

ABSTRACT

Title: Changes in the quality of voluntary medical male circumcision services in selected districts of the Mpumalanga, Eastern Cape, Free State and North West provinces of South Africa.

Objective: Voluntary Male Medical Circumcision (VMMC) as an HIV prevention strategy, has been widely adopted in several countries over the years, and its expansion has brought about quality gaps requiring urgent interventions. A key intervention strategy has been the implementation of continuous quality improvement (CQI). However, less has been focused on the changes in quality of services across all quality standards after implementation of quality improvement support. Therefore, this study sought to evaluate the effect of CQI on the quality of service in VMMC programmes across Right to Care supported sites in the North West, Mpumalanga, Eastern Cape and Free State provinces in South Africa.

Design: This was a pre-post design intervention study based on secondary data collected from the National Department of Health sites supported by Right to Care (RTC) on VMMC services in South Africa.

Method: Data for baseline CQI assessment and re-assessments was collected using a standardized National Department of Health (NDoH) CQI assessment tool for VMMC services. The assessments were conducted through staff interviews, checklists and direct observation of facility activities in line with the NDoH and WHO VMMC quality guidelines. Quality improvement support was provided through a combination of coaching, provision of standard operating procedures and guidelines, mentoring and on-site in-service trainings on quality improvement planning and implementation. A paired sample t-test was used to compare the quality of service mean scores before and after CQI implementation by quality standard. Linear mixed modelling was applied for multivariate analysis to adjust for clustering and to determine changes in quality of service by type of service delivery and facility structure using the overall quality of service across quality standards.

Results: During the period July 2018 to October 2019, 96 sites offered VMMC services [16 in the Eastern Cape, 19 in Free State, 19 in Mpumalanga and 42 in the North West province]. Out of

these, 40 sites were assessed at both baseline and after CQI support visits and 13 were from Mpumalanga, 6 from Free State and 21 from the North West provinces. Results showed significant increases for the overall changes in quality of service after CQI support intervention of 11.89% for infection prevention (95%CI: 6.60-17.15; $p < 0.001$) and 8.28% for male circumcision surgical procedure, (95%CI: 3.25-13.30; $p < 0.01$). Similarly, individual counselling, and HIV testing increased by 13.56%, (95%CI: 6.94-20.19; $p < 0.001$), group counselling, registration and communication by 8.5%, ($z=3.529$; $p < 0.001$), and 35.08% for monitoring and evaluation, (95%CI: 28.03-42.12; $p < 0.001$). In addition, there were significant increases for management systems of 28.65%, (95%CI: 22.30-35.00; $p < 0.001$), leadership and planning 23%, (95%CI: 12.85-33.88; $p < 0.001$) and supplies, equipment, environment and emergency 5.10%, (95%CI: 1.09-9.11; $p < 0.01$). The overall quality of service performance across provinces had increased by 19.32% (95%CI: 15.67-22.97; $p < 0.001$) on adjustment to facility structure and urban-rural classification. Furthermore, the overall quality of service performance was 9.9% higher in urban facilities compared to rural sites (95%CI: 4.10-15.81; $p < 0.001$). Similarly, the overall quality of service performance for outreach facilities was 4.92% higher compared to fixed facilities (95%CI: 5.21-19.91; $p < 0.001$) after CQI support intervention.

Conclusion: The overall quality of service performance across provinces was significantly improved after implementation of CQI support intervention program. However, provinces showed lack of positive improvement for specific quality standards. For instance, no significant improvements were observed for group counselling, registration and communication in the Free State and Mpumalanga provinces. Furthermore, the overall quality of service performance was highest at outreach and urban facilities compared to fixed and rural facilities respectively. Results from this study did not find any significant differences on the overall change in quality of service between types of service delivery (routine and campaign) and between provinces.

Key words: circumcision; quality of service; quality improvement; quality standards; implementation; training; monitoring; site assessment.