Data Quality Audit (DQA) Tool

- January 2007 -
1. Background

2. Methodology of the Data Quality Audit (DQA) Tool

3. Objective and lessons-learned of the Pilot-test in Tanzania

4. Next Steps
National Programs and Donor-funded projects are working towards achieving ambitious goals in the fight against HIV, TB and Malaria.

Measuring success and improving management of these initiatives is predicated on strong M&E systems that produce quality data.

In the spirit of the “Three Ones” and the “Stop TB Strategy”, a Data Quality Audit (DQA) Tool is being developed jointly with PEPFAR, USAID, WHO and Measure Evaluation. Further harmonization with other partners is underway (RBM, World Bank, HMN, UNAIDS, etc.).

A single tool ensures that standards are harmonized and allows for joint implementation (between partners and with National Programs).
The Data-Quality Audit (DQA) Protocol is designed:

1. to verify that appropriate data management systems are in place in countries;

2. to verify the quality of reported data for key indicators at selected sites; and

3. to contribute to M&E systems strengthening and capacity building.
Global Fund M&E and DQ Framework

1- M&E Systems

- M&E Assessment (before Grant Signature)

2- Data Quality

- Routine LFA On-site Data Verifications (at least once a year)
- Data Quality Audit (DQA) Tool (approximately 5-10% of Grants per Year)

Routine Assessments

Independent Assessments
Agenda

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The DQA is implemented chronologically in 6 Phases.

Assessments and verifications will take place at every stage of the reporting system:

- M&E Management Unit
- Intermediate Aggregation Level (Districts, Regions)
- Service Delivery Sites.
**PROTOCOL 1:**
Assessment of Data Management and Reporting Systems

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**PURPOSE:** Identify potential risks to data quality created by the data-management and reporting systems at:
- the M&E Management Unit;
- the Service Delivery Points;
- any Intermediary Aggregation Level (District or Region).

- The DQA assesses both (1) the design; and (2) the implementation of the data-management and reporting systems.

- The assessment covers 8 functional areas (HR, Training, Data Management Processes, etc.)
<table>
<thead>
<tr>
<th>Functional Areas</th>
<th>Summary Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>I M&amp;E Capabilities, Roles and Responsibilities</td>
<td>Are key M&amp;E and data-management staff identified with clearly assigned responsibilities?</td>
</tr>
<tr>
<td>II Training</td>
<td>Have the majority of key M&amp;E and data-management staff received the required training?</td>
</tr>
<tr>
<td>III Data Reporting Requirements</td>
<td>Has the Program/Project clearly documented (in writing) what is reported to who, and how and when reporting is required?</td>
</tr>
<tr>
<td>IV Indicator Definitions</td>
<td>Are there operational indicator definitions meeting relevant standards and are systematically followed by all service points?</td>
</tr>
<tr>
<td>V Data-collection and Reporting Forms and Tools</td>
<td>Are there standard data-collection and reporting forms that are systematically used?</td>
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<tr>
<td></td>
<td>Are source documents kept and made available in accordance with a written policy?</td>
</tr>
<tr>
<td>VI Data Management Processes</td>
<td>Does clear documentation of collection, aggregation and manipulation steps exist?</td>
</tr>
<tr>
<td>VII Data Quality Mechanisms and Controls</td>
<td>Are data quality challenges identified and are mechanisms in place for addressing them?</td>
</tr>
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<td></td>
<td>Are there clearly defined and followed procedures to identify and reconcile discrepancies in reports?</td>
</tr>
<tr>
<td></td>
<td>Are there clearly defined and followed procedures to periodically verify source data?</td>
</tr>
<tr>
<td>VIII Links with National Reporting System</td>
<td>Does the data collection and reporting system of the Program/Project link to the National Reporting System?</td>
</tr>
</tbody>
</table>
C - DQA M&E Systems Verification Protocol: Assessment of Capacity at the Service Delivery Points

Distribution of Answer Categories  Reporting System Level: M&E Unit
Protocol 2

**PROTOCOL 2:**
Trace and verify Indicator Data

**PURPOSE:** Assess on a limited scale if Service Delivery Points and Intermediate Aggregation Sites are collecting and reporting data accurately and on time.

- The trace and verification exercise will take place in two stages:
  - *In-depth* verifications at the Service Delivery Points; and
  - *Follow-up* verifications at the Intermediate Aggregation Levels (Districts, Regions) and at the M&E Unit.
### Trace and Verification Exercise

**ILLUSTRATION**

<table>
<thead>
<tr>
<th>NATIONAL</th>
<th>Quarterly Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1</td>
<td>65</td>
</tr>
<tr>
<td>Region 2</td>
<td>75</td>
</tr>
<tr>
<td>Region 3</td>
<td>250</td>
</tr>
<tr>
<td>TOTAL</td>
<td>390</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly Report</td>
</tr>
<tr>
<td>SDP 1: 45</td>
</tr>
<tr>
<td>SDP 2: 20</td>
</tr>
<tr>
<td>TOTAL: 65</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly Report</td>
</tr>
<tr>
<td>SDP 4: 75</td>
</tr>
<tr>
<td>SDP 5: 200</td>
</tr>
<tr>
<td>TOTAL: 275</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly Report</td>
</tr>
<tr>
<td>SDP 4: 50</td>
</tr>
<tr>
<td>SDP 5: 200</td>
</tr>
<tr>
<td>TOTAL: 250</td>
</tr>
</tbody>
</table>

**Service Delivery Point 1**
- Quarterly Report
- TB Cases Successfully Treated: 45
- Primary Record 1

**Service Delivery Point 2**
- Quarterly Report
- TB Cases Successfully Treated: 20
- Primary Record 1

**Service Delivery Point 3**
- Quarterly Report
- TB Cases Successfully Treated: 75
- Primary Record 1

**Service Delivery Point 4**
- Quarterly Report
- TB Cases Successfully Treated: 50
- Primary Record 1

**Service Delivery Point 5**
- Quarterly Report
- TB Cases Successfully Treated: 200
- Primary Record 1
## Service Delivery Points – Data Verification

### SERVICE DELIVERY POINT - 5 TYPES OF DATA VERIFICATIONS

<table>
<thead>
<tr>
<th>Verifications</th>
<th>Description</th>
<th>In all cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification nº. 1: Observation / Description</td>
<td>Observe or describe the connection between the delivery of services/commodities and the completion of the source document that records that service delivery.</td>
<td>In all cases</td>
</tr>
<tr>
<td>Verification nº. 2: Documentation Review</td>
<td>Review availability and completeness of all indicator source documents for the selected reporting period.</td>
<td>In all cases</td>
</tr>
<tr>
<td>Verification nº. 3: Trace and Verification</td>
<td>Trace and verify reported numbers: (1) Recount the reported numbers from available source documents; (2) Compare the verified numbers to the site reported number; (3) Identify reasons for any differences.</td>
<td>In all cases</td>
</tr>
<tr>
<td>Verification nº. 4: Cross-checks</td>
<td>Perform &quot;cross-checks&quot; of the verified report totals with other data-sources (eg. inventory records, laboratory reports, etc.).</td>
<td>If feasible</td>
</tr>
<tr>
<td>Verification nº. 5: Spot checks</td>
<td>Perform &quot;spot checks&quot; to verify the actual delivery of services or commodities to the target populations.</td>
<td>If feasible</td>
</tr>
</tbody>
</table>
Illustration - Trace and Verification at the Service Point (TB)

Number of new smear positive TB cases who are successfully treated
1st of October 2004 - 31st of December 2004

1. VERIFICATION FACTOR
(% difference in the reported / re-counted numbers from Patient Cards)

- 19.9% (10 Cards Unaccounted)
- 80.1% (42 Cards Recounted)

2. CROSS-CHECKS
(Patient Cards, TB Unit Register, Lab Register)

- From: Patient Card
  To: Unit Register
  100% Verified
  (20 randomly selected Patient Cards)

- From: Unit Register
  To: Patient Card
  100% Verified
  (20 randomly selected names on TB Unit Register)

- From: Patient Card
  To: Lab Register
  80% Verified
  (20 randomly selected Patient Cards)
  20% Un-verified *

* Can be explained by patient "transferred in" from other facilities (to complete the TB treatment)
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Objective of the pilot test in Tanzania

- The DQA Tool was designed in 2006 (with multi-partner participation and funding from the Global Fund and PEPFAR) and this was the first pilot test.

- The objective of the pilot test in Tanzania was to test and refine the tool and not to formally audit the Programs.

- However, we committed ourselves to communicating high level DQA findings - - Which could help enhance and improve the monitoring and reporting systems.
## Indicator Selection

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>INDICATORS</th>
<th>REPORTING PERIOD</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS</td>
<td>1. Number of patients on ARV</td>
<td>3-month period [1-Nov-05 / 31-Jan-06]</td>
<td>National Numbers</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>2. Number of smear positive TB cases registered under DOTS who are successfully treated</td>
<td>3-month period [1-Oct-04 31-Dec-04]</td>
<td>National Numbers</td>
</tr>
<tr>
<td>Malaria</td>
<td>3. Number of insecticide-treated bed nets (ITNs) distributed (i.e., number of vouchers redeemed)</td>
<td>6-month period [1-Nov-2005 / 30-Apr-2006]</td>
<td>Reported numbers to Global Fund</td>
</tr>
</tbody>
</table>
## Site Selection

<table>
<thead>
<tr>
<th>Service Points</th>
<th>Intermediate Aggregation Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>Tememe District Hospital</td>
<td>10-11 Nov.</td>
</tr>
<tr>
<td>Iringa Regional Hospital</td>
<td>13-14 Nov.</td>
</tr>
<tr>
<td>Tememe District Hospital</td>
<td>10-11 Nov.</td>
</tr>
<tr>
<td>Iringa Regional Hospital</td>
<td>13-14 Nov.</td>
</tr>
<tr>
<td>Retailer</td>
<td>7 Nov.</td>
</tr>
</tbody>
</table>
Lessons Learned – Enhancement of DQA Tool

Lesson Learned 1
The preparation phase is critical to the success of the DQA
- For the Audit Team to understand the systems beforehand and to reduce the burden on the Programs
- For the Programs to understand the purpose of the audit and to ensure availability of staff and key documents

Lesson Learned 2
The composition of the Audit Team should be carefully considered
This is to ensure that the Audit Team (1) has a strong understanding of the Programs being implemented; and (2) can adapt the assessment and verifications to various systems, practices and context

Lesson Learned 3
The methodology is flexible enough to be used in various settings
- Different health-related areas (e.g., TB, Malaria, Tuberculosis)
- Different implementing organizations (e.g., Ministry of Health, NGOs, donor-specific projects)
- Different data-management systems (e.g., paper-based vs. computer-based, centralized vs. Decentralized)

Lesson Learned 4
The approach is complementary to routine supervision practices
- For example TB supervisory site visits, …
Agenda

1. Background

2. Methodology of the Data Quality Audit (DQA) Tool

3. Objective and Scope of the Pilot-test in Tanzania

4. Lessons-learned for enhancement of the DQA Tool

5. Next Steps
**Next Steps**

**DQA Development and Roll-out - Road Map**

- **Apr.06-Oct.06**
  - Initial Design (v1)

- **Nov.06**
  - Tanzania Pilot Test

- **Dec.06-Jan.07**
  - Lessons-learned and Refinement (v2)

- **Feb.07-May.07**
  - Roll-out - Phase 1 (Learning-set of 2-3 Grants)

- **Jun.07**
  - Roll-out - Phase 2 (Generalized)

**NEXT STEPS:**

- **Finalization of the tool** - WHO Workshop; Feb. 07 -

- Development of an Implementation Strategy

- Prepare for roll-out

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