Optimizing HIV testing through routine use of data: considerations for a status-neutral approach

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The future of testing: a status-neutral approach

Source: Grimsrud, etc, Plos Med 2023 https://doi.org/10.1371/journal.pmed.1004182
Considerations for the status neutral approach: prevention and re-diagnosis (example: Kenya)

Majority of HIV- tests are repeat testers which is important for prevention . . .

Substantial proportion of HIV+ tests are known HIV+ re-diagnoses . . .

Source: WHO HTS Dashboard
Highlights complementarity and interaction between primary HIV prevention, testing, treatment and the prevention of vertical transmission of HIV
Defining Who Needs Prevention

**STEP 1: DETERMINE TOTAL POPULATION SIZE ESTIMATE**

- Countries should have **up-to-date, nationally validated key population size estimates generated from empirical methods** and sound statistical concepts.
- Where PSEs are outdated or do not exist, global or regional averages may be used to benchmark. For MSM, this should be at least 1% of the total adult male population (WHO & UNAIDS, 2020).
- In resource constrained settings, **low-cost methodologies that generate reliable PSEs** need to be developed and used.
- Where possible, **multiple sources** should be triangulated for greater certainty.
- **Plausible PSEs should be mandatory** in the development of all national strategic plans, prevention roadmaps as well as funding requests/country operational plans for major donors.

**STEP 2: CALCULATE A RISK-FOCUSED DENOMINATOR**

For key populations:
- Men who have sex with men with a non-regular partner
- All transgender women
- All sex workers
- All people who inject drugs
- All prisoners

For other young people and adults:
- Use sub-national HIV incidence estimates disaggregated by age, sex, location and risk. The denominator for regular community outreach should be **populations with high HIV incidence** (globally defined as more than 1 per 100 person years).
- In parts of sub-Saharan Africa this level is also reached among people with non-regular partner(s), people who have transactional sex or another sexually transmitted infection.
Declining incidence requires more disaggregated data for precision prevention delivery (example: Malawi, AGYW)

Demographic: age, sex
Geographic: sub-national
Risk: Behavioral

Source: John Stover, NAOMI estimates; Clemens Benedikt, UNAIDS, GPC “Towards more precision in prevention investments”
Define differentiated packages of prevention based on population segments

HTS should be routinely offered in all incidence settings, but . . .

Consider differentiated needs and prevention packages for HTS linkage for all populations . . . .

Prevention packages provided (linked following HIV-test) need to be differentiated based on population needs and defined packages.

Source: UNAIDS, various documents
HTS and re-diagnosis

Western Cape, SA ART Experience

- 2017: Started ART 50,000, Restarted ART 10,000
- 2018: Started ART 45,000, Restarted ART 15,000
- 2019: Started ART 40,000, Restarted ART 20,000
- 2020: Started ART 35,000, Restarted ART 25,000
- 2021: Started ART 30,000, Restarted ART 30,000
- 2022: Started ART 25,000, Restarted ART 35,000

Source: Euvar, CROI 2023

Malawi

- HIV positive tests - new diagnoses and re-diagnoses
- Started ART
- Restarted ART

Source: WHO HTS Dashboard

Mozambique

- HIV positive tests - new diagnoses and re-diagnoses
- Started ART
- Restarted ART

Zambia

- HIV positive tests - new diagnoses and re-diagnoses
- Started ART
- Restarted ART

Source: WHO HTS Dashboard

Zimbabwe

- HIV positive tests - new diagnoses and re-diagnoses
- Started ART
- Restarted ART

Source: WHO HTS Dashboard
Considerations for those re-engaging through HTS

*Increased insights into those re-diagnosing and shifting the paradigm to welcome them back based on their needs is critical to the success of the status-neutral approach.*

**Reasons for returning to care % (No. of respondents)**

- Saber to get to the clinic now: 89% (91)
- Weared about not being on ART: 90% (91)
- Stopped to feel sick or risk: 54% (26)
- Toning (e.g., contacted and asked to return): 5% (2)
- Concerns for children: 4% (10)
- More or better support from a partner/family/friends: 4% (10)
- Recent clinic visit: 36% (11)
- Found out they were pregnant: 3% (11)

**Dynamic Treatment Cascade**

**Reasons for stopping ART % (No. of respondents)**

Source: Euvrard, CROI 2023 and Ehrenkranz, et al

Source: Bisnauth, et al Plos One
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.e0256540
Capture these data to better provide patient-centered services, inform quantification, and improve routine program monitoring.

<table>
<thead>
<tr>
<th>HIV testing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS.1</td>
<td>People living with HIV who know their HIV status who know their HIV status (first 95)</td>
</tr>
<tr>
<td>HTS test volume and positivity</td>
<td>Number of HIV tests performed (volume) and the % of HIV-positive results returned to people (positivity)</td>
</tr>
<tr>
<td>HTS.3 (NEW)</td>
<td>Individuals testing positive for HIV</td>
</tr>
<tr>
<td>HTS.4</td>
<td>Linkage to ART</td>
</tr>
<tr>
<td>HTS.5</td>
<td>HTS partner services</td>
</tr>
<tr>
<td>HTS.6</td>
<td>HIVST distribution</td>
</tr>
<tr>
<td>HTS.7 (NEW)</td>
<td>HTS linkage to prevention</td>
</tr>
<tr>
<td>HTS.8 (NEW)</td>
<td>HIV retesting coverage</td>
</tr>
</tbody>
</table>

Source: WHO Consolidated Guidelines on person-centred HIV strategic information: strengthening routine data for impact
Last but to least . . realize the full potential of HIVST!

- Increasing access through greater use of HIVST within core (facility-based) and prioritized testing approaches (index testing, social-network testing, secondary distribution and partner approaches and other focused private sector and community testing approaches)
- Addressing age of consent barriers that limit use of HIVST by adolescents
- Expanding effective and acceptable HIVST distribution approaches to reach undertested populations and those who would benefit from simplified access to regular testing
- Increasing population-level HIVST literacy towards broader self-testing and self-care literacy
- Increasing use for status monitoring among PrEP users to facilitate differentiated PrEP service delivery models
- Invest in simplified data collection for HIVST such as triangulation methods

Source: HIVST Quick reference guide

Source: QUOTED - Grimsrud, etc, Plos Med 2023 https://doi.org/10.1371/journal.pmed.1004182
Conclusions

- Know the epidemic and understand variability to inform linkage to prevention (and all of Celine’s conclusions! 😊)

- Define clear differentiated packages for linkage (e.g. prevention or re-engagement/welcome back)

- Leverage and expand HIVST as well as demand for HTS through literacy and self-care

- Consider what is needed to achieve the paradigm shift:
  - Balance efficiency and effectiveness!
  - change in incentive structures,
  - analytic capacity building at sub-national levels,
  - new and innovative differentiated models for prevention and re-engagement,
  - improved metrics for success (beyond yield) and indicators to for routine measurement
Thank you!