



Review

Hiv Self Testing In Antenatal Care Services

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ABSTRACT

Background: HIV continues to pose a serious threat to world health. Gestational age is one of the indicators used to evaluate the success of HIV status because pregnant HIV-positive women are more likely to experience maternal and perinatal morbidity and mortality. In order to reach pregnant women and their partners for HIV testing, the World Health Organization is beginning to explore the use of the most recent HIV test, known as HIV self-testing (HIVST). Determining the utilization of HIVST in ANC services is the aim of this literature review.

Method: This article was written using a literature study based on Google Scholar and Pubmed databases from 2016-2023. A total of 17 articles are reviewed in this paper.

Result: The results showed that the use of HIVST in pregnant women and their partners in ANC services was an early prevention related to status and further treatment efforts.

Conclusion: It is hoped that the government will focus more on HIVST counseling and secondary HIVST distribution strategies in ANC services. In addition, further development is needed in the form of research related to HIVST in ANC services so that the target of HIV testing for pregnant women and partners can be achieved.

INTRODUCTION

Globally, the HIV virus continues to pose a serious threat to public health. According to WHO data¹, there was a 39% drop in infections between 2000 and 2019, although there were still a lot of HIV cases. There were 38 million HIV-positive individuals in 2019, 36.2 million of whom were adults and 1.8 million of whom were children². Roughly 7.1 million people are HIV positive yet are unaware of it³. UNAIDS (2018) revealed that out of 1.1 billion women there are as many as 18.8 million living with HIV of which around

870,000 are newly infected with HIV every year⁴. In addition, global health observations WHO (2020) states that in 2018 there were 1.3 million pregnant women living with HIV who needed treatment and as many as 85% who had received treatment in 2019^{5,6}. While the latest report UNAIDS (2020b) stated that the majority of HIV infections in children obtained from mothers were caused by pregnant women not receiving proper treatment⁷.

Process during pregnancy is a predictor in assessing the success of HIV

status. According to Chilaka and Konje (2021) state that HIV testing should be done as a first step to prevent negative effects on a pregnant woman who is living with HIV or who contracts the virus during her pregnancy. If the virus is not well controlled, there is a risk of morbidity and mortality for both the mother and the fetus⁸. It is important to assess HIV status during Antenatal Care (ANC) so that appropriate treatment can be taken immediately⁹. HIV testing for expectant mothers has encountered challenges throughout its development, including issues with cost-effectiveness and the population approach's focus. According to Ishikawa et al. (2018), the results of HIV testing concentrated in high-burden areas of a nation caused the rate of HIV transmission from mother to child to remain high at about 18% to 23%, with an increase in new HIV in children in the range of 25% to 69%. So, in order to reduce the rate of transmission, ANC carried out a universal approach to HIV testing¹⁰.

In the age of aggressive HIV targeting, a novel test paradigm self testing, or HIVS is

required to reach pregnant women and their partners.

Report results WHO (2021b) 2019 states that there are 77 countries that have adopted HIVST in their national policies¹². In pregnant women, HIV testing between partners including index and notification tests to reach sexual partners and partners who use drugs is very useful but is not implemented enough so that the application of the use of HIVST tests between partners in ANC is being considered¹³. Based on the literature explanation above, this discussion will further elaborate on the use of HIVST in ANC services.

METHOD

This article uses a literature study method obtained from the google scholar database with 17000 articles and pubmed with 47 articles using the keyword "HIV Self Testing Antenatal Care" and a time span of 2016-2023. From the two databases, 17 articles were obtained according to the discussion which were arranged in separate tables and analyzed.

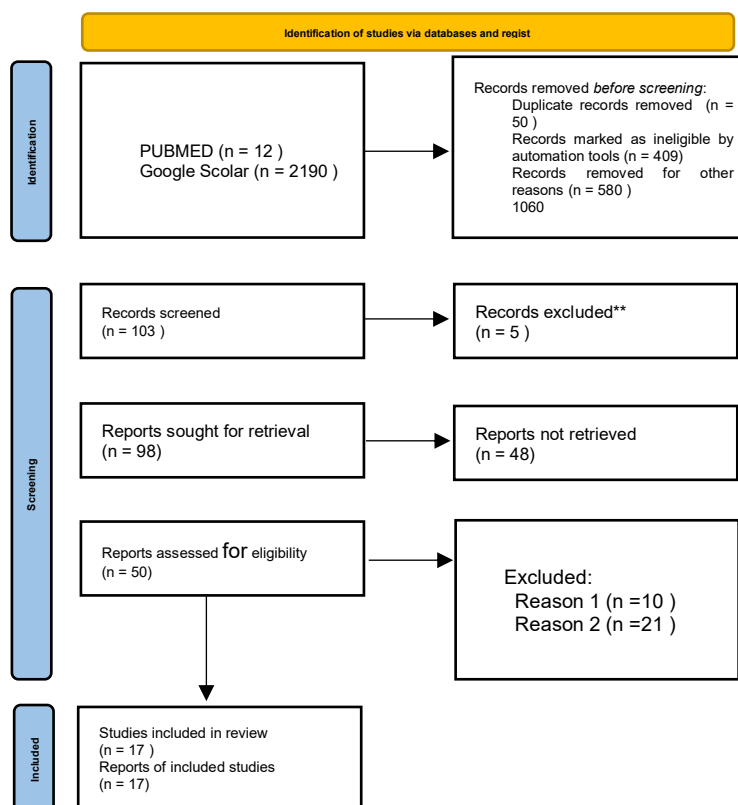


Figure 1. Prisma Flow Chart

RESULT AND DISCUSSION

Definition

HIVST is also known as self-test to find out a person's HIV status. WHO and UNAIDS (2014) explain further where HIVST is a process carried out by a person to find out his HIV status by collecting specimens, conducting tests and interpreting test results independently¹⁴. WHO (2016) explained in more detail that a person's self-test used to determine HIV status is related to a provisional interpretation of disease status based on the results of the tests that have been produced. While the supporting specimens for the HIV test were collected in the form of oral fluids and blood, which were carried out and interpreted personally, both by yourself and by someone you trust¹⁵. HIVST ANC services are a useful and practical tool for promoting testing and disclosing partners' HIV status throughout the prenatal period.¹³ More detail HIVST in ANC services, namely the process of testing carried out by pregnant women by collecting specimens, distributing and conducting independent tests for themselves and their partners and interpreting the results using the HIVST kit provided by maternal and child health services (MCH) during ANC¹⁶.

In general, HIVST in ANC services is a process carried out by pregnant women during ANC by distributing HIVST kits to collect specimens in the form of oral fluids or blood for themselves and their partners, interpret and obtain results that will be processed further to find out the final results of HIV status between themselves. and a couple.

Basic Considerations for HIVST Development

Increasing cases of HIV with the main problem where people with HIV / AIDS (PLWHA) do not know and are aware of their HIV infection. HIV testing services at health agencies tend to only slightly increase from

PLWHA who know their HIV status. According to WHO (2018) the rationale for the HIVST innovation is that between 2010 and 2014, over 600 people in 122 low- and middle-income countries received HIV testing services; between 2015 and 2017, this number increased by 67%, and by 2017, approximately 75% of people living with HIV worldwide were aware of their status. Even with the advancements, 9.4 million people, or roughly 25% of the population living with HIV (PLHIV), do not know they are positive. Thus, the most recent innovation HIVST was developed in order to hasten the global UNAIDS 90-90-90 target's accomplishment. In order to enable PLWHA to test independently and determine their status early on, HIVST can be provided as an extra strategy that enhances and generates demand for currently available HIV testing services. HIVST was introduced using a deliberate and targeted approach. Reaching out to those in need of HIV prevention and treatment testing requires careful consideration and selection of several efficient strategies. The prioritized population is one of the outreach programs, and they receive various HIV testing services as needed. Pregnant women are among the groups that benefit from HIV testing. It's critical for expectant mothers and their partners to get tested for HIV in order to determine their status. The priority demographic that needs to use HIVST during ANC or a second test during postpartum care (PNC) includes pregnant women and their partners¹³.

Prosedure

HIV prevention efforts in pregnant women and children begin during ANC. HIV testing is needed to determine the HIV status of pregnant women and determine follow-up actions. The following is a framework chart of HIV testing for pregnant women¹⁷:

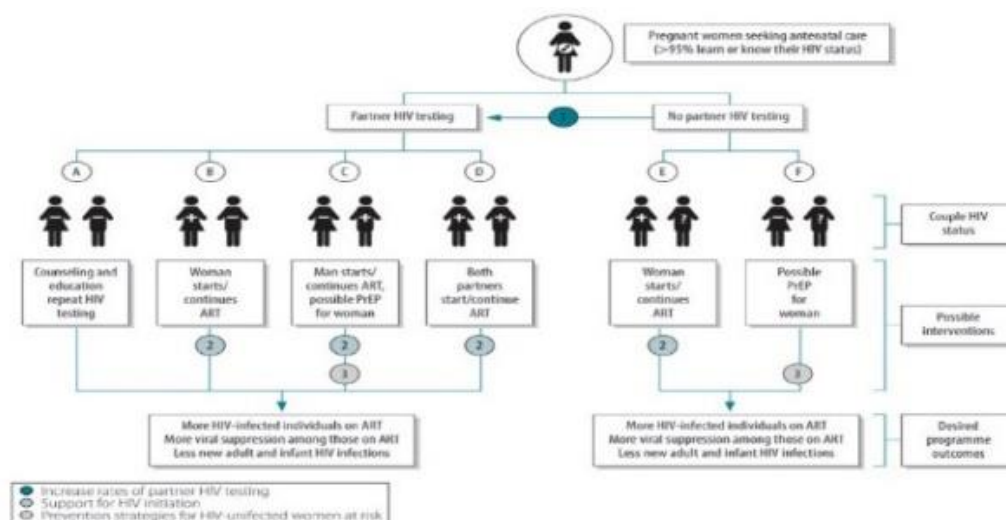


Figure 2. Framework of HIV Testing for Pregnant Women According to Chi et al. (2018)

Before taking the HIVST test, education and counseling on HIVST is carried out so that someone is willing to take an HIVST test. Then someone collects a specimen and performs an HIV test independently, either alone or with a trusted person in order to obtain provisional results. Both positive and negative test results are reported to the health service. A positive test result means reactive, so it is recommended to do a follow-up test and if the follow-up test is confirmed to be HIV-positive, they will immediately be referred to HIV treatment. On the other hand, if the test result is negative, it will be recommended for re-testing if necessary and directed directly to the relevant HIV prevention service.

In addition to procedures, there is also access to services in the implementation of HIVST ¹⁴:

a. Clinically limited

A secondary-based approach where health professionals only provide test kits to certain populations and groups to carry out tests independently in accordance with policies in each region.

b. Semi limited

The community-based approach is that health workers voluntarily provide some instructions and counseling in the form of pre-tests before distributing self-test kits to individuals, for example, health workers distribute through health care facilities or

trained staff who distribute them to patients and the general public in pharmacies and workplaces.

c. Open access

The pharmacy-based distribution approach is an HIV self-test tool available through a variety of programs and locations including pharmacies, clinics, supermarkets, convenience stores and vending machines.

The HIVST kit is a test kit used in HIVST. The distribution of HIVST Kits is carried out through various approaches, namely to partners, key populations, indices, and male partners. While the reach is the community, door to door, mobile, workplace, ANC clinic, primary care, outpatient department, STI clinic, family planning clinic, and self-test, sex partners and others ¹³. The ANC service uses a secondary distribution approach which has one advantage associated with a higher diagnosis positivity rate. Journal said as many as 40% of pregnant women who benefit from HIVST with 3.72% of HIVST tests carried out by health workers ¹⁸.

Advantages of HIVST in ANC

The advantages and disadvantages of using HIVST services. The advantages of using HIVST have potential benefits related to increased access to testing as well as early diagnostics for people living with HIV ¹⁴. By

self-testing one will be much more comfortable, have full power and can maintain greater privacy while testing. This can provide options for individuals who do not use Health Testing and Counseling (HTC) services as well as for those who do not have regular contact or access to health services where HIV testing is offered. Several studies have also suggested that HIVST can reduce sexual risk behaviors and increase and facilitate voluntary disclosure in partners. HIVST can complement HTC and public health strategies to reduce the risk of HIV exposure and can complement routine HIV testing methods in the general population ¹⁹.

HIVST in ANC services can increase HIV testing in hard-to-reach populations including pregnant women and their partners. Couples of pregnant women have a link in increasing the number of HIV tests. The distribution of HIVST from women to their partners can improve testing between partners ²⁰. The use of HIVST was successful in promoting HIV testing between partners and facilitating them to make safer sex decisions in ANC services ^{21,22}. The partner of a pregnant woman is considered important and becomes a target in the use of HIVST so that it is recommended to participate in ANC care ²³. In addition ANC services build confidence for pregnant women and their partners to use HIVST thereby increasing the use and distribution of HIVST between partners ²⁴.

The use of HIVST increases the number of pregnant women and their partners getting tested for HIV. HIVST did not increase negative social harm, compared to standard of care, and could reduce the workload of providers by screening HIV-negative people through HIVST ²⁵. Pregnant women and their partners tend to choose the HIVST test over other tests because it tends to be cheaper. Pregnant women and their partners who routinely check on MCH and family planning services mostly carry out HIVST both on themselves and their partners ¹⁶. The use of HIVST was considered very effective because it was more flexible and

easy to use and more affordable ²⁷. In addition, HIVST is considered a good opportunity for individuals and their partners to learn about each other's HIV status ²⁸. In line with research that respondents who were in 12 ANC service centers preferred the use of HIVST over other test kits with lower HIV prevalence due to their use independently. ²⁹. HIVST can improve HIV testing compared to other more standard HIV testing services, thereby increasing antiretroviral treatment (ART) for PLWHA, especially pregnant women and their partners ³⁰.

Challenges, Barriers and Innovative Strategies of HIVST in ANC

HIVST does not escape the various challenges it faces. In terms of risks associated with HIV self-testing, although there were no reported adverse events or hazards, for example, no human rights violations from abuse of HIV self-testing and no violence or self-harm, some stakeholders have concerns Separately related to operational issues, including the sensitivity and specificity of the tool, namely the Rapid Diagnostic Test (RDT) which has decreased slightly in the hands of untrained or unskilled users where there is a risk of operator error, potential for misinterpretation of results and lack of maintenance linkage. In addition, it is also related to ethical, legal and social issues such as increased risk for vulnerable populations ¹⁴. Unitaids, UNAIDS and WHO (2019) explained in general there are various barriers to the development of HIVST such as product registration, public awareness and knowledge, policies prohibiting testing outside health care facilities, as well as concerns about high costs and low awareness, knowledge and demand ³¹.

Barriers occur in the distribution of HIVST kits, especially the concerns of pregnant women related to the use of HIVST which is carried out both for themselves and their partners. Couples of pregnant women are a group that is difficult to reach in this service. The majority of pregnant women have their own concerns about bringing

home and using HIVST with their partners. Pregnant women tend to have their own anxiety about bringing the HIVST kit home even though there are some who have succeeded in telling their partners about the test kit ²⁸. Some of the pregnant women lied about the purpose of the device while others secretly took mucosal samples from their partners to find out their HIV status.

Cost is a separate obstacle in the distribution of HIVST. The HIVST kit was affordable and not a serious obstacle, but additional interventions after the HIVST test were the biggest challenge for someone to do HIVST. The linkage of using HIVST in pregnant women's partners in ANC services will increase substantially if it is supported by sufficient finance and a combination of HIVST and additional interventions that are more affordable ²⁷.

In addition to distribution, often pregnant women also receive violence by their partners or experience intimate partner violence (IPV) due to lack of knowledge related to HIVST. The results of research conducted by Agot et al. (2018) stated that out of 280 respondents, 14% of the ANC group and 21% of the FSW group experienced IPV in the early stages due to offering HIVST self-test to partners. Among all studies revealed as many as 2 cases of IPV occurred in the FSW and 0 cases in the ANC group ³². Notification letters are also one of the important things, there were obstacles such as loss of letters, concerns about giving letters to partners, difficulty reading results made couples reluctant to participate in visiting ANC services so that additional counseling was needed to increase the use of HIVST ³¹.

While the journal written by Ware et al. (2020) revealed that from the results of a randomized trial of research related to the impact of giving HIVST from women living with HIV (WLWH) to their partners during ANC visits from 20 respondents, only 3 respondents (5%) had partners who had known their status for more than 30 years. of

4 years, 7 respondents said that their partners had known their status for 1-4 years and as many as 10 respondents had partners who had only known their status for less than 1 year. This was due to WLWH's concern about disclosing its status. They worry that their partner will leave them if they find out their HIV-positive status. WLWH's way of dealing with this dilemma is that they use HIVST but manipulate the results, some don't use it and just leave the device, and some do the test but don't send it to a health facility. This causes the distribution of HIVST to be hampered in WLWH than women who are not susceptible to having HIV ³¹.

Innovative strategies are needed to expand the use of HIVST. One of the strategies developed in ANC services is secondary distribution. Based pervious study stated that the focus was on promoting HIVST targeting pregnant women and their partners using a secondary distribution approach. The existence of counseling related to HIVST will increase the use of HIVST between partners in ANC services. The distribution of HIVST kits from pregnant women to partners along with notification letters from ANC services will increase the use of HIVST ^{32 19}.

CONCLUSION

HIVST is a modern test innovation that is used in various countries to accelerate UNAIDS targets. The use of HIVST in pregnant women and partners focuses on ANC services for early prevention related to status and treatment. HIVST has advantages over previous tests, namely convenience, privacy, flexibility, affordable cost, reducing violent behavior and HIV exposure, facilitating honesty between partners and increasing HIV testing for pregnant women and partners. However, there are challenges and obstacles, namely the operation of the tool, the risk of error, as well as ethical, legal and social issues with obstacles related to distribution, post-intervention costs and violence from partners. It is hoped that the government will focus on counseling and

HIVST secondary distribution strategies while for academics further development related to HIVST research in ANC services in

achieving HIV testing targets for pregnant women and partners.

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