

Data Quality- What?

Services: the REAL world

In the *real world*, project activities are implemented in the field. These activities are designed to produce results that are quantifiable.

Data: the INFORMATION SYSTEM

An *information system* represents these activities by collecting the results that were produced and mapping them to a recording system.

Data Quality: How well the **information system** represents the **real world**



Data Quality- Why?

- Governments and donors collaborating to fight HIV/AIDS, TB, and malaria-
“Three Ones”
- Increasing importance of Accountability for funding and results reported
- Quality data needed at program level for management decisions

Data quality and the Program Cycle



Data Quality is in the center of, and interacts with all these process

Data Quality- Where?

- Program monitoring
- Population-based surveys (BSS, DHS)
- Routine surveillance
- Program documents, reviews, and reports
- Mapping Data
- Research

Data Quality- How

- Systems Assessment
- Data Verification

Systems Assessment

- M&E Structures, Functions and Capabilities
- Indicator Definitions and Reporting Guidelines
- Data Collection, Reporting Forms and Tools
- Data Management Process and Quality Controls

Systems Assessment

- **M&E Structures, Functions and Capabilities**
 - Responsibility for entry of service delivery data?
 - Designated staff for reporting/reviewing aggregated numbers prior to reporting to next level
 - Staff trained to handle data entry and aggregation ?

Systems Assessment

- **Indicator Definitions and Reporting Guidelines**
 - Indicator definitions with indicator reference sheets available?
 - Clarity on type of reports to be submitted?
 - Clarity on who the reports should be submitted to?
 - Clarity on when the reports are due?

Systems Assessment

- **Data Collection, Reporting Forms and Tools**
 - Clear instructions provided by the M&E Unit on how to complete formats?
 - Standard reporting forms/tools provided for use by all reporting levels
 - Standard forms/tools are being used at all levels (RU, district, state)?
 - Any changes to formats are intimated uniformly across all levels

Systems Assessment

- **Data Management Processes**

- Using SIMS for checking for validity, completeness
- Using SIMS for establishing timelines to be followed for reporting? (entry/receipt/“freezing” the data, procedures for highlighting anomalies)
- Use data use to incentivize data quality? Routine discussion of data quality at monthly review meetings? Routine feedback.
- Other mechanisms to ensure data integrity ?

Data Verification

- Documentation Review: Describe routine data collection procedures
- Process Review: Describe routine data cleaning process at site, and before final data submission.
- Recounted results: Recreate site level aggregate treatment results at selected sites for the previous quarter. Compare this computed number to the reported aggregate result, and describe discrepancies. Quantify.
- Cross checks – compare with alternative data sources

ILLUSTRATION- ROUTINE DATA VERIFICATION

NACO SIMU	
Monthly Aggregated Report	
State 1	139,000
State 2	29,000
State 3	35,000
Total	139,000

SACS 1	
Monthly Aggregated Report	
District 1	1,000
District 2	12,000
District 3	5,000
Total	18,000

SACS

SACS 2	
Monthly Aggregated Report	
District 1	2,000
District 2	9,000
District 3	1,000

SACS 3	
Monthly Aggregated Report	
District 1	2,000
District 2	9,000
District 3	1,000

DAPCU 1	
Monthly Aggregated Report	
SD Facility 1	760
SD Facility 2	300
SD Facility 3	200
Total	1,260

DAPCU 2	
Monthly Aggregated Report	
SD Facility 1	500
SD Facility 2	800
SD Facility 3	200
Total	1,500

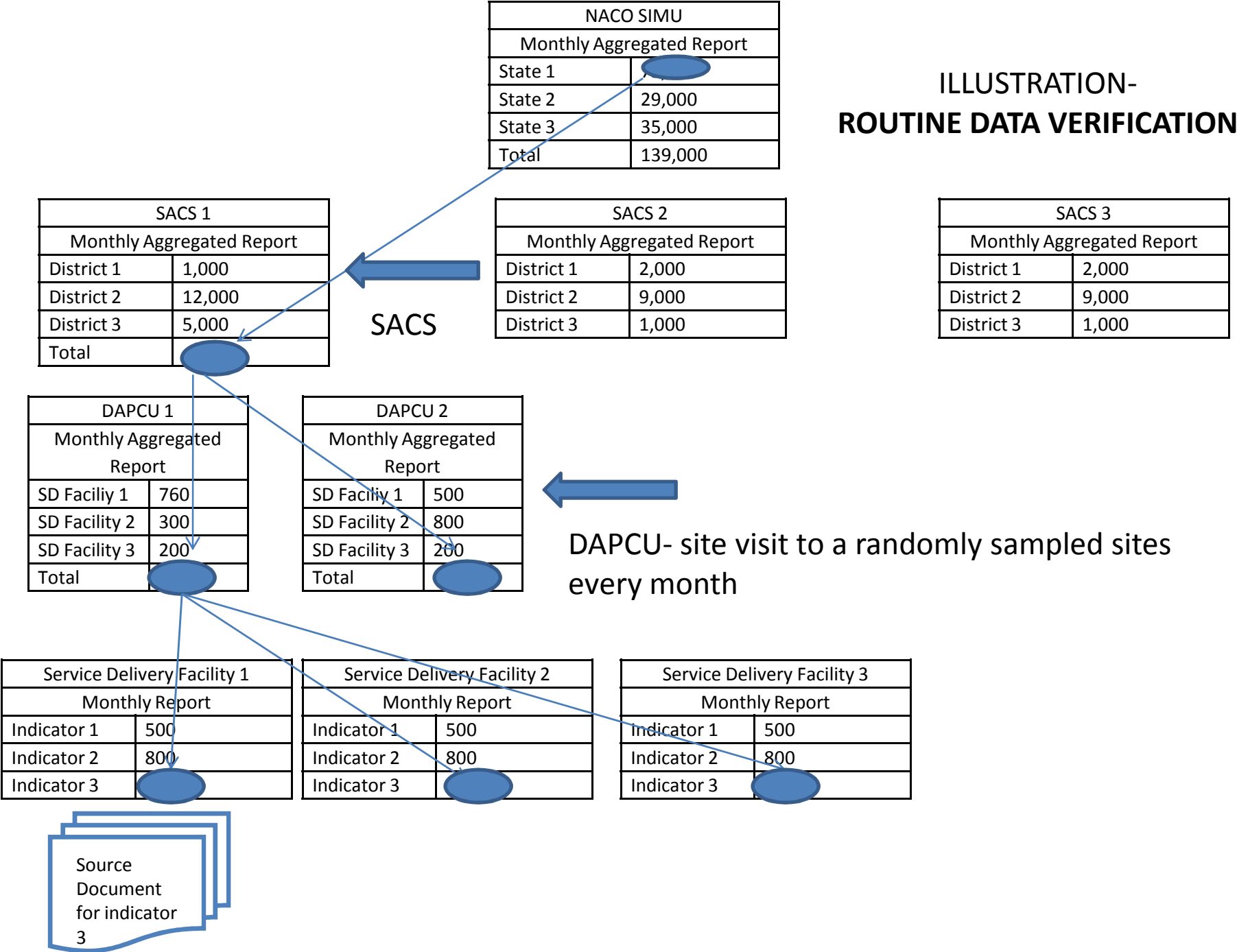
DAPCU- site visit to a randomly sampled sites every month

Service Delivery Facility 1	
Monthly Report	
Indicator 1	500
Indicator 2	800
Indicator 3	800

Service Delivery Facility 2	
Monthly Report	
Indicator 1	500
Indicator 2	800
Indicator 3	800

Service Delivery Facility 3	
Monthly Report	
Indicator 1	500
Indicator 2	800
Indicator 3	800

Source Document for indicator 3



Key Success Factors for Data Quality

1. Functioning and acceptable information systems (ownership)
2. Clear definition of indicators consistently used at all levels
3. Description of roles and responsibilities at all levels
4. Specific reporting timelines
5. Standard/compatible data-collection and reporting forms/tools with clear instructions
6. Documented data review procedures to be performed at all levels, and documentation of the limitations of data
7. Steps for addressing data quality challenges (missing data, double-counting, lost to follow up, ...)
8. Storage policy and filing practices that allow retrieval of documents for auditing purposes (leaving an audit trail)

Some thoughts for discussion

- As part of ISO certification, NACO has an opportunity to define data quality procedures and establish data quality systems at all levels (pre-defined tools and templates)
- Can we have a data quality plan ? (system and process, training needs, supportive supervision) Dedicated data quality cell in the initial roll-out to act as enablers ?
- Routine data quality assessments (Dedicated time every month for data verification trips?) v/s formal data quality audits
- Using DAPCUs as point of quality control (ownership, empowerment with accountability)
- Data verification section as part of trip report?

Define training needs- identify at what levels

Inculcate an organizational practice of generating high quality data

DISCUSSION