Optimizing community-led and integrated health services using point-of-care testing

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Content

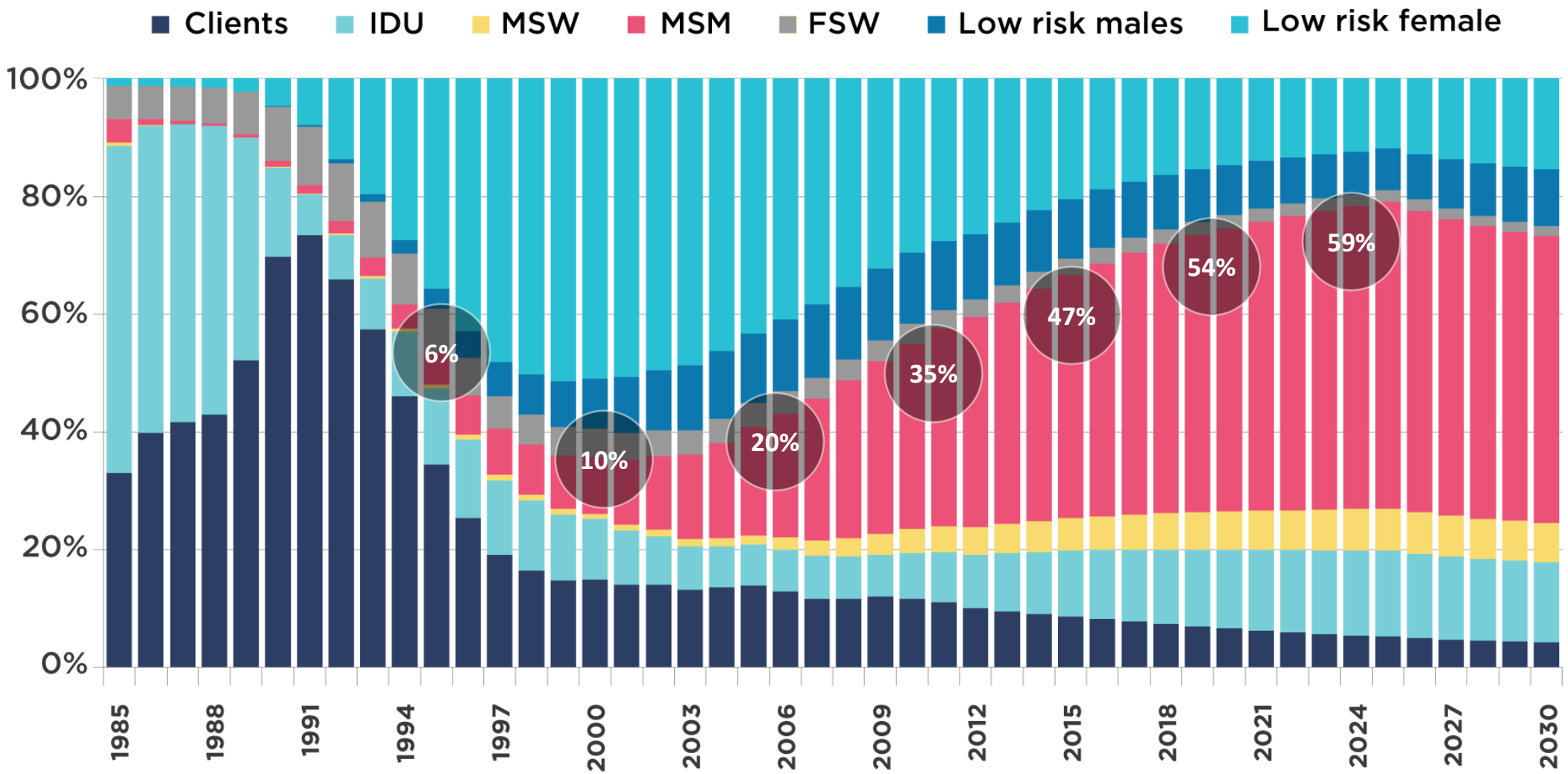
- Putting people in the center for integrated HIV, viral hepatitis and STIs services
- Key population-led health services (KPLHS)
- Roles of POC testing to streamline HIV, viral hepatitis and STIs services in KPLHS
- Economy of scope with service integration beyond HIV, viral hepatitis and STIs

Putting people at the center for HIV, viral hepatitis and STIs services

- Share modes of transmission, socio-ecological determinants of health, stigma and discriminatory practices
- Putting people at the center of rights-based health system responses – by organizing services around people's needs rather than around diseases – is the key to ending these epidemics
- Different populations have unique health needs and circumstances → tailored responses that recognize and respond to the lived experiences of the people
- Perform more effectively, cost less, increase client engagement, and better prepared to respond to health crisis

WHO Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030. https://www.who.int/publications/i/item/9789240053779

New HIV infections by population in Thailand



AIDS Epidemic Model Projections for HIV/AIDS in Thailand: 2010-2030.

HIV, viral hepatitis and STIs stigma

STIGMA

A personal attribute or characteristic that is socially "discrediting," i.e., that confers a negative judgment or value onto the individual

HIV stigma (UNAIDS)

A process of devaluation of people either living with, or associated with, HIV

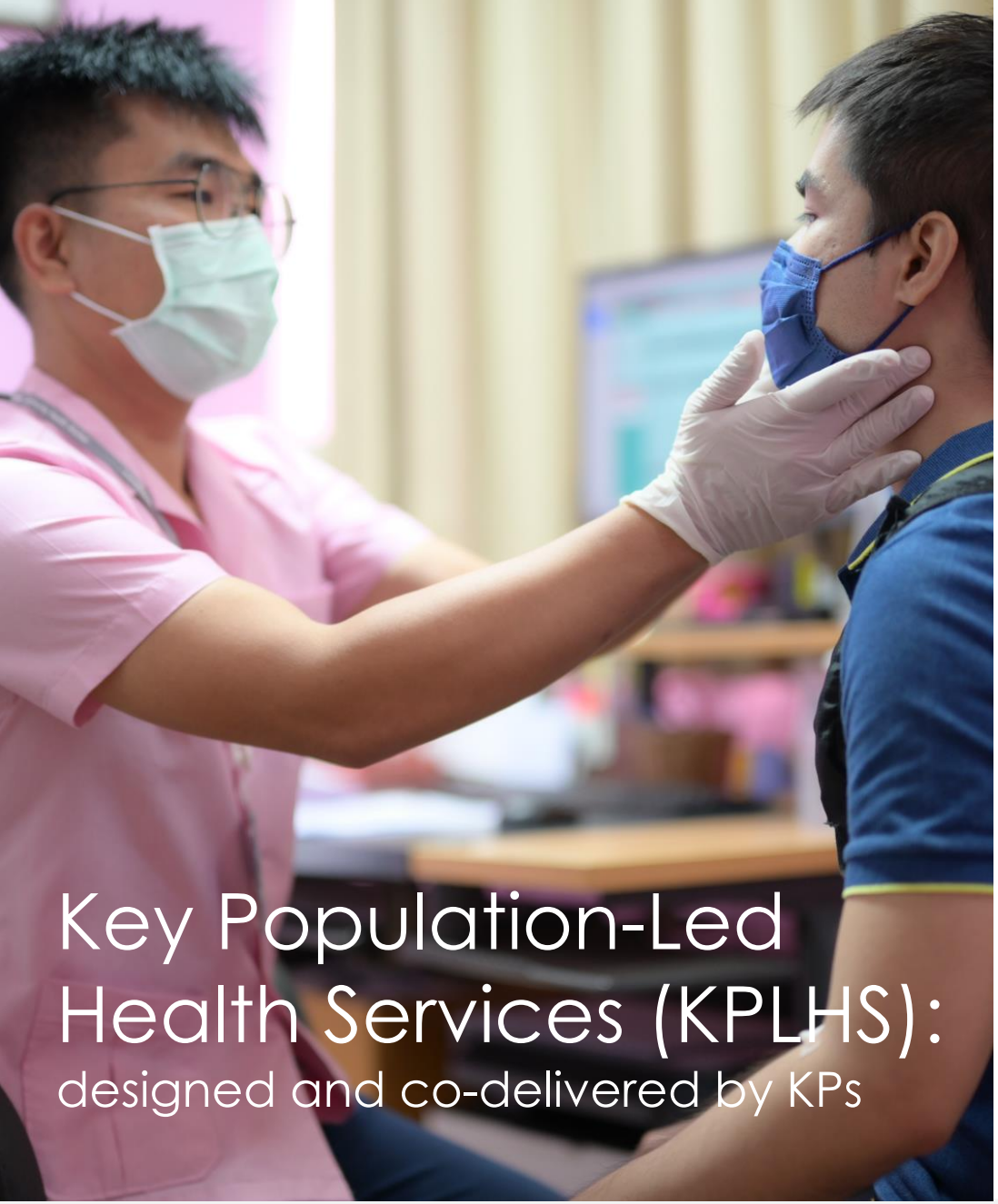
Link to socially unacceptable behaviors (promiscuity, substance use)

Also pre-existing stigma and overlapping stigma (key populations, poverty, race)

Viral hepatitis and STIs

Linked to HIV stigma and sexual stigma

Goffman E. Stigma: Notes on the management of spoiled identity. New York: Simon & Schuster Inc; 1963.
UNAIDS fact sheet on stigma and discrimination; 2003.
Golub S. Curr HIV/AIDS Rep. 2018 April ; 15(2): 190–197. doi:10.1007/s11904-018-0385-0.
Calabrese SK and Mayer KH. JIAS 2020; 23:e25559.



Key Population-Led Health Services (KPLHS):
designed and co-delivered by KPs

- A defined **set of HIV-related health services**, focusing on specific key populations
- Services are identified by the community itself and are, therefore, **needs-based, demand-driven, and client-centered**
- Delivered by trained and qualified **lay providers**, who are often members of the key populations

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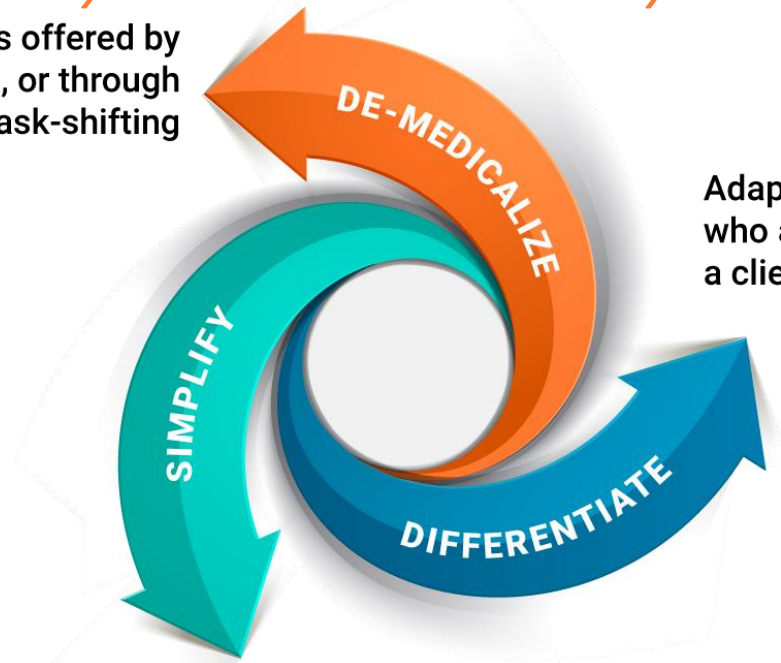
Vannakit R, et al. JIAS 2020; 23(6):e25535.
USAID LINKAGES project and USAID Community Partnership project

People-centered service delivery principles

Facility-based → Community-based → Community-led

Different steps offered by lay providers, or through HCW task-shifting



Adapting the when, where, who and what based on a client-centered approach

One size fits all → Custom tailoring

Finding less complex ways to deliver care, to promote increased access and lower cost, while retaining efficacy and quality

Nice-to-have → Must-have

Kimberly Green, et al. 2020.

Key population-led health services (KPLHS):
filling service gaps for key populations

ACCESSIBILITY

- Located in **hot spots**
- **Flexible service hours** suitable for KP's lifestyle
- **One-stop** service

AVAILABILITY

- **Needs-based** and **client-centered** services, such as hormone monitoring, STI, legal consultation, harm reduction

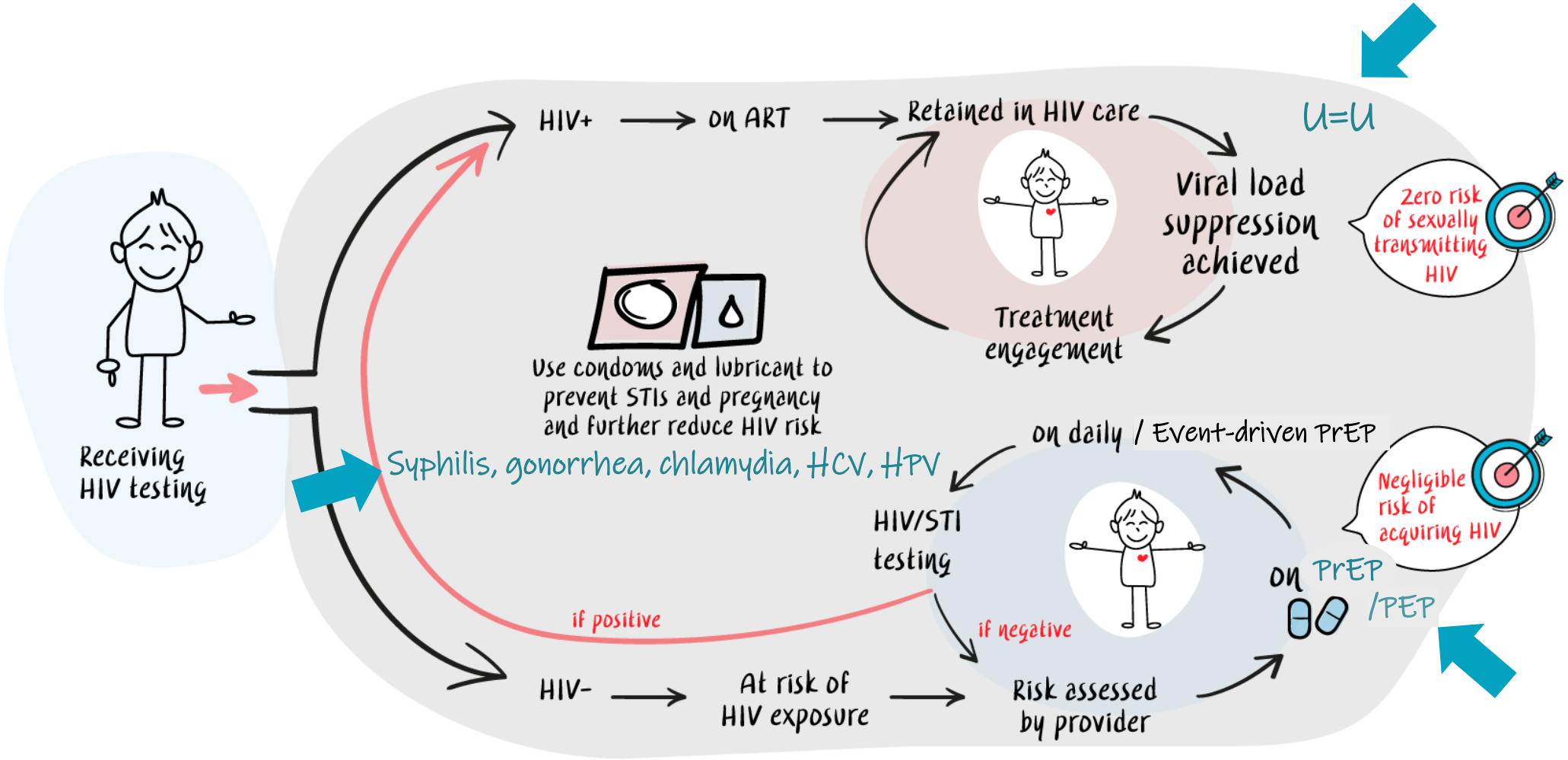
ACCEPTABILITY

- **Staff are members of KP communities** who truly understand KP's lifestyle
- Services are gender-oriented, and **free from stigma and discrimination**

QUALITY

- Staff are **trained and qualified** in accordance with national standards
- Strong **linkages** with and **high acceptance** from **public health sectors**

Status-neutral approach to HIV



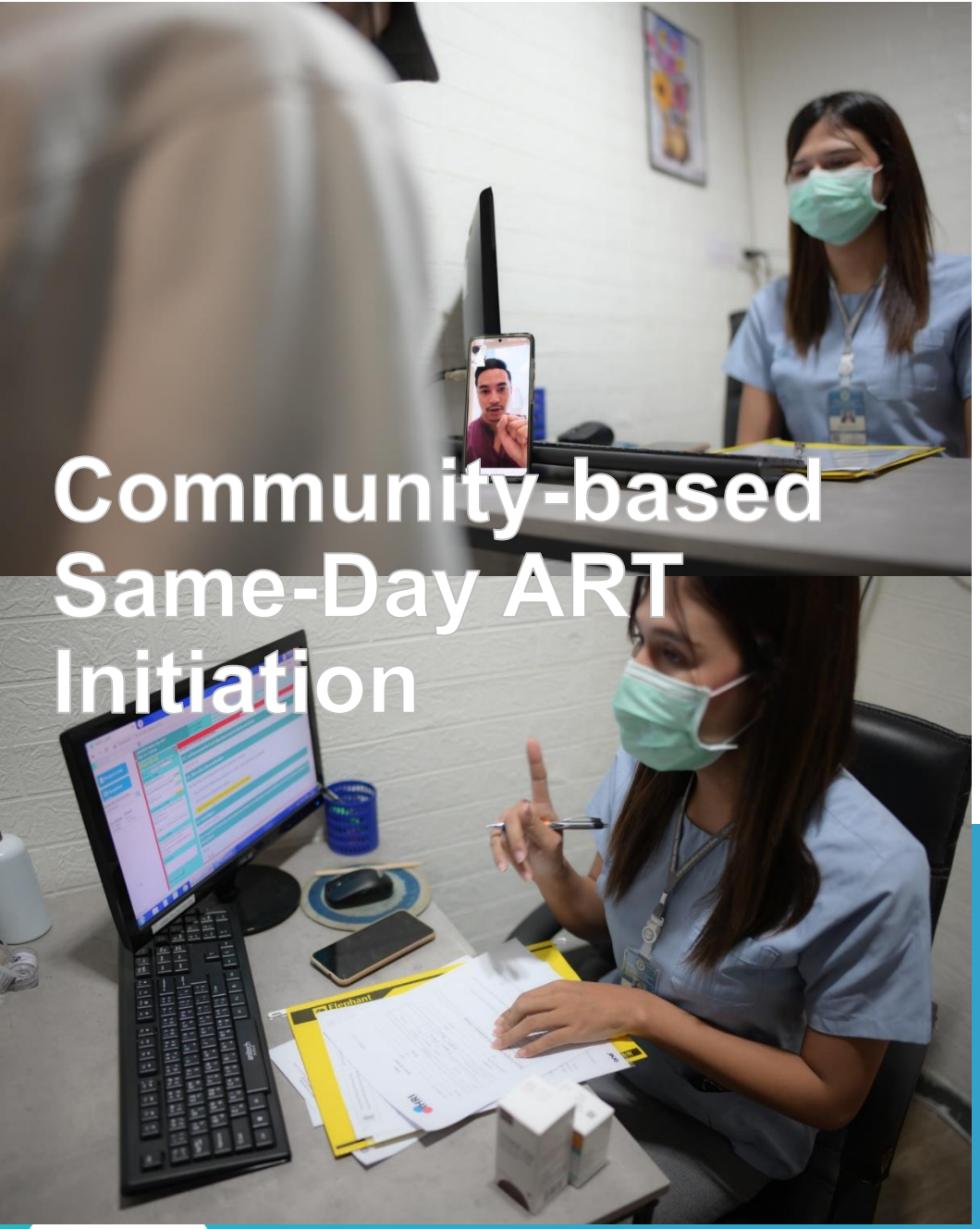
Phanuphak N, et al. Curr HIV/AIDS Report 2020. https://doi.org/10.1007/s11904-020-00516-z

Acute HIV infection detected at key population-led clinics

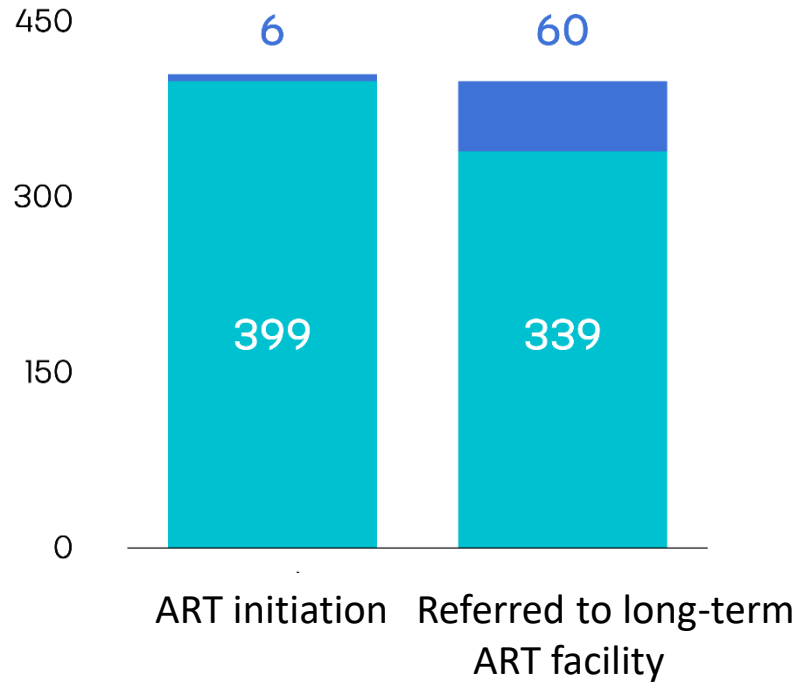
Period: January 1, 2022 - August 31, 2022

No. of HIV inconclusive result	93
No. of HIV inconclusive result receiving HIV VL	61
% of HIV VL service provided	66%
No. of HIV inconclusive with HIV VL detected	12
- Ag reactive	7
- Ab reactive	4
- Ag/Ab reactive	1
% of HIV VL detected among those with HIV inconclusive result	20%

- 4th gen HIV rapid test with 2 confirmatory tests if first test reactive
- Able to confirm HIV infection in 20% of inconclusive results from rapid test algorithm, using POC VL (Xpert® HIV-1 Viral Load)
- Crucial for immediate linkage to same-day ART initiation and for PrEP initiation/continuation



Community-based Same-Day ART Initiation

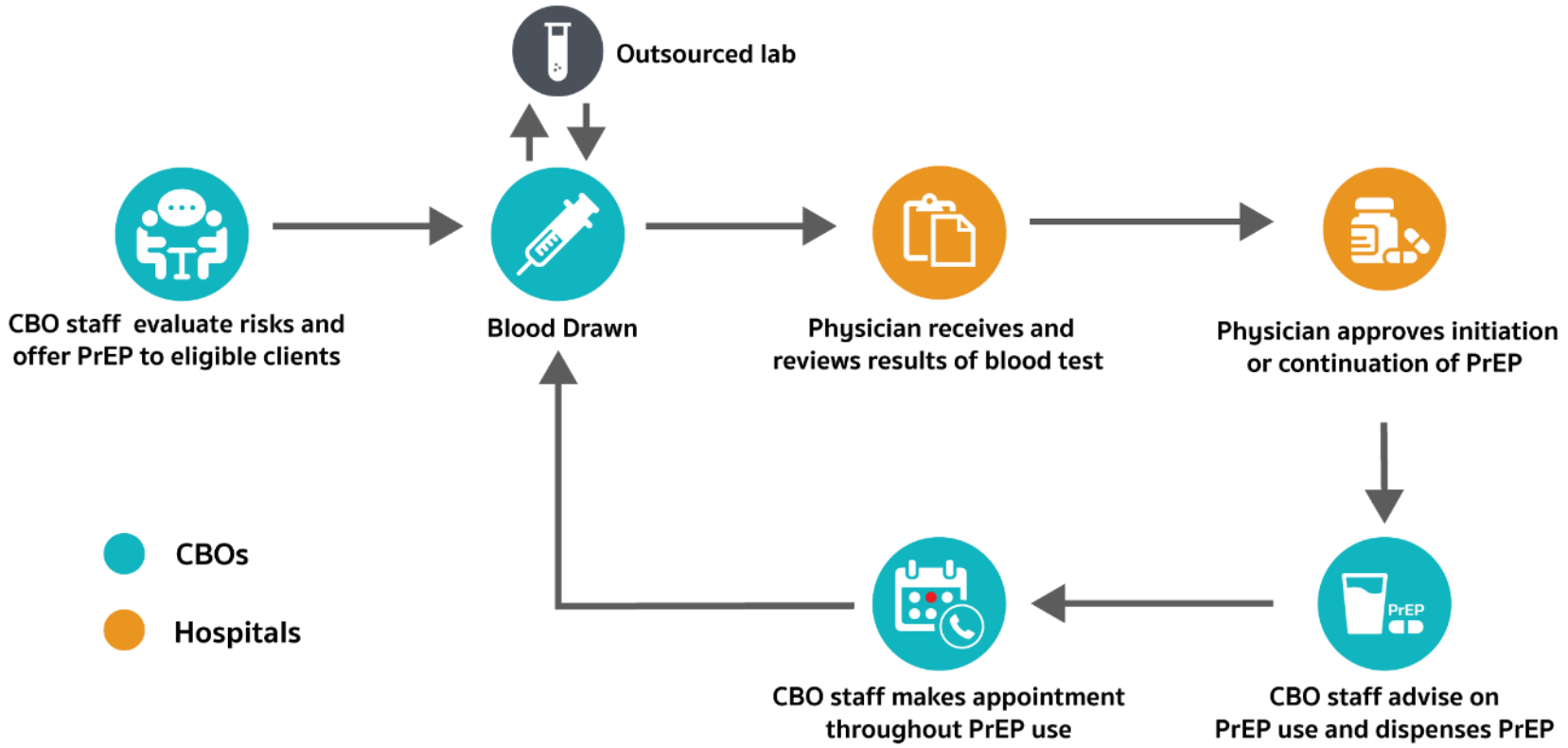


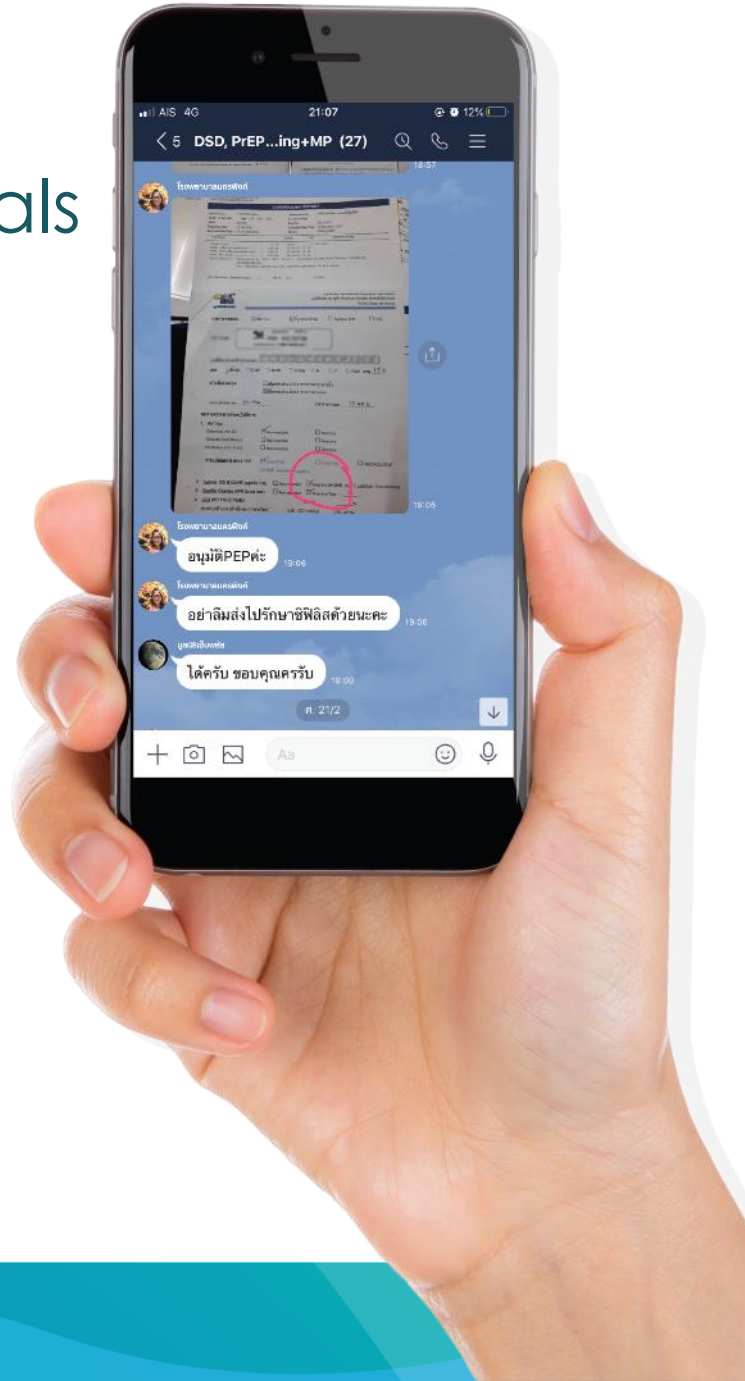
- Total 405 eligible clients enrolled (Oct 2021 – Sep 2022)
- 399 individuals (98.52%) accepted the CB-SDART
  - 96% initiated ART within 1 day
  - 339 of 399 patients referred to long-term ART facility
  - 99% very satisfied with the CB-SDART service
- VL monitoring gap being filled in by POC HIV VL testing to enhance “U=U” implementation

To enhance U=U communication in the clinic, we need to promote VL literacy among PLHIV and HCPs

- Just around 70% VL testing among PLHIV on ART in Thailand
- Low VL literacy among PLHIV in Thailand – low demand among PLHIV to know their VL status
- Challenges in healthcare setting
  - Infrequent practice among HCPs to inform PLHIV of tests to be conducted and what to expect from test results
  - No sense of urgency to know the latest VL and to communicate U=U to PLHIV
  - False perception that POC VL is more expensive (and cannot be reimbursed from NHSO)
  - False ownership of Xpert platform by TB program
  - Common use as a ‘batch’ testing platform

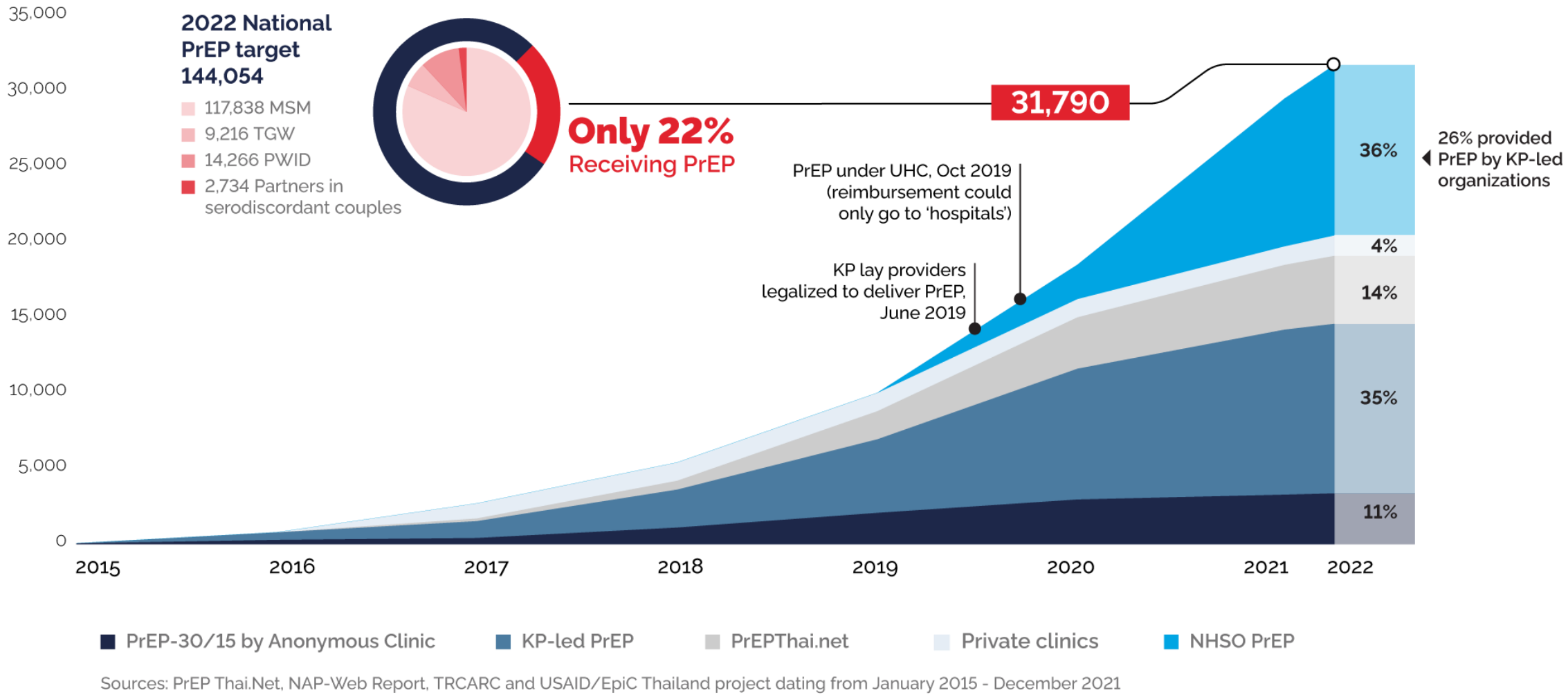
KP-led, Same-Day PrEP:
close collaboration between CBOs and hospitals





2020 Thailand National Guidelines on HIV/AIDS Treatment and Prevention
Ramautarsing RA, et al. J Int AIDS Soc 2020; 23 Suppl 3: e25540.
Phanuphak N, et al. Sex Health 2018; 15(6): 542-55.

KP-led PrEP service has served 80% of current PrEP users in Thailand



Sources: PrEP Thai.Net, NAP-Web Report, TRCARC and USAID/EpiC Thailand project dating from January 2015 - December 2021

CT/NG prevalence and incidence by pooled samples on Xpert CT/NG among MSM and TGW in KP-led clinics

Participant group	Any STIs		Syphilis		*Chlamydia trachomatis*		*Neisseria gonorrhoeae*	
	Prevalence (%)	Incidence (per 100 PY)	Prevalence (%)	Incidence (per 100 PY)	Prevalence (%)	Incidence (per 100 PY)	Prevalence (%)	Incidence (per 100 PY)
New PrEP users (n=214)	33.6	32.3 (20.6-50.7)	6.5	5.0 (1.3-20.2)	19.7	24.8 (14.7-41.9)	15.0	8.6 (3.6-20.6)
Current PrEP users (n=259)	38.2	54.4 (39.6-74.8)	6.6	6.1 (2.0-18.8)	26.6	31.1 (20.5-47.3)	20.1	34.4 (23.1-51.3)
Non-PrEP users (n=298)	27.5	19.9 (10.4-38.3)	10.4	7.3 (1.8-29.3)	16.1	13.6 (6.1-30.2)	11.1	6.8 (2.2-21.0)
HIV positive (n=237)	51.1	57.6 (40.3-82.4)	19.0	12.8 (4.8-34.0)	32.3	24.1 (14.0-41.4)	23.3	31.9 (19.8-51.2)

IHRI. Data from POC STI and VL study, supported by EpiC project, January 2021. This was an off-label use as part of a research study. Refer to the package insert for the intended use. US-IVD and CE-IVD. In Vitro Diagnostic Medical Device. May not be available in all countries.

Self-sampling collection and pooled samples for POC CT/NG testing

- Self-sampling collection for STI testing is relatively new to clients in Thailand → "uptake" increased during and after COVID-19
- POC molecular STI testing allows for "STI test and treat" implementation, shortening time from testing to treatment

Median (IQR) days from diagnosis to treatment

Syphilis	CT	NG
4 (2-7) days	4 (1-10) days	5 (3-14) days

- Pooled samples provided high sensitivity and agreement (similar to findings from the UK, Belgium and Australia) → "reduce budget impact" for UHC inclusion of regular, asymptomatic, POC, molecular STI testing
- GF money to roll-out POC molecular STI testing on pooled samples in key strategic provinces over the past year

IHRI

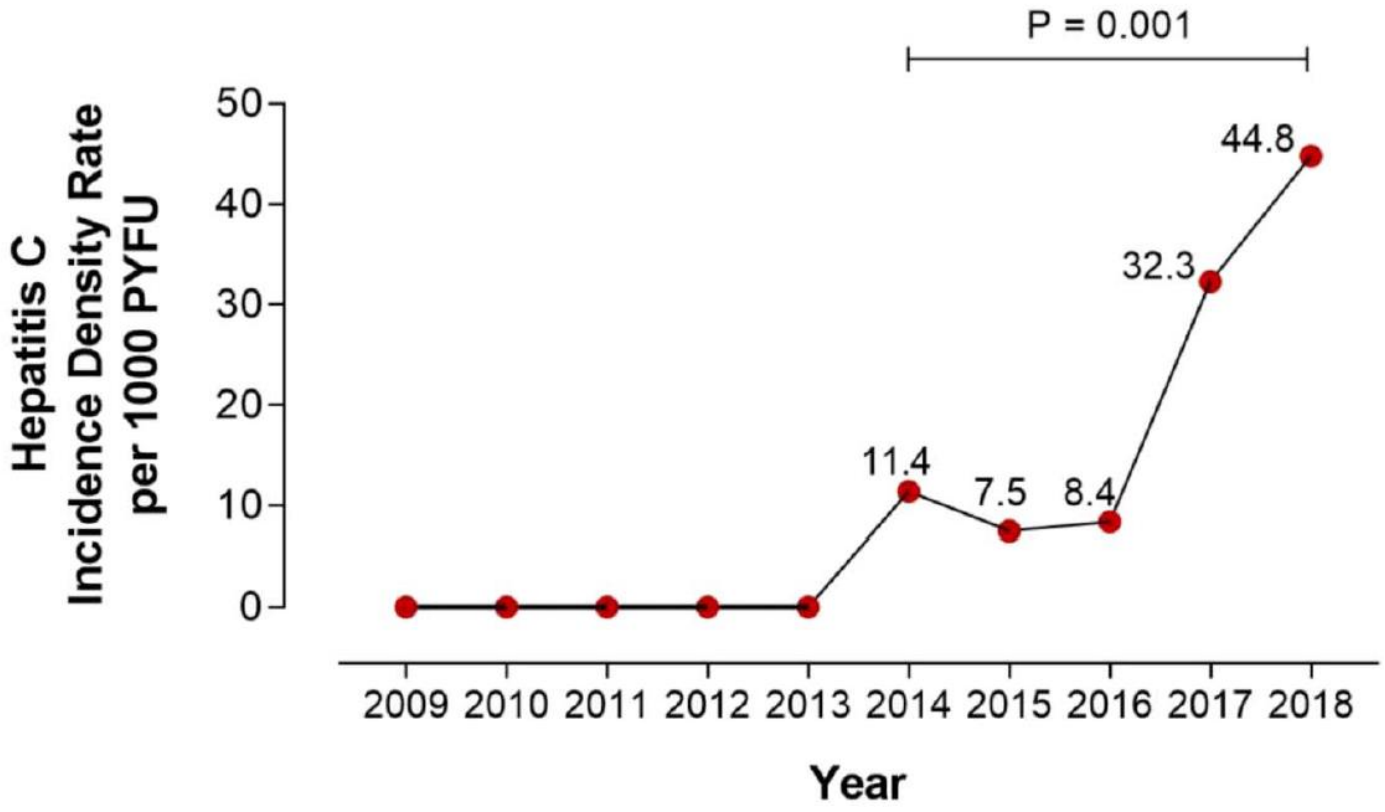
Janamnuaysook R and Thammajaruk N. Integrating STI Testing for MSM and TGW at the Tangerine Clinic and other key population-led health clinics in Thailand. STI 2020 WHO and IAS Satellite Session, AIDS 2020 Virtual.

Explosive HCV epidemic among HIV-positive MSM in Bangkok

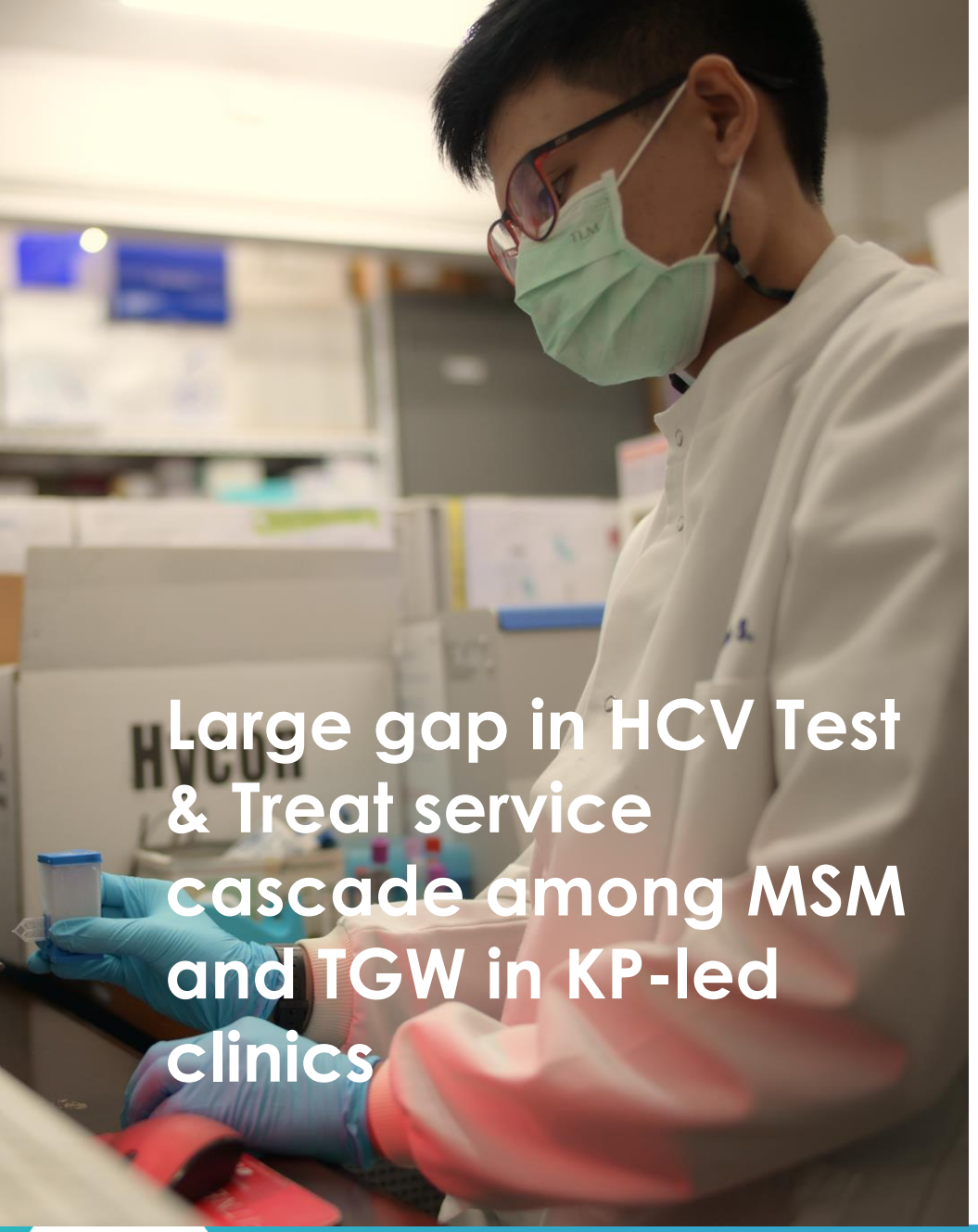
Factors associated with HCV incidence in multivariable analysis:

- **Crystal methamphetamine use**
  aOR **3.29** (1.91– 45.66)
- Group sex aOR 1.82 (1.08 – 3.09)
- Syphilis aOR 1.98 (1.13 – 3.48)

- 79% of incident HCV cases denied injecting drugs



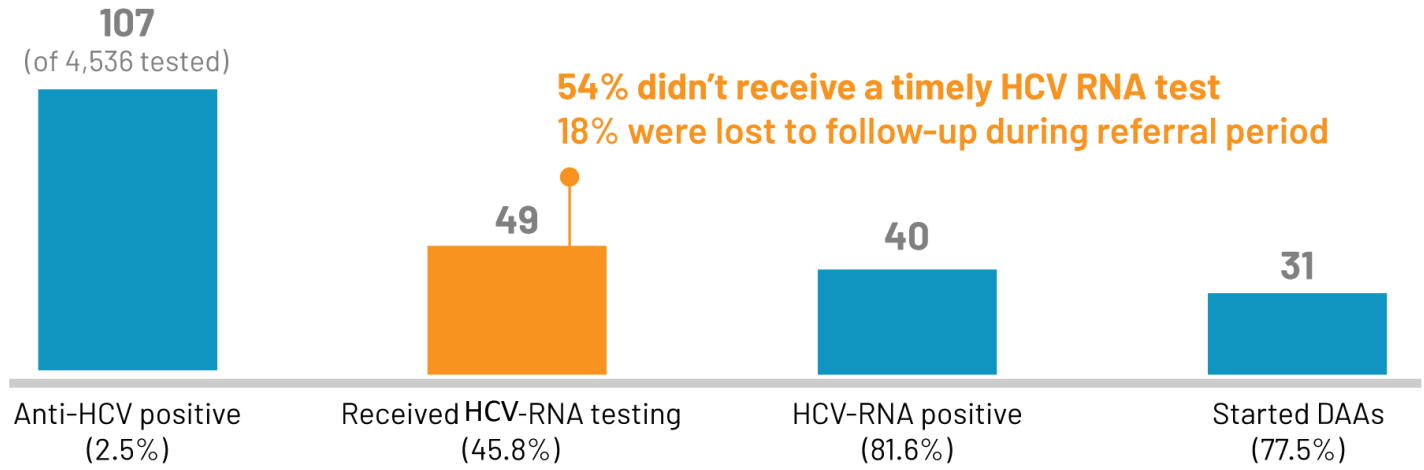
Wansom T, et al. JAIDS 2020;84:331-335.



Large gap in HCV Test & Treat service cascade among MSM and TGW in KP-led clinics

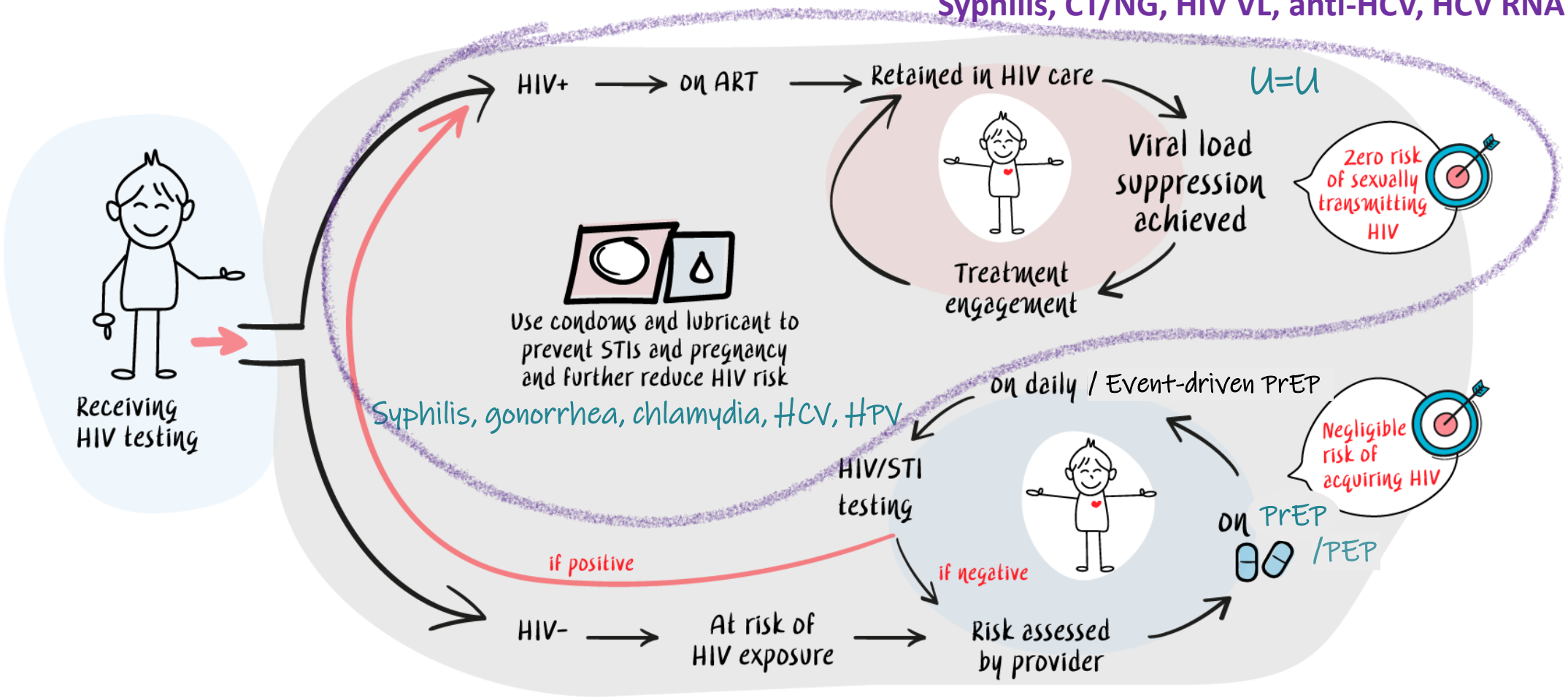
- 65% were PrEP users, 24% reported chemsex
- Immediate HCV RNA confirmation DAA initiation urgently needed for micro-epidemic control

Key Population-Led Same Day
HCV Test and Treat Demonstration Project
(Type 1 hybrid effectiveness-implementation study)



IHRI. Data from EpiC project, July 2021.

Integrated people-centered approach to end HIV, viral hepatitis and STIs by 2030



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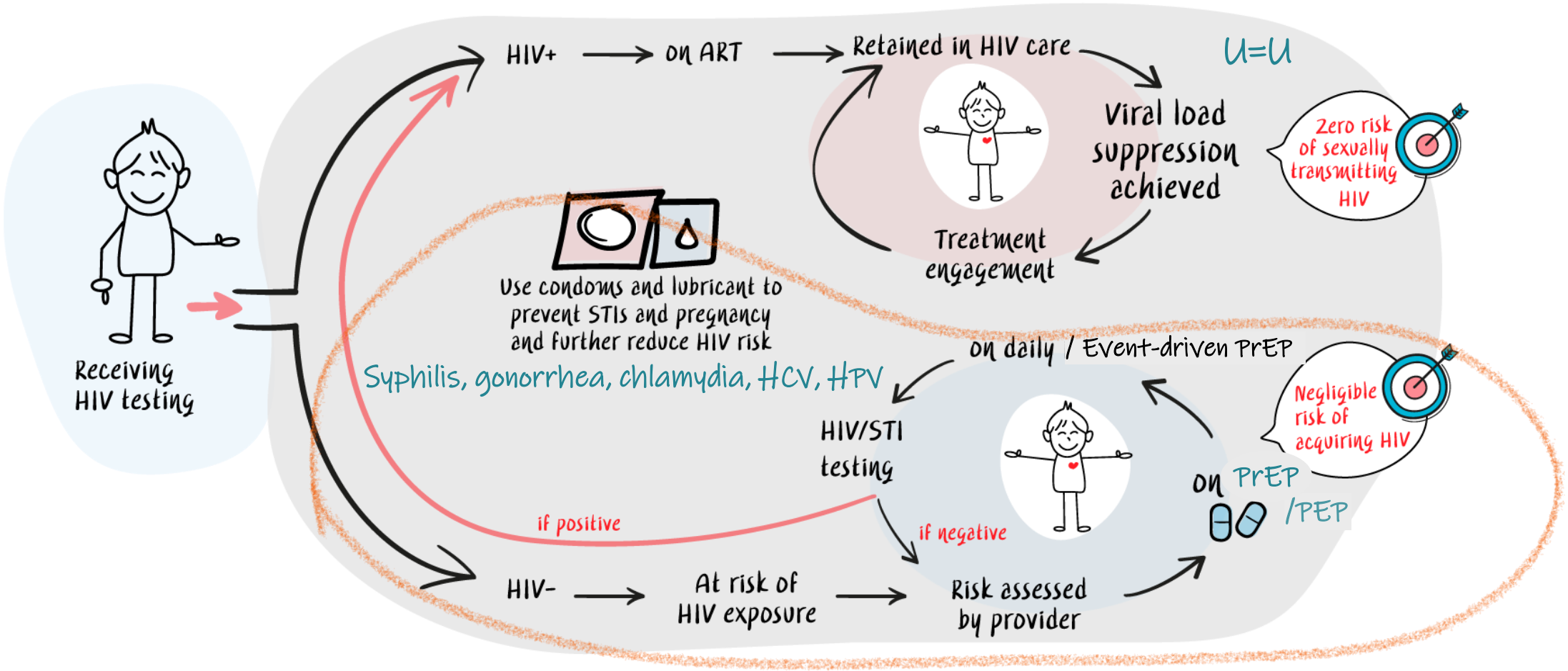

Syphilis, CT/NG, HIV VL, anti-HCV, HCV RNA (& HPV DNA)

Phanuphak N, et al. Curr HIV/AIDS Report 2020. https://doi.org/10.1007/s11904-020-00516-z

ระเบียบกระทรวงสาธารณสุข
ว่าด้วยบุคคลซึ่งกระทรวง ทบวง กรม เทศบาล องค์การบริหารส่วนจังหวัด องค์การบริหารส่วนตำบล กรุงเทพมหานคร เมืองพัทยา องค์กรปกครองส่วนท้องถิ่นรูปแบบพิเศษอื่นตามที่มีกฎหมายกำหนด หรือสภากาชาดไทย มอบหมายให้ประกอบวิชาชีพเทคนิคการแพทย์ ในความควบคุมของเจ้าหน้าที่ซึ่งเป็นผู้ประกอบวิชาชีพเทคนิคการแพทย์หรือผู้ประกอบวิชาชีพเวชกรรม (ฉบับที่ ๓) พ.ศ. ๒๕๖๒

ข้อ ๖ บุคคลซึ่งได้รับมอบหมายตามข้อ ๔ ถ้าเป็นเจ้าหน้าที่ ให้ทำการประกอบวิชาชีพเวชกรรมได้เฉพาะในกรณีการปฏิบัติราชการหรืออยู่ระหว่างปฏิบัติราชการตามหน้าที่เท่านั้น

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(๓.๒) ยาที่ผู้ประกอบวิชาชีพเวชกรรมสั่งจ่ายให้แก่ผู้รับบริการเฉพาะรายหรือเฉพาะคราวที่เกี่ยวเนื่องกับเอชไอวี โรคซิฟิลิส หนองใน หรือหนองในเทียม หรือโรคติดต่อทางเพศสัมพันธ์อื่น ๆ ในลักษณะเดียวกัน

Clinical roles of KP lay providers, 2019 MOPH Regulations:

- **Provide services related to HIV, syphilis, gonorrhea, chlamydia or other STIs**
  - Pre- and post-test counseling
  - Specimen collection to test for infection(s)
  - Finger prick blood collection for screening test
  - Perform rapid and POC testing
  - Reading and reporting of test results
- **Referral for diagnostic test and link to care**
- **Give drugs, as prescribed by health professionals, to treat and prevent HIV, syphilis, gonorrhea, chlamydia or other STIs (or primary symptoms related to these conditions)**

Thailand Universal Health Coverage: from EQUALITY to EQUITY by COMMUNITY

EQUALITY

EQUITY

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Economy of SCOPE by KPLHS

- Using HIV just to establish KPLHS, however, KPLHS is not limited to HIV
- **Not** a ~~specialized care~~ but an integrated care (HIV, STIs, hepatitis, TB, mental health, legal/rights, stigma/discrimination, harm reduction, NCD, cancer), according to the 'people-centered' approach

Conclusions

- **People-centered approach** is the key principle of the community-led health services.
- **Integrated HIV, viral hepatitis and STIs services** can be made a reality when services are designed around people's need and not around diseases.
- **Platform which can test for multiple diseases**, together with immediate linkage to care, allow for the Test & Treat strategy to be implemented to end HIV, viral hepatitis and STIs by 2030.
- Integration of other services beyond HIV, viral hepatitis and STIs (i.e., TB, mental health, legal/rights, stigma/discrimination, harm reduction, NCD, cancer) will further enhance the economy of scope and people's wellbeing.

Acknowledgements


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WHERE INNOVATION MEETS IMPLEMENTATION