Differentiated Service Delivery for Key Populations

Virtual Meeting: August 25-26 and 30-31, 2021

WHO: HIV testing updates

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icap Global Health

HIV Learning Network
The CQUIN Project for Differentiated Service Delivery

SOUTH TO SOUTH LEARNING NETWORK
The HIV Prevention Interchange

Progress toward Global Targets: HIV testing

 # PLHIV Diagnosed (Millions)

Target 2030

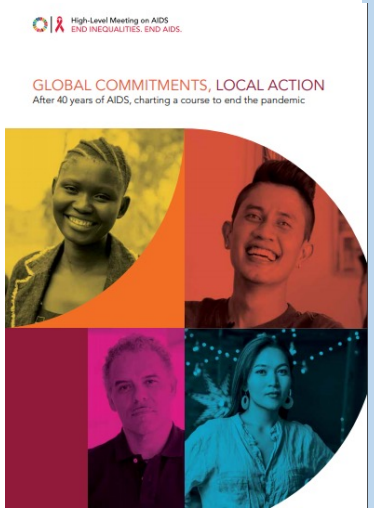
Target 2020

Test

Scale-up of successes – but gaps remain:
Costs of additional testing increasing, gaps remain, challenging to effectively focus and rationalize core and additional testing

Initial decelerated increase:
High hanging fruits more difficult to reach via traditional strategies

Initial slow start to steep increase
In 2005 ~10% PLHIV diagnosed. Increases marked by ramping up PITC



Estimated ~480 million HIV tests performed globally in 2019

Yet, 6 million (16%) PLHIV remain undiagnosed in 2020

What do we need to stay on track and reach the remaining undiagnosed PLHIV?

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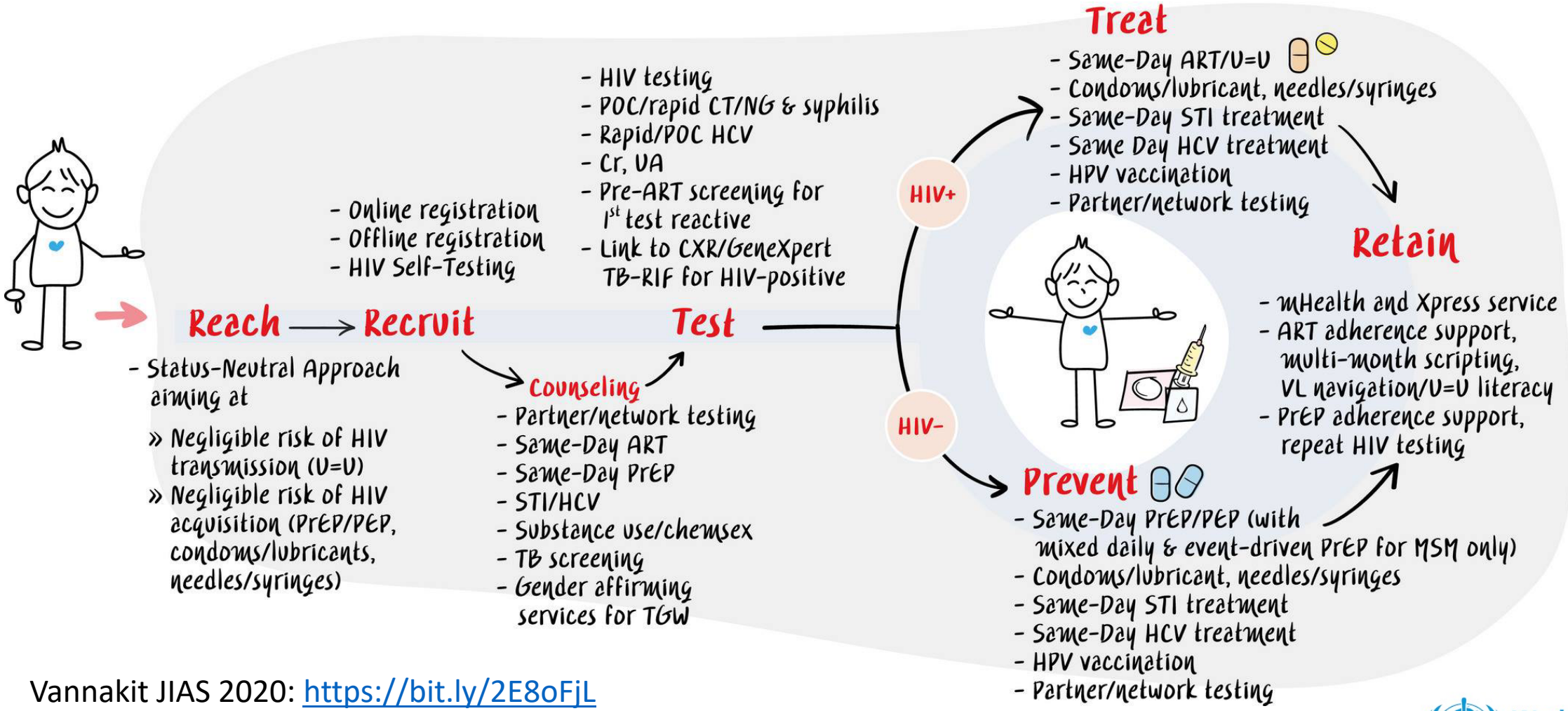
Source: WHO forecast 2020; UNAIDS 2021; WHO 2005; CHAI 2015; WHO, UNICEF, PEPFAR, GFTAM 2018; GAM reporting 14 October 2020

HIV testing is a key gateway



Vannakit JIAS 2020: https://bit.ly/2E8oFjL

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Case-finding focused HIV testing priorities

Effective Focused Facility-based HTS

High burden settings:
HTS in every health contact – integration

Low burden settings:
HTS in hotspots/select services (TB, STI, key pops)

HIVST & Community Approaches

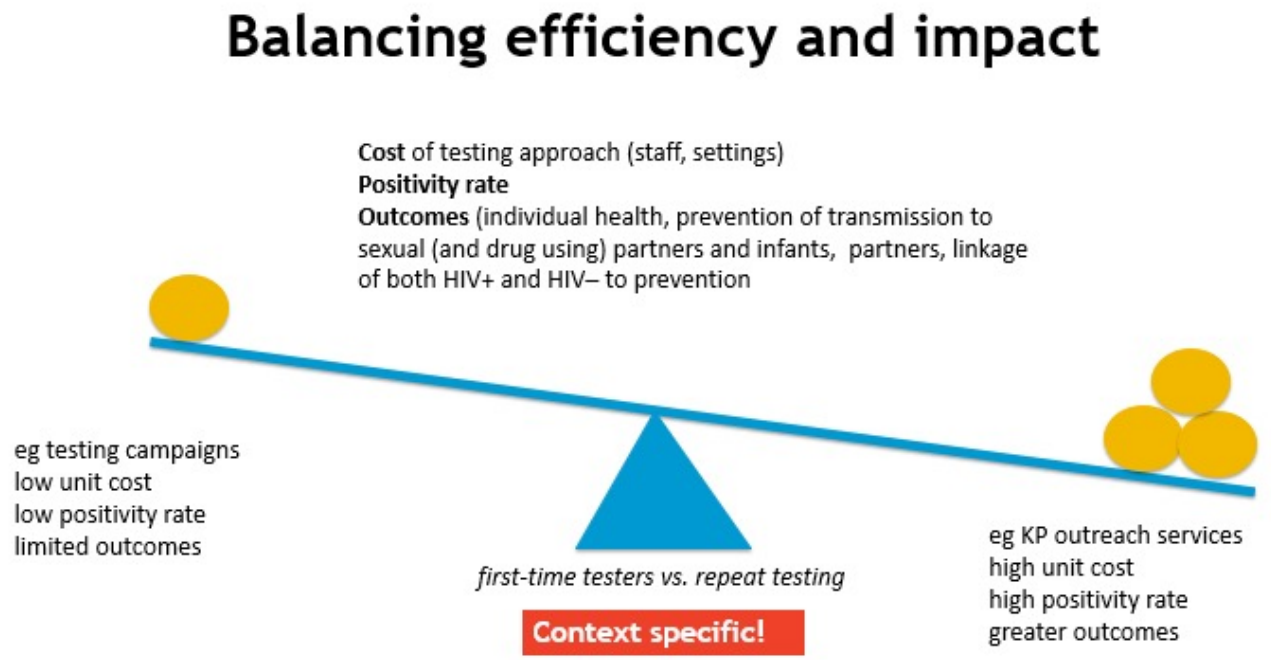
High burden settings:
outreach for key pops, partners PLHIV, hotspots, consider workplace, strategic outreach

Low burden settings:
outreach to key pops, partners PLHIV

Couples and Partners

High burden settings:
offer all, and for partners of KP and PLHIV

Low burden settings:
offer to KP and partners of PLHIV



- Reorienting HTS to reach the most PLHIV (#) who don't know their status as effectively and efficiently as possible (%)
- A strategic mix of HTS approaches and options needed to reach priority populations
  - Key populations and their partners, partners of PLHIV, young people (15-24) and men in ESA

Prevention focused HIV testing priorities

HIV testing services are also part of implementing and monitoring prevention services to help:

1. **HIV-negative** ppl stay negative (monitoring)
2. **Diagnose PLHIV at high risk** and start ART as soon as possible

Core **HIV Prevention** packages with HTS:

- **PMTCT (**1st ANC visit test for all**,** late pregnancy 3rd trimester only for KP or in high burden settings)
- **VMMC** – 1 test or self-test
- **PrEP** – quarterly testing
- **Key populations** testing at least annually (up to 3-6 month based on risk)
- **Serodiscordant couples** package of services annually (up to 3-6 month based on risk)
- **AGYW** in ESA package of services

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Way forward on HIV testing services

Tremendous progress over last decade:

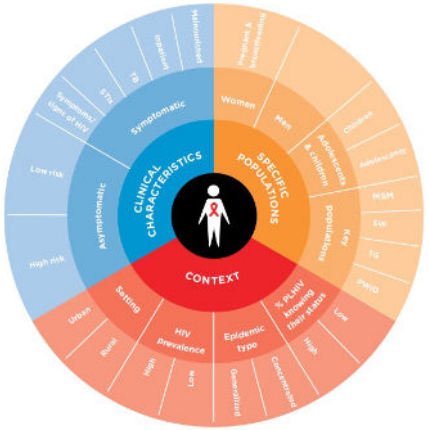
- Closer to achieving first 90 (or first 95) – but priority populations still missed.

Achieving high awareness of status is challenging:

- **Key populations** are more likely to be undiagnosed and contribute to new infections
- **Men (35-49 yrs)** and **AGYW** in sub-Saharan Africa
- **Partners of PLHIV**, ***STI patients*** missed
- **LTFU PLHIV** – who never started ART or need to be relinked to care
- Populations and settings affected and missed due to **COVID-19 related disruptions**

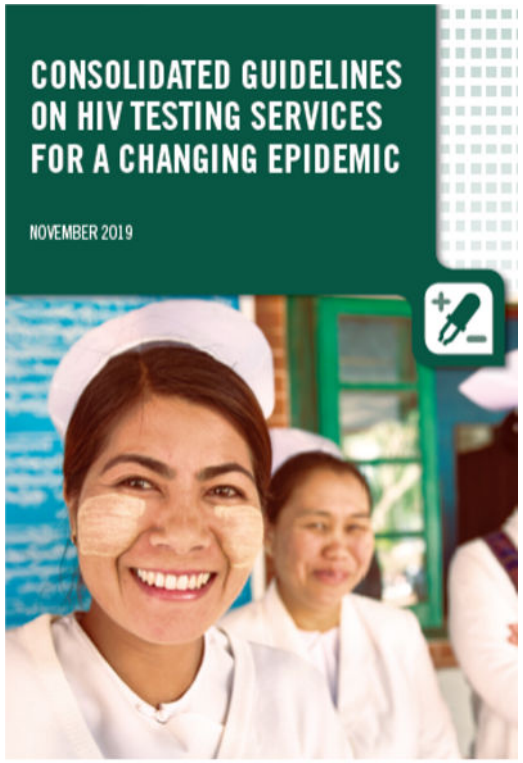
2030 target is 95% awareness – how to achieve it:

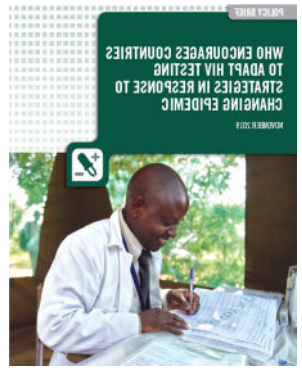
- Additional challenges, decreasing positivity.
- Need to optimize HIV testing services to focus on priority populations.
- Reduce both absolute and relative gaps.



Key populations are defined by WHO to include men who have sex with men, people who inject drugs, transgender people, sex workers and people in prison

WHO HIV testing services guidelines





Source: WHO 2019: https://www.who.int/publications/i/item/WHO-CDS-HIV-19.31

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Guiding principles for HIV testing services

WHO 5Cs encourage all testing to include:

- Consent
- Confidentiality
- Counselling (pre-test information and post-test messages)
- Correct results and
- Connection (linkage)

Source: WHO 2019

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Supportive policies essential for HIV testing services

- **Critical enablers**

- **Task-sharing HIV testing services with lay providers (WHO recommended)**
  - High uptake
  - Accurate
  - Often preferred
  - Low cost

WHO recommends:

- Initatives to protect and enforce privacy
- Prevent discrimination
- Promote tolerance

Source: WHO 2019

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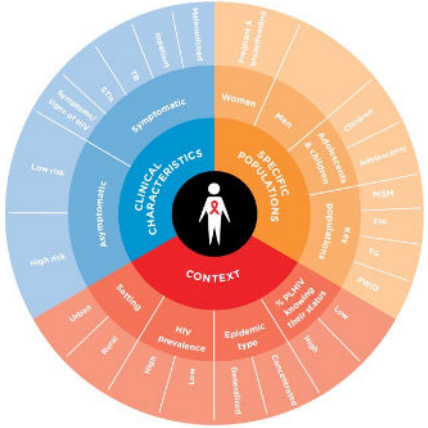
Strategic principles for HIV testing services

HTS approaches need to consider three dimensions for implementation:

1. Mobilizing and creating demand for testing
2. Testing service delivery
3. Linkage to post-test services

	Mobilizing and creating demand	HTS implementation	Linkage to care
When	Continuous, intermittent or focused	Time of day and frequency	Time period for linking and frequency of monitoring
Where	Location of mobilization activities	Health facility, other facility, community	Location of linkage activities
Who	Who does the mobilizing? Who is the focus for messages and mobilization?	Who does the HIV testing? Who is the focus for testing?	Who supports linkage to prevention or ART initiation?
What	What package of services and demand creation interventions?	What HTS approach?	What linkage intervention?

Approaches are then adapted based on the context, population and epidemic



Source: WHO 2019; IAS 2018

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Demand creation for HIV testing services

MOBILIZING

WHO good practices that increase uptake of HIV testing services:

Peer-led approaches

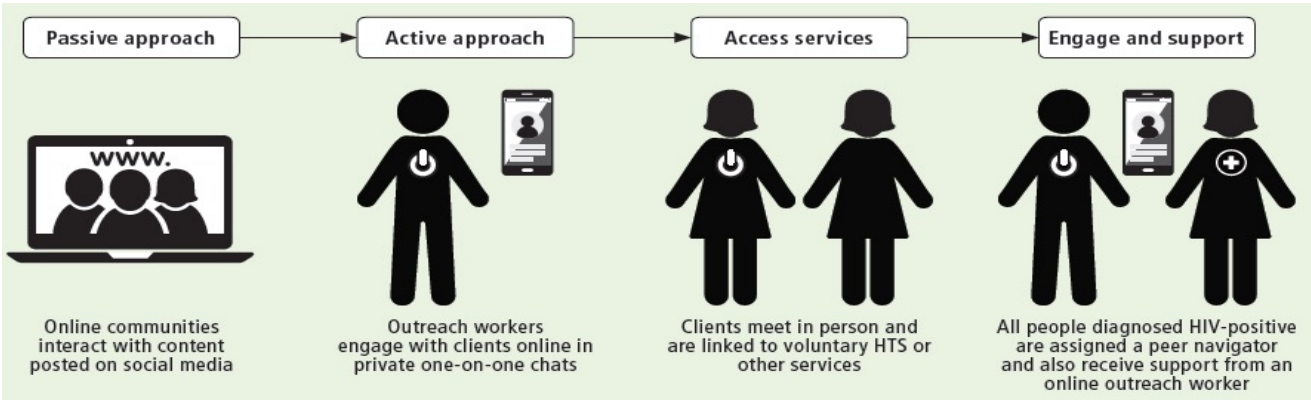
Virtual and digital tools

Videos

Messaging matters: Brief pre-test information advised over lengthy pre-test counselling (WHO good practice)

Experience from FHI360 (March 2016 to January 2019)

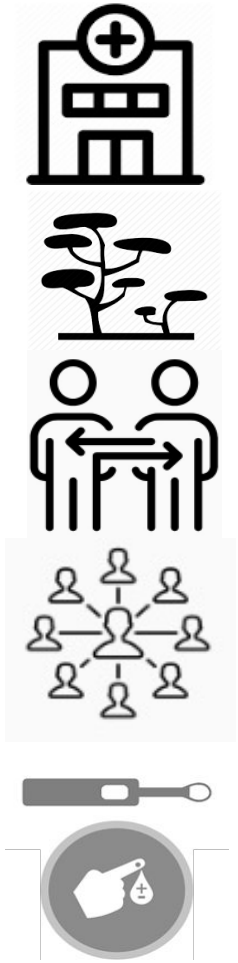
- Using online platforms, peer outreach workers counselled **6367 online users**, of **76%**(4879) tested.
- **75% of those contacted had never been in contact with a peer or outreach worker** and 1/3 self-assessed as being at substantial risk for HIV.
- Overall, 431 **(10%) individuals were diagnosed with HIV**. This ***HIV positivity is higher than among key populations*** seeking testing through other referrals (10% versus 6%).



Source: WHO 2019; FHI 360 2019

WHO-recommended HIV testing approaches

TESTING



Facility-based: Offering HIV testing in a facility, e.g. VCT, in-patient and out-patient clinics, ANC, **TB**, **STI**, **family planning/contraceptive services**
Community-based: Offering HIV testing in natural setting of the community, e.g. outreach, CBOs, workplace, clubs, bars.
Provider-assisted referral (i.e. index testing or assisted partner notification): Assisting individuals with HIV by contacting their sexual and/or drug injecting partners and offering them HIV testing services; and offering HIV testing to biological children.
Social network-based approaches: whereby key populations offer HTS to their social, sexual and drug injecting partners at risk of HIV. Includes HIV+ and HIV- key populations
HIV self-testing: Offering self-test kit for individual, and/or their partner, enabling them to collect their sample (oral or blood), perform test, and interpret results in private. All reactive results need confirmation.

Source: WHO 2019

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Supporting linkage to post-test services

LINKING

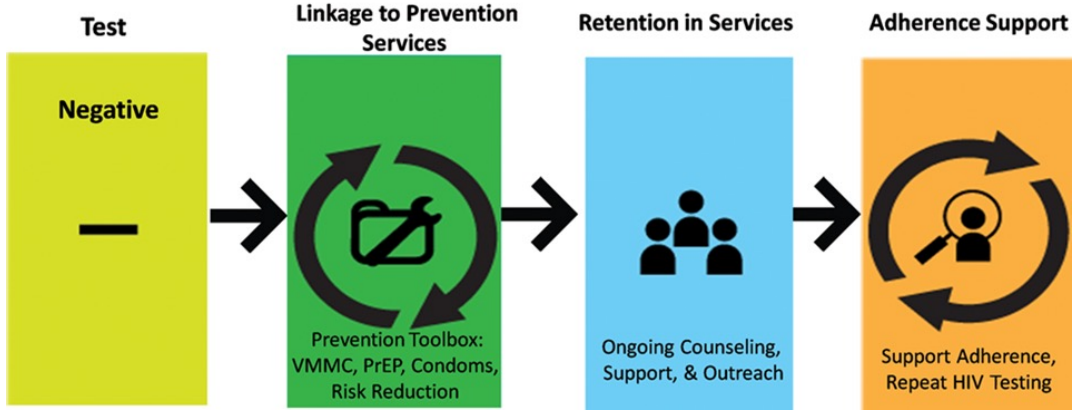
Offer of rapid ART initiation and providing a package of support services based on context and population including (*strong recommendation*):

- **streamlined interventions** to promote rapid initiation: enhanced linkage with case management, support for HIV disclosure, partner services, staff training and co-location of services *(moderate-quality evidence)*
- **peer support** (including peer counselling) and navigation approaches for linkage *(moderate-quality evidence)*; and
- **quality improvement** approaches using data to improve linkages *(low-quality evidence).*

Other considerations to support linkage and rapid ART initiation include:

- **Moving away from western blotting** to EIA and RDT-based approaches (strong recommendation)
- **People centred-care** models (best practice)
- Support offer of **treat all and same day offer** of ART for PLHIV regardless of CD4 cell count (best practice)
- Consider **friendly, flexible, digital tools, peers and community** strategies (& re-engaging LFTU PLHIV)

Don't forget prevention!



Source: WHO 2021; WHO 2019

Post-test messaging good practices

LINKING

- **Testing, prevention and treatment have evolved – and so have post-test counselling messages**
- **Messages need to be:**
  - **Clear and concise**
  - **Include referral and offer of rapid ART initiation**
  - **Include U=U information and messages**
  - **Discussion of partner services**
  - **Additional linkages (re-linking) to HIV prevention, care, support and other relevant services**

Key gap in messaging:

- WHO's 2019 review of studies and programme data found most messages did not explain that people who are on ART and virally suppressed will not transmit HIV to their partners
- Communicating this benefit is key and needs to be disseminated

Source: WHO 2019

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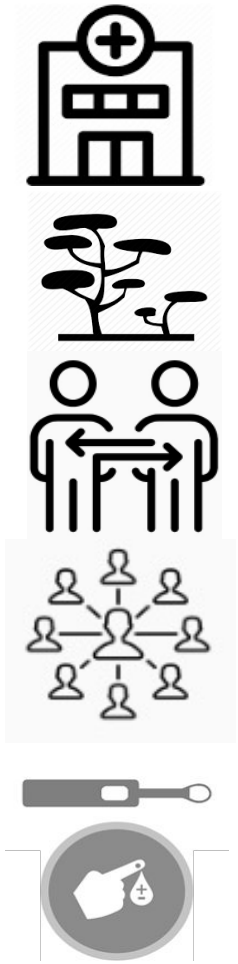
WHO-recommended HIV testing approaches: Critical for key populations

TESTING



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Source: WHO 2019

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Community-based HIV testing approaches

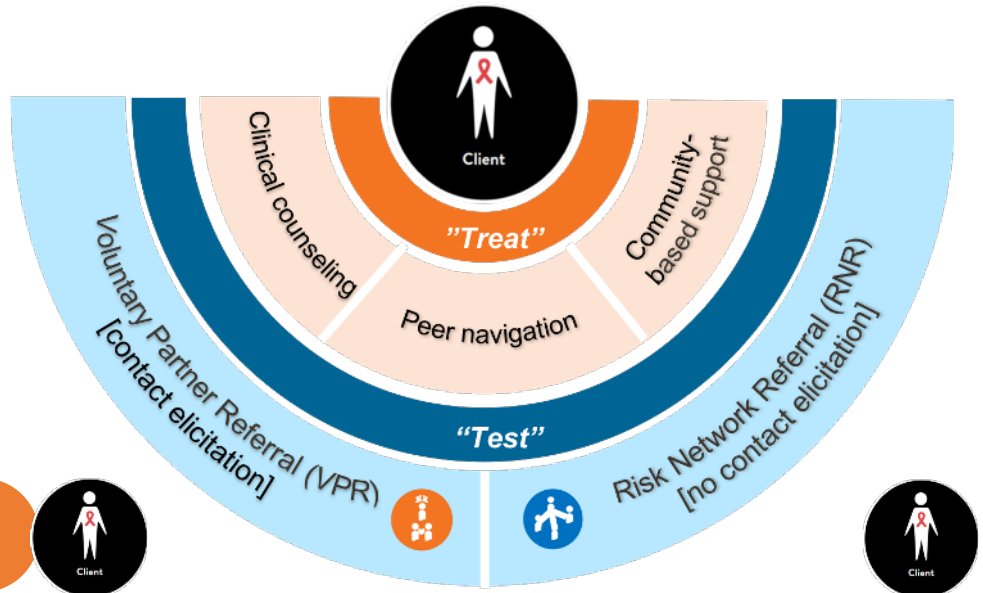
Testing model	No. of studies	Total no. tested	%CD4 >350	% Male	%1st time testers
Index	8	12,400	20-56%	45.3	95-97
Door-to-door	33	595,389	44-71%	45.9	30-90
Mobile	34	193,602	39-75	44.9	34-85
Mobile for key populations	30	44,623		62.9	42-69
Workplace	6	17,352	54	67.0	
School	4	2,678		42.2	

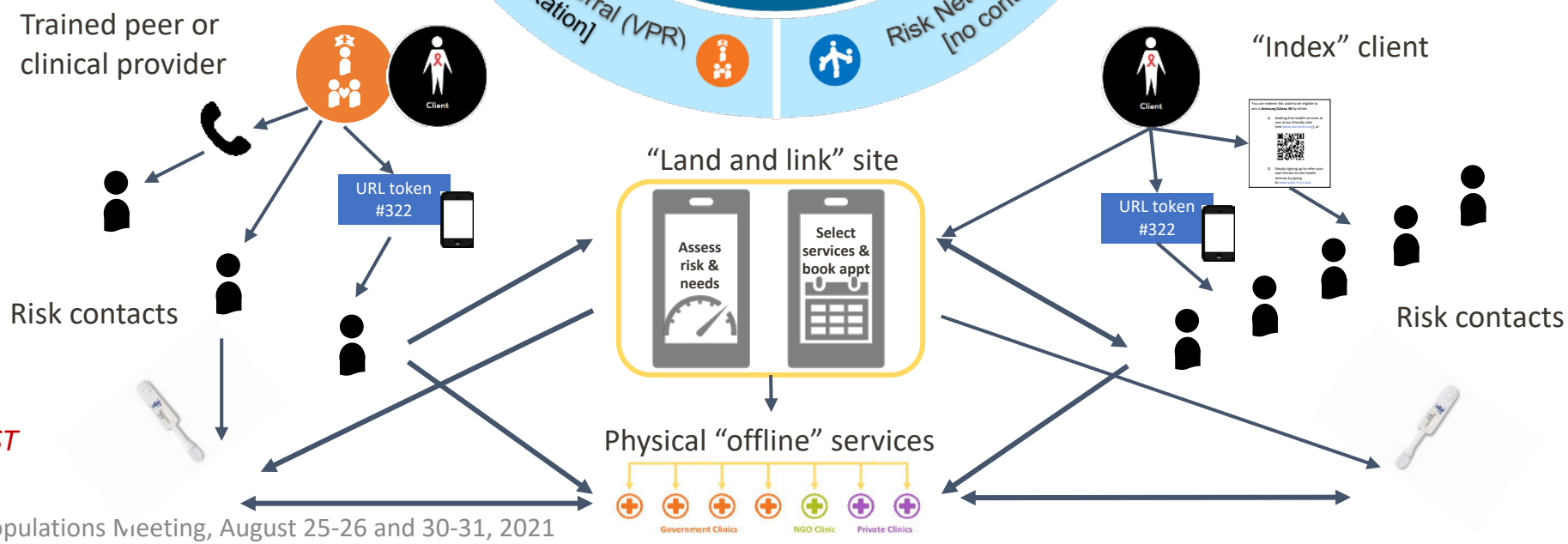
Towards universal voluntary HIV testing and counselling: a systematic review and meta-analysis of community-based approaches. Suthar AB, Ford N, Bachanas PJ, Wong VJ, Rajan JS, Saltzman AK, Ajose O, Fakoya AO, Granich RM, Negussie EK, Baggaley RC.PLoS Med. 2013 Aug

HIV partner services: Effective options and approaches

WHO recommends:
Providers-assisted referral (often called partner notification or index testing) for all partners and biological children of PLHIV *(strong recommendation)*

Provider-assisted referral:
- Increases # receiving HTS
- Increases % HIV+ diagnoses
- Cost-effective (especially with task sharing, opportunities for cost-saving with integration such as HIV/Syphilis)
- Social harm is rare
- Can be implemented with range of approaches, different types of assistance, virtual tools, and self-tests





Source: WHO 2019; Slide adapted from Michael Cassell, FHI 360

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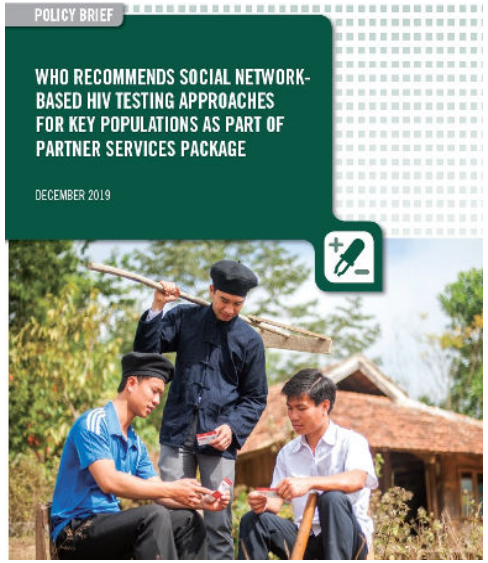
Social network approaches for reaching key populations and their partners

What are social networks and social network-based approaches (SNA)?

- A **social network** refers to a group of individuals linked by a common set of relationships or behaviours and includes sexual and drug-injecting partners as well as social contacts.
- **Social network-based HIV testing approaches** are an extension of HIV partner services: A trained provider asks PLHIV and/or those who are HIV-negative from key populations to encourage and invite individuals in their sexual, drug injecting or social networks to participate in voluntary HTS.



WHO recommendation

Social network-based approaches can be offered as an approach to HIV testing for key populations as part of a comprehensive package of care and prevention *(conditional recommendation)*.

Key evidence has shown SNA among key populations:

- may increase HIV diagnoses and identify additional PLHIV
- may increase the acceptability of HIV partner services
- feasible to implement
- can be an efficient use of resources when focused
- seldom result in any social harm or adverse events.

Source: WHO 2019

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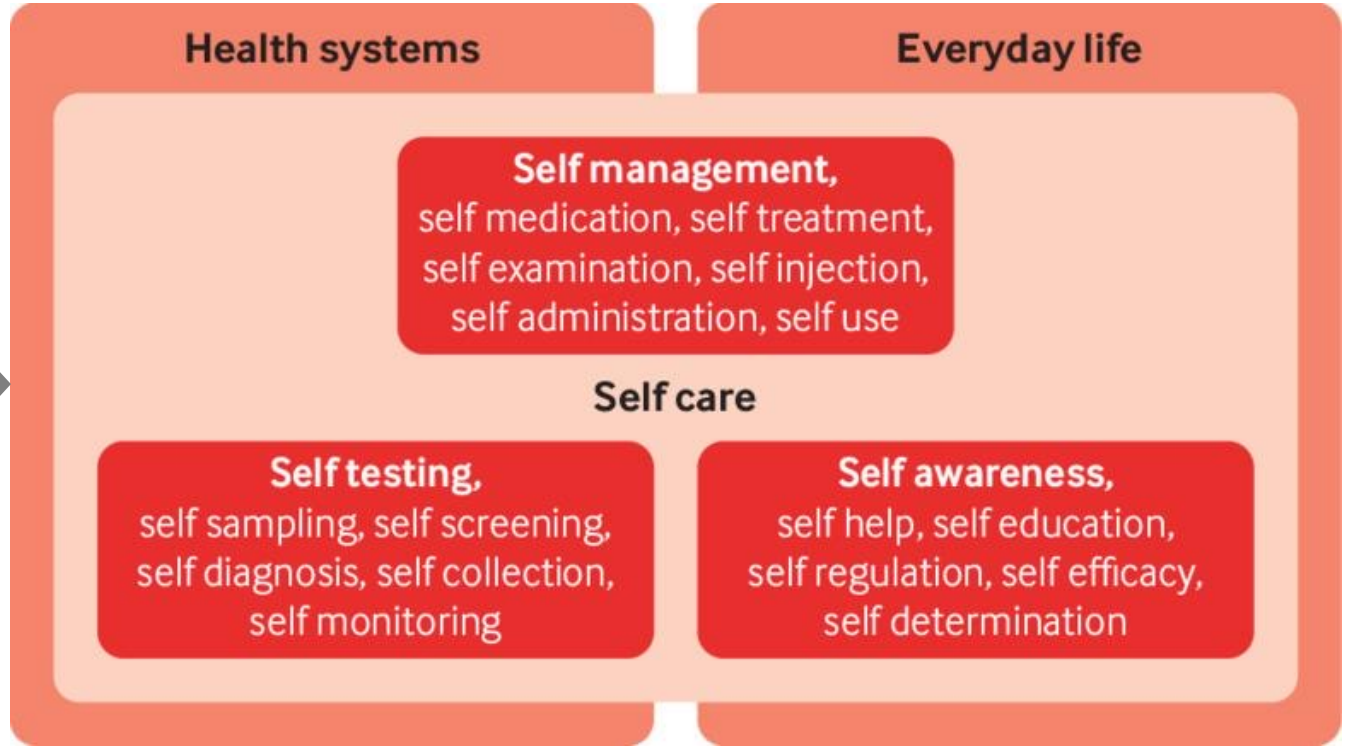
Self-care and self-testing

Self-care

The ability of individuals to promote health, prevent disease, maintain health, and cope with illness and disability with or without support of a healthcare provider.



Source: WHO, 2019, https://www.who.int/reproductivehealth/self-care-interventions/access-health-services/en/

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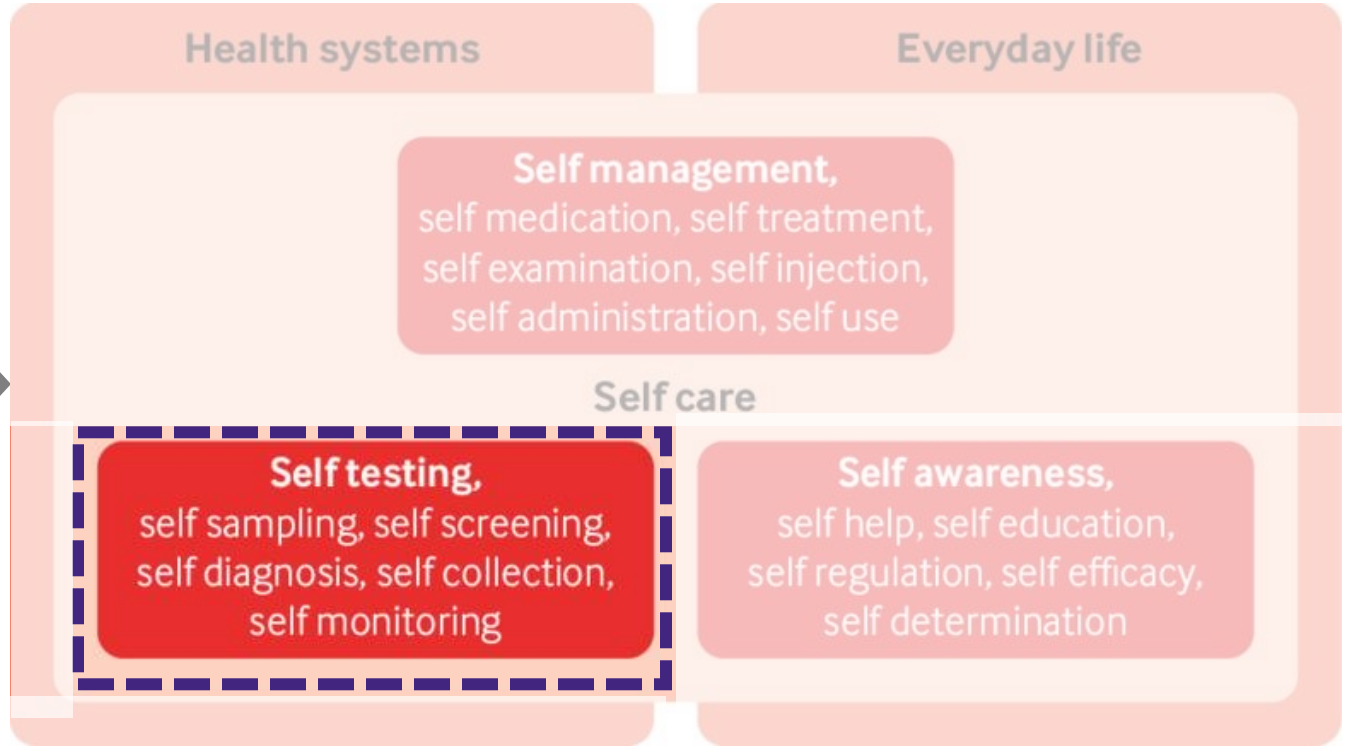

Source: WHO, 2019, https://www.who.int/reproductivehealth/self-care-interventions/access-health-services/en/

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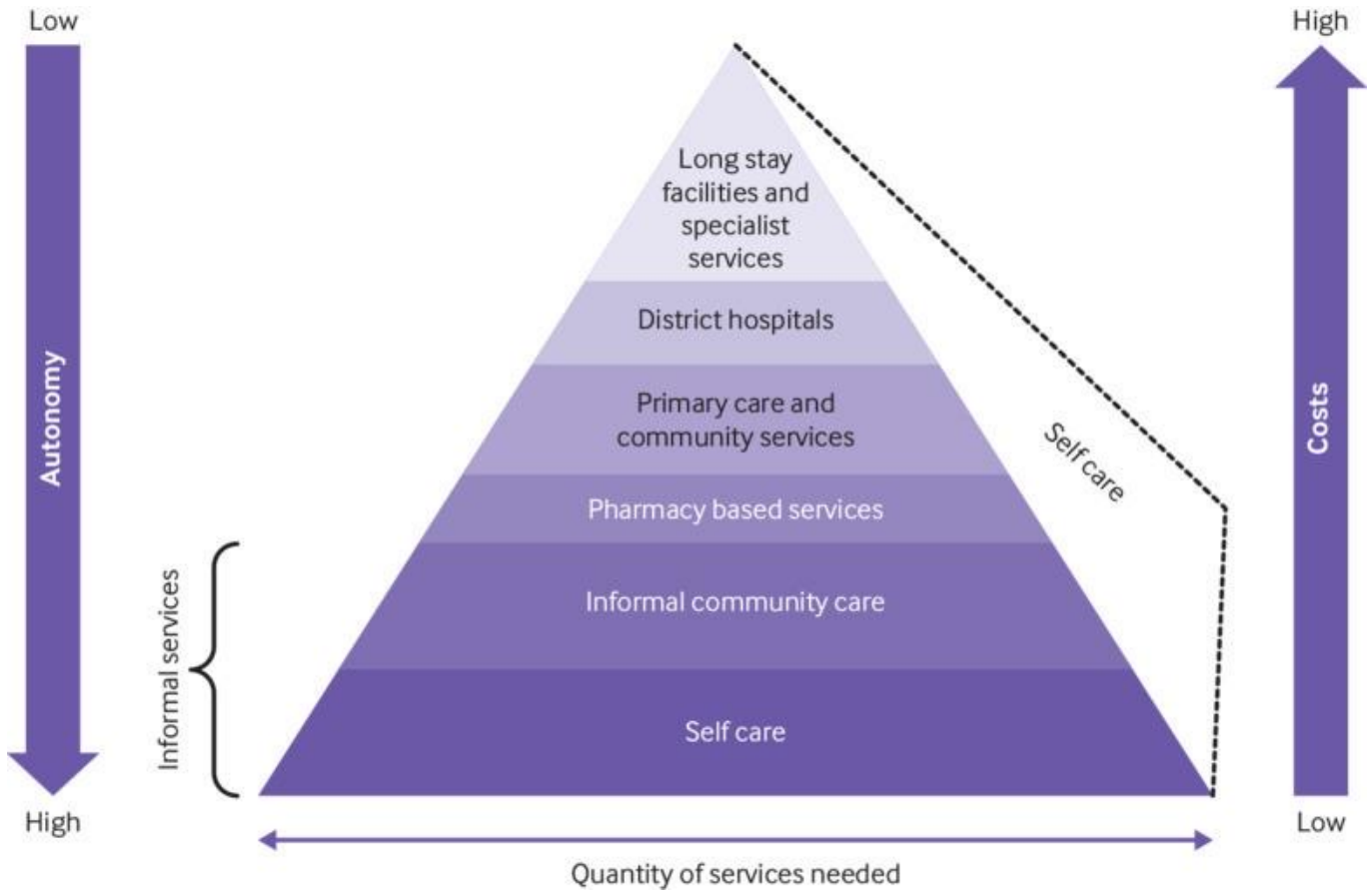
Self-care and self-testing: critical to health system



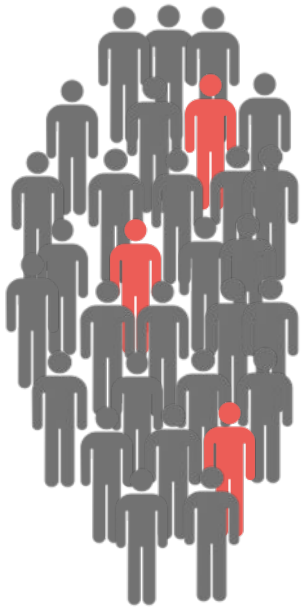
- Increase engagement and autonomy
- Increase access and equity
- Improve quality of care
- Increase efficiency
- Reduce costs to health system and individuals
- Expand UHC efforts

Source: Remme 2019, https://www.bmj.com/content/365/bmj.l1228

HIV Self-testing framework

PREPARATION

- Demand generation
- Support package
- Accessible & affordable



Uptake
HIV+/High risk

DIRECT ACTION

- Link to ART
- Re-link to ART
- Disclosure/Shared knowledge of status
- Link to Prevention
- Triaged out of Health System

DIRECTIMPACT

- Health for PLHIV: Reduced Morbidity & Mortality
- Reduced HIV Transmission & Infections Averted
- Cost and Time Savings (Health System & Users)

ADDITIONAL IMPACT

Social & Economic

- Population Productivity & Growth
- Social Benefit Social Harm

Health Systems

- Efficiency
- Expanded Coverage
- Equity of Health

**Adapted framework based on BMGF & UNITAID HIVST Meeting in January 2017*

DIFFERENT POPULATIONS | **DIFFERENT CONTEXTS** | **DIFFERENT GEOGRAPHIES**

WHO recommendations on HIV self-testing

Key evidence showed HIVST is:

- Safe and accurate
- Highly acceptable
- Increased access
- Increased uptake and frequency of **HIV testing among those at high risk and who may not test otherwise**
- Comparable linkage and more total HIV+ diagnoses
- Empowering
- Can be affordable and cost-effective when focused

WHO recommendation:

HIV self-testing should be offered <u>as an approach</u> to HIV testing services

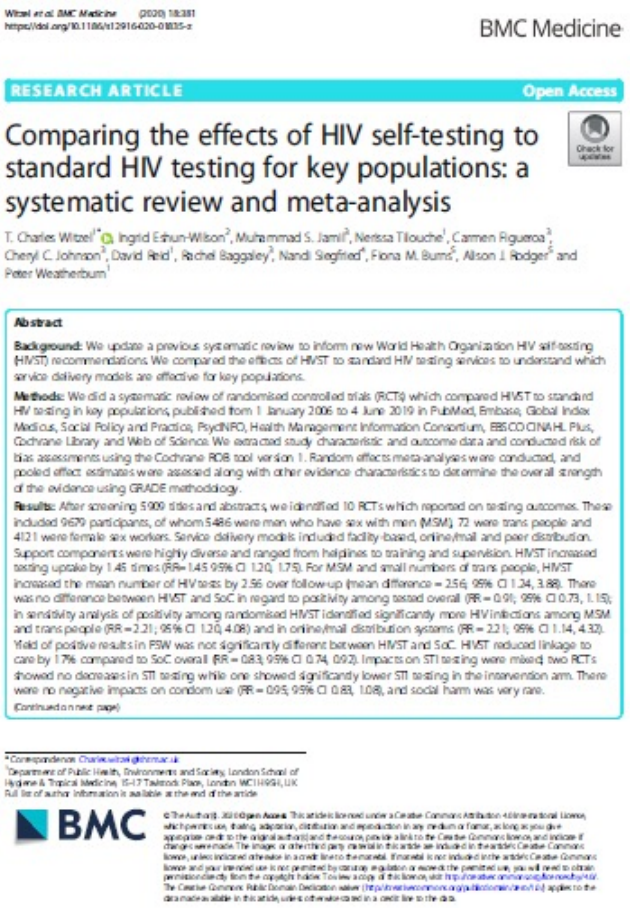
(strong recommendation, moderate quality evidence)

Remarks

- Providing HIVST service delivery and support options is desirable.
- Communities need to be engaged in developing and adapting HIVST models.
- HIVST does not provide a definitive HIV-positive diagnosis. Individuals with a reactive test result must receive further testing from a trained tester using the national testing algorithm.

Source: WHO 2019, Jamil et al 2019 review

HIV self-testing consideration among key populations



Witzel et al. BMC Medicine (2020) 18:381
https://doi.org/10.1186/s12916-020-01835-z

BMC Medicine

RESEARCH ARTICLE Open Access

Comparing the effects of HIV self-testing to standard HIV testing for key populations: a systematic review and meta-analysis

T. Charles Witzel[1*], Ingrid Eshun-Wilson[2], Muhammad S. Jamil[3], Nerissa Tilouche[1], Carmen Figueroa[3], Cheryl C. Johnson[3], David Reid[1], Rachel Baggaley[3], Nandi Siegfried[4], Fiona M. Burns[5], Alison J. Rodger[6] and Peter Weatherburn[1]

Abstract

Background: We update a previous systematic review to inform new World Health Organization HIV self-testing (HIVST) recommendations. We compared the effects of HIVST to standard HIV testing services to understand which service delivery models are effective for key populations.

Methods: We did a systematic review of randomised controlled trials (RCTs) which compared HIVST to standard HIV testing in key populations, published from 1 January 2006 to 4 June 2019 in PubMed, Embase, Global Index Medicus, Social Policy and Practice, PsycINFO, Health Management Information Consortium, EBSCO CINAHL Plus, Cochrane Library and Web of Science. We extracted study characteristic and outcome data and conducted risk of bias assessments using the Cochrane ROB tool version 1. Random effects meta-analyses were conducted, and pooled effect estimates were assessed along with other evidence characteristics to determine the overall strength of the evidence using GRADE methodology.

Results: After screening 5909 titles and abstracts, we identified 10 RCTs which reported on testing outcomes. These included 9679 participants, of whom 5486 were men who have sex with men (MSM), 72 were trans people and 4121 were female sex workers. Service delivery models included facility-based, online/mail and peer distribution. Support components were highly diverse and ranged from helplines to training and supervision. HIVST increased testing uptake by 1.45 times (RR= 1.45 95% CI 1.20, 1.75). For MSM and small numbers of trans people, HIVST increased the mean number of HIV tests by 2.56 over follow-up (mean difference = 2.56; 95% CI 1.24, 3.88). There was no difference between HIVST and SoC in regard to positivity among tested overall (RR = 0.91; 95% CI 0.73, 1.15); in sensitivity analysis of positivity among randomised HIVST identified significantly more HIV infections among MSM and trans people (RR = 2.21; 95% CI 1.20, 4.08) and in online/mail distribution systems (RR = 2.21; 95% CI 1.14, 4.32). Yield of positive results in FSW was not significantly different between HIVST and SoC. HIVST reduced linkage to care by 17% compared to SoC overall (RR = 0.83; 95% CI 0.74, 0.92). Impacts on STI testing were mixed; two RCTs showed no decreases in STI testing while one showed significantly lower STI testing in the intervention arm. There were no negative impacts on condom use (RR = 0.95; 95% CI 0.83, 1.08), and social harm was very rare.

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- **HIVST increased uptake compared to standard testing among KP (10 RCTs)**
- HIVST more than **doubles positivity** compared to standard testing among KP (all those randomized; 9 studies)
- Slight decrease in linkage among KP – however no difference in MSM/TG populations, suggesting **FSW are key group that may need more support**
  - FSW studies (2) suggesting lower linkage both used **peer educator models** distributing kits via educators and/or a coupon to get kits at clinic/pharmacy.
  - **FSW consultations important** for designing linkage strategies
  - Evidence in general populations on enhancing linkage following HIVST suggest: **home-based ART, provider-incentives and peer navigators are effective**; such strategies could be considered and adapted for KP
- Results consistent across settings and showed multiple HIVST approaches are beneficial among KP
  - **Online and mail HIVST distribution** perform particularly well increasing uptake and positivity compared to standard testing among KP

Source: WHO 2019, Witzel et al BMC Med 2020; Eshun-Wilson CID 2021; Jamil EClinMed 2021

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Conclusions

- HTS progress – we've come a long way but the challenges remain
  - Must continue to adapt to the changing HIV epidemic
  - Focusing on available data, priority populations, settings and approaches increasing critical to be efficient and effective
  - Efforts ahead – especially in light of COVID-19 will require solutions, virtualization of services and self-care/self-testing are critical

- Many strategic HTS approaches for reaching KP
  - It's not 1-size fits all but about a strategic mix of patient-centered approaches for KP which consider mobilization, testing service delivery and linkage
  - Scale-up of KP approaches needs to include both case-finding and prevention driven HTS strategies
  - Ongoing monitoring and engagement with communities is essential

For more information on HIV testing services

WHO HIV Testing Services Dashboard

WHO HIV Testing Services Info App

WHO HTS GL

Questions?

Contact: Cheryl Johnson **johnsonc@who.int**

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