REPUBLIC OF RWANDA

MINISTRY OF HEALTH

DATA QUALITY ASSESSMENT

PROCEDURES MANUAL

Version 2019

PREFACE

In 1998, the Rwanda Ministry of Health (MoH) established a Health Management Information System (HMIS) to facilitate the reporting of health related data across the country. Since its establishment, the HMIS has undergone a number of updates in order to accommodate the changing needs of the health sector. The first of these changes was an upgrade of the reporting system from a MS Excel based database, which was in use since 2008, to a MS Access based database, which was used from 2008 to 2011. In 2012, in order to better align the reporting of health related data to the needs of the health sector, as well as allow for integrated reporting of all health services from every health facilities in the country, the Ministry of Health's HMIS unit adopted a more flexible and robust web-based reporting system known as DHIS-2. In the past 3 years since its inception, the DHIS-2 system has enabled health facilities across the country to improve significantly in their ability to obtain and report accurate, timely data, which the health sector can then use to improve health initiatives countrywide.

Despite the progress, there is still a challenge in ensuring that all reporting entities are working from mutually agreed upon standards in regards to routine data collection, compilation, analysis and use, reporting, dissemination, and overall security. The data quality assessment procedures manual aims to help all reporting entities meet these standards and thus ensure the quality of data that is collected, analysed, and disseminated. Abiding by these detailed, routine standards will improve the MoH's ability to trust and use data both for informed decision making and future planning for the health sector.

It is therefore important not only to define mechanisms and procedures for management, use, and dissemination of health data and/or information but also to develop quality, reliable standards to ensure quality. By implementing within mutually agreed upon standards for routine data collection, compilation, analysis and use, reporting, dissemination, and overall security, best practices for management of quality health related data and/or information can be achieved. This document provides guidance on the implementation of such standards of health related data reporting, specifically focusing on the quality of the data collection and assessment processes as well as procedures for feedback of health related data and/or information.

The use of the procedures manual for data quality assessment will build a culture of high-quality data use in order to increase evidence-based planning of interventions. Program managers and service providers must customize their interventions to meet gaps identified through routine data analysis and program evaluations. Innovative interventions incorporating data at the program and service delivery level should be customized within existing health data reporting structures so that there is consistency across the country.

I encourage all stakeholders to carefully read this guideline and require all practitioners to adhere to the required standards stated herein.

Dr. Diane GASHUMBA
Minister of Health

ACKNOWLEDGEMENT

The Ministry of Health would like to thank all of the organizations and persons who contributed to the development and update of these standard operating procedures for data quality assessment in Rwanda.

This document is a result of the great collaboration that exists between the Ministry of Health and various stakeholders who are dedicated to creating a positive change in the Rwandan health sector. We appreciate all of the effort invested in the development and update of the current Standard Operating Procedures. Implementation and monitoring of these guidelines will contribute to the sector's common goal of building a stronger health system that is driven by data.
We give our sincere appreciation to the following institutions and organizations:

- ✓ The World Health Organization
- ✓ The United States Government team in Rwanda including:
  - USAID RWANDA
  - IntraHealth/ Ingobyi Activity
- ✓ Partners in Health
- ✓ Health Builders
- ✓ Health Facilities

ACRONYMS AND ABBREVIATIONS

ART	Anti-Retroviral Treatment
CDC	Centers for Disease Control and Prevention
DQA	Data Quality Assessment/Audit
DHIS-2	District Health Information System 2
HMIS	Health Management Information System
IPs	Implementing Partners
ISS	Integrated Supportive Supervision
M&E	Monitoring and Evaluation
MOH	Ministry of Health
RBC	Rwanda Biomedical Center/Centre
R-HMIS	Rwanda Health Management Information System
SOW	Scope of Work
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing

TABLE OF CONTENTS

LIST OF TABLES

1. INTRODUCTION

1.1. DATA QUALITY ASSESSMENT REQUIREMENT

The Ministry of Health and development partners require that health care institutions and implementing partners delivering services be subject to routine review in order to validate and verify data that is reported to the government and development partners. The purpose of the routine data quality assessment is to ensure that health care institutions and implementing partners are reporting health-related data that are reliable, valid, complete, comparable, and timely.

The validated and verified data will improve reporting and will provide MOH and key stakeholders with assurance that data are credible and consistently collected and reported in accordance with standard procedures and guidelines.

The primary purpose of this Procedure Manual is to provide health care institutions and implementing partners with information regarding the conduct of data quality assessment in order to meet the reporting requirements. The manual provides background information and an overview of the data quality assessment process, discusses the scope and timeframe required for the data quality assessment, and describes the tools and processes used for conducting the data quality assessment.

1.2. WHAT IS DATA QUALITY ASSESSMENT

Data Quality Assessment (DQA) is the confirmation of the accuracy, completeness, consistency and timeliness of data.

1.3. IMPORTANCE OF DATA QUALITY ASSESSMENT

- Reduce errors and inconsistencies within the data collected, reported and used.
- Improve the quality of data to meet reporting requirements.
- Provide accurate, consistent, complete, and timely data to all stakeholders.
- Decisions made based on validated data are more defensible.
- Ability to compare data across institutions and organizations.
- As the data becomes more accurate, less time and effort is spent on the validation and verification process, ultimately saving time and money.

1.4. USE OF THIS MANUAL AND TOOLS

The Ministry of Health requires health care institutions and implementing partners (IPs) to use the processes and tools contained in this *Procedure Manual* and its appendices to conduct the routine data quality assessments at health facility level. This includes each of the following documents:

1. DQA Standards
2. Routine DQA Checklist and Tool
3. DQA Report Template and Action Plan Form
4. Error Correction Form
5. Standard Operating Procedures for Management of Routine Health Information

The DQA tool is used for routine self-assessment as well as independent data quality assessment or audits. A comprehensive audit of the data is done quarterly through the Integrated Supportive Supervision (ISS) for selected performance indicators.

2. OVERVIEW OF THE DATA QUALITY ASSESSMENT PROCESS

2.1. GENERAL PRINCIPLES OF DATA QUALITY

This manual recognizes that there are two key targets in the improvement of data quality: prevention and correction. The following general principles are recommended for any institution or individual improving data quality:

1. Develop and implement a data policy and strategy. Avoid carrying out unplanned, uncoordinated and non-systematic "data cleaning" activities.
2. Assign responsibility for the quality of data to whoever collected or generated the data. If this is not possible, assign responsibility as close to the individual who created the data as possible.
3. Most data comes into an organization from "health facilities," and it is much easier to develop good data collection practices than to correct errors downstream.
4. Data ownership and custodianship not only confers rights to manage and control access to data, it confers responsibilities for its management, quality control and maintenance. Custodians also have a moral responsibility to manage the data for use by future generations.
5. Users and collectors have important roles to play in assisting custodians in maintaining the quality of the data in the collections, and both have a vested interest in the data being of the highest possible quality.
6. Individuals and institutions are not the only ones that working with data quality. To make the data valuable to the greatest number of users in the shortest possible time, it may be necessary to prioritize the capture and/or validation of the data.
7. Not all data are created equal, so focus on the most important. If data cleaning is required, make sure it **never** has to be repeated.
8. Before measuring data quality levels, first consider how users of the results might use them.
9. Do not be seduced by the apparent simplicity of data cleaning tools. They are valuable and help in the short-term but, over the longer-term, there is no substitute for error prevention.
10. Outlier detection can be a valuable validation method, however not all outliers are errors.
11. Data quality assessment targets are a good way for an institution to maintain a consistent level of quality checking and validation. Have DQA targets for the number of indicators and volume of data to be checked and validated.
12. Establishing effective feedback channels between data users and producers is easy and productive mechanism to improve data quality.
13. Lack of/inadequate training lies at the root of many data quality problems.
14. The data must be documented with sufficient detailed description to enable its use by third parties without reference to the producer of the data.
15. Data which are no longer required (for legal or other reasons) should not be destroyed or exposed to risk of destruction without exploring all other possibilities – including archiving.
16. Data integrity is preserved through good data management, storage, backup, and archiving.
17. Data integration produces higher quality results when contributing data custodians have followed and used consistent data storage standards.
18. Effective data quality systems help prevent embarrassment to the organization and individuals, both internally and publicly.

2.2.DATA QUALITY ASSESSMENT SCOPE

The Ministry of Health requires that data quality assessment be conducted routinely. In addition, routine DQA must also retrospectively review a sample of data submitted to R-HMIS during the previous reporting period and any other reporting periods deemed necessary by the review team.

The findings from the DQA review must be shared with the health facility immediately before leaving the facility after the feedback meeting and submitted to MOH and RBC within five working days after each review.

Table 1 below shows the data reports that require routine DQA and the frequency and timelines for conducting the assessments and sharing results with MOH.

Table 1: Reports Requiring Data Quality Assessment

Report	**Reporting Period**	**Data Submission due date(s) to R-HMIS**	**Data Quality Assessment due dates**	**Responsible**
Health Center Monthly Report	Monthly	5th to 15th day of the following month	15th April 15th July 15th October 15th January	Hospitals
District/Provincial Hospital Monthly Report	Monthly	5th to 15th day of the following month	15th April 15th July 15th October 15th January	Central level team(s)
Case based reporting	Immediate	Immediate	15th April 15th July 15th October 15th January	Head of Health facility Hospital/Central level

2.3. BASIC CONCEPTS AND TERMS USED IN THIS MANUAL

Data element and Data: A record of a health event or health-related event. Data is an aggregation of data elements in the form of numbers, characters, and images that gives information after being analyzed.
Example 1:Number of children immunized
Example 2: Number of deliveries assisted by a skilled health worker

Information: Data organized with reference to a context which gives data a meaning.
Example 1:Percentage of children who have been immunized by the age of 1 year
Example 2: Percentage of deliveries assisted by a skilled health worker and percentage of deliveries with no skilled health worker assistance

Knowledge: When information is analyzed, communicated and acted upon, it becomes knowledge.
Example 1: Why is morbidity high in children who were not immunized? Why are certain children who were not immunized affected by malnutrition?
Example 2: Why do some pregnant women received assistance from skilled health workers during labor? Why were some pregnant women not attended to by a skilled health worker during labor? Who are those women? What are the issues related to accessing this service?

Indicator: A data element placed in a given context so that it becomes useful for program monitoring, management, and action.
Example 1: Percentage of children aged between 12 to 23 months who have completed the immunization package.
Example 2: Percentage of deliveries that were assisted by a skilled health worker

Data quality: The extent to which data measures what they intend to measure.

2.4. DIMENSIONS OF DATA QUALITY

Accuracy/Validity: The degree to which data correctly reflects the true value or how close the data is to the true measurement.
Example 1:The age of the client in the database is the true age of the person; Example 2: The reported number of voluntary testing and counseling (VCT)clients who were tested and received their results in the database/register is the actual number of clients tested
Example 3:The address of the client in the register is the true address

Completeness: The extent to which the expected data entries are provided. The data represents the complete list and no data fields are left empty. Data is considered complete if all of the data entries and other information that are "expected" to be present in the register have been entered. It is possible that certain data are not available, and the product is still considered complete as it meets the expectations of the user.

Data can be complete, but inaccurate.
Example 1: All of the information about the VCT client is filled in the VCT register, but many entries are not correct.
Example 2: The health records of all patients have a 'last visit' date, but some of the entries are actually the dates of the next scheduled visit.

Data Consistency/Reliability
The data generated by the health facility are based on protocols and procedures (i.e., standardized tools) that do not change according to who is using them and when or how often they are used. The data are reliable because they are measured and collected consistently.
Examples of data inconsistency include:

- A nurse measuring the patient's heart beat by hand using a carotid pulse (neck) or radial pulse (wrist) in one facility and the other using a heart rate monitor or stethoscope in another facility. Both may record the actual counts but the measurement procedures or methods are not uniform (i.e., they are inconsistent).
- An ART client has died, but his drug supply is still active.
- Data can be accurate (i.e., it will represent the true value), but still inconsistent because the instruments are different with different measurements.
- A VCT promotion campaign closure date is January 31, however a VCT client is reached through the campaign on February 2.

Data Timeliness
As someone once said, "data delayed is data denied. Data is timely when it is up-to-date (current-belong to the reporting period), and when the information is available on time. Timeliness is affected by the rate at which the program's information system is updated, the rate of change of actual program activities, and the timing of when the information is actually used or required. The timeliness of data is extremely important as reflected by:

- Health facilities publishing their quarterly results within a given frame of time.
- Doctors being provided up-to date information on ART clients.

Precision: Data have sufficient detail. For example, an indicator requires the number of individuals who received HIV counseling and testing and received their test results, by sex of the individual. An information system lacks precision if it is not designed to record the sex of the individual who received counseling and testing.

Integrity: Data generated by a program's information system is protected from deliberate bias or manipulation for political or personal reasons. An example of an integrity issue is when a facility changes the data to please a partner organization. In addition, data should also be protected from unauthorized access/dissemination.

Data Cleaning: A process used to determine inaccurate, incomplete, or unreasonable data and then improving the quality through correction of detected errors and omissions.

3. DATA QUALITY ASSESSMENT PROCEDURES AND DATA VALIDATION

This section outlines procedures and processes that the reviewer or review team will use to determine whether the institution's data is accurate, valid, and reliable.

3.1. COMPLETE DATA QUALITY ASSESSMENT TRAINING

During the data quality assessment preparation phase, all staff involved in the activity should complete the DQA training individually to familiarize themselves with the process and requirements.

3.2. PREPARING FOR DATA QUALITY ASSESSMENT

In preparation for a data quality assessment exercise, it is recommended that you develop a written scope or statement of work. A scope or statement of work is a formal document that captures and defines the work activities, deliverables and timeline an individual or team will execute against in performance of specified work. The scope of work must outline the following:

- Composition of the review team.
- Roles of Each Team Member
- Selecting the institution and program/disease area to be assessed.
- Selecting the indicators.
- Selecting the Period of Review
- Notification
- Required Materials for data quality assessment

3.2.1. Composition of the Review Team

During the development of the SOW, the team that will conduct the data quality assessment should be identified, and you should reach out to each individual team member in a timely manner. The following are suggested positions/members for the review team:

- District Health Unit representative
- Hospital Planning M&E Officer
- Hospital Data Manager
- Health Facility Supervisor with a thorough knowledge of the disease program area
- The Health Facility In-charge or Unit In-Charge whose role is to observe the process and provide information as needed.
- **OPTIONAL**: A member from the partners that support the health facility
- The leader of the team should be the Hospital Planning M&E Officer. In his/her absence, the Hospital data manager can be the Team Leader.

3.2.2. Roles of Each Team Member

Hospital Planning M&E officer shall be the Team Leader and is responsible for:

1. Arranging for any courtesy call with the relevant Health Facility Management Staff and share with the facility the list of indicators for DQA
2. Planning all the field visits with health facilities
3. Overseeing team fieldwork and allocating tasks as necessary
4. Facilitating introduction of the team and explanation of the DQA at all visits
5. Delegating tasks and taking part in data verification, crosschecks, and spot-check activities
6. Appointing someone to list all tools used to collect, aggregate, and report data at the health facility.
7. Developing an action plan specific to the Health Facility
8. Conducting all Health Facility debriefing
9. Coordinating and compiling the final DQA Report
10. Keeping files of all original documents collected during fieldwork (electronic and paper-based) in the field
11. Communicating any urgent matters to other members
12. Follow up the implementation of recommendations from DQA

Hospital Data Manager shall:

1. Liaise with health facility staff to avail all the source documents for indicators targeted for DQA, such as patient charts, registers, and monthly reports
2. Perform a cross-check between source documents and data from the database
3. Coordinate logistics and meeting times for all health facilities
4. Write sections of the final DQA Report as directed by the Team Leader
5. Fill in and maintain electronic copies of the DQA tool for all visits
6. Performs any other duties assigned by the Team Leader
7. Provide technical support as needed during implementation of recommendations from DQA

Visited health facility staff shall:

1. Be responsible for helping the team access the facility and source documents and other information
2. Provide explanations to questions in the DQA tool
3. Invite other health facility staff to the debrief meetings
4. Participate in the cross-checks, spot checks, data verification, and discussion of the action plan
5. Perform any other duty assigned by the Team Leader
6. Approve finding from DQA for each indicator verified

District Health Unit representative shall:

1. Participate in data quality assessment
2. Participate in the development of action plan
3. Follow up implementation of recommendations from DQA

Representative from the Implementing Partner shall:

4. Participate in data quality assessment
5. Participate in the development of action plan
6. Support facilities during implementation of recommendation from DQA

3.2.3. Selecting the institution and program/disease area to be assessed.

The institution(s) where DQA is intended to be conducted should be specified in the SOW and include the program or disease areas to be assessed. It is recommended that the team review a maximum of three programs/disease areas per visit in order to comprehensively cover all the items and issues. The remaining programs/disease areas should be covered during subsequent follow-up visits.

3.2.4. Selecting the indicators.

The criteria for selecting indicators to be assessed include the followings:

- The indicator is one of the key indicators in the program area
- The indicator is being monitored or is supposed to be monitored by the institution

Since the DQA activity is designed to improve on the system's performance, in certain situations, it is advisable to combine indicators that have had problems during their collection and reporting with at least one indicator that has not been problematic.

3.2.5. Selecting the Period of Review

The team should decide which monthly, quarterly, or semi-annual report to assess. In most cases, the latest quarter(s) comprising quarterly and Semi-Annual reports is preferred in order to validate whether what was reported is accurate, reliable, and valid.

3.2.6. Notification

The staff of the institution to be visited should be notified prior to the visit. The notification letter should go two weeks before the visit. The content of the notification letter should include a list of indicators to be verified See Appendix B for a sample notification letter.

3.2.7. Required Materials for DQA

Required materials for quality assessment include, but are not limited to:

1. A hard copy of data quality assessment tool
2. Electronic version of data quality assessment tool
3. Patient dossiers/charts/cards
4. Registers/e-Registers
5. Hard copy Monthly Report(s) to be assessed
6. The Standard Operation Manual (this manual)
7. Plain sheets of paper to be used as tally sheet
8. Note book
9. Calculator
10. Pens
11. Copy of data downloaded from HMIS for indicators to be verified
12. Computer

3.3. SITE VISIT DATA QUALITY ASSESSMENT

The review team should use the Excel template of the data quality assessment tool to record notes and enter findings for the different dimensions of data quality measured. Finding for each indicator verified must be approved by facility staff involved in DQA

For each step while conducting a site DQA, a corresponding section of the data quality assessment tool is attached (appendix D).

3.3.1. Conduct entrance briefing

The review team should pay a visit to the institution in-charge upon arrival in order to conduct an entrance briefing. During the briefing, the review team should request an introduction with the specific site staff of the program/disease areas to be reviewed to discuss expectations for the site visit. The review team should also discuss the objectives for the review and discuss any administrative needs of the review team. They should review the day's agenda with the institution's staff and ask for any updates.

3.3.2. Conduct interviews with staff

The review team is advised to conduct interviews with site staff involved in the collection, compilation, and reporting of health-related data for each program/disease area being assessed. These interviews provide a first-hand opportunity for the review team to gain a thorough understanding of each institution's data collection and reporting processes. Any outstanding questions and follow-up issues identified during the previous site visits should be addressed during the interviews.

3.3.3. Description of Routine Data Quality Assessment/Audit Tool

The routine data quality assessment tool consists of four main parts:

PART A: Source Document Review
- A-1 Completeness of data in register
- A-2 Accuracy of data in register
- A-3 Spot-checking register data

PART B. Monthly Report Review
- B-1 Completeness of Monthly Report
- B-2 Accuracy of Monthly Report

PART C: Error rate findings during DQA

PART D. Action Plan

Instructions for Working with DQA Tool in Excel

To begin working with the DQA tool, first open the Assessment Template in excel.

Next, fill in the name of the health facility in which the data quality audit is implemented, the period of review, the service area/unit reviewed, the register to be reviewed, and date of the review.

Table 2: Health Facility Data Quality Assessment Tool

HEALTH FACILITY DATA QUALITY ASSESSMENT TOOL			
Name of Health Facility Reviewed:			
Period reviewed (month/year)			
Service Area/Unit Reviewed:			
Name of Register Reviewed:			
Date of Review			

Part A: Source Document Review
Identify and list the source documents that are going to be used during the review process by filling in the following section in the form.

PART A: Source Document Review			
Step 1: Identify the register and then the corresponding patient files and/or case records that are used to complete the register			
List the source documents (i.e., patient file(s), case records and other corresponding registers) reviewed, if any			

Random Sampling
Randomly select at least 10 patient files for patients who visited the health facility during the period of review. To randomly select patient files, first count the total number of patient files for the given period. Then, divide the total number by the required number of the sample (e.g. 10) to obtain the **sampling interval**. For example, if the program has 50 patient files and we need to randomly select 10 patient files, we simply divide the 50 patient files by 10 to get a sampling interval of 5. This implies that you select every fifth patient from a random starting point between 1 and 5. If you start with patient 3, the next patient to be selected is patient 8.

In the event that the total number of patient files for the period is too small to warrant sampling (e.g. less than 20 files), you may use all files to conduct the data quality assessment. Fill in the template:

A-1 Completeness of Data in Register			
Randomly select at least 10 patient files for patients that visited the facility during the period of review			
1.1 Total number of patient files randomly selected	10		

Count and record the total number of data fields in the register that were supposed to be completed with data from the patient files multiplied by the total number of sampled patient files. Then, count and record the total number of fields that were left blank or have missing data. For example, if there are 20 expected/mandatory data fields for each patient, multiply the 20 data fields by 10 (the selected sample of patient files) to get 200 data fields.

A-1.0 Completeness of Data in Register			
1.2 Total number of data fields in the register that were supposed to be updated with data from selected patient files	200		
1.3 Total number of data fields supposed to be updated in the register that were left blank or with missing data	10		
Error due to incomplete (or blank) fields in register	**5%**		

The error percentage due to incomplete or blank fields in the register is automatically generated by the Excel-based tool and therefore does not need to be calculated manually.

From each patient file, find the patient entry in the register and verify if all the information in the patient file was accurately entered in the register. Make sure you go through each data field in the register for a selected patient and verify that the corresponding data is same as that in the patient file. Count and record the total number of correct entries in the register from the randomly selected patient files.

A-2 Accuracy of data in Register			
2.1 Total number of data fields updated in the register with **the correct data entered** from the selected patient or case files (i.e. data in register corresponds to data in patient/case files).	180		
Error due to transcription from data source to register	**10%**		

Note that this number is compared against the 200 data fields recorded above under A 1.2.

Spot-checking register data

Randomly select at least 10 patient names from the register and attempt to locate the corresponding patient files. The random sampling technique is described above. In the example below, of the 10 randomly selected patient names from the register, patient files for two were not found.

Randomly select at least 10 cases/patients from the register and identify the corresponding case/patient files			
3.1 Number of cases/patients randomly selected from the register	10		
3.2 Number of cases/patients whose source documents are missing	2		
Percentage of missing case/patient source documents	20%		

Completeness and Accuracy of Monthly Reports

PART B: Monthly Report Review

Count and record the total number of data fields that were supposed to be filled in the monthly report as well as the number of data fields with completed data in the monthly report form.

PART B. Monthly Report Review			
B-1.0 Completeness of Monthly Report			
1.1 Total number of data fields in the monthly report that were supposed to be filled.	20		
1.2 Total number of data fields with completed data in the monthly report form	15		
Error due to incomplete (or blank) fields in monthly report	**25%**		

Using tally sheets designed for the register, recount data in the register for each data element on the monthly report under review. Ensure that all disaggregation as required by the monthly report are included in your tally sheet. Next, compare the recounted data in your tally sheet with the reported data in the monthly report (hard copy or HMIS) and record all data fields in monthly report with correct data as recounted in your tally sheet.

B-2.0 Accuracy of Monthly Report			
2.1 Number of disaggregated data fields in monthly report with correct data as recounted in your tally sheet	10		
Error due to transcription from register to monthly report	**50%**		

Note that this number is compared against the 20 data fields recorded above under B 1.1.

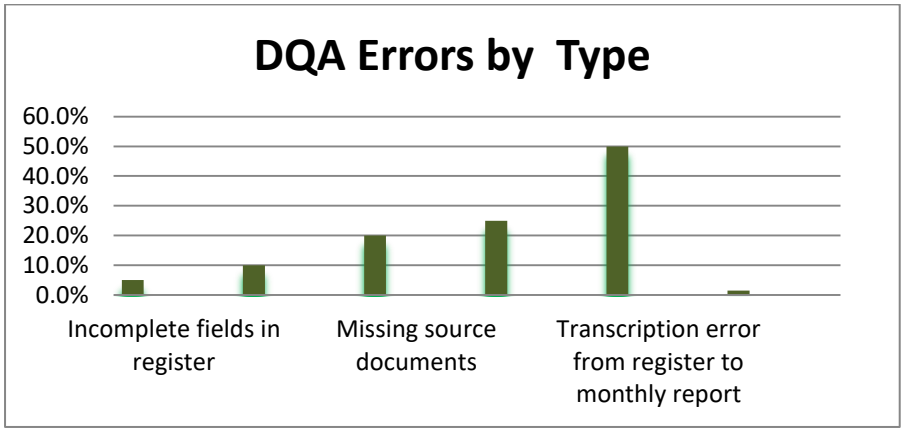
Enter the recounted versus the reported results for each data element/indicator comparing data from source documents with reported results in the monthly reports or HMIS.

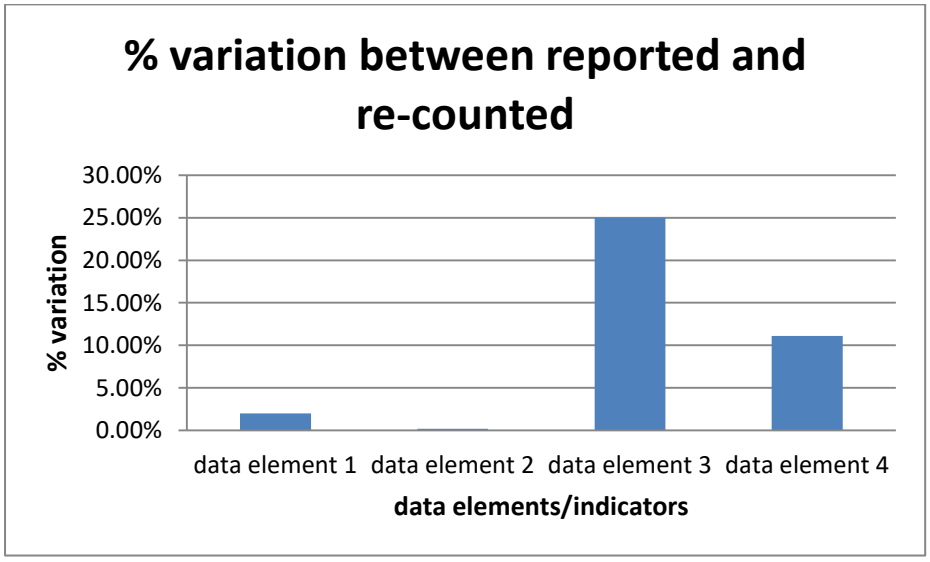
Indicator (List the indicator)	**Recount**	**Report**	**% variance**	**Recount**	**Report**	**% variance**
data element 1	**450**	**441**	**2.0%**			**0.0%**
data element 2	**426**	**425**	**0.2%**			**0.0%**
data element 3	**10**	**8**	**25.0%**			**0.0%**
data element 4	**10**	**9**	**11.1%**			**0.0%**
Average Inaccuracy Ratio (score)			**1.5%**			

PART C: Error rate findings during DQA

The DQA tool automatically generates charts which indicate the magnitude of error by type. This includes incomplete fields in register, transcription error from source to register, missing source documents, incomplete fields in monthly report, transcription error from register to monthly report, and the average inaccuracy ratio.

The following charts were generated from the data in the examples above:





PART D. Action Plan

A major activity of data quality assessment is the development of an action plan. Based on the findings presented indicated in the charts above, an action plan can be developed in collaboration with health facility staff. The Action Plan table below includes data quality improvement measures (action points), individuals responsible for their implementation, as well as timeframes for resolving identified data quality issues.

Table 3: Action Plan

Part D. Action Plan			
Action Point	**Responsible person or entity**	**Timeframe**	**Follow-up comments**

3.5.CONDUCT EXIT BRIEFING

It is recommended that the entire review team meet briefly with the institution's staff and management at the end of the site visit to go over any action items or outstanding documentation needs. The site visit should conclude with an exit briefing, where the review team should provide the institution with DQA finding, a summary of next steps and note any follow-up that may need to occur.

4. PROCEDURES FOR FEEDBACK/DEBRIEF

4.1. FEEDBACK AFTER THE DATA QUALITY ASSESSMENT

4.1.1. The health facility must be debriefed before the team leaves the site. Discuss the key action points that the team feels should be addressed during debrief. The team should nominate someone to take notes. The debrief should cover the following topics:

- Thank the health facility staff for their cooperation and hard work they are doing at the health facility
- Review of the DQA process, including what was done by the team
- Discuss the identified action points
- Inform the institution's staff and management how they will receive the full final DQA report

4.1.2. Make sure to highlight and praise all areas that show system strengths. Do not just focus on the weaknesses.

4.1.3. At the end of presentation, discuss each specific weakness that was identified. Ask the health facility staff to comment on the findings. Discuss with the staff what they think would be good ways to address the weaknesses.

4.1.4. Revise the action plan where each specific weakness is addressed in one action point.

4.1.5. At the end of debrief meeting, provide electronic and hard copies of the debrief notes to the health facility staff as required.

4.1.6. The review team should include and approve the strengths of the health facility and key recommendations in the supervision book.

End the debrief meeting on a positive note. Please recognize the value of the work that health facility staff are *already* doing every day, stressing the fact that DQA is intended for capacity building and is not a fault-finding mission. Finally, re-emphasize the important role that each staff member plays in generating quality data for the Government of Rwanda, providing quality services to the Rwandan population, and shaping effective implementation of the Health Sector Strategic Plan.

4.2. REQUIREMENTS FOR REGULAR FEEDBACK

Regular feedback is very important for the following reasons:

- It establishes strong relationships between data collectors and users at all levels
- It is an important element of management and supervision
- Regular feedback leads to greater appreciation of data by:
    - Improving data quality
    - Influencing collection of appropriate data
    - Expanding information use
- It can benefit community programs and service delivery
- It can benefit program reporting by uncovering the reasons behind numbers and trends
- It can act as an incentive/motivation to data managers and service providers

Requirements for Regular Feedback

To be the most beneficial, regular feedback should:

- Be constructive and include positive and negative comments
- Be selective, and should be no more than a one-page document focusing on a particular disease area (indicators)
- Be timely, given no more than 2 weeks after receiving data or monthly report
- Be descriptive both qualitatively and quantitatively. Make sure the quantitative description is appropriate to the skill level of the recipient

LIST OF APPENDICES

Appendix A: Final Report Template

Full DQA Report Outline

1. **Cover Page**
2. **Table of Contents**
3. **Executive Summary (one page)**
4. **Introduction**
   a. **Brief Outline of DQA Activities (DQA objectives, when it took place, period reviewed, program/disease area assessed, team members, brief description of the tool used, documents reviewed etc.)**
   b. **Assessment Limitations**
5. **Assessment Findings**
6. **Conclusions and Recommendations to Improve the data collection and reporting system**
7. **Annexes**
   a. **Annex 1: Action Plans for Sites**
   b. **Annex 2: List of Staff Who Participated in Assessment**
   c. **Annex 3: Schedule of visits**

Appendix B: Example of Notification Letter

Template for Notification Letter

Date

Address

Dear_____:

[Your Hospital/Health Center) will undergo a routine data quality assessment on the following dates:_____The purpose of this assessment is: (1) To assess the ability of the data management systems of the Program/project(s) you are managing to report quality data; (2) To check the quality of the results being reported; and (3) To contribute to the overall improvement of data collection and reporting systems and capacity building. District M&E Team will be conducting the assessment and will contact you soon regarding the assessment.

This data quality assessment relates to the [disease],[program area] and [indicator name(s)].

The assessment team will:

1. Verify past reported numbers for a limited number of indicators; and

2. Hold a debriefing with your management staff on assessment findings and suggested improvements in Action Plan.

To facilitate site visits, we request that the health facility data manager and unit in- charge be present during the assessment period. .

Again, we emphasize that we will make every effort to limit the interference the assessment might have on your ongoing activities. In that regard, it would be very helpful if you would provide us with a key contact person (such as data manager) so we can provide other relevant details to the appropriate person. If you have any questions please contact _____ at _____

Sincerely,

Appendix C: Correction Form

MINISTRY OF HEALTH

LOG BOOK FOR ERROR CORRECTION V11_2018

		Please follow the instructions below
	HMIS Instance:	Name the instance you want to correct from : HMIS, HIV,eIDSR, SISCOM,eTB,FBF,PBF
	Dataset name:	Name the dataset exactly as it is captured in RHMIS system
	Data element :	Name the data element exactly as it is captured in RHMIS system
Province :	Data source	Indicate the primary source of the data new data (the true value)
District :	Period:	Month and year you want to correct
Subdistrict:	Previous data :	Wrong value (the value to be changed)
Health facility:	Corrected data:	New data (the true value)
Sector:	Reason for correction:	State cleary what happened to have the wrong value (use your favorite language:French, English, or Kinyarwanda)
Date of request:	Names and title :	Names of person who has made the correction (please add also the function/title, as very important)
	Telephone number:	Telephone number of Person who has made the correction
	Request approved by:	The correction request has to be approved by the Head of health facility (Titulaire for health Centers and Director General for Hospitals)
	Central level approval:	The request will be approved by concerned Division Manager prior unlock for correction

HMIS Instance:	Dataset name	Data element	Data source (Patients register, Laboratory register,...)	Period	Previous data	Corrected data	Reason for correction	Names and Title	Telephone

Note: You are not allowed to make any change to this logbook format
Please send your request to the RBC/PDQA focal person

Appendix D: Routine Data Quality Assessment/Audit Tool

Annexe2: ROUTINE DATA QUALITY ASSESSMENT TOOL FOR HEALTH FACILITY (Quantitative Aspect)				
Introduction: This tool has been designed to assess the five dimensions of data quality (i.e. accuracy, completeness, validity, reliability and integrity) for routine data collected and reported by service delivery. Whereas as efforts are being made to standardize data collection tools and formats, this tool focuses mainly on the quantitative aspects of data quality and should be self-administered by a health facility or by a supervisor on routine basis (at least once per quarter) in every health				
Name of Health Facility Reviewed:				
	Quarter:	**Quarter:**	**Quarter:**	**Quarter:**
Service Area/Unit Reviewed:				
Name of Register Reviewed:				
Date of Review				
Period reviewed				
PART A: Source Document Review				
Step 1: Identify the register and then the corresponding patient files and/or case records that are used to complete the register				
List the source documents (i.e. patient file(s), case records and other corresponding registers) reviewed, if any				
A-1.0 Completeness of data in Register				
Step 2: Randomly select at least 10 patient files for patients that visited the facility during the period of review				
1.1 Total number of patient files randomly selected				
Step 3: For each patient file, trace the patient entry in the register and verify if all the information in the patient file was correctly entered in the register. Make sure that you go through each data field in the register for a selected patient file and verify that the corresponding data is same as that in the patient file. Count the total number of wrong entries in the register from the randomly selected patient files				
1.2 Total number of data fields in the register that were supposed to be updated with data from selected patient files				
1.3 Total number of data fields supposed to be updated in the register that were left blank or with missing data				
Error due to incomplete (or blank) fields in register	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
A-2.0 Accuracy of data in Register				
2.1 Total number of data fields updated in the register with **the correct data entered**				
Error due to transcription from data source to register	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
A-3.0 Spot-checking register data				
Step 4: Randomly select at least 10 cases/patients from the register and identify the corresponding case/patient files				
2.1 Number of cases/patients randomly selected from the register				
2.2 Number of cases/patients whose source documents are missing				
Percentage of missing case/patient source documents	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

PART B. Monthly Report Review

B-1.0 Completeness of Monthly Report

Step 5: Using tally sheets designed for the register, recount all data in the register for the monthly report under review . Ensure that disaggregated as required by the monthly report is included in your tally sheet.
Compare the recounted data in your tally sheet (including the disaggregations and totals) with the reported data in the monthly report (including the disaggregations and totals)

1.1 Total number of disaggregated (partitioned) data fields that have have complete data from your tally sheet				
1.2 Total number of disaagregated data fields with completed data in the monthly report form				
Error due to incomplete (or blank) fields in monthly report	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

B-2.0 Accuracy of Monthly Report

2.1 Number of disaggregated data fields in monthly report with correct data as recounted in your tally sheet				
Error due to transcription from register to monthly report	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Step 6: Review all monthly summary forms generated for each indicator during the reporting period verified. Recount results from source documents, compare the verified numbers to the reported results in the monthly summary forms

Indicator (List the indicator)	Recounted	Reported	% variance	Recounted	Reported	% variance	Recounted	Reported	% variance	Recounted	Reported	% variance
Number of uncomplicated Malaria cases treated after confirmation (RDT + GE) January									**#DIV/0!**			**#DIV/0!**
Number of uncomplicated Malaria cases treated after confirmation (RDT + GE) February									**#DIV/0!**			**#DIV/0!**
Number of uncomplicated Malaria cases treated after confirmation (RDT + GE) March									**#DIV/0!**			**#DIV/0!**
Patients on Pre-ART in January									**#DIV/0!**			**#DIV/0!**
Patients on Pre-ART in February									**#DIV/0!**			**#DIV/0!**
Patients on Pre-ART in March									**#DIV/0!**			**#DIV/0!**
Microscopic Pulmonary Tuberculosis Positive (TPM) during the previous quarter (January to March)									**#DIV/0!**			**#DIV/0!**
Average Accuracy Ratio (score)	**#DIV/0!**			**#DIV/0!**					**#DIV/0!**			**#DIV/0!**

PART C. Action Plan

Action Point	Responsible person or entity	Timeframe	Follow-up comments