On a hot October morning in Jakarta, Indonesia, Bunga* finally summoned the courage to go for HIV testing at the brothel where she worked. For several weeks, a local civil society organization (CSO) called Yayasan Kusuma Buana that works with female sex workers (FSWs) had told the women that voluntary HIV testing and counseling (VCT) would take place at that time and place. Being among CSO staff she trusted was important to Bunga; she was more likely to get tested there than elsewhere. But she waited in vain at the brothel for three hours before learning that mobile VCT would not arrive that day, after all.

Mobile VCT for HIV has myriad challenges in Indonesia. A basic one concerns scheduling it in places where CSOs work, such as brothels, entertainment establishments, and their own facilities. Until recently, mobile VCT visits were scheduled ad hoc, without systematic documentation. CSOs would telephone, send an SMS, or email the HIV unit manager of the relevant Puskesmas (government subdistrict health clinic) to request mobile VCT for a specific date and location. These requests were then written by hand into the Puskesmas’ schedule — or sometimes, not written into the schedule. Confirmation and, often, cancellations were typically provided to the CSOs with only same-day notice. Double booking was frequent. With key populations losing the chance to learn their HIV status, frustrations were mounting on both sides.

Then LINKAGES Indonesia teamed up with the Provincial Health Office (PHO) and District Health Office (DHO) to develop a solution. LINKAGES Indonesia is part of the global project Linkages Across the Continuum of HIV Services for Key Populations Affected by HIV funded by USAID and PEPFAR. Its goal is to conduct a range of activities to reduce HIV transmission among key populations and to improve their enrollment and retention in care. In Indonesia, key populations are FSWs, men who have sex with men (MSM), waria (a third-gender group that translates loosely as transgender), people who inject drugs (PWID), and partners of key population individuals.

LINKAGES and PHO/DHO staff realized that this scheduling problem was preventing key population members like Bunga from accessing HIV testing, a gateway to the continuum of HIV-related services. In addition, staff discovered that CSOs were reporting mobile testing data only to their donors and that Puskesmas were often not using the data at all. This lack of reporting was a missed opportunity to record the number of clients tested and how many tested positive during each mobile activity, data that could be used to inform program improvements. Availability of those data would also allow the DHO to gauge progress toward the country’s UNAIDS Fast-Track commitment to achieve 90-90-90 by the year 2020 — that is, 90 percent of people living with HIV will know their status, 90 percent of people diagnosed with HIV will be on sustained antiretroviral therapy, and 90 percent of those on antiretroviral therapy will have viral suppression.

The response of LINKAGES and the PHO/DHO was to join efforts to create an online scheduling and tracking system called DOKLING, short for dokter (doctor) plus keliling (mobile), which is slang for “mobile testing” in the field. In the planning phase, PHO/DHO and CSO stakeholders identified the desired features of the application. LINKAGES then supported development of the prototype desktop application that was piloted in two districts in Jakarta Greater Region in March 2017 and rolled out across all districts a month later.

* Pseudonym
Features include a scheduling database (Figure 1), an auto-send request letter to replace the previous scheduling requests by email and hard copy, and a record-keeping feature to document the number of people tested and how many tested positive during mobile VCT. A geotag function creates a visual of locations with the highest HIV prevalence, which can be used to identify future mobile HIV testing sites. The report generator creates graphs and tables of the mobile HIV testing data for use by CSOs, Puskesmas, and the PHO/DHO.

Following the DHO-led trainings in each district, DOKLING has already been adopted by all 44 Puskesmas that provide mobile testing in Daerah Khusus Ibukota Jakarta Province, as well as by the 22 CSOs led by and/or catering to key populations, two private clinics, and one hospital. Four other provinces have also expressed interest in DOKLING.

The response from stakeholders has been enthusiastic. Eti Supriati of the DHO in West Jakarta described implementing the system right away. She explains, “I instructed all health facility officers in West Jakarta that beginning April first, don’t make any more mobile VCT requests manually. We will only use this [DOKLING] application system for mobile VCT activities.” Fauzi Doni, of the CSO Gema Indonesia, agrees. “Before, once I got the schedule from the brothel I needed to go in person to the Puskesmas to request the date. If it was a holiday or weekend, I had to wait another day before I could go. Now, I can log in and request the schedule anywhere, anytime — a really huge advantage, especially in a high-traffic city like Jakarta.”

Thanks to the new systematic documentation, the recorded numbers and locations of hot spots reached and key population members tested are now being used to measure progress and plan for next steps. Figure 2 tracks the increasing number of mobile testing events since DOKLING was piloted in March 2017.
The DOKLING reports also show that more than one-third of mobile testing from April to August 2017 took place in West Jakarta (Figure 3), and that about half of all testing (50.9 percent) was among FSWs (Figure 4). The highest number of individuals found HIV positive was among waria (transgender people) and injecting drug users (Figure 4). Tracking these numbers systematically was not possible prior to DOKLING.

![Pie chart showing mobile testing events by district in DKI Jakarta](image)

**Figure 3.** Number of mobile testing events by month, March to August 2017

**Figure 4.** Number of key population clients tested for HIV and number who tested positive, April to August 2017

Despite the enthusiasm for DOKLING, both CSOs and Puskesmas have struggled with some aspects of the system — namely using the unique identifier codes assigned to clients and entering the anonymous service uptake information into the system. These issues are being addressed through a capacity-building and mentoring plan.

Future plans for DOKLING include expanding the desktop application for use in Test and Start. Clients testing HIV positive in mobile testing could be tracked to see where they go for services, whether they have started treatment, how long after testing positive they start treatment, and which CSO supports each client. Local technical assistance providers from CSOs will also be trained to maintain DOKLING to ensure sustainability of the system post-LINKAGES.