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# TECHNICAL AND PROGRAMMATIC CONSIDERATIONS FOR INDEX TESTING AND PARTNER NOTIFICATION FOR ADOLESCENT GIRLS AND YOUNG WOMEN

## TECHNICAL REPORT

January 2019

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## **ACRONYMS AND ABBREVIATIONS**

AGYW	Adolescent Girls and Young Women
ART	Antiretroviral Therapy
GBV	Gender-Based Violence
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
IPV	Intimate Partner Violence
LMIC	Low- and Middle-Income Countries
NGO	Non-Governmental Organization
PITC	Provider Initiated Testing and Counseling
PN	Partner Notification
PrEP	Pre-Exposure Prophylaxis
PYD	Positive Youth Development
RCT	Randomized Controlled Trial
SMS	Short Message Service (text message)
SRH	Sexual and Reproductive Health
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
SV	Sexual Violence
US	United States
USAID	United States Agency for International Development
VTC	Voluntary Testing and Counseling
WHO	World Health Organization
YPL	YouthPower Learning

## **EXECUTIVE SUMMARY**

HIV index testing with partner notification (PN) is the testing strategy with the highest positivity rate. Such a strategy is important at this stage of the HIV epidemic where many countries have reached or are near to reaching the global target of 90% of people living with HIV knowing their status by 2020 and other testing approaches have decreasing positivity rates. While HIV index testing and PN services have the potential to reach adolescent girls and young women (AGYW) aged 15-24 and their sexual partners in need of HIV testing services (HTS), the implementation of PN requires careful consideration to minimize potential social harms for AGYW who may be experiencing violence or stigma, fear violence or stigma, or who may have acquired HIV as a result of violence. Paramount among considerations regarding the roll-out of HIV PN for AGYW is ensuring *voluntarism, with informed consent and the explicit right to decline*, as expressly stated in the HIV Self-Testing and Partner Notification guidance document published by the World Health Organization (WHO).<sup>1</sup>

YouthPower Learning reviewed the evidence on social harms linked with HIV index testing and PN, including intimate partner violence (IPV) and stigma. Using the lens that a holistic positive youth development approach can help to address the barriers and challenges associated with HIV PN among AGYW, we synthesized the potential risks to AGYW in low- and middle-income countries (LMICs) of HIV PN among this vulnerable population. Eighteen published studies were identified and reviewed spanning three main geographical areas from 1999 to 2018.

The following key findings emerged from this review:

### **Key Findings**

- It is unclear if HIV PN will be feasible and acceptable for AGYW in LMICs or whether it will increase HIV testing, knowledge of HIV status, and entry into care for AGYW and their partners, as there is no published evidence on this to date. Only one research study examining sexually transmitted infection (STI) PN among adolescents was identified in the review. While evidence from studies with adult women and men living with HIV in the United States (US) and LMICs indicates that HIV PN for adults is feasible, acceptable, and effective at identifying new clients living with HIV, more research is needed to confirm these results with adolescent girls and boys in LMICs and understand the best methods for safely implementing HIV PN with adolescents before or alongside scale-up.
- Concerns about judgmental attitudes of healthcare providers and a lack of trust in providers were cited as potential barriers to HIV PN in the literature reviewed. Given the unequal power dynamics in the provider-adolescent client relationship, as well as the judgmental attitudes towards sexual activity among adolescents that providers often hold, the risk of coercion to notify partners is real.
- PN methods used with AGYW should prioritize confidentiality and avoidance of adverse outcomes, thus use of anonymous PN is preferred when possible. Information sent to a sexual partner should be non-specific and not identify the index client or referred client's sexual exposure.

- PN services may be particularly difficult for youth because they may lack the communication skills and developmental maturity to address such difficult topics as HIV with their partners. Studies from high-income countries and LMICs have found that self-efficacy is an important predictor of patient-initiated STI PN for adults and adolescents.
- Despite the anticipation of experiencing social harms, including violence and stigma, these fears did not appear to deter adult women in LMICs 18 years of age or older from notifying their partner or partners about their HIV infection, and very few cases of notification-related violence were observed in the studies reviewed.
- Partnership dissolution, particularly for adult women fearing loss of economic support, was identified as a key barrier to HIV PN in South Africa, Malawi, Tanzania, and Barbados. Other barriers feared more keenly by women included being abandoned, being undervalued for not having children, and having difficulty notifying a partner when sex work was her main livelihood.
- Power differentials in relationships were a common barrier to HIV PN among adults. Socio-culturally rooted gender inequalities within relationships often place women at a disadvantage and make them hesitant to inform their partners about their positive status.
- A growing body of evidence shows promising results on male engagement in improving health outcomes of female partners, and it may be an effective strategy that can help address the gendered barriers to partner notification.
- Fears of verbal and emotional abuse have been linked to HIV PN for adult women. However, reported incidents of violence and physical harm were not associated with HIV PN in the literature reviewed. Concerns around experiencing domestic violence are not unique to women, but the fear of violence is much more likely to be mentioned by women than by men as a barrier to PN.
- Fear of embarrassment, anticipated stigma from partners and the surrounding community, and shame were noted as potential barriers to HIV and STI PN for adult women.

Based on these findings, YouthPower Learning recommends the following research and programmatic priorities. All recommendations should allow for the meaningful involvement of AGYW in their development, implementation, and interpretation or evaluation and should consider safe and acceptable strategies for AGYW.

### **Research Recommendations**

- Conduct feasibility and acceptability studies of HIV PN with AGYW in LMICs where implementation is being planned before scaling up HIV PN with this vulnerable population. Where research is underway, encourage disaggregation of data to learn more about young cohorts from ages 15-24 and 18-24 years old.

- Prior to implementing HIV PN for AGYW, countries should conduct situational analyses to understand what PN methods will be most acceptable to AGYW and in alignment with national guidelines on consent for HIV services with minors, and what resources are available to support AGYW who suffer social harms such as IPV or stigma due to PN.
- In countries where HIV PN is already being implemented for AGYW, operations research and/or studies to assess the availability, accessibility, acceptability, and quality of HIV PN services for AGYW should be conducted and programs adjusted as needed based on the findings.

### **Programmatic Recommendations**

- Conduct routine program monitoring of HIV PN services for AGYW once implemented to identify and correct any procedures or processes that may facilitate social harms. This could include follow-up with AGYW to assess their experience of social harms linked with HIV PN services, exit interviews with AGYW clients, and observations of provider-client interaction and counseling sessions by trained healthcare administrators to ensure that voluntarism with informed consent and the right to decline is adhered.
- Paramount to the successful implementation of HIV PN for AGYW is the need for countries to develop consent policies and practices to facilitate access to and uptake of HIV testing services among adolescents.
- Ensure that resources, like gender-based violence (GBV) support services and social support services for adults and adolescents living with HIV, are in place and prepared to support all adolescents referred from HIV PN services. Support services should be integrated into HIV and healthcare services where feasible to facilitate access and use by AGYW. Such services could include GBV resource centers and support groups for adolescents living with HIV and would assist adolescents in coping with IPV, stigma, mental health, concerns around disclosure; coming to terms with their HIV status; and remaining retained in HIV care and treatment.
- Alongside the implementation of HIV PN for AGYW, targeted efforts, potentially through the MenStar Coalition,<sup>2</sup> should be made to introduce adolescent boys and young men to HIV testing and increase their engagement in partner referral. As many AGYW partner with men older than their peers, increasing HIV testing and engaging older men, in addition to adolescent boys and young men, in HIV PN is likely to increase knowledge of HIV status and engagement in care of AGYW as well.
- Healthcare providers should be trained on how to conduct routine enquiry for IPV, including how to ask about experience or fear of IPV and sexual violence (SV) and the provision of first-line support for AGYW who do disclose experience or fear of violence. This training should include information on how to utilize the tools accompanying this report to screen AGYW for risk of GBV, IPV, or other social harms that may result from HIV PN.

- Providers should also receive training on the provision of stigma-free, gender-sensitive, adolescent- and youth-friendly services in a non-judgmental and supportive manner. Providers should also be given a list of resources and support services for AGYW living with HIV and survivors of violence to facilitate referrals.
- Ensure that HIV PN services are embedded into comprehensive HIV services that are youth-friendly. Integrating positive youth development (PYD) features into service delivery can help to address the barriers and challenges associated with HIV PN among AGYW by providing skill-building opportunities, creating safe spaces, strengthening the enabling environment, and improving linkages to mental health services.
- Implement community mobilization strategies to increase awareness of 95-95-95 and to generate enthusiasm for participating in HTS, including HIV PN. This could minimize the risk of blaming some populations for ‘spreading HIV’, especially AGYW, along with improving community attitudes towards HIV testing, prevention, care, and treatment.
- Other HIV PN options for AGYW, besides provider-initiated PN, should be considered for casual partners, including anonymous technology-facilitated PN (e.g. SMS) or provider referral.
- HIV PN may not be recommended for unmarried AGYW with few or single partners, as there are real risks of loss of confidentiality due to limited sexual networks. In all cases, HIV PN should only be carried out if preferred by the AGYW and should include follow-up counseling for all parties.
- Ensure that adolescent girls and boys have access to information through schools and local community centers and skills on reproductive health to enhance both their knowledge and ability to communicate about reproductive health topics with both healthcare providers and partners. This could include ways to increase their self-efficacy, problem-solve negative partner reactions, self-regulate their emotions when communicating to a partner, and cope with their partner’s reaction.
- Ensure close coordination with host country governments in regard to programming, implementation, and monitoring.

## INTRODUCTION AND BACKGROUND

Adolescents and young people represent an increasing share of people living with HIV globally. According to UNICEF, 590,000 young people between the ages of 15 to 24 were newly infected with HIV in 2017, yet recent data indicate that HIV testing rates among adolescents are low.<sup>3</sup> In Eastern and Southern Africa, the region most affected by HIV, only 17 percent of adolescent boys aged 15-19 and 23 percent of adolescent girls of the same age have been tested for HIV in the past 12 months and received their results. Testing rates in South Asia and West and Central Africa and are even lower.<sup>2</sup>

HIV disproportionately affects adolescent girls and young women (AGYW) in low- and middle-income countries (LMICs) due to a range of social and structural factors.<sup>4,5</sup> AGYW are vulnerable to HIV due to social and cultural factors, including early sexual debut, early and forced marriage and childbirth, sexual relationships with older men, economic pressure for transactional sex, and restricted ability to negotiate condom use.<sup>4-6</sup> Structural factors, such as a lack of youth-friendly health services and less access to education, also contribute to girls' vulnerability to HIV.<sup>7-9</sup>

AGYW are a priority population that would benefit from HIV index testing to ensure early linkage to care and treatment services. Recently, partner notification (PN) linked with HIV index testing has also been recommended for AGYW in LMICs to support global efforts to reach 95-95-95 goals<sup>10</sup> and achieve epidemic control by 2030. HIV PN for AGYW is also seen as an entry point for engaging adolescent boys and young men, populations that are harder to reach, in HIV services through PN. However, little is known about the potential social harms that AGYW may experience due to HIV PN.

PN services for adolescents are also expected to increase efficiency in HIV testing and identify more HIV-positive clients before they become sick due to earlier linkage to care and treatment. These services should also facilitate linkages into HIV prevention services, such as pre-exposure prophylaxis (PrEP) and sexual and reproductive health (SRH) services, for sexual partners not living with HIV.<sup>11</sup> As with adults, PN services for AGYW should always be voluntary. Offering PN services and specific PN methods in a way that allows for choice and opting out if AGYW fear adverse consequences of PN should be an underlying principle in the implementation of HIV index testing and PN services for AGYW.

There are four methods of HIV PN: (1) client referral, where clients living with HIV are encouraged to contact their sexual partners directly and let them know that they should be tested for HIV. Providers or other trusted persons can support notification as needed; (2) provider referral, sometimes referred to as partner services, in which providers contact partners directly to offer HTS without sharing the client's name; (3) contract referral, where clients living with HIV enter into a contract with healthcare providers to refer partners to HTS in a certain timeframe, after which the provider will follow-up with the partner directly, keeping the index client anonymous; and (4) dual referral, where the index client is accompanied by the provider when they disclose their status and HTS is offered to the partner/s.<sup>12,13</sup>

It would be unwise to assume that strategies that are feasible, acceptable, and effective for adult women will be safe for AGYW. Adolescence is often marked by profound changes in understanding and exploration of sexual relationships.<sup>14</sup> Partnerships among youth can be more

transitory or undefined than those among adults.<sup>15</sup> Because of the nature of their developmental stages, communication skills, knowledge gaps, and type of relationships, adolescents may require different strategies for partner notification.<sup>16,17</sup> Utilizing positive youth development (PYD) strategies, which take into account the broader social and structural factors that influence health behaviors, can offer a novel opportunity to strengthen HIV PN efforts, particularly for AGYW. PYD is focused on building youth skills, assets, and competencies; fostering healthy relationships; and strengthening youth's environment and transforming systems.<sup>18</sup> PYD programs in SRH and HIV have been found to strengthen social, emotional, and cognitive competencies in youth. These skills<sup>18</sup> may be beneficial in helping AGYW navigate the challenges in notifying their sexual partners and coping with negative reactions.

Studies among adult women living with HIV have suggested that fear of experiencing intimate partner violence (IPV),<sup>19,20</sup> dissolution of relationships and abandonment<sup>20,21</sup> and stigma from partners or the community<sup>22</sup> are common concerns surrounding PN. IPV, one of the most common forms of gender-based violence (GBV), is intrinsically linked with HIV for women and girls. Only a few studies reported IPV resulting from PN among adult women, however, and the anticipation of IPV was not reported to impede women from notifying their sexual partners about their HIV infection.<sup>23–25</sup>

Still, risk of IPV may have a greater impact on AGYW. More than one in four girls' first sexual experience under the age of 18 is unwanted.<sup>26</sup> The most common perpetrators of violence against girls are their current or former partners, boyfriends, or husbands.<sup>27</sup> Additionally, women who experience IPV are 1.5 times more likely to acquire HIV in high-prevalence settings.<sup>28</sup>

Disclosure of HIV sero-status is a key concern of AGYW living with HIV.<sup>29,30</sup> The anticipation of stigma from peers, family, and community members can be severe, and AGYW are often encouraged by parents or guardians not to share their HIV status with anyone outside of their family to protect them from social harms.<sup>31,32</sup> Access to SRH services is limited for AGYW, and many AGYW may face additional social and family stigma and consequences if it becomes known that they have begun sexual activity, regardless of whether that sexual activity was consensual.<sup>33–35</sup> Support services for AGYW living with HIV in LMICs are limited, especially as girls age out of pediatric services and enter adult care and treatment services.<sup>36</sup> Given the dual threat of stigmatization for both sexuality and HIV status, disclosure even to trusted friends and family is limited for AGYW living with HIV.<sup>37,38</sup> Adding PN has the potential to cause undue social harm, impeding a healthy transition to adulthood.

## OBJECTIVE OF THE REPORT

The main objective of the report is to review the evidence on social harms linked with HIV PN, including IPV and stigma, and discuss how these potential harms may affect AGYW living with HIV. In addition, the report recommends research and programmatic strategies to minimize potential social harms for AGYW as HIV PN is scaled up for this population and is accompanied by a set of tools for providers to support the safe roll-out of HIV PN and with AGYW.

## METHODS

In reviewing the evidence base on HIV PN, YouthPower Learning searched academic databases (Scopus and PubMed) using the terms “HIV index testing” OR “partner notification” together with “intimate partner violence”, “gender-based violence”, “stigma”, “adolescent girls” and “young women”. The searches were initially restricted to “sub-Saharan Africa”, but were then broadened to include “low- and middle-income countries”. Geographic restrictions were ultimately removed due to the limited number of published studies identified under previous search terms.

In addition, the USAID Development Experience Clearinghouse, UNESCO HIV and AIDS Education Clearinghouse, and Google were searched using the above search terms to capture relevant grey literature. Reference lists of all eligible studies and systematic reviews were manually searched for additional articles. Results were limited to English-language publications, but without geographic and publication date restrictions.

To be included, publications and reports had to include data on either the barriers to or challenges associated with HIV PN or the relationship between HIV index testing and social harms such as IPV or stigma. Initially, inclusion was restricted to studies that focused on AGYW or adolescent girls living with HIV. However, due to lack of published data on HIV PN among AGYW, the YouthPower Learning team expanded the selection criteria to include studies with adult populations.

Results were aggregated into a Mendeley database and titles and abstracts were reviewed. Upon determining eligibility, full texts of the articles were reviewed. Data on study description, study population, geographic setting, barriers, and challenges, as well as effective strategies and recommendations, were extracted using a data abstraction form.

## FINDINGS

The following section summarizes common barriers and challenges associated with HIV PN among women globally that were identified from the literature review. It should be noted that significant gaps exist in the evidence base on HIV PN for AGYW. Only one qualitative study was identified that examined sexually transmitted infection (STI) PN with adolescent boys and girls in the US.<sup>17</sup> Therefore, the findings reviewed in this section draw namely from studies with adult women living with HIV, both married and unmarried.

### *Overview of studies included*

Eighteen studies were identified that met our search criteria. The studies spanned Africa, North America, and Latin America from 1999 to 2018. Eight studies were conducted in East and Southern Africa<sup>19–22,24,25,39,40</sup> and five were conducted in North America.<sup>17,23,41–43</sup> One study was conducted in West and Central Africa,<sup>44</sup> one in Latin America<sup>45</sup> and one in the Caribbean.<sup>46</sup> Two systematic reviews were identified, one focused on studies conducted in the US<sup>43</sup> and one on HIV PN studies globally.<sup>12</sup> No studies from Western and Central Europe, Eastern Europe and Central Asia, Asia-Pacific, or the Middle East and North Africa were identified. The most represented countries were the US (5 studies), South Africa (3 studies) and Malawi (2 studies) (Table 1). A large proportion of the studies reviewed were observational in nature (6 studies).

Five studies were qualitative and two were randomized trials, one with a control group (Table I).

## Feasibility and acceptability of PN

No studies were identified that investigated the feasibility and acceptability of HIV PN in LMICs for AGYW 15-24 years old. For this reason, we summarize the more substantive evidence base on HIV PN feasibility and acceptability among adult women in LMICs ages 18 years and older. The two systematic reviews identified suggest that HIV PN for adults living with HIV is feasible, acceptable, and effective at identifying new clients living with HIV in the US<sup>43</sup> and LMICs.<sup>12</sup> Despite the anticipation of experiencing social harms, including violence and stigma, these fears did not deter women from notifying their partner/s about their HIV infection,<sup>23-25</sup> and very few cases of notification-related violence were observed in the studies reviewed.<sup>42</sup> It should be noted, however, that one study specifically excluded violent partners of women study participants from notification.<sup>24</sup>

Partnership dissolution, particularly for women fearing loss of economic support, was identified as a key barrier to HIV PN in South Africa, Malawi, Tanzania, and Barbados.<sup>19-21,46</sup> Other barriers feared more keenly by women included being abandoned, being undervalued for not having children, and having difficulty notifying a partner when sex work was her main livelihood.<sup>20</sup>

While both men and women were typically willing to notify their partners, there were conflicting results on which gender was more likely to do so. One study in South Africa found that women were more likely than men to intend to notify their partners.<sup>19</sup> Conversely, a study in Tanzania found that PN was 2.2 times more likely among male compared to female index clients.<sup>20</sup> Notification was more common among committed partners and less likely among casual partners or one-night stands.<sup>20,25</sup>

Overall, assisted referral was the preferred method of notification in the majority of studies reviewed (13 out of 18 studies). The meta-analysis of three randomized controlled trials (RCTs) conducted by Dalal et al.<sup>12</sup> found that assisted partner notification services led to a 1.5-fold increase in uptake of HTS among partners compared to passive referral. However, the study conducted in Barbados found that contract referral was the most acceptable method of assisted notification, with provider referral the least acceptable to participants. These contrasting findings highlight the importance of determining the most acceptable methods of PN in the context in which PN scale-up is to occur. The studies reviewed did not disaggregate PN preferences for adult women and men, so it is not possible to determine if PN method preferences differed by gender.

Based on the strong evidence of feasibility, acceptability, and effectiveness of HIV PN among adults, the World Health Organization (WHO) published guidelines for HIV self-testing and partner notification in 2016.<sup>1</sup> While HIV PN for adolescents is supported by WHO and guidance is included for this population, only three studies including adolescents, two qualitative and one observational, were referenced, all focused on STI PN in high-income countries.<sup>47-49</sup> All three studies suggested that younger participants preferred technology-facilitated PN, including SMS or text messages. The qualitative studies with youth in Canada aged 15-24 noted that text messages were seen as both safe and private.<sup>47,49</sup> Online HIV risk assessment and testing services were favored, as they addressed youth needs for expedient, convenient, and private services.<sup>47</sup>

The study that examined barriers to STI PN among adolescents in the US also suggested that alternative methods for PN be considered. Given adolescents' concerns about their safety or reputations when discussing STI exposures with partners, Reed et al. (2015) suggested that provider referral may be warranted. In addition, instructional videos about how to have a conversation about STI exposure with a partner may help to address the lack of communication skills and developmental maturity needed to address such difficult topics.<sup>17</sup>

## Gender dynamics

While HIV PN was feasible and acceptable in all of the studies reviewed, a number of factors emerged that influence HIV PN in LMICs. Power differentials in relationships were a common barrier to HIV PN.<sup>19-21</sup> Socio-culturally rooted gender inequalities within relationships often place women at a disadvantage and make them hesitant to inform their partners about their HIV-positive status. Specifically, in a study conducted in Malawi, female index participants expressed their reluctance to disclose their status to their male partners because they had visited the clinic to get tested without their partners' knowledge or permission.<sup>21</sup> Women often lack decision-making autonomy with regard to their health, which could negatively impact their uptake of HIV PN.

Gender dynamics also influence PN by fostering fears of negative reactions or repercussions from male partners. Because women in sub-Saharan Africa (SSA) are more likely than men to get tested for HIV, typically during pregnancy or birth, they are often the first to learn they are living with HIV,<sup>50,51</sup> which can lead to blame from male partners and family for 'bringing HIV into the family'.<sup>52,53</sup> The misconception that the person who tests positive first transmitted the disease to their partner is pervasive.<sup>22</sup> In addition, a study from South Africa revealed male participants' inaccurate gendered beliefs that women were STI carriers and blamed them for transmitting diseases during intercourse or menstruation.<sup>22</sup> Thus, anticipation of being blamed and subsequent social harm, including stigma and discrimination, were more pronounced among women.<sup>21</sup> Moreover, Brown et al.<sup>54</sup> found that men were less likely to be tested and notify partners themselves compared to women in a trial of HIV PN.

Another way in which gender inequalities operate is in differences between men and women's economic status. The perceived risk of losing financial support, typically from male partners, was cited as a deterrent for women from sharing HIV-positive status.<sup>12,20,46</sup> Although fear of accusations of infidelity has been identified as a barrier to PN among both men and women,<sup>45,55</sup> women were more likely to be concerned about being accused of unfaithfulness.<sup>22,56</sup> Ultimately, gendered barriers linked to PN lead to missed opportunities for prevention of new HIV infections and impede women from accessing appropriate treatment and care.

A growing body of evidence shows promising results on male engagement in improving health outcomes, and it may be an effective strategy that can help address the gendered barriers to PN.<sup>57,58</sup> According to a recent report, male engagement "*is about recognizing how social norms of power and gender affect men and women as individuals, in their relationships with each other, and in the structures and institutions that organize societies – and bringing this recognition to bear on gender equity programming.*"<sup>58</sup> However, the main challenge in engaging men and boys is that HIV testing and uptake of treatment remains low among men relative to women.<sup>57</sup> In general, men's use of SRH services remains lower than women's, including among adolescents. Girls and young women are encouraged to utilize services such as pap smears, family planning, and annual check-ups beginning

from the onset of menstruation, while boys' and young men's health needs are less evident and their use of services encouraged only as a response to risk.<sup>59</sup> Evidence shows that health service models are often perceived as catering to women's needs, and HIV testing efforts that have primarily focused on reaching women through antenatal care services have inadvertently failed to engage men.<sup>60</sup> Outreach to men and boys tends to focus more on their roles as partners of women, and not on their own health needs or outcomes.<sup>59</sup> Clinics are frequently seen as women-only spaces, therefore, the so-called "feminization" of healthcare services deters men from visiting health centers for HIV testing.<sup>52,61</sup> Limited male participation in this arena has also been attributed to stigma and fear of societal ridicule of men as being jealous or over-protective of their wives if they choose to accompany them to antenatal care visits.<sup>61</sup> Furthermore, harmful masculine norms not only discourage men from getting tested for HIV and receiving appropriate treatment, but also hinder health-seeking among women.<sup>62</sup>

One study conducted in Tanzania found that it was considered socially unacceptable for a woman to make decisions connected to HIV testing or to ask her husband for his participation in HTS.<sup>63</sup> Thus, increasing efforts by improving outreach to include men in HTS, including in prevention of vertical transmission programs, can enhance communication among couples. Doing so will ultimately create safer environments for disclosure.<sup>64</sup>

Empowering men to challenge cultural norms and engaging them more systematically in SRH services, including couples' HIV testing and partner-assisted notification, are critical to yielding positive results for both men and women.<sup>60</sup> Studies have shown that SRH and HIV prevention interventions which engaged men and boys can lead to significant shifts in gender norms as well as improved practices.<sup>62</sup> For example, an impact evaluation of an HIV prevention program in South Africa that involved men demonstrated desired behavior change including higher condom use, reduced perpetration of IPV, and fewer partners.<sup>65</sup> In another study from Kenya, male partner participation in voluntary counseling therapy was positively associated with seropositive women's increased likelihood to adhere to an HIV treatment regimen during pregnancy compared to women who were counseled without their spouses.<sup>66</sup>

### **Fear of abandonment and violence**

Fear of conflict or dissolution of relationships has been identified as a negative consequence of PN.<sup>19,20,45</sup> Women revealed that they were not inclined to notify their male partners after learning about their status in order to avoid arguments and abandonment. Unwillingness to disclose HIV status among mothers is tied to women's economic vulnerabilities and fear that they will not have the financial means to provide for their children.<sup>67</sup> In a recent study in Tanzania, four of 26 women interviewed reported that their male spouses and partners decided to end the relationship following disclosure.<sup>19</sup> In another study that probed for the effect of PN on relationship dissolution, 46% indicated that their partnerships ended following notification.<sup>42</sup> Among adolescents, loss of a relationship was also identified as a concern and cited as a key deterrent to notifying a partner about exposure to an STI.<sup>17</sup>

Furthermore, because women in developing country contexts often either depend on their spouses or male partners for financial support or are not allowed by male partners to decide how their financial earnings are spent, it is not surprising that PN is of particular concern. However, studies conducted in developed countries also show that fear of economic loss is tied to reluctance to share HIV status.<sup>68</sup>

Another barrier related to PN was fear that a sexual partner would react violently and threaten physical harm.<sup>23,44,69</sup> Fears of verbal and emotional abuse have also been linked to HIV PN.<sup>17,46,55</sup> However, reported incidents of violence and physical harm were not associated with HIV PN.<sup>24,25,42</sup> Concerns around IPV are not unique to women,<sup>19</sup> however, the fear of violence is much more likely to be mentioned by women as a barrier to PN.

Women participants reported IPV in four of the 18 studies reviewed.<sup>23–25,42</sup> For example, 11% of index clients from an RCT conducted in Kenya reported some form of IPV, 31% of whom reported being a victim of physical violence.<sup>24</sup> However, in the studies that captured reports of IPV, no association was observed between reported violence and PN.<sup>23–25,42</sup> One study reported that women with a history of experiencing IPV were more likely to fear negative reactions, such as accusations of infidelity and physical harm, from their partners. In addition, male perpetrators of IPV were less likely to seek treatment for STIs.<sup>56</sup> This finding indicates that violence could undermine PN and lead to onward HIV transmission.

Despite limited published data showing direct association, one study found substantial evidence that women fear physical harm and that those who have sustained injuries from a partner are likely to decline HIV testing.<sup>23</sup> As such, fear of negative reactions and violence influence women's decision-making to get tested for HIV and pose a challenge for PN.

### **Anticipated stigma**

Stigmatizing attitudes and practices towards people living with HIV have been well-documented among healthcare workers globally.<sup>70</sup> While facility-based interventions have been implemented in several LMICs to increase knowledge of HIV and stigma, reduce harmful attitudes and stigmatizing behaviors, and improve the quality of care provided to people living with HIV,<sup>71,72</sup> only a few countries have taken these interventions to scale nationally.<sup>73</sup> Overall, integration of stigma reduction into pre-service training for healthcare providers is rare.

Women living with HIV are at particular risk of stigma or coercion in the health setting.<sup>74,75</sup> The same potential for coercion exists for AGYW, who may be pressured by healthcare providers to identify their sexual partners for PN. Given the unequal power dynamics in the provider-adolescent client relationship, as well as the judgmental attitudes towards sexual activity among adolescents that providers often hold, the risk of coercion is real.<sup>76</sup>

Concerns of judgmental attitudes by healthcare providers and a lack of trust in providers was cited as a potential barrier to HIV PN by study participants in Barbados.<sup>46</sup> Fear of embarrassment, social stigma, and shame were also as potential barriers to HIV and STI PN among adults in Barbados, as well as by youth in the US.<sup>17,46</sup> Similarly, in South Africa, the most common stigma-related barriers to HIV PN mentioned were anticipated stigma from partners or the surrounding community.<sup>22</sup>

## **CONSIDERATIONS FOR IMPLEMENTING HIV PN WITH AGYW**

### **Consent**

Paramount to the successful implementation of HIV PN for AGYW is the need for countries to develop consent policies and practices to facilitate access to and uptake of HTS for adolescents. The inability of minors in most countries to seek HTS without parental assent is a potential barrier to scaling up HIV PN services with AGYW. According to UNAIDS, parental consent is required for young people under certain ages before accessing one or more SRH services in 72 countries.<sup>77</sup> Given the varied consent policies in place for adolescents and young people aged 10-24 in LMICs, implementing HIV PN with AGYW in that age group may prove challenging.<sup>78</sup>

For example, the majority of adolescents 10-19 years of age require parental consent to test for HIV. A few high-prevalence countries (such as Kenya) have expanded access to HIV testing with no age limits, while others have instituted lower age limits, from age 12 (Lesotho, South Africa, Uganda) and age 13 (Malawi); but of the remaining countries with age limit policies in place, youth must be 16-years-old or 18-years-old depending on the country in order to be tested.<sup>79</sup> Indeed, recent research suggests that lowering the age of consent for HIV testing may have more of an impact on 95-95-95 than any new testing modality.<sup>80</sup> Despite challenges posed by age of consent, providing HTS services to adolescents “in a safe environment, without the involvement of law enforcement, is important to enable this vulnerable group to access life-saving antiretroviral therapy (ART) if diagnosed HIV-positive or prevention services if HIV-negative.”<sup>81</sup>

### **HIV PN as part of comprehensive HIV services for youth**

To tailor HIV PN for youth, services should ideally be part of a comprehensive package of HIV testing and counseling that is sensitive to youth needs. HIV testing and counseling services can be an entry point for youth to access other services, such as reproductive health education, peer counseling, life skills development, family planning, diagnosis and treatment of STIs, prevention of vertical transmission, and mental health and psychosocial support services. Integrating PYD features into comprehensive HIV services can help support healthy adolescent development, reduce HIV risk behaviors, and address the potential barriers and challenges to HIV PN identified in the review. These features include access to age-appropriate and youth-friendly services, life skills-building, creating safe spaces, and building healthy relationships.<sup>81</sup>

WHO developed a framework for youth-friendly health services that identified five key objectives to promote the delivery of quality healthcare for youth, including health services that are equitable, accessible, acceptable, appropriate, and effective.<sup>82</sup> A systematic review of the effectiveness of interventions to improve the use of health services by adolescents in LMICs found that making health services youth-friendly and appealing led to increases in the use of health services by adolescents.<sup>83</sup> Youth-friendly services can help youth living with HIV overcome barriers to healthcare, such as disclosure and PN, and provide links to other services, such as mental healthcare.<sup>83</sup> Targeted, comprehensive HIV services tailored to the specific needs of youth include flexible service hours, convenient locations, staff training, peer support, and well-established linkages and referrals to mental health, education, employment, and social services.<sup>84,85</sup> Training can be developed to sensitize and educate health workers on issues specific to AGYW, non-discriminatory attitudes and practices, privacy and confidentiality, informed consent, and counseling. Peer support groups and safe spaces can help youth share experiences, address stigma

and discrimination, and build skills to support partner disclosure. Peer counselors can serve as trusted and credible sources of support given their own personal experiences with anxiety, guilt, fear, shame, rejection, stigma, depression, and feelings of hopelessness encountered when struggling with a new HIV diagnosis and treatment.<sup>86</sup> Creating opportunities for youth dialogue and participation in program design and implementation of services can help to improve services for youth. Integrated youth-friendly services provide the opportunity for youth-centered prevention, care, and treatment for the multitude of issues affecting youth living with HIV.<sup>84</sup>

Youth-friendly services, while vital to expanding HIV PN for AGYW, have not been effectively scaled in most countries.<sup>87</sup> Youth-friendly service centers are most commonly located in major urban centers, and trained youth-friendly providers may move from clinic to clinic or be more accessible at private clinics or clinics operated by non-governmental organizations (NGOs). Standards for youth-friendliness may vary from country to country or within countries, or may vary based on the type of service being provided.<sup>88</sup> Trainings may be infrequent or out-of-date, and few resources exist for young people who experience bias or discrimination to hold clinics or providers accountable. AGYW's access to services may not overlap with trained or certified youth-friendly providers, or may be limited by their geography, age, marital status, or other factors.

PN services may be particularly difficult for youth because they may lack the communication skills and developmental maturity to address such difficult topics as HIV with their partners. For AGYW in particular, age differentials of sexual partners and unequal power dynamics make disclosure even more challenging. Studies from countries of all income levels have found that self-efficacy is an important predictor of patient-initiated STI PN for adults and adolescents.<sup>86,89-91</sup> Patient-initiated partner referral methods have been found to be more successful among patients with increased self-efficacy and for partners with whom patients have stronger relationships.<sup>84</sup>

## RECOMMENDATIONS

It is unclear if HIV PN will be feasible and acceptable for AGYW in LMICs or whether it will increase HIV testing, knowledge of HIV status, and entry into care for AGYW and their partners, as there is no evidence on this to date. We do know that different methods of HTS are broadly acceptable to adolescents, including home-based testing, provider-initiated testing, and more recently, self-testing.<sup>79</sup> However, PN is new for this population, so close attention should be paid during scale-up and implementation to assess acceptability and adjust approaches accordingly. As with adult women living with HIV, HIV PN will likely not be advisable for all AGYW living with HIV, particularly in cases where sexual partners have a history of perpetrating violence.

Paramount among considerations regarding the roll-out of HIV PN for AGYW is ensuring voluntarism, with informed consent and the explicit right to decline, as expressly stated in the HIV Self-Testing and Partner Notification guidance document published by WHO.<sup>1</sup>

Based on the published evidence reviewed, YouthPower Learning recommends the following research and programmatic activities be undertaken prior to and alongside the scale-up of HIV PN for AGYW.

### Research Recommendations

- Conduct feasibility and acceptability studies of HIV PN with AGYW in LMICs where implementation is being planned before scaling up HIV PN with this vulnerable population. Where research is underway, encourage disaggregation of data to learn more about young cohorts from ages 15-24 and 18-24 years old.
- Prior to implementing HIV PN for AGYW, countries should conduct situational analyses to understand what methods of PN will be most acceptable to AGYW, and in alignment with national guidelines, and what resources are available to support AGYW who may experience social harms, such as IPV or stigma, due to PN.
- In countries where HIV PN is already being implemented for AGYW, operations research and/or studies to assess the availability, accessibility, acceptability, and quality of HIV PN services for AGYW should be conducted and programs adjusted as needed based on the findings.

### **Programmatic Recommendations**

- Conduct routine program monitoring of HIV PN services for AGYW once implemented to identify and correct any procedures or processes that may facilitate social harms. This could include follow-up with AGYW to assess experiences with social harms linked with HIV PN services, exit interviews with AGYW clients, and observations of provider-client interactions and counseling sessions by trained healthcare administrators to ensure that voluntarism with informed consent and the right to decline is adhered.
- Paramount to the successful implementation of HIV PN for AGYW is the need for countries to develop consent policies and practices to facilitate access to and uptake of HIV testing services in adolescents.
- Ensure that resources, like GBV support services and social support services for adults and adolescents living with HIV, are in place and prepared to support all adolescents referred from HIV PN services. Support services should be integrated into HIV and healthcare services where feasible to facilitate access and use by AGYW. As an example, GBV resource centers and support groups for adolescent living with HIV<sup>36</sup> would enable adolescents to cope with IPV, stigma, mental health, concerns around disclosure, coming to terms with their HIV status, and staying engaged in HIV care and treatment.
- Alongside the implementation of HIV PN for AGYW, targeted efforts, potentially through the MenStar Coalition,<sup>2</sup> should be made to introduce adolescent boys and young men to HIV testing and increase their engagement in partner referral. Since many AGYW partner with men older than their peers, increasing HIV testing and engaging older men, in addition to adolescent boys and young men, is likely to increase knowledge of HIV status and engagement in care of AGYW as well.
- Healthcare providers should be trained on how to conduct routine enquiry for IPV, including how to ask about experience or fear of IPV and sexual violence and the provision of first-line support for AGYW who disclose experiences or fear of violence. This training should include information on how to utilize the PN tools accompanying this report to screen AGYW for risk of GBV, IPV, or other social harms that may result from HIV PN.<sup>92</sup>
- Providers should receive training on the provision of stigma-free, gender-sensitive, youth-friendly services in a non-judgmental and supportive manner.<sup>70,71,93,94</sup> Providers should also

be provided with a list of resources and support services for AGYW living with HIV and their sexual partner/s, as well as survivors of violence, to facilitate referral.

- Implement mass media campaigns and community mobilization strategies to increase awareness of 95-95-95 and broad support for success to generate enthusiasm for participating in HTS, including HIV PN. This could minimize the risk of blaming some populations for ‘spreading HIV’, especially AGYW, along with improving community attitudes towards HIV testing, prevention, care, and treatment.
- Other HIV PN options for AGYW, besides provider-initiated PN, should be considered for casual partners, including anonymous technology-facilitated PN (e.g. SMS) or provider referral.
- HIV PN may not be recommended for unmarried AGYW with few or single partners, as there are real risks of loss of confidentiality due to limited sexual networks. In all cases, HIV PN should only be carried out if preferred by the AGYW and should include follow-up counseling for all parties.
- Ensure HIV PN services are embedded into comprehensive HIV services that are youth-friendly. Integrating PYD features into service delivery can help to address the barriers and challenges associated with HIV PN among AGYW by providing skill-building opportunities, creating safe spaces, strengthening the enabling environment, and improving linkages to mental health services.
- Ensure that adolescent girls and boys have access to information and skills on reproductive health to enhance both their knowledge and ability to communicate about reproductive health topics with healthcare providers and partners. Focus areas should include increasing youth self-efficacy, problem-solving negative partner reactions, self-regulating one’s emotions when communicating to a partner, and coping with a partner’s reaction.
- Ensure close coordination with host country governments in regard to programming, implementation, and monitoring.

## **CONCLUSION**

While PN services have the potential to reach AGYW and their sexual partners in need of HIV testing services, the implementation of PN needs careful consideration to minimize potential social harms for AGYW who may be experiencing violence or stigma, fear violence or stigma, or who may have acquired HIV as a result of violence. PN services for AGYW should also be designed to ensure that AGYW who know their status are linked to appropriate HIV services, such as PrEP to prevent HIV infection, ART to suppress HIV viral load, and adherence and social support services for adolescents or partners living with HIV. Such strategies should be incorporated into HIV/SRH services and complemented with the scale-up of outreach, HIV testing services, and PN for adolescent boys, as well as young and adult men.

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## ANNEXES

Table 1. Study and intervention characteristics, description of partner notification and social harm outcomes and study findings from 18 studies

First author, publication date, country, study design	Study population, sample	Intervention characteristics	PN and social harms outcomes assessed	Results
Adams et al. 2015, Barbados, qualitative	Adult men and women, including: physicians, nurses, representatives from government, youth, HIV, men's and women's groups, church and private sector organizations  16 men, 13 women	Not applicable	Attitudes, barriers and challenges to PN  Stigma and IPV	Contract referral deemed most acceptable method of PN for HIV and provider referral deemed least acceptable method. Judgmental attitudes of healthcare workers and a lack of trust in them cited as potential barriers to PN. Index patients may avoid PN due to denial, fear and shame, fear of domestic violence (physical and mental) following PN, and fear of losing economic support, including being put out of the house.
Brown et al. 2011, Malawi, randomized trial	Adult men and women newly diagnosed with HIV who had been sexually active in last 90 days and will to provide partner info for PN  100 men, 140 women	Participants were randomized to 1 of 3 methods of partner notification: passive referral, contract referral, or provider referral. The passive referral group was responsible for notifying their partners themselves. The contract referral group was given seven days to notify their partners, after which a health care provider contacted partners who had not reported for counseling and testing. In the provider referral group, a health care provider notified partners directly.	Partners returned for testing, partners newly diagnosed	Provider-assisted methods of HIV PN were feasible, acceptable, and effective among STI clinic patients. A high proportion of eligible patients participated and provided accurate partner locator information. Provider-assisted PN was implemented without difficulty and was supported by clinic staff. Provider-assisted PN resulted in more partners receiving counseling and testing services than passive referral, the current standard of care.
Cavalcante et al. 2016, Brazil, qualitative	Adult men and women  21 total: 11 index patients (5 men, 6 women); 10 notified partners (5 men and 5 women)	Not applicable	Perceptions about PN	Various types of PN were reported (verbal, telephone, notification card). Index patients had negative feelings regarding PN, including: resentment, insecurity, and above all fear of partner reaction and losing trust in the relationship. Partners reported betrayal, fear of death, of incurability and the diagnosis, especially of HIV. Reasons for coming to a healthcare center were: fear of being sick, attenuation of guilt of infection

First author, publication date, country, study design	Study population, sample	Intervention characteristics	PN and social harms outcomes assessed	Results
				transmission, need for diagnosis and early start of treatment.
Cherutich et al. 2016, Kenya, randomized controlled trial	Non-pregnant adults aged at least 18 years with newly or recently diagnosed HIV without a recent history of IPV  1305 participants	Consenting sites were randomly assigned to immediate versus delayed assisted partner services.	Number of partners tested for HIV, the number who tested HIV positive, and the number enrolled in HIV care	6 weeks after enrolment of index patients, 392 (67%) of 586 partners had tested for HIV in the immediate group and 85 (13%) of 680 had tested in the delayed group. 136 (23%) partners had new HIV diagnoses in the immediate group compared with 28 (4%) in the delayed group and 88 (15%) versus 19 (3%) were newly enrolled in care. Assisted partner services did not increase IPV.
Dalal et al. 2017, eight countries, systematic review	Eligible studies compared assisted HIV PN services to passive or no notification  10 studies; four RCTs and six observational studies totaling 5150 index patients were included	Not applicable	HTS uptake among notified partners, proportion of HIV positive partners identified  IPV	Meta-analysis of three individually randomized trials showed that assisted PN services resulted in a 1.5-fold increase in HTS uptake among partners compared with passive referral (RR = 1.46; 95% CI: 1.22–1.75; I <sup>2</sup> = 0%). The proportion of HIV-positive partners was 1.5 times higher with assisted PN than with passive referral (RR = 1.47; 95% CI: 1.12–1.92; I <sup>2</sup> = 0%). Assisted PN increased HIV test uptake and diagnosed high proportions of people with HIV infection, with very few reports of harm.
Kamanga et al. 2015, Malawi, qualitative	Adults with newly diagnosed HIV and other STIs  16 index patients (10 women) and 12 sexual partners (7 women); 14 healthcare workers	Not applicable	Gender dynamics, marital or relationship breakdown, IPV	Most index participants and partners expressed a preference for passive notification, but highlighted benefits for provider-assisted notification and the universal right for all HIV-exposed persons to know their HIV exposure and benefit from HIV testing and access antiretroviral treatment. Several participants mentioned couples counseling as a way to diffuse tension and get accurate information. All mentioned benefits to HIV testing, including the opportunity to change behavior. Concerns about social harms were greater among women, especially if infected. Some female index

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				participants did not disclose because of fear of negative repercussions from their male partners. Despite concerns about social harms, there were no social harms reported by any study participant as a result of disclosure in this study.
Henley et al. 2013, Cameroon, observational	Adult men and women testing positive for HIV who accepted HIV partner services (index cases)  1462 index patients	National HIV Partner Services Program, including collection of partner information from index patients followed by contact tracing and PN completed by Research Health Advisors.	Number of partners notified, tested for HIV and positive for HIV.	1462 persons with HIV infection provided information about 1607 sexual partners. Health advisors notified 1347 (83.8%) of these partners, of whom 900 (66.8%) were HIV tested. Of partners tested, 451 (50.1%) were HIV positive, of whom 386 (85.6%) enrolled into HIV medical care. An average 3.2 index cases needed to be interviewed to identify one HIV case. HIV Partner Services can be successfully implemented in a developing country and is highly effective in identifying persons with HIV infection and linking them to care.
Hoxworth et al. 2003, US, observational	Adult men and women living with HIV, partners notified of exposure to HIV, and HIV negative persons receiving HIV counseling and testing (controls)  165 study participants	HIV testing and PN services.	Sexual activities, substance use and partnership outcomes	The study examined the effect of PN on subsequent sexual behaviors and partnership dissolution and formation. Partnerships where both persons received PN were less likely to break up or acquire new partners and more likely to use condoms at follow-up. After PN or counseling and testing, the frequency of dissolutions lessened and there were no differences between subgroups. It appears that the experience of PN did not bring about any more dissolutions than would be expected in a comparison group.
Kahabuka et al. 2017, Tanzania, observational	Adults newly diagnosed with HIV, not pregnant, with a current sexual partner or who had a partner in the past 24 months	PN following HIV testing	Number of partners notified, tested for HIV and positive for HIV.	Results showed good acceptability, feasibility and effectiveness, as evidenced by high uptake of PN among newly diagnosed individuals, over half of listed partners successfully referred, and a very high positivity rate among referred sexual partners. No cases

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	309 index clients		IPV	of notification-related violence were reported in this study.
Kalichman et al. 2017, South Africa, observational	Adults receiving STI diagnostic and treatment services from a community-based clinic in Cape Town  324 men and 452 women	Not applicable	Perceived barriers to PN, including number of partners, partner types, adverse partner reactions (violence or dissolution of partnership)	Half of patients surveyed intended to inform their partners. Women were more likely than men to intend to notify their partners. Men and women who did not intend to notify partners endorsed significantly more concerns that partners would leave, end their relationship and act out violently. The results of this study confirm that concerns and fears about partner reactions, particularly anger and violent responses, create significant barriers to PN. These concerns and fears were observed in men and women.
Kissinger et al. 2003, US, quasi-experimental (no control)	Adults who received HIV or syphilis diagnoses and named at least one partner  76 HIV infection and 81 syphilis index cases (controls)	Index cases were interviewed by a disease intervention specialist (DIS) for PN. Partnership information was reported by index cases interviewed at baseline and 3 and 6 months post-PN.	Sexual abstinence, condom use, partnership dissolution and acquisition, emotional abuse, physical violence	The PN process was completed for 32.7% of partnerships and it was completed more often for partnerships that were classified as main and cohabiting. After PN, 46.8% of partnerships dissolved, 15.9% of cases acquired a new partner, and emotional abuse and physical violence decreased significantly. HIV index cases were somewhat more likely to report using condoms at last sex act and less likely to acquire a new sex partner after PN compared to syphilis index cases. There was no difference post-PN between HIV infection and syphilis partnerships for partnership dissolution, physical violence, emotional abuse and abstention from sex. Emotional abuse and physical violence were experienced at least once over follow-up in 23.5% and 8.8% of the partnerships, respectively.
Maher et al. 1999, US, observational	Adult women not known to be HIV positive, not tested for HIV in the previous 3 months, and offered HIV testing during the clinic visit	Not applicable  Women who accepted HIV testing were compared to women who did not accept testing.	History of partner violence, fear of partner violence	16% reported partner violence in the past year, and 28% declined HIV testing. Declining the test was not significantly ( $p > .05$ ) associated with history or fear of partner violence, previous experience with PN, or beliefs about PN. When specifically asked, only 2 women

First author, publication date, country, study design	Study population, sample	Intervention characteristics	PN and social harms outcomes assessed	Results
	490 participants			responded that their declining the test was related to fear that their partner or partners might harm them if the women tested positive.
Mathews et al. 2018, South Africa, observational	Adult men and women 99 males with 303 partners and 96 females with 158 partners	Participants were enrolled in a behavioral intervention to reduce STI incidence.	PN (any method), partnership type, experience of IPV, adverse partner responses to PN	The strongest, independent correlate of PN was partner type. Male and female participants were more likely to notify their main partners compared with their one-night stands. Males reported perpetrating IPV in 46.2% of partnerships. Females reported experiencing IPV in 53.2% of partnerships. Males notified 58.1%, females 75.4% of partners during the 2 weeks following diagnosis. IPV was not identified as a barrier to PN. For males, reporting physical IPV perpetration in the partnership was an independent correlate of PN. For females, there was no association between IPV victimization in a partnership and PN.
Passin et al. 2006, US, systematic review	Eligible studies reported client or provider attitudes, experiences, and practices with HIV PN  25 studies	Not applicable	Potential negative effects of HIV PN	Clients were willing to self-notify partners and participate in provider notification, and few reported negative effects. The majority of healthcare providers were in favor of HIV PN; however, they did not consistently refer index clients to HIV PN programs. Considering that clients have positive attitudes toward self- and provider referral, local HIV prevention programs need to ensure that all HIV-positive clients are offered PN services.
Plotkin et al. 2018, Tanzania, mixed-methods	Adult men and women diagnosed with HIV through provider initiated testing and counseling (PITC) or voluntary counseling or testing (VCT) at the study facilities  390 index clients and 249 sexual partners of index clients	Index clients were interviewed by HIV counselors to list their sexual partners. Index clients could elect passive referral, provider referral, or contract referral. Any sexual partners that clients thought might cause a risk of IPV were excluded from PN intervention.	History of IPV	Successful partner referral was 2.5 times more likely among married compared to unmarried index clients and 2.2 times more likely among male compared to female index clients. In qualitative analysis, male as well as female index clients mentioned difficulties notifying past or casual partners, and noted disease symptoms as a motivating factor for HIV testing. Some barriers to PN appeared to impact women more heavily than

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				men. Experiences mentioned only by women included being abandoned or the ending of the relationship because HIV status was disclosed; being undervalued for not having a child; and having difficulty in notifying partners when her livelihood was sex work. These findings, which point to gender barriers which women disproportionately face, echo findings from other studies. No index clients or partners reported physical abuse. Partners as well as index clients described negative consequences such as sadness, anger, disturbance in sleep, anxiety, headaches, diarrhea, not being able to eat, and in the case of four female index clients, the dissolution of marriages or relationships.
Reed et al. 2015, US, qualitative	Adolescents boys and girls 14 to 21 years of age tested for STIs in an emergency department setting  40 adolescents (20 males and 20 females)	Not applicable	Barriers to PN	Barriers to PN include the fear of retaliation, whether that be verbal or physical, among patients who notify partners of STI exposures, embarrassment or social stigma; basic lack of understanding of the consequences of untreated STIs. Because many adolescents fear for their safety or reputations when discussing STI exposures with their partners, clinicians need to be sensitive to these concerns and explore alternative options, including provider PN, for this subset of patients. Methods such as providing adolescents with instruction and videos suggesting how to have that conversation may be valuable may be warranted, as adolescents may lack the communication skills and developmental maturity to address such difficult topics as STIs with their partners.
Rothenberg et al. 1995, US, commentary	Women living with HIV in the US  Sample - not applicable	Not applicable	Policy implications of PN for women living	The future development of AIDS control strategies and public health laws must be shaped by concern for the safety and autonomy of patients

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			with HIV, risk of domestic violence	who face a risk of domestic violence. Three distinct recommendations flow from this premise. First, all HIV-infected women should be assessed for the risk of domestic violence and offered appropriate interventions. Second, where a risk of abuse is indicated, partners should never be notified without the patient's consent. State laws that presently permit involuntary notification should be repealed or amended. Third, laws that punish a patient's refusal to notify partners should also be modified or repealed.
Wood et al. 2018, South Africa, qualitative	<p>Adult men and women between 19 to 41 years (mean age = 28.4) attending HIV and STI counseling session</p> <p>15 men and 15 women; 2 program counselors</p>	<p>60 min interactive sessions where STI and HIV education, risk mitigation, and effective PN strategies were discussed.</p>	Barriers to PN, perceptions about effective PN strategies	<p>By the conclusion of the intervention session, both male and female participants were motivated to notify their partners face-to-face about their positive STI status. Despite this, misperceptions about the etiology and transmission of STIs, as well as inadequate support from the clinical level and power imbalances amongst men and women emerged as major barriers for the prevention of future STIs. Most participants were motivated to notify their main partners about their STI and believed that their partners would attend a clinic visit. HIV status/concerns about infection were critical facilitators of PN intentions, while significant barriers to PN included health education, health system, and interpersonal barriers. Stigma-specific interpersonal barriers to notification were most commonly fear of stigma from partners or the surrounding community, concerns about being accused of infidelity, and/or concern about violent reactions from partners.</p>