“Stylish Man” Intervention - Cluster Randomized Trial (CRT) to Increase Adult Male (≥19 years) Use of Voluntary Medical Male Circumcision and ART, Rakai, Uganda

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BACKGROUND
VMMC and ART rollout reduces population-level HIV incidence. However, in much of sub-Saharan Africa, service uptake is suboptimal in men ≥19 years, hindering HIV control.

METHODS
• In 2013-2018, we conducted an implementation science cluster randomized trial of a “Stylish Man/Stylish Living” intervention to promote VMMC and ART to men ≥19 years.

• Components included:
  1. Community mobilization via “Village Organizing Committees”
  2. De-medicalized messaging via radio
  3. A “Stylish Man Van” showcasing testimonials from satisfied male VMMC and ART users and their partners; messages that services keep men active, attractive, and in charge of their lives; music, quizzes, games, and Stylish “swag” (caps, etc...) to rebrand services
  4. Immediate service provision in mobile camps: HIV testing services (individual/couple); VMMC and referral for ART; “red carpet” services for men aged ≥19 (separate from women/children, reduced waiting times, evening hours).

• Frequency:
  5. 5 intervention community clusters received “Stylish” activities for “3 days per community every 18 months (total of 3 “Stylish” phases per community). Standard Ministry of Health (MOH) HIV services were available in MOH clinics at all times.
  5. 5 control community clusters had access to standard MOH clinic services (HIV testing services [individual/couple], ART, and at 18-month intervals, routine VMMC mobile clinics (total of 3 VMMC clinics phases per community) without additional Stylish activities.

Primary endpoints:
• Number and proportion of VMMC clients aged ≥19 compared to adolescents aged 13-18 in both study arms, based on mobile VMMC camp service statistics.
• Population-based VMMC/ART rates, and HIV incidence, at a baseline and 3 follow-up (FU) community surveys, in all consenting resident men aged 15-49, both study arms.
• Differentials between arms were estimated using rate ratios (RR) and 95% confidence intervals (CI).

RESULTS
Table 1: VMMC Mobile Van Service Statistics

<table>
<thead>
<tr>
<th>All circumcisions</th>
<th>13-18 years</th>
<th>≥19 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention N</td>
<td>Control N</td>
<td>Intervention N (%)</td>
</tr>
<tr>
<td>Phase 1</td>
<td>2775</td>
<td>1700</td>
</tr>
<tr>
<td>Phase 2</td>
<td>2470</td>
<td>2006</td>
</tr>
<tr>
<td>Phase 3</td>
<td>747</td>
<td>568</td>
</tr>
<tr>
<td>All</td>
<td>5992</td>
<td>4394</td>
</tr>
</tbody>
</table>

• Compared to control arm clinics, intervention arm VMMC clinics served more male clients (adult plus adolescent), N = 5992 vs 4394, and a higher number of adult men aged ≥19 (2083 vs 752).
• A significantly higher proportion of intervention arm VMMC clients were aged ≥19 years (intervention 34.8% vs control 17.1%; RR 1.96, 95% CI 1.82-2.11).
• This was observed within each phase (NB: During Phase 3, WHO/Uganda MOH required 2 tetanus immunizations prior to VMMC: numbers of VMMCs declined sharply across Uganda. This requirement has since been lifted.)

Community survey-based assessment of all consenting resident men

Comparability of adult men aged 19-49 years at baseline, intervention vs control arm

Intervention arm men (n=3418) vs control arm men (n = 3261) were comparable in key characteristics:
• Mean age (31.8 vs 31.6, respectively)
• Educational attainment
• Marital status (67.0% vs 66.3% married; 14.2% vs 14.1% widowed/divorced)
• Numbers of partners in past year (0= 7.8% vs 7.2%, 1+= 46.3% vs 45.0%, 2+= 45.9% vs 47.8%)
• Religions (Christian 87% vs 85.5%, Muslim 12.0% vs 13.4%)
• Percent non-Muslims circumcised (31.1% vs 32.6%)
• HIV prevalence (20.7% vs 24.9%)
• Proportion of HIV+ men on ART (16.7% vs 18.2%)

Awareness of and participation in the Stylish Program, men aged 19-49, intervention vs control

• Aware of the program: 90.8% vs 24.2%
• Aware of the Stylish Van 84.5% vs 11.7%
• Participated in a Stylish Program activity: 41.2% vs 2.0%

Attitudes among men aware of the Program regardless of study arm

• > 94.0% agreed/strongly agreed it presented a positive image of the Ugandan man and would result in positive behavioral change.

RESULTS, CONT’D
Table 2: VMMC Prevalence in men aged 19-49

<table>
<thead>
<tr>
<th>INTERVENTION VMMC-N (%)</th>
<th>CONTROL VMMC-N (%)</th>
<th>RR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>750/2244 (30.7)</td>
<td>812/2435 (33.4)</td>
</tr>
<tr>
<td>Follow-up 1</td>
<td>1273/2792 (47.7)</td>
<td>1164/2840 (41.3)</td>
</tr>
<tr>
<td>Follow-up 2</td>
<td>1510/3074 (49.1)</td>
<td>1398/2893 (48.3)</td>
</tr>
<tr>
<td>Follow-up 3</td>
<td>1797/3181 (56.5)</td>
<td>1784/3228 (55.3)</td>
</tr>
</tbody>
</table>

VMMC prevalence was lower in the intervention arm vs the control arm at baseline and increased in both arms over time (Δ = 21.8% vs Δ = 21.9%). During the first FU, VMMC prevalence was significantly higher in the intervention vs the control arm (RR= 1.11, 95%CI 1.05-1.18); prevalence was comparable between arms in the subsequent FU surveys (Table 2).

VMMC incidence (newly circumcised since the prior survey) was significantly higher in the first FU period (Incidence 257/1131, 22.7% vs control 158/1161, 13.0%, RR (95% CI) 1.71 (1.43-2.05), P<0.05). There was no significant difference between arms in the 2nd and 3rd FU periods.

ART use (self-reported) in HIV+ men was lower in the intervention arm vs the control at baseline (16.7% vs 18.2%, ns), and increased to 77.5% vs 74.8% (p=0.23, ns) by the 3rd FU period, with changing Ugandan ART CD4 cell criteria.

HIV incidence at first FU in intervention arm men aged 19-49 was 1.37/100 py (95% CI 0.02-2.04) vs 2.37/100 py (95% CI 1.71-3.27) in the control (borderline significant). There were no differences in subsequent FU periods (2nd FU 1.35/100 py vs 1.40/100py; 3rd FU 1.32/100 py vs 1.30/100 py).

CONCLUSIONS
The intervention increased uptake of VMMC among men aged ≥19 as reflected in service statistics and initial increases in population-level VMMC prevalence and incidence. There were no significant effects on ART or on population-level HIV incidence. Additional outreach is needed.

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Component mobilization & de-medicalized messaging were associated with significantly increased adoption of VMMC by adult men aged ≥19. There was no significant effects on use of ART or on population-level HIV incidence. Additional outreach is need.