Development of Tools for Monitoring & Reporting VMMC Program Indicators

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Co-chair of PEPFAR MC Technical Working Group
PEPFAR - US Department of Defense
26 September 2012

Joint PEPFAR – WHO Meeting on Accelerating the Scale – Up of VMMC for HIV Prevention in East and Southern Africa, South Africa
Overview

1. Assessment of VMMC Data Tools

2. Sample Paper Data Collection Tools

3. VMMC Health Information System
Assessment of VMMC Data Tools
Background

• While VMMC is being scaled up to support HIV prevention, standardized clinical forms are not yet available

• Ministries of Health, Defence & implementing partners are using a variety of forms

• A review of existing forms and systems is necessary to inform development of standardized forms and reporting processes
Assessment: Goal & Objectives

• To inventory data tools currently being used to support VMMC program implementation in PEPFAR-supported countries

• Objectives
  o Collect data tools from PEPFAR implementing partners
  o Comparing MC client record and adverse event forms
  o Identifying best practices in MC data use for sharing across other country programs
Methods

- Develop standardized survey instrument
- Invited PEPFAR coordinators in countries supporting MC to request implementing partner participation
- Survey administered through phone interviews averaging 30-60 minutes during March-June 2011
  - Interview respondents were MC focal points from implementing partners (IPs) & USG agencies
  - Copies of clinical forms and reporting tools requested
Analysis of Interview Responses & Data Tools

- 28 respondents from 12 organizations across 7 countries
- 57 clinical MC data tools received
- 29 MC & HTC reporting forms received
- Performed a comparative analysis of data fields from MC client record forms
- Built data dictionary (reviewed by physicians & TWGs)
- Adverse Event Forms used the WHO format
Findings

• A variety of different data tools and forms being used
• Data fields vary considerably between implementers
• Organizations are reporting to at least 3 different types of institutions: implementing partner HQ, USG, MoH
• Respondents reported that an electronic database would facilitate data collection, help fulfill various reporting requirements & track the continuum of care
  – Some Implementers using electronic systems now
  – USG agencies endorse electronic database to improve data quality
  – Interest by MoH, but need capacity building & infrastructure
Action Steps

• Build a standard database for the minimal datasets required by all VMMC programs for facility, partner, national, and donor reporting requirements
  – Provide standard paper forms & processes
  – VMMC Health Information System

• Work with military programs to build capacity by providing training on data tools, use & processes
Sample Paper Data Collection Tools
# Registration Form

**Client Details**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td></td>
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<tr>
<td>Middle Name</td>
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<tr>
<td>Surname</td>
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<tr>
<td>Home Address</td>
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<tr>
<td>Current Physical Address</td>
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**Next-Of-Kin**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
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<tbody>
<tr>
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<td>Middle Name</td>
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<td>Surname</td>
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**Date**

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**Unique ID:**

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**Gender:**

<table>
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<tr>
<th>Gender</th>
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<tbody>
<tr>
<td>Male</td>
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<tr>
<td>Female</td>
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**Marital Status:**

- [ ] Currently Married
- [ ] Currently cohabitating

**Education:**

<table>
<thead>
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<td>Primary</td>
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<td>College/University</td>
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**Phone No.:**

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### Education Attendance Sheet

**Date of Education Session:** 
**Location/Venue:** 
**Educator Name:** 
**Educator Unique ID:** 
**Topic:** 
**Organization:**

<table>
<thead>
<tr>
<th>Surname</th>
<th>First Name</th>
<th>Unique ID</th>
<th>Gender</th>
<th>Age, in years (check one)</th>
<th>Civilian</th>
<th>Active Duty</th>
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# Education Event Summary Report

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<th>D / M / Y</th>
<th>Start Time:</th>
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</thead>
<tbody>
<tr>
<td>Location/Venue:</td>
<td></td>
<td>End Time:</td>
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</table>

## Educator Information

<table>
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<th>Middle Name</th>
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<th>Drama Group</th>
<th>Peer Educator</th>
<th>Counselor</th>
<th>Non-Military</th>
<th>Commanding Officer</th>
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## Education Session Information

| Topic(s) of Session | |
|---------------------||

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<td>Posters</td>
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<tr>
<td>Educational Games</td>
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<tr>
<td>Lecture</td>
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<td>Sports Activities</td>
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<td>Condom demonstration</td>
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</tr>
<tr>
<td>Social Event</td>
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<td>Other, specify</td>
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**Surgery and Immediate Post-Operative Form**

<table>
<thead>
<tr>
<th>Client Surname:</th>
<th>Client First Name:</th>
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<table>
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**Surgery Notes**

<table>
<thead>
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<th>Location of Surgery:</th>
<th>AM/PM</th>
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<table>
<thead>
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<th>Anesthesia:</th>
<th>mL</th>
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<td>Marcaine 0.5%</td>
<td></td>
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<tr>
<td>Lignocaine 1%</td>
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<tr>
<td>Lignocaine 2%</td>
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<thead>
<tr>
<th>DBNP</th>
<th>DBNP + ring block</th>
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<table>
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<th>Procedure used:</th>
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<tr>
<td>Sleeve</td>
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<tr>
<td>Dorsal Slit</td>
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<tr>
<td>Forceps Guided</td>
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**Immediate Post-Op Notes**

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<th>Blood pressure:</th>
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<th>Pulse:</th>
<th>Temperature:</th>
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<tr>
<th>Adverse events observed?</th>
<th>Yes</th>
<th>No</th>
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If yes, specify type and degree of severity below:

**Adverse Event**

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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</table>

- AN: Anaesthesia reaction
- BL: Bleeding
- DP: Damage to Penis
- ES: Excessive Skin Removed

**Adverse Event**

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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VMMC

Health Information System
VMMC Health Information System

• Primary audience: Military VMMC programs

• Objectives
  – eHealth Solution to support VMMC M&E reporting
  – HIS based on informatics/engineering standards
  – Training of HIS and ICT skills
  – Implement VMMC HIS
eHealth Solution

• Designed for partner militaries
  o Total cost of ownership $200 USD/year/user
  o Enterprise Architecture based ICT standards
  o Military “Signal” Corps support & maintain

• Mobile User Device
  o Ruggedized netbook computer
  o Wireless or wired network
  o Touch screen, camera, audio, 10-12 hour battery

• Software packages on mobile device for field use
  o Electronic Medical Record
  o Office, Email, Internet/Web, Skype, etc.
  o Anti-virus, data storage & backup
Login Screen
Patient Registration

First Name: dave
Surname: test
OMANG ID: 12345
Phone No.: 3335557777
Date Of Birth: 03/01/2011

District: Please Select
Location: 1 MIL. Garrison

Gender: Please Select
Education: Please Select
Marital Status: Please Select
HIV Testing
Physical Exam

Provider: Please Select

Physical Exam

Examination of penis:
- Normal
- Abnormal
  - Phimosis
    - Yes
    - No
  - Paraphimosis
    - Yes
    - No
  - Episadias
    - Yes
    - No
  - Hypospadias
    - Yes
    - No
  - Ulcers
    - Yes
    - No
  - Balanitis
    - Yes
    - No
  - Torsion
    - Yes
    - No
  - Irretractable foreskin
    - Yes
    - No

Did patient have previous circumcision?
- Yes
- No

If yes, specify grade: Please Select

New
Save
Close
Surgery Notes

<table>
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<tr>
<th>Assistant Clock</th>
<th>Physician Clock</th>
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<tbody>
<tr>
<td><strong>Start Time:</strong> Begin 5:12:17 AM</td>
<td><strong>Start Time:</strong> Begin 5:12:10 AM</td>
</tr>
<tr>
<td><strong>End Time:</strong> End 5:12:10 AM</td>
<td><strong>End Time:</strong> End 5:12:10 AM</td>
</tr>
<tr>
<td><strong>Time Elapsed:</strong> 00:00:15</td>
<td><strong>Time Elapsed:</strong> 00:00:00</td>
</tr>
</tbody>
</table>

**Anaesthesia:**
- Marcaine 0.5%
- Lignocaine 2%
- Lignocaine 1%
- DBNP
- DBNP + ring block

**Procedure Used:**
- Sleeve
- Dorsal Slit
- Forceps Guided

**Other:**

**Suture:**
- Chromic
- Not applicable
- Vicryl rayoide
- Plain Gut

**Diathermy used:**
- Yes
- No
Enterprise Architecture Approach

Logical Data Model and Data Dictionary

Mission Specific Applications
- LIS
- PWP
- VMMC
- eLearning

Common Applications
- Alerts
- Data Utilities (anti-virus)
- Screen Share
- Presentation
- Office
- Data Processing
- Message Processing

Common ICT Facilities
- Workflow
- Data Interchange
- Common Management
- Printing
- Meta-Object
- Rendering Management
- Mobile Agents
- Security Administration
- Image Compression
- Compound Presentation and Interchange
- Internationalization and Time Operation
- Information Storage and Retrieval
- Automation and Scripting

Health Information System Services
- Data Management Services
- Network Services
- Software Engineering Services
- User Interface Services
- System Management Services
- Data Interchange Services
- Graphics Services
- Web Services
- Transaction Processing Services
- Security Systems Management

Infrastructure Services
- Operating System Services
- System Management Services
- Software Engineering Services
- Network Services
- User Interface Services

External Environment Interface
- External Environment
- Communications
- Information Integration
- Users Devices

External Environment Interface
- External Environment
- Communications
- Information Integration
- Users Devices

Mission Specific Applications
- LIS
- PWP
- VMMC
- eLearning

Logical Data Model and Data Dictionary
- EMR/EHR
- VMMC

Standard Application Program Interface
Indicators and Reports

Unique Identifier

- ART
- Individual Counseling
- Group Education
- VMMC Booking
- Voluntary Testing and Counseling
- Medical History
- VMMC Surgery
- VMMC Follow up Care
- Referrals
- TB
- PMTCT
- PwP
- Individual Counseling

Pepfar
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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</table>
| Sexual and Other Risk Prevention              | • Number of targeted population reached with individual and/or small group level prevention based on evidence and/or meet the minimum standards  
  • P8.1.D                                      |
| HIV Counseling and Testing (T&C)              | • Number of individuals who received T&C services for HIV & received their test results  
  • By sex  
  • By age category  
  • By test result  
  • By type: individual/ couple  
  • P11.1.D                                      |
| VMMC                                          | • Number of VMMC  
  • By Age  
  • By HIV status  
  • Number AE  
  • By Severity  
  • Number of MC Locations  
  • Proportion of males circumcised  
  • P5.1.D + others                              |
| HSS                                           | • Number of healthcare workers trained  
  • By Type: Male Circumcision Training/ Pediatric Treatment Training  
  • H2.3.D                                       |
| Post Exposure Prophylaxis                     | • Number of persons provided with post-exposure prophylaxis (PEP)  
  • By exposure type  
  • P6.1.D                                       |
PEPFAR VMMC Indicators

- Number of males circumcised as part of the minimum package of MC for HIV prevention services
  - By Age: <1; 1-9; 10-14; 15-19; 20-24; 25-49; 50+
- Number of circumcised clients experiencing at least one moderate or severe adverse event (AE) during or following surgery
- Number of locations providing MC surgery as part of the minimum package of MC for HIV prevention services
- Number of males circumcised who return at least once for post-operative follow-up care (routine or emergent) within 14 days of surgery
- Number of healthcare workers who successfully completed an in-service training program
  - By MC Training and Pediatric Treatment Training
Training

- M&E
- HIS
- Basic & advanced computer skills
- Data use & reporting
- 47 peer educators, nurses, counselors, physicians, HIV coordinators trained
- 2 ICT Signal Corps trained
Botswana Defence Force Implementation
Summary

• Sample paper data collection tools available

• Implementation of HIS system in partner military programs to satisfy various reporting requirements
  – Plans to implement in 12 countries
  – Demo of the system
Thank You!

For more information contact:
Anne.Thomas@med.navy.mil