

“You can’t do that; they’ll throw the cooking pot at you!” A qualitative study of healthcare providers’ attitudes toward assisted partner notification for people with HIV in Indonesia

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Abstract

Assisted partner notification (APN) is recommended as a public health strategy to increase HIV testing in people exposed to HIV. Yet its adoption globally remains at an early stage. This qualitative study sought the opinions of HIV health service providers regarding the appropriateness and feasibility of implementing APN in Indonesia where such services are on the cusp of adoption. Focus group discussions were held with 40 health service providers to consider APN as an innovative concept and to share their reactions regarding its potential implementation in Indonesia. Voice-recorded discussions were conducted in Bahasa, transcribed verbatim, and analyzed. Participants recognized APN's potential in contacting and informing the partners of HIV-positive clients of possible viral exposure. They also perceived APN's value as a client-driven service permitting clients to select which of three partner notification methods would work best for them across differing partner relationships and settings. Nonetheless, participants also identified personal and health system challenges that could impede successful APN adoption including medical and human resource limitations, the need for specialized APN training, ethical and equity considerations, and lack of sufficient clarity concerning laws and government policies regulating 3rd party disclosures. They also pointed to the job-overload, stress, personal discomfort, and the ethical uncertainty that providers might experience in delivering APN. Overall, providers of HIV services embraced the concept of APN but forecast practical difficulties in key service areas where investments in resources and system change appeared necessary to ensure effective and equitable implementation.

Introduction

Over the last 20 years, considerable success has been achieved worldwide in the scale-up of HIV testing and referral to treatment for people who contract HIV. Nonetheless, of the approximately 38 million people estimated globally in 2020 to be living with HIV, about 16% (6 million) are thought to be unaware of having contracted the virus [1]. Closing this testing gap calls for effective new methods to reach this population. In recent years, assisted partner notification (APN) services have gained attention and some limited implementation as an innovative method to meet this challenge [2].

APN is a comprehensive, client-centered program to increase uptake of HIV testing, care, and treatment among partners of HIV-positive clients by notifying them of possible exposure to the virus and offering or linking them to testing [3]. In contrast to traditional public-health contact tracing that is provider led, APN allows clients who test HIV-positive to select voluntarily between three modes of disclosure. *Self-notification* refers to an agreement between the provider and client in which the latter chooses to self-tell partners about HIV exposure and then refer them for testing. This modality can include an agreement with the client that permits health care providers to inform partners of possible HIV exposure without naming the client if self-tell notifications are not completed by an agreed upon date. With *provider referral*, a health care provider with the permission of the client contacts partners to inform them of shared exposure and the need for testing without revealing who named them. With *dual referral*, a trained provider and client work as a team to inform the partner and encourage testing. Irrespective of which

option the client chooses, APN's goal is to inform the partner of possible exposure, offer or encourage HIV testing, and link those who test HIV-positive to HIV care and treatment [4].

A growing body of research testifies to the feasibility of implementing APN in a variety of settings and with different key populations [5–10]. Compelling evidence of its success includes results from a meta-analysis of three individually randomized trials showing that APN services resulted in a 1.5-fold increase in uptake of HIV testing services among exposed partners [8]. Additional research shows APN to be cost-effective in reducing HIV-related mortality and mobility while lending itself to task shifting [11]. APN may be especially effective in reaching first-time testers [12]. APN's contact with HIV-positive individuals also can lead to reengagement in treatment among partners who know their status but have dropped out of care [13]. Based on this growing body of positive evidence, the World Health Organization endorses APN's adoption along with recommendations to guide its implementation internationally [3, 4].

Despite its many advantages, worldwide adoption of APN remains at an early stage. Questions remain as to how APN might be adapted for different global contexts while retaining the core components that make its services acceptable, ethical, and effective. A step toward achieving these goals is to consider in advance of its adoption how health providers, clients, and stakeholders weigh the evidence for its implementation [14]. Formative research can help to identify components that need modification while possibly reducing future staff and organizational friction by identifying potential points of contention [15]. Such preliminary assessments also can usefully inform strategies to facilitate its acceptance among health care providers as future APN implementers.

The current study: APN opportunities in Indonesia

This research reports the qualitative findings of a formative, multimethod study to assess the acceptability and feasibility of instituting APN as an innovative service new to Indonesia, a populous Southeast Asian country with a large and expanding HIV epidemic. Its capital, Jakarta, is home to an estimated 110,000 people with HIV [16]. HIV prevalence is highest in key populations, including an estimated one quarter of MSM [17]. In 2019, two-thirds of new cases in Jakarta occurred outside of key populations among people considered low risk for HIV infection [16]. Meanwhile, HIV testing in key populations remains stubbornly low [18], and an estimated one-third of persons with HIV are thought to be unaware of their HIV-positive status [16, 19]. Also, despite government subsidies, few adults with HIV (26%) receive treatment with antiretroviral therapy (ART) [19], and survival with HIV is poor even in cohorts receiving ART [20, 21].

Assisted partner notification could help to reverse trends in new infections by linking persons with known HIV exposure to the country's existing continuum of publicly-funded HIV testing and ART services, a plan that the government currently is considering [22]. Yet, Indonesian guidelines for partner contact tracing, much less APN, do not yet exist beyond recommending that spouses of HIV-positive clients get tested but without specifying how or when this should occur [22]. Meanwhile, the healthcare system already faces major challenges in providing basic services to people with HIV along with a critical shortage of HIV-

trained staff [23]. Studies also describe increasing levels of HIV stigma and social hostility toward LGBT populations in Indonesia, including discrimination by health care providers [24–26]. Given these potential challenges to APN's successful implementation at both the community and clinic level, a closer examination is warranted into how core HIV service providers view the future integration of APN into the services that they deliver.

To this end, four focus groups consisting of HIV health care providers were convened to gauge their expert opinion of APN as a new approach to contact tracing and partner testing. Would they see APN services as relevant and possibly embrace the concept in their own work? How easy or difficult did they perceive it would be to implement APN services within the context of their organizations and with clients whom they serve? Finally, we wanted to gain insights into aspects or components of APN that might prove especially challenging for health providers to deliver and the possible facilitators and barriers at the personal and system level to its successful implementation. Findings from this study hold the potential to help guide the development and implementation of APN services in Indonesia and possibly other countries that are considering adopting it to increase HIV testing and achieve epidemic control.

Methods

Four voice-recorded focus group discussions were held with a total convenience sample of 40 nurses, physicians, peer educators, and HIV counselors serving HIV key populations in Jakarta, Indonesia. These occupations were sampled for their key role in delivering HIV prevention services in Indonesia [27, 28] and in APN studies elsewhere [8]. Discussions focused on the providers' experiences with delivering HIV counseling and testing services and their perception of the facilitators and challenges to implementing APN services within the current Indonesia health care system and their own organizations and practice settings.

Recruitment and eligibility

Forty focus group participants were recruited through their professional networks via email, social media, and in-person. Contact points included a listserv for nurses in West Java and two large public HIV referral hospitals, four community health centers, and three non-governmental organizations (NGOs) serving key HIV populations in Jakarta. Eligible participants were: ≥ 18 years of age and employed in clinics, hospitals, and organizations serving key populations and people with HIV. The study was approved by Institutional Review Boards in the U.S. and Indonesia. Informed consent was obtained from participants. Each received \$20 USD compensation for their time and transportation costs.

Data collection and analyses

A short, written questionnaire collected participant demographic and occupational information. Group discussions were facilitated by a masters-prepared nurse researcher (AM) fluent in Bahasa (the Indonesian language) and familiar with APN, but without prior APN occupational experience. After explaining the research purpose, the facilitator provided an overview to APN to assure that everyone was

familiar with the topic prior to discussion. A discussion guide developed for this study (Appendix 1) was used to steer participants toward topics of interest. Each approximately 90-minute discussion was voice recorded, transcribed verbatim in Bahasa, translated into English, and then back translated by a second researcher for accuracy and quality. Qualitative data coding by four researchers used the Promoting Action on Research Implementation in Health Sciences (PARIHS) framework [29] as a guide to evaluate participants' appraisal of the scientific or experiential *evidence* that may support implementing APN and *contextual factors* possibly influencing APN adoption at the provider, health system, and societal levels.

Results

As shown in Table 1, the 4 focus groups were composed of peer educators and HIV test counselors working in community-based HIV service organizations (n=24), nurses (n=17), and physicians (n=2). On average, participants had more than 10 years of occupational experience serving key populations and people with HIV. About half were university graduates (n=23). Most (93%) had experience with HIV test counseling. With one exception, all were familiar with the concept of public health contract tracing but not necessarily APN. Most (81%) had contacted someone about possible exposure to HIV as part of their professional duties. Participants drew upon these experiences and their work in general to assess the facilitators, barriers, rewards, and drawbacks to implementing APN nationally and in local health care facilities.

Table 1
Participant characteristics [n=40]

Characteristic	n (%)
Age in years (mean \pm SD)	38.6 \pm 7.7
Female	24 (57.1)
Education	
High school	10 (25.0)
Diploma	7 (17.5)
Bachelor's degree	21 (52.5)
Post-baccalaureate	2 (5.0)
Occupation	
Community health worker	21 (52.5)
Nurse	17 (42.5)
Physician	2 (5.0)
Occupational experience (mean \pm SD)	12.4 \pm 7.3
Have you had any experience delivering health services to people with HIV?	
none	0 (0)
a little	6 (15.0)
a lot	34 (85.0)
Have you had any experience delivering health services to prison inmates?	
none	11 (27.5)
a little	17 (42.5)
a lot	12 (30.0)
How often do you conduct HIV test counseling?	
never	3 (7.5)
seldom	11 (27.5)
often	26 (65.0)
Have you ever informed someone of having tested positive for HIV?	
never	9 (22.5)
Legend: SD, standard deviation	

Characteristic	n (%)
a few times	11 (27.5)
many times	20 (50.0)
Have you ever contacted someone about possible exposure to HIV?	
never	8 (20.0)
a few times	13 (32.5)
many times	19 (47.5)
How much do you know about HIV partner notification?	
nothing	1 (2.5)
a little	22 (55.0)
a lot	17 (42.5)
Legend: SD, standard deviation	

Perceptions of Assisted Partner Notification

While not always fully familiar with the concept of APN, participants could envision its potential and were intrigued at its novelty and possible utility. As one peer educator exclaimed:

Helping clients to notify their exes and asking them, “Have you had any partners before? Have you ever had sex?” – it never happens. That is beyond my thought. I think it is great to think of reaching out to people, tracing people.

Another participant remarked that while the idea of contacting exposed partners was not new, working collaboratively with the client to identify and contact them was novel. He reminisced that “in the old days, we used to disregard who’s the partner.” He went on to explain that in his view “case findings would be much higher if patients directly disclose who their partners are.”

Participants said that clients whom they counseled often reported practical or emotional difficulties to informing their partners of an HIV diagnosis. They perceived that confidential notification services could relieve reluctant clients of the burden of telling their partners themselves. One nurse recounted the dilemmas of a male client who had yet to tell his wife:

The husband was incarcerated. He was concerned as his wife wanted to have another child. [Yet] he had not opened up about his [HIV] status to his wife. [He asked] “What should I do? I am afraid that my wife might get infected.

For this client, disclosing that he was HIV-positive could end his wife's dreams of safely conceiving another child, and might open him to unwanted questions as to how he had contracted the virus. Participants agreed that APN services could prove useful in helping clients to resolve such dilemmas.

Persuading Clients to Name and Notify Partners

While the idea of offering APN services was met with enthusiasm, delivering them was seen as needing careful presentation and management. Clients whom they serve frequently are reluctant to name or notify a partner, and their reactions to being asked to do so are mixed. A nurse explained that some clients say, "I don't want to transmit this to other people; others would be like, 'Whatever, I don't care'."

When names were not forthcoming, participants had to find ways to draw out such information and methods differed. One participant's view of soliciting names was not unlike that of a detective uncovering clues. "The job of the buddy (counselor) is to dig up information as much as possible from the client." He went on to explain that such information could be used to probe clients as to where and with whom they may have shared exposure to the virus.

Building rapport was perceived as essential to persuading clients to name their partners. Forging an empathetic connection, however, could require providers to proceed slowly and approach the client and topic with considerable caution. For one peer educator, this was not unlike dealing with a frightened animal:

Despite being a health care provider, if we want to approach them – it's like we're getting into a cat's cage, we need to be like a cat so that we can just talk comfortably with them.

Others recommended building rapport by calling attention to a shared background. For example, one peer educator explained that he purposively discloses to male clients who have sex with men that he does too. He explained, "I just open up my status to speed up the process." Another described the successful tactic of employing female-to-female patient/client gender-matching to open conversations about HIV exposure when approaching wives.

In addition to rapport, correct timing was seen as critical. A nurse warned that introducing partner services too early could jeopardize efforts to build rapport and undermine long-term relationships that facilitate APN acceptance. She went on to explain, "If we suddenly aim for the partner, the trust that we have been building can disappear in a moment." Another participant remarked, "Clients are usually not yet open in the first or second meeting. They sometimes start to open up in the second or third meeting, and sometimes it takes more than three meetings."

Maintaining provider-client confidentiality also constituted a crucial APN element. To identify at-risk partners, clients need to share information that might be embarrassing, stigmatizing or even legally self-incriminating. Consequently, it was important for clients to feel that APN sessions were shrouded in professional secrecy. One participant explained, "You can't be a "bucket mouth" in spilling to others what a client has said. Another participant reported that she implicitly reassured clients that:

Everything that you share with me is only between you, the doctor, the nurse, and God. No one else would know. We will not disclose any single thing you share with us, except on medical or legal ground.

Maintaining provider/client confidentiality also meant conversing within a conducive environment where others could not overhear. One nurse explained, you “have to talk to the patients in a very confidential way, in a private room, not at the patient’s bedside that is only covered with a curtain.”

While participants agreed with the importance of tracing partners to warn of possible exposure, they also strongly agreed that not every partner needed to be identified or told. They firmly held to the belief that clients have the right not to name or to disclose being HIV positive if their personal circumstance did not pose an HIV threat to others. One participant explained:

If the client is adherent to therapy and has no risk to transmit infection, we need to respect his right to not disclose his status. It is different if the client is an active IDU, is not taking ARV, and suddenly is about to get married. That’s when we need to intervene.”

In instances where the client might not be able or willing to notify a partner or no one might be harmed, providers reported weighing their role in soliciting names for public good against honoring clients’ right not to tell.

Locating Partners

Finding partners once they are named poses a new set of challenges according to participants. Locating a partner could be relatively easy if the client and partner were closely related or communicated regularly. In contrast, tracing a casual partner with whom the client had little to no contact post-exposure could prove formidable. Having multiple casual partners escalated the difficulty, especially if it involved a chain of exposure:

One person can meet one person, and another person, and so on. They meet through dating apps. Maybe after they meet, they’ll just lose contact. So, it’s difficult.

The caseloads of many of the focus group peer educators and HIV counselors included individuals of both genders who exchange sex for money. Participants strongly agreed that locating commercial partners could prove tough. Due to stigma and legal complications, so could finding partners exposed through sharing drug equipment or sexual behaviors with someone of the same sex. Such behaviors often are conducted in secret with little personal information exchanged that later would permit HIV notification.

Partner Notification

Deciding to inform a partner of HIV exposure can be exceedingly stressful. Fear of the consequences is not uncommon, and the providers offered numerous examples of clients who refused or shied away from disclosing the information themselves. Yet other clients appear to prefer to self-disclose over other

choices. APN offers three options that clients can select in informing their at-risk partners, and not all partners need to be notified using the same method.

Self-disclosure notification. Because informing others of being HIV-positive can go both well or badly no matter how it is disclosed, participants perceived that it was ethically important to warn or remind clients of the possibility that revealing their status could have negative consequences. One peer educator regularly queried his clients about their personal readiness to disclose:

Are you sure you want to open up your status? Because, once you open up your status to someone, that person will never forget. So make sure when you open up your status, you have dealt with yourself, then you can deal with someone else. If you have not befriended your status, you better not disclose it to other people.

Another participant added:

I always say that: "if you disclose your status, you have to be ready for two things. The first thing is to lose, and the second thing is to be left. So, you must be ready to be left and to lose. Are you ready? If you are, I will help you. But if you're not ready yet, we'll just wait until you're ready. Until you are totally sure, you have dealt with yourself, make peace with yourself, you must think carefully about its positive and negative impacts on your relationship."

But even when clients were sufficiently coached and ready to notify others, it was the recipient of the information who might be unprepared to hear the disclosure. The threat of shared exposure to a serious illness can negatively color partner relationships, while misinformation about how HIV is transmitted can worry family and friends unrealistically about possible contagion. Consequently, coaching clients in how to conduct self-disclosure and impart correct information was seen to be an important part of APN.

Drawing on their HIV counseling experience, providers gave examples of tutoring clients in how and what to say when first disclosing their HIV status. Gradual disclosure followed by incremental addition of further details was commonly recommended as was carefully crafting the message. As one peer educator explained, the client cannot abruptly say, "I'm HIV-positive. The PLWH needs to open the discussion between themselves and their partners smoothly."

When direct methods failed or seemed too onerous, indirect methods might be recommended. A peer educator recounted how a client he counseled persuaded his mother to tell his spouse for him. A nurse suggests that reluctant clients use printed HIV information:

You could bring home a brochure. That's a strategy I have used with patients. Bring these brochures. Let your wife read them or put them on the table. When she asks you about it, that's when you can open-up a discussion about your status.

Another suggestion was to leave HIV medication out where it could be found easily. Having indirectly forced an initial conversation, a fuller discussion could ensue once the client's status was out in the open.

Provider assisted notification involves a client choosing to have a trained provider deliver the news, typically without revealing the identity of the index person. This method demands that the notifier approach a stranger with the unpleasant information of exposure to a serious virus. Telephone contact is commonly used by HIV health providers to break the news but was considered tricky in a country with a high number of telephone scams. The providers predicted that a health notifier's call might be mistaken as fraudulent:

The challenge will be great in Indonesian culture. People will ask, "From who did you get my number? Why am I being contacted? I haven't done anything."

Meanwhile, participants worried that visits by a health notifier to a partner's home, office, or favorite hangout might not go unnoticed in Indonesia's tight-knit neighborhoods. Keeping such discussions confidential could prove especially difficult in homes where partners and their extended families live in close physical proximity.

In making a notification, participants recounted the difficulties that they likely would face as messengers in conveying unwelcome HIV information:

If we just come visit the clients' partners and tell them, "Your husband is positive," Ouch! They will throw a cooking pot at us! I personally would rather encourage them [the clients] to disclose.

Even participants with considerable street outreach experience in approaching strangers about HIV prevention flinched at the prospect of contacting partners in the privacy of their home with sensitive and potentially upsetting information.

Contacting partners of men who have sex with men was seen as especially challenging. In linking clients and their partners to HIV through same-sex behavior, a notification could inadvertently become public and place both men at risk for social stigmatization and moral judgement. Another provider remarked about the special notification challenges with older adults. He explained that "they are less open [than younger clients], so it's hard to find out the chain of transmission." Female partners also were considered especially hard to approach for provider notification, especially if they resided in a multi-generational family unit where maintaining confidentiality was complicated by proximity. Based on awareness of a long Indonesian history of societal paternalism, one provider explained:

If the client lives in the in-law's house. That can be tough. It is much easier when the index patient is the husband because husbands have all the rights. But when it is the wife who is diagnosed first, that can be tough."

Pregnant women appeared especially vulnerable to fear of harsh outcomes. An outreach worker repeated the words of a female client, "If I disclose my status while I'm pregnant, then he'd leave me. Who will take care of me?"

Not knowing what to advise an expectant mothers facing such fears, the participant went on to explain his view:

If they want to disclose it later after the child is born, let it be. Maybe they also have their strategy. But if they had to disclose now, while having their pregnancy, that would concern my sense of humanity.

Other participants were quick to add that many clients, and not just partnered and pregnant women, were subject to fears of rejection when disclosing their status. "They're afraid of being left," said one peer educator. "The fear that the partner would leave is especially strong."

Unfortunately, such fears seemed justified for both genders when the revelation of having contracted HIV treads on already shaky personal ground. Participants reported that not all HIV clients have families or significant others who accept their lifestyles, drug use, and/or other societally defined immoral behavior. When coupled with HIV, such disapproval could result in shunning, abandonment, or being forced out of partner or family relationships. Conversely, some clients were seen to proactively adopt withdrawal or social distancing tactics to avoid such conflict.

Participants agreed to feeling ill prepared to facilitate disclosures that involved revelations of infidelity, same-sex relationships, drug use, or other behavior considered taboo. The thought that their actions could result in dissolution of a marriage or other partnership was especially troubling. "We're afraid if we made a client disclose to the partner, but then they got separated, in the end we'd be blamed for it." They also worried about the professional ethics of delivering notifications that could result in such outcomes.

Participants pondered if unmarried clients or those estranged from their families or partners would perceive APN services as potentially useful. A prison nurse described the plight of the incarcerated men whom she serves:

Most of the prisoners are the 'lost boys.' They don't have family. They live on the street or they say the family lives in the village. Only one or two people, perhaps gave us a chance to explain to their family. The rest were the lost boys. No family, or family in the village.

Of course, prisoners are not the only clients who are estranged from their family or community of birth. The participants' caseloads include rural, unmarried youth of both genders who flock to the city for excitement, employment, or to avoid the prying eyes of family members. Testing HIV-positive can be hard for someone to self-admit to a family who was left behind.

Dual notification teams the provider and client in planning and delivering a notification. A major challenge to dual notification lies in finding a way to invite a partner to attend an HIV APN session without explaining why. One participant relayed what a client told him in this regard:

My challenge is when I wanted to go to an AIDS NGO with my wife, my problem is the way that I should tell her. What should I say about it? What kind of place is it? I still find it hard to say that this is the place to do an HIV test."

The group's recommendation was that clients could inform their partner that a joint appointment had been scheduled to discuss a health problem. No further group advice was offered, however, as to what clients might say if asked why an appointment was needed. They did agree, however, that providers should never mention HIV when making initial contact or requesting partners to see them for a health reason.

From a provider's perspective, APN dual notification offers the advantage of saving them from the challenges and full burden of informing a stranger about HIV exposure. Although the provider and client form a team in telling the partner, the final decision-making and aftermath of disclosure in APN rests primarily on the informer and informed. As one participant envisions:

The patient holds the central role, while the counselor would explain what they can do next when the couple are sitting down together. The counselor would describe the possibilities, but the couple is the one to make decision, not the counselor, whether they would keep their relationship or anything else. That's for you and your partner to decide. My job is to provide the correct and appropriate information.

Despite APN's promotion of client-driven services, participants' remarks indicate keen awareness that neither providers or clients have total control over the notification process or its outcome. Organizational culture and its socio-economic environment also influence the APN process and its results.

Organizational and Legal Contingencies

FG participants were united in maintaining that organizational contingencies could both facilitate and hinder the delivery of effective APN services. They perceived a wide gap between the ambitions of those who want to develop APN and the reality of implementing it in many Indonesian health care settings. In discussing these gaps, four themes emerged.

First, participants were aware of resource shortages in the Indonesian healthcare system that could limit successful adoption of APN services. One health care counselor described the scarcities of the rural prison where she worked:

Maybe in the prisons in the city there are counseling and treatment available. But in the prisons in smaller towns, we can only do counseling. My prison is in the middle of a jungle. We cannot get the medication. Our local community health center and local hospital don't have it either. So, we are just confused. We have no idea what to do with the patients.

Other participants reported similar shortages where they were employed.

Second, front-line staff in many clinical and NGO settings were thought to lack the knowledge, skills, and professional confidence needed to counsel patients effectively about APN:

Several times when I asked my team to give education to the patients, they were not confident. Because they're emptyheaded. They said, I'm afraid I cannot answer if the patient asks me.

While not necessarily sharing such a dim view of health care staff, group consensus held that, “All professionals, especially the doctors and nurses who communicate to patients every day, need to have ‘breaking bad news’ training.”

Third, merely offering notification training was not perceived as adequate to ensuring a capable cadre of APN staff. Participants remarked that the constant staff turn-over common to many Indonesian health care settings could reduce the number of trained providers over time:

The problem is not that they have no training, they have. But the problem is with the structure of the health care provider. In the province level, the human resource would change every three months. The head of the community health center is changed. And the staffs that had been trained did not transfer their knowledge to their successor. That becomes a problem. The second problem is the human resource. When someone is hired to deal with the HIV problem at a polyclinic, that person also do many other things in the other polyclinics, so they are not focused on providing the service.

Consequently, provisions would need to be made within the health care system and at the local level to train new APN staff as they were hired.

Fourth, participants were concerned that APN might not be equitably delivered across medical sites and to all clients. Professional experience convinced them that negative attitudes and stigma toward people with HIV was built into the organizational culture of some medical facilities and held by some medical staff. They told of having encountered health care providers seemingly unable to counsel people whose lifestyle choices differed from their own. They also worried that notification of more challenging cases of HIV exposure might hinge on the whims or biases of individual medical providers. In such instances, providers might write their own rules for these services, selectively offer APN services to some clients but not others, conduct notifications without the client’s permission, and possibly breach client confidentiality.

Finally, uncertainty as to Indonesian law governing disclosure of patient information posed a potential stumbling block for many participants in contemplating APN. For example, a nurse questioned if discussing a client’s private or secretive behavior in the presence of a third party would be legal:

Nowadays, the trend at the inpatient units is to have more MSM patients. But, the MSM patients at the inpatient wards usually come with their wives. Then it’s easier for us to do notification since the wife is the legal partner, right? But if accompanied by a friend and we don’t know about the wife, that’s the challenging case.

Another participant warned that programs attempting to launch APN would first “need to have a solid ground on the country’s regulations” to protect the rights of clients, their partners, and the health care providers who notify them.

Discussion

Health providers in this study agreed that APN services seemed worth implementing and potentially could be integrated successfully into Indonesia's existing HIV care. They saw dual or provider-assisted notification as appealing options for clients preferring not to notify partners of HIV exposure themselves. Nonetheless, successful implementation of a new modality in real-world health settings is enhanced when providers and stakeholders view the evidence for its adoption as credible, sufficient resources are available, the context is favorable, and enabling mechanisms exist to facilitate implementation [14]. Providers in this study doubted that all these conditions fully exist within Indonesia's current health care system at the level needed for APN's widespread integration.

One major concern was that delivery of APN services could prove highly time and labor-intensive. Coaxing clients to name their partners, tracing their locations, and then contacting them might absorb much of health care providers' efforts to the detriment of other HIV-related testing and counseling functions. Work assignments at many health care facilities typically include a plethora of non-HIV related tasks that likely would exert a competing pull for provider's attention. Meanwhile, the pernicious high staff turn-over that characterizes many Indonesian health facilities would demand constant training of new APN staff [30]. Due to these concerns, providers worried that implementing APN could exacerbate what they perceived as Indonesia's general shortages of health care human resources, medical supplies, and other HIV-related services.

The process of locating partners was cited as a particularly daunting challenge, especially when clients knew little personal information about the partner. Moreover, Indonesia is an archipelago with a highly mobile population spread across approximately 17,000 islands. Geography alone could pose significant problems in reaching partners who have moved to a distant location. Telephone calls have been used to contact and notify partners in some APN projects [31, 32], but their use may be impractical in mobile populations [33] and was seen as problematic in Indonesia where telephone contact with a stranger might be judged as fraudulent. Although not mentioned by informants in this study, internet-based programs to assist HIV partner notification have gained increased popularity and also endorsement by the U.S. Centers for Disease Control and Prevention [34]. Their use in reaching partners has proved effective in several settings [35–38]. More research is warranted to determine how best to implement them ethically and safely within APN [39].

Successful adoption of a new health care modality depends, in part, on providers' comfort with delivering it [14]. While providers believed in the delivery of APN services by well-prepared and competent staff, discomfort was expressed by many at the thought of contacting and informing a stranger about HIV exposure. They saw their lack of formal training in APN as partly contributing to this problem along with fears that other Indonesian providers were similarly deficient. Also, they were discomforted at the thought that making or assisting a notification could result in harsh consequences for their client and/or partner involved.

Clients and notification circumstances differ as the group discussions made clear, and providers in this study perceived that successful APN services must consider that some clients are more vulnerable than

others to negative disclosure outcomes. Mindful that partner notification could reveal previously secretive or illegal behavior unknown to others, they cautioned that a client's revelation of an HIV positive status could trigger negative social reactions. They also pointed to the cultural belief that Indonesian women traditionally are subordinate to and dependent upon their male partners. They prophesied that women in more socially conservative marriages or sexual partnerships might require additional APN assistance to overcome social and legal barriers to HIV testing, and treatment [40]. To assist clients in minimizing risk while informing others, providers described some of the strategies that they had coached clients to consider.

Participants also described instances when they felt caught between the ethical and moral dilemmas of respecting the rights of the clients, their partners' need to know, and the collective rights of society to be protected from unknowing transmission. General confusion concerning Indonesian policies and laws governing the protection of personal health information added to this conundrum. All agreed that honoring client trust lies at the core of effective and ethical APN services, and they were adamant that whatever was said in an APN session must remain confidential. Yet even with client permission, they were not always in agreement or certain as to the ethics of contacting and possibly intruding on the privacy of a partner through making a notification. Also, not all clients who tested HIV positive were judged a threat of HIV transmission to others, a circumstance that questioned the need for notification. Unnecessarily revealing an HIV status might place some clients needlessly at risk for partner violence, social rejection, shunning, or stigmatization. Without concrete notification guidelines to follow in their current work, they followed their own moral compass. Some participants concluded that it might be best practically and/or ethically not to notify a partner in some instances, at least temporarily until a more favorable time or personal circumstance evolved. While such decisions may be intended to shield clients or partners from unnecessary risks, they also introduce the possibility of unequal care for those whom health care providers perceive as too risky to notify.

Four conditions or insights that must be met in successfully implementing APN services emerged from the group discussions. First, building a workforce of able APN providers requires organizational investment in providing comprehensive APN training, including periodic in-service sessions, across the model's many service steps and functional components. Core curricula should emphasize and reinforce respect for all HIV clients irrespective of lifestyle choices or preferences as to whom and how to tell a partner about HIV exposure. Such training needs to raise awareness and provide the guidance needed for providers to comfortably, fairly, and effectively tailor APN services to match clients' individual needs and preferences. Education in best notification practices, including information about the country's laws and policies governing health information disclosure, was seen as mandatory. Realistic job descriptions and written guidelines for APN providers should accompany this training but be sufficiently flexible to address the needs and safety of even the most vulnerable client [41].

Second, as our informants reported, even health care workers are not immune to holding stigmatizing attitudes and enacted discrimination toward people with HIV including in Indonesia [25]. Based on a meta-analysis of the health care stigma literature [42], four strategies appear to work in reducing provider

stigma: educating providers about the condition or about stigma and its effects on health; “skills-building activities” that allow healthcare providers to develop the necessary skills to work with a stigmatized group; “participatory learning” in which providers actively engage in the intervention; and either natural or arranged contact that breaks down stereotypes and prejudice and affords health care workers the opportunity to build human empathy toward the stigmatized group.

Third, all participants agreed that soliciting partners’ names and delivering effective APN services requires having built rapport with each client within a context of confidentiality and trust. Clients need to know and believe that disclosure within a provider/client session is private and confidential. Besides discussing APN’s benefits for both clients and partners, providers also should be forthcoming about the risks of disclosure and, when feasible and appropriate, suggest possible strategies to help ameliorate them. Security measures need to be in place to protect sensitive data and patient health records [43].

Finally, considerable research shows that disclosing an HIV status can be highly stressful and possibly threatening to the index person’s health and well-being. Often unnoticed in these discussions is that health care providers whose professional roles include partner notification also may experience such duties as stressful and emotionally demanding [44]. Despite highly endorsing the concept, providers in our study called attention to their own uncertainty as to APN’s feasibility, their potential guilt at orchestrating a notification that ends badly, and qualms as to when notification was even needed or legally possible. These findings suggest that to avoid undue provider stress and possibly job “burn out,” organizations need to recognize, acknowledge, and address the challenges that APN providers face. They also need to institute policies, realistic job expectations, and access to counseling and other forms of social support if needed.

Limitations of the Study

The study’s health providers were sampled through their professional networks using internet, snowball sampling, and in-person contact. Consequently, the study’s results may not generalize to health care providers whom these methods failed to reach or who chose not to participate. Also, besides querying providers, successful implementation of APN requires investigation into its acceptability among all HIV stakeholders including clients, partners, administrators, family, and community members. We refer you to the excellent study conducted in Indonesia by Wirawan and his colleagues [22] that explores APN from the added vantage of clients and the general population. Nonetheless, our findings provide an insightful and highly useful window through which to view many of the challenges, barriers, and facilitators that experienced health care professionals perceive are likely to arise when encouraging and implementing APN services.

Conclusions

Mounting evidence from multiple countries testifies to the success of assisted partner notification (APN) services in safely and significantly increasing the uptake of HIV testing among the at-risk partners of HIV

positive clients. Yet achieving this success is not without some degree of problems and challenge. The findings and insights into APN gained from this study add to the growing body of research needed to guide APN's effective adoption within countries and setting where it will be newly introduced and then maintained.

Declarations

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Consent to participate: Informed consent was obtained individually from all participants included in the study.

Consent to publish: Not applicable

Availability of data and material: Data requests referencing protocol #2018-0754 may be sent to the Director of Research Facilitation at University of Illinois Chicago, College of Nursing, Susan Littau (slittau@uic.edu).

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Authors contributions: Levy contributed to the study design, data analysis, and writing the final manuscript. Earnshaw contributed to study design and data analysis. Milanti collected, translated, and prepared the study's qualitative data. Waluyo contributed to study design and data acquisition. As Principal Investigator, Culbert obtained funding for the research, contributed to data analysis, and wrote the initial manuscript. All authors have read and approved the final manuscript.

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Tables

Table 1. Participant characteristics [n=40]

Characteristic	n (%)
Age in years (mean \pm SD)	38.6 \pm 7.7
Female	24 (57.1)
Education	
High school	10 (25.0)
Diploma	7 (17.5)
Bachelor's degree	21 (52.5)
Post-baccalaureate	2 (5.0)
Occupation	
Community health worker	21 (52.5)
Nurse	17 (42.5)
Physician	2 (5.0)
Occupational experience (mean \pm SD)	12.4 \pm 7.3
Have you had any experience delivering health services to people with HIV?	
none	0 (0)
a little	6 (15.0)
a lot	34 (85.0)
Have you had any experience delivering health services to prison inmates?	
none	11 (27.5)
a little	17 (42.5)
a lot	12 (30.0)
How often do you conduct HIV test counseling?	
never	3 (7.5)
seldom	11 (27.5)
often	26 (65.0)
Have you ever informed someone of having tested positive for HIV?	
never	9 (22.5)
a few times	11 (27.5)
many times	20 (50.0)

Have you ever contacted someone about possible exposure to HIV?

never	8 (20.0)
a few times	13 (32.5)
many times	19 (47.5)
How much do you know about HIV partner notification?	
nothing	1 (2.5)
a little	22 (55.0)
a lot	17 (42.5)

Legend: SD, standard deviation