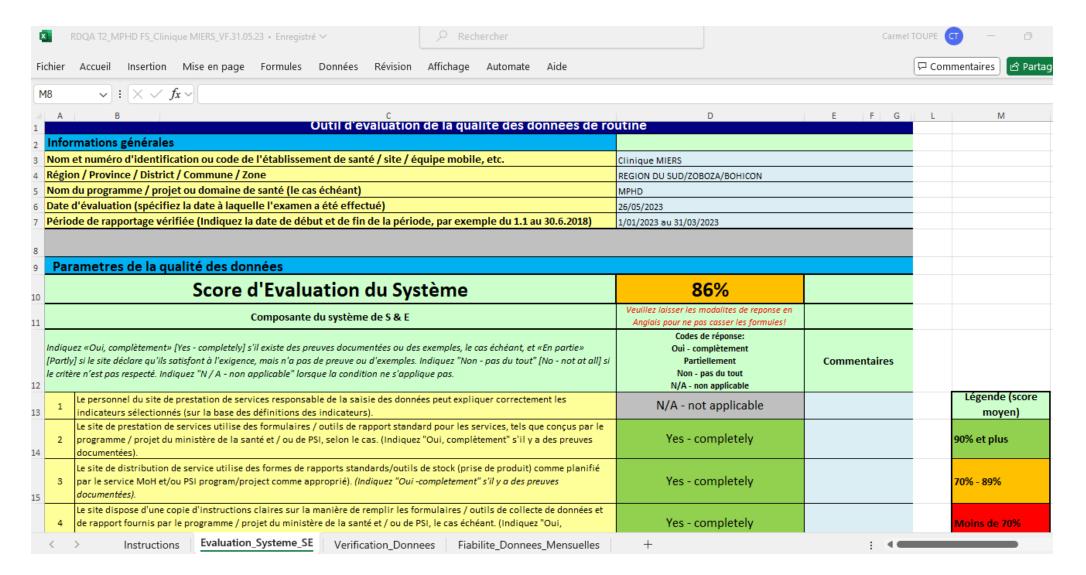
Practice and Lessons Learned

Routine Data Quality Assessment (RDQA) Methodology and Procedure

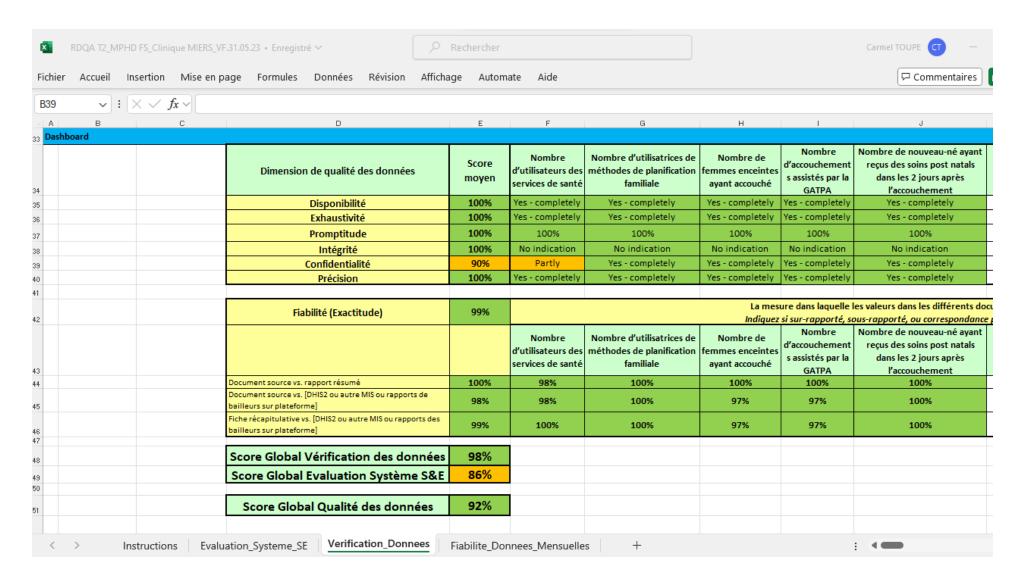
Aim of RDQA: To improve the quality of data collected for evidence-based decision-making

- Preparatory phase: Identify indicators; select supported health centers; define collection period; identify team members
- Execution phase: Use the RDQA Tool Template file to check completeness and promptness of report transmission; check quality of input
- **Feedback phase:** Train providers on minimum PSI standards; make recommendations to stakeholders to improve data quality

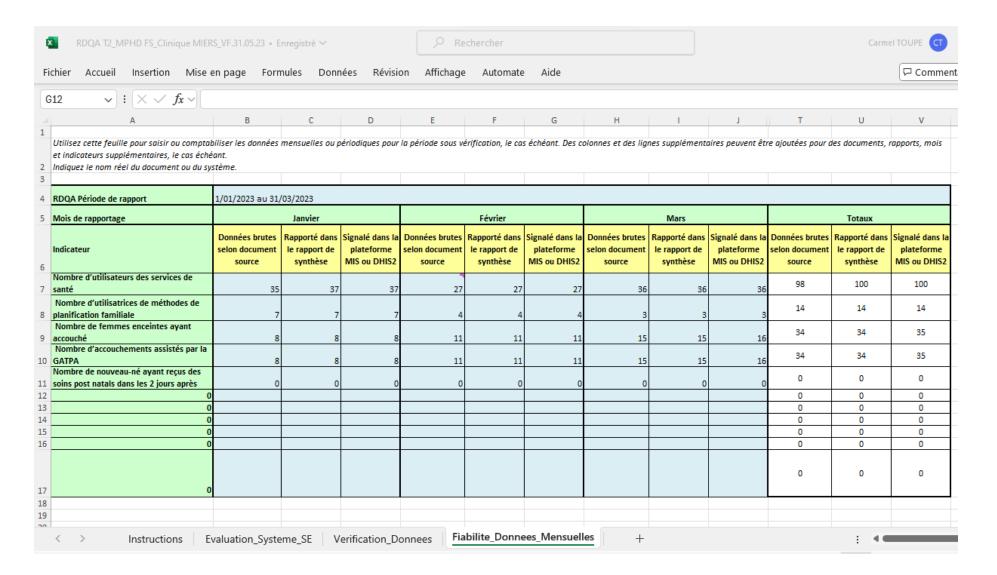
RDQA Tool Template: SE System Assessment



RDQA Tool Template: Data Check

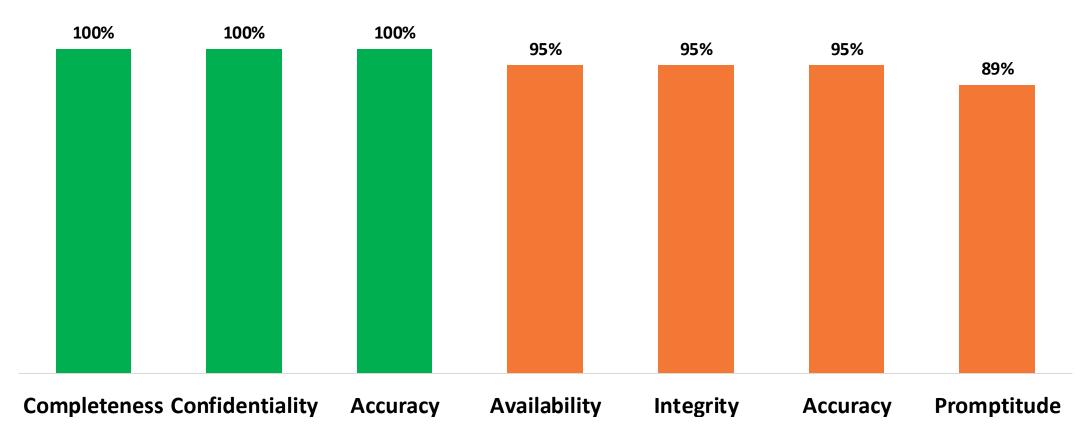


RDQA Tool Template: Data Reliability



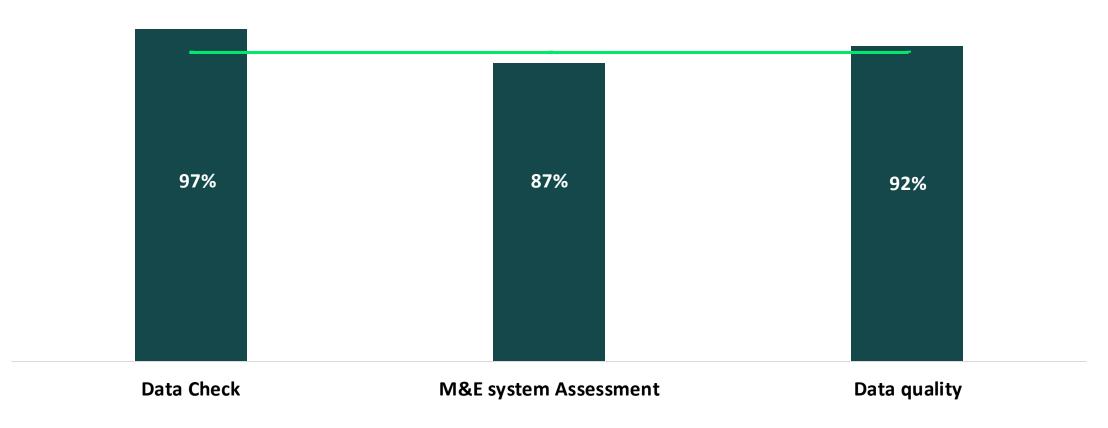
Results from 11 MPHD-supported Health Centers Visited during the RDQA

Average score distribution by data quality dimensions (N =11)



Results from 11 MPHD-supported Health Centers Visited during the RDQA

Proportion of overall score: Target ≥ 90%



Lessons Learned

- Strong involvement of health zone statisticians → strengthening the integration of providers
- Rigorous follow-up of recommendations → Challenges faced up
- Sharing RDQA results → improving the monitoring-evaluation system

SECTION 3

Data Usage

Using Data to Inform the Project

RDQA results are used to inform the project at the following feedback meetings:

- Organization of the data-to-action (D2A) session
- Learning workshop on project implementation
- Capacity building for health care providers
- Direct feedback
 - During RDQA missions
 - Supervision of RDQA recommendations

Challenges

RDQAs are subject to two major challenges:

- 1. Using RDQA apps
- 2. Assessing a higher number of health facilities (40% on average)

Questions?



Data Triangulation and Analysis

September 5, 8:00 - 9:30AM EDT

THANK YOU

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Appendix

Problem-solving Plan (Example)

Problem-solving Plan					
Problems Identified	Actions to be Implemented	Officer	Timeframe		
Promptness problems in some clinics	Ensure timely transmission of reports	Clinical service provider	Permanent		
Integrity problems in some clinics	Ensure compliance with data handling standards	Clinical service provider	Permanent		
Non-documentation of services (childbirth, newborn care, family planning) in some clinics	Ensure documentation of specific services	of specific Clinical service provider Permanent			

Recommendation Monitoring Plan (Example)

	RDQA 2023 Recommendation Monitoring				
Sanitary Zones	Clinics	Recommendations	Status	Score	Time frame
	CMCA Zakpota Clinic ZOBOZA CJAV Bohicon	Make sure you fill in the MIS files in accordance with the input guide, respecting the chronology of dates	Conducted	100%	N/A
		Ensure that the C6 report matches the MIS register	Conducted		N/A
		Document delivery and newborn care services	Conducted		N/A
ZOBOZA		Please ensure that the MIS registers are filled in accordance with the input guide, especially for the section "consultation reason"	Conducted	67%	N/A
		Ensure a good match between MIS register figures and SNIGS tools (CDV, C6/C15) by using MIS for SNIGS aggregates	Not conducted		March 2024
		Contact the zone office with the C15 report (SRAJ) to replace C6	Conducted		N/A

Recommendation Monitoring Plan (Example)

	RDQA 2023 Recommendation Monitoring					
Sanitary Zones	Clinics	Recommendations	Status	Score	Timeframe	
	Clinique Déo Gratias	Ensure correct application of data handling standards (especially concerning confidentiality)	Conducted	67%	N/A	
		Ensure that the figures in the MIS register match those in the C6 report by documenting all family planning and delivery services in the MIS register	Not conducted		March 2024	
		Respect the correct chronology of dates when filling in MIS sheets	Conducted		N/A	
	Mother & Child Clinic	Now document delivery, AMTSL, newborn care, and diarrhea services	Conducted		N/A	
		Please ensure that the MIS forms are filled in correctly, in accordance with the input guide	Conducted	67%	N/A	
		Ensure that the MIS register and C6 report match (use MIS and register to aggregate C6 figures)	In progress		March 2024	

Consumer Data Protection Sheet (1/2)

Normes minimales pour la manipulation des données sur les sites de prestation de services

Objectif

Ce guide décrit les normes minimales pour la manipulation des données, notamment le stockage des données, la sauvegarde, la confidentialité, la manipulation, le partage et le rapportage au niveau des sites de prestation de services. Le suivi des procédures de traitement de données permet d'assurer la sécurité et l'intégrité des données pendant les phases de collecte, de stockage et de transfert.

2. Champ d'application

Ce guide est destiné au personnel de PSI au niveau du site de prestation de services et à ses partenaires. Cela inclut les établissements de santé, les pharmacies, les magasins de médicaments et d'autres membres du personnel des établissements qui collectent et rapportent les données de routine. Il s'applique aux données papier et électroniques.

Guide

Ce guide n'est ni exhaustif ni prescriptif, mais fournit les exigences minimales à respecter. Un stockage adéquat, la confidentialité, l'intégrité et le partage des données sont essentiels dans toute organisation. Les membres du réseau PSI et les partenaires doivent veiller à ce que le personnel du site concemé reçoive régulièrement une formation sur le terrain et une supervision par rapport aux meilleures pratiques de manipulation des données.

3.1. Stockage et sauvegarde de données

Les dossiers médicaux, rapports, registres et autres sources de données doivent être stockés et archivés conformément aux politiques et réglementations établies par le Ministère de la Santé national étou le ballieur. Ces dossiers sont utiles pour documenter les antécédents médicaux des cilents, faciliter la continuité des soins, surveiller et évaluer la prestation de services, la recherche et l'exécution d'évaluations et de verifications de la qualité des données. Les dossiers médicaux peuvent être stockés sur support papier ou électronique. Les données électroniques comprennent les données contienues dans les dossiers médicaux électroniques (« EMR »), les appareils electroniques mobiles (téléphones mobiles, tablettes, USB, PDA), les tableurs, les bases de données, les logiciels de gestion de données (DHIS2), les serveurs et le cloud. Les principes de stockage sont les mêmes pour les données papier et électroniques et sont résumés dans le tableau ci-dessous.

3.2. Confidentialité de données

Garder les données clients sécurisées et confidentielles est une priorité absolue pour PSI. La confidentialité des données doit être priorisée lorsque les données sont collectées, transmises et stockées.

 Traitez toutes les informations individuelles des clients comme hautement confidentielles. Restreignez l'accès aux informations identifiant le client (par exemple,

psi

- nom, numéro de téléphone, âge, lieu de résidence, etc.) uniquement au personnel autorisé directement responsable de la prestation des services.
- Ne collectez que le minimum d'informations personnelles nécessaires pour conduire des activités de santé publique.
- Transmettez uniquement des données agrégées. Désidentifiez (supprimez les informations personnelles identifiant un client) avant qu'elles ne soient transmises, diffusées ou utilisées pour l'analyse. Créez et utilisez des codes d'identification uniques (UIC) qui identifient de manière unique un client.
- Lorsque des données client sont nécessaires, les enregistrements doivent être bien protégés et des protocoles spécifiques doivent être maintenus pour garantir la confidentialité des données.
- Un accord de confidentialité doit être signé et renouvelé chaque année par tous les membres du personnel qui ont besoin d'accèder à des documents confidentiels. L'accord doit clairement identifier les conditions dans lesquelles les documents peuvent être consuités.

Résumé des normes minimales pour le stockage et la confidentialité des données

Protégez les enregistrements électroniques Stockez les fiches clients dans des armoires verroullées dans une zone par un mot de passe - chaque fichier et sécurisée. chaque ordinateur. Restreignez l'accès aux armoires Restreignez l'accès aux mots de passe uniquement aux employés autorisés. uniquement au personnel autorisé. Utilisez des règles de dénomination Créez et maintenez des systèmes de classement pour les dossiers papier afin de standard dans les enregistrements de faciliter leur récupération. données pour faciliter leur récupération. Conservez les fiches clients sur le site Maintenez des sauvegardes régulières et conformément aux directives nationales / des plans de récupération à lour du système du Ministère de la Santé ou des bailleurs. d'information. Limitez les zones où les enregistrements Maintenez une protection antivirus efficace papier peuvent être déplacés. et à lour, le cas échéant. Stockez et transférez les données client sous forme cryptée.

3.3. Intégrité de données

Maintenir et assurer l'exactitude et la flabilité des données est d'une importance vitale. Les données doivent représenter flédiement les services fournis aux clients. Des mesures doivent être mises en place pour protèger les données contre les changements non autorisés, c'est-à-dire l'insertion, la modification ou la destruction accidentelle ou délibérée de données. De telles étapes doivent inclure des vérifications rétrospectives ou des preuves documentées de tout changement qui a été apporté aux enregistrements de données.

 Les enregistrements de données ne doivent pas être faussement ajoutés, supprimés ou modifiés.



Consumer Data Protection Sheet (2/2)

 Les modifications apportées aux dossiers clients et aux rapports sommaires doivent être approuvées, signées et datées. Les enregistrements électroniques doivent avoir un journai d'audit des données pour conserver un enregistrement des modifications apportées sur eux.

3.4. Partage de données

Les procédures appropriées doivent être mises en piace pour définir ciairement quelles données peuvent être partagées, quand, à qui et dans quel format.

- Partagez les données avec des personnes autorisées uniquement pour le programme ou le projet spécifique.
- Partagez des données par des méthodes sécurisées, c'est-à-dire des protocoles, des systèmes et des outils approuvés.
- Les informations identifiant le client doivent être conservées au niveau de l'établissement. Ne partagez que des données agrégées autant que possible.
- Les données conservées sous format électronique doivent être rendues accessibles au personnel concerné sur le site (par exemple via un réseau ou une piate-forme partagée) avec des restrictions d'affichage et de modification, le cas échéant.
- Les données doivent être examinées et approuvées par des personnes autorisées avant le rapportage. Les examens de données doivent être documentés et signés sur des documents de synthèse ou de rapport (par exemple, indiquez «Révisé par» avec signature et date).
- Partagez les données avec les niveaux de rapports pertinents en temps opportun avec des mécanismes de suivi du temps établis pour la compilation et / ou la réception. Cela devrait être intégré dans les outils de rapportage lorsque cela est possible (par exemple, une disposition pour indiquer ou estampiller la date de réception des rapports).

Ce guide est conçu pour aider à renforcer la manipulation des données par le personnel sur les sites de prestation de services. Le personnel doit être formé et supervisé réguilèrement sur les meilleures pratiques de manipulation des données. Après la formation, le personnel doit lire et signer ce quide comme un engagement à respecter ces normes.

