

# Data Quality Review (DQR) Desk Review Tools and Methods Workshop

## Session 3: Domain I

### Completeness and Timeliness



World Health  
Organization



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MEASURE  
Evaluation



# Learning Objectives

**Learning Objective** is to familiarize the workshop participants with the analysis of metrics for Domain I—Completeness and timeliness. Specifically, by the end of the workshop the participants will:

- Understand the data requirements for the different metrics pertaining to Completeness in Domain I
- Understand mechanisms and challenges to accessing data for evaluating completeness, particularly program-specific data sets
- Learn to input and analyze data for completeness for the different metrics
- Learn to interpret findings and develop plans for improving data completeness

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Domain I: Completeness and Timeliness



# Domain I: Completeness & Timeliness

## Domains of Data Quality

1) Completeness & timeliness of data

2) Internal consistency of reported data

3) External consistency, i.e. agreement with other sources of data, e.g. surveys

4) External comparisons of population data – review denominator data used to measure performance indicators

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Domain I: Completeness and Timeliness



# Completeness and Timeliness of Reporting—I

Data Quality Metric	Definition	
	National Level	Subnational Level
Completeness of district reporting	% of expected district monthly reports (previous 1 year) that are actually received	# (%) of districts that submitted 100% of expected monthly reports
Timeliness of district reporting	% of submitted district monthly reports (previous 1 year) that are received on time	# (%) of districts that submitted on time at least 75% of monthly reports received at national level from the district

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Domain I: Completeness and Timeliness



## Example — Completeness and Timeliness of District Reporting

Districts that submitted monthly reports on time are indicated by “Y”. Districts with poor reporting ( $\leq 75\%$ ) are shown in red.

District	Month												Total	Completeness Rate
	1	2	3	4	5	6	7	8	9	10	11	12		
A	Y	Y		Y	Y	Y	Y		Y		Y	Y	9	75%
B	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	11	92%
C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	12	100%
D	Y		Y	Y		Y		Y	Y	Y	Y		8	67%
E	Y		Y		Y		Y	Y			Y	Y	7	58%
National	5	3	4	4	3	4	4	4	4	3	5	4	40	67%



## Completeness and Timeliness of Reporting—2

Data Quality Metric	Definition	
	National Level	Subnational Level
Completeness of facility reporting	% of expected facility monthly reports (previous 1 year) that are actually received	# (%) of districts with at least 90% of monthly facility reports received
Timeliness of facility reporting	% of submitted facility monthly reports (previous 1 year) that are received on time	# (%) of districts that received on time at least 75% of monthly facility reports that were submitted

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Domain I: Completeness and Timeliness



## Example — Completeness of Facility Reporting

Facility reporting rate within districts. Districts with facility reporting rate of <80% are shown in red.

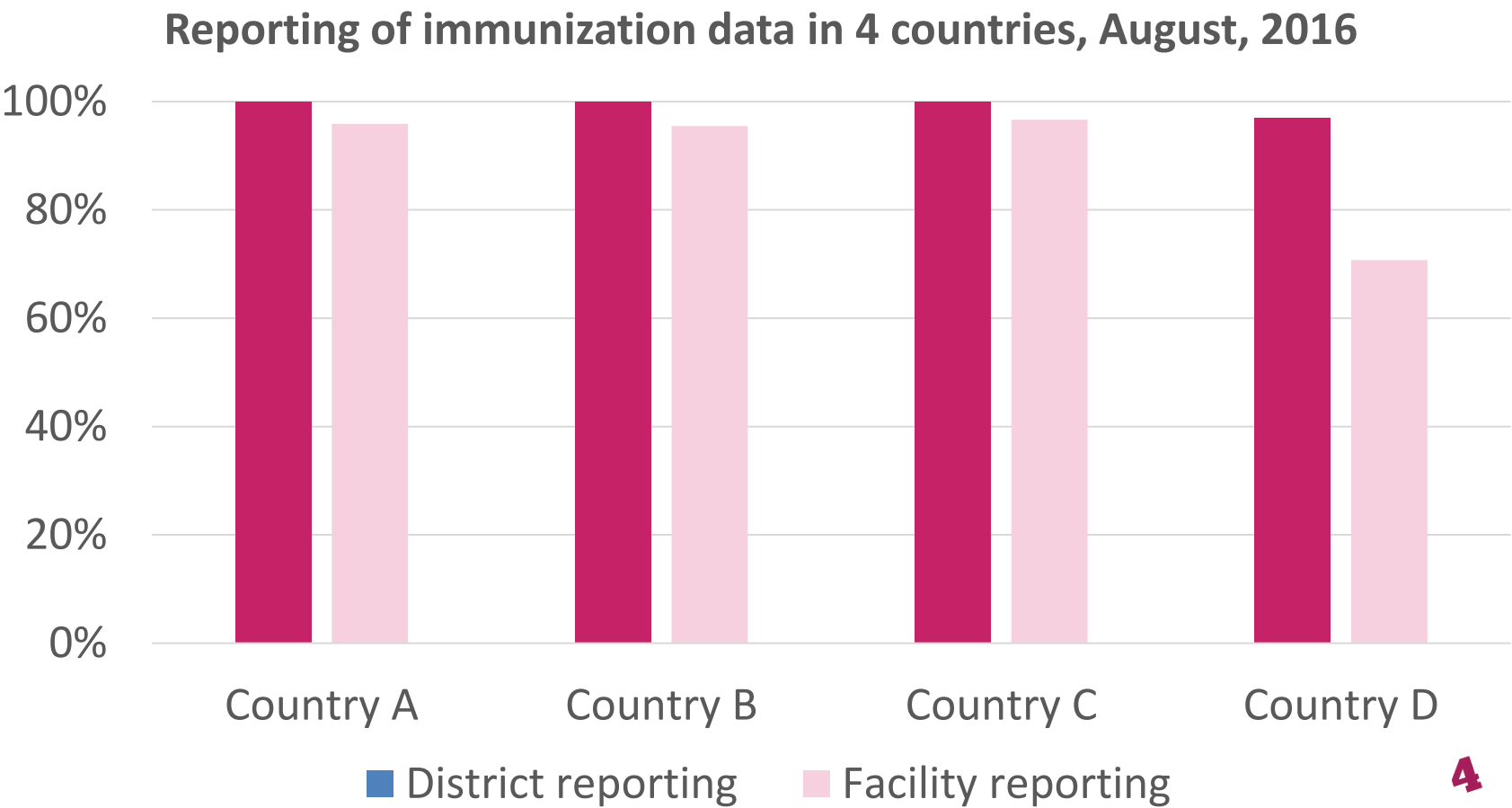
District	Total # of Facilities	Expected Reports for 12 months	Actual # of Reports Received in 12 months	Facility Completeness Rate
A	150	1800	1140	63%
B	50	600	554	92%
C	80	960	950	99%
D	120	1440	1080	75%
E	100	1200	1200	100%
National	500	6000	4924	82%



Domain I: To assess completeness,  
first review facility reporting

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# Completeness and Timeliness of Reporting—3

Data Quality Metric	Definition	
	Indicator	Criteria
<b>Completeness of indicator data</b> (% of data elements that are non-zero values; % of data elements that are non-missing values; do each analysis separately)	ANC 4 <sup>th</sup> visit	# (%) of districts with <90% a) non-zero values, b) non-missing values
	3 <sup>rd</sup> dose DPT-containing vaccine	# (%) of districts with <90% a) non-zero values, b) non-missing values
	HIV coverage	# (%) of districts with <90% a) non-zero values, b) non-missing values
	Notified cases of all forms of TB	# (%) of districts with <100% a) non-zero values, b) non-missing values
	Suspected malaria cases tested	# (%) of districts with <100% a) non-zero values, b) non-missing values



# Example — Completeness of Indicator Data

Districts that had a non-missing value for that month are indicated by “Y”. Districts with missing values ≥10% are shown in red.

District	Month												# Months with Missing Data	Incomplete Rate
	1	2	3	4	5	6	7	8	9	10	11	12		
A	Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	2	17%
B	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	1	8%
C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	0	0%
D	Y	Y		Y		Y	Y	Y	Y	Y	Y		3	25%
E	Y			Y	Y	Y	Y		Y	Y		Y	4	33%
National	0	1	3	0	3	0	0	1	0	0	1	1	10	17%



# Discussion

## Discussion Questions:

- Why does reporting need to be timely and complete?
- What is the completeness of reporting in your RHIS?  
Timeliness?
- What does the trend in completeness of report tell you? Why is it important?

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# Exercise

## Exercise – Completeness and timeliness of data and reporting

- Navigate to the DQ Demo instance of DHIS2:  
<https://demos.dhis2.org/dq/dhis-web-commons/security/login.action>

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