

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

Domain 3

External Consistency of Reported Data



World Health
Organization



The Global Fund



USAID
FROM THE AMERICAN PEOPLE



MEASURE
Evaluation



Domain 3: External Consistency

Dimensions of Data Quality

1) Completeness & timeliness of data

2) Internal consistency of reported data

3) External comparisons/cross-checks (with other data sources, e.g. surveys)

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



SESSION 5

Domain 3: External
Consistency

Domain 3: External Consistency

SESSION 5

Domain 3: External
Consistency

External Consistency with Other Sources

Focus

- Consistency between 2 sources of data measuring the same health indicator

Sources of Data

- HMIS compared to household survey
- HMIS compared to program-specific information system
- Other data sources, e.g. supply of vaccines



External Consistency with Other Sources-I

Indicator	Definition	
	National Level	Subnational Level
ANC 1 st visit	Ratio of facility ANCI coverage rates to survey ANCI coverage rates	# (%) of aggregation units used for the most recent population-based survey, such as province/state/region, whose ANCI facility-based coverage rates & survey coverage rates are at least 33% different
3 rd dose DPT-containing vaccine	Ratio of DTP3 coverage rates from routine data to survey DTP3 coverage rates	# (%) of aggregation units used for the most recent population-based survey, such as province/state/region, whose DTP3 facility-based coverage rates & survey coverage rates are at least 33% different



Consistency with survey data

Example – External Consistency with Survey Results

Comparison of HMIS & survey coverage rates for ANCI. Any difference between the 2 sources that is $\geq 33\%$ is highlighted in red.

District	Facility Coverage Rate	Survey Coverage Rate	Ratio of Facility to Survey Rates	% Difference the two rates
A	1.05	0.95	1.10	10%
B	0.93	0.98	0.96	4%
C	1.39	0.90	1.54	54%
D	1.38	0.92	1.50	50%
E	0.76	0.95	0.80	20%
National	1.10	0.94	1.17	17%

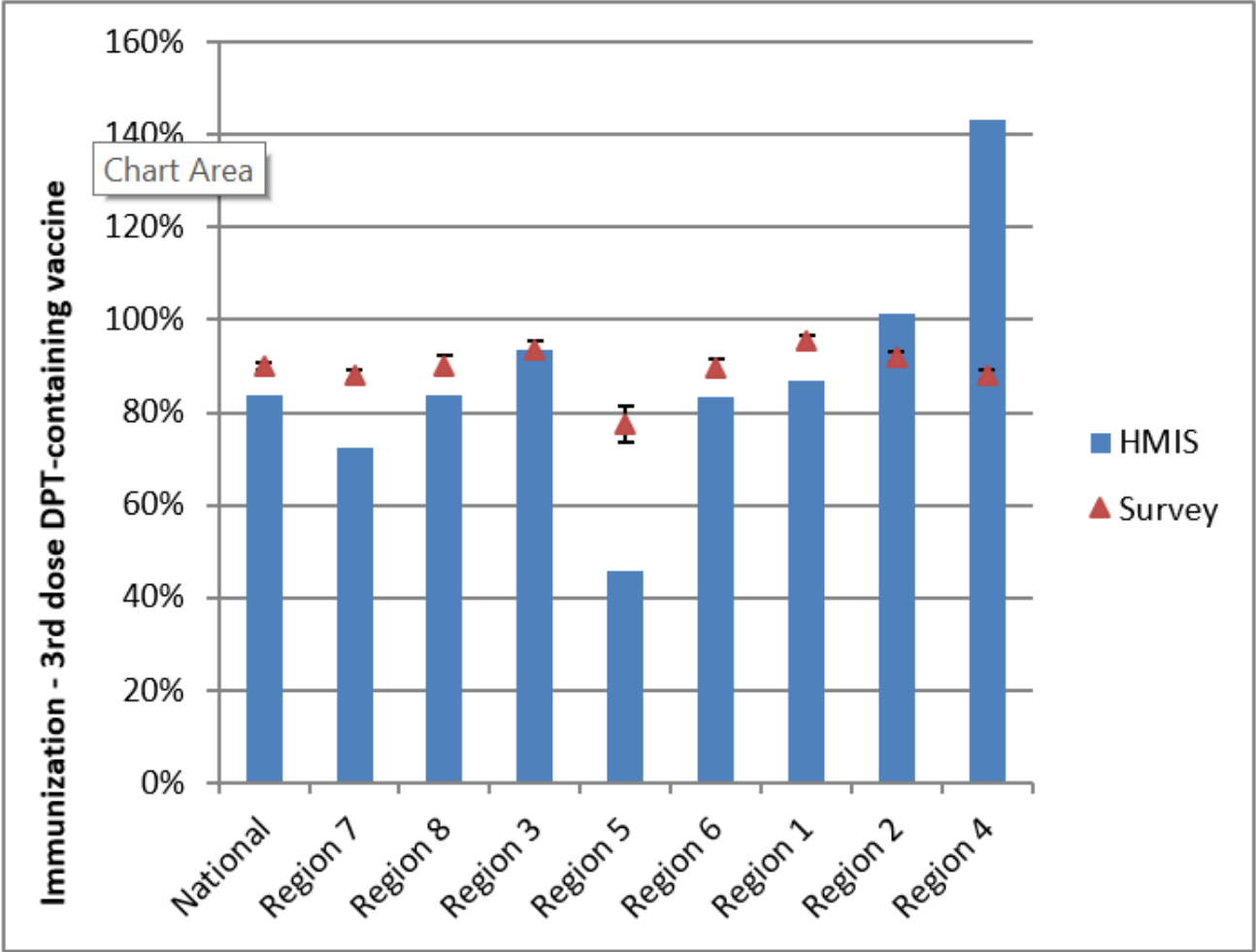
SESSION 5

Domain 3: External Consistency



Consistency with survey data

Domain 3a: An “administrative estimate” of coverage can be compared to an estimate from a household survey



SESSION 5

Domain 3: External Consistency



Domain 3a: Limitations to use of survey estimates to assess the quality of routine data

- Limitations of administrative estimates:
 - Incomplete reporting (especially from private providers);
 - Uncertain denominators (especially at regional level)
 - Clients may live in one region and seek services in another region
- Limitations of survey estimates:
 - Surveys do not provide estimates for some important indicators
 - Survey estimates apply to services delivered during previous years
 - Surveys seldom provide district-level estimates
 - Surveys themselves are sometimes inaccurate or imprecise:
 - For some surveys, sampling has not been sufficiently random;
 - The confidence interval depends upon sample size
 - Recall bias



External Consistency with Other Sources-2

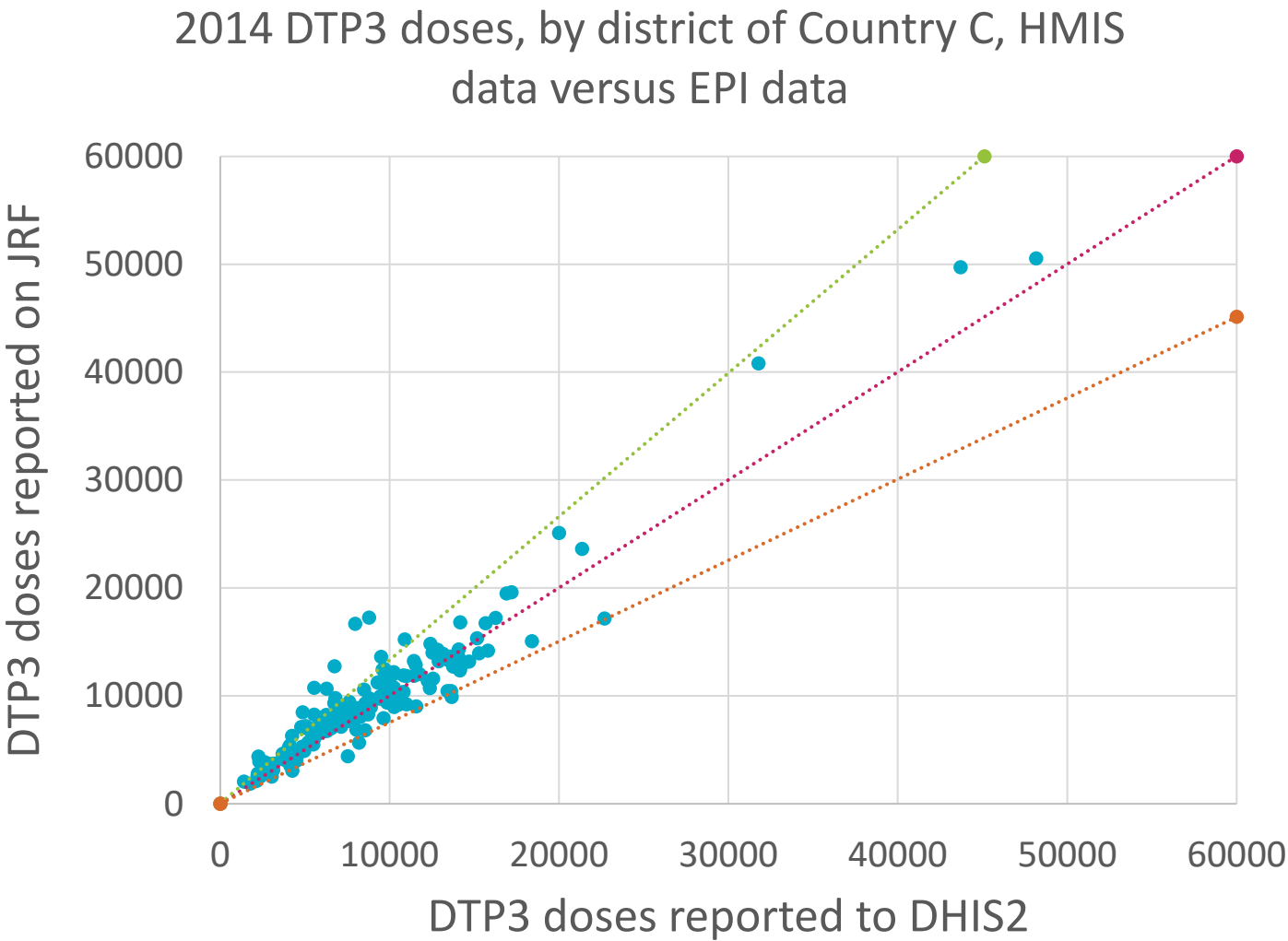
Indicator	Definition	
	National Level	Subnational Level
Comparison between program & HMIS values	For select indicators, compare the value aggregated for 12 months from HMIS to Program data	For select indicators, compare the subnational unit values aggregated over 12 months - # (%) of districts with >10% difference in annual values between HMIS & Program data



Domain 3b: Comparison of data from parallel data systems

SESSION 5

Domain 3: External Consistency



Discussion

Discussion Questions:

- How similar should the routine and survey indicator values be?
- What are some of the reasons for discrepancies between routine and survey indicator values, in addition to data quality?
- Which data source is more reliable, and why?

SESSION 5

Domain 3: External
Consistency



Exercise

Exercise – External Consistency of data – Comparison of indicators across different data sources

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

SESSION 5

Domain 3: External
Consistency

