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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation (3-letter codes)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPJS-K</td>
<td>Badan Penyelenggara Jaminan Sosial-Kesehatan (National Health Insurance Agency)</td>
</tr>
<tr>
<td>ART</td>
<td>antiretroviral therapy</td>
</tr>
<tr>
<td>ARV</td>
<td>antiretroviral</td>
</tr>
<tr>
<td>CSO</td>
<td>civil society organization</td>
</tr>
<tr>
<td>DHO</td>
<td>district health office</td>
</tr>
<tr>
<td>FSW</td>
<td>female sex worker</td>
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<tr>
<td>HIV</td>
<td>human immunodeficiency virus</td>
</tr>
<tr>
<td>HP+</td>
<td>Health Policy Plus</td>
</tr>
<tr>
<td>IDR</td>
<td>Indonesian rupiah</td>
</tr>
<tr>
<td>JKN</td>
<td>Jaminan Kesehatan Nasional</td>
</tr>
<tr>
<td>LTFU</td>
<td>lost to follow-up, loss to follow-up</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MSM</td>
<td>men who have sex with men</td>
</tr>
<tr>
<td>PHO</td>
<td>provincial health office</td>
</tr>
<tr>
<td>PLHIV</td>
<td>people living with HIV</td>
</tr>
<tr>
<td>SIHA</td>
<td>Sistem Informasi HIV/AIDS dan IMS</td>
</tr>
<tr>
<td>PWID</td>
<td>people who inject drugs</td>
</tr>
<tr>
<td>US$</td>
<td>U.S. dollar</td>
</tr>
<tr>
<td>USAID</td>
<td>U.S. Agency for International Development</td>
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</table>
Executive Summary

Jakarta faces a high HIV burden and persistent challenges in HIV prevention, identification, linkage to care, retention in care, and viral suppression, yet the province has set ambitious HIV service delivery coverage targets under its fast-track strategy. Overcoming barriers along the HIV treatment cascade are essential for meeting these targets and improving efficiency of the HIV response. Given the paucity of data on HIV intervention costs in Jakarta—particularly by service delivery model or population served—the U.S. Agency for International Development (USAID)- and U.S. President’s Emergency Plan for AIDS Relief (PEPFAR)-funded Health Policy Plus (HP+) project conducted a cascade costing analysis in Jakarta. The analysis involved collecting primary data from the government, civil society organizations (CSOs), puskesmas, and private clinics to answer the following questions:

- What are the interventions, by service delivery model and targeted population, needed to overcome barriers along the HIV treatment cascade?
- How much does the intervention cost per person reached in a year?
- How cost-efficient are these interventions?

The study included CSOs that serve men who have sex with men, female sex workers, people who inject drugs, and waria (transgender), as well as facilities with different HIV caseloads (e.g., high-volume versus low-volume puskesmas).

Results

The analysis identified several opportunities for efficiency improvements along the cascade.

Cross-Cutting

Management and indirect costs account for significant proportions of CSO unit costs. For example, indirect costs account for 64 percent and 84 percent of hotspot outreach unit costs among people who inject drugs and waria due to the relatively low numbers reached and time intensity of the intervention. Management staff—including program managers, finance staff, field coordinators, and monitoring and evaluation staff—account for most of these costs. CSOs may be able to reduce these costs by scaling up coverage of services to achieve better economies of scale, reducing fragmentation within the HIV CSO community, or reducing the number of full-time management staff employed.

Identification

Among female sex workers, the unit costs of mobile HIV testing are relatively high (IDR 149,541; US$11.18)\(^1\) and testing yields are low (1.4 percent, as most HIV-positive female sex workers in Jakarta already have been identified). Consequently, the cost of mobile testing per female sex worker newly identified as living with HIV is 6 to 17 times higher among female sex workers than among other key populations. Changing the frequency, timing, and locations of female sex worker mobile testing could potentially improve the efficiency of this intervention, while scaling up index and self-testing among female sex workers has the greatest potential to reduce costs and improve HIV testing yields.

For men who have sex with men, virtual outreach costs 25 percent less per individual reached than hotspot outreach.\(^2\) Data suggest that the inclusion of nine outreach streams targeting men who have sex with men has reached segments of this population that were

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\(^1\) All currency conversions to US$ use the period exchange rate from 2017 found at x-rates.com

\(^2\) Note that some equipment and other start-up capital costs associated with virtual outreach were financed by USAID’s LINKAGES project.
unreachable through traditional hotspot outreach, resulting in a greater absolute number of identified HIV-positive men who have sex with men. Therefore, scaling up virtual outreach should result in finding more undiagnosed men who have sex with men and improving testing yields among this population—which already are quite high at 11.5 percent in Jakarta—while also lowering overall outreach costs.

**Linkage to Care and Treatment**

Detailed documentation on linkage services offered by CSOs was not collected for this report. HP+ estimated costs associated with providing information on or accompanying individuals to a facility for treatment initiation following diagnosis, ideally on the same day.

The cost of antiretroviral therapy (ART) as an individual intervention is high in Indonesia compared to other lower-middle-income settings; it is estimated to cost just over 7 million rupiah (US$523) per person on treatment per year. While low-volume puskesmas consistently reported spending less time per patient per year than did high- and medium-volume puskesmas, this finding likely is a result of inexperience in managing ART patients in low-volume puskesmas and could indicate quality issues that require further investigation. Due to high rates of loss to follow-up in low-volume puskesmas (41 percent) that have already incurred the costs of initiating patients on treatment, these facilities have the highest annual cost of ART per person retained in care (IDR 12.4 million, US$927). Drivers of cost per person on ART varied, and are not further analyzed in this report. These findings suggest that the additional costs for providing patient care in medium- and high-volume puskesmas, particularly for new patients and recurring patients stable on treatment, are ultimately a more efficient use of ART staff resources.

While stable patients on treatment have the lowest costs per person on ART compared to new or unstable patients, the difference is small. Puskesmas could reduce the cost of managing stable patients by introducing differentiated care models that reduce the frequency of clinical visits and laboratory monitoring.

**Retention in Care and Viral Suppression**

Support group meetings are one of the highest-cost interventions; for example, the average annual cost per person who injects drugs attending support groups is estimated to be IDR 3.2 million (US$239). Significant resources are spent on staff time, transport reimbursement, and refreshments to carry out routine support group meetings. For stable ART patients, reducing the frequency of these meetings, consolidating groups across CSOs, using peer volunteers rather than full-time CSO staff to hold the meetings, and maximizing support through other mechanisms (e.g., WhatsApp groups) could reduce the unit cost of these activities.

**Discussion**

The results suggest that significant cost savings (e.g., 11 percent reduction in cost per positive person identified) without compromises to quality of care may be possible if interventions are better targeted and delivered differently. As CSOs in Jakarta face declining external

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3 For this report, the Sistem Informasi HIV/AIDS dan IMS (SIHA) data, being the most robust dataset in Jakarta, were used to calculate lost to follow-up rates. Note that individual cohort data collected by LINKAGES suggest lower rates of lost-to-follow-up than do SIHA data.

4 Stable patients are defined as those who have received ART for at least one year and have no adverse drug reactions that require regular monitoring, no current illnesses or pregnancy, are not currently breastfeeding, have good understanding of lifelong adherence, and have evidence of treatment success (two consecutive viral load measurements below 1,000 copies/mL). In the absence of viral load monitoring, rising CD4 cell counts of CD4 counts > 200 cells/mm3, an objective adherence measure, can be used to indicate treatment success (WHO, 2016).
financing support for their activities and Jakarta aims to rapidly scale up services, it is imperative that program managers use cascade cost analytics to inform efficient use of resources and program implementation. HP+ recommends that the local government (i.e., provincial or district health offices):

- Routinely collect and analyze cost data annually in addition to programmatic data to continuously evaluate the cost efficiency of HIV prevention, testing, and treatment service delivery models. Further work is required to highlight the mandated sources of disaggregated program data to improve what is already collected in the Sistem Informasi HIV/AIDS dan IMS (SIHA) for the Ministry of Health (MOH).

- Use cascade cost data to inform social contracting arrangements with CSOs and set potential reimbursement rates for essential HIV activities conducted by CSOs and health facilities. Rates may require differentiation across locations as well as service delivery contexts of individual CSOs.

- Pilot innovative service delivery models for key population support groups and stable patients on ART and conduct additional research on the outcomes and cost-efficiency of current virtual outreach and ART referral services, acknowledging that there will be upfront costs for these pilots.
Introduction

While Indonesia has a relatively small HIV burden with an HIV prevalence of just 0.3 percent, the country faces challenges in its HIV response. Coverage of HIV prevention, testing, and treatment services is low, and adoption of global HIV guidelines and best practices is often delayed. At the end of 2018, only 57 percent of people living with HIV nationally knew their status and 17 percent of people living with HIV were estimated to be on antiretroviral therapy (ART) (Dwisangka, 2019). Suboptimal coverage contributes to an estimated 50,000 new infections a year, and this number is expected to increase if past trends continue (UNAIDS, 2018). The government has not successfully rolled out its test-and-treat policy, introduced in July 2018, to initiate treatment among all people diagnosed with HIV, resulting in poor linkage to care and delayed treatment initiation.

Despite these challenges, as well as the lack of comprehensive data on program achievements, the government of Indonesia is committed to tackling the HIV epidemic, as evidenced by its ambitious fast-track strategy. Recently revised minimum service delivery standards mandate provinces to screen and test all those at risk of HIV infection, defined as pregnant women, tuberculosis and sexually transmitted infection patients, prisoners, and key populations. This change in policy presents an opportunity for greater government investment in HIV and increased accountability. The subdireectorate for HIV and AIDS within the MOH is in the process of negotiating lower prices for critical HIV drugs and supplies, particularly antiretrovirals (ARVs), to improve efficiency as the country rapidly scales up coverage of HIV services.

HIV Epidemic in Jakarta

The HIV epidemic in Indonesia varies by province. Jakarta is one of the highest-burden provinces with an estimated HIV prevalence rate of 0.6 percent and more than 100,000 people living with HIV (MOH, 2015). Key populations such as men who have sex with men, female sex workers, people who inject drugs, and waria (transgender) are disproportionately affected by HIV; in Jakarta, HIV prevalence in many of these groups is greater than 30 percent (MOH, 2015). Performance along the HIV treatment cascade is poor, with low rates of identification, treatment initiation, and retention in care (Figure 1). Forty-five percent of people in Jakarta living with HIV do not know their status (Jakarta PHO, 2019). Performance at the second and third steps in the cascade has similar or even greater leakage. Viral load testing coverage, though improving, is still low and not frequently reported in Jakarta. However, across facilities supported by the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), viral suppression rates in Jakarta among ART patients receiving viral load testing is greater than 90 percent in Jakarta (LINKAGES, 2018).
Figure 1. HIV Treatment Cascade in Jakarta, 2019

Reasons for poor cascade outcomes include:

- **Ineffective targeting for testing**: Most HIV testing is conducted in health facilities (e.g., “fixed-site” testing) and the government has focused on scaling up HIV testing among pregnant women, even though testing yields among this group are very low. Provider-initiated testing and counseling accounts for most testing coverage and the largest absolute number of diagnoses, but it has not yet been systematized to target those at high risk. Consequently, there is insufficient HIV testing coverage among those with tuberculosis, sexually transmitted infections, or hepatitis C. Voluntary counseling and testing has the highest yield but requires amplification. This is particularly true for index testing.

- **Suboptimal prioritization for outreach**: Mobile HIV testing is conducted in key population hotspots, primarily for female sex workers (but also for transgender individuals, men who have sex with men, and people who inject drugs). However, HIV prevalence and testing yields are lower and declining for female sex workers compared with other key population groups, while many high-prevalence key population groups remain unreached with current testing strategies. Significant resources are dedicated to quarterly repeat testing among female sex workers rather than for funding additional testing among other populations or for scaling up availability and access to other testing modalities, including index testing, self-testing, and community-based screening, so that fixed confirmatory testing resources can be used more strategically.

- **Stigma and discrimination**: Police raids at city hotspots for men who have sex with men have introduced impediments to HIV outreach and other interventions among this population. Other mechanisms, such as virtual outreach and individualized face-to-face meetings are used to overcome these impediments. The punitive environment in Jakarta presents a significant barrier, as HIV prevalence there is rising among men who have sex with men; it was 17.2 percent in 2013 and increased to 32 percent in 2015 (MOH, 2015).

- **Low levels of funding for follow-up with patients**: Some outreach workers and peer volunteers employed by civil society organizations (CSOs) do not have sufficient funding to accompany patients to health facilities to initiate treatment (LINKAGES project does cover staff transport costs). Also, systematic issues such as lack of clear mechanisms for identifying individuals lost to follow-up (LTFU) and/or engaging community-based finders results in very few patients who are LTFU returning to care.
• **Bias toward hospital-based care:** Though Jakarta has been moving to more decentralized services, many HIV testing and treatment services are still provided in hospitals rather than in *puskesmas*, which results in higher costs to the government. Due to the lack of differentiated models of care for HIV treatment in Jakarta, all patients must visit a health facility monthly for clinical check-ups and ARV pickup. These monthly visits can place a significant burden on patients, especially if they must travel far to access services in a hospital.

• **Poor viral load capacity:** Many patients lack access to viral load testing, meaning patient outcomes are primarily monitored through CD4 testing and clinical visits. The subdirektorat for HIV is in the process of scaling up access to GeneXpert for viral load monitoring countrywide.

The provincial health office (PHO) in Jakarta recognizes the need to overcome these barriers to meet ambitious fast-track service delivery targets, including quadrupling the number of people on ART to 81,603 by 2020, and improving cascade outcomes. With support from the U.S. Agency for International Development (USAID)-funded LINKAGES project, the local government is testing new service delivery models and strategies to reach undiagnosed people living with HIV, link them to care, and retain them in care. One innovative strategy involves creating online platforms to reach new segments of young female sex workers and young men who have sex with men. These online platforms facilitate reaching key populations through social media to share information on HIV and supporting key populations to make HIV service appointments online (LINKAGES, 2018).

**HIV Costing Evidence**

To achieve fast-track targets, the PHO needs to identify the most effective and efficient interventions for overcoming barriers along the cascade, to estimate the cost of scaling up these interventions, and to secure adequate and sustainable funding for its HIV response. While there is some evidence, particularly from the LINKAGES project, on the causes of poor cascade outcomes, there is a lack of up-to-date cost data to inform programmatic and financing decision making. The most recent HIV costing study available is from 2015 and it is limited in that it used a top-down approach to estimate HIV service costs in which total expenditures are divided by total number of people reached (Sucayah and Mardiati, 2015). This approach does not allow the government to understand the costs of implementing services differently to achieve better outcomes for a lower unit cost. This study was also limited by the types of costs collected and the levels of disaggregation.

Due to poor performance along the treatment cascade and lack of sufficient cost data, the USAID- and PEPFAR-funded Health Policy Plus (HP+) project conducted a cascade costing analysis in Jakarta. The analysis involved collecting primary data from the government, CSOs, and HIV service providers to answer the following questions:

- What are the interventions, by service delivery model and targeted population, needed to overcome barriers along the HIV treatment cascade?
- How much does the intervention cost per person reached in a year?
- How cost-efficient are these interventions?

This summary report includes a description of the cascade costing methodology and key results, including unit costs of HIV interventions, disaggregated by population served and type of service delivery model.

These results suggest that Jakarta may be able to meet its fast-track targets through changes in how services are delivered and targeted without compromises in quality of care.
Methodology

HP+ conducted a cascade cost analysis to determine the investments required for scaling up interventions to improve identification, linkage to care, retention in care, and viral suppression and to assess the cost-efficiency of these interventions. The analysis involved interviewing key stakeholders to understand the interventions needed—by service delivery model and target population—and collecting cost data from district health offices (DHOs), CSOs, puskesmas, and private clinics to estimate unit costs of interventions. The PHO, DHOs, and the USAID- and PEPFAR-funded LINKAGES project played an important role in designing the study, including selection of the data sample. The study timeline and process are described in Figure 2.

Figure 2. Study Timeline and Process

Data Sample

HP+ collected data from 12 CSOs, five DHOs, and nine facilities. HP+ selected a diverse range of CSOs based on size, geographic reach within Jakarta, and populations served (Table 1). LINKAGES helped select the sample of CSOs included in the costing study; these CSOs receive funding from multiple donors, including PEPFAR and the Global Fund to Fight AIDS, Tuberculosis, and Malaria. The PHO and DHOs selected a sample of puskesmas based on the monthly volume of HIV patients to have a diverse range of facilities and area distribution included in the study. High-volume puskesmas may have different practices and resources than low-volume puskesmas. HP+ also included two private clinics with relatively large HIV patient caseloads to compare costs between the public and private sector.

Table 1. Data Collection Sample

<table>
<thead>
<tr>
<th>Populations Served</th>
<th>Number of CSOs</th>
<th>Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female sex workers and their clients</td>
<td>3</td>
<td>PEPFAR</td>
</tr>
<tr>
<td>People who inject drugs</td>
<td>3</td>
<td>PEPFAR, Global Fund</td>
</tr>
<tr>
<td>Men who have sex with men</td>
<td>3</td>
<td>PEPFAR, Global Fund, BTG Netherland</td>
</tr>
<tr>
<td>Waria</td>
<td>1</td>
<td>PEPFAR, Global Fund</td>
</tr>
<tr>
<td>Multiple populations</td>
<td>2</td>
<td>AIDS Healthcare Foundation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Categorization of Facilities</th>
<th>Number of Facilities</th>
<th>District Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-volume puskesmas</td>
<td>3</td>
<td>East and North Jakarta</td>
</tr>
<tr>
<td>Medium-volume puskesmas</td>
<td>2</td>
<td>South and Central Jakarta</td>
</tr>
<tr>
<td>Low-volume puskesmas</td>
<td>2</td>
<td>West and South Jakarta</td>
</tr>
<tr>
<td>Private clinics</td>
<td>2</td>
<td>Central and South Jakarta</td>
</tr>
</tbody>
</table>
Identifying Interventions

HP+ interviewed key stakeholders in Jakarta, including the PHO, CSOs, and staff from the LINKAGES project, to identify the specific interventions needed to overcome barriers along the HIV treatment cascade. Participants revealed that some existing interventions, such as peer volunteers accompanying patients to facilities for treatment initiation, index testing, and key population support groups, need to be scaled up with fidelity to improve cascade outcomes. However, existing interventions alone will not address all barriers along the cascade, particularly in reaching testing targets. Therefore, stakeholders also suggested introducing new service delivery models for outreach, testing, and treatment, including virtual outreach models for key populations and differentiated models of care for patients on ART. HP+ held an initial workshop with CSOs in February 2018 to discuss the methodological approach and confirm the interventions to include in the cost analysis and identify the inputs needed for specific service delivery models and populations (Table 2).

Table 2. Interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Hotspot outreach</td>
<td>Outreach workers or peer volunteers provide or refer key populations to HIV prevention, testing, or treatment at places frequently visited by those populations</td>
</tr>
<tr>
<td>Virtual outreach</td>
<td>Reaching key or general populations with HIV messaging or individualized support related to HIV prevention, testing, or treatment through online platforms, including social media and dating applications</td>
</tr>
<tr>
<td>Facility-based HIV testing</td>
<td>HIV testing and counseling conducted at a health facility</td>
</tr>
<tr>
<td>Mobile HIV testing</td>
<td>HIV testing and counseling provided at hotspots</td>
</tr>
<tr>
<td>Referral to ART</td>
<td>Providing information on or accompanying individuals to a facility for treatment initiation following diagnosis, ideally on the same day</td>
</tr>
<tr>
<td>Antiretroviral therapy</td>
<td>HIV treatment services that includes monthly clinical visits and laboratory monitoring through CD4 (two times/year) and viral load testing (annually)</td>
</tr>
<tr>
<td>Adherence support</td>
<td>Individualized counseling and support to ART patients who may be at risk of LTFU or not adhering to their treatment regimen</td>
</tr>
<tr>
<td>Key population support groups</td>
<td>Routine meetings with key populations to provide information and support related to HIV prevention, testing, and treatment</td>
</tr>
<tr>
<td>Lost-to-follow-up tracing</td>
<td>Facility-based staff calling or visiting an ART patient who has stopped coming for ART services for at least three months</td>
</tr>
</tbody>
</table>

Costing Approach

HP+ estimated direct and indirect costs needed to deliver interventions based on interviews with program staff or service providers and review of financial records. Direct costs included the costs of human resource time; commodities, medical supplies, and educational materials; transportation; communication; and program support activities directly related to scaling up service delivery coverage. Indirect costs included management staff costs, operating costs, and fixed costs not directly associated with service delivery, but still essential for scaling up services.

For estimating direct costs, HP+ used an ingredients-based or bottom-up costing approach. This involves calculating costs based on the types and quantities of inputs needed to deliver each intervention to each specific population group (Figure 3). Weighted unit costs were estimated across CSOs based on number of people reached.
Figure 3. Ingredients-Based Costing Methodology

Formula for each input required to deliver an intervention:

\[
\text{Percent (\%)} \times \text{Quantity needed per month/year} \times \text{Unit cost of input} = \text{Cost per person reached per month/year}
\]

Formula for calculating cost of staff time delivering an intervention:

**Step 1: Calculate cost per minute**

\[
\text{Average annual salary and benefits per staff type} + \text{Average number of days worked per year} + \text{Average number of minutes worked per day} \times 1+ \% \text{ of time spent on admin activities} = \text{Cost per minute by staff type}
\]

**Step 2: Estimate number of minutes spent delivering each service**

\[
\text{Average number of minutes spent per visit / encounter} + \text{Number of visits per patient per year} \times \text{Total number of minutes spent per patient per staff type for each intervention} = \text{Cost of staff time delivering intervention per person per year}
\]

**Step 3: Calculate direct labor cost per patient**

In addition to estimating the cost per person reached by intervention, HP+ estimated the cost for a desired outcome, such as, for HIV testing, the cost per person identified as living with HIV, when data were available. These costs were estimated by dividing total costs for the intervention by the number of people achieving the outcome of interest.

For indirect costs, HP+ used a top-down approach by dividing the total indirect cost associated with an intervention by the number of people reached. The proportion of indirect costs associated with a particular intervention was based on the amount of time direct staff spend per person per year on the intervention and the total number of people reached.
Results

Unit costs are presented for each step of the cascade by intervention and target population.

Identification

Face-to-Face Outreach

The biggest challenge to Jakarta’s HIV program is reaching undiagnosed individuals, especially in the lower-risk general population. Results reported focus on interventions targeting key population groups that are disproportionately affected by HIV, acknowledging that a proportion of undiagnosed people living with HIV do not identify as a key population and will therefore not likely be reached by key population-focused outreach services. In Jakarta, CSOs traditionally reach key populations with peer volunteers or outreach workers through hotspot visits at particular times of the day. CSOs will provide a variety of prevention and support activities through hotspot outreach, including distribution of educational materials, condoms, and clean needles (people who inject drugs only) and referral to HIV testing. The unit cost of reaching key populations through hotspot outreach services varies by population (Figure 4).

Figure 4. Average Annual Cost Per Person Reached through Hotspot Outreach by Population Group in IDR (US$)

Cost of hotspot outreach per person contact is highest among female sex workers, as they receive more condoms through hotspot outreach than any other groups (Box 1). Men who have sex with men have the lowest cost per person reached, primarily due to economies of scale from CSOs reaching more new individuals through this mode of outreach. CSOs that reach people who inject drugs reported more frequent and longer interactions per person reached than CSOs targeting other key population groups. For example, one CSO reported that outreach workers spend nearly four hours per person who injects drugs reached per year, while another CSO reported spending just 30 minutes per individual reached among

Box 1. Why do hotspot outreach unit costs vary by population?

Staff time: CSOs serving people who inject drugs spend more time per person than do CSOs serving other groups.

Commodities: Female sex workers receive more condoms (288 on average per year) than do other groups.

Economies of scale: People who inject drugs and waria reach relatively fewer people through hotspot outreach, but it is still a time-intensive activity for the CSOs involved, resulting in high indirect costs per person reached.
men who have sex with men. CSOs serving people who inject drugs may spend more time per person reached through hotspot outreach to discuss prevention specific to people who inject drugs, including needle and syringe exchange.

Across all CSOs—but particularly for those serving people who inject drugs and waria where outreach coverage is already very high—a large proportion of hotspot outreach unit costs are for management and other indirect costs. Indirect costs include proportional costs for a field coordinator, program manager, finance manager, and office utilities. CSOs reach large numbers of people through hotspot outreach, but CSOs serving waria and people who inject drugs reach fewer people than other CSOs. Consequently, hotspot outreach to waria and people who inject drugs remains a time-intensive activity that leads to relatively high indirect resource allocation to the intervention. Data suggest that in Jakarta most HIV-positive transwomen and people who inject drugs already have been identified, making finding the remaining undiagnosed labor-intensive and expensive. Prioritization for these key population groups should shift to case management to achieve viral suppression and the use of networks of people living with HIV to identify newly HIV-positive individuals.

A key aspect of cost-efficiency of hotspot outreach depends on whether the outreach results in uptake of prevention and HIV testing services for those in need of those services (testing yields are discussed later in the report). HP+ estimated the cost per person reached through hotspot outreach who accesses HIV testing services (Figure 5). The results show that female sex workers and people who inject drugs have the highest hotspot outreach cost per person tested for HIV. For female sex workers, the high overall cost is a result of the higher costs of reaching one female sex worker through hotspot outreach than is the case for other groups, as well as the fact that more than half (53 percent) of female sex workers reached at hotspots are tested for HIV. For people who inject drugs, the results indicate a very low percentage of people contacted through hotspot outreach are also tested for HIV.

Although prevention efforts are a significant aspect of hotspot outreach for both female sex workers and people who inject drugs, these results suggest that current hotspot outreach for these groups may not be very cost-efficient in terms of increasing HIV testing uptake. On the other hand, outreach among men who have sex with men has the lowest cost per person reached through hotspot outreach and lowest cost per person reached who is tested for HIV, suggesting that such hotspot outreach is relatively cost-efficient. However, there is room for further efficiency gains as uptake of HIV testing among men who have sex with men remains relatively low, though LINKAGES programming is reaching more than 60 percent of eligible men who have sex with men. Outreach in this population should continue to be under CSOs, funded separately from Jaminan Kesehatan Nasional (JKN), the national health insurance scheme. However, under HP+'s Strategic Purchasing for HIV activity, we consider the possibility of JKN funding top performing CSOs to identify, link, treat, and ensure viral suppression for specific population groups of people living with HIV, including men who have sex with men.
Virtual Outreach

For men who have sex with men, HP+ compared the unit costs of hotspot versus virtual outreach models. Box 2 includes a description of some of the virtual outreach models for men who have sex with men and tools that LINKAGES is helping the local government and CSOs pilot or bring to scale in Jakarta (see Annex for model design). Both hotspot and virtual outreach models are needed as they engage different social networks, allowing for reaching different subpopulations within men who have sex with men. Unit cost estimates and other programmatic data can help determine the optimal mix of hotspot and virtual outreach.

Among men who have sex with men, the cost per individual reached through virtual social network outreach models is lower than that for hotspot outreach, as the former generally requires less time from outreach workers and counselors, though the time varies per outreach encounter (Figure 6). Hotspot outreach costs include the costs of staff transport, commodities, and materials that are not required for virtual outreach. However, there are some equipment and other costs associated with virtual outreach that are not needed for hotspot outreach, but these costs are relatively small per person reached through virtual outreach models. Due to the lack of data on HIV testing uptake resulting from virtual outreach models, HP+ cannot calculate cost per person reached who access HIV testing services by service delivery model or compare the cost-efficiency of hotspot versus virtual outreach models.

Box 2. Virtual outreach models and tools piloted by LINKAGES

Peer social network outreach: Paid CSO outreach workers reach vulnerable individuals online and promote HIV prevention, testing, and treatment services.

Social influencer outreach: Individuals with substantial online followers promote HIV prevention, testing, and treatment services.

Social profile outreach: Targeted advertisements reach vulnerable individuals online and promote HIV prevention, testing, and treatment services.

Large-scale advertising: Key populations reached with targeted messages through big data firm, data app, or social media influencer.

Community outreach databank: Administered by the Jakarta Provincial AIDS Commission and district AIDS commissions; is a repository for face-to-face outreach data submitted by CSOs, irrespective of funding source.

DOKLING: The mobile testing scheduling application. UpdateStatus.id is an online platform in which vulnerable individuals can assess their risks/needs for HIV prevention, testing, and treatment services, and can make health service appointments at participating puskesmas and clinics.
**HIV Testing and Counseling**

There are several HIV testing and counseling entry points in Jakarta. People accessing tuberculosis, sexually transmitted infection, and prenatal services at health facilities are targeted to receive HIV testing. CSOs support HIV testing and counseling through mobile testing services that reach key populations and their partners. On average, mobile HIV testing is estimated to cost less per person tested than HIV testing in health facilities; the weighted average cost per person tested through mobile testing is IDR 129,928 (US$9.71) compared to IDR 233,861 ($17.48) in facilities. Unit costs vary by type of facility, type of testing modality, and population tested (Figure 7). For facility-based testing, it is expected that high-volume puskesmas would be more efficient with staff time and have relatively lower indirect costs per person tested for HIV than low-volume puskesmas. However, low-volume puskesmas have the lowest cost per person tested for HIV; this is a result of nurses, rather than doctors, carrying out most of HIV tests in low-volume puskesmas and staff spending less time per patient tested for HIV. The unit cost of HIV testing in private clinics—which tend to have high volumes of HIV testing—is in line with costs in high-volume puskesmas.

**Figure 6. Unit Costs of Hotspot Versus Virtual Outreach for Men Who Have Sex with Men in IDR, (US$)**

**Figure 7. Costs of Mobile Versus Facility-Based HIV Testing Per Person Tested**

FSW: female sex workers; PWID: people who inject drugs; MSM: men who have sex with men
Mobile testing unit costs are slightly higher for female sex workers than for other populations. This is driven by relatively higher mobile clinic operating costs and higher indirect costs compared with CSOs serving other key populations.

To assess the cost-efficiency of mobile HIV testing, HP+ estimated the cost of HIV testing per person identified as living with HIV for each key population group. The cost-efficiency of mobile HIV testing depends on testing yield (e.g., percentage of people tested for HIV who are identified as living with HIV). In Jakarta, men who have sex with men have the highest testing yields and female sex workers have the lowest testing yields among key populations (Figure 8). High testing yields among men who have sex with men likely are a result of there being a bigger proportion of men who have sex with men living with HIV that remains undiagnosed compared to other key populations living with HIV. Results from the HP+ LEAP Jakarta application and 2017 data from the Sistem Informasi HIV/AIDS dan IMS (SIHA) indicate that in Jakarta, 29 percent of HIV-positive men who have sex with men are undiagnosed; the comparable figure among female sex workers is 1 percent. Frequent repeat testing of key populations at hotspots is leading to declining testing yields, especially among female sex workers and people who inject drugs.

Figure 8. HIV Testing Yields in Jakarta by Key Population, January-December 2018

Source: MOH, 2019a
In our data sample which was a combination of CSO and facility data from January–December 2018 (MOH, 2019a), testing yields by population did not align with those reported for Jakarta province. Testing yields were highest among people who inject drugs (9.5 percent), followed by men who have sex with men (7.5 percent), waria (6.3 percent), and female sex workers (1.4 percent). Given that the cost of mobile testing per person tested is lowest among people who inject drugs and they have the highest testing yield in our sample, the cost of mobile outreach per person identified is lowest among people who inject drugs (Figure 9). Female sex workers, with relatively high unit costs for mobile testing and low testing yields, have a high mobile testing cost per person identified; the cost of mobile testing to identify one female sex worker as living with HIV is nearly six times the cost for waria and men who have sex with men and 17 times the cost for people who inject drugs (Box 3). This suggests that the current frequency, timing, and locations of female sex workers’ mobile HIV testing may need to change to use resources more efficiently.

Figure 9. Costs of Mobile HIV Testing Per Person Identified as Living with HIV in IDR (US$)

<table>
<thead>
<tr>
<th>Population</th>
<th>Cost per Person Identified (IDR)</th>
<th>Cost per Person Identified (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female sex workers</td>
<td>10,604,962</td>
<td>793</td>
</tr>
<tr>
<td>Waria</td>
<td>1,796,531</td>
<td>134</td>
</tr>
<tr>
<td>Men who have sex with men</td>
<td>1,611,106</td>
<td>120</td>
</tr>
<tr>
<td>People who inject drugs</td>
<td>614,054</td>
<td>46</td>
</tr>
</tbody>
</table>

Box 3. Why is the cost of mobile testing per person identified highest among female sex workers?

**Low testing yield:** Just 1.4 percent of female sex workers tested are living with HIV; the rate among other populations is four or more times this rate.

**Cost of mobile testing:** Costs per female sex worker tested through a mobile site are at least 33 percent higher than that of any other population.

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**Linkage to Care and Treatment**

**Referral to ART**

CSOs in Jakarta refer key populations and their partners to ART services once they are diagnosed as living with HIV. There are different ART referral models among CSOs. Some CSOs have outreach workers or peer volunteers accompany patients to the facility to initiate ART, some CSOs will provide transport stipends to patients who initiate ART, and some CSOs pay incentive payments to peer volunteers and outreach workers if certain targets or outcomes are achieved. The structure of incentive payments also varies by CSO; some CSOs pay outreach workers and peer volunteers based on meeting monthly targets for HIV testing and/or treatment initiation, whereas others pay for each person who initiates treatment.

Wide variations in the unit cost of ART referrals reflect these differences in how CSOs carry out ART referrals. The cost per person referred to ART is highest for female sex workers (IDR 1,425,469, US$107) and people who inject drugs (IDR 1,657,376; US$124) due to staff
time spent accompanying clients to initiate ART and transportation costs associated with ART referral (Figure 10). The cost per individual referred to ART among waria or men who have sex with men is much lower than that for other key population groups at IDR 67,253 (US$5.03) and IDR 88,815 (US$6.64) and per person, respectively. Most CSOs serving waria or men who have sex with men do not accompany newly diagnosed men who have sex with men to facilities to initiate treatment, pay a travel stipend to clients, or pay employees for successful treatment initiation (Box 4). Due to lack of both follow-up mechanisms and reporting on patient outcomes across most of the CSOs for those who were referred to treatment, HP+ is unable to analyze the cost per person referred to ART who successfully initiates treatment and therefore is unable to assess the relative cost-efficiency of different ART referral models.

Box 4. What Drives ART Referral Costs?

**Accompanying patient:** Seventy-one percent of people who inject drugs and 56 percent of female sex workers are accompanied by an outreach worker or peer volunteer to initiate treatment.

**Transport stipends:** Eight-six percent of female sex workers and 71 percent of people who inject drugs referred to ART receive a transport stipend from the CSO.

Note: No transportation stipends are provided by facilities.

![Figure 10. Average Cost per Female Sex Worker and Person Who Injects Drugs Referred to ART in IDR (US$)](image-url)
**Treatment Initiation and Maintenance**

Average annual unit costs of treatment depend on whether the patient is new or stable on treatment, as well as where services are provided (Figure 11). In general, treating new patients and unstable recurring patients costs more per person per year than treating stable recurring patients (see footnote on page vii for definition of stable patient). Newly diagnosed positive patients and unstable patients on treatment require more staff time and more frequent clinical testing than stable ART patients. For new and stable patients, the cost per person on treatment in low-volume puskesmas is less than that in medium- and high-volume puskesmas. This is a result of low-volume puskesmas staff spending significantly less time with patients compared with that in medium- and high-volume puskesmas (Box 5). The difference may stem from inexperience in managing patients on ART in low-volume facilities or potentially poor quality of care. In private clinics, ART unit costs are slightly lower than that for puskesmas, with the average cost per ART patient per year being 6,654,366 IDR (US$497) across all patient types.

**Box 5. Differences in staff costs drive lower treatment costs in low-volume puskesmas**

- Staff costs per new ART patient are one-fourth that in high- and medium-volume puskesmas.
- Doctors spend 10–20 minutes per visit with recurring stable patients versus 15–30 minutes per visit in high-volume puskesmas.

**Figure 11. Average Cost Per Patient on Treatment Per Year in Puskesmas by Type of Patient and Facility in Million IDR (US$)**

![Chart showing average cost per patient on treatment per year in puskesmas by type of patient and facility in million IDR (US$).](chart)

Even though low-volume puskesmas have slightly lower costs per patient on ART among new and stable patients, the overall average cost per person on treatment is about the same across facility types (Figure 12). Low-volume facilities have the highest lab and indirect and management costs per patient. Across all facility types, ARVs account for the largest proportion of treatment unit costs, ranging from 66 percent to 69 percent depending on the facility type. Viral load testing is another significant cost, costing between IDR 800,000 (US$59.80) to IDR 850,000 (US$63.54) per test, depending on the facility.
Retention and Viral Suppression

Retention in care is the largest failure point along the treatment cascade in Jakarta. ART patients stop attending facility visits for a variety of reasons, from stigma and discrimination to inconvenient facility operating hours to financial barriers to access. Data collected by LINKAGES tracking a cohort of 48,013 clients eligible for ART show that 92 percent started treatment. Of the 44,111 clients who started treatment, only 49 percent remained on treatment, while 11 percent died, 15 percent were referred out, and 25 percent either stopped treatment or were LTFU (MOH, 2019b). Current treatment protocols do not allow for differentiated ART models in which patients who are stable on treatment receive multimonth ARV scripts and visit the facility for clinical monitoring less frequently. As a result, all ART patients are expected to make monthly visits to facilities. Some CSOs attempt to alleviate the financial burden of monthly visits by providing transportation reimbursement to new ART patients, but recurring patients often do not receive such support.

Individualized adherence support costs less per person reached than support group meetings (Box 6). Support group meeting costs vary by key population group; support groups for

<table>
<thead>
<tr>
<th>Puskesmas type</th>
<th>High volume</th>
<th>Medium volume</th>
<th>Low volume</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>29,504 ($2.21)</td>
<td>8,769 ($0.66)</td>
<td>68,883 ($5.15)</td>
</tr>
<tr>
<td></td>
<td>1,181,412 ($88)</td>
<td>1,419,980 ($106)</td>
<td>1,804,946 ($135)</td>
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<tr>
<td></td>
<td>4,960,771 ($371)</td>
<td>4,960,771 ($371)</td>
<td>4,960,771 ($371)</td>
</tr>
<tr>
<td></td>
<td>977,495 ($73)</td>
<td>1,099,873 ($82)</td>
<td>427,258 ($32)</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Indirect costs</td>
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</tr>
<tr>
<td>Lab costs</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct staff</td>
<td></td>
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</tr>
</tbody>
</table>

Box 6. Why do support group meetings cost more per person than individualized support?

Time intensity: Support group meetings are held as often as 24 times per year and for two hours, whereas individualized adherence support may require as little as an hour per person per year.

Staff: Usually just one staff person works with a person for individualized support, whereas multiple staff (outreach worker, counseling, peer volunteers) attend support groups.

Transport and refreshments: Support group attendees usually receive transport reimbursement and refreshments at each meeting.
people who inject drugs have the highest cost per person due to relatively small group sizes (one CSO reported only having 2-4 people per meeting) and more frequent meetings compared with other key population support groups (Figure 13). Waria have the lowest unit cost for support group meetings as they tend to have larger group sizes (20 people per meeting).

**Figure 13. Average Unit Cost of Individualized Adherence Support and Group Meetings by Key Population in IDR (US$)**

Costs of individualized adherence support per person reached per year also vary by key population group. Similar to support group meetings, adherence support costs more per person who injects drugs reached than per individual in any other key population. Over half (77 percent) of this cost is for staff time spent with each person who injects drugs; CSOs serving people who inject drugs are more likely than others to conduct home visits and outreach workers and counselors spend at least one hour with each person receiving this support. Only two CSOs included in our analysis employ case managers to support patients from initial diagnosis to providing adherence support after treatment initiation. The cost per patient per year of the case workers’ time to provide this continuity of care and support is 218,333 IDR (US$16.32).

Despite adherence support, many ART patients in Jakarta are not retained in care. Low-volume facilities reported higher LTFU rates than did medium- and high-volume facilities (Figure 14). The count does not include clients who have died or were referred out, e.g., to a hospital. Facilities attempt to bring patients back to care through phone or home visits. Medium-volume facilities reported the highest cost per LTFU patient reached as doctors, rather than lower level staff such as nurses, were primarily responsible for conducting LTFU activities. In medium- and low-volume facilities, LTFU patients were contacted through phone; high-volume facilities traced patients through phone and home visits.
Due to the lack of data on how many people are returned to care from LTFU activities, HP+ cannot assess the cost-efficiency of different LTFU approaches. However, HP+ estimated the cost of ART per person retained in care after 12 months of treatment to determine whether ART provision is cost-efficient by type of puskesmas (Figure 15).

Because low-volume facilities reported much lower ART retention rates (59 percent) than medium- and high-volume facilities (87 percent), they have a higher ART cost per person retained in care. This suggests that ART provision in low-volume puskesmas may not be as cost-efficient as that in medium- and high-volume puskesmas.
Discussion

This report fills gaps in data on the costs of implementing HIV interventions in Jakarta. By analyzing intervention costs per person reached or for a desired outcome by service delivery model and population served, this report helps advance the evidence base for improving the cost efficiency of Jakarta’s HIV response and cascade outcomes. The PHO in Jakarta can use results from this study to inform social contracting arrangements that they will establish with CSOs and to set potential reimbursement rates for essential HIV activities conducted by CSOs and health facilities.

Opportunities for Efficiency Gains

Management and indirect costs account for a significant proportion of CSO unit costs. Management staff, including program managers, finance staff, field coordinators, and monitoring and evaluation staff, account for most of these costs. CSOs may be able to reduce these costs by scaling up coverage of services to achieve better economies of scale, by reducing fragmentation within the HIV CSO community, or by reducing the number of full-time management staff employed. As noted previously, using a top-down costing approach for indirect costs was a limiting factor for the study, given that it is difficult to know if allocations made are accurate.

As expected, low-volume puskesmas tend to have slightly higher management and other indirect costs per person reached. However, management and indirect costs account for a relatively small proportion of puskesmas’ unit costs—unlike the case with CSOs—which suggests there is little room for efficiency improvements in this area. Private clinics’ unit costs of HIV services such as ART and HIV testing and counseling are in line with unit costs seen in high-volume puskesmas.

As Jakarta scales up HIV services to meet ambitious fast-track strategy targets, there are several opportunities to improve cascade outcomes and the cost-efficiency of the HIV response by making changes to how services are delivered. They are described below.

Identification

Due to relatively high unit costs of mobile HIV testing and low testing yields among female sex workers, given that the majority of HIV-positive female sex workers in Jakarta already have been identified, the cost of mobile testing per female sex worker identified as living with HIV is significantly higher than the cost for other key populations. Changing the frequency, timing, and locations of female sex workers’ mobile testing could potentially improve the efficiency of this intervention, while scaling up index and self-testing among female sex workers has the greatest potential to reduce costs and improve HIV testing yields.

Among men who have sex with men, virtual outreach costs less per individual reached than does hotspot outreach. Although the effectiveness of virtual outreach is still unknown, it is expected to reach segments of the population of men who have sex with men that are unreachable through traditional hotspot outreach. Therefore, scaling up virtual outreach may result in finding more undiagnosed men who have sex with men and in improving testing yields among this population while lowering overall outreach costs.

Linkage to Care and Treatment

There are some costs associated with providing information on or accompanying individuals to a facility for treatment initiation following diagnosis, ideally on the same day, but as expected, ART is the highest-cost intervention. While low-volume puskesmas consistently reported spending less time per patient per year than high- and medium-volume puskesmas, this is likely a result of inexperience in managing ART patients in low-volume puskesmas.
and could indicate quality issues that require further investigation. Given high rates of LTFU in low-volume puskesmas that have already incurred the costs of initiating the patients on treatment, these facilities have the highest cost of ART per person retained in care. This suggests that the additional costs of patient care in medium- and high-volume puskesmas, particularly for new patients and recurring patients stable on treatment, are ultimately a more efficient use of ART staff resources.

While stable patients on treatment have the lowest costs per person on ART compared to new or unstable patients, the difference is relatively small. Puskesmas could potentially reduce the costs of managing stable patients by introducing differentiated care models that reduce the frequency of clinical visits and laboratory monitoring.5

In addition, efficiency gains can be realized by shifting care for stable patients from hospitals to puskesmas, while also improving access to monthly care for patients. The national health insurance scheme, JKN, could play a role for people living with HIV who are covered by the plan (223 million or 83 percent of the population in August 2019). The national health insurance agency, Badan Penyelenggara Jaminan Sosial-Kesehatan (BPJS-K), can support this shift by revising payment mechanisms for HIV such that financial incentives (for example, non-capitation payments) are provided to puskesmas to encourage them to retain within their care HIV-positive individuals on ART.

Lastly, the current procurement mechanisms for ARVs are inefficient and result in Indonesia having higher per patient per year costs than peer countries. Inserting BPJS-K into the procurement process may support more efficient pricing and procurement processes, as a primary focus for the agency is cost control.

Retention in Care and Viral Suppression
Support group meetings are one of the highest-cost interventions. Significant resources are spent in terms of staff time, transport reimbursement, and refreshments to carry out routine support group meetings. For stable ART patients, reducing the frequency of these meetings, consolidating groups across CSOs, using peer volunteers rather than full-time CSO staff to hold the meetings, and maximizing support through other mechanisms (e.g., WhatsApp groups) could reduce the unit cost of these activities.

Recommendations and Next Steps
Changing how services are delivered can have a significant impact on total resource requirements for the HIV response in Jakarta. For example, the PHO in 2020 aims to test 50,667 men who have sex with men, 1,546 waria, and 18,740 female sex workers as part of its fast-track strategy. The use of unit cost data is part of a broader set of evidence-based decision-making steps on an appropriate future identification strategy for key population groups at higher risk in Jakarta alongside identifying people living with HIV in the general population.

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5 For example, a creatinine clearance test would be conducted only for clients on tenofovir (TDF)-based regimens once per year as opposed to all clients getting a clinical chemistry test twice per year. Also, a hemoglobin (hematology) test would be conducted for clients on zidovudine (AZT)-based regimens once per year as opposed to all clients getting a full blood count twice per year. Lastly, continuing stable clients would only get a viral load test once per year, compared to twice per year for non-stable clients.
Further discussion is required around interpreting the lower unit cost of mobile testing as a basis for strategy. Based on the unit costs estimated in this report across each of the key populations, Jakarta would spend an estimated IDR 9.1 billion (US$680,219) on mobile testing in 2020 to achieve the testing targets. If testing yield rates for these populations in Jakarta remain the same as current rates, 6,266 people would be identified as living with HIV in 2020, meaning mobile testing would cost IDR 1,449,315 (US$108.34) per person identified as living with HIV. If CSOs in Jakarta were able to reduce costs of mobile testing for female sex workers and men who have sex with men to be in line with that for waria, total resource requirements for mobile testing would decrease by more than 1 billion rupiah (US$74,749), and the cost of mobile testing per person identified as living with HIV would decrease by 11 percent to IDR 1,283,866 (US$95.97). If the government decided to change its testing strategy by aiming to test more men who have sex with men and fewer individuals in other key populations given the proportion of individuals who already know their HIV status and testing yields, it would improve efficiency and reduce total resource requirements necessary to identify the same number of people, even though men who have sex with men have a relatively higher unit cost for mobile testing.

As CSOs in Jakarta face declining external financing support for their activities and Jakarta aims to rapidly scale up services, it is imperative that program managers use cascade cost analytics to inform efficient use of resources and program implementation while maintaining or improving performance around key indicators such as retention and viral suppression. HP+ recommends routine, annual collection and analysis of cost data in addition to programmatic data to continuously evaluate the cost-efficiency of HIV prevention, testing, and treatment service delivery models by the local government. Determining and developing a systematic way to collect and review cost data on a consistent basis is a logical next step. Additional areas of research include:

- **Tracking outcomes of virtual outreach** to assess relative cost-efficiencies in reaching new, high-risk segments of the population, supporting these individuals to assess their risks, and motivating them to participate in the HIV prevention, testing, and treatment services available to them.

- **Analyzing the cost-efficiency of different CSO ART referral models** to see if accompanying patients to initiate treatment, giving patients transport subsidies, and paying incentives to CSO staff for each newly diagnosed person who initiates treatment results in better outcomes (e.g., same-day initiation, retention in ART) than in CSOs that do not provide this support.

- **Pilot and evaluate new, lower-cost models for treatment and support groups** that maximize use of staff time and other resources. Stable patients on ART could be managed by CSOs in the community and make less frequent visits to the facility, which could result in improved retention in care as well as cost savings. Also, support group meetings are one of the highest-cost interventions provided by CSOs and it is unknown if the frequency or size of these meetings affect uptake of HIV prevention activities or ART retention. CSOs should pilot new ways of providing group support; optimal strategies may vary for each key population group.

- **Assessing quality of HIV care in low-volume facilities.** Although some interventions cost less per person reached in low-volume puskesmas compared with medium- and high-volume puskesmas, poor ART retention rates in low-volume puskesmas suggest that quality of care may be an issue and that staff do not spend enough time with patients. The PHO may need to provide additional support to these facilities to ensure service delivery guidelines and policies are followed.
References


Indonesia Ministry of Health (MOH). 2015. *Integrated Biological and Behavioral Survey (IBBS)*. Subdirectorat for HIV/AIDS. Jakarta, Indonesia: Ministry of Health:


Annex: Jakarta Models to Reach and Link Key Populations to HIV Services Online

Details: Partner with Percolate for O2O system for outreach to all KP.

Details: Partner with O2O online-to-offline.

Details: Community Advisory Team for MSM outreach.

Details: Partners with DSI for SW and MSM outreach.

Social Network Outreach
- Online CBS
- Social media posting
- 1-on-1 chat

Social Profile Outreach
- Social media influence
- Social media ads
- Dating ads

Social Influencer Outreach
- Online Ads

Maintenance/ Low Priority
Face-to-Face
Facilitated
Outreach Context

CNS HIV+/Tuberculosis
CNS HIV-/Tuberculosis
CNS HIV-/Tuberculosis/TB Patient

O2O online-to-offline
SW sex worker
DSI Data Science Indonesia
CBS community-based supporter

Outreach Approaches
- Online
- Face-to-Face
- Virtual

Risk Assessment
- HIV/?
- PLHIV out of care

Appointment Booking
- KP opting for appointment booking

Facilities
- Walk-in or call CSO
- Directly assisted

Government Clinics
- Puskesmas Kecamatan Senen
- Puskesmas Kecamatan Gambir
- Klinik Keluarga Berencana
- Ruang Carlo
- Globalindo Clinic
- Angsah Mentah

NGO Clinic
Private Clinics

Details: Partner with O2O for design of O2O system for outreach to all KP.
For more information, contact:

Health Policy Plus
Palladium
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Email: policyinfo@thepalladiumgroup.com
www.healthpolicyplus.com