Voluntary Medical Male Circumcision in an Evolving HIV Prevention Landscape in East and Southern Africa

**Session Title:**
What's New: HIV Prevention

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In 2007, WHO and UNAIDS recommended that “medical male circumcision be recognized as an additional important intervention for the prevention of heterosexually acquired HIV in men”.

As we move towards 2020 and 2030, key questions to ask on VMMC in ESA include:

- **Is VMMC making an impact?** Is VMMC still needed given the current prevention interventions?

- **Who needs to be reached** to accelerate reductions in HIV infections?

- How can men and adolescent boys **benefit from delivering VMMC** and **realize further health benefits**?
The current HIV response will not let ESA region reach the **Political Declaration Target** for new HIV infections among adults in 2020.
Evolving Landscape to Prevent Heterosexually Acquired HIV (2007 to 2019)

**2007**
- Safer sex education
- Condom use
- Voluntary medical male circumcision (VMMC)
- Post-exposure prophylaxis (PEP)

**2019**
- Comprehensive sexuality education
- Condom use
- VMMC
- PEP
- HIV medications before exposure: Pre-Exposure Prophylaxis (PrEP)
- HIV treatment and viral suppression: secondary prevention effect

**VMMC minimum services**
- Sexuality education
- Condom promotion
- HTS and link to treatment
- STI management

**Benefits of VMMC**
- Safer sex education
- Condom use
- Voluntary medical male circumcision (VMMC)
- Post-exposure prophylaxis (PEP)

**Gaps and Realizing Benefits of VMMC**
- Comprehensive sexuality education
- Condom use
- VMMC
- PEP
- HIV medications before exposure: Pre-Exposure Prophylaxis (PrEP)
- HIV treatment and viral suppression: secondary prevention effect

**Lessons to Inform Action in 2020 and Beyond**
Insights from 4 universal test & treat trials

**UTT can accelerate HIV epidemic control**
- achieved with intense community based approaches to reach populations in their homes
- 90-90-90 achieved with population-level viral suppression
- HIV incidence decreased between 20 and 32%

**UTT alone will not reduce HIV transmission sufficiently**
The UTT trials were originally conceived of as combination prevention trials
- However, less attention given to other prevention interventions – VMMC, condoms, partner services and services for key population
- PrEP was not promoted or offered, but is now widely available
Updated evidence on impact of voluntary medical male circumcision on female-to-male HIV infection

Consistent over 20 years in diverse settings

- 3 RCTs: 59% lower risk
- 2 extended follow-up: 65% lower risk
- 4 higher HIV risk cohorts: 66% lower risk
- Community-based cohorts:
  - 5 before VMMC scale up: 52% lower risk
  - 5 during combination prevention (VMMC, ART scale up): 45% lower risk

Overall 55% lower risk

Source: Farley et al, in publication
Evidence on VMMCs effect on HIV in communities

Rakai Uganda community- based cohort: 1999-2013

Scale up of each intervention (median coverage)

- VMMC: 19% to 39%
- ART among women: 0% to 26%

IMPACT on HIV incidence in men

- For each 10% increase in coverage of VMMC: 13 % lower HIV incidence
- For each 10% increase in women’s coverage of ART: 5% lower incidence in men

Source: Kong et al
HIV Infections Averted by VMMCs in 15 ESA countries 2008 – 2018

Cumulative total of 23 million VMMCs conducted

Cumulative total of 250,000 (200,000 – 330,000) HIV infections averted

Source: GAM; and modeling analysis by Avenir Health
Impact of VMMC in Communities with both VMMC and ART Coverage Scale Up – Modelled Effect

**VMMC is a key component of Fast-Track**

Effect of VMMC is constant in ‘real world’ community settings where viral suppression may vary due to suboptimal adherence and drug resistance.

Source: Odhiambo et al., 2016

See related posters FRPEC219
FINANCIAL BENEFITS

Cumulative net cost of VMMC and savings due to ART costs averted in Zambia

Assumptions: $68 per VMMC, $300 per person-year of ART, current coverage of ART, costs discounted at 3%

Source: Avenir, ICL, IDM, Kenya, 2016
BENEFITS TO WOMEN

- Indirectly: lower risk of HIV infection if less men with HIV
- Slightly **lower HIV risk** with circumcised HIV infected male partners compared to uncircumcised male partner
  - except higher risk if VMMC recent and wound still healing
- Reduced risk of STIs: trichomonas, bacterial vaginosis, high risk HPV types
  - Reduced subsequent HPV-causing cervical cancer cases and associated mortality

See related poster FRPE216
Despite tremendous achievements in MC and HIV Prevention since 2007, there is still more to be done.

- Reach **HIV-negative adult men**, those at higher risk of HIV and STI infection and mature adolescents

- Reorient and expand services for Sexual Reproductive Health and towards universal health coverage.
Who is at High Risk for HIV?

Opportunities to Improve VMMC Program Targeting

Using PEPFAR population-based HIV Impact Assessment (PHIA) data to maximize HIV prevention impact through age targeting

Key Findings

HIV incidence in men becomes substantial after age 30 in most countries.

Male circumcision coverage remains low in these men.
Among men 15-34 years, medical MC was associated with significantly lower incidence as expected

Stop by the posters
Men in Higher HIV Risk Groups

66% reduction in HIV risk: **STI clients, trucking employees, serodiscordant couples**

Community-based cohort study (‘real life settings’) – 4 Lake Victoria **fishing communities**

<table>
<thead>
<tr>
<th>Background HIV prevalence</th>
<th>HIV incidence among uncircumcised men</th>
<th>HIV incidence among circumcised men</th>
<th>Adjusted incidence rate ratio (95%CI)</th>
<th>Reduction in HIV risk</th>
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<tbody>
<tr>
<td>40%</td>
<td>3.58 per 100 py</td>
<td>1.46 per 100 py</td>
<td>0.46 (0.32-0.67)</td>
<td>54%</td>
</tr>
</tbody>
</table>

Source: Kagaayi et al. Lancet HIV. 2019

**Number of VMMCs needed to avert one HIV infection**

1 sexual partners: 80 VMMCs → 1 HIV infection averted
2 or more sexual partners: 1 – 14 VMMCs → 1 HIV infection averted

Source: Awad et al
Enhancing men’s uptake of VMMC

Interventions with evidence: comparative studies and case studies

**Awareness, knowledge, self-efficacy**
- Interpersonal communications/mentoring
- Community engagement
  - Community communication strategies
  - Engaging community leaders: traditional, political and religious leaders to promote VMMC, including around transforming gender norms

**Availability and accessibility**
- Mobile clinics and private providers
- Economic compensation for opportunity or direct costs
  - MC linked from community-based HIV testing services
  - Using quantitative & qualitative data to identify & target gaps

**Acceptability**
- Interpersonal communications/mentoring
  - Using satisfied clients to bring older men to services
  - Circumcised adults as role models sharing experiences
  - Local engagement

**Quality**
- Enhanced SRH education
- Training of healthcare workers
  - Comprehensive client-centered package of care
  - Enhancing clinic privacy
  - Medical training and support for traditional practitioners

See related posters FRPEC202 & FRPEC200

share case studies at: www.malecircumcision.org
Reaching Older & High Risk Men: Recruiting VMMC Clients from STI and ANC Clinics in Malawi

Programme Innovation

VMMC mobilizer embedded at each clinic
Clients escorted to same-day services or booked for later

Key Finding

Both clinics successfully recruited clients for VMMC using with less mobilizer time needed than standard community mobilization

Stop by the poster
Adolescent HIV and sexual reproductive health services needed now and for the future

Every contact counts to deliver quality interventions that adolescents need, including vaccination and health education

Zimbabwe participatory learning approach to inform services and delivery

**THE CHALLENGE OF THE YOUTH BULGE**

**International technical guidance on sexuality education**

- An evidence-informed approach
- Sexuality
- Gender and masculinity
- Life skills

**EXPANDED**
- IEC and counselling on VMMC/ASRH
- STI screening and treatment
- Condoms and other contraception
- VMMC
- HTS and linkages to care and treatment

**BASIC**
- Information about ASRH, VMMC, and availability of both services

**MINIMUM**
- Zimbabwe participatory learning approach to inform services and delivery
Lessons to prevent HIV and maximize benefits of contact with adolescent boys and men in east and southern Africa

- Promote VMMC as an essential intervention to achieve HIV prevention goals, along with safer sexuality education and ART. Evidence is clear on:
  - Efficacy - Impact - Cost effectiveness/savings
- Reach men, including those at higher risk, and mature adolescents
- Reorient to person-centered service delivery – male- and age-friendly approaches informed by evidence and case studies
- Capitalize on VMMC delivery as entry point to other needed information and services - leading towards UHC
- Empower individuals, communities, health systems
THANK YOU

http://www.who.int/hiv/en/
http://www.who.int/hepatitis/en/
http://www.malecircumcision.org/