Voluntary medical male circumcision

Steady progress in the scaleup of VMMC as an HIV prevention intervention in 15 eastern and southern African countries before the SARS-CoV2 pandemic
Introduction

Voluntary medical male circumcision (VMMC) is a one-time preventive measure that reduces by 60% the risk of heterosexual transmission of HIV from women to men, in settings of high HIV prevalence among the general population. VMMC impacts on the HIV epidemic in high-prevalence settings. VMMC services are provided as a package of prevention interventions in 15 eastern and southern African countries, including safer sex education, condom education and provision, HIV testing and linkages to care and treatment, and management of sexually transmitted infections.

Numbers of VMMCs performed each year in high-priority countries

In 2016 UNAIDS set global VMMC Fast-Track targets recommending 25 million additional men and boys accessing VMMC services by 2020, translating to about 5 million boys and men accessing or availing themselves of VMMC services per year. Table 1 shows the numbers of VMMCs in males aged 10 years and older conducted in high-priority countries since 2008. The past 4 years of implementation alone have contributed about 61% (15 million VMMCs) to the total cumulative VMMCs performed since the recommendation was issued.

Countries maintain pace on VMMC scaleup

There have been 13 years of good progress since VMMC was recommended in 2007 by UNAIDS and WHO as a key HIV prevention intervention in high-prevalence settings, particularly for countries in the eastern and southern Africa region. Nearly 27 million men and boys have accessed VMMC services in high-priority countries since then (Figure 1).

Table 1. Annual provision of voluntary medical male circumcisions (VMMCs) in 15 high-priority countries

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>0</td>
<td>5,424</td>
<td>5,773</td>
<td>14,461</td>
<td>38,005</td>
<td>46,793</td>
<td>30,033</td>
<td>15,722</td>
<td>24,042</td>
<td>19,756</td>
<td>24,207</td>
<td>17,123</td>
<td>85,128</td>
<td>241,539</td>
</tr>
<tr>
<td>Eswatini</td>
<td>1,110</td>
<td>4,336</td>
<td>18,869</td>
<td>13,791</td>
<td>9,977</td>
<td>10,105</td>
<td>12,289</td>
<td>12,952</td>
<td>17,374</td>
<td>18,138</td>
<td>14,316</td>
<td>17,360</td>
<td>67,188</td>
<td>150,617</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>0</td>
<td>769</td>
<td>2,489</td>
<td>7,542</td>
<td>11,961</td>
<td>16,393</td>
<td>11,831</td>
<td>9,744</td>
<td>10,306</td>
<td>15,789</td>
<td>23,009</td>
<td>31,042</td>
<td>80,146</td>
<td>141,075</td>
</tr>
<tr>
<td>Kenya</td>
<td>11,663</td>
<td>80,719</td>
<td>139,905</td>
<td>159,196</td>
<td>151,517</td>
<td>190,580</td>
<td>193,576</td>
<td>207,014</td>
<td>219,086</td>
<td>233,879</td>
<td>286,899</td>
<td>191,863</td>
<td>931,727</td>
<td>2,065,891</td>
</tr>
<tr>
<td>Lesotho</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10,835</td>
<td>37,655</td>
<td>36,245</td>
<td>25,966</td>
<td>34,157</td>
<td>25,150</td>
<td>26,448</td>
<td>34,144</td>
<td>119,899</td>
<td>230,600</td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>589</td>
<td>1,234</td>
<td>1,296</td>
<td>11,881</td>
<td>21,250</td>
<td>40,835</td>
<td>80,419</td>
<td>108,672</td>
<td>129,975</td>
<td>166,350</td>
<td>210,239</td>
<td>114,465</td>
<td>621,029</td>
<td>887,205</td>
</tr>
<tr>
<td>Mozambique</td>
<td>0</td>
<td>100</td>
<td>7,633</td>
<td>29,592</td>
<td>135,000</td>
<td>144,066</td>
<td>240,507</td>
<td>198,340</td>
<td>253,079</td>
<td>315,380</td>
<td>311,891</td>
<td>390,589</td>
<td>1,220,939</td>
<td>2,028,157</td>
</tr>
<tr>
<td>Namibia</td>
<td>0</td>
<td>224</td>
<td>1,763</td>
<td>6,123</td>
<td>4,863</td>
<td>1,182</td>
<td>4,165</td>
<td>17,388</td>
<td>27,340</td>
<td>30,134</td>
<td>34,942</td>
<td>40,868</td>
<td>133,284</td>
<td>148,992</td>
</tr>
<tr>
<td>Rwanda</td>
<td>0</td>
<td>0</td>
<td>1,494</td>
<td>25,000</td>
<td>138,711</td>
<td>116,029</td>
<td>173,191</td>
<td>138,216</td>
<td>137,218</td>
<td>264,912</td>
<td>327,904</td>
<td>382,223</td>
<td>1,112,318</td>
<td>1,705,159</td>
</tr>
<tr>
<td>South Africa</td>
<td>5,190</td>
<td>9,168</td>
<td>131,117</td>
<td>296,726</td>
<td>422,009</td>
<td>514,991</td>
<td>482,474</td>
<td>485,552</td>
<td>497,186</td>
<td>591,941</td>
<td>572,442</td>
<td>451,636</td>
<td>2,113,205</td>
<td>4,460,432</td>
</tr>
<tr>
<td>South Sudan</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>1,147</td>
<td>1,453</td>
<td>2,600</td>
<td>2,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Republic</td>
<td>0</td>
<td>0</td>
<td>21,072</td>
<td>77,756</td>
<td>368,490</td>
<td>801,678</td>
<td>878,109</td>
<td>536,546</td>
<td>411,459</td>
<td>847,633</td>
<td>619,082</td>
<td>768,882</td>
<td>2,647,056</td>
<td>5,250,707</td>
</tr>
<tr>
<td>Tanzania</td>
<td>0</td>
<td>0</td>
<td>1,033</td>
<td>18,266</td>
<td>126,261</td>
<td>183,480</td>
<td>329,729</td>
<td>573,845</td>
<td>435,302</td>
<td>548,390</td>
<td>730,435</td>
<td>885,999</td>
<td>2,995,456</td>
<td>5,625,556</td>
</tr>
<tr>
<td>Zambia</td>
<td>2,758</td>
<td>17,180</td>
<td>61,911</td>
<td>85,151</td>
<td>173,992</td>
<td>294,466</td>
<td>315,168</td>
<td>222,481</td>
<td>311,792</td>
<td>483,816</td>
<td>482,183</td>
<td>549,655</td>
<td>1,827,446</td>
<td>3,000,553</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>0</td>
<td>2801</td>
<td>11,176</td>
<td>36,603</td>
<td>40,755</td>
<td>112,084</td>
<td>209,125</td>
<td>188,732</td>
<td>205,784</td>
<td>301,366</td>
<td>326,012</td>
<td>354,819</td>
<td>1,187,981</td>
<td>1,789,257</td>
</tr>
<tr>
<td>Total</td>
<td>21,310</td>
<td>122,988</td>
<td>422,924</td>
<td>884,283</td>
<td>1,710,845</td>
<td>2,658,566</td>
<td>3,240,977</td>
<td>2,622,627</td>
<td>2,827,188</td>
<td>4,044,740</td>
<td>4,146,320</td>
<td>4,145,578</td>
<td>15,163,826</td>
<td>26,848,346</td>
</tr>
<tr>
<td>Cumulative</td>
<td>2,827,188</td>
<td>6,871,928</td>
<td>11,018,248</td>
<td>15,163,826</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
South Sudan has only recently initiated a pilot voluntary medical male circumcision programme, and data were reported for the first time in 2018. 

The pace of scaleup has varied across high-priority countries. An increase in the annual number of men and boys opting for VMMC was observed from 2008 through 2018, with a slowdown only in 2015–2016. Although this progress in VMMC programme scaleup remains impressive, more intensified efforts are required to reach men at higher risk of HIV infection, especially in countries that are lagging behind.

VMMC scaleup has maintained progress over the past 4 years, achieving 58%, 79%, 83% and 80% of their annual recommended targets in 2016, 2017, 2018 and 2019, respectively. Cumulative performance towards the global target set in 2016 is 60%, falling short by 20% of an 80% figure in its fourth year for the 5-year target.

Global reporting on VMMC progress is improving, including age disaggregation

National VMMC programme monitoring and reporting is improving over time, including on age-disaggregated data, which is crucial for programming. In the 2018 reporting period, 84% (12/15) of high-priority countries reported on age-disaggregated VMMC data. About 84% of VMMCs conducted in 12 of the 15 countries in 2018 were among males aged 10–29 years. Although disparities exist across countries, a large proportion of VMMCs were among boys aged 10–14 years, an age group which recent WHO guidance (2020) no longer prioritises due to concerns regarding safety, and informed consent.

VMMC services and COVID-19

This progress brief focuses on data through 2019, and normally key messages would emanate from those data. The annual progress over time, and the more than 4 million VMMCs performed over the past few years, brought hope that the target for 2020 would be achieved. Unfortunately, due to the SARS-CoV-2 pandemic, service delivery of this elective HIV prevention procedure was disrupted during 2020. As services resume, it will be important to ensure facility site readiness (including PPE) and a focus on males aged 15 years and older.

---


Some rights reserved.

UNAIDS (Joint United Nations Programme on HIV/AIDS)
20 Avenue Appia
1211 Geneva 27
Switzerland
+41 22 971 3666
www.unaids.org
www.hivpreventioncoalition.unaids.org
UNAIDS/JC3022E

WHO (World Health Organization)
Global HIV, Hepatitis and STIs Programmes
20 Avenue Appia
1211 Geneva 27
Switzerland
hiv-aids@who.int
www.who.int/hiv
Some rights reserved.

Global data have highlighted challenges in reaching desirable health outcomes for men in the HIV response. The VMMC programme is a good example of one service providing an entry point for a package of integrated health services that serve the needs of men and boys.

Figure 3. Proportion of men and boys accessing voluntary medical male circumcisions (VMMCs) by age group in 12 high-priority countries, 2018

From 2008 to 2019, 26.8 million men and boys accessed VMMC in 15 countries in sub-Saharan Africa. Using mathematical modelling we estimate this programme averted 340,000 (260,000–440,000) new HIV infections by 2019, including 260,000 infections among males and 75,000 among females (due to reduced secondary transmission from males). The future benefits will presumably be much larger since VMMC provides protection for life. We estimate that if men and boys stopped accessing VMMCs today, the number of HIV infections averted would still rise to about 1.8 million by 2030 and to 5.7 million by 2050, if coverage of other interventions remains constant. The actual benefits are likely to be larger as programmes continue to provide more men and boys with access to VMMC each year (unpublished data, Avernir Health, June 2020). In Rakai, Uganda, HIV incidence was reduced in circumcised men showing VMMC effectiveness which was sustained with increasing time from surgery and consistent with efficacy trials.3

In areas with low population coverage of VMMC and a generalised HIV epidemic, the focus should be on providing services to sexually active adolescents 15 years and older and adult men at higher risk of HIV infection to make an immediate impact on HIV incidence. In areas where the prevalence of circumcision among sexually active men is already high, a focus on sustaining and expanding services for adolescent boys over 15 years is needed to maintain high coverage levels and reap other health benefits by reaching adolescent boys.

Note: The size of the circle is proportional to the proportional contribution of that age band to the country’s total number of VMMCs conducted that year. For 12 countries, data are shown only for 2019.


VMMC impact

Figure 3. Proportion of men and boys accessing voluntary medical male circumcisions (VMMCs) by age group in 12 high-priority countries, 2018