WEBINAR 4/6
SELF-TESTING SCALE UP AND HEALTH SYSTEMS

PART 4/6: INTEGRATING HIVST DISTRIBUTION INTO HEALTH SYSTEMS, M&E, HIVST COMMODITY QUANTIFICATION AND FORECASTING AND PSM

Thursday, Sept. 17, 2020
9:00am EST
3:00pm UTC/GMT+2

Unitaid
Innovation in Global Health

HIV SELF-TESTING AFRICA INITIATIVE

Atlas
Savoir d’une force
HIV self-testing monitoring and evaluation

A module to HIVST strategic framework

Muhammad Shahid Jamil, Pavlo Smyrnov, Cheryl Johnson, Rachel Baggaley
17 Sep 2020 – STAR webinar

HTS Info on the Go: https://apple.co/2LAB8vt
WHO HTS Data Dashboards: http://hts.hivci.org/
New WHO guidelines on HTS for a changing epidemic

8 updates and new recommendations/guidance

Box. 1 Summary of new WHO guidance, recommendations and good practice statements

1. Demand creation: NEW Good practice statement highlighting evidence-based approaches and considerations for the use of incentives for HIV testing services, including linkage.

2. Counselling message: ✔️ Updated messages and guidance on concise communications with emphasis on linkage and latest information on the benefits of treatment and prevention services.

3. HIV self-testing: ✔️ Updated HIV self-testing should be offered as an approach to HIV testing services (strong recommendation, moderate-quality evidence).

4. Social network-based approaches: NEW Social network-based approaches can be offered as an HIV testing approach for key populations as part of a comprehensive package of care and prevention (conditional recommendation, very low-quality evidence).

5. HIV testing strategies: ✔️ Updated. In response to changes in the HIV epidemic, WHO encourages countries to move toward using three consecutive reactive tests to provide an HIV-positive diagnosis.

6. Western blotting: NEW Western blotting and line immunoassays should not be used in national HIV testing strategies and algorithms (strong recommendation, low-quality evidence).

7. Dual HIV/syphilis rapid diagnostic tests: All pregnant women should be tested for HIV, syphilis and hepatitis B surface antigen (HBsAg) at least once and as early as possible (syphilis testing: strong recommendation, moderate-quality evidence; HBsAg: strong recommendation, low-quality evidence).

NEW Dual HIV/syphilis rapid diagnostic tests (RDTs) can be the first test in HIV testing strategies and algorithms in ANC settings.

8. Optimal maternal retesting time points: ✔️ Updated. In high HIV burden settings, retesting is advised for all pregnant women with an unknown or HIV-negative status during late pregnancy (third trimester). Catch-up testing is needed if the first test or retest is missed or delayed. High HIV burden countries could consider an additional retest in the post-partum period for specific districts or regions with high HIV burden or incidence, women from key populations or who have a partner with HIV who is not virally suppressed.
Objectives

The purpose of this module is to provide a framework and guidance principles to national programmes:

• for developing routine HIVST monitoring and evaluation plan
• selecting key programme indicators
• collecting relevant HIVST data and utilizing it in conjunction with other routinely collected data for monitoring programme outcomes and impact
Key data sources for HIVST M&E

**Routine programme monitoring**

- **HIVST service register, HIVST order form, sale registers**
  - HIVST kits distributed.
  - People receiving HIVST.
  - Coverage of HIVST programme.

- **Self-reported data on HIVST**
  - People reported on using HIVST results. Reported results positivity yield.
  - People reported on using HIVST services after HIVST.
  - Accessing confirmatory test, ART, PrEP, etc.

- **Data on use of HIVST from other service data**
  - ART/PrEP service register, HTS register, health statistics
  - People reported on using HIVST services prior to confirmatory HIV test, ART, PrEP, etc.

- **Special surveys, population size data, client/patient based surveys**
  - Target groups for HIVST. Group size. Coverage of HIVST.
  - Group using HIVST. Positive yield of HIVST.
  - Percentage accessing confirmatory test, ART, PrEP, etc.
Routine data collection strategies on different stages depending on HIVST models

**Community and facility-based models**
- On-site self-testing and directly assisted self-testing
- Primary distribution of HIVST kits for later use
- Secondary and SNS based

**Internet based distribution models**: Online, mail order and pick up
- Online, mail order and pick up
- Retail stores and pharmacy-based distribution

**HIVST distribution**
- Individual HIVST register; self-administered forms; self-assessment

**HIVST use/results**
- Individual HIVST register
- Individual self-administered tools (cards, online forms, etc.)

**HIVST linkage**
- Site level tracking previous use of HIVST (linkage)
- Indirect data on ART/PrEP initiation
<table>
<thead>
<tr>
<th>distribution</th>
<th>use and results</th>
<th>linkage</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number of individual HIVST kits distributed (programme data)</td>
<td>• Number of HIVST tests used and the percentage of HIVST-positive results observed and self-reported (programme data)</td>
<td>• Number and percentage of people diagnosed with HIV following HIVST (programme data)</td>
</tr>
<tr>
<td>• Number of sites distributing HIVST kits (programme data)</td>
<td>• % of the population who has ever self-tested (survey)</td>
<td>• Percentage of new ART initiations among people diagnosed with HIV who report prior self-testing in the past 12 months (programme data)</td>
</tr>
<tr>
<td>• Percentage of first time testers among people who received HIVST (programme data)</td>
<td>• % of the population who has ever self-tested and reported positive result of self-test (survey)</td>
<td>• Proportion of people who test positive for HIV using an HIVST, enrolled in ART services (survey)</td>
</tr>
<tr>
<td>• Percentage of the population aware of HIVST (survey)</td>
<td>• % of those tested in the last 12 months reporting self-test as their last test (survey)</td>
<td>• Percentage of PrEP initiations among people who report prior self-testing in the past 12 months (survey)</td>
</tr>
<tr>
<td>• Percentage of the population willing to self-test if available (survey)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Examples of routine HIVST monitoring tools used during kits distribution

<table>
<thead>
<tr>
<th>Individual level data</th>
<th>Site level data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider or self-administered assessment form</td>
<td>HIVST online order and assessment form</td>
</tr>
<tr>
<td><strong>Individual HIVST register</strong> (provider administered) Existing services register add-on</td>
<td>Event register or site level commodity register</td>
</tr>
<tr>
<td>Individual HIVST form (client self-administered) Client referral card</td>
<td>Online or retail Sale register</td>
</tr>
</tbody>
</table>

- Information on people receiving HIVST
- Information on HIVST model and approach
- Number and type of HIVST kits distributed
Independent HIVST distribution register

- Individual-level data tool to collect information during test kits distribution

- Filled at HIVST kits delivery site

- Include specific data related to HIVST kits, people who are receiving kits and/or will be using them

- Can be in paper or electronic form (for example on tablets)
Examples of routine HIVST monitoring tools used for collecting data on **test use and results**

<table>
<thead>
<tr>
<th>Notification/reminders</th>
<th>Client self-administered reporting</th>
<th>Individual-level follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated SMS and messengers reminders</td>
<td>Paper based on-site results reporting cards</td>
<td>Provider administered individual follow up and feedback forms, referral cards</td>
</tr>
<tr>
<td>Interactive voice response systems</td>
<td>Mobile apps, messengers, chat bots, website results reporting and feedback collection forms</td>
<td></td>
</tr>
</tbody>
</table>

**Considerations for resources and sustainability**

- Number of HIVST tests used
- Number of HIVST results reported, number of positive results reported
- Information on people using HIVST and reporting it
Automated SMS reminders

Reminders have a positive effect on the number of test results reported, with a major increase of results reported in the day of the first SMS reminder (7th day after order) and some increase in the days of the second SMS reminder (10th day after test kit order).
Examples of routine HIVST monitoring tools used for collecting data on **linkage**

<table>
<thead>
<tr>
<th>Notifications and referrals</th>
<th>Self-administered reporting</th>
<th>Individual-level follow up</th>
<th>Clinic registers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Referral cards to link to services.</strong> Automated SMS and messages. Interactive voice response systems</td>
<td>Mobile apps, messengers, chat bots, web apps and online feedback collection forms</td>
<td>Provider administered individual follow up forms, peer referral and navigation</td>
<td>HTS registers, ART registers, PrEP registers, etc.</td>
</tr>
</tbody>
</table>

- **Number of people self-reported positive tests results confirmed after HIVST**
- **Number of people self-reported link to prevention and treatment services after HIVST**

**Clinic registers considerations for resources and sustainability**

**Proportion of people using prevention, testing and care services prompted by HIVST**
Clinic registers

• Include questions into existing clinic registers if patients have used HIVST prior to visit to clinic

• All referral health service points (ART services, PrEP and VMMC services) can adopt data collection to capture prior HIVST use (e.g. HIVST referral cards; clinic register etc.)

• It is important to note that these data may be subject to recall bias and some people may not disclose prior HIVST use and/or results for reasons such as stigma or to get a result from the provider without biases

• These data also do not provide a denominator to measure linkage following HIVST. Nonetheless, such data can provide useful information on the proportion of all ART initiations prompted by HIVST
Using multiple data sources and information

• The assessment of linkage to ART and prevention services can be done with the use of routine programme data from variety of sources, such as client-administered tools, provider follow up data collection, clinic registers, and ART initiations

• Digital tools, online and m-health platforms can also be leveraged

• When used **triangulated and used in conjunction** various data sources can provide reliable information on HIVST indicators
Use of digital health and mobile health technologies (e-health, m-health)

Widespread use of mobile devices creates opportunities for delivering HIVST services by generating demand, improve delivery of HIVST kits and collecting information from clients.

Some digital health components related to HIVST:

- Client-to-provider communication: self-assessments, reporting of results
- Data collection and management: service records, registers, case management registers/logs, data collection of results, adverse events, IPV;
- Targeted client communication: notifications, alerts and reminders focused on improving linkages. Delivery channels include SMS, voice calls, interactive voice responses, mobile apps, messengers, and messenger bots.
Access the full guidelines on the WHO HTS APP!

- Search ‘WHO HTS Info’ wherever you get Apps
- Notifications when new content is available
- Search, save, send
- Country HTS data in one place w/ guidelines
- Language updates: French on the way!
- Available online and off
- Videos coming for 2020
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HIV SELF-TESTING AFRICA

Key Considerations for HIVST M&E and HMIS
Lessons Learned from STAR HIVST Implementation
Taurai Kambeu & Amber Sheets, PSI STAR
HIVST Monitoring for measuring program impact and optimisation

- HIVST is not a stand-alone intervention
  - HIVST is AO, test for triage, confirmative testing required to “complete test” for self-testers with reactive self-test result

- HIVST enhances uptake of HIV testing among populations unreached by conventional testing
  - Measuring impact/coverage for priority population to be reached
  - Primary and Secondary distribution: important to collect data on end-user of HIVST kit
  - Measuring effectiveness of HIVST distribution model
  - Measuring optimization of HIV testing services through HIVST

- Outcome measures: tracking HIVST test use, confirmative testing, Treatment/Prevention services uptake
  - HIVST attribution to HIV testing coverage, yield, case finding, ART coverage

- Integration of HIVST indicators in mainstream M&E and HMIS for HIV testing services
How HIVST impacts individuals, populations, and systems

**HIVST Direct Actions**
- Identify undiagnosed individuals
- Link to ART
- Disclosure/shared knowledge of status
- Link to prevention
- Triaged out of health system

**HIVST Direct Impacts**
- Reduced morbidity and mortality for PLHIV
- Reduced HIV transmission, infections averted
- Time and cost savings for the health system and users
- Re-link to ART

**HIVST Additional Impacts**
- Social and economic
  - Population productivity and growth
  - Social benefits, minimal to no social harms

- Health systems
  - Improved efficiency
  - Greater reach, coverage
  - Increased equity

Social and economic

- Population productivity and growth
- Social benefits, minimal to no social harms

Health systems

- Improved efficiency
- Greater reach, coverage
- Increased equity
HIVST models

- Community-based
  - Targeted, community-led campaigns and events, community index

- Facility-based
  - Integrated with outreach or fixed site HIV testing services
  - Secondary distribution for clients of antenatal, family planning, STI services
  - Direct distribution, HTS optimization

- Secondary distribution through index testing
  - Enhance index testing through referral option
  - Distribution at workplaces

- Other models, including public-private partnership
  - Order online and receive via mail or pick-up point
  - Distribution at workplaces

- Demand creation and linkage to HIV prevention
  - Retail outlets, pharmacies
  - Integration with VMMC programs
  - Integration with PrEP
## STAR Outcome measurements for HIVST

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Uptake of the HIVST kit                      | Reach and target groups  
Age, Sex  
Testing history  
Shared the HIVST kit with partners or network (secondary distribution)                                                                                     |
| End-User of HIVST kit                        | Primary recipients  
Secondary recipients                                                                                                                                                                                |
| HIVST results/reactive/non-reactive          | Onsite HIVST (selected models for primary recipients)  
Offsite testing (all models-primary and secondary recipients) through % follow up & mHealth tools, surveys                                                                                  |
| Linkage to care and prevention               | Confirmatory testing for reactive HIVST test  
ART Initiation  
Started PrEP/Started STI treatment/Uptake of VMMC                                                                                                                                         |
HIVST “Cascade”

- HIVST kit distributed
- HIVST kit used (reported)/end-user
- HIVST outcome reported
- HIVST non-reactive
- HIVST outcome reported reactive
- HIVST reactive, confirmative testing
- HIVST reactive, confirmed positive
- HIVST confirmed positive initiated ART
Country Level HIVST M&E Implementation

National Level M&E Frameworks (HIVST indicators by Distribution model) → Development of HTS & HIVST Tools for tracking distribution & outcomes → HIVST M&E Training → Data transformation for HIVST scale up decision → Data collection & Analysis
# HIVST M&E Frameworks: Eswatini Example

## A. COMMUNITY MODEL: 1. Workplace

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>DEFINITION</th>
<th>BASELINE (2019)</th>
<th>TARGET (2020)</th>
<th>DATA SOURCE</th>
<th>FREQUENCY</th>
<th>RESPONSIBLE</th>
<th>REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percentage of men and women tested for HIV and who were positive (compare conditions)</strong></td>
<td>Number of men and women tested for HIV and who were positive in the baseline year</td>
<td>To be determined</td>
<td>25% (estimated)</td>
<td>HIV tests</td>
<td>Monthly</td>
<td>National HIVST Coordinator</td>
<td>Monthly report</td>
</tr>
</tbody>
</table>

**Key: Outputs:**
- Number of HIV tests conducted
- Internal control of HIV test results (quality control and QA/QC)

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>DEFINITION</th>
<th>BASELINE (2019)</th>
<th>TARGET (2020)</th>
<th>DATA SOURCE</th>
<th>FREQUENCY</th>
<th>RESPONSIBLE</th>
<th>REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of testing sites and number of people testing (compare conditions)</strong></td>
<td>Number of testing sites and number of people testing in the baseline year</td>
<td>To be determined</td>
<td>7,200 (estimated)</td>
<td>HIV test site registers, HIV test site performance reports</td>
<td>Monthly</td>
<td>National HIVST Coordinator</td>
<td>Monthly report</td>
</tr>
</tbody>
</table>

**Key: Outputs:**
- Number of testing sites and number of people testing in the target year (approved by the MoH)

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*Version 1.0: December 2020*
## HIVST M&E Frameworks: Cameroon Example

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Desagregation</th>
<th>Data source</th>
<th>Distribution Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distribution</strong></td>
<td></td>
<td></td>
<td><strong>Community based distribution</strong> <strong>Workplace distribution</strong> <strong>Public Sector</strong> <strong>Key Pop</strong></td>
</tr>
<tr>
<td># HIVST test kits distributed (primary and secondary distribution)</td>
<td>By region / district, by age, sex, population group (target), distribution models, by ART status</td>
<td>HIVST Registry</td>
<td>X  X  X  X  X  X</td>
</tr>
<tr>
<td># of clients offered secondary distribution</td>
<td>By region / district, by age, sex, population group (target), distribution models, by ART status</td>
<td>HIVST Registry</td>
<td>X  X  X  X  X  X</td>
</tr>
<tr>
<td># of clients that accept secondary distribution</td>
<td>By region / district, by age, sex, population group (target), distribution models, by ART status</td>
<td>HIVST Registry</td>
<td>X  X  X  X  X  X</td>
</tr>
<tr>
<td># clients that opt for HIVST</td>
<td>By region / district, by age, sex, population group (target),</td>
<td>HIVST Registry</td>
<td>X</td>
</tr>
<tr>
<td>Total number of persons tested in the health facility</td>
<td>By region / district, by age, sex, population group (target)</td>
<td>Health facility lab registry</td>
<td>X</td>
</tr>
<tr>
<td><strong>Client Follow-up</strong></td>
<td></td>
<td></td>
<td><strong>Community based distribution</strong> <strong>Workplace distribution</strong> <strong>Public Sector</strong> <strong>Key Pop</strong></td>
</tr>
<tr>
<td># of people accepted to be followed-up</td>
<td>By region / district, by age, sex, population group (target), distribution models.</td>
<td>HIVST Registry</td>
<td>X  X  X  X  X  X</td>
</tr>
</tbody>
</table>
Integrating HIVST into existing HTS tools

• Collecting distribution data through
  • HTS Client Intake forms
  • HIVST Register (standalone)
  • Integrated HTS Register (HIVST & Conventional testing)
  • Index testing register

• Outcome Data
  • Tracking through HIVST/HTS registers
    • Prior use of HIVST
    • Confirmatory testing
    • Confirmatory test results
    • Linkage into ART & Prevention Services

  • Tracking through Follow up methods
    • Data collection forms
    • Telephonic & mHealth tools
Country level M&E Implementation: Mozambique HIVST Register

<table>
<thead>
<tr>
<th>Data (DD/MM/AA)</th>
<th>Local do Distribuição</th>
<th>Modalidade</th>
<th>Grupo etário e Sexo</th>
<th>Grupo Alvo (População)</th>
<th>Tipo da atenta</th>
<th>Informação de Pre-ATNIV</th>
<th>Tipo de Auto Testagem</th>
<th>Historic de Testagem de HIV</th>
<th>Consentiu para ser contactado?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fornecedores e Ivanho</td>
<td>M F M F M F</td>
<td>15 - 19 20 - 24 25+</td>
<td>HIVS, IRSH, PDI, HEV, CAM, TRAUMA</td>
<td>PML</td>
<td>3 meses, 4 - 12 meses, &gt;12 meses, Nuno testou</td>
<td>Assistente para provador</td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
<tr>
<td>1 DO MM AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
<tr>
<td>2 DO MM AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
<tr>
<td>3 DO MM AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
<tr>
<td>4 DO MM AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
<tr>
<td>5 DO MM AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
<tr>
<td>6 DO MM AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SIM NÃO</td>
<td>SIM NÃO SIM NÃO</td>
</tr>
</tbody>
</table>

- **Age & Sex of user**
- **Priority pop group**
- **HIVST user**
- **Testing History**
Country level M&E Implementation: Zambia HIVST Register (ANC Entry point)

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Testing History</th>
<th>HIVST End User</th>
<th>Secondary HIVST User</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Age & Sex of primary HIVST user

Testing History

Age & Sex of HIVST End User

Age & Sex of Secondary HIVST user
# Country level M&E Implementation: Eswatini Integrated HTS/HIVST Register

## HIV TESTING ACTIVITIES

<table>
<thead>
<tr>
<th>Partner's HIV Status:</th>
<th>Entry Point (use code)</th>
<th>Reason for HTS</th>
<th>HIVST Result:</th>
<th>Type of Test</th>
<th>Test Used:</th>
<th>Final HIV status</th>
<th>Result Received (Y/N)</th>
<th>Index contacts listed</th>
<th>Referred for which service(s)? Write all that apply.</th>
</tr>
</thead>
<tbody>
<tr>
<td>R, NR, Unknown, Not Applicable (N/A)</td>
<td>1. Community Based</td>
<td>1=Outreach/Mobile 2=Home Based Care 3=Cam page 4=# workplace</td>
<td>1=OPD, 2=MO, 3=ST, clinic 4=Inpatient STD, 6=ED, 7=DNC, 8=FP, 9=PREP, 10=STI, 11=HIV department 12=Transfusion VCT 13=Intervened VCT 14=Emergency/ casualty</td>
<td>2. Facility Based</td>
<td>5. Self testing result confirmation A=ENTER B=PHCT</td>
<td>1. New Test</td>
<td>2. No Test</td>
<td>DNA PCR (Q, ND), 3 = Other (specify)</td>
<td>Individual test results (Y/N/Ref/Referral)</td>
</tr>
<tr>
<td>Marital Status (use code):</td>
<td>1=Married</td>
<td>2=Militarized</td>
<td>3=Living Together</td>
<td>4=Divorced or Separated Widowed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Confirmative test result

### HIVST Model

- Prior HIVST use

### Modality

- HIVST Result

### Referral

- Facility Referred to
Measuring Linkages/Outcomes - HIVST M&E Outcomes Framework
# STAR M&E Outcomes Framework: CBD

<table>
<thead>
<tr>
<th>Community Based Distribution Models</th>
<th>Outcome Indicator</th>
<th>Time Period</th>
<th>Possible Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door-to-Door</td>
<td># of people tested before HIVST introduction</td>
<td>Baseline</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of HIVST distributed to priority population in geographic area</td>
<td>after HIVST, to present</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of people tested after HIVST Introduction</td>
<td>after HIVST, to present</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of priority population tested with HIVST</td>
<td>after HIVST, to present</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of first-time testers/tested &gt;12 months</td>
<td>Baseline</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of people who received HIVST who are reached during follow up</td>
<td>after HIVST, to present</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of people confirming use of HIVST during follow up (tested with HIVST)</td>
<td>after HIVST, to present</td>
<td>Follow up</td>
</tr>
<tr>
<td></td>
<td># of people confirming use who have reactive results</td>
<td>after HIVST, to present</td>
<td>Follow up</td>
</tr>
<tr>
<td></td>
<td># of people who have reactive results who are initiated on ART</td>
<td>after HIVST, to present</td>
<td>Follow up</td>
</tr>
<tr>
<td></td>
<td># positive cases</td>
<td>Baseline</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># positive cases initiated on ART</td>
<td>Baseline</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># positive cases initiated on ART</td>
<td>after HIVST, to present</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># negative cases</td>
<td>Baseline</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># negative cases taking up PrEP/VMVC</td>
<td>Baseline</td>
<td>Facility records in catchment area</td>
</tr>
<tr>
<td>Integrated HTS</td>
<td># of people tested before HIVST introduction</td>
<td>Baseline</td>
<td>NSC Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of people tested after HIVST Introduction</td>
<td>after HIVST, to present</td>
<td>NSC Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of people tested with provider</td>
<td>after HIVST, to present</td>
<td>NSC Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of target population tested</td>
<td>Baseline</td>
<td>NSC Facility records in catchment area</td>
</tr>
<tr>
<td></td>
<td># of first-time testers/tested &gt;12 months</td>
<td>Baseline</td>
<td>NSC Facility records in catchment area</td>
</tr>
</tbody>
</table>
Data Analysis, Transformation & Use: HIVST dashboards
Community Based Distribution & Outcomes
Dashboards: Country Examples

Distribution by Age & Sex, First time testers

Cumulative Outcomes Cascade
HIVST Distribution at Transport Hubs: RSA Outcomes

- Number Called: 14119
- Number successfully Reached: 5538 (39%)
- Used: 4644 (84%)
- Tested Positive: 417 (9%) of those used
- Attended confirmatory testing: 226 (54%)
- Confirmed Positive: 216 (96%)
- Initiated ART: 142 (66%)

Number Called: 0, 2000, 4000, 6000, 8000, 10000, 12000, 14000, 16000
Impact of HIVST on case finding: Integrated outreach HTS

7 months Before HIVST distribution (Oct 2017 – Apr 2018)
- 21,825 tests conducted
  - 21,426 PDHTS
  - 399 HIVST
- 1,116 positive cases identified
  - 1,080 PDHTS
  - 36 HIVST

7 months After HIVST distribution (May 2018 – Nov 2018)
- 21,275 tests conducted
  - 4,505 PDHTS
  - 16,770 HIVST
- 1,788 positive cases were identified
  - 464 PDHTS
  - 1,324 HIVST

Key Observation
- HIVST reduced the number of conventional RDTs used during outreach HTS by 73%
- 60% increase in case identification after HIVST integration in outreach HTS with similar test volume
South Africa Facility Based: HIVST Contribution to case finding Sept 2019

Clinic

HTS_POS
Reactive

HIVST Reactive contribution

<table>
<thead>
<tr>
<th>Clinic</th>
<th>HTS_POS</th>
<th>Reactive</th>
<th>HIVST Reactive contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>153</td>
<td>77</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>20</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>97</td>
<td>60</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>121</td>
<td>35</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>110</td>
<td>49</td>
<td>53%</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>31</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>83</td>
<td>33</td>
<td>58%</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>43</td>
<td>70%</td>
</tr>
</tbody>
</table>
Integration of HIVST into national HMIS/M&E System
Key Considerations for Integration/alignment with National HMIS/M&E

• Need to conduct national M&E MIS baseline assessments
  • Gap analysis of MIS support
  • Current data entry methods, type of data, that the national HMIS implements
  • Assessment of existing paper-based and electronic tools

• Determining whether aggregate or client-level data is the requirement for National HMIS and the implications of this on data collection tools & reports

• Decision on which HIVST indicators for integration/alignment; HIVST uptake, confirmative testing, linkage into ART, linkage into prevention services (VMMC, PrEP)

• National level agreement and finalisation of M&E Framework and agreed upon integration
  • Integration of HIVST with conventional HTS & M&E tools
  • Clarity on what constitutes integration; paper based, electronic or both
# Monthly National Summary Forms: Tanzania

### HUDUZA UCHUNGUZI (HIVST), UPIMAJI YA VVU, UHAKIKI UBORA NA MATUMIZI YA VITENDANISHI

<table>
<thead>
<tr>
<th>Name of the facility</th>
<th>District</th>
<th>Region</th>
<th>Reporting Month</th>
<th>Year</th>
<th>Idadi ya Mamamizi wa Kituwa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAY</td>
<td>2020</td>
<td>3</td>
</tr>
</tbody>
</table>

### VASHIBA VYA RIPOTI

#### B1. VASHIBA VYA UCHUNGUZI VVU (HIVST)

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>JUMILA (EM-US)</th>
<th>DIRECTLY ASSISTED (DA)</th>
<th>SW</th>
<th>MSM</th>
<th>PMD</th>
<th>VAGAL</th>
<th>PHW</th>
<th>PMU</th>
<th>OVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of HIV/ST reagents distributed to key populations</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Number of reagents collected by key populations for peers friends.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Number of reagents collected by key populations for sexual partners.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>JUMILA (DA)</th>
<th>UNASSISTED (US)</th>
<th>SW</th>
<th>MSM</th>
<th>PMD</th>
<th>VAGAL</th>
<th>PHW</th>
<th>PMU</th>
<th>OVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (M+F)</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### B2. VASHIBA VYA UPMALI VVU

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>JUMILA (EM-US)</th>
<th>JUMILA (M)</th>
<th>JUMILA (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hadadi ya Walitaka Wapiga (MP)</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Hadadi ya Walitaka Wapiga walio Golda usaha macho baa ba kipona kupewa majibu ya VVU</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Hadadi ya Walitaka Wapiga waliopatikana na wakopata Nina VVU</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Hadadi ya Walitaka Walibadilika (HF)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### WAHALIME MALE

<table>
<thead>
<tr>
<th>&lt;1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-19</th>
<th>20-24</th>
<th>25-49</th>
<th>≥50</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### WANAWLE KAMA FEMALES

<table>
<thead>
<tr>
<th>&lt;1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-19</th>
<th>20-24</th>
<th>25-49</th>
<th>≥50</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Monthly National Summary
Forms: Malawi

Ministry of Health
HIV Self-Test Distribution Register
Version 0 (August 2018)

<table>
<thead>
<tr>
<th>Location</th>
<th>Distribution Point Type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health facility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>ANC Clinic</td>
<td>Kits given to ANC women for their partners</td>
</tr>
<tr>
<td>B</td>
<td>ART Clinic</td>
<td>Kits given to ART patients for their partners</td>
</tr>
<tr>
<td>C</td>
<td>STI Clinic</td>
<td>Kits given to HIV patients for their partners</td>
</tr>
<tr>
<td>D</td>
<td>HTC room</td>
<td>Kits given to HIV-positive HTC or VCT clients for their partners</td>
</tr>
<tr>
<td>E</td>
<td>Other point in HIV</td>
<td>Kits given to HIV-positive HIV clients for their partners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary or secondary school not on OPD, church, etc.</td>
</tr>
<tr>
<td>Stand-alone HTS site</td>
<td>VCT, stand-alone</td>
<td>Kits given to HIV-positive VCT clients for their partners</td>
</tr>
<tr>
<td>Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Workplace, Formal</td>
<td>Kits given to company or government employees</td>
</tr>
<tr>
<td>I</td>
<td>Hamlet</td>
<td>Kits given to government, non-HIV NGOs, non-HIV NGOs, district hospital,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIV NGOs, non-HIV NGOs, government employees</td>
</tr>
<tr>
<td>J</td>
<td>Other community point</td>
<td>Kits given to other community points</td>
</tr>
</tbody>
</table>

Source: Self-Test Distribution Register
- Resipient Box
  - Male
  - Female non-pregnant
  - Female pregnant
  - Other
  - Last HIV Test
  - Never tested
  - Last negative
  - Last positive on ART
  - On ART
  - Last unsuitable

Source: Daily Activity Register
- Self-Test name
- Operation balance
- Receipts
- Used for clients
- Used for other
- Losses
- Closing balance

Report filed
- Date
- Name
- PHONE
Integration of HIVST into National HMIS

Lesotho MOH Data Warehouse Example:

1. HIV TESTING SERVICES

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>POS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>M</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>1 - 4</td>
<td>M</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

2. HIV SELF TEST (HIVST)

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>NUMBER OF HIVST KITS DISTRIBUTED</th>
<th>NUMBER OF HIVST KITS RETURNED</th>
<th>NUMBER OF HIVST CONFIRMED HIV POSITIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 14</td>
<td>M</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15 - 19</td>
<td>M</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20 - 24</td>
<td>M</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25 - 29</td>
<td>M</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Integration of HIVST indicators into HMIS DHIS2 - Zimbabwe examples

<table>
<thead>
<tr>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periods</td>
</tr>
</tbody>
</table>

Select period type

Available

Previ

Next year

Selected

<table>
<thead>
<tr>
<th>Data / Period</th>
<th>Jan to Mar 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV - Clients retesting for HIV</td>
<td>30,954</td>
</tr>
<tr>
<td>HIV - Clients retesting for HIV COMMUNITY</td>
<td>2,525</td>
</tr>
<tr>
<td>HIV - Clients with Reactive results on re-tests</td>
<td>1,666</td>
</tr>
<tr>
<td>HIV - Clients with Reactive results on re-tests COMMUNITY</td>
<td>319</td>
</tr>
<tr>
<td>HIV - Clients with Reactive results on the first test</td>
<td>702</td>
</tr>
<tr>
<td>HIV - Clients with Reactive results on the first test COMMUNITY</td>
<td>605</td>
</tr>
<tr>
<td>HIV - Reactive tests confirmed with provider testing</td>
<td>2,045</td>
</tr>
<tr>
<td>HIV - Results shared</td>
<td>719</td>
</tr>
<tr>
<td>HIV - Results shared COMMUNITY</td>
<td>29,576</td>
</tr>
<tr>
<td>HIV - Self-test kits distributed (Primary Distribution)</td>
<td>37,867</td>
</tr>
<tr>
<td>HIV - Self-test kits distributed (Primary Distribution) COMMUNITY</td>
<td>4,403</td>
</tr>
<tr>
<td>HIV - Self-test kits distributed (excluding for partners, Secondary distribution)</td>
<td>2,318</td>
</tr>
<tr>
<td>HIV - Self-test kits distributed (Secondary distribution, excluding for partners) COMMUNITY</td>
<td>429</td>
</tr>
<tr>
<td>HIV - Self-test kits distributed (Secondary distribution, for partner) COMMUNITY</td>
<td>476</td>
</tr>
<tr>
<td>HIV - Self-test kits distributed (for partner, Secondary distribution)</td>
<td>4,432</td>
</tr>
</tbody>
</table>
HIVST Monitoring: Lessons Learned

- Design robust HIVST distribution & outcome data collection tools that inform on sub-target populations reached, previous testing history, first-time testing rates, and effectiveness of distribution models
- Successful integration of HIVST indicators with national M&E and HMIS systems is both pragmatic and critical
- In addition to outcome data, it is still important to consider the use of national surveys (DHS, IBBS) to monitor impact of HIVST on increased HTS coverage
- Use of dashboards is essential for monitoring progress and to inform programmatic decision making
- Instability of HIVST results: not to use late read of used self-test device
- Need to design, and continue to innovative, sustainable ways to measure linkages into care and prevention post HIVST uptake
Contact

DR. KARIN HATZOLD
Director UNITAID/PSI HIV Self-Testing Africa (STAR) Project
khatzold@psi.org

STAR protocols and tools: https://hivstar.lshtm.ac.uk/ protocols/

https://psiorg.sharepoint.com/sites/star

https://aidsfree.usaid.gov/resources/hts-kb

STAR Toolkits (upcoming)
https://www.psi.org/star-hiv-self-testing-africa/
WEBINAR 4/6

SELF-TESTING SCALE UP AND HEALTH SYSTEMS

PART 4/6: INTEGRATING HIVST DISTRIBUTION INTO HEALTH SYSTEMS, M&E, HIVST COMMODITY QUANTIFICATION AND FORECASTING AND PSM

Thursday, Sept. 17, 2020
9:00am EST
3:00pm UTC/GMT+2
HIV SELF-TESTING AFRICA

Sustainable linkage systems: approaches to measuring the impact of HIVST in routine programs

Mohammed Majam, Head: Medical Technologies
Ezintsha, Wits RHI South Africa
HIV SELF-TESTING AFRICA

Sustainable linkage systems: approaches to measuring the impact of HIVST in routine programs

Mohammed Majam, Head: Medical Technologies
Ezintsha, Wits RHI South Africa
The inherent challenge of HIVST

“Distributing HIV Self-Tests is easy... we know that people want these tests. What is difficult is trying to piece together what happens to a test and to a tester once they have left and test in private”
CHALLENGES OF DATA COLLECTION IN HIVST PROGRAMMES

**CHALLENGES**

1. Paper based capture tools
2. Lengthy data capture processes
3. Data validation during capturing done retrospectively by QA staff
5. Holding staff accountable as well as managing workloads

**SOLUTIONS**

1. Paperless data capturing
2. Real-time data uploads
3. Data validation during capturing preventing human error
4. Automation of mundane tasks such as location and date.
5. Track staff performance and spot potential training issues
Data collection becomes increasingly challenging down the cascade

- **Uptake** of the HIVST
  - Reach and target groups – Age, Gender, Testing Status
  - Shared the test kit with the partner/s or network (secondary distribution)
  - Demonstration provided/not

- **Utilization** of the test kit by
  - Primary recipients
  - Secondary recipients

- **HIV test results**
  - Where Onsite testing is taken up (selected models for primary recipients)
  - Offsite testing (all models – primary and secondary recipients)
    - Through % follow up and mHealth tools

- **Linkage to care**, where positives reported
  - Confirmatory testing for HIV positives
  - Started ART
How can we practically measure impact?

1. Using distribution data to identify whether you are reaching your intending population [Age, Gender, Testing Freq]

2. Random telephonic follow up of a subset of test recipients to understand utilization, test result, and further accessing of services

3. Utilization of digital tools for patient level follow up

4. Triangulation of HTS data in facilities within a geographical area
It is important to understand that each of these methodologies have inherent limitations, biases, and resource requirements.

HIVST programmes should not be compared to routine HTS, because it is a supplementary strategy and not replacing.
How can we practically measure impact?

1. Using distribution data to identify whether you are reaching your intending population [Age, Gender, Testing Freq]

Example:
How can we practically measure impact?

2. Random telephonic follow up of a subset of test recipients to understand utilization, test result, and further accessing of services

Example: ANC Distribution model in CoJ/CoT
How can we practically measure impact?

3. Utilization of digital tools for patient level follow up

Example: Toll-free Call, WhatsApp or Web Application
Digital solutions employed on STAR

Should a participant select the ‘toll-free call’ option, the participant goes through a 6-day cycle of prompts to report of their self-screening results. On day 7, calls are triggered to users that have not reported.

Day 1 Distribution
- User selects toll-free call option as preferred follow-up channel.

Day 1 SMS 1
- Receives an initial SMS with the toll-free number to call.

Day 3 SMS 2
- Receives a reminder SMS if they have not yet reported.

Day 7 Call participant
- Receives a call with a free recorded question to answer.

All users that have not reported on the PMWS/MN platforms are included in the outbound call workflow.

Patients are guided by website, brochure or clinic staff towards online platform.

Patient registers and is explained their rights around data protections and anonymity.

Patient is provided information on their condition and upcoming journey.

Patients are guided through test and 12C by engaging with content and calls to action.

The patient can at any time access counselling by sending a message in-app for a call back.

A live dashboard has been designed to provide real-time analytics on interactions with participants and self-screening results from the toll-free channel.
Examples and Results – Telephonic Follow up

To date:
• 2118 total results have been reported telephonically (20.64% of these are positive results)
• 98.2% of results have been reported in less than 60 seconds
• 73.5% of participants who made an inbound call reported their results
• We had an overall telephonic reporting rate of 6.87%
• 77.34% of reported results have been through an inbound call
• 210 participants who selected other mHealth platforms ended up reporting telephonically
• 47% of participants reported through an unknown number
• 66% of participants selected telephonic follow-up
Examples and Results – WhatsApp for business and Ithaka Web App

To date:

• 1000 total results have been reported (roughly 15% of which are positive results)
• WhatsApp and the Ithaka Web App had an approximate reporting rate of 45%
• Males and those between 25 and 35 years old are more likely to report a positive result
<table>
<thead>
<tr>
<th><strong>Telephonic</strong></th>
<th><strong>WhatsApp</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pros</td>
<td>Cons</td>
</tr>
<tr>
<td>Both inbound and outbound calls supported</td>
<td>Some users prefer human interaction</td>
</tr>
<tr>
<td>Results can be reported in less than 1 minute</td>
<td>No contact detail verification – possible to collect incorrect numbers</td>
</tr>
<tr>
<td>Toll-free</td>
<td>Platform only available in English</td>
</tr>
<tr>
<td>No smartphone required</td>
<td></td>
</tr>
<tr>
<td>No drop-off even though platform was only available in English</td>
<td></td>
</tr>
<tr>
<td>Pros</td>
<td>Cons</td>
</tr>
<tr>
<td>WhatsApp is a widely used platform</td>
<td>Smartphone required</td>
</tr>
<tr>
<td>Minimal data cost</td>
<td>Not everyone has access to mobile data</td>
</tr>
<tr>
<td></td>
<td>No contact detail verification – possible to collect incorrect numbers</td>
</tr>
</tbody>
</table>
How can we practically measure impact?

4. Triangulation of HTS data in facilities within a geographical area
Example: CoJ Region F 2017 vs 2018 Facility HIV Testing
Conclusion

• There is no one size fits all, or off-the-shelf solution for measuring impact, and managing linkage into care for HIV self-test users.

• Tools utilized must be designed with the population it is to be used in and intended for in mind.

• Digital tools provide cost effective, wide reaching access to channels for self-reporting and linkage.

• Impact of HIVST at a population level will only be seen with sufficient test saturation.

• HIVST is a tool to help individuals to learn their status. The onus is still on the individual to act upon their result. We need to have public health systems that make confirmatory testing, ART initiation, and retention into care easier for the patient.
Acknowledgements

• Unitaid
• National Department of Health
• STAR Partners: PSI, SFH, CHAI, LSHTM
• Wits RHI-Ezintsha STAR team
• WHO
• mHealth Service Providers: Aviro Med Design, A2D24, Viamo Mobile

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WEBINAR 4/6
SELF-TESTING SCALE UP AND HEALTH SYSTEMS

PART 4/6: INTEGRATING HIVST DISTRIBUTION INTO HEALTH SYSTEMS, M&E, HIVST COMMODITY QUANTIFICATION AND FORECASTING AND PSM

Thursday, Sept. 17, 2020
9:00am EST
3:00pm UTC/GMT+2
HIV SELF-TESTING AFRICA

HIVST Commodity Quantification and Forecasting Experiences from 13 Countries
Aayush Solanki, PSI
Nompumelelo Mzizi, MoH Eswatini
Why to Conduct HIV Self-Testing Quantification and Forecasting

1. National & Subnational Need Estimate
   - National Forecasting tool
   - Regional/District Level Analysis

2. GF/PEPFAR/MOH & Other Investment
   - GF Concept Note
   - Investment Case

3. Strategy, Planning, & Scaleup
   - MOH/Implementing Partners
   - Distribution Models, Target Population and Geography
   - Target setting

4. Procurement & Supply chain Management
   - Annual National Need/Allocation
   - District/Regional Allocation
   - Other PSM Support
Consideration – HIVST Forecasting at National Level

1. MOH priorities/Scale up plan/Resources and strategy
2. National Epi data, HIV testing, ART coverage trends
3. Country's progress towards 95-95-95
4. Population size estimates/Need based/3-5 years
5. Model projects market size based on multiple scenarios
6. Distribution models, IPs, and STAR/HIVST experience
Commodity Forecasting: Components of the Model

**Population categories**

AGYW, Sexually active men, FSWs, MSMs, PWID, TG and other key population groups or vulnerable population groups

**Operational and Programmatic information** to eliminate any risk

**Time frame:** 3 to 5 Years

**National and regional estimates for HIVST kits need for each country**
Commodity forecasting – Different Activities/Tools example

First round of Quantification – is always at National level
- Understand MOH priority/intervention scale up strategy/stage
- Define population categories/groups
- Data collection
- Prepare assumption list
- Stakeholder meeting/workshop to validate methodology and assumptions
- Data Analysis
- Output review and presentation
- Model Update

Second Round of Quantification also includes Regional Analysis/Sub-National
- HTS Analysis, Revised forecast based on national procurement plan/strategy and additional assumptions

Semi Annual Quantification dashboard, Distribution Tracker for Each country
- Based on HIVST kits consumption (linked to step 2) and other market trends

All tools merged in one Master file
HIV Self Testing Quantification & Forecasting: Examples from the backend

**Value in Million - Year 1 forecast**

<table>
<thead>
<tr>
<th>Region</th>
<th>Total GF Districts Estimate (20 + 7)</th>
<th>Total GF Districts Estimate (12 + 15)</th>
<th>Overall SA Estimate (52 districts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 7 GF Districts</td>
<td>2.25</td>
<td>3.70</td>
<td>4.82</td>
</tr>
<tr>
<td>Other 20 GF Districts</td>
<td>1.54</td>
<td>3.79</td>
<td></td>
</tr>
<tr>
<td>AGWY</td>
<td>2.21</td>
<td>3.70</td>
<td></td>
</tr>
<tr>
<td>Other 15 GF Districts</td>
<td>1.49</td>
<td>3.79</td>
<td></td>
</tr>
</tbody>
</table>

**Regions**

- **Manzini**: 1, 35%, 95,637
- **Hhohho**: 2, 30%, 81,975
- **Lubombo**: 3, 22%, 60,115
- **Shiselweni**: 4, 13%, 35,523

**KITS SHARE/SPLIT - BY POPULATION CATEGORY**

<table>
<thead>
<tr>
<th>Category</th>
<th>AGYW</th>
<th>Men (15-24)</th>
<th>25+ (male + female)</th>
<th>Key population</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>0.27</td>
<td>0.29</td>
<td>0.69</td>
<td>0.07</td>
<td>1.33</td>
</tr>
<tr>
<td>Share</td>
<td>20%</td>
<td>22%</td>
<td>52%</td>
<td>6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**HIV Self Testing Commodity Forecasting**

<table>
<thead>
<tr>
<th>Year</th>
<th># of Self Test Kits to be Procured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>468657</td>
</tr>
<tr>
<td>Year 2</td>
<td>476650</td>
</tr>
<tr>
<td>Year 3</td>
<td>383598</td>
</tr>
<tr>
<td>Total for THREE Years</td>
<td>1328904</td>
</tr>
</tbody>
</table>
Conclusion and Key Take Away – HIV Self Testing Quantification & Forecasting

1. **Country Context**
   - Testing trend, HTS Targets
   - Progress towards 90-90-90, National and Regional Indicators
   - Available resources

2. **Scale Up Strategy**
   - Target Population, Target Region/district
   - Distribution Models
   - Implementing partners, MOH Vision, Sustainability

3. **Assumption Agreement & Regularly update the model**
   - Engage stakeholders while developing assumption list
   - Regularly update the assumption list and data
HIVST Procurement and Supply Chain Consideration
HIVST WHO Prequalifies Products

- Variety of HIVST products are on the market at different price range (in-market and pipeline)
- **FOUR** HIVST products are **WHO Prequalified**
- Additional test kits are in the pipeline, approved by Expert Review Panel for Diagnostics (ERPD)
- Both WHO PQ and ERPD products can be purchased with public funds
- Blood based products have been evaluated in the field by STAR for usability:
  - Good usability/accuracy, which will improve as product literacy improves
  - Preferences between testing options show differences by population group, may be important to ensure availability of the different options
- Diversification of HIVST products preferable to suit preferences and sustain the market
PSM strategy and responsibilities – HIV Self-Test kits

- **Inventory Management**: Storage
- **Distribution**: to health care facilities/distribution site
- **Effective Usage**: at community level
- **Quality Assurance**: Monitoring
- **LMIS Monthly/Quarterly reporting to NDOH/STAR**

**HIVST Commodities Storage**

- **Selection of Products**
- **Quantification**
- **Manufacturer & Supplier Engagement**
- **Pricing**
- **Planning & Budgeting**
- **Procurement Through STAR PSI or through Wambo**
HIVST Supply Chain Management/Quantification/Forecasting – Challenges

- Quantification of commodities relies on a feedback loop, where facilities report their consumption periodically allowing MOH to make more accurate estimates of future requirements.
- Key challenge is lack of and delayed reporting of consumption and ordering data from facility level, which affects stock availability at facilities.
- Due to lack of sufficient consumption data, quantification is done using norms/standards, which do not always align with actual consumption.
- Challenges:
  - Inaccurate consumption reporting
  - Reports are not submitted in time/not consolidated
  - Reports are not actioned and translated into supply
  - Time lapse between reporting consumption and order and distribution/supply
  - Challenges in transport for distribution
- Forecasting challenges:
  - New intervention for several countries, market trends are still evolving
  - Assumption list verification, data availability, data gaps in updating model.
Recommendations for effective HIVST Supply Chain

- Right mix of products to avoid market monopoly, longer lead time, pricing
- Regular quantification and forecasting at national and subnational level
- HIVST supply chain: May require customization of system design and inventory control parameters
- Storage and distribution capacity may influence PSM decisions at national level
- Pull vs. Push (Mechanism to avoid over/under stocking and allocating kits based on the need and consumption)
- Interactive system, with buffer capacity to deal with increase in demand for HIVST (even more relevant after COVID 19).
- Quantification based on reported consumption should be prioritized for supply chain optimization (depends on stage of intervention life cycle in a specific market).
- Learning from available best practices based on STAR phase 1 and phase 2 market experiences
HIVST Supply Chain Management – Zimbabwe example

Zimbabwe Assisted Pull System (ZAPS) for the primary health care facility level including clinics operates quarterly.

- It combines products for primary health care facility level.
- An ordering team comprised of a driver and a district pharmacist travels to all facilities in their resupply area to assist health facility staff to collect essential logistics data and to place orders by using an automated system (AutoOrder).
- The ordering team transmits the order topping up to 6 months to Central warehouse branch (Regional or Central)
- Staff at the Central warehouse picks and packs the order.
- Central Warehouse then delivers pre-parceled orders to health facilities.

Zimbabwe Laboratory Commodities Distribution System (ZiLaCoDS) is designed for Referral, Central, Provincial, District, Mission laboratories in Zimbabwe, not Clinics.

- Orders are placed bimonthly using the Report and Requisition form send to Laboratory logistics Unit (LLU) office based at the Central warehouse in Harare only.
- LLU staff prepares the orders topping up to 4 months and send to Natpharm warehouse.
- Warehouse staff picks and packs then load trucks which will deliver direct to each Laboratory site
- Laboratories request for lab commodities and rapid kits to backup clinics in response to urgent cases of stock outs.
HIVST Quantification & Forecasting Example :- Kingdom of Eswatini
MOH Eswatini; STAR team; PEPFAR and HIVST task team members conducted multiple rounds of HIVST quantification and forecasting in the Kingdom of Eswatini – over the last 18 months.

Forecasting model was adopted based on the STAR experience in different countries and assumption list was developed in collaboration with stakeholders during the quantification and forecasting workshop in country.

**Timeline for forecasting exercise with STAR team**

- First round of Quantification: June, 2019
- Second round of Quantification: November, 2019
- Third round of Quantification: July, 2020 [this round took into account COVID-19 impact on HIVST program]
Forecasting Analysis: Usage

• Procurement planning for HIVST kits
  • Initially, no HIVST distribution data available
  • HIVST kits were procured and the quantification workshops happened afterwards.
• Analyzing the national and subnational need for HIV self-testing based on multiple indicators
• Investment and overall supply chain management
• Regional allocation of HIVST kits
• HIVST kits procured: 2017 to date
  • PEPFAR routine – 154,250 kits
  • PEPFAR FCI – 200,000 kits with 82,000 kits in the pipeline
  • Unitaid/STAR – 80,250 kits
  • MSF – 5,458 kits
  • Global Fund - 183,000 kits in the pipeline
### Pre-COVID Forecast for HIVST

<table>
<thead>
<tr>
<th>Year</th>
<th># of Self Test Kits to be Procured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>160633</td>
</tr>
<tr>
<td>Year 2</td>
<td>163524</td>
</tr>
<tr>
<td>Year 3</td>
<td>126533</td>
</tr>
<tr>
<td>Total for THREE Years</td>
<td>450690</td>
</tr>
</tbody>
</table>

Increase in HIVST need due to decline in conventional testing numbers after COVID 19

### COVID-adjusted analysis for HIVST

<table>
<thead>
<tr>
<th>Population group</th>
<th>Total kits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men 15-24</td>
<td>38158</td>
</tr>
<tr>
<td>Men 25+</td>
<td>90269</td>
</tr>
<tr>
<td>Female 15-24</td>
<td>95346</td>
</tr>
<tr>
<td>Female 25+</td>
<td>62230.5</td>
</tr>
<tr>
<td>Key population</td>
<td>163800</td>
</tr>
<tr>
<td>Others (buffer)</td>
<td>32760</td>
</tr>
<tr>
<td>Total</td>
<td>542858.5</td>
</tr>
</tbody>
</table>
Summary recommendations for countries

1. MOH coordination of HIVST has ensured **sustainability** of the program

2. Before data availability on consumption (as the program starts), the **epidemiology-based approach** sets a good base for calculations, especially to stagger allocations to regions or population groups.
   - The **results of this should be communicated** to the HTS department

3. Now that we have actual **consumption data**, it is much easier to forecast by combining the two: morbidity- and consumption-based forecasting.

4. MOH systems e.g. **coordination of HIVST** needs to be clear in terms of procurement, planning and distribution
   - National level tracker can be a good tool for this, and to plan HIV kits allocation and procurement

5. Have the quantification core team review the forecast on a quarterly basis.

6. Impact assessment on conventional testing need to be done
Thank You
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Innovation in Global Health
HIV SELF-TESTING AFRICA INITIATIVE

atlas