Client perspectives on an outreach approach for HIV prevention targeting Indonesian MSM and transwomen

Adi Nugroho1,2,3,*, Vicki Erasmus1, Sarah E. Krier4,5, Kusnindyah P. Reviagana2, Pipiet A. Laksmono3, Asti Widiastuti3, and Jan Hendrik Richardus1

1Department of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands, 2School of Public Health, Faculty of Medicine, Lambung Mangkurat University, Banjarbaru, Indonesia, 3GWL-INA Network, Jakarta, Indonesia, 4Department of Infectious Diseases and Microbiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA, USA and 5Center for LGBT Health Research, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA, USA

*Corresponding author. E-mail: adie.noegroho@gmail.com

Summary
This study explored clients’ perspective on an outreach approach to promote HIV testing in Indonesia targeting men who have sex with men (MSM) and transgender women (transwomen or waria). Semi-structured qualitative interviews were conducted with 32 individuals (21 MSM and 11 waria) who had received services from outreach workers (OWs) in five cities in Indonesia. Participants in this study reported positive experiences with the outreach approach and perceived OWs as their motivators in accessing HIV testing as well as HIV care and treatment. OWs provided easy-to-understand HIV information. Clients expected OWs to be well-trained and more creative in performing outreach. They perceived that the Internet and social media have helped them considerably to stay in touch with OWs. Yet, they expressed that such virtual contacts could not simply replace the face-to-face contact, especially for waria. Furthermore, clients suggested outreach to be delivered in a more appealing manner, for example through activities that may facilitate clients learning professional or life skills. They also asserted that as an HIV prevention approach, outreach needs to use more positive framing and go beyond HIV and health contents, chiefly for the youth. Future outreach programmes should facilitate OWs in providing tailored services based on the level and type of support that the clients need, and in applying varied proportion and levels of sophistication in the use of online and virtual platforms for outreach.

Key words: HIV prevention, outreach, MSM, transgender, qualitative study, Indonesia

INTRODUCTION
Studies have suggested that HIV prevention strategies should apply combined approach that includes behavioural change, biomedical strategies, antiretroviral treatment and social justice and human rights components (Coates et al., 2008). Consequently, much research strives to meet
biomedical or behavioural objectives, such as reducing sexually transmitted infection (STIs), increasing consistent condom use, and improving HIV testing uptake (Hankins and de Zalduondo, 2010). In Indonesia, the national HIV prevention strategy focuses on the prevention of the sexual transmission of HIV. The strategy includes four key components: (i) mobilizing relevant stakeholders; (ii) implementing behaviour change communication; (iii) improving management and distribution of condom and lubricant and (iv) providing comprehensive treatment and care for STIs. One of the crucial elements of HIV prevention effort in Indonesia involves the provision of stigma free HIV testing services as well as promoting and improving access to routine HIV testing for populations at risk for HIV infection (National AIDS Commission of Indonesia, 2012).

Accessing routine HIV testing allows key populations to know their HIV status, and engages them in medical care as soon as they are diagnosed with HIV (Walensky et al., 2007; Jain and Deeks, 2010). However, raising awareness about the importance of engaging in immediate and routine HIV testing among high-risk individuals in Indonesia remains a challenge. Men who have sex with men (MSM) and transgender women (waria in Bahasa Indonesia) are groups least reached by HIV prevention programmes. In 2013, only 38% (vs. 25% in 2009) of MSM were reported to have an HIV test (with result), 24% of MSM were reported to take an HIV test in the past 12 months. And 54% of transwomen reported ever having an HIV test (with result) (Ministry of Health Republic of Indonesia, 2013).

HIV programmes targeting these populations have been consistently conducted by an outreach approach (van Griensven and de Lind van Wijngaarden, 2010). This approach uses outreach workers (OWs) at the frontline to engage individuals who are at risk for HIV. The main task of the OWs is to connect members from the community to public health services, so that they can be reached by HIV programmes. OWs disseminate HIV prevention packages, provide safe sex education materials and support for behaviour changes, and most importantly, refer the community for HIV testing and counselling (Agüero et al., 1996). The success of this approach is generally measured using two parameters, i.e. the number/percentage of individuals who are reached, and the number/percentage of individuals who receive testing of HIV (UNAIDS, 2013).

HIV prevention interventions for MSM and waria in Indonesia are implemented primarily through civil society organizations (CSOs) (WHO SEARO, 2010). When tailoring HIV intervention approaches to the characteristics of MSM and waria, every effort is made by the organizations to hire OWs who are members of these communities as this facilitates the reaching of their peers. Several reviews found that an outreach approach is commonly used among peer-based interventions for MSM and transwomen (Simoni et al., 2011; Higa et al., 2013). Peer outreach facilitates the detection of those who are at risk for HIV but may not be discovered through regular health services. This, however, is labour-intensive and costly. Therefore, efforts are made to increase the effectiveness of outreach programmes (Platteau et al., 2012).

The performance of outreach programmes in Indonesia is still relatively low. In 2013, a national survey showed that the outreach programmes reached only 59% of MSM and 57% of waria individuals (Ministry of Health Republic of Indonesia, 2013). This low performance might explain the unsatisfactory results of HIV testing among these two populations. By mid-2014, the programme reported 115 077 MSM and 4868 transwomen tested for HIV or around 13 and 11% of the estimated number of each population, respectively (Ministry of Health Republic of Indonesia, 2015). This low performance indicates that some aspects of HIV prevention targeting these population in Indonesia should be improved, including the outreach approach.

This study aimed to answer the following questions: (i) How do MSM and waria in Indonesia perceive an outreach approach to promote HIV testing? and (ii) What can we learn from their experiences? To this end, we explored their experiences with HIV outreach services.

**MATERIALS**

**Setting**
We invited participants through local CSOs that implemented outreach targeting MSM and waria groups in every city. We recruited 6–8 MSM and waria individuals from each city, who (i) had received services from OWs; (ii) were aged 18 years or older and (iii) had never worked as an OW. We identified MSM participants based on their self-reported sexual practices in the past year (i.e. ever had sex with another man in the past 12 months), and identified waria participants based on their gender identity (i.e. self-identified waria).

**Data collection**
We invited potential individuals to a location for an interview. We explained the purpose of the study to all participants and asked for their consent before participation. The participants were reassured that their identity and personal details would be kept anonymous and
confidential, and that they could withdraw their participation at any time. AN, PL, and one research assistant conducted semi-structured interviews in Bahasa Indonesia using an interview guide (see Table 1). At the end of the session, the participants received IDR 120 000 (~USD 10) as compensation for their time and transportation costs.

Data management and analysis
All interviews were audio-recorded and transcribed verbatim by a trained transcriber. AN and PL read and checked all transcripts to ensure understanding and completeness. The study data were extracted from the transcripts.

Data analysis employed grounded theory approach (Corbin and Strauss, 1990). All completed transcripts were uploaded into NVivo 10 (QSR, Cambridge, MA) and textual data were coded into themes and categories inductively. At first, two coders (AN and KR) separately coded and analysed one set of transcripts to generate the initial codes independently and to identify the potential themes and categories. Results from both coders were then matched to find common themes and categories. In cases where the coders disagreed in their identification of the different themes, they examined and consolidated these differences through discussions. Subsequently, the coders continued a separate coding on another set of transcripts and discussed the new emerging themes and categories as well as the differences they found. The agreed themes and categories were then used for analysing the remaining set of transcripts.

Specific quotes were selected for use in this paper and translated into English by two bilingual translators. The two translators deliberated the differences between their translations and constructed a final English version. As an extra control, a third person translated the final English version back into Bahasa Indonesia.

RESULTS
Study participants
A total of 32 individuals participated in the interviews; 21 were MSM and 11 were waria (see Table 2). The participants’ age ranged from 19 to 55 years with almost a half (47%) were under 25 years; 34% were 25–34 years and 19% were 35 years or older. Without being prompted, three participants (2 MSM and 1 waria) independently disclosed their HIV-positive status during the interview.

Themes and categories
We grouped the emerging themes into categories as follows: experience with outreach; HIV testing service and uptake and promotion strategy and media use.

Experience with outreach
Contact with OWs
Most participants’ first contact with an OW occurred at a common hangout and/or cruising place for MSM and

Table 2: Characteristics of study participants

| Characteristics | N (32) | % (100.0) |
|-----------------|-------|-----------|
| Risk group      |       |           |
| MSM             | 21    | 65.6      |
| Waria           | 11    | 34.4      |
| Age group       |       |           |
| ≤24 years       | 20    | 62.5      |
| 25+ years       | 12    | 37.5      |
| City            |       |           |
| Medan           | 8     | 25.0      |
| Jakarta         | 6     | 18.8      |
| Bandung         | 6     | 18.8      |
| Yogyakarta      | 6     | 18.8      |
| Surabaya        | 6     | 18.8      |

MSM, men who have sex with men; Waria, Indonesian term for transwomen.

Table 1: Guidance questions for focus group discussion

| Topics                                      | Guidance questions                                                                 |
|---------------------------------------------|-------------------------------------------------------------------------------------|
| Contact with OW                             | How do you usually get contacted by an OW?                                          |
|                                             | Do you feel comfortable to be contacted that way?                                   |
|                                             | If not, in which way do you think will make you feel more comfortable?               |
| Information/services received from OW       | How often did the OW contact you in the last 3 months?                              |
|                                             | Do you feel satisfied with that number of contact?                                  |
|                                             | What information or services did you ever receive from the OW?                      |
|                                             | Do you find the provided information or services beneficial for you?                |
|                                             | If not, what kind of information do you expect to be provided?                      |

OW, outreach worker.
waria, such as city square, club or sex work area. Other first contacts happened through either Internet-based messaging or social media.

I went to a discotheque, and ran into A, R, R, and D [OWs]. They chatted with me and gave me information about HIV. I was interested, and then asked for A’s contact details. I told him that I would like to learn more. (M, young MSM, Jakarta)

When we were hanging out, sister S approached us, and we’ve been friends since then. Together, we initiated ‘arisan’ which is now considered as a model for community-based circle for waria. (R, young waria, Surabaya)

Some participants first contacted an OW mainly after searching for gay-related information or after having experienced symptoms that appeared to be HIV-related. Follow-up contacts usually occurred weekly or monthly and most often took place in the participants’ home or via the Internet. A common method of follow up among the waria participants was the so-called ‘arisan’, a periodic social gathering held by members of a group. The gatherings have an ‘edutainment’ character, where information is shared in an informal way, while at the same time there is also entertainment e.g. in the form of a raffle.

In our weekly ‘arisan’, health-related information is always shared, about edutainment events, condoms and other topics. (R, waria, Surabaya)

MSM participants regularly visiting cruising areas reported that they often received new insights, free condoms and lubricants from OWs every time they came to the area. The participants also reported that they usually received reminders about a gathering and/or mobile clinic through Blackberry messenger (BBM). This service was also often used whenever they needed to request a personal consultation from an OW.

I am usually in contact [with the OW] through SMS (short message service) or BBM, or if there is any gathering or something like that. (A, MSM, Bandung)

I often receive BBM texts, every month [reminder] for STI check or every three months for HIV testing. (R, waria, Medan)

Participants who worked as sex workers reported consistent condom use during sex with their clients. However, the consistent condom use became problematic during sex with their steady partners, both among MSM and waria participants. Participants who openly indicated their HIV status seemed to be aware about the risk of reinfection if they had unprotected sex with individuals diagnosed with HIV.

They [waria sex worker] are good in negotiating condom use with their clients. They can be persistent but not so much when it comes to sex with their boyfriend, including me myself. (R, waria, Jakarta)

If we have sex without condom and our sex partner turns out HIV-positive, while I am also HIV-positive, once his semen get into my body, that would be a loss of my own .... (Y, MSM, Jakarta)

Services received from outreach

Participants reported that OWs delivered basic HIV information, including information on HIV transmission, prevention options and HIV services available. Participants with HIV also reported that OWs helped them access the national health scheme they need for HIV care and treatment. Some participants indicated that OWs also offered services through their CBO that went beyond HIV, namely professional skills workshops and social activities.

I learned about STIs and about how to deal with the health system which was very useful because I now can have my CD4 count checked. I have access to antiretroviral meds and I always get informed whenever there is a free CD4 check. (I, HIV-positive waria, Jakarta)

I was involved in many activities that HA [a local CBO] conducted, and have obtained a lot of information, not only about HIV, but also about STIs, and other knowledge such as management, public speaking, even cooking classes. (A, MSM, Bandung)

Participants commonly perceived the OW as a friend who provides HIV information in a safe environment in an understandable way. OWs were also considered as one of their motivators in accessing HIV care for testing. Once the relationship was established, the clients seemed to demand services ranging from obtaining information on HIV, testing reminders, to assistance for accessing care, support and treatment. The waria indicated that getting along with an OW and being attached to a CBO—where the OW worked or was affiliated with could make them feel more respected.

If there is no OW ... we will be puzzled every time we get ill, while to find information at hospital will be impossible. We might end up asking friends who are not necessarily capable of giving us the right information. It
[having an OW] isn’t just about having a source of information, but they also provide us a safe space.
(Y, MSM, Yogyakarta)

One of the benefits is that they [OWs] can ‘save’ us … moreover, we as waria have always been deemed as disgraceful persons. So, if people can see that we belong to a sort of organization, they may perceive us better.
(V, waria, Medan)

Attitudes towards outreach
Most participants felt comfortable when approached by OWs who were peers—those who shared the same age, gender or sexuality—especially waria. This was especially the case when waria were approached by waria. The benefits of outreach activities mentioned by the participants include being able to learn about HIV and AIDS, sharing information with peers, and having a constant reminder regarding HIV testing schedules.

Their services are quite good, really … We often get reminded to get tested [for HIV]. We also often receive broadcasted messages through BBM for VCT (voluntary counseling and testing) schedules.
(R, MSM, Surabaya)

Because I am a waria, I am more comfortable with fellow waria … I love sharing with sister R [an OW waria], she seems knowledgeable. Besides, she isn’t an arrogant person, so I can easily ask questions about anything.
(D, waria, Medan)

Some respondents indicated that there is an assumption that only those infected by HIV can be hired as OWs. To some, if an OW is known to be diagnosed with HIV, it could cause HIV prevention messages to be unconvincing. Scepticism about younger OWs was also raised by an older participant.

When one OW gets infected with HIV, the community won’t trust him anymore. They [OWs] always advise us [for condom use] but they themselves got infected. [To be an OW] A person should be really committed and truly capable of doing the job. Although I believe there is a sort of pre-training, some people still will say like ‘that kid gets hired as an OW, really? He is just a kid! …’ then he gets ignored.
(T, MSM, Yogyakarta)

Some participants expected to obtain up-to-date information and new skills regarding HIV when they attended an outreach gathering. However, this expectation was not always met, making some participants feel like they had wasted their time.

Some gatherings were held without any clear agenda or specific activity … so sometimes I felt like I came for nothing.
(R, MSM, Bandung)

On the other hand, some participants felt bored with outreach meetings that solely focused on HIV. They expected various activities that were more appealing and offered deeper insights. They expected to get information not only related to HIV, condoms, and STIs, but also about sexual and reproductive health in general.

They are poor in approaching people because they just keep on talking about VCT, HIV gatherings, and whatever … they should probably create more appealing events … so people would be interested in joining.
(D, MSM, Surabaya)

I would suggest that they try and find new topics … every time there is an HIV gathering coming up, my friends often said ‘don’t bother to come, they always talk about the same thing, it’s just boring!’.
(S, waria, Yogyakarta)

HIV testing services and uptake
Personal testing barriers
MSM participants pointed out that many men only came to an HIV clinic when they got ill, regardless of the availability of information about the benefit of knowing their HIV status early and about the locations of friendly clinics. They also stated that shame and fear were the most common causes preventing them from accessing HIV services.

What I heard from most people is that they are afraid to find out if they are HIV-positive. Because they think their life will end soon. Many people said like that.
(M, MSM, Jakarta)

They actually want to [get HIV tested] but most of them are too shy for that. They are scared people will notice if they turn out to be HIV-positive or to have an STI.
(A, MSM, Bandung)

Most participants indicated coming to HIV clinic for their subsequent HIV test unaccompanied because they are aware about their risk of HIV. Some having steady partners reported that they also encouraged their partners to get HIV tested.

I did my second and third [HIV] test because of self-awareness, VCT is supposed to be done voluntarily, right? … I did my last test together with my boyfriend.
(R, waria, Surabaya)

HIV testing services
Some participants suggested that provision of an HIV clinic directory with a geo-location feature would be helpful. The directory should feature comprehensive information about HIV services in each clinic. This would enable them to select HIV care which is accessible and
suits their needs and comfort level. They also recom-
mended conducting more mobile HIV testing at places 
where MSM and waria hang out. For STI checks, waria 
indicated a preference for being examined by male doc-
 tors or nurses.

We need information about procedures of VCT and 
where their locations are.
(H, MSM, Medan)

I wish we could do the VCT here [at our place] so we 
don’t have to go to the clinic. It would be better if the 
clinic staff come to our place so all waria can just gather 
around [for testing].
(F, waria, Yogyakarta)

Waria should be examined by a male staff [doctor/ 
medic], not female. I don’t feel awkward with men, but I 
do with women. I think male staff know us better . . .
(M, waria, Bandung)

The participants wished HIV service providers to be more 
 stigma free. Some of them indicated negative experiences 
they had received from staff at public clinics (which were 
 generally less gay friendly than community-based service 
clinics) because of their sexual orientation. One participant 
pointed out that some MSM would rather access HIV test-
ing at public clinics than at community-based service clin-
ics as it was more anonymous.

I forget which puskesmas [primary health center] ex-
actly. I once took a friend to this puskesmas, and was 
asked [by a clinic-staff] why I came and why I wanted to 
get tested. As soon as I said I am gay, the staff preached 
to me that I should repent [from being gay] so I won’t 
get infected.
(M, young MSM, Jakarta)

My ex-boyfriend is a very discreet person. We are totally 
the opposite of each other. He didn’t feel comfortable 
coming to GN [a local CBO] for HIV testing, so we 
went to puskesmas instead. But when I get HIV tested 
myself, I’d rather go to GN.
(D, MSM, Surabaya)

They also mentioned the inconvenient opening hours of 
the services, particularly for waria and MSM who were 
office employees or students.

We wanted to bring our friend for [HIV] testing but no 
clinics were available because their office hours coinci-
cided with operational hours of the clinics. Clinics are 
open for service only until 12 or 1 PM.
(A, MSM, Surabaya)

One thing that I find inconvenient is about the opening 
hours. It’s too early for us, we are still in bed.
(J, waria, Surabaya)

Promotion strategy and media use
The participants expected the availability of a wider 
choice of media to keep themselves updated with the lat-
est HIV information.

Maybe, a specific website which offers many kinds of in-
formation. Do more promo activities in many channels 
such as newspaper, radio, and so on, so more people 
would notice. Also, you might want to do a poll to check 
if the information provided is satisfactory. The name of 
the website should be easy to remember . . . .
(A, MSM, Bandung)

The other needs mentioned included edutainment activi-
ties, provision of information centres, and the need to 
present negative or fear-based messages in a more posi-
tive light.

Speaking as a young people, please do not scare us . . . I 
think it’s better to show us some role models of persons 
who live with HIV and still can perform their daily life 
as well as other [non-HIV-infected] people. That would 
be more encouraging than only frightening us.
(M, young MSM, Jakarta)

Respondents reflected that outreach via the Internet will 
not replace face-to-face contact. This type of contact 
was still considered useful for avoiding miscommunica-
tion. In addition, not all MSM and waria used the 
Internet and social media frequently.

I feel more comfortable asking questions in person, so 
we get a clear explanation about everything we ask. 
That’s what is lacking from the Internet, we might mis-
understand things . . . .
(A, MSM, Yogyakarta)

I feel more comfortable talking face-to-face [with an 
OW]. The internet has a very sophisticated language, 
and many of them are in English, while I don’t under-
stand English like at all. It is better to meet in person.
Also, using the Internet costs mobile data. I bet most 
people would feel reluctant . . . .
(J, waria, Surabaya)

DISCUSSION
Our results indicate that the outreach clients in this 
study generally have a positive attitude towards the out-
reach approach promoting HIV testing. They perceived 
OWs as their motivators in accessing HIV testing as well 
as HIV care and treatment. OWs also served as persons 
providing understandable HIV information. Clients 
expected OWs to be well-trained and more creative in 
performing outreach. They thought that the Internet and
social media have helped them stay in touch with OWs. Yet, they expressed that such virtual contacts could not simply replace the face-to-face contact, especially for waria. Furthermore, clients suggested that outreach should be delivered in a more appealing manner, for example through activities that may facilitate clients learning some professional or life skills. They emphasized that outreach needs to use more positive framing and go beyond HIV and health contents, especially for the youth.

Our findings support the studies that have revealed HIV message fatigue among high-risk populations (Stockman et al., 2004; Rowniak, 2009; Thomas et al., 2012). This emphasizes the importance of developing new outreach programme strategies. For example, it should go beyond condom promotion and address the diverse health and social needs of MSM and waria in Indonesia. Our data further indicate that incorporating HIV information into a non-HIV social-gathering activity is useful, primarily for waria individuals who form a socially cohesive group (Saggurti et al., 2013; Shaikh et al., 2016). Others have recommended organizing activities that can facilitate bonding and empowerment among the two groups (Parker, 1996; Beeker et al., 1998; Evans et al., 2010), which we call ‘edutainment’ activities. The MSM participants in our study also highlighted their keen interest in activities which allow them to gain professional skills.

In line with our findings, other studies indicated that MSM and transwomen preferred not to know their HIV status until they experienced illness (Safren et al., 2006). Furthermore, studies have shown that predominant barriers to HIV testing include the fear of being diagnosed with HIV and fear of discrimination due to positive testing result (Risher et al., 2013; Zhang et al., 2013; Goncalves et al., 2016). Therefore, it is crucial to formulate appropriate messages that address such barriers. Consistent with a study from India (Thomas et al., 2012), our findings recommend promoting more positive images of healthy HIV-positive individuals to eliminate some fear-based negative messages about living with HIV. Such negative messages only discourage people from testing, primarily among younger MSM.

In line with the results of a study from South Africa (Tucker et al., 2013), this study reveals that it is crucial for OWs to gain the trust of their clients. As soon as the trust is gained, it is more likely that the reached clients would embrace services offered by OWs and stay in contact for follow up. Moreover, although OWs’ primary task in Indonesia is to get their clients tested for HIV, the participants reported that some OWs provided services beyond testing. We found that some clients who were diagnosed with HIV were also helped by their OWs in accessing HIV care and treatment. Similarly, a previous study highlighted OWs’ significant role in engaging and retaining clients living with HIV in care (Rajabiun et al., 2007). This indicates the importance for OWs to be knowledgeable in HIV case management, and for future outreach programmes in Indonesia to revisit the job description assigned for OWs.

Some participants in this study indicated that they initiated contact with an OW because of information they had received via the Internet. Other studies showed that the Internet can help HIV programmes reach a larger number of individuals (Zou et al., 2013; Brennan et al., 2015). The Internet also seems to help clients stay connected with their OWs and keep them updated with information about HIV services.

Strengths and limitations
This study provides information about the strengths and limitations of an outreach approach to improving HIV testing targeting MSM and transgender women in Indonesia. The study employs the clients’ perspective to evaluate an outreach approach for HIV testing that targets the two vulnerable groups. Although the number of participants in our study is relatively small, it is sufficient for a qualitative analysis. Therefore, our findings offer evidence-based information of two hard-to-reach groups that can be used to improve approaches targeting these populations. This study has some limitations. First, all interviews were conducted in an urban setting. Thus, the findings might not be applicable to rural settings. Second, we applied non-probabilistic sampling. Therefore, generalizing the findings outside our study sample should be done with caution. Third, we recruited participants through an organization implementing outreach, which means that the participants generally have a good relationship with the organization. Such a method may lead to social desirability bias even though we emphasized that all information would be kept anonymous during all interviews. Nevertheless, most participants appeared to express openly their opinions and experiences. Fourth, the political and social situations change rapidly in the country and our findings may reflect a situation that has changed by now. Nonetheless, we believe that the data present worthwhile lessons learned for future programme improvement.

Implications for practice
This study has revealed several elements that should be considered when improving future outreach as a public health programme. First, managing performance,
through human resources management, by recruiting OWs who share characteristics of their target populations, ensure the provision of tailored training programme for the OWs that build on their knowledge and skills in outreach, and rigorous monitoring and evaluation upon their performances. Having a peer-to-peer training package available for the outreach team may also be useful for maintaining OWs’ capacity in performing outreach (Nugroho et al., 2018). The second is innovation. As outreach is a form of communication strategy, it should always progress following the evolution of how people communicate, which may include a mix of physical and virtual communications. OWs should aim applying a client-centred approach by providing tailored services based on the level and type of support clients need (Grimsrud et al., 2016). This could also be performed by applying different generations of outreach for different clients, i.e. make use online and virtual platforms in accordance to portion and levels of sophistication of clients’ use (FHI 360-LINKAGES Project, 2019). The third is partnership with relevant stakeholders. Apart from comprehensively refining the outreach approach, structural barriers at HIV services and care should continuously be tackled by, for example, (i) providing accessible stigma-free HIV services and care and (ii) providing various types of HIV services that may suit diverse clients’ characteristics (Differentiated Service Delivery, 2018).

ETHICAL APPROVAL

We asked for consent from all participants in this study prior to their participation. Participants joined this study at their own will and could withdraw any time during the study process. The Research Ethics Board of Atma Jaya University Indonesia Jakarta approved this study with registration number: 504/III/LPPM-PM.10.05/06/2014.

ACKNOWLEDGEMENTS

The authors would like to express a sincere gratitude to all the participants in this study for their time and openness to share their experience. We highly appreciate the support and assistance from Rosidin M. Al Harbi during the data collection process. We also gratefully thank Dr Alfi Yasmina for her assistance in co-translating the quotes for the manuscript and Dr Sandra O. Wesselink for her assistance in data analysis.

FUNDING

Costs for conducting all interviews and transcribing the audio-recording were funded by the Global Fund to fight AIDS, TB and Malaria (GF-ATM) Round 10 grant through a regional grant to the ISEAN Hivos Program. GWL-INNA Network is a Sub Recipient of ISEAN Hivos Program in Indonesia. The funding had no role in study design, data analysis or preparation of the manuscript.

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