

Voluntary Medical Male Circumcision (VMMC) for HIV Prevention in sub-Saharan Africa

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**Some slides adapted
from a presentation by Naomi Bock, MD, MS**

Where does VMMC fit into the President's Emergency Plan for AIDS Relief (PEPFAR)?

- PEPFAR invests in both treatment and prevention
Elements of prevention portfolio:
 - Treatment as prevention (infected people on treatment -> less infectious)
 - Medical transmission prevention (blood safety, needle safety, etc.)
 - Prevention of mother-to-child transmission
 - Behavior change (condoms, decrease partner numbers, etc.)
 - **VMMC**

What is VMMC, and why do it?

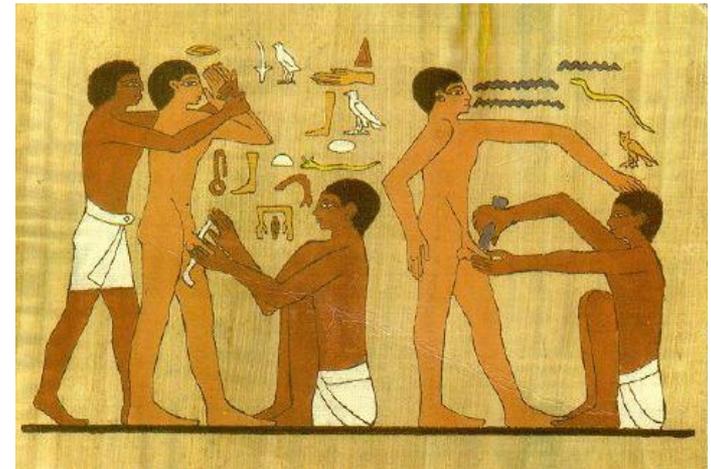
- Surgical removal of the foreskin, the sleeve of skin covering the head of the penis
- Foreskin is vulnerable to HIV infection; removing it decreases risk of getting HIV by about 60%
- Also decrease risks for some other sexually transmitted infections (STIs)

What about women?

- Safer men = safer female partners
 - Substantial ‘indirect’ protection now demonstrated
- Has **not** been shown to decrease HIV+ men’s risk of infecting female partner

VMMC history

- Practiced for centuries as cultural and religious practice in some cultures, including some in Africa
- Decades of observational evidence suggested decreased protection for men against HIV
- As of 2006, 3 randomized controlled trials in Africa all showed protection of around 60%



VMMC history (cont'd)

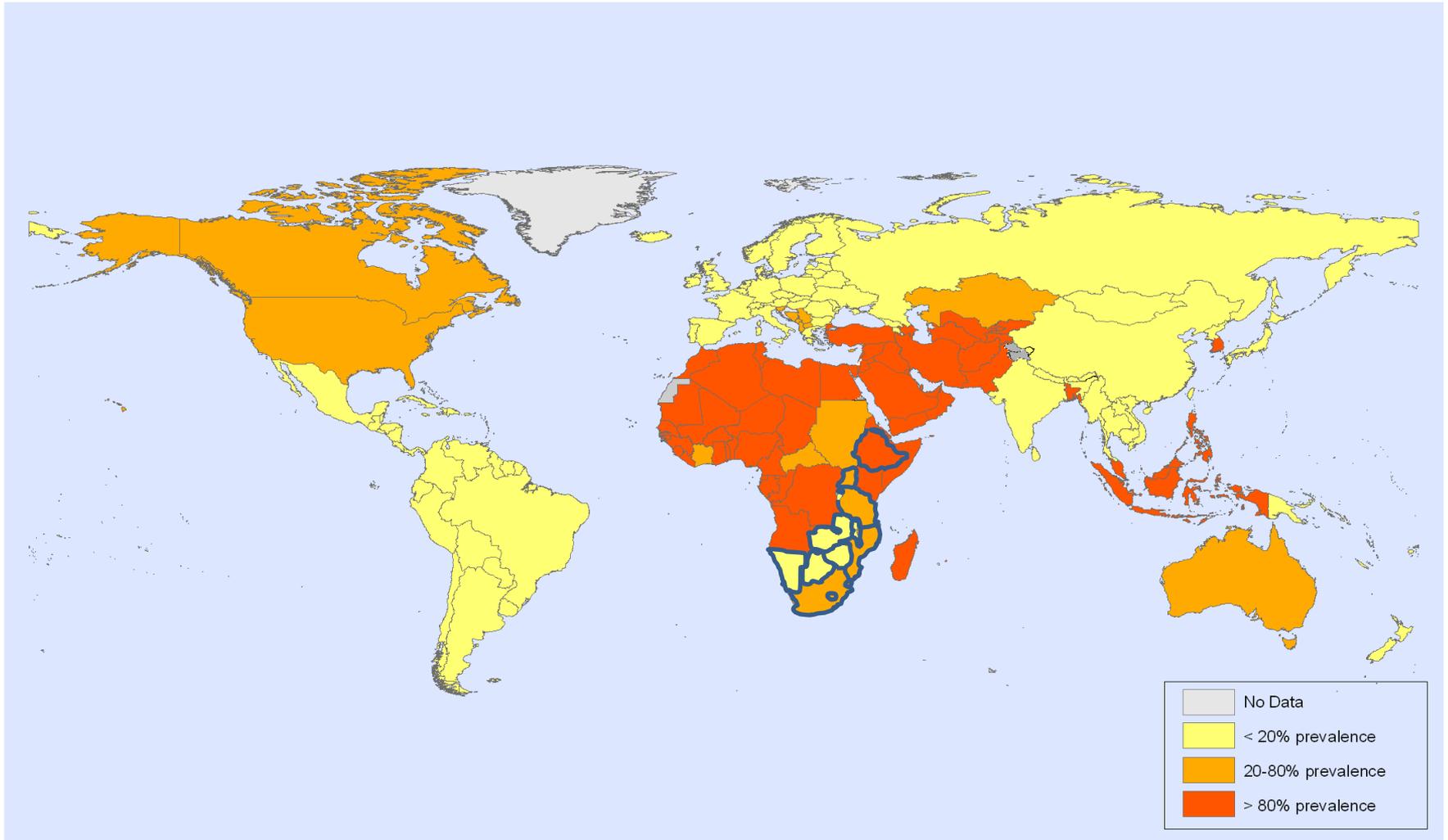
- In 2007, the World Health Organization (WHO) endorsed VMMC to prevent HIV in countries with high HIV prevalence and low circumcision prevalence (14 countries in southern/eastern Africa)
- Goal: 80% coverage of 15-49 year old men in these countries = approximately 20 million men

VMMC history (cont'd)

- Following WHO guidance, PEPFAR began funding VMMC in 2009
- Halfway there:
 - about 10 million VMMCs done to date in these countries
 - vast majority PEPFAR-funded

14 PEPFAR countries

Global Map of Male Circumcision Prevalence at Country Level



Impact of VMMC

- One-time intervention giving lifelong partial protection
- WHO VMMC goal modeled to prevent 3.36 million new infections and create \$16.5 billion net savings from treatment costs
 - Not including saved costs for other STIs and cervical cancer

How we do it

- Office of the Global AIDS Coordinator (OGAC) sets broad strategy and requirements, e.g.
 - Only local, not general, anesthesia (safety)
 - Focus on clients aged 15-29 years (impact)
- Involved US Government agencies have field offices in each implementing country (e.g., CDC Zimbabwe and USAID Zimbabwe)
- These offices fund implementing partners (local/international NGOs) to perform VMMC

How we do it (cont'd)

- Field office VMMC staff:
 - provide country strategy and technical oversight
 - set annual targets
 - ensure partners meet targets and follow PEPFAR requirements
 - serve on national VMMC technical working groups, with Ministry of Health, to coordinate national VMMC scaleup across partners

Role of CDC Atlanta VMMC team

- Technical support to field offices (quality, volume), through TDYs and remotely
- Develop program-wide guidance, e.g.
 - Best Practices guidelines
 - Adverse Event prevention/management manual
- Design, fund, oversee biomedical and operational research to advance VMMC practice
- Review annual PEPFAR Country Operational Plans (COPs) for alignment with OGAC guidance

Challenges to scaling up VMMC

- Building human resource capacity
- Ensuring safety: preventive intervention for healthy people -> high standards
- Creating demand: varies greatly between countries and regions
 - “A minor surgery on a very major organ!”
- Sustaining funding: \$100 per VMMC x 20 million VMMCs, then continue indefinitely



Advances and next steps in VMMC

- “Task shifting” to alternative provider cadres
 - Various nurse cadres perform VMMC as safely as physicians, much more available
- Devices as alternatives to standard surgery
 - Foreskin compression device stops blood flow to foreskin over 1 week with minimal pain, then dead tissue removed
 - Little to no bleeding, no injections
- Sustainability: after this ‘catch-up’ phase, new males will keep entering ages of sexual debut

VMMC as an example of PEPFAR structure and function

- Headquarters (HQ)-based interagency Technical Working Groups coordinate technical area (VMMC) policy and guidance across agencies
- Each year, each country's PEPFAR COP includes its VMMC plan; approved by OGAC if feasible and aligned with high-level strategy
- Field offices oversee NGO partner implementation, with technical support from HQ
- HQ staff coordinate with other stakeholders (WHO, UNAIDS, Gates Foundation) to maximize impact

