

# Voluntary medical male circumcision

Remarkable progress in the scale up of VMMC as an HIV prevention intervention in 15 ESA countries

## Introduction

Voluntary Medical Male Circumcision (VMMC), is a one-time, preventative measure, that reduces by 60% the risk of heterosexual transmission of HIV from women to men <sup>ii,iii</sup>. VMMC impacts on the HIV epidemic in high-prevalence settings. VMMC services are provided as a package of prevention interventions, including safer sex education, condom education and provision, HIV testing and linkage to care and treatment if found positive and managing sexually transmitted infections in 15 Eastern and Southern African (ESA) countries.

## Numbers of VMMCs performed each year in each priority country

In 2016, UNAIDS set global VMMC Fast Track targets, with the aim that 25 million additional VMMCs to be conducted by 2020, translating to about 5 million VMMCs per year <sup>iv</sup>. Table 1 shows the total numbers of VMMCs (10 years and older) conducted in each priority country each year since 2008. The last three years of implementation alone have contributed about 50% (11 million VMMCs) to the total cumulative VMMCs performed since the recommendation was issued (Table 1).

**Table 1.** Yearly country performance of voluntary medical male circumcisions in 15 priority countries from eastern and southern Africa: 2008-2018

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total 2016-2018	Total 2008-2018
Botswana	-	5 424	5 773	14 661	38 005	46 793	30 033	15 722	24 042	19 756	24 207	68 005	224 416
Eswatini	1 110	4 336	18 869	13 791	9 977	10 105	12 289	12 952	17 374	18 138	14 316	49 828	133 257
Ethiopia	-	769	2 689	7 542	11 961	16 393	11 831	9 744	10 306	15 789	23 009	49 104	110 033
Kenya	11 663	80 719	139 905	159 196	151 517	190 580	193 576	207 014	219 086	233 879	286 899	739 864	1 874 034
Lesotho	-	-	-	-	10 835	37 655	36 245	25 966	34 157	25 150	26 448	85 755	196 456
Malawi	589	1 234	1 296	11 881	21 250	40 835	80 419	108 672	129 975	166 350	199 399	495 724	761 900
Mozambique	-	100	7 633	29 592	135 000	146 046	240 507	198 340	253 079	315 380	311 891	880 350	1 637 568
Namibia	-	224	1 763	6 123	4 863	1 182	4 165	17 388	27 340	30 134	34 942	92 416	128 124
Rwanda	-	-	1 694	25 000	138 711	116 029	173 191	138 216	137 218	264 973	327 904	730 095	1 322 936
South Africa	5 190	9 168	131 117	296 726	422 009	514 991	482 474	485 552	497 186	511 191	572 442	1 580 819	3 928 046
South Sudan*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 147	1 147	1 147
Uganda	-	-	21 072	77 756	368 490	801 678	878 109	556 546	411 459	847 633	619 082	1 878 174	4 581 825
United Republic of Tanzania	-	1 033	18 026	120 261	183 480	329 729	573 845	435 302	548 390	730 435	885 599	2 164 424	3 826 100
Zambia	2 758	17 180	61 911	85 151	173 992	294 466	315 168	222 481	311 792	483 816	482 183	1 277 791	2 450 898
Zimbabwe	-	2 801	11 176	36 603	40 755	112 084	209 125	188 732	205 784	301 366	326 012	833 162	1 434 438
<b>TOTAL</b>	<b>21 310</b>	<b>122 988</b>	<b>422 924</b>	<b>884 283</b>	<b>1 710 845</b>	<b>2 658 566</b>	<b>3 240 977</b>	<b>2 622 627</b>	<b>2 827 188</b>	<b>3 963 990</b>	<b>4 135 480</b>	<b>10 926 658</b>	<b>22 611 178</b>

Note: \* South Sudan has only recently initiated a pilot voluntary medical male circumcision programme, and data were reported for the first time in 2018. Ethiopia VMMC implementation is in Gambela region.

Source: 2019 Global AIDS Monitoring.

## Countries maintain pace on VMMC scale up

It has been 12 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 countries in the ESA region. Nearly 23 million VMMCs have been performed in the priority countries by end of 2018 (Figure 1).

The pace of scale up has varied across priority countries. An increase in the annual numbers of VMMCs performed was observed from 2008 through 2018 (cumulative increase shown by pink line in Figure 1). Although there has been progress in VMMC programme scale-up, the deficits in achieving yearly targets that accumulated over the years, especially in 2015 and 2016 call for more intensified efforts to achieve the 2020 targets especially in the countries that are lagging.

## 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 the priority countries reported on age disaggregated VMMC data. About 84% of VMMCs conducted in 12 of the 15 countries in 2018 were among adolescent boys and young men aged 10-24 years, which is within a priority age group (10-29 years) for this intervention. Although disparities exist across countries, a large proportion of VMMCs were among boys aged 10-14-years (Figure 2) and the epidemiological impact from these young adolescents will be reaped in subsequent years as they age into the older sexually active high risk age groups.

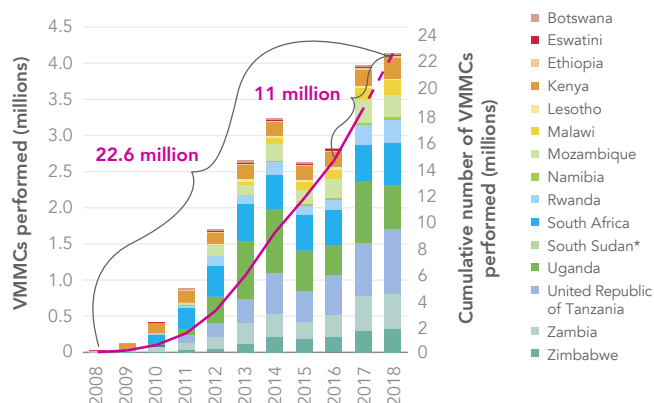
## VMMC impact

Using the 22.6M VMMCs conducted from 2008 to 2018 in the 15 countries in sub-Saharan Africa, mathematical modelling estimates that 250 000 (CI: 200 000 – 330 000), 78% male and 22% female new HIV infections were averted by the end of 2018. The future benefits of this effective intervention will be much larger since VMMC provides life-long protection. Furthermore, mathematical modelling estimates that the VMMCs conducted so far would avert approximately 1.5 million new HIV infections by 2030 and 4.5 million by 2050, if the coverage of other HIV interventions including ART coverage remain constant. If Fast-Track targets are achieved for all interventions, VMMCs conducted so far would still avert 660 000 new HIV infections by 2030 and 1 million by 2050. The actual benefits are likely to be larger as programs continue to provide more VMMCs each year (unpublished data, Avenir Health, June 2019<sup>v</sup>).

In areas with low population coverage of VMMC, the focus should be on older adolescents and sexually active men to make an immediate impact on HIV incidence. In areas where the prevalence of circumcision among sexually active men is approaching saturation levels, a focus on sustainability and expanding services for adolescent boys is needed to maintain high coverage levels.

i. Bailey RC, Moses S, Parker CB, et al. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomized controlled trial. *Lancet*. 2007;369:643–656.  
 ii. Gray RH, Kigozi G, Serwadda D, et al. Male circumcision for HIV prevention in Rakai, Uganda: a randomised trial. *Lancet*. 2007; 369:657–666.  
 iii. Auvert B, Taljaard D, Lagarde E, et al. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 trial. *PLoS Med*. 2005;2:e298.  
 iv. UNAIDS: 2016–2021 Strategy – On the Fast-Track to end AIDS, 2016. [https://www.unaids.org/sites/default/files/media\\_asset/20151027\\_UNAIDS\\_PCB37\\_15\\_18\\_EN\\_rev1.pdf](https://www.unaids.org/sites/default/files/media_asset/20151027_UNAIDS_PCB37_15_18_EN_rev1.pdf)  
 v. Avenir Health, HIV Infection Averted by VMMC Programs in priority countries from 2008 to 2018, June 2019

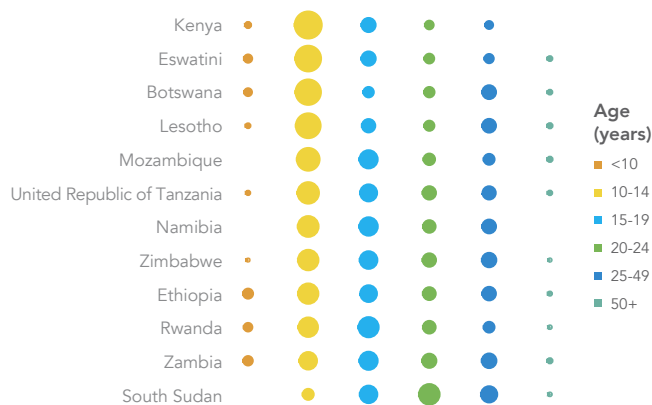
**Figure 1.** Annual and cumulative numbers of voluntary medical male circumcisions from 15 priority Eastern and Southern African countries, 2008–2018



Note: \* South Sudan has only recently initiated a pilot voluntary medical male circumcision programme, and data were reported for the first time in 2018. Ethiopia VMMC implementation is in Gambela region.

Source: 2019 Global AIDS Monitoring.

**Figure 2.** Proportion of voluntary medical male circumcisions by age group, 12 priority countries, 2018



Note: The size of the circle is proportional to the proportional contribution of that age band to the country's total conducted that year. Data shown are for 2018 only and for 12 countries.

Source: 2019 Global AIDS Monitoring.

Global data has highlighted the challenges in reaching desirable health outcomes for men in the HIV response. However, the VMMC programme is good example of an intervention that has consistently managed to reach men with quality HIV services for more than a decade.

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