Lessons learned from HIV testing scale-up

 # PLHIV Diagnosed (Millions)

Target 2025   **2030**
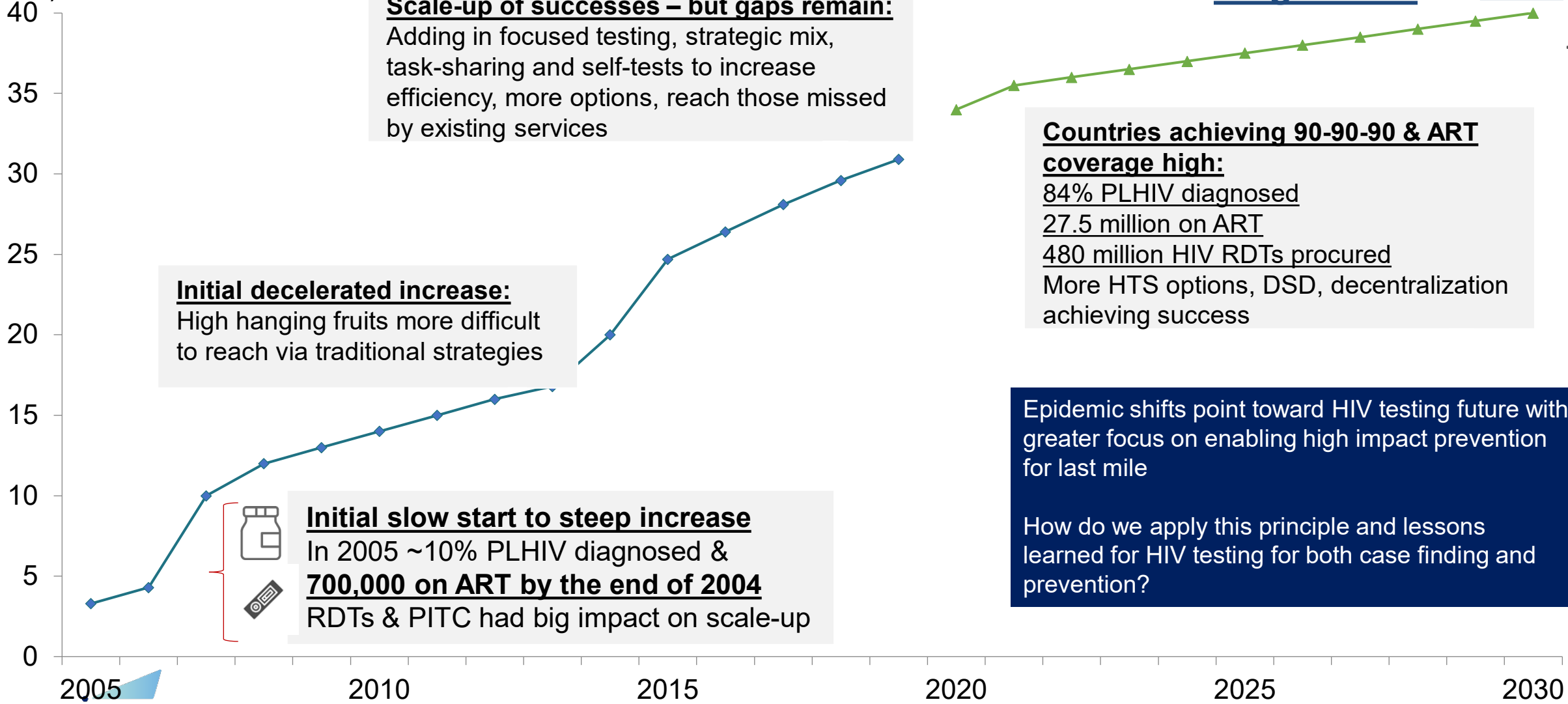
Test

Scale-up of successes – but gaps remain:
Adding in focused testing, strategic mix, task-sharing and self-tests to increase efficiency, more options, reach those missed by existing services

Countries achieving 90-90-90 & ART coverage high:
84% PLHIV diagnosed
27.5 million on ART
480 million HIV RDTs procured
More HTS options, DSD, decentralization achieving success

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

Epidemic shifts point toward HIV testing future with greater focus on enabling high impact prevention for last mile

How do we apply this principle and lessons learned for HIV testing for both case finding and prevention?
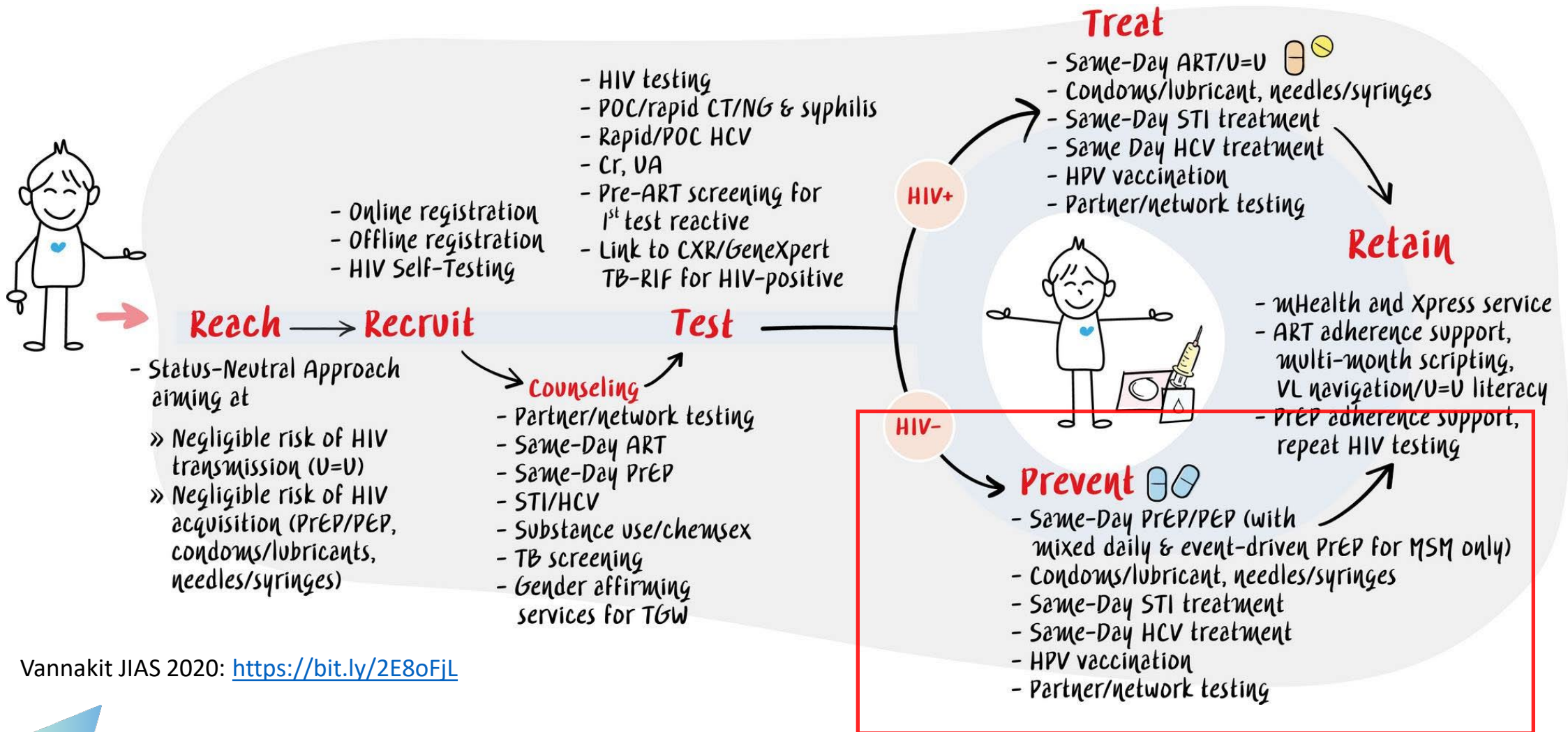
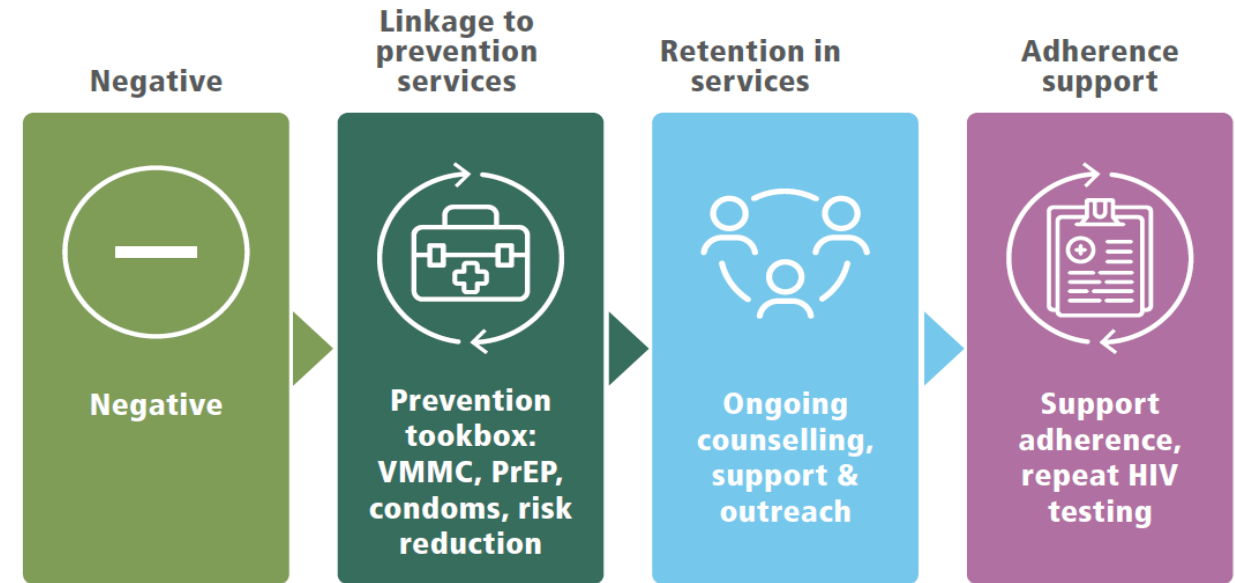**Initial slow start to steep increase**
In 2005 ~10% PLHIV diagnosed & **700,000 on ART by the end of 2004**
RDTs & PITC had big impact on scale-up

Shifting to status neutral testing, renewed focus on prevention

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

Linkage, engagement & re-engagement in HIV prevention

WHO recommendations on linkage:

- **streamlined interventions** to promote rapid initiation: enhanced linkage with case management, support for HIV disclosure, partner services, staff training and co-location of services
  - *Scoping review specifically for linkage to prevention*

- **RDTs for same-day diagnosis** instead of western-blotting based testing/EIA

- **peer support** (including peer counselling) and navigation approaches for linkage

- **quality improvement** approaches using data to improve linkages

Negative	Linkage to prevention services	Retention in services	Adherence support
Negative	Prevention tookbox: VMMC, PrEP, condoms, risk reduction	Ongoing counselling, support & outreach	Support adherence, repeat HIV testing

Source: McNairy M and El Sadr W, 2014 *(70)*.

Additional good practices to optimize prevention linkage:
- **People centred-care** models (best practice)
- Support offer of **VMMC, Harm reduction, PrEP & PEP through DSD and HIVST-**supported delivery models
- Consider **friendly, flexible, digital tools, peers and community** strategies (& re-engaging LFTU PLHIV)

WHO 2019: https://www.who.int/publications/i/item/978-92-4-155058-1

Why, how and when to monitor Linkage to HIV Prevention?
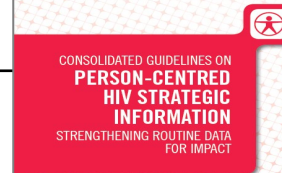
|	
WHY?	• To ensure those most likely to benefit have access to interventions • To enhance effectiveness and impact of interventions • To derive service level denominators to monitor if service provision is meeting demand
HOW?	• Conversations during consultations are key to understanding individuals HIV prevention needs • Questions on risk factors can be helpful as a counselling tool to extend access to HIV prevention • Program data on services received can indicate potential ongoing demand
WHEN?	• Exposure to risk and HIV prevention needs change over time. Data should be collected longitudinally • Data on HIV prevention need gathered in the course of providing services can be recorded
Inclusion not Exclusion	• Providers should offer prevention interventions to all people who request them. • Prioritization questions should never be used to exclude people from HIV prevention interventions, especially if individuals have self-identified as concerned about HIV and are motivated to use HIV prevention.

CONSOLIDATED GUIDELINES ON **PERSON-CENTRED HIV STRATEGIC INFORMATION** STRENGTHENING ROUTINE DATA FOR IMPACT

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Consolidated Guidelines on Person-Centred HIV Strategic Information

CONSOLIDATED GUIDELINES ON PERSON-CENTRED HIV STRATEGIC INFORMATION
STRENGTHENING ROUTINE DATA FOR IMPACT
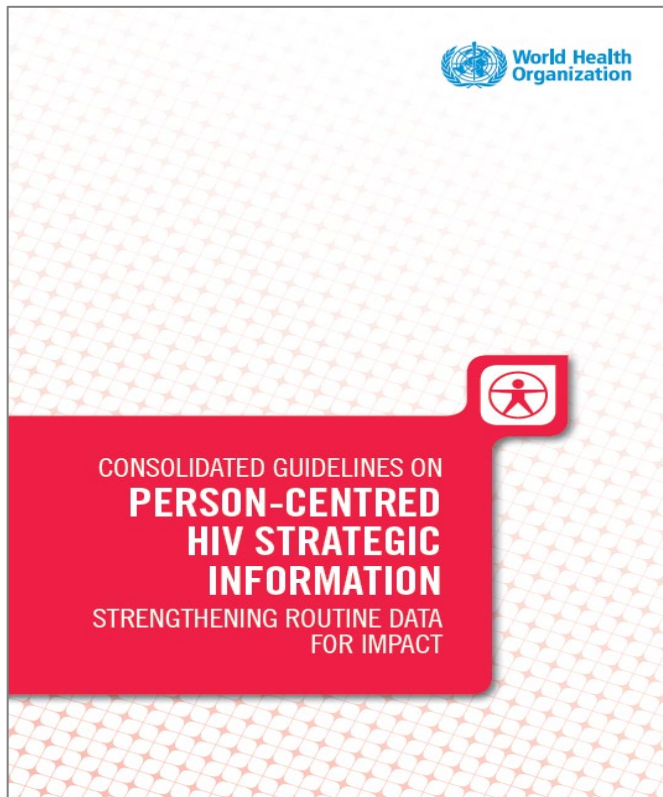
Key recommendations

NEW 1. The collection of a **minimum dataset of individual-level data elements on HIV prevention interventions** is recommended to measure interventions received and health outcomes among individuals seeking HIV prevention.

NEW 2. **Individual-level data on HIV prevention** should be used, alongside other available data sources, to strengthen the measurement of:

a) the **coverage of interventions** provided to populations affected by HIV, to increasingly measure individual people reached rather than services delivered

b) **prevention impact** through longitudinal assessment of HIV status at the facility, subnational and national levels.

NEW 3. The collection of **clinical and behavioural information on factors associated with HIV acquisition** in routine health information systems is suggested to aid in offering HIV prevention interventions to those who may benefit from them and to estimate service-level denominators for the calculation of programme monitoring indicators. An individual's need for HIV prevention changes over time, based on individual, structural and contextual factors. Therefore, for the purposes of service delivery and M&E, information on HIV prevention should be collected frequently.

NEW 4. It is recommended that **HIV data systems that capture an individual's sensitive clinical and behavioural information (that is, on stigmatized and criminalized behaviours) do not link these data to personally identifying information.** This separation of sensitive behavioural and personally identifying information should be maintained when linking HIV prevention data systems to other clinical datasets (such as for HIV treatment) containing personal identifiers.

Key Recommendations for Prevention

22 data elements across six prevention interventions & HIV testing

Intervention	Minimum dataset
HIV testing	• HIV test sample date • type of HIV test (for example, rapid test, dual syphilis/HIV) • HIV test result
Condom programming	• date individual was provided with condoms (where recording this information is practical and appropriate, this could include provision of condoms to people from key populations in the context of outreach)
Pre-exposure prophylaxis (PrEP)	• date PrEP prescribed (includes initial prescription and repeats) • date PrEP dispensed (if available from dispensing pharmacy or community distribution) • PrEP product prescribed (for example, oral; long-acting formulation/device, such as dapivirine vaginal ring (DPV-VR), injectable cabotegravir (CAB-LA)) • volume of PrEP product prescribed/dispensed (for example, number of pills, number of devices) • date individual attends follow-up appointment
Post-exposure prophylaxis (PEP)	• date PEP prescribed • date individual completes PEP course (ascertained at follow-up)
Needle–syringe programmes (NSP)	• date injecting equipment provided • number of needles–syringes provided
Opioid agonist maintenance treatment (OAMT) for opioid dependence	• date OAMT initiated • date OAMT dose received • date OAMT take-away dose(s) dispensed • first date maintenance dose received • date of loss to follow-up or OAMT stopped
Voluntary medical male circumcision (VMMC)	• date VMMC received • date of follow-up • date of adverse event related to VMMC reported • type of severe adverse event.

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Priority indicators for HIV prevention

16 programme and 1 survey prevention priority indicators & 9 additional indicators

Programme indicators

Ref.no	Short name
Condom programming	
PRV.1	Condoms distributed
Pre-exposure prophylaxis (PrEP)	
PRV.2	Total PrEP recipients
PRV.3 (NEW)	PrEP coverage
PRV.4 (NEW)	Volume of PrEP prescribed
Post-exposure prophylaxis (PEP)	
PRV.5 (NEW)	Number of PEP recipients
PRV.6 (NEW)	PEP completion
PRV.7 (NEW)	HIV in PEP recipients

Needle-syringe programme (NSP)	
PRV.8 (NEW)	NSP coverage
PRV.9 (NEW)	Regular NSP access
PRV.10	Needles-syringes distributed
Opioid agonist maintenance treatment (OAMT)	
PRV.11	OAMT coverage
PRV.12 (NEW)	Total person-years on OAMT
PRV.13 (NEW)	OAMT minimum duration
PRV.14 (NEW)	OAMT minimum dose
Voluntary medical male circumcision (VMMC)	
PRV.15	VMMC scale-up

Survey indicators

Ref.no	Short name
Condom programming	
PRV.17	Condom use (key populations and general population)

Considerations for measuring Linkage interventions
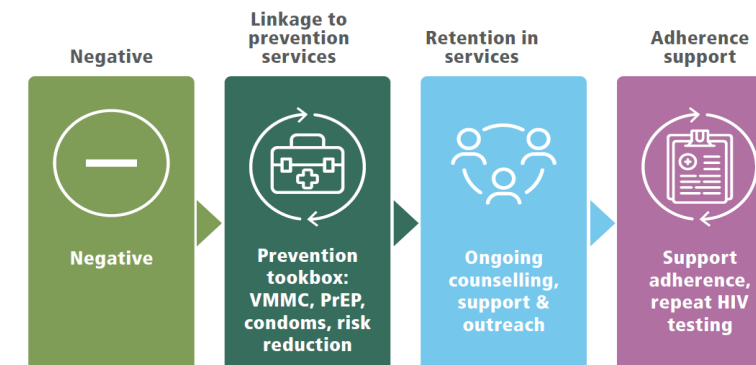
- Person-centered monitoring and evaluation
  - Are we linking the RIGHT people to the RIGHT services
    - Measuring and monitoring risk prioritization
- What constitutes a successful linkage?
  - Using prevention indicators as proxy to measure uptick of prevention services e.g. PrEP
  - Virtual platforms
    - Both to measure service delivery and linkage
      - WhatsApp message, other social media etc

Delivery and measurement of these interventions differs

- Some are delivered at a single point in time (VMMC, PEP)
- Others are episodic (STI diagnosis & treatment)
- Others continue as long as required (PrEP, NSP, OAMT)

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Other Considerations

- Capacity building
  - Monitoring linkage is labour intensive-appropriate training and tools are required to support front line workers
  - Strengthening data use at all levels & from all sources (population-based surveys, modelling, quality of care measures, community-led monitoring and others).

- Integration of entry points for HIV testing, linkage mechanisms and prevention services
  - Map process flows, interoperability of data systems

- Investments in infrastructure (preferably point of care systems e.g. smart phones)
  - Digital systems, appropriate architecture and legal systems, interoperability
  - Special emphasis on confidentiality
  - Role of unique identifiers

Negative

Negative

Linkage to prevention services

Prevention toolbox: VMMC, PrEP, condoms, risk reduction

Retention in services

Ongoing counselling, support & outreach

Adherence support

Support adherence, repeat HIV testing

Source: McNairy M and El Sadr W, 2014 (70).

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Information Systems to measure linkage to prevention

- Routine health information/program data
  - Requires definition of minimum data set and specific indicators for linkage to prevention
  - Challenges with longitudinal registers
    - Complex
    - May require unique identification
    - Sub-optimal linkage of services and service delivery points
  - Role of Quasi-experimental studies e.g. time series analysis

- Population-based surveys
  - Could measure both coverage and impact simultaneously (PHIAS)
  - Include relevant question in population based surveys, demographic health surveillance or integrated bio-behavioral surveys- use the next PHIA and IBBS lite (for key populations) as a pilot

Using modelling data to measure impact of HIVST

- ATLAS programme successfully used triangulation methods to understand impact of HIVST on HTS & ART proramme
- This method can be scaled-up and adapted for HIV prevention (e.g. VMMC, PMTCT/partner testing, PrEP) where HIVST is being used to support service delivery
- Reference: https://doi.org/10.1097/QAD.0000000000003328

EPIDEMIOLOGY SCIENCE

Routine programmatic data show a positive population-level impact of HIV self-testing: the case of Côte d'Ivoire and implications for implementation

Simo Fotso, Arlette[a,b]; Johnson, Cheryl[c]; Vautier, Anthony[d]; Kouamé, Konan Blaise[e]; Diop, Papa Moussa[d]; Silhol, Romain[f]; Maheu-Giroux, Mathieu[g]; Boily, Marie-Claude[f]; Rouveau, Nicolas[a]; Doumenc-Aïdara, Clémence[d]; Baggaley, Rachel[c]; Ehui, Eboi[e]; Larmarange, Joseph[a]

Author Information

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Metrics

Abstract

Objectives:

We estimate the effects of ATLAS's HIV self-testing (HIVST) kit distribution on conventional HIV testing, diagnoses, and antiretroviral treatment (ART) initiations in Côte d'Ivoire.
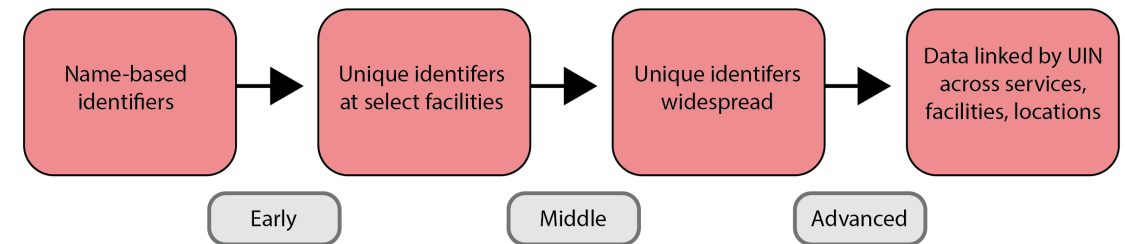
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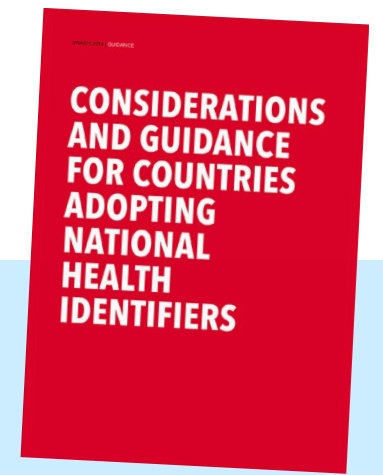
Unique Identifiers

Alphanumeric codes that support individuals to identify themselves when accessing a variety of health services ...

➢ Enables:

- access to services if people move between facilities
- separating identifying information from health records
- potential for nefarious tracking / linking of data

➢ Content largely pulls from UNAIDS/PEPFAR guidance and 2017 WHO SI Guidelines

➢ Section further framed around issues for key populations.

Development pathway for unique identifiers

1. **Situation Analysis** (UNAIDS guidance)
2. Invest in improved **data security**
3. **Invest in data use** to improve programs
4. Planning of **program improvement and sustainability**

➢ Outline of broad stages of the maturation pathway.

➢ Detailed considerations for each step of the maturation pathway

CONSIDERATIONS AND GUIDANCE FOR COUNTRIES ADOPTING NATIONAL HEALTH IDENTIFIERS

Name-based identifiers → Unique identifers at select facilities → Unique identifers widespread → Data linked by UIN across services, facilities, locations

Early — Middle — Advanced

➢ Implementation details, including system architecture, international standards for unique identifiers, technical components of a unique identifier system.

- Conceptualize and design a linkage to prevention cascade

➢ # tested for HIV

  ➢ # HIV-negative with current or ongoing HIV risk

   ➢ Uptake of linkage interventions [How to measure?]

    ➢ # or % accessing prevention intervention e.g. PrEP

     ➢ Effective use of PrEP

      ➢ Incidence rates

- Refer to Creating Prevention Cascades (UNAIDS, 2021)

Questions for HIV prevention prioritization	Lower prevention benefit	Higher prevention benefit
During the past 12 months, did you have a non-regular sex partner? *A non-regular partner is someone who is not a spouse or boyfriend/girlfriend.*	☐ No	☐ Yes
During the past 12 months have you had sex with someone who was HIV-positive or whose HIV status you don't know?	☐ No	☐ HIV-positive ☐ HIV status unknown
During the past 12 months, have you been diagnosed with or received treatment for a sexually transmitted infection?	☐ No	☐ Yes
During the past 12 months, have you received money or goods in exchange for sex?	☐ No	☐ Yes
During the past 12 months, have you ever injected drugs?	☐ No	☐ Yes
Men only: During the past 12 months, have you had sex with a man?	☐ No	☐ Yes

Conclusion

- Strengthening routine, individual-level data systems improves national capacity to monitor and respond to health needs in real time at local and national levels
    - Improves quality of care, surveillance, programme performance and impact
    - Is sustainable and scalable
    - Increases capacity to link across different data systems (laboratory, pharmacy, logistics management)
    - Facilitates longitudinal records and patient access to their personal health record for continuity of care
    - Contributes to other surveillance exercises – modeling/estimation

- Better integration across related infections (HIV, STIs, hepatitis, TB, cervical cancer) will improve health outcomes and linkage between health services, keeping the person at the center over time

- Limitations of routine data means that using data from multiple sources is essential for review and measure programme performance (surveys, cohorts, modeled estimates, CLM etc.)
    - Data quality affected by limited resources for infrastructure or human resources

Acknowledgements

Rachel Baggaley, Cheryl Johnson, Maggie Barr-DiChiara,, Purvi Shah, Belen Dinku, Carlota Bapista Da Silva, Muhammad Jamil, Anita Sands, Celine Lastrucci, Shona Dalal, Bradley Mathers

All other partners including ATLAS for permission to use slides

For more information on HIV testing services

WHO HIV Testing Services Dashboard	WHO HIV Testing Services Info App	WHO HTS GL

Questions?

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Thank you!