

Tool to Assess the Quality of Data on the Number of People on Antiretroviral Therapy

User Guide

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ABBREVIATIONS

ANC	antenatal care
ART	antiretroviral therapy
DATIM	Data for Accountability, Transparency, and Impact
DHIS2	District Health Information Software, version 2
DQA	data quality assessment
EDQA	expedited data quality assessment
LTFU	lost to follow-up
MER	monitoring, evaluation, and reporting
PEPFAR	United States President's Emergency Plan for AIDS Relief
PMTCT	prevention of mother-to-child transmission
TO	transfer out
USAID	United States Agency for International Development
VF	verification factor

BACKGROUND

Data from health facilities must be of high quality for U.S. government funders and for the country's policymakers to make sound decisions on health policy, health programs, and the allocation of scarce resources.

At the request of the United States Agency for International Development (USAID)/Zambia and with the benefit of expert guidance from the mission, the USAID- and United States President's Emergency Plan for AIDS Relief (PEPFAR)-funded MEASURE Evaluation project and USAID/Zambia developed and implemented an intervention-based, expedited data quality assessment (EDQA) that was intensive and used a rapid set of activities and assessments focused on data quality. This tool (which is available here: <https://www.measureevaluation.org/resources/publications/tl-20-84/>) is based on Zambian experience where a novel method for classifying cases by treatment status was used that included organization of client records and cleaning of data. An assessment team can use the tool to clean up client files; it helps to clarify, identify, and follow up with clients classified as lost to follow-up (LTFU). Stakeholders needing to clean up files and improve the quality of data for the HIV clients currently on treatment are encouraged to use this tool.

The tool focuses exclusively on the **TX_CURR** indicator (number of individuals currently on antiretroviral therapy [ART]) because the assessment of this indicator, in particular, requires effort and procedures well beyond what is needed for most HIV indicators. Verification of this indicator requires a thorough review of the individual (paper-based) client file folders. In many health facilities, these will number in the hundreds, and in the larger hospitals, there can be thousands of files to review. Sorting, organizing, reviewing, and documenting these files for an accurate indicator recount is an especially complicated and time-consuming process.

The materials presented here incorporate experience gained from a collaborative effort between the MEASURE Evaluation project and USAID/Zambia. The manual and Excel-based tool are designed to facilitate efforts by USAID missions and their implementing partners in PEPFAR priority countries to undertake expedited data quality assessments for the TX_CURR indicator, during regularly scheduled site visits. Although the tool was built from instruments developed and used for a particular assessment in Zambia, it can be readily adapted to a specific country context. The tool is intended for use by health program staff, including project directors and program and monitoring and evaluation officers who work in HIV-sector initiatives, such as PEPFAR. These concepts and procedures can be adapted to fit an indicator quality assessment for any type of program providing ART in any country. The EDQA can be used as an intervention when source documents are found to be incomplete or inconsistent after assessment with the lot quality assurance sampling triage system or following a more comprehensive data quality assessment.

The data quality assessment tool for TX_CURR facilitates verification of the number of people receiving ART at supported sites. It is a semiautomated, Excel-based tool used for client file recount when verifying or validating the number of people currently on ART. The tool includes multiple worksheets that provide data entry screens for various levels and aggregation formulas that automatically generate summary reports and dashboards.

This tool has can be used at three levels:

1. Facility—to conduct the actual data quality assessment (DQA) activity at the facility (It is advisable to use a separate copy of the toolkit at each facility.)
2. District—to collate data collected from all facilities within the district where the activity was conducted for data analysis

3. Subnational or Provincial level—to collate data from all the districts for data analysis

Note: The Excel tool must be opened with macros enabled for the tool to function properly.

PROCEDURE

This toolkit consists of three sections:

Section 1: Information (blue)

- Title Page
- Instructions

Section 2: Data Capture (red)

- Facility IC Interview
- Tally_Sheet

Section 3: Outputs and Dashboard (green)

- Summary_Tally_Sheet
- Tally_Sheet_Active_Inactive
- Back Cross-Check
- DQA_Recount_Reported
- VF_Facility

Section 4: Others

- Dashboard (yellow)
- Action Plan
- Configuration

Step-by-step instructions for using the tool follow.

Step 1: Review the Instructions Page

Review the instructions in this document and the toolkit's Instructions tab. This tool should be used at the headquarter and facility levels and can be used to conduct the pre-DQA orientations for the DQA team.

Note: All members of the DQA team are expected to familiarize themselves with the instructions prior to starting the DQA process.

Ensure all DQA teams are well oriented before the DQA exercise. Also, be sure to communicate effectively with participating facilities before beginning the assessment.

Step 2: Setting Up the Tool: Configuration Page

The tool should be configured at headquarters before the teams go to the health facilities.

The following should be decided before configuration:

1. Number of facilities targeted for DQA
2. Number of districts
3. Province where DQA will be conducted
4. The reporting period, e.g., one month, three months, or six months

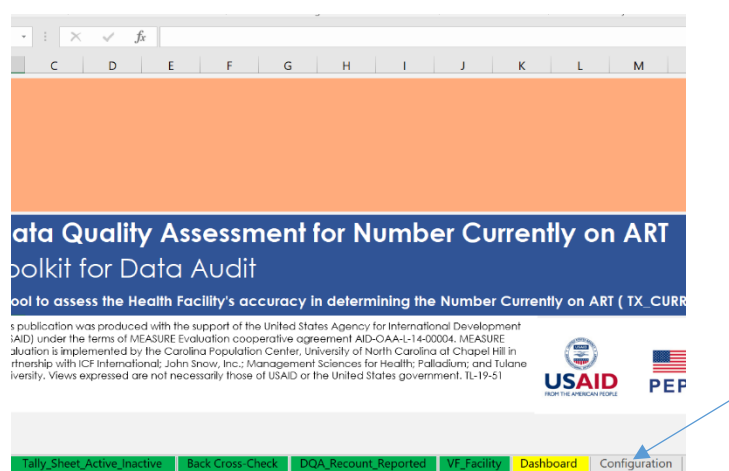
This information will help determine how the teams will conduct the DQA and the number of copies of the toolkits to produce.

Decide on the levels of aggregation. This can depend on the structure of the project or whether or not the DQA is a national project. The assessment team can decide to collect data aggregated at (1) the district or provincial level or (2) the national office.

The configuration procedure follows:

1. Open the master file, and select, "Enable all Macros".
2. Navigate to the configuration page by clicking on the "Configuration" tab.

Figure 1. Toolkit configuration



3. Enter the configuration details in the respective columns: District (Local Government Area or Subcounty), Facility, and Facility District. Do not delete any cells in this tab.

Figure 2. Configuration page

	A	B	C	G	H	I	J
1	District	Facility	Facility District				
2	Nairobi	Kenyatta National Hospital	Nairobi				
3	Mombasa	Mbagathi County Hospital	Nairobi				
4	Kisumu	MamaLucy Kibaki Hospital	Nairobi				
5	Nakuru	Pumwani Maternity Hospital	Nairobi				
6	Machakos	JOOTRH	Kisumu				
7		Kisumu SubCounty Hospital	Kisumu				
8		Lumumba Hospital	Kisumu				
9							
10							
11							
12							
13							
14							
15							

Summary Tally Sheet Tally Sheet Active_Inactive Back Cross-Check DQA_Recount_Reported VF_Facility Dashboard Action Plan Configuration

4. The tool should be fully configured before creating any copies. Be sure to lock the page using the provided password (0000) after configurations are completed.
5. Make the same number of copies of the toolkit as the number of facilities where the DQA is to be conducted. Rename each copy by adding “_Facility Name_Date” to the current toolkit file name.
6. Provide the copies to the DQA team as appropriate. The team leader should retain an empty toolkit and rename it “Master DQA toolkit.”
7. Distribute the toolkit copies and dispatch the teams.

Step 3: Qualitative Interview with Facility In-Charge and Data Staff

1. This section of the assessment will be a qualitative interview with the facility in-charge and data and health records staff.
2. Initiate the interview by introducing yourself and stating the reason for the visit.
3. Select Tab 3, “Facility IC Interview”, on the DQA toolkit.
4. Administer the questions in the order provided.
5. Enter the answers on the next available row.
6. Note that you may only enter data in one row per facility.
7. The columns have been configured with drop-down options where applicable.

Figure 3. Qualitative interview

Level 3/Step 3: Qualitative Interview and Verification at Facility Level				
IP Referral Facility Details			1.1a Staff being interviewed	Assessment Question
No.	IP Referral Facility Name	IP District Name	Staff Name and designation (Separated by comma)	1. Can you tell us the number of adults currently on ART at site/facility [for the assessment period]
5	Kenyatta National Hospital			
6	Kenyatta National Hospital			
7	Mbagathi County Hospital			
8	Mama Lucy Kibaki Hospital			
9	Pumwani Maternity Hospital			
10				
11				
12				
13				
14				
15				

[Title](#)
[Instructions](#)
[Facility IC Interview](#)
[Tally Sheet](#)
[Summary Tally Sheet](#)
[Tally Sheet Active Inactive](#)
[Back Cross-Check](#)
[DQ](#)

Step 4: TX_CURR Indicator Definition

Clarify the TX_CURR indicator, and related terms that will be used in the DQA, to the facility team based on the latest PEPFAR Monitoring, Evaluation, and Reporting (MER 2.0) Indicator Reference Guide.¹ This should be used regardless of local practice.

For the purpose of this toolkit, the PEPFAR Monitoring, Evaluation, and Reporting (MER 2.0) Indicator Reference Guide, version 2. Use the following definitions for terms:

ACTIVE: All clients who are current according to PEPFAR's definition (no missed appointment or missed appointment, but the missed appointment is still within 90 days) and no official status change (death or transfer out [TO])

TX_CURR: Includes all active clients and the clients who transferred out during the month of June (ACTIVE + ACTIVE TO)

INACTIVE: All clients who have ceased treatment as of the end of the reporting period, including those who died, were LTFU, STOPPED, or TO

TO: If a client transfers out during the review period (i.e., April–June 2018), this person should not be included in the active client file count.

LTFU: A client who has not received ART in the past 90 days (three months) following their last missed appointment or missed drug pickup

DEATH: If a client dies during the reporting period, the client should not be counted as active, even if he or she has received medications.

STOPPED: If a client STOPS treatment during the reporting period, the client should not be counted as active.

¹ United States President's Emergency Plan for AIDS Relief (PEPFAR). (2019). PEPFAR Monitoring, Evaluation, and Reporting (MER 2.0) Indicator Reference Guide. Retrieved from <https://srhrindex.genderhealth.org/uploads/2018/11/PEPFAR-Indictators-2017.pdf>

Step 5: Locate all ART Patient Files and Other Source Data at the Facility

Request access to the Pre-ART, ART, antenatal care (ANC), and prevention of mother-to-child transmission (PMTCT) registers, and to the client file folders for all clients ever having received ART at the facility, beginning from the time the facility first offered ART.

The primary source documents for verification of TX_CURR are the physical (paper-based) client file folders stored at the facility. Secondary sources, including the relevant service registers, will be used for cross-checking.

Table 1. Primary and secondary data sources for TX_CURR verification

Indicator	Primary source	Secondary sources (for cross-checking, or when primary source data are missing or incomplete)
Number currently on ART (TX_CURR)	ART client files (all clients ever initiated on ART at the facility) Client status form and pharmacy form (in client file folder)	<ul style="list-style-type: none">• Pre-ART register• ART register• Other potential service entry points (HIV testing and counselling, PMTCT, voluntary medical male circumcision, etc.)• Daily Activity register• Maternal and child health/Option B+• Electronic database• Pharmacy dispensing records• Event register

Step 6: Enter Data Quality Assessment Data into the Tally Sheet

The DQA team can now use the DQA toolkit's automated decision guide to sort, recount, and capture file information on the tally sheet from the retrieved files:

1. Select the "Tally_Sheet" tab in the DQA Toolkit to access the Tally Sheet form.
2. Select the first tab on the Tally Sheet form that appears, the "Quick Guide to Patient Status".
3. Click "Add" and enter the required data retrieved from the client files.
4. Enter the facility details (Location and Facility Name), File Details (ART Number, Age, and Sex) and select the appropriate check boxes. The form will automatically determine the client status (Active or Inactive).

Figure 4. Tally sheet form

5. Click “Save” to enter the record on the Tally Sheet.
6. Use the “Delete”, “Next”, or “Previous” button to delete and navigate the records as needed.
7. Place the file in the correct bunch (Active or Inactive) as determined by the guide.
8. The toolkit will automatically count the files and produce the summaries as needed.
9. This toolkit only allows entry to the tally sheet through the tally sheet entry form for quality and security.

Step 7: Conduct Cross-Checks and Reverse Cross-Checks of the Initial Tallies to Confirm Status

Before the final tallies can be compiled, the cross-checks can be carried out on both the active and inactive file listings. After the cross-checks are completed and documented, the individual tally sheets are ready to be submitted to a supervisor. A supervisor should collect the tallies at the end of each day.

Note that all inactive files must be cross-checked to determine the final state, i.e., TO, LTFU, Death, or Stopped. The cross-check can be conducted by a second team as the initial count (Step 6) is ongoing, per the following procedure:

Select the second tab on the form that appears, “Cross Check Information”.

1. Select the “Cross Check Information” tab on the Tally Sheet form.
2. Select the ART No. (number) of the file to be cross-checked from the drop-down list.
3. Enter the required details in the check boxes. This will automatically determine the final client status.
4. Click “Save” to update the record on the Tally Sheet.
5. Place the file in the correct bunch (Active or Inactive) as determined by the guide.
6. The toolkit will automatically capture the correct count of the files and produce the summaries as needed.

Back cross-check active files.

7. Select the “Back-Cross Check – Active Files” tab on the Tally Sheet form. Back cross-check should only be done on sampled active files (5% of all files or 20 files).

8. Select the ART No. of the file to be cross-checked from the drop-down list.
9. Enter the required details on the tab; the dates match result will be automatically populated.

Figure 5. Cross-check

Step 8: View the Summary Analysis

After completion of the DQA, view the summary outputs from worksheets coloured in green and the dashboards.

1. Summary_Tally_Sheet—summary aggregated report of client status as captured in the Tally Sheet.
2. Tally_Sheet_Active_Inactive—filterable line list tally sheet output of active and inactive clients.
3. Back Cross-Check—line list of cross-check dates and results
4. DQA_Recount_Reported—DQA recount summaries that compare TX_CURR totals captured on the official summary report, number reported in District Health Information Software, version 2 (DHIS2), and number reported in PEPFAR/Data for Accountability, Transparency, and Impact (DATIM) to totals from the DQA activity for the selected facilities.

You must enter the totals by typing in numbers captured from the external reports, directly. The DQA counts are populated automatically per the procedure outlined below.

When viewing the DQA_Recount_Reported output on the worksheet, always refresh the table by right-clicking on any cell on the left side and click on “refresh” as shown in Figure 6.

Figure 6. Refresh pivot

Health_Facility	DQA Recount	Number_reported_in_DHIS2_TX_CURR	Number_reported_in_PEPFAR/DATIM_TX_CURR
Kenyatta National Hospital	3	5	3
Mbagathi County Hospital	0	3	0
MamaLucy Kibaki Hospital	0	2	0

5. **VF_Facility**—this output worksheet displays the verification factor (VF) that informs the concordance levels between the DQA counts and from the DQA activity. The VF is calculated based on the guidelines in Table 2.

Table 2. Interpretation of verification factor

Data verification factor	Percentage variation between recounted and reported number	Classification
100% concordant	0% variation—numbers match	Gold standard
95% concordant	+/- 5% variation from number reported	Adequate
90% concordant	+/- 10% variation from number reported number	Acceptable
< 90% concordant	Greater than +/- 10% variation from number reported	Not acceptable

Step 9: Collation of Data

At the end of the DQA process, toolkits from all facilities are returned to the headquarters for collation.

1. Paste copies of the DQA toolkits into one central computer, in an appropriately named folder.
2. Open the master DQA toolkit.
3. Unlock the “Facility IC Interview” and “Tally_Sheet” worksheets.
4. Copy the records from only from “Facility IC Interview” and “Tally_Sheet” and paste appropriately into the master DQA toolkit.
5. The outputs and dashboards should be updated automatically.

Note: the worksheet default password is 0000

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