

Data Quality Assessment Strategy



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

Contents

Abbreviations and Acronyms	3
Acknowledgements	4
Background	5
Introduction	7
1. Data Elements under review.....	7
2. Terms of Reference.....	7
Objectives	7
Scope of work	7
3. Methodology.....	8
Site selection	8
Communication.....	8
Review of site characteristics.....	8
Review the M&E systems.....	8
Data review	8
Review a sample of client records	9
4. Dissemination and use of DQA findings.....	9
Report	9
Data quality improvement plan	9

Abbreviations and Acronyms

AE	Adverse Events
ANC	Antenatal Client
BMGF	Bill and Melinda Gates Foundation
CDC	Centre for Disease Control and Prevention
CQI	Continuous Quality Improvement
DHIS	District Health Information Software
DHMIS	District Health Management Information System
DOH	Department of Health
DQA	Data Quality Assessment
DQIP	Data Quality Improvement Plan
EQA	External Quality Assessment
GP	General Practitioner
HIV	Human Immuno-deficiency virus
HTS	HIV Testing Services
M&E	Monitoring and Evaluation
MMC	Medical Male Circumcision
NDOH	National Department of Health
NDP	National Development Plan
NSP	National Strategic Plan
PSI	Patient Safety Incidence
QI	Quality Improvement
SOP	Standard Operating Procedure
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
WHO	World Health Organization
VMMC	Voluntary Medical Male Circumcision

Acknowledgements

The South African National Department of Health

Bill and Melinda Gates Foundation

The Presidents Emergency Plan for AIDS Relief

Foundation for Professional Development

Genesis Analytics

Mr. Collen Bonnecwe
National Department of Health
Director: VMMC Program, HIV Prevention Cluster

Mr. Daynund Loykisoona
National Department of Health
Program Manager: VMMC Program, HIV Prevention Cluster

Background

South Africa has the world’s largest HIV epidemic with an estimated seven million people living with HIV and over 300,000 new HIV infections each year (UNAIDS, 2014). Since 2012, South Africa has seen an increase in life expectancy, declining new HIV infection rates, a doubling of the antiretroviral treatment (ART) program and significant progress towards UNAIDS 90-90-90 targets. Despite significant gains, the recent South African National HIV Prevalence, Incidence, Behavior and Communications Survey also highlights significant program challenges (HSRC, 2017). For men in particular, there has been no significant changes in HIV incidence, continued low estimates of ART exposure, poor viral suppression, early sexual debut, low condom use at last sex and high rates of reported multiple sexual partners in the last 12 months (Human Science Research Council, 2017). To this end, preventing new infections is of critical importance and men require a biologically and behaviorally tailored approach to HIV prevention

Medical male circumcision (MMC) has been identified as a key HIV prevention intervention for South Africa as it reduces the risk of female to male HIV transmission by approximately 60% (South African National AIDS Council, 2017) (Auvert, et al., 2008). MMC is not only one of the most efficacious biomedical HIV prevention interventions, but is also one of the most cost-effective interventions under South Africa’s Investment Case (South African Department of Health, South African National AIDS Council, 2016).

In 2010, the South African National Department of Health (NDOH) began implementing a plan to medically circumcise men between the ages 15-49 (South African National Department of Health, 2012). To date, the national MMC program has achieved extraordinary scale having circumcised close to 3.8 million men. The program continues scale-up services and has set the ambitious targets of circumcising another 2.5 million men by 2022 in order to reach 80% of HIV negative men aged 15-49 years (South African National AIDS Council, 2017).

The national Voluntary Medical Male Circumcision (VMMC) program is guided by a number of policies including the National Strategic Plan (NSP) for HIV, TB and STIs (2017-2022), the National Guidelines for MMC (2016), the South African MMC Demand Generation Strategy (2018), the South Africa VMMC Operational Plan [2016/2017-2018/2019] and the South Africa Health Sector Strategy for HIV, 2018. These policies cover clinical, non-clinical and managerial regulations, as well as implementation plans and frameworks. The different policies are aligned to South Africa’s National Development Plan (NDP) 2030, which prioritizes the improvement of prevention and therapeutic interventions to reduce HIV (South African National Planning Commission, 2012).

The National VMMC program data management is governed by the District Health Management Information Systems (DHMIS) Policy and Standard Operating Procedure (SOP). The DHMIS SOP stipulates how data is managed at all levels of the health information system. The data flow and timelines for data submissions are depicted in the figure below:

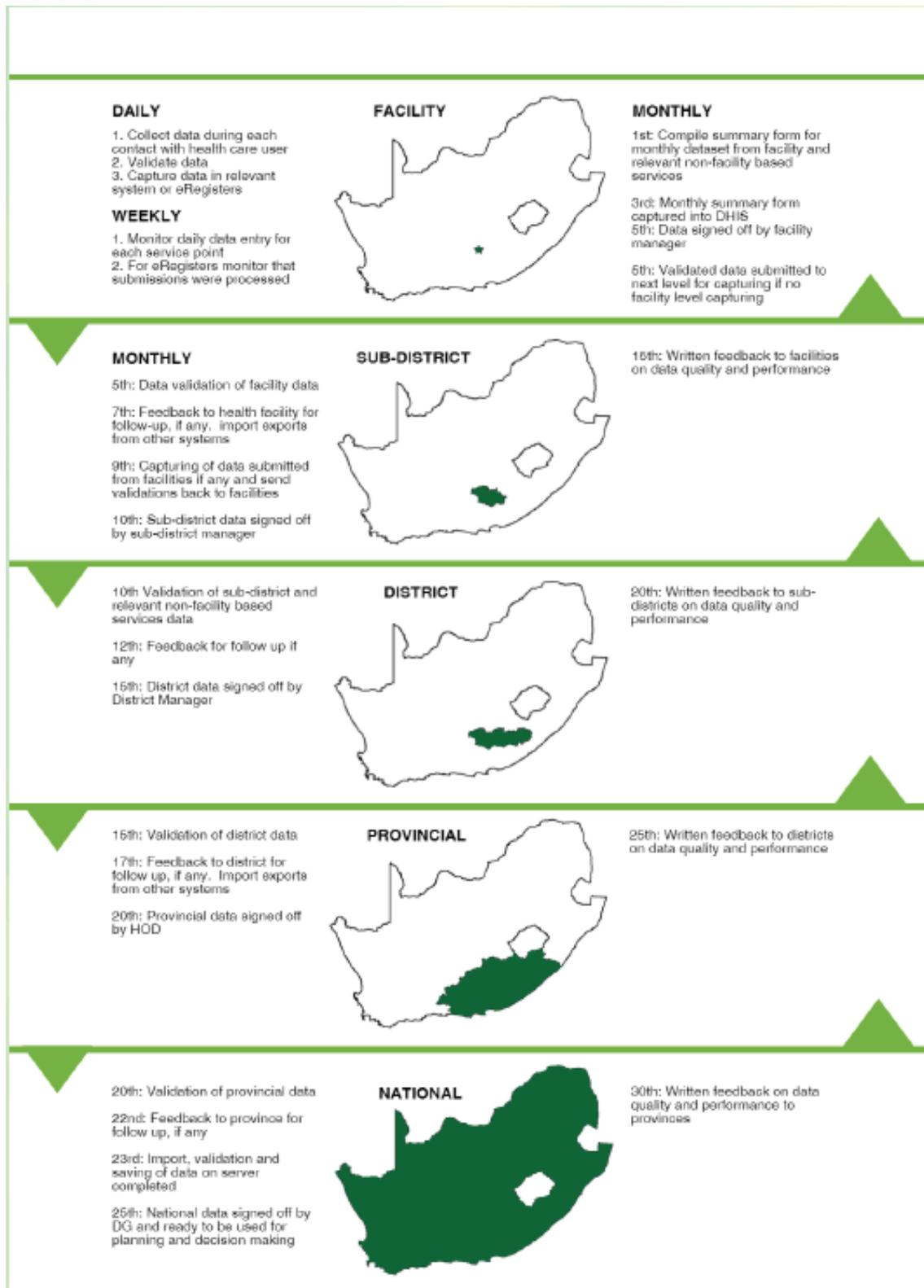


Figure 1: DHMIS Policy data flow timeline

Introduction

An effective VMMC program directly influences the aversion of new HIV infections in men. In order to measure the effectiveness of the program as an intervention, there is a need for evidence-based program management. The data quality assessment (DQA) is used to review how data is collected, maintained and managed within the program.

1. Data Elements under review

- Medical male circumcision 10-14 years
- Medical male circumcision 15 years and older
- HIV test 15 years and older (excl ANC)
- HIV test 5-14 years
- HIV test positive 15 years and older (excl ANC)
- HIV test positive 5-14 years

2. Terms of Reference

Objectives

- Establish the availability of supporting documentation for reporting (i.e. SOPs, Software, Clinical Stationery) in selected sites.
- Verify the completeness of clinical records in selected sites.
- Verify the quality of reported data for the key indicators in the VMMC program
- Provide feedback to sites.
- Provide recommendations and develop improvement plans for data quality and management.

Scope of work

1.	The assessment team
1.1	Identify teams to conduct the quality assessment.
1.2	Identify facilities with potential data quality issues and anomalies through DHIS data analysis.
1.3	Select sites in which assessments will be done and communicate with the sites respectively.
1.4	Conduct M&E systems assessment within selected sites.
1.5	Conduct a review of a sample of the clinical records (Client intake form).
1.6	Provide feedback on the findings.
1.7	Develop Data Quality improvement plan (DQIP) based on findings.
1.8	Review progress on the DQIP.

2.	The site management team
2.1	Ensure the site staff are available for the assessment.

2.2	Ensure that the Client files, MMC Registers, HTS registers, AE Registers and monthly input forms are available for review.
2.3	Implement data quality improvement plan and monitor progress.

3. Methodology

Site selection

The DQA should be driven by evidence in order to maximize the effectiveness of the program. The selection criteria for the DQA will be based on DHIS discrepancies and high rate of adverse events (AEs). Facilities displaying quality issues are selected for further investigation through the DQA.

Communication

The sites, through the district office, need to be notified of the up-coming site visits in order to ensure that the sites are ready for the assessment and all the required documents are in order prior to the assessment.

Review of site characteristics

The site characteristics provide details of how the site conducts services, it is important to understand the site characteristics in order to determine how to assess the site and what aspects of the data management process to review. The site characteristics are assessed using the site characteristics and monitoring and evaluation (M&E) systems tool (See Appendix A). The information collected on the site characteristics focus on the following aspects:

- The site geographic location
- The type of site
- The type of service delivery
- The frequency of services
- The site volume
- The linkage systems

Review the M&E systems

The M&E system review is conducted using the site characteristics and M&E systems tool (See Appendix A). The section assesses the availability of resources for data management and the structure of the reporting process. The review provides information relating to how the information flows within the site and how the site reports the information.

Data review

The data review is conducted using the data review assessment tools which assess the collaboration between the different sources of data within the site. The assessment reviews data over a 12-month period. An extract from DHIS containing 12 months data is compared to the site MMC register, monthly input forms and the number of physical client records found within the site. The aim of this exercise is to assess whether the four sources match.

Review a sample of client records

The review of client records assesses how accurately client records are filled. A sample of 25 files spanning a 12-month period are reviewed. The assessment reviews the following aspect:

- Client age
- Client HIV status
- The consent process for the HIV test and the circumcision
- The taking of client health history and physical checks
- The details of the surgeon
- The date and method of the procedure
- The accuracy of anesthetic dosing
- The documentation of adverse events
- The documentation of follow-up visits

4. Dissemination and use of DQA findings

Report

A report which presents the findings of the DQA should be prepared and should include recommendations to improve data quality. The recommendations need to take into account the context and constraints that exist. The report should be disseminated to all relevant staff responsible for actioning the recommendations.

Data quality improvement plan (DQIP)

Based on the findings of the DQA, the assessment team should develop a data quality improvement plan, with the involvement of all relevant stakeholders. The plan should prioritize the concerns so that those with highest likelihood of success/lowest cost/ highest impact on data quality should be implemented first. The plan should be monitored regularly by the assessment team to ensure successful implementation.

The data quality improvement plan should specify:

- data quality concerns;
- evidence of the finding;
- remedial actions;
- responsible parties;
- timelines; and
- resources needed.

The implementing team is responsible for implementing and monitoring progress of the data quality improvement plan.

References

- Auvert, B., Marseille, E., Korenromp, E., Lloyd-Smith, J., Sitta, R., & Taljaard, D. (2008). Estimating the resources needed and savings anticipated from roll-out of adult male circumcision in Sub-Saharan Africa. *PLoS one*, 3(8), e2679.
- Barnighausen, T., Bloom, D., & Humair, S. (2012). Economics of antiretroviral treatment vs. circumcision for HIV prevention. *National Academy of Sciences of the United States of America*, 109 (52), pp. 21271-21276.
- Human Science Research Council. (2017). *South African National HIV Prevalence, Incidence, Behaviour and Communication Survey*. Pretoria: Human Science Research Council.
- Njeuhmeli, E., Forsythe, S., Reed, J., Opuni, M., Bollinger, L., & Heard, N. (2011). Voluntary medical male circumcision: modeling the impact and cost of expanding male circumcision for HIV prevention in eastern and southern Africa. *PLoS Medicine*, 8(11), e1001132.
- South African Department of Health, South African National AIDS Council. (2016). *South African HIV and TB Investment Case*.
- South African National AIDS Council. (2012). *The South African National Strategic Plan (NSP) for HIV, STIs and TB 2017-2016*.
- South African National AIDS Council. (2017). *The National Strategic Plan for HIV, TB and STIs, 2017-2022*. Pretoria: South African National AIDS Council.
- South African National Department of Health. (2012). *Implementation plan for scale-up of medical male circumcision (MMC) program in South Africa 2011/12-2015/216*. Pretoria.
- South African National Planning Commission. (2012). *National Development Plan 2030: Our Future-make it work*. Pretoria.
- UNAIDS. (2014). *The Gap Report*. Geneva: UNAIDS.
- UNAIDS/WHO/SACEMA. (2009). Expert Group on Modelling the Impact and Cost of Male Circumcision for HIV Prevention. Male circumcision for HIV prevention in high HIV prevalence settings: what can mathematical modelling contribute to informed decision making? *PLoS one*, 6(9), e1000109.
- World Health Organization. (2018). *WHO Progress Brief: Voluntary Medical Male Circumcisions for HIV Prevention*. WHO Regional Office for Africa.
- World Health Organization. (2017). *Data quality review: a toolkit for facility data quality assessment. Module 1. Framework and metrics*. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.