



Malaria Routine Data Quality Assessment Tool

A Checklist to Assess the Quality of Malaria Program Data

For help to use this tool, please see the Instructions tab in this Excel file. See also Malaria Routine Data Quality Assessment Tool: User Manual, which is available here:

<https://www.measureevaluation.org/resources/publications/mr-20-190/>

Malaria – Routine Data Quality Assessment Tool (M-RDQA)

SMERG Meeting
Bangkok, Thailand
May, 2023



U.S. President's Malaria Initiative



Use case

- Data quality assurance is important – but requires effort and attention to detail
- Often done by large health facility assessments on a sample of health facilities – infrequent, expensive
- Sometimes done more routinely, e.g. as part of HF supervision.
- But these efforts often lack coordination (what, how, when) - little possibility of deriving global conclusions for improvement

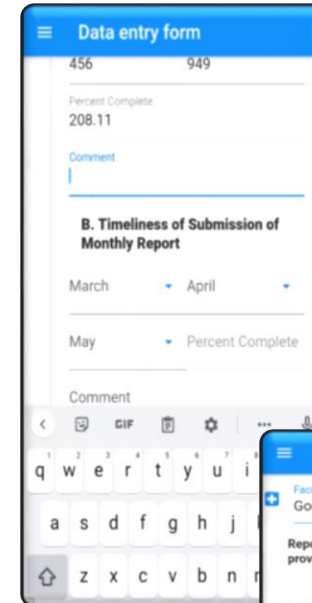


Use case (2)

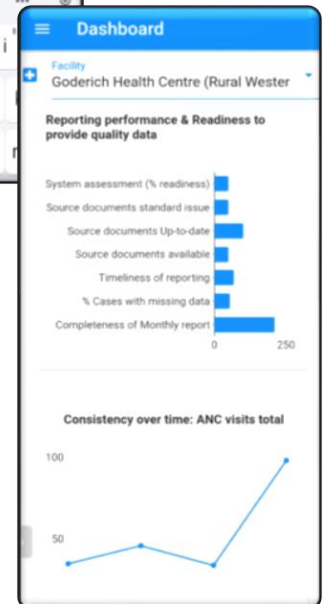
- MEASURE Malaria created M-RDQA in Excel and used in PMI countries
 - Adaptation to Android to facilitate use and aggregation of data to subnational and national levels
 - DHIS 2 “Configuration Package” – meta data and dashboards
 - More coordinated and standardized approach to routine data quality checks
 - More efficient targeting of resources for data quality improvement

Approach

- Routine supervision
 - Malaria program managers conduct data quality checks during supervision
 - Standard configuration of tool
 - Metrics:
 - Completeness of reporting, completeness of data elements and source documents, timeliness
 - Accuracy checks against monthly reports and DHIS2
 - Consistency over time
 - System assessment
 - Data quality improvement plans
 - View results in a dashboard on the portable device
 - Export to text file (e.g., .csv) to aggregate across supervision teams/facilities

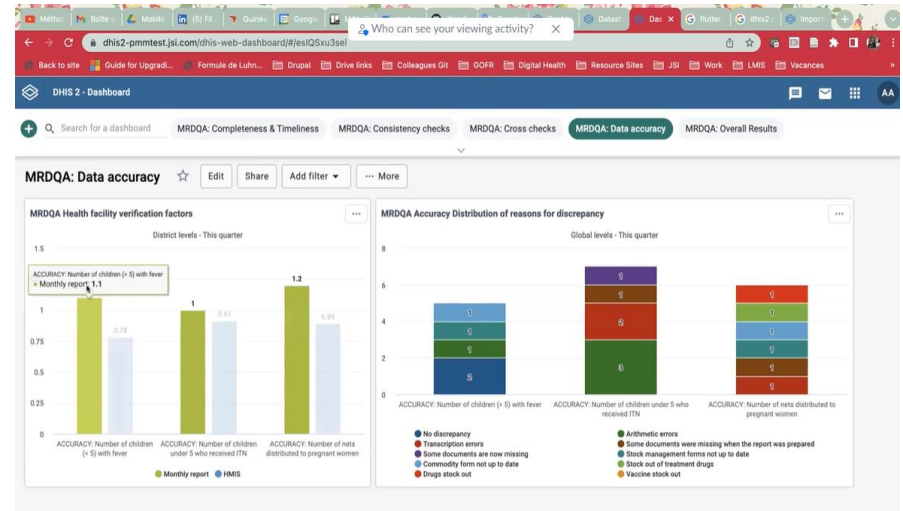


The screenshot shows a mobile application interface for data entry. At the top, it says "Data entry form" with a menu icon on the left. Below that, there are two rows of data: "456" and "949". A section titled "Percent Complete" shows a value of "208.11". There is a "Comment" field with a vertical cursor. Below this, a section titled "B. Timeliness of Submission of Monthly Report" has two dropdown menus: "March" and "April". Another dropdown menu shows "May" and "Percent Complete". There is another "Comment" field at the bottom. A keyboard is visible at the bottom of the screen.



Approach

- DHIS2 configuration package
 - An app downloaded and installed on local instance of DHIS2
 - Automatically configures and installs indicators for malaria data quality supervision visits (e.g., accuracy for tracer indicators, completeness of data collection, consistency, etc.)



- Creates and configures standardized dashboards (charts and graphs) for data quality indicators for different levels of the health system
- Facilitates syncing of MRDQA Android app with DHIS2

Demo

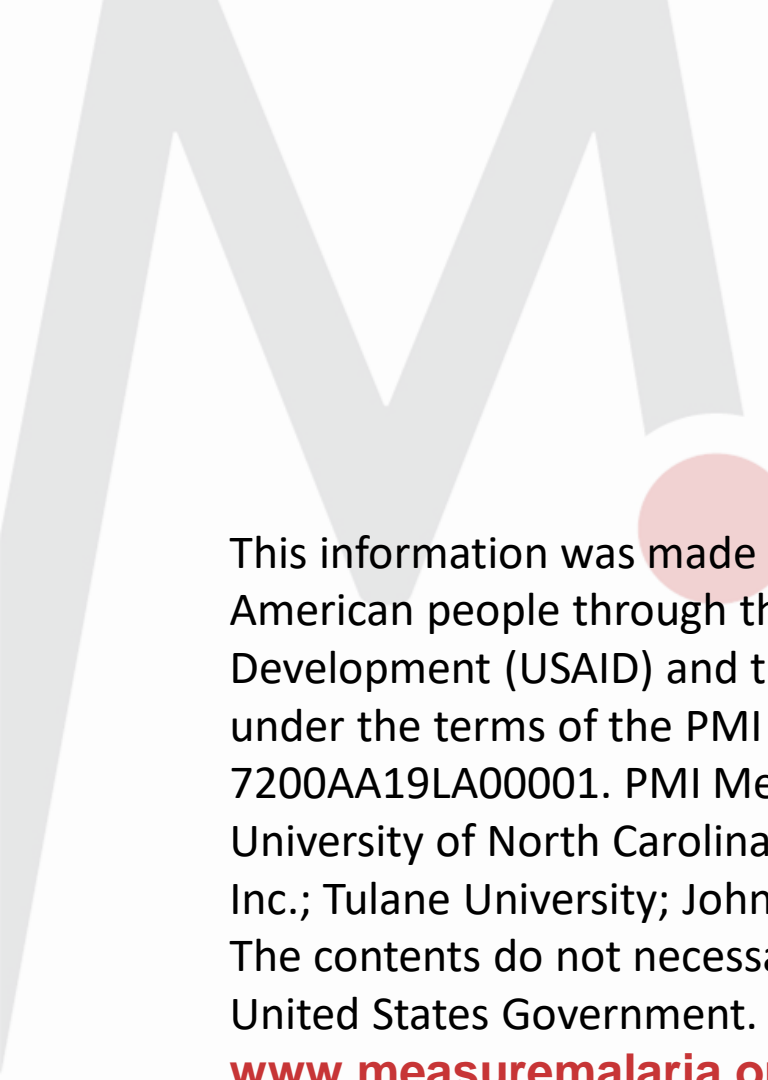


Next steps

- Pilot-tested in in Sierra Leone and Cote d'Ivoire - June 2022
- Presented to DHIS 2 Annual Conference 2022 and was top-3 in android app competition.
- Update and finalize M-RDQA app and DHIS2 configuration package based on results of the pilot – June 2023
- Develop guidance for setting up and using the tools in countries – June 2023
- Make available in DHIS2 app repository and Google Play Store – June 2023

Conclusion

- We believe the app will improve coordination of data quality checks and the use of findings for data quality improvement, but there are no short cuts!
- Still requires commitment at national and district levels to collect the data, track results over time, develop and implement interventions to improve data quality
- Potential for use with other program areas



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www.measuremalaria.org



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U.S. President's Malaria Initiative

PMI **Measure
Malaria**

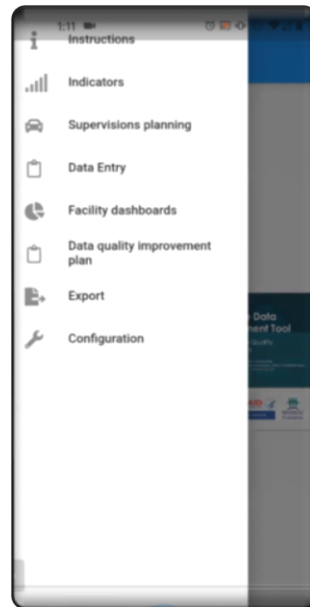
-
- Some screen shots in case the live demo doesn't work well.

M-RDQA Screenshots

Configuration



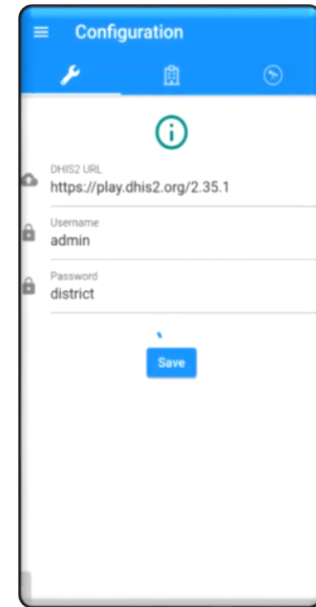
Opening Screen



Menu



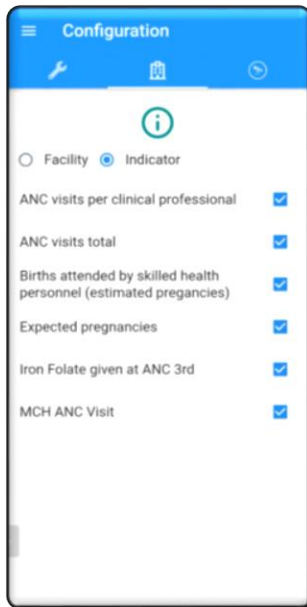
Description /
Instructions



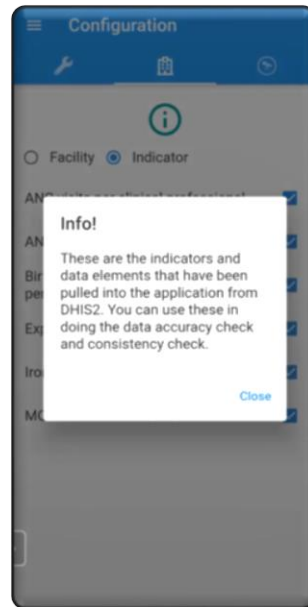
Configure DHIS 2
access & level

M-RDQA Screenshots

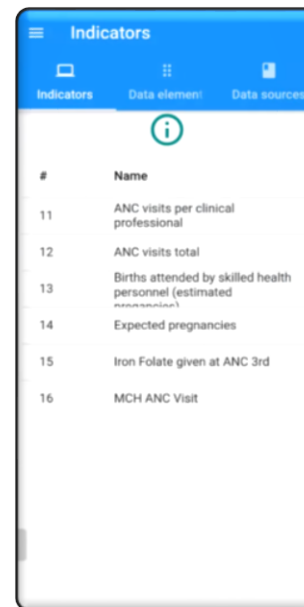
Configuration



Select Indicators



Menu specific
Info / instructions



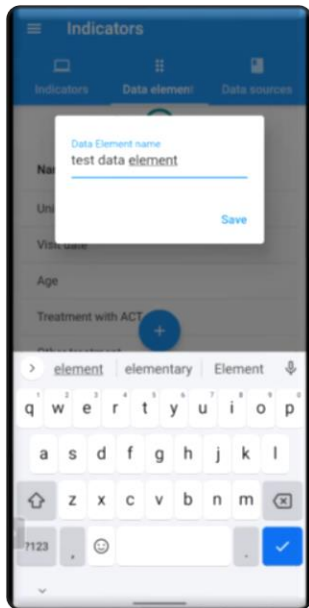
List of selected
indicators



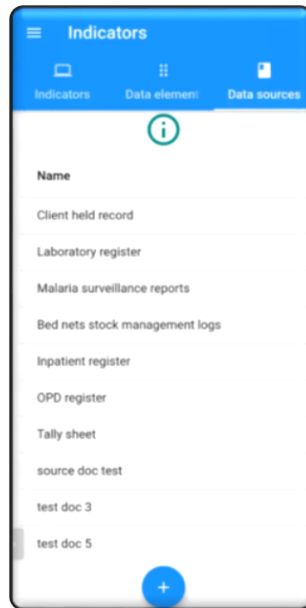
Select data
elements for
completeness
check

M-RDQA Screenshots

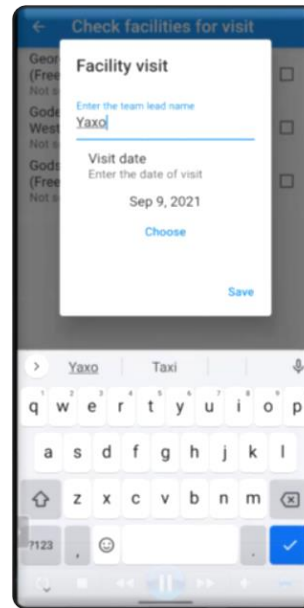
Configuration



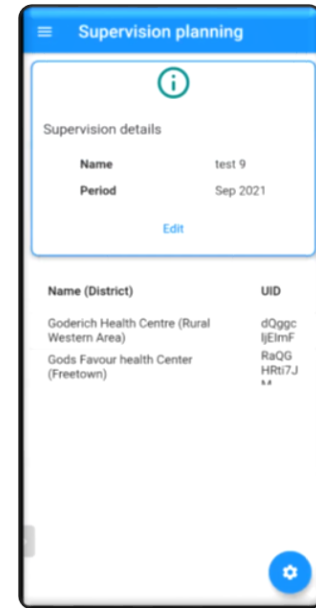
Enter user defined data elements



Enter data sources for completeness check



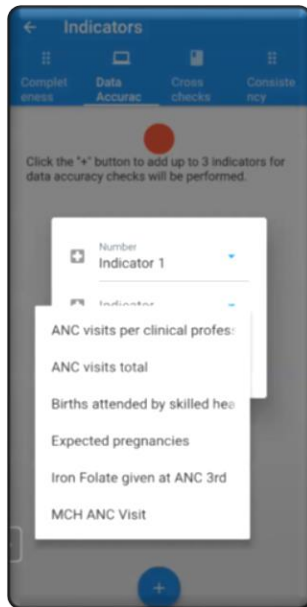
Enter supervision info



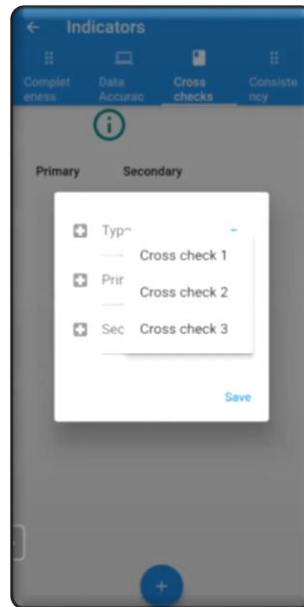
List of facilities scheduled for supervision

M-RDQA Screenshots

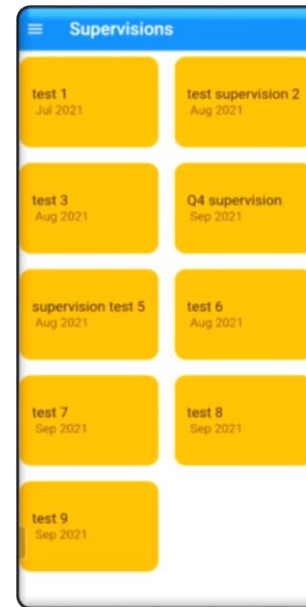
Configuration



Configure indicators for accuracy checks



Configure cross checks



List of scheduled supervisory visits

M-RDQA Screenshots

Data Entry

Data entry form

Routine Supervision Data Quality Checklist

I. Completeness & Timeliness

A. Completeness of Malaria Monthly Report

Expected Cells	Completed Cells

Percent Complete

Comment

B. Timeliness of Submission of Monthly Report

March April

May Percent Complete

Comment

Data entry – completeness monthly report

Data entry form

Standard form

Comment

% Complete

Available Up-to-date Standard form

Comment

II. Data Accuracy

III. Cross Checks

IV. Consistency Checks - Consistency of data elements over time

Data entry – data sources completeness check

Data entry form

456 949

Percent Complete 208.11

Comment

B. Timeliness of Submission of Monthly Report

March April

May Percent Complete

Comment

Data entry – completeness: enter comments

Data entry form

Comment

B. Timeliness of Submission of Monthly Report

March April

May Percent Complete

Comment

C. Data Element Completeness

Malaria data elements

Visit date

Age

Number of entries missing data in at least 1 of the 6 columns listed above

Total number of entries for the period

Data entry – timeliness: standard drop down lists

M-RDQA Screenshots

Data Entry

C. Data Element Completeness
Malaria data elements

Visit date

Age

Number of entries missing data in at least 1 of the 6 columns listed above

Total number of entries for the period

D. Source Document Completeness
Laboratory register

Available Up-to-date

Standard form

Data entry – data element completeness

II. Data Accuracy

Iron Folate given at ANC 3rd

Source document re-count	March	April	May	Total
	65	64	34	163

Comment

HMIS monthly report value

March	April	May	Total
94	61	94	249

Comment

1 2 3 -

4 5 6 ↶

7 8 9 ↷

, 0 . ✓

Data entry – accuracy of reporting

Reasons for discrepancy

- No discrepancy
- Arithmetic errors
- Transcription errors
- Some documents were missing when the report was prepared
- Some documents are now missing
- Stock management forms not up to date
- commodity form not up to date
- Stock out of treatment drugs
- Drugs stock out
- Vaccine stock out

Data entry – standard reasons for discrepancy

V.5: Has this health facility experienced any stock out of registers or reporting forms (since last visit)?

Yes Comment

V.6: Is a standardized register being used to record information on malaria cases (not improvised forms)?

No Comment

V.7: Can a patients malaria diagnosis and treatment history be easily found in the facility records?

Yes Comment

No

V.8: Are data with historic aggregate (i) regularly maintained (registers) and results?

Yes Comment

V.9: Does the facility maintain accurate demographic information for the catchment area (that is, a record current population and the number of births and deaths)?

Data entry – system assessment

M-RDQA Screenshots

Data Analysis and Improvement Plan



Dashboard –
cross check



Dashboard –
accuracy of
reporting



Dashboard –
reporting
performance &
consistency over
time

The screenshot shows a mobile form titled 'Data quality improvement ...' for 'Goderich Health Centre (Rural Wester)'. It contains three sections for 'Identified Weakness 1', 'Identified Weakness 2', and 'Identified Weakness 3'. Each section includes fields for 'Responsible(s)', 'Time line', 'Description of Action plan', and 'Comments'.

Data Quality Improvement Plan for the Health Facility

Identified Weakness 1

Responsible(s) Time line

Description of Action plan

Comments

Identified Weakness 2

Responsible(s) Time line

Description of Action plan

Comments

Identified Weakness 3

Enter data quality
improvement
plans