

Interprofessional collaborative practice in the treatment of HIV among pregnant women: a scoping review

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ABSTRACT

Background: The occurrence of HIV among pregnant women has an impact on the process of pregnancy and childbirth which further leads to the need for interprofessional collaborative practices between health workers in the treatment of HIV among pregnant women. **Objective:** The aim of this study was to scrutinize the interprofessional collaborative practices in the treatment of HIV among pregnant women. This was achieved by clarifying if and how implementation of scientific study was used in the interprofessional collaborative practices in the treatment of HIV among pregnant women. **Method:** To map relevant literature, a scoping review was conducted to articles published between January 2015 and December 2020, guided by a method consists of five stages approach. Specifically, the following academic databases were systematically searched to identify publications that presented findings on identifying scoping review questions with the PEOS framework (Population, Exposure, Outcome, Study Design), identifying relevant articles using the PubMed, Scopus, Science Direct, and Grey Literature (Google Scholar) Information about each study was extracted using a purposely designed data extraction form and database with keyword with keywords, carrying out the Critical Appraisal using Hawker tools, charting and compiling data, summarizing and reporting results. **Results:** Of the 60 articles with relevant titles and abstracts, 4 articles were identified to meet the inclusion and exclusion criteria with grade A. Besides, four themes were found, namely roles, barriers, interpersonal communication, and patient-centred services in the interprofessional collaborative practices of HIV treatment among pregnant women. **Conclusion:** The role of midwives and doctors was indispensable in implementing informed consent, counseling, HIV screening, and HIV treatment training. The barriers encountered by midwives and doctors were the lack of clinical skills, limited infrastructure such as teaching aids for training, the lack of funding budget from policy makers, and the lack of communicative competence. As suggestion for the next review, this review could submit register review protocols-namely, PROSPERO and the Joanna Briggs Institute to ascertain by searching databases and the online platforms of organizations.

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1. Introduction

Human Immunodeficiency Virus (HIV) is a type of virus that infects white blood cells and causes a decrease in human immunity. People with HIV require treatment with antiretroviral therapy (ART) to reduce the amount of HIV in the body so it will not lead to the AIDS stage ([Health & Welfare, 2020](#)).

Based on the data and statistics from the World Health Organization (WHO) in 2018, the number of people with HIV in the world reached 36.9 million people. Africa region has the highest number of

people with HIV, namely 25.7 million people, followed by Asia region with 3.5 million people ([World Health Organization, 2018](#)).

According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), about 50% of people affected by HIV included women and 2.1 million children less than 15 years old. It was also estimated that 1.8 million people were newly infected with HIV, and 1.4 million women with HIV infection became pregnant each year. In the same year, 5.1 million (14%) people infected with HIV were in the Asia Pacific; Asia had the second-largest HIV prevalence after Africa. Although HIV prevalence in Asia continued to decline, HIV infection was one of the most common complications of pregnancy in several countries ([UNAIDS, 2018a](#)).

World Health Organization (WHO) confirmed that 5.3 million births occur per year in Indonesia. The rate of first antenatal care visits is high (>95%) and the prevalence is 0.7%. In some provinces, such as DKI Jakarta, the prevalence is close to the 1% threshold, indicating a widespread epidemic pattern. In 2016, HIV testing coverage for pregnant women was estimated at 10%, and 48% of those who tested positive were identified to have started the antiretroviral therapy (ART). Overall, 5-10% of the total estimate of HIV-positive mothers have gone through ART. The number of HIV tests for pregnant women in Indonesia had increased more than 20 times from 2011 to 2016, from around 21.000 to more than 500.000 tests ([Klode et al., 2020](#)). The number of diagnosed infected pregnant women increased from about 500 to nearly 3.600, and the number of HIV-positive pregnant women who have gone through ART also increased from about 100 to nearly 1.000. However, with an annual birth rate of 5.3 million and an estimated cesarean prevalence of 0.3%, the coverage of HIV testing in 2016 was around 10%, and only 20% of pregnant women infected with HIV were diagnosed ([WHO, 2016](#)).

Data on HIV/AIDS cases in Indonesia continues to increase from year to year. During the last eleven years, the number of HIV cases in Indonesia reached its peak in 2019, which was 50.282 cases. Besides, the highest number of AIDS cases in the last eleven years was in 2013, which was 12.214 cases. Five provinces with the highest number of HIV cases were East Java, DKI Jakarta, West Java, Central Java, and Papua, where in 2017 the most HIV cases also occurred in these five provinces. The provinces with the highest number of AIDS cases were Central Java, Papua, East Java, DKI Jakarta, and the Riau Islands. AIDS cases in Central Java were about 22% of the total cases in Indonesia. The trend of the highest HIV and AIDS cases from 2017 to 2019 was still the same, mostly on Java island ([Center of Data and Information, 2014](#)). Regarding HIV cases in Indonesia, there were 630.000 people with HIV in 2017 with 49.000 new cases, and 39,000 people died from AIDS ([UNAIDS, 2018b](#)).

From the increasing number of HIV/AIDS cases, the supporting factor to reduce the increase in such cases was the readiness factor of health workers in HIV/AIDS testing, where they should receive training on the testing procedure. Health workers who should receive training on HIV/AIDS testing are doctors, midwives, nurses, pharmacists, and health analysts. Those who serve as counselor coordinators are usually doctors, while counselors can be doctors, midwives, or nurses. This research was achieved through a review of publication scoping, identified through a systematic search of academic databases, to finally 'map the existing literature in areas of interest in terms of nature, volume, and key research characteristics ([Maslikhah et al., 2018](#)).

2. Methods

The method consists of (1) identifying questions, (2) identifying relevant articles, (3) selecting articles, (4) charting data, (5) compiling, summarizing and reporting the results.

2.1. Identifying the Questions or Focus of the Review

This scoping review aimed to scrutinize the interprofessional collaborative practices in the treatment of HIV among pregnant women to elaborate the level, scope and nature of the research available on the research questions and to summarize the results of the study based on the evidence in order to recommend further research ([Tricco et al., 2016](#)). The result of this stage was a review of several questions, namely (1) what is the role of midwives and health workers in the treatment of HIV among pregnant women?, (2) what are the results of collaboration between midwives and health workers in the treatment of HIV among pregnant women?, and (3) what are the barriers to midwives and health workers in the treatment of HIV among pregnant women?

2.2. PEOS Framework

This scoping review employed the Population, Exposure, Outcome, and Study Design (PEOS) framework. The use of this PEOS framework could help identify the key concepts in the focus of the review, develop appropriate search terms to clarify problems and determine the inclusion and exclusion criteria (Bettany & Saltikov, 2014).

Table 1. PEOS Framework

P (Population)	E (Exposure)	Os (Outcome)
Doctors Midwives Pregnant mothers	Interprofessional Collaborative Practices in the Treatment of HIV among Pregnant Women	The role of midwives and health workers Barriers to midwives and health workers

2.3. Identifying Relevant Articles

The literature search in this scoping review involved several databases such as the PubMed, Scopus, Science Direct, and Grey Literature (Google Scholar) databases. It also applied a few restrictions on articles in English and Indonesian and the original articles, and the specification was applied on articles whose keywords were contained in the title or abstract (Astuti & Putri, 2022).

The keywords used in the article search were topics OR ethics OR HIV OR maternal health OR pregnancy AND interprofessional collaboration provider OR HIV testing OR primary care OR pregnant women AND interprofessional collaboration in health care OR interprofessional teamwork OR multidisciplinary OR teamwork OR health worker OR role of midwives OR role of doctor. To specify the literature search, this study was limited to articles published in the last 5 years, namely from 2015 to 2020, articles in English, and the selected articles were free full-text or open access. Then, the articles were screened based on the title, abstract and population (Hidayanti, 2016).

2.4. Article Selection

The selection of research articles was determined using inclusion and exclusion criteria. The inclusion and exclusion criteria are further described in the table.

Table 2. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
- Articles published in 2015-2020	- Articles published in the paid form
- Articles published in English and Indonesian	- Opinion articles
- Primary research and reports such as WHO reports, Health Profiles, and UNICEF	- Letters and book reviews
- Articles discussing interprofessional collaboration in HIV treatment among pregnant women	- Articles without full-text version

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) PRISMA is an evidence-based minimum set of items for reporting in systematic reviews and meta-analyses. PRISMA aims to facilitate reporting as well as assist readers in evaluating implementation, improving review replication, and implementing more meaningful results (McInnes et al., 2018). The article selection process used a PRISMA flow diagram to describe the whole process that had been carried out.

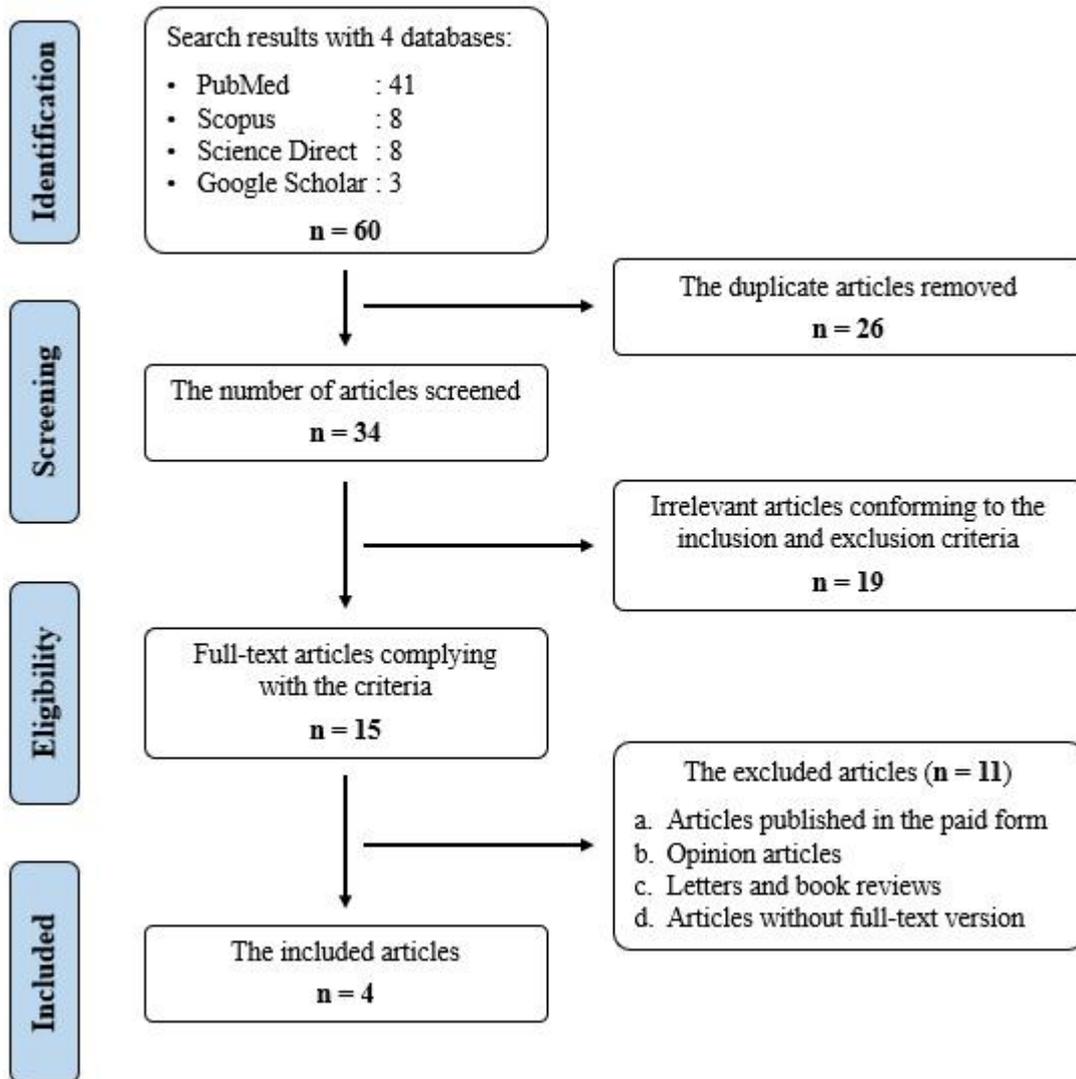


Fig. 1. PRISMA Flow Diagram

2.5. Data Charting

Table 3. Data Extraction

No	Title/ Author/ Year/ Grade	Country	Aim	Type of Research	Data Collection	Participants/ Sample Size	Result
1	Overview of health workers readiness in the treatment of HIV-AIDS examinations for pregnant women/ Maslikhah/ 2018 (Google Scholar)	Indonesia	to investigate the description of health workers' readiness in the management of HIV-AIDS examinations among pregnant women	Descriptive quantitative	Data collection techniques were in the form of primary data and secondary data. The research instruments used were questionnaire sheet and a checklist. Data analysis applied was univariate analysis.	The population and sample of this study were all health workers who had received training on HIV-AIDS screening in Batang Regency. The number of samples in this study were 45 respondents consisting of doctors, midwives, nurses, and health analysts.	The room for counseling that has been prepared is in the category of meeting the standards, and health workers are ready with the informed consent. Counseling is given before HIV-AIDS examination is carried out, followed by HIV-AIDS examination, giving the results of HIV-AIDS examination, and counseling after knowing the examination results.
2	Interprofessional and intersectoral collaboration in the care of vulnerable pregnant women/ Karina Klode/ 2020	Denmark	to know the interpretation and understanding of vulnerability in pregnancy, including her own role, to understand the practice of interprofessional and intersectoral collaboration in antenatal care for vulnerable pregnant women	Non-categorical inductive qualitative research	Ethnographic field observation	The study was conducted in two large hospitals in one of five regions in Denmark. The hospital has about 2,000 births per year per hospital. The hospitals (Hospital A and Hospital B)	Interprofessional collaboration is strongly influenced by the relationship between the professionals and sectors involved in antenatal care for pregnant women and is also influenced by the existing arrangements and structures for interprofessional and intersectoral collaboration.
3	Interprofessional collaboration improves	New York	to examine the relationship between factors distributed in	Descriptive quantitative research	Using longitudinal data and ordinal logistic regression	245 doctors, midwives and nurses	The role of health workers in improving HIV screening services for pregnant women with HIV

	linkages to primary care/ Rogério M. Pinto/2019		three theoretical socioecological domains: individual (demographic and HIV training characteristics); relationships (interprofessional collaboration); and institution (size and capacity), and frequency of association between HIV testing and primary care.		in 36 hospitals in New York City	continuum services is very important for HIV/AIDS care. Service providers in social and health management place the public in an awareness of HIV testing and primary care, thereby improving the performance of health workers in providing HIV care.	
4	Village and Community Health Center Partnership in an Effort to Prevent HIV-AIDS/ Colti Sistiarani/2020 (Google Scholar)	Indonesia	to implement village and community health center partnership efforts in an effort to prevent HIV-AIDS	Qualitative method	Health promotion media such as banners, leaflets and village-community health center partnership modules to prevent HIV-AIDS transmission	Village head, WPA cadre management, VCT counselor, village midwife, doctor, and health promotion officer. The materials used in this activity are the material on the concept of village-community health center partnership and the material on the empowerment in HIV-AIDS prevention efforts.	HIV-AIDS prevention programs have been carried out by both village and community health center. The management remains not optimal due to the presence of stimulants, namely information media such as leaflets, posters and banners. This activity provides a stimulant for village and community health center partnerships in supporting partnerships through increasing perceptions and roles in conducting village-community health center partnerships. Based on the role of partnership actors, it is necessary to initiate cross-sectoral collaboration and division of roles of village-community health center partnership actors so that HIV-AIDS prevention efforts can be carried out optimally.

2.6. Mapping/Scoping

1. Geographical Characteristics

Data extraction had been carried out on the articles selected by categorizing the title, year, research objectives, methods, number of samples, and research results. In the results of a systematic search, four articles published in 2015-2020 were obtained. The four articles used were articles with grade A quality, and all of these articles were qualitative and quantitative research. These articles were obtained from developed and developing countries consisting of Indonesia, Denmark, and New York.

2. Thematic

From the results of the review, several themes were identified to match the focus of the review as shown in [table 4](#).

Table 4. Thematic Mapping

Theme	Sub Theme	Sub-Sub Themes
The role of health workers in interprofessional collaboration in the treatment of HIV among pregnant women	Midwife	Informed consent (A1)
	Doctor	a. Health education/IEC (A1, A3, A4) b. HIV Screening (A1, A3)
Barriers to health workers in interprofessional collaboration in the treatment of HIV among pregnant women	Midwife	Lack of communicative competence and clinical skills (A2)
	Doctor	Lack of Interpersonal communication practice

3. Results and Discussion

From the results of 4 articles, 4 themes from A1, A2, A3 and A4 were obtained, namely the roles and barriers of midwives and health workers in interprofessional collaboration in the treatment of HIV among pregnant women. The interprofessional collaborative practices in the treatment of HIV among pregnant women consisted of midwives and doctors ([Pinto et al., 2020](#)). The barriers that occurred in the practice of interprofessional collaboration were ethics, cooperation, communication and responsibility of all health workers involved. Pregnant women were required to do an integrated ANC examination to find out the results and management of HIV in their pregnancy.

1. The role of health workers in interprofessional collaboration in the treatment of HIV among pregnant women

a. Midwife: Informed Consent

Informed Consent is the consent given by the patient or his rightful guardian to the doctor to take a medical action against the patient after obtaining complete and understood information about the action that has been applied in A1 and A4. The relationship between the midwife and the patient arises when the patient first comes with the intention of seeking help. Since then, informed consent has been developed, namely the arrival of the patient, which means he has given the midwife the confidence to take action against him. The doctor automatically brings up an attitude that aims to prioritize the health of his patient, but the patient has the right to decide whether or not the midwife can continue the relationship. It depends on what information he gets about the midwife's next action.

Informed consent is given before the patient undergoes the surgery. The midwife explains to the patient the risks, goals and actions to be taken to the patient. Approval is done in the treatment room. After the midwife explains and signs the Informed Consent form, the patient will be taken to the operating room. Once the operation is complete, the patient will be brought back to the previous treatment room. If the patient does not comprehend the explanation or information given by the midwife before taking medical action, the midwife must clarify it to the patient in order to avoid problems in the future.

*b. Doctor**1) Health education/ IEC*

Doctors in health education to patients are one of health care providers (Sistiarani, 2020). The purpose of providing information and health education needed by pregnant women based on various health conditions is to change behavior patterns so that they keep maintaining their health, both for themselves and the fetus during pregnancy, especially in terms of nutritional problems among pregnant women (Helmy et al., 2017).

2) HIV Screening

HIV screening for pregnant women is an attempt to detect HIV among pregnant women. This HIV screening is key to the PMTCT program. If the results of this screening are positive, then these pregnant women are planned for the PMTCT program which includes the provision of ARVs included in A1, A2 and A3 deliveries by conducting caesarean section at 38 weeks of pregnancy, giving ARVs to newborns, and not breastfeeding.

*2. Barriers to health workers in interprofessional collaboration in the treatment of HIV among pregnant women**a. Midwife: Lack of clinical skills*

The Ministry of Health sets standards for antenatal care services that must be mastered by midwives and nurses. In A1, A2 and A4, each primary care facility is required to compile detailed technical guidelines, so that nurse-midwives could immediately implement the procedure for pregnant women. However, the real facts found a lack of clinical competence and skills of nurse-midwives in providing health education to patients (Widyawati et al., 2015). Based on the research by (Widyawati et al., 2015), out of 23 nurse-midwives, none had attended the training of anemia management during pregnancy in the last five years. The informant also stated that there were doubts in detecting early signs of anemia, so they needed more training to investigate more accurately.

b. Doctor: Interpersonal communication practice

In A1 and A4, interpersonal communication is a face-to-face communication between two people or small groups who receive direct reactions both verbally and non-verbally (Fathya et al., 2021). In health services, especially antenatal care, the importance of implementing effective interpersonal communication between pregnant women and their families is to participate and follow the recommendations of health workers (Rahman et al., 2018). When effective communication is well-conducted, trust will be simultaneously established between patients and health workers. On the other hand, if trust is not effectively built between patients and health workers, pregnant women tend to be reluctant to receive information. Hence, the involvement of husbands and/or closest family members can help health workers to provide comprehensive health information. Therefore, it is imperative to conduct trainings for every health worker that aim to improve their interpersonal and communication skills so that in its implementation health workers can provide care according to the capacity and topics discussed (Mhajabin et al., 2020).

4. Conclusion

HIV in pregnancy can have a serious impact on the fetus and the quality of life of mothers living with HIV need to practice interprofessional collaboration of HIV treatment among pregnant women there is a role of health workers involved in the PMTCT program. Where one of the supporters of interprofessional collaboration practices is ethics, cooperation, communication and responsibility, one of which is by providing Informed Consent before the patient undergoes an HIV examination. The doctor explains to the patient about the risks, goals and actions that will be done to the patient. Next is the role of Doctors, doctors play a role in health education / KIE, HIV screening, HIV screening, HIV screening training.

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