

# LINKAGES THAILAND

## *Summary of Achievements*

*October 2015 – September 2020*

The Linkages across the Continuum of HIV Services for Key Populations Affected by HIV (LINKAGES) project was implemented in Thailand in partnership with six community-based, nongovernmental organizations, three technical assistance partners, and more than 150 hospitals across nine provinces with support from the U.S. Agency for International Development (USAID) and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Between October 2015 and September 2020, LINKAGES Thailand implemented a robust and innovative portfolio of activities designed to improve outcomes along the entire cascade of HIV services for men who have sex with men (MSM) and transgender women. A cornerstone of the LINKAGES Thailand project was the successful rollout of the key-population-led HIV health services (KPLHS) model. The project also pioneered several technical strategies to improve service uptake by key populations, including the enhanced peer outreach approach (EPOA), use of online platforms, same-day treatment initiation, community-based PrEP delivery, and differentiated services for transgender women. The LINKAGES Thailand team used its data to advocate for and achieve policy changes, including co-financing by the Thai government for KPLHS, that will make for a more sustainable, locally led, and key population-inclusive response to the epidemic.

## BACKGROUND

LINKAGES Thailand — implemented June 2014 to September 2020 — helped reduce HIV transmission among men who have sex with men (MSM) and transgender women by developing a model for domestically funded, community-led health services and strengthening performance across the cascade of HIV services from prevention and testing to treatment initiation and viral load suppression. Initially launched in four provinces with high HIV prevalence among key populations (Bangkok, Chiang Mai, Chonburi (Pattaya City), and Songkhla (Hat Yai City), the project eventually expanded to cover urban and peri-urban settings across nine of Thailand's 13 highest-prevalence provinces.

For service delivery to key populations LINKAGES Thailand partnered primarily with community-based, nongovernmental organizations including Rainbow Sky Association of Thailand (RSAT), Service Workers in Group (SWING) Foundation, Mplus Foundation, Sisters Foundation, The Poz Home Foundation, and Caremat. LINKAGES also supported the Asia-Pacific Coalition on Male Sexual Health (APCOM) as online demand generation lead. Thai Red Cross AIDS Research Center was the primary technical

### Highlights

- Newly diagnosed 18,394 new cases of HIV and successfully initiated 87% of them on treatment.
- Introduced community-based distribution of PrEP and supported 11,358 individuals to initiate PrEP, the majority of whom were MSM.
- Implemented online outreach to reach new, high-risk networks of key populations and developed an Online Reservation Application (ORA) — TestMeNow.net — which resulted in at least 1,162 HIV-negative clients accessing PrEP for the first time and produced a case-finding rate of 9.2%.
- Demonstrated the value of the KPLHS model to Thailand's epidemic response, leading to Thai government financial support to all LINKAGES partners for implementation of the model.
- Established Tangerine Clinic — the first transgender health center in Thailand — which has become a model for differentiated, trans-competent HIV services and is being replicated in other countries in Southeast Asia.
- Contributed to policy changes that favor key populations, including authorization by Ministry of Public Health to permit lay health providers to conduct HIV testing; approval of assisted HIV self-testing using OraQuick; and inclusion of PrEP in the national health insurance scheme.

assistance provider (with a particular focus on HIV testing and treatment) and Thai Red Cross Anonymous Clinic was a major service delivery partner. In FY20, with LINKAGES support, the AIDS Research Center spun off from TRC to form a new, independent organization, the Institute of HIV Research and Innovation (IHRI).

## KEY PROGRAMMATIC ELEMENTS

LINKAGES Thailand focused on populations at highest risk of becoming infected with HIV and reached them with a cascade of high-quality, client-centered prevention, testing, and treatment services, so that HIV-negative clients would remain negative and positive clients would remain healthy and avoid transmitting HIV to others. Success was due to using a differentiated service delivery model that understands the different needs and preferences of populations and individuals at highest risk of HIV, and works in partnership with community-based organizations (CBOs), the formal health care sector, and the Thai Ministry of Public Health (MOPH) to tailor services accordingly, particularly by investing in community-based service delivery. Key elements of the LINKAGES Thailand project included:

- **Reach and recruitment** via community-based outreach by trained community-based supporters and incentivized volunteers (peer mobilizers) under the enhanced peer outreach approach (EPOA), online demand generation through web and social media advertising and marketing campaigns
- Rapid **HIV screening and confirmatory testing** through community health centers, mobile testing, and limited application of HIV self-testing models;

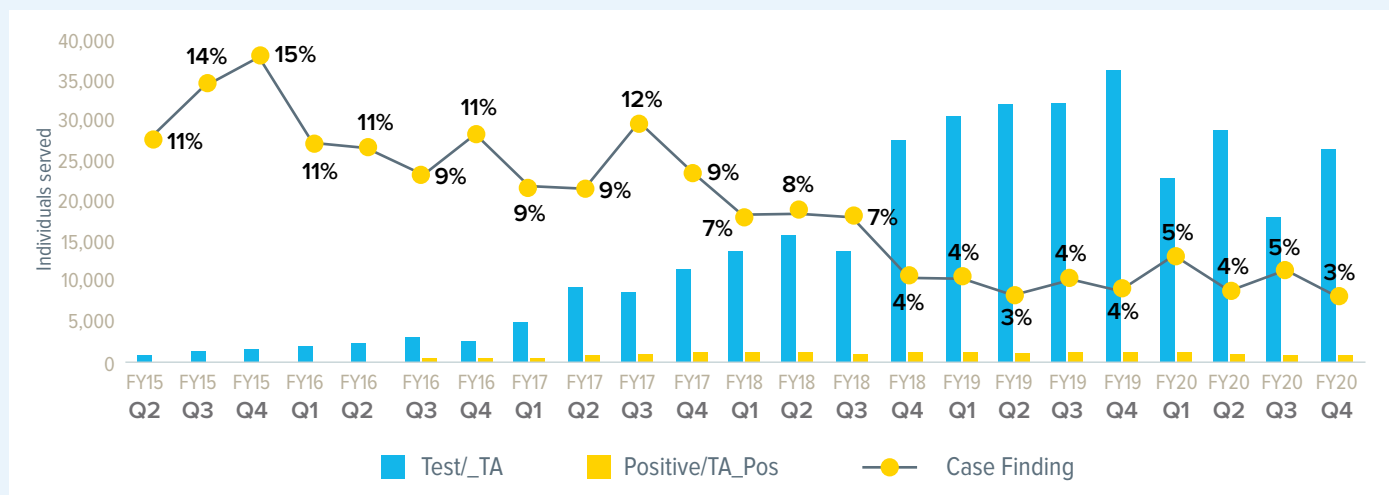
referral to public-sector health care facilities; and introduction of support for partner notification under a “treat-and-test” model

- Provision of **HIV prevention** services and commodities through distribution of condoms and lubricant, post-exposure prophylaxis (PEP), and community-based HIV pre-exposure prophylaxis (PrEP) — both daily and event-driven — under a same-day PrEP model; support for sexually transmitted infection (STI) screening and referral (primarily syphilis)
- Support for **HIV treatment** including capacity building for public-sector antiretroviral therapy (ART) providers, community-based ART under a differentiated service delivery model, and introduction of same-day ART models
- Follow-up monitoring and case management by community-based lay health workers to promote **treatment retention** and viral load testing

## SERVICE DELIVERY IMPACT

Over the life of the LINKAGES Thailand project, partners reached an average of more than 50,000 key population individuals per year (not deduplicated across fiscal years) with HIV prevention services and supported on average more than 60,000 HIV tests per year (not deduplicated by unique client). Coverage of HIV testing services increased considerably over time, while overall HIV-positivity rates decreased from a high of 15% to roughly 3% by project end. This reflects, in part, a general decline in HIV case finding, primarily among MSM, that was noted across PEPFAR-supported and other service providers and speaks to the need for more targeted testing approaches, as reflected in Figure 1.

**Figure 1.** HIV case-finding rates by quarter under LINKAGES Thailand, FY15–FY20



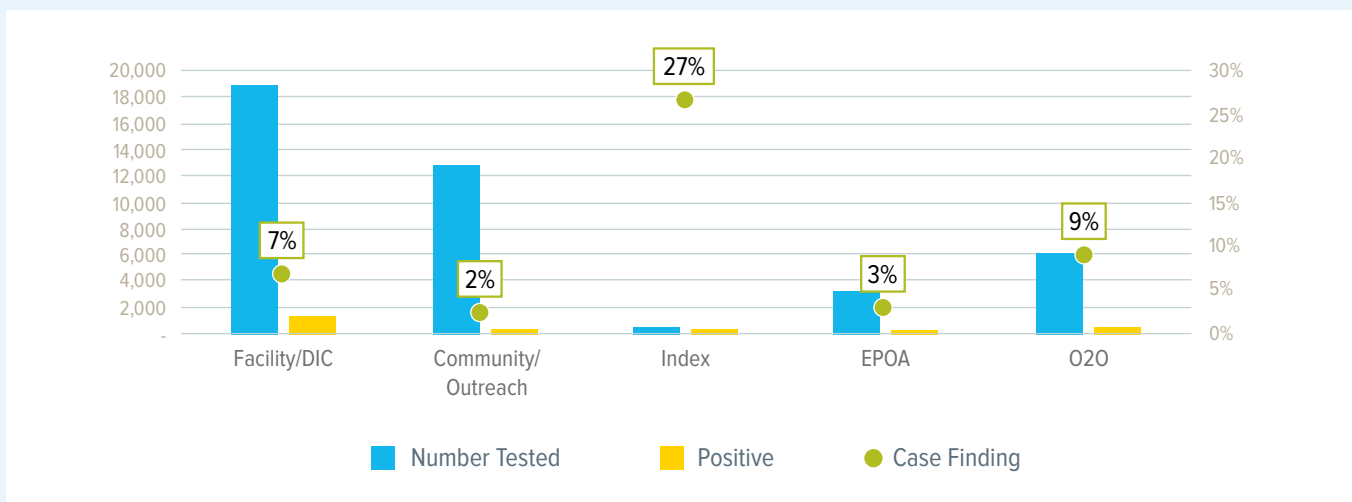
By tracking individual clients across the HIV cascade, the project learned that highest case finding was from index testing and online-to-offline activities, which reached fewer individuals but higher-risk individual population segments (Figure 2).

In total, LINKAGES Thailand implementing partners and supported health care facilities diagnosed 18,394 new cases of HIV over life of the project, of whom 16,021 people living with HIV (87%) either initiated ART at a LINKAGES-supported site or were successfully referred to treatment elsewhere. Trends in treatment initiation increased significantly (Figure 3), in part due to the addition of new treatment facility partners and strengthened case management and support for piloting same-day ART. Initiation rates varied across key populations

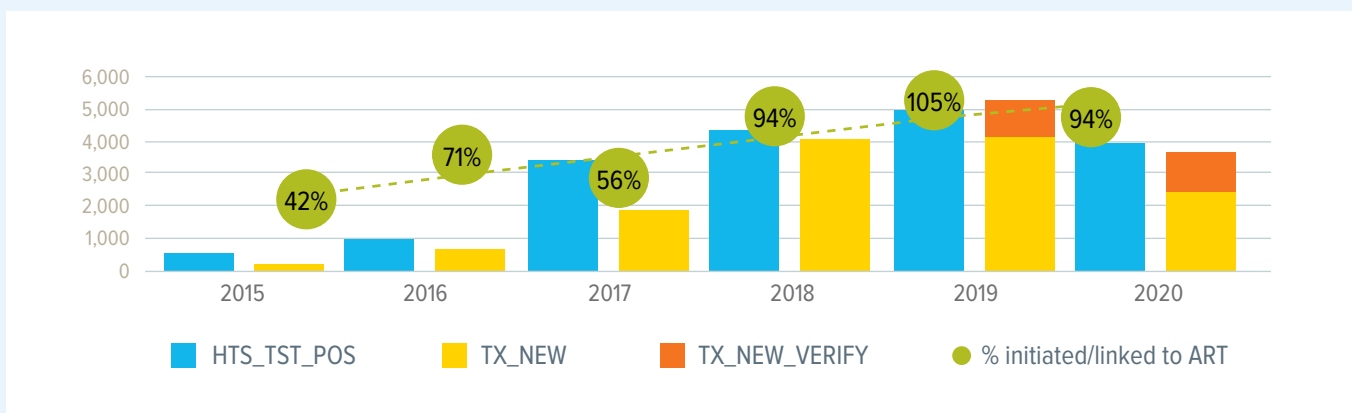
(Table 1): as high as 95% for transgender persons and as low as 67% for female sex workers (FSWs), a group that tended to be highly mobile and included a significant minority of non-Thai individuals who experienced higher rates of HIV infection but for whom ART initiation rates were notably lower (40% versus 64%).

At project end, LINKAGES partners were supporting 25,845 people living with HIV (PLHIV) retained on treatment. The project encountered challenges ensuring uptake of viral load (VL) testing — most notably, the COVID-19 lockdown in FY20 which limited access to “nonessential” health care services for many clients — however, among 83% of eligible clients who had received a VL test by the end of Q4 FY20, 97% had achieved viral load suppression.

**Figure 2.** HIV case-finding rates by approach under LINKAGES Thailand, FY20



**Figure 3.** Trends in ART initiation among all populations under LINKAGES Thailand, FY15–FY20





# TECHNICAL HIGHLIGHTS

## DEVELOPING A KEY-POPULATION-LED HEALTH SERVICES (KPLHS) MODEL

### 1. Community-led service delivery contributes significantly to the national response

The key-population-led HIV health services (KPLHS) model—built on task shifting principles recommended by WHO—engages and maintains members of key populations in the HIV cascade. Under KPLHS, HIV services from prevention and diagnosis to treatment, support, and follow-up are delivered by trained lay providers recruited from among key populations. CBOs working with MSM and trans women are the heart of the KPLHS model and under LINKAGES were fully involved in the design, planning, and delivery of services suiting to needs and preferences of key populations.

LINKAGES supported standardized training and accreditation for health services delivered under the KPLHS model and worked with local health care providers and provincial health officials to conduct regular monitoring of service quality. By project end, KPLHS was being implemented in nine sites across seven provinces. In 2019, these sites contributed 52% of all HIV testing and 28% of case finding among MSM and transgender people for the entire country.

Recognizing the contribution of community-led HIV service delivery to the national HIV response, LINKAGES collaborated with MOPH to register KPLHS sites as equivalent to the health center structure of the national public health system, capable of receiving direct reimbursement with public funds for delivery of health services to key populations. The model is also being extended to non-USAID program sites in other geographic areas and expanded to other populations including people who inject drugs.

### 2. Expanding Reach into Virtual Spaces

LINKAGES Thailand also extended interventions into virtual spaces via social media platforms that young KP members, in particular, use to socialize, access information, and seek sex partners. LINKAGES supported online peer education and demand generation activities such as the

*TestBKK* campaign and the *Ready, PrEP, Go* online competition to promote HIV testing and PrEP uptake across Facebook, Twitter, YouTube, and a range of online dating applications. The project also engaged popular social media influencers to amplify key HIV messages to their target audiences. Critically, the project introduced TestMeNow.net, an online reservation application linking virtual clients to physical HIV testing and PrEP services.

From Q4 FY17 to Q4 FY20, clients made 23,880 online reservations for HIV services via TestMeNow, of which 14,659 visits (61%) were confirmed at clinics. Online activities resulted in at least 1,162 HIV-negative clients accessing PrEP for the first time, while the HIV case-finding rate among online clients for whom results were available was 9.2%, compared with 5.2% among traditional outreach clients. Further analysis identified especially high-risk MSM networks on online dating applications where case finding was as high as 12%.

Online approaches proved essential during the COVID-19 pandemic, when virtual platforms allowed activities to continue when other outreach had been locked down. LINKAGES strengthened online outreach workers' capacity through the introduction of social media “boot camps” on development of effective online content and strategies for boosting online advertising, supported new online activities such as the *PreP in the City* campaign targeting trans women, and supported the further integration of online outreach and clinical service delivery through telehealth models for HIV testing and PrEP.

### 3. Introducing a trans-friendly model for comprehensive, community-based care

With support from LINKAGES Thailand, the Tangerine Clinic—established in 2016 as the first transgender health center in Thailand—became a model for differentiated service delivery. Tangerine integrated HIV services as part of a comprehensive health care package for trans people that also included hormone-level monitoring, mental health support and referral, and legal and human rights support and referral. The clinic has depended heavily on online promotion and demonstrated the successful use of trans social media influencers who contributed to a more than 150% increase in HIV testing clients over a one-year period.





Between November 2015 and March 2020, 3,342 transgender women received services at Tangerine, including 3,163 (95%) who were tested for HIV and 318 (10%) diagnosed positive. Clients who received assistance with monitoring hormone levels were more likely to return for subsequent visits, to receive repeat HIV/STI testing, and (if HIV positive) to receive PrEP. As a result, LINKAGES has supported the introduction of hormone monitoring to better serve transgender clients at other KPLHS sites. Tangerine Clinic has also become a regional model for trans-competent HIV services. Clinic staff have provided technical assistance for replication of all or part of this model in Vietnam, Burma, and Laos, and IHRI has established a Tangerine Academy in Bangkok to provide in-service training for clinical providers from throughout Southeast Asia.

#### 4. Integrating community-based PrEP into the KPLHS service package

With LINKAGES support, Thailand became the first country in Southeast Asia to introduce PrEP, delivered under the KPLHS model as part of differentiated HIV service delivery for key populations. Clients can access same-day PrEP delivered by lay providers at a community health center free of charge: PEPFAR funding supports staff and screening costs while public donations to Thai Red Cross under the Princess Soamsawali Fund cover the cost of generic PrEP drugs. The project also introduced event-driven PrEP for clients who do not wish to follow a daily dosing regimen, and recently rolled out PrEP mobile service delivery to bring services closer to high-risk audiences.

As of the end of May 2020 (the most recent period for which national service delivery data are available), LINKAGES KPLHS partners alone accounted for 58% of all PrEP uptake, and LINKAGES partners in total supported 83% of all uptake nationwide since the launch of PrEP services in late 2014. Program data show the project successfully targeted mainly high-risk key populations and notably young members: 68% were aged 25–49 years and 31%, 15–24. LINKAGES' demonstration of a successful, community-based PrEP model contributed to the Thai government's decision in 2019 to include PrEP under the national health benefits scheme of the National Health Security Office (NHSO).

### IMPROVING LINKAGES BETWEEN COMMUNITY- AND FACILITY-BASED HEALTH CARE SERVICES

#### 1. Building a broad network of service providers

To ensure strong linkage between community- and facility-based services, LINKAGES negotiated cooperative agreements with more than 150 hospitals across nine provinces; recruited HIV coordinators to liaison between Provincial Health Offices (PHOs), individual health care facilities, and KPLHS partners; created a fast-track channel for clients referred by CBOs to facilities to receive HIV services; and developed a hospital directory used by community-based care and support staff to refer clients for HIV treatment, VL testing, and other services.

To ensure clients received KP-friendly services through the health sector, LINKAGES also conducted regular in-person and virtual training sessions for health care providers on a wide range of topics including motivational counseling, index testing, intimate partner violence screening and response, and same-day ART.

All these efforts have significantly improved treatment access and retention for KP clients, strengthened hospitals' database systems, and indirectly impacted provincial and national-level HIV data through data quality exercises initially supported by the LINKAGES team. Training courses developed and delivered for health care providers also have been assessed by the Thailand Nursing and Midwifery Council and accredited so participants can earn continuing education credits.



Mplus foundation together with collaboration from the local stakeholders launched HIV mobile service for the underserved KPs in the north of Thailand.

## 2. Strengthening government buy-in for KPLHS approach through provincial QA-QI

Despite good linkages between KPLHS sites and health care facilities, concerns emerged regarding the ability of community-based lay providers to adhere to national standards for HIV testing and counseling. In response, LINKAGES formed provincial committees in the nine provinces where the KPLHS model has been implemented to conduct yearly quality assessment and quality improvement activities (QA/QI). Each committee includes representatives of the PHO, NHSO, Department of Disease Control, local hospitals, and CBOs implementing KPHLS. Committees audited KPLHS sites' HIV testing and counseling activities according to a jointly determined set of quality standards and, where deficiencies were identified, LINKAGES worked with local health care providers to conduct training and provide follow-on mentoring.

Provincial QA/QI committees have helped KPLHS sites improve and maintain the quality of HIV services over time. Ensuring service quality—and generating recognition from health sector partners for the KPLHS model—has been key to achieving sustainability of community-led service delivery. Over the life of the project, several KPLHS sites have successfully met national standards for HIV testing and counseling, have become testing “nodes” for local hospitals, and been accredited as testing clinics by MOPH and, therefore, eligible to receive reimbursement for HIV testing and counseling costs under the NHSO public health protection scheme. Demonstration of high-quality, community-led HIV testing under the support of the provincial QA/QI committees additionally helped clear the way for regulatory approval of lay provider testing by the MOPH in 2019.

## 3. Introducing Same-Day ART (SDART)

While testing uptake improved significantly under the KPLHS model, gaps in ART initiation were a challenge, with significant delays relating to screening protocols and health rights issues contributing to losses to follow-up among PLHIV. LINKAGES introduced a same-day ART (SDART) service at the Thai Red Cross Anonymous Clinic in July 2017, and subsequently expanded the model to an additional 10 hospitals throughout Thailand where eligible and willing PLHIV can access treatment on the day of their diagnosis, with case management support to transfer to a long-term



An outreach worker from SWING foundation engaging with a beneficiary to deliver comprehensive HIV information and offer an oral fluid screening in Pattaya during the COVID-19 pandemic.

care provider under their social rights benefits. As of June 2020, 7,326 HIV-positive clients had been screened eligible for SDART, of whom 81% were successfully initiated on treatment with the median number of days to treatment initiation being within the same day. Of those who initiated SDART by the end of the reporting period, 82% had already been successfully transitioned to a long-term treatment provider and the others were being actively followed up and supported.

Under the LINKAGES project, ART could not be initiated at KPLHS sites, but partners could refer clients to SDART sites for rapid treatment initiation, which has played a key role in increasing ART uptake. For example, uptake for RSAT Bangkok clients increased from 49% between January 2015 and June 2017 (before the implementation SDART) to 77% from July 2017 to June 2020. Uptake at SWING Bangkok increased from 55% to 83% during the same period.

The SDART model significantly reduced barriers to ART services for key populations and consequently may have also benefited HIV VL suppression; program data showed 93% of SDART clients achieved VL <1,000. Based on these positive outcomes, SDART has been recognized by the MOPH and NHSO who will incentivize all registered ART facilities to initiate treatment within seven days of diagnosis.

## STRENGTHENING DATA-DRIVEN PROGRAM MANAGEMENT

### 1. Introduction of eCascade system

LINKAGES would not have been able to advocate for adoption of the various successful models described above without data tracking clients and service delivery outcomes across the HIV cascade and over time. To better monitor cascade improvements, LINKAGES launched the eCascade system in July 2015, employing an easy-to-use interface for digital data collection via mobile devices and tracking clients via a unique identifier code. As of the end of FY20, eCascade was being used by 16 service delivery partners in Thailand (including CBOs and health care facilities) to track services for more than 179,000 unique clients across project sites.

The key to acceptance of eCascade was the introduction of a web-based dashboard that calculates program indicators and visualizes performance across sites and for specific program innovations, allowing partners to review their full cascades in real time; disaggregate cascade performance by demographics, date, and strategy; identify gaps and areas of underperformance; and adjust program planning accordingly.

### 2. Piloting an Online Reservation Application

LINKAGES developed an Online Reservation Application (ORA) — TestMeNow.net — to extend cascade tracking and data analysis into virtual space. Using ORA, any online recruitment — a paid advertisement, Facebook post, hyperlink, or an outreach worker in a private chat — is assigned a unique URL allowing the project to track which methods lead to successful testing reservations, who arrives for their test, and where activities result in HIV case finding. When linked to eCascade data collected at KPLHS sites, the project can characterize audiences reached online by demographics and self-reported risk behaviors and track them to final service uptake (ART or PrEP). As a result, partners can track which online outreach modalities deliver the most tests and cases identified and identify gaps in coverage and service uptake.

### 3. Support for development and marketing of Caremat Application

Once LINKAGES' implementing partners experienced the benefits of more granular data for program monitoring and planning, they began innovating on their own. In 2018, one of the local partners, Caremat Foundation, introduced the Caremat Application, a real-time HIV case management tool developed by their staff to better track and manage clinical performance and retention of program clients while reducing paperwork and improving data quality. The application tracks clients across different services, allows users to access a client's clinic records, and generates reminders for follow-up visits and treatment refills.

The application has been adopted by two other CBOs working with key populations in Thailand and has drawn attention from other public and private organizations. Given the increasing interest, LINKAGES is supporting Caremat to develop a social enterprise business model to market their application for community-based, governmental, and private sector organizations including public and private hospitals and clinics.



SWING Pattaya outreach team conducting online outreach program to promote their HIV service with Facebook Live feature to KPs.



## ABOVE-SITE ACHIEVEMENTS

LINKAGES Thailand led or contributed to above-site policy changes and innovative intervention models that improved overall HIV response, as described below. Several were replicated and adapted in other countries, contributing to improved cascades globally.

### IMPROVED REGULATORY ENVIRONMENT

- LINKAGES' partners contributed program and implementation science data from 2016 to 2018 that led to the authorization by MOPH to **permit lay health providers to conduct HIV testing** under the supervision of medical technologists. This step expanded the availability of HIV testing and led to domestic financing of HIV testing services for CBOs.
- In 2018–19, LINKAGES supported implementation science that documented the safety and effectiveness of HIV self-testing. The data helped convince the Thai Food and Drug Administration (FDA) to **approve assisted self-testing using OraQuick**.
- Based on KPLHS partners' continued advocacy for and provision of PrEP services, NHSO agreed to pilot **PrEP inclusion in the national health benefits scheme**. By 2020, NHSO agreed to support 4,000 individuals on PrEP, with many coming from local CBOs.

### IMPROVED SUSTAINABILITY OF THE KPLHS MODEL

- KPLHS partners' demonstrated capacity to maintain quality laboratories accredited by the Medical Technologists Association led to several being registered as **"nodes" officially affiliated with public hospitals** in their provinces. Thus, the CBOs are eligible for domestic financing and have improved ability to offer ART and PrEP on site.
- Improved domestic financing translated into significantly higher amounts of **domestic budgetary support** for local organizations. In 2016 approximately US\$167,000 went to LINKAGES partners, but in 2020 KPLHS sites received more than US\$1.6 million to support direct service provision for KPs.

## DEVELOPED INTERVENTION INNOVATIONS FOR THAILAND THAT SPREAD GLOBALLY

- **Enhanced Peer Mobilization**, based on chain referral sampling methods, was first piloted under LINKAGES Thailand in 2015 and, based on increased case finding, was subsequently replicated under LINKAGES programs globally as the [Enhanced Peer Outreach Approach](#).
  - LINKAGES Thailand also led the development of a [Motivational Counseling training package](#) designed to address the challenges frontline workers face in motivating clients to make informed decisions about HIV testing, ART adherence, and PrEP that lead to sustained positive outcomes. The guidelines focus on listening and communication skills proven effective in behavior change programs in multiple public health areas.
  - More than 20 countries have adapted LINKAGES Thailand's **Online Reservation Application (ORA)** and launched their own versions under localized brands such as Ibadon.com in Mali, Ngouan.com in Cote d'Ivoire, and Yes4Me.net in India. As this ORA has scaled geographically, the features have also expanded, now including PrEP, index testing, case management, COVID-19 screenings, risk assessments, and flexible data visualizations.
  - Successful demonstration of comprehensive transgender health care under the LINKAGES-supported Tangerine Clinic led to the establishment of the **Tangerine Academy** that has produced transgender competency guidelines for clinics serving transgender populations. By 2020, stakeholders in Vietnam, Nepal, the Philippines, Burma, and Laos had all received capacity development support from Tangerine Academy.
- ### CONTRIBUTED TO GLOBAL THOUGHT LEADERSHIP
- LINKAGES Thailand and implementing partners **contributed 15 oral presentations and 54 posters** in global and regional HIV fora including the Internal AIDS Society Conference, the Conference on Retroviruses and Opportunistic Infections, International Congress on AIDS in Asia and the Pacific, Asia-Pacific AIDS & Co-Infections Conference, Bangkok International Symposium on HIV Medicine, and Prince Mahidol Award Conference.





Tangerine Clinic, the first HIV clinic for trans people in Thailand, working with a Thai famous online influencer (left) to promote HIV-related services for trans people.

- Project and partner staff led or contributed to the development of **21 manuscripts published in peer-reviewed journals** addressing a range of topics including PrEP, same-day ART, HIV services for transgender populations, STIs and service delivery under the KPLHS model (see publications list on page 11).

## FUTURE DIRECTIONS

Much of the work supported by LINKAGES Thailand will continue under the USAID- and PEPFAR-supported Meeting Targets and Maintaining Epidemic Control (EpiC) project. To close remaining gaps and achieve epidemic control, EpiC will ensure recruitment and testing become increasingly targeted using higher-yield approaches such as online recruitment and index testing, focusing on highest-risk subpopulations including chemsex participants and non-Thai migrants (particularly migrant sex workers), and using routine data analysis to track testing outcomes and adaptively

manage recruitment efforts. Moving forward, the approach will be less “reach everyone” and more “reach the right ones.”

As coverage becomes more targeted, EpiC will work to expand the KPLHS model to support community-based ART and VL testing. Community-based treatment is already a standard component of differentiated service delivery in many parts of the world, and experienced community organizations that manage distribution and monitoring of PEP and PrEP can also be trained and supported to manage ARVs for treatment of stable, clinically uncomplicated HIV-positive patients. Piloting of community-based ART under LINKAGES Thailand showed high levels of acceptability and satisfaction among patients, community health workers, and hospital staff, and the expansion of this model will not only help close remaining gaps in treatment uptake but also free up hospital resources to focus on higher-need patients.

The shift toward domestic funding for community-based service delivery under the NHSO ensures the sustainability of the KPLHS model. However, to optimize the contribution of community partners to epidemic control, the funding model needs to be reconsidered. The NHSO currently promotes high coverage with an emphasis on regular repeat testing in low-prevalence geographies and among low-risk populations. The model should incentivize case finding and be extended across the cascade to support community-based models for treatment initiation and adherence support.

Finally, EpiC will build on LINKAGES' use of robust data to track and manage program performance and ensure partners are reimbursed appropriately for services delivered under domestic financing. While Thailand collects a significant amount of data from LINKAGES and other sources, data systems remain fragmented and, in many cases, duplicative. This imposes a data management burden on implementing partners who nonetheless still face challenges accessing data to manage patients and evaluate programs. LINKAGES Thailand helped pilot and demonstrate the value of new data collection systems and data-driven programming models. Under EpiC, FHI 360 will work with the MOPH to consolidate and streamline systems for better tracking of clients and program performance across the cascade and between services and geographies.

## PEER-REVIEWED PUBLICATIONS SUPPORTED BY LINKAGES THAILAND

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### ***Linkages across the Continuum of HIV Services for Key Populations Affected by HIV (LINKAGES)***

is a global cooperative agreement funded by USAID through PEPFAR. Led by FHI 360 with partners Pact, IntraHealth International, and the University of North Carolina at Chapel Hill, LINKAGES has worked in more than 30 countries since 2014 to reduce HIV transmission among key populations — sex workers, men who have sex with men, transgender people, and people who inject drugs — and to improve their enrollment and retention in care.

*This report is made possible by the generous support of the American people through USAID and PEPFAR through the terms of cooperative agreement #AID-OAA-A-14-00045. The contents are the responsibility of the LINKAGES project and do not necessarily reflect the views of the USAID, PEPFAR, or the United States Government.*

Suggested citation: LINKAGES. LINKAGES Thailand: Summary of Achievements October 2015–September 2020. Durham (NC): FHI 360; 2020.

