Addressing Voluntary Medical Male Circumcision (VMMC) data quality challenges through targeted data management interventions

Gert Sibande District, Mpumalanga

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Introduction

The South African National Department of Health (NDoH) adopted Voluntary Medical Male Circumcision (VMMC) as part of its combination HIV prevention strategy in 2010 to decrease new HIV infections. Since its inception, the programme has circumcised over five million men, which is a significant contribution towards averting new HIV infections in the country[1].

While the programme's success is evident in the large number of men it has reached, persistent data quality challenges threaten the continued successful scale-up and sustainability of the VMMC programme.

Specifically, data quality issues experienced in the programme are perpetuated by:

- Discrepancies between the data on the District Health Information System (DHIS), the official national data source and partner-reported data submitted to NDoH during the annual VMMC campaign period and;
- The lack of adherence to the national data management processes and guidelines by VMMC implementing partners.

In 2019, the Medical Male Circumcision Scale-Up and Sustainability to Avert New HIV Infections (MMC SUSTAIN) programme, which consists of a team providing overall technical assistance for the successful scale-up and sustainability of the VMMC programme in eight districts across three provinces, was established. A key component of the technical assistance provided by the MMC SUSTAIN programme is the design and implementation of targeted interventions that aim to address identified challenges in the VMMC programme, including data management and data quality.

This case study aims to demonstrate how the MMC SUSTAIN team and the District Department of Health (DoH) in Gert Sibande District, Mpumalanga addressed VMMC data management challenges through targeted interventions to improve data quality.
The lessons learnt are envisaged to be widely dispersed to other districts in the country to help strengthen their VMMC data management processes, improve data quality and ultimately support the successful scale-up of the VMMC programme in South Africa.

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[1] Gazimbi MM, Magadi MA, Kruger C. 2019. The Association between Male Circumcision and HIV Infection in Sub-Saharan Africa: A Systematic Review of the Literature. Int Arch Public Health Community Med 3:022. https://clinmedjournals.org/articles/iaphcm/in-ternational-archives-of-public-health-and-community-medicine-iaphcm-3-022.pdf

Overview of the management of VMMC data in South Africa

The VMMC programme has **existing guidelines** outlining the VMMC data management process with clearly defined roles and steps (see last section). These guidelines have been **cascaded to all provinces and districts**, and **in-depth training** sessions have been provided to capacitate all DoH stakeholders.

As part of the data management process, each district participates in **data review meetings** convened by the District DoH to ensure performance is accurately recorded on DHIS and tracked against targets. However, it was identified in various districts, including Gert Sibande, that reviewing VMMC data was less of a priority compared to other programme data, that the meetings were not VMMC-specific, and that the frequency of the meetings was inconsistent.

During the **annual VMMC campaigns**, run by the NDoH, which aim to maximise VMMC performance over the winter season using a project management approach, districts are encouraged to include an **additional review process** to compare partner-reported data and data reflected on the DHIS to resolve any variances. This is the only period in which all implementing partners share their raw data with the VMMC programme before uploading on DHIS and therefore this period is leveraged for improving the VMMC data quality.

Data challenges as barriers to the success of the VMMC programme in Gert Sibande

Historically, there have been persistent data quality issues in Gert Sibande district, mainly data variance between partner reports and DHIS data, and the lack of adherence to data processes.

Within this district, the following challenges were noted:

1. Data Variance between DHIS and partner reports

During the monthly desktop review of VMMC data, it was observed that there were discrepancies between the number of circumcisions reported in the South African programme's official data source, DHIS, and the annual campaign report compiled by the VMMC Directorate at the NDoH. This resulted in data variance

which meant that implementing partners had recorded higher numbers in their reports than those reflected on the DHIS. This indicates inaccurate data reporting or capturing, which calls into question the validity and accuracy of the programme data.

2. Adherence to data management

2.1. Non-reporting of data to public health facilities

The DoH identified that implementing partners, particularly RT-35 partners were not reporting their data to Public Health Care (PHC) facilities. According to the district agreement, implementing partners were expected to report their data to PHC facilities for capture into the DHIS. However, the implementing partners failed to comply with this requirement, resulting in incomplete and inaccurate VMMC data.

Additionally, it was also identified that implementing partners were consistently delaying their reporting of data to the PHC facilities.

2.2. Poor management of client records by VMMC implementing partners

During site support visits, the District DoH and the MMC SUSTAIN team noticed that implementing partners were not managing VMMC records as per the national guidelines and records were not stored accordingly. As a result, some records were not kept at the site where circumcision was done, and some records were misplaced.

These challenges collectively compromised the quality of the VMMC's programme data in Gert Sibande.

Key interventions to resolve data challenges and improve data quality

The DoH stakeholders, with support from the MMC SUSTAIN team, led the implementation of the following interventions to resolve data challenges in the district.

1. Interventions to address <u>data variance</u>

Routine VMMC data review process

The district enforced a routine VMMC data review process with each implementing partner to verify their source data against data in DHIS. During the review process;

a) The Health Information officials would compare partner reports against the DHIS extract form for a given period.

b) Partners would then receive a report highlighting discrepancies between the two data sources.

c) Finally, a short window of opportunity to ensure closure of the data variance was given.

This process also encouraged monthly discussions of VMMC data between the District DoH and implementing partners and helped the District DoH make decisions on how to improve the process of data reporting.

2. Interventions to address <u>data adherence guidelines</u>

District Support Partner engagement with all partners

When the data review process was initiated, the District DoH received minimal response from implementing partners. The district, with the support of MMC SUSTAIN, brought Broadreach, the District Support Partner (DSP), on board to engage with implementing partners and ensure that they submitted their monthly data input summary sheets and verified the implementing partners' VMMC registers at the facility as in line with the established guidelines. The collaboration provided an additional layer of support to the district and the VMMC programme by engaging with implementing partners, verifying data, and ensuring that data reporting and data storage were in line with established guidelines. The collaboration helped to address the poor management of client records by VMMC implementing partners, resulting in improved data storage and accuracy.

Findings

How successful were these interventions? To understand this, an evaluation was conducted on the interventions to see their impact on the data quality. These were the findings:

1. Reduced data variance

The implementation of **monthly data verification meetings** and **implementing partner data review** processes had a significant impact on the completeness and validity of VMMC programme data reported in the DHIS in Gert Sibande District. The process allowed for the timely correction of data and led to an improvement in the overall quality of the data captured, as shown in Figure 1 below.

About Figure 1: The green line represents the figures captured before the data review process, while the yellow line represents the figures captured after the data review process. The percentages next to the upward-facing arrows represent the percentage increase in figures captured after the data review process. For example, in June 2021, the data figures reported increased by 162% after the data review process. These increases indicate an improvement in data accuracy and validity which the data review introduced.

Figure 1: VMMC annual campaign (2021) data in Gert Sibande, reported before and after the data review process
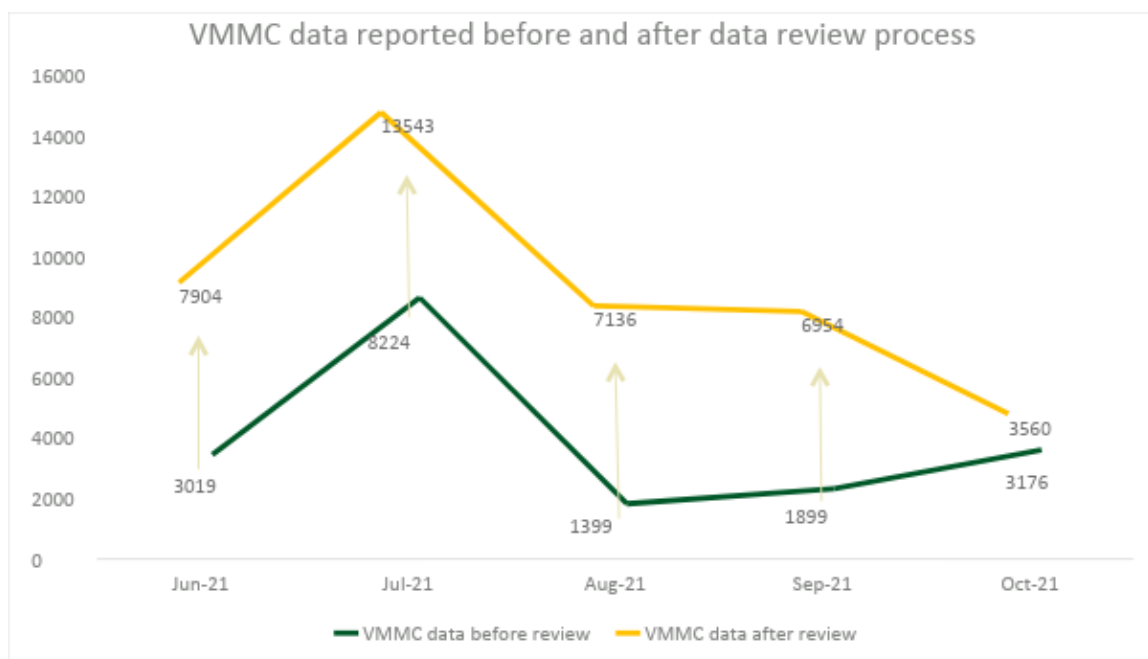
As a result of the successful interventions, it is now standard practice for monthly DHIS data to be circulated to each implementing partner for review.

This provides an opportunity for implementing partners to review their data before district verification meetings, which has improved the accuracy and completeness of data reporting. Implementing partners are also allowed a grace period to correct their VMMC data when discrepancies are identified, by reviewing source documents and travelling to VMMC sites to review client records for accuracy. This process ensures accurate reporting on submitted sheets and enables implementing partners to follow up with data capturers, if necessary.

2. **Improved adherence to VMMC data management guidelines**

The **implementation of routine data verification**, supported by the District Support Partner (DSP), resulted in improved adherence to VMMC data management guidelines by implementing partners. This is demonstrated by the resolution of data discrepancies for circumcision reported in DHIS and partners' reports during the annual campaign held between June and October 2021.

Three key lessons learnt

Ownership and sustainability: Ensuring that the district's stakeholders lead the implementation of interventions creates ownership and sustainability of the VMMC programme.

Pre- and post-data verification: The pre- and post-data verification process helps to course-correct and improve data quality on time before it's captured on DHIS.

Implementing partners: Regular engagement and involvement of DSP managers help to ensure the data management process is followed accordingly by implementing partners.

Useful resources & tools

➢ *District Data Verification Meeting Manual*
➢ *Facility Monthly Data Verification Checklist*
➢ *VMMC Learning eLibrary on Data Management & Systems*