

Article Review

Interprofessional Collaboration Practices in Integrated ANC Services: Scoping Review

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ABSTRACT

Obstetric complications often occur in pregnant women because not all pregnant women regularly make integrated ANC visits, causing problems of maternal mortality that never go away. This research aims to examine interprofessional collaboration practices in integrated ANC services. The method used is Scoping Review as a research design. A scoping review is a precursor to a systematic review, aiming to identify the types of evidence available about the topic under discussion. They are using the PRISMA-ScR framework by searching for articles through relevant databases. Research results: Based on a search of 1,534 selected papers, ten essays met the inclusion criteria, and of the ten articles reviewed, it was found that the role of interprofessional collaborative practice among various health workers had not carried out their duties based on the responsibilities of each profession and the development and empowerment of human resources. Obstacles were found in supporting facilities, skills, awareness, and communication by Health workers to be overcome to obtain integrated ANC services to increase visits and obtain quality pregnancy checks, thereby reducing cases of maternal and neonatal deaths.

Keywords: *Integrated ANC, Interprofessional Collaborative Practice, Pregnant Women, Indonesia*

<https://doi.org/10.33860/jik.v17i2.2488>



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INTRODUCTION

Interprofessional collaboration is a collaboration between several health professionals from different educational backgrounds with patients and their families to provide the best health services. Good collaboration between professionals is necessary to provide efficient care to patients so that it will increase patient satisfaction. Interprofessional collaboration can support the quality of integrated Antenatal care services if there are good infrastructure and human resources¹.

Integrated antenatal care is a pregnancy examination carried out collaboratively by professionals such as general practitioners, midwives, nutritionists, and nurses. Antenatal care (ANC) is an evidence-based intervention of international character to improve maternal and child health².

Poor implementation of

interprofessional collaboration in integrated antenatal care will hurt teamwork and cause tension, gaps, hostility, and less effective communication between health workers and patients, resulting in a decline in the quality of service due to increasingly serious patient illnesses³.

Poor quality of service in Antenatal services (ANC) is still around 37.8%, so there is a decline. The highest frequency of visits is still less than four times a visit. The decline in visits is due to a need for more taste. Pregnant women's satisfaction with the services they receive impacts reducing the frequency of antenatal care visits. Affairs This shows that lousy collaboration practices will decrease satisfaction with accepting pregnant women's integrated antenatal care.⁴

The application of health services for mothers with two bodies can be evaluated by looking at K1, K4, and K6 coverage. The information released by the Indonesian

Ministry of Health shows the number of visits for mothers with two bodies in Indonesia in 2021 is K1, 98.0%, visits of pregnant women K4 88, 8%, and visits of K6 pregnant women 63.0% ⁵.

In Indonesia, there are obstacles to implementing the integrated ANC program, namely the need for more healthy human resources and a large workload. So, implementing SOPs sometimes fails to meet standards, such as not carrying out early detection in integrated ANC services. ⁶.

The main problems that hinder compliance with ANC services during clinical practice are ANC guidelines (SOPs), such as the ANC sheet format, which lacks detail and is impractical, making it challenging to follow quickly, and the availability of special equipment and supplies for ANC services. Such as cutting off electricity supplies, making services difficult. Laboratories must be more functional in health facilities such as community health centres ⁷.

In the Tewodros study, more than 1 in 4 women in Ethiopia did not receive quality ANC visits due to the provider's inability to adhere to focused ANC guidelines ⁴. In the Nagaraj study in India, 2/3 of pregnant women in India experienced pregnancy complications, namely hypertension and diabetes, due to limited access to and quality of health care ⁸.

Based on data in 2021, 4,466 (0.18%) pregnant women were reactive, and pregnant women screened for Hepatitis B 1.6% of pregnant women were positive for hepatitis B ⁹. Tuberculosis (TB) in pregnant women is associated with increased spontaneous abortion and low birth weight. There are 5-10% of cases of TB in pregnant women can be at risk of transmitting to the fetus; mental health problems in pregnant women are a concern; in 2014-2016, there were 545 pregnant women who had their mental health checked, it was found that 1 out of 4 pregnant women as much as 25% experienced mental health problems during pregnancy ¹⁰.

One of the promising health transformations is the implementation of interprofessional collaboration practices, namely health services provided by many health workers from different professional backgrounds providing comprehensive services in collaboration with patients, families, health workers, and the community or society to provide the best quality for the whole range.

Health ¹¹. Because there are still many problems in implementing early detection in integrated ANC that can cause maternal death, one profession cannot solve these problems alone. Based on the issues above, the authors would like to review "interprofessional collaboration practices in integrated ANC services" ¹⁰.

METHOD

The author intends to use the Scoping Review study as a research design. A scoping review is used as an introduction to a systematic review, which aims to identify the types of evidence available about the topics covered, provide an overview of how research is conducted on a particular subject or field, identify critical characteristics or factors associated with a concept, and describes a systematic review ⁹. Two from the same educational institution, one lecturer and one student, wrote this scoping Review.

The preparation of this scoping Review uses a guide from *preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) scoping review extension checklist* ¹². The adapted reviews include (1) document identification through a systematic search, (2) Screening of articles based on title and abstract, (3) Assessment of the feasibility of the article in full text, (4) Critical Appraisal, and (5) Entering relevant articles.

RESULTS

Identification of Research

Articles (Searching and Screening Process)

Researchers use the Population, Exposure, and Outcome (PEO) framework to manage and finalize the Review focus when developing study focus and search strategies ¹³. PEO makes it easy to choose which key concepts to focus on in the Review, set inclusion and exclusion criteria, and generate search phrases that appropriately characterize the issue ¹⁴. PEO was deemed appropriate since the research article was the focus of the search. The research framework is Population: Health professionals, exposure: Integrated ANC Interprofessional Collaborative Practice, Outcomes: In Integrated ANC, early detection. Table 1 describes medical subject titles (MeSH) and Boolean operators (OR and AND) used for keywords in this study.

Table 1. Keywords

Population	Exposure	Outcomes
Doctors OR Midwife Dentist, Nurses OR Nutritionists, Laboratory assistants OR Public Health	Relations Interprofessiona l Practice integrated ANC, OR Collaboration Interprofessiona l Practice integrated antenatal care.	Nutritional Problems OR Pregnancy Risk Factors OR Pregnancy Complications OR Mental Disorders OR Communicabl e and Non- Communicabl e Diseases

Search for articles discussing inclusion criteria. Inclusion criteria in this study are articles related to interprofessional collaboration studies in integrated ANC services that have been published for a

Article Selection

The authors went through a screening procedure and ensured that the ten articles they got were good enough for this research. Found 1534 articles from search results of three databases. Two hundred sixty-eight articles from Willey Online Library, 569 from Science Direct, and 697 from Pubmed. Including all articles in the Mendeley Reference Management Tool is the next step¹⁷. The two researchers then filtered the articles based on

maximum of the last five years using English or Indonesian as research articles or original research that is complete and accessible¹⁵. To reduce the danger of conducting unrelated research, exclusion criteria are employed for papers written in opinions and study designs utilizing systematic and scoping reviews. This study used the Pubmed, Science Direct, and Willey Online Library databases, which can be accessed through the National Library of the Republic of Indonesia¹⁶. The first step is that the researcher searches the three selected databases, namely Pubmed, Science Direct, and Willey Online Library. The PRISMA Flowchart described the article's findings. All article results are downloaded and entered into the Mendeley referencing manager tool, which then detects duplicate reports and deletes pieces seen as duplicates.

titles and abstracts related to "Interprofessional Collaborative Practice in Integrated ANC Services"; 14 duplicate reports brought the total to 1520. Fifty-six articles met the requirements after 1464 irrelevant articles were excluded. We read the entire article; out of the remaining 46, only ten were considered relevant. Ten articles found eligible for assessment were subjected to a Critical Appraisal by the Joanna Briggs Institute (JBI)¹⁸.

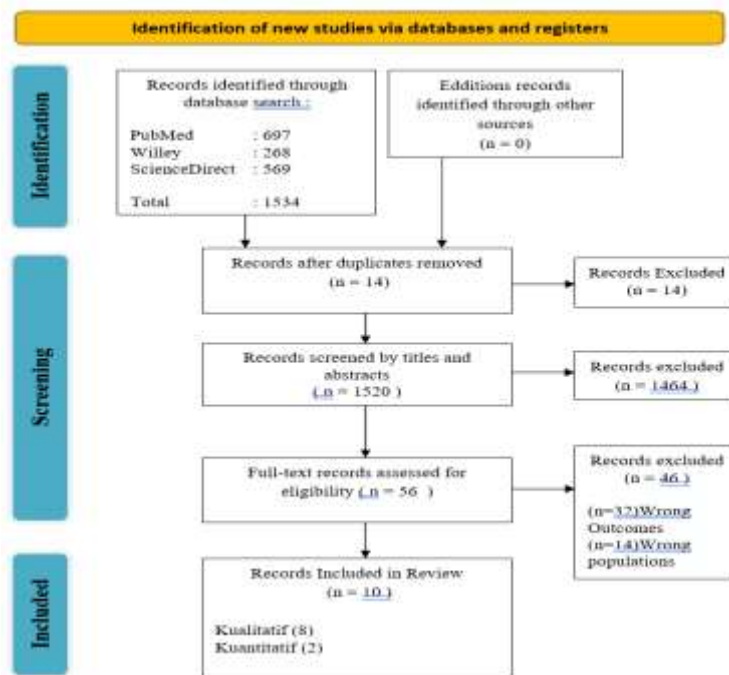


Figure 1. PRISMA Flowchart

Table 2. Data Charting

No	Title/Authors/ Year	Country	Purpose	Types of research	Data collection	Participants/ Sample Size	Results
1	A multi-method evaluation of interprofessional education for healthcare professionals caring for women during and after pregnancy/ 19	London	To assess interprofessional impact and targets for enhancing cooperation between medical staff members providing care during and after pregnancy.	Quantitative research with a cross-sectional study	Before and after questionnaires to measure attitudes and willingness to collaborate.	Thirty-eight health professionals: midwives, nurses, nutritionists, and general practitioners.	There are many barriers: staff shortages, limited time in providing services, service breakdown, and difficulty in sharing information consistently stated to be barriers to successful collaborative work. The training resulting from this research was identified as influencing participants to shift their practice toward greater collaboration.
2	Interprofessional collaboration and smartphone use as promising strategies to improve prenatal oral health care utilization among US underserved women: result from a qualitative study/	California	to comprehend prenatal oral health care strategies for underserved pregnant women	Qualitative research with a descriptive study	Semi-structured in-depth interviews and thematic analysis	Eight pregnant women and ten people with health professionals, dentists, and social workers	Barriers identified were low-income women for health care utilization to promote interprofessional collaboration, innovative education programs to prenatal oral health care guidelines, and dedicated dental facilities for low-income women.
3	Antenatal Testing For Anemia, HIV and Syphilis In Indonesia – a Health System Analysis of Low Coverage/	Indonesia	The goal is to decrease the number of unfavourable pregnancies by identifying and treating antenatal anemia, HIV, and syphilis.	Qualitative research with a descriptive study	The utilization of semi-structured interviews (SSI) at the sub-district and district levels	Community Health Officers = 16, Midwives = 9, and Laboratory and counselling 13 from 8 villages in 2 sub-districts	Not a single antenatal test result for HIV, syphilis, or anemia was recorded in the village. The more widely used haemoglobin test is acceptable and reported to be used more often. The HIV and syphilis test is less prevalent and scarcely used. However, it became apparent that leadership and

							accountability were crucial to prioritizing prenatal care and closing the testing gap.
4	Provider-perceived benefits and constraints of complete adherence to antenatal care guideline among public health facilities, Ethiopia: A qualitative study	Ethiopia	to investigate how providers view the advantages and limitations of using ANC guidelines.	General Qualitative Research	Semi-structured interview	There were 9 participants in this study, including two obstetricians and seven midwives.	Following ANC guidelines was said to help reduce provider workload and improve performance, promote safe motherhood, and improve service delivery. The three groups to focus on are organizational issues, the knowledge, attitudes, and skills of existing service providers, and the availability of training and mentoring. The main things that keep providers from following all of the ANC guidelines are: <ol style="list-style-type: none"> 1. Organizational Issues 2. It is the existing knowledge, attitudes, and skills of care providers. 3. Availability of training and mentoring.
5	Integrated Antenatal Care by Midwives in Surabaya	Indonesia	To find out the quality of Integrated ANC services at puskesmas (Midwives HR, Supporting Facilities and service infrastructure, planning, 10 T Integrated ANC services, and organization)	Qualitative research with a descriptive study	Interview	12 MCH Coordinating Midwives from 12 Public Health Centers.	To implement the integrated ANC program, human resources still need to be improved for midwives at Surabaya Public Health Center. Still, facilities and infrastructure are adequate according to Integrated ANC guidelines standards.

6	The Comparison of the Interpersonal Action Component of woman-centred Care Reported by a Healthy Pregnant Woman in Different Practices in the Netherlands: A cross-sectional study ²⁰	Netherlands	To examine the interpersonal measures of woman-centred care primary care midwives provide in practices of varying sizes.	Quantitative research with a cross-sectional study	Questionnaire 15 items self-report Client-Centred Care Questionnaire (QC)	Women who are pregnant and get their primary care from midwives in small practices (with 1-2 midwives), medium procedures (with 3-4 midwives), and large trials (with 4-5 midwives)	There is a significant difference in getting the highest score for pregnant women getting care from no more than two midwives. A small practice could elevate women-centred care from good to excellent.
7	Needs of parents and professionals to improve shared decision-making in interprofessional maternity care practice: a qualitative Study	Netherlands	Investigate the perspectives of parents and healthcare providers regarding the challenges and opportunities presented by shared decision-making in antenatal care.	General Qualitative Research	Interview	11 Groups, i.e., Parents, primary care midwives, hospital-based midwives, obstetricians, obstetric nurses, and delivery nurse assistants	Before making a final decision, parents and professionals should have discussed preferences and options with other professionals. The obstacles that were found were good communication skills between parents and professionals. Interventions obtained: raise awareness and understanding, cultivate effective communication techniques, and promote interprofessional cooperation.
8	Integrated point-of-care testing (PCOT) For HIV, Syphilis, Malaria, and anemia at antenatal facilities in western Kenya: a qualitative study exploring end-users	East Africa, Kenya	To determine whether or not integrated testing at ANC using POCT (Point-of-Care-Testing) for HIV, syphilis, malaria, and anemia is appropriate, acceptable, and possible.	General Qualitative Research	Semi-structured interviews with open-ended questions were used to investigate the intervention's applicability, acceptability, and practicability.	18 Participating healthcare workers	The research investigated the acceptability, suitability, and feasibility of incorporating PCOT into ANC services among end users. While these innovations are desirable and valuable, Integrating testing for all four conditions and effectively

							perspective of appropriateness, acceptability and feasibility	managing them will require future scale-up efforts to address weaknesses in the healthcare system.
9	Indonesian Antenatal Nutrition Education: A Qualitative Study of Healthcare Professional Views/	Indonesia	To find out the views of Indonesian antenatal health workers on maternal nutrition education and the improvements needed to provide more effective antenatal nutrition education.	Qualitative research with a descriptive study	Semi-structured interview	24 health professional participants, including ten nutritionists, nine midwives, and 5 participants obstetricians	Four themes found they are:	<ol style="list-style-type: none"> 1. Health workers recognize the importance of providing antenatal nutrition education in addition to supporting targeted deliveries 2. Differences in views according to midwives and obstetricians who must provide nutrition education are nutritionists. Still, nutritionists report that only a few women come to the health centre for nutritional counselling. 3. There are several obstacles in providing nutrition education, namely the limited number of nutritionists and the need for more professional nutrition knowledge. 4. Should strengthen collaboration and develop guidelines for improving

							antenatal nutrition education.
10	Women's and healthcare providers' perceptions of long-term complication associated with hypertension and diabetes in pregnancy: a qualitative study	India	To investigate the perspectives of rural Indian women and health care providers on the long-term risk of hypertension during pregnancy and gestational diabetes in pregnant women.	General Qualitative Research	Interview	Seven discussion groups were formed: community health workers, primary care doctors, obstetricians, laboratory technicians, health workers, and 11 pregnant women who receive antenatal care.	Antenatal care includes routine blood pressure checks. Limited information exists regarding postpartum monitoring and long-term complications. Gestational diabetes is not regarded as a typical issue, and clinicians generally have little knowledge of the long-term side effects of gestational diabetes, including an increased risk of type 2 diabetes and cardiovascular disease.

Characteristics of articles by country can be seen in the figure below:

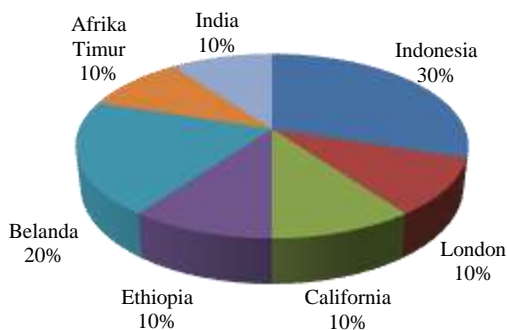


Figure 2. Characteristics of Country Names

The diagram above explains the characteristics of articles from several developing countries, including reports from Indonesia with the theme Integrated Antenatal Services by Midwives in Surabaya. Next is East Africa with the theme Integrated Point of Care Test (PCOT) for HIV. Ethiopia with the theme of Benefits perceived by service providers and barriers to fully complying with guidelines for antenatal care in public health facilities. India with the theme Perceptions of women and health care providers regarding long-term complications related to hypertension and diabetes in pregnancy. And several developed countries, including articles from the

Netherlands with the theme The need for parents and professionals to improve shared decision making. California with the theme Interprofessional collaboration and smartphone use as promising strategies to increase utilization of prenatal oral health services among underserved women in the US, and an article from London with the theme Multi-method evaluation of interprofessional education for health professionals caring for women during and after pregnancy. The characteristics of articles based on the research design used can be seen in Figure 3. Of the ten research articles, there are qualitative and quantitative research articles.

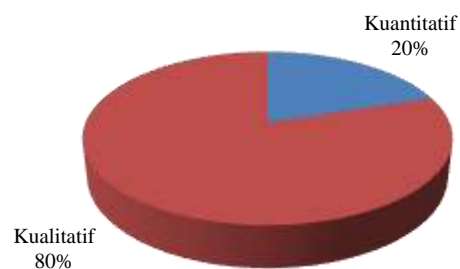


Figure 3. Characteristics of Research Data

The critical appraisal results for five articles,^{21, 22, 23, 24, and 25}, with the answer "YES" on all question items in the Joanna, Brings Critical Appraisal Tools (JBI), were answered perfectly. Apart from that, the advantages of this article are data sources in the full article. Each article's sample, data collection methods, and instruments have been

validated to minimize the error rate. Unsatisfactory results are found in articles^{26, 27, 28, 29, and 30}, with the drawbacks of not explaining the influence of researchers on their research and not explaining cultural and theoretical researchers not described in the article.

Result of Individual Sources of Evidence

The following are some of the themes that emerged from the Scoping Review conducted by the researcher:

Table 3. Maps theme

Theme	Subtheme	Article
The Role of Interprofessional Collaborative Practice	1. Responsibilities of Each Profession	3,4,5,9 & 10
	2. Health HR Development & Empowerment	1 & 5
Barriers to Interprofessional Collaborative Practices	1. Supporting Facilities	2
	2. Skills	4
	3. KesHealth Worker Awareness	8, 6 & 4
	4. Communication By Health Workers	7

The role of interprofessional collaboration practices in integrated ANC services

Integrated Antenatal Care services must be provided comprehensively and with quality to mothers undergoing pregnancy to ensure that pregnant women can undergo pregnancy and childbirth safely and give birth to healthy and safe babies³¹. Apart from that, integrated Antenatal Care services aim to provide emotional and psychosocial support to mothers, monitor fetal growth and development, detect fetal abnormalities early and provide appropriate treatment to mothers who have abnormalities early on to avoid unwanted pregnancy complications³².

One of the most essential benefits of interprofessional collaboration in health services is improving the quality of patient care and increasing patient satisfaction. Implementing interprofessional collaboration in health services can reduce the number of complications, patient length of stay, and conflicts between health workers and reduce patient mortality²⁶. Meanwhile, in the mental health sector, interprofessional collaboration is considered capable of increasing patient

satisfaction, shortening the duration of treatment, reducing treatment costs, reducing the number of patient suicides, reducing the frequency of outpatient visits, and reducing the possibility of overlapping functions. Health workers who have different professional backgrounds³³.

Good interprofessional collaboration will benefit patients by increasing the success of therapy and providing benefits to practitioners by increasing the effectiveness and efficiency of communication between professions and between professions and patients, resulting in satisfactory patient service³⁴. Patients will assess the quality of health service facilities through services provided by doctors and nurses. Patients will feel satisfied if doctors and nurses can build good cooperation and partnerships in providing patient services. The better the collaboration between doctors and patients in providing services, the greater patient satisfaction will increase. On the other hand, if interprofessional collaboration goes well, it will help patient comfort and satisfaction, especially in aspects of interprofessional communication that do not go well, resulting in delays in service delivery and

shortening consultation times ²² with patients and lack of respect for patients. Patients will feel that they need to be cared for by health workers and will feel more satisfied with the services provided by health workers ³⁵.

Responsibilities of Each Profession.

Doctor or Obstetrician

The role of the doctor or obstetrician in Article ³² states that obstetricians provide antenatal care through counselling to pregnant women. The article confirms that senior obstetricians' responsibility in Educational Health facilities is committed to training their students, i.e., interns, to provide routine ANC services by increasing the number of focused ANC visits to at least four is a top priority to reduce maternal death and improve maternal health, which is a top priority ³⁶.

Midwife

The role of midwives in article ⁵ states that midwives are health workers, mainly in ANC examinations. Article ³⁴ states that ANC is accessed through a clinic led by a midwife who identifies pregnant women with a 10 T examination.

Nutritionists

The role of the nutritionist in Article ³⁷ is to provide antenatal nutrition education. It is one of the necessary elements for an effective ANC program to alleviate the three burdens of malnutrition: overweight/obesity, malnutrition, and micronutrient deficiency, which will increase the risk of various health problems for the mother and fetus.

Laboratory Staff

The role of the laboratory assistant in Article ³³ is tasked with carrying out tests for anemia, HIV, and syphilis, which are the leading causes of preventable problems in pregnancy and are essential components of antenatal care (ANC). Article ³⁵ states that laboratory testing is an interview with laboratory staff who must focus on ensuring quality.

Community Health Workers

The role of public health workers in article ¹⁰ is essential to connect women with

health services and provide access to quality antenatal care (ANC) at community health centres free of charge, including diagnostic examinations. In article ³⁸, Public health professionals act as mediators between the community, including expectant mothers and their families, and healthcare providers because public health has high social sensitivity and actively supports the community.

HR Development and Empowerment

Article ⁵ stated that the results of HR development greatly influenced integrated ANC services. There was no special training on integrated ANC, so Health HR needed to receive information or updated knowledge about integrated ANC. Article ³⁹ states that the interprofessional health team's attitude has improved after interprofessional collaborative practice training. Increased policy awareness, the capacity to discuss how interprofessional collaboration can be improved, and the capacity to form networks with other health professionals.

Barriers Interprofessional collaboration practices in integrated ANC services

Supporting Facilities

In article ⁴⁰, some obstacles are found, namely dental and oral health examination facilities, which are highly specialized and not developed for staff, so the facility does not function to provide oral health care to pregnant women.

Skills

In article ⁴¹, caregivers' skills, knowledge, and attitudes were identified as obstacles that hinder health workers from following ANC guidelines. Poor attitudes, behaviours, and skills were the most frequently identified barriers to using and fully implementing ANC guidelines.

Health Worker Awareness

Article ⁴² The biggest obstacle is the weakness and awareness of the Health system, inadequate training and supervision, retaining an unskilled and unmotivated workforce, and not adequately supported with adequate commodities will not provide integrated antenatal services effectively. In article ⁴³,

health workers' awareness is seen to be different in providing services, namely the practice led by midwives of small, medium, and large sizes.

There are differences in carrying out care measures for pregnant women. Article ⁴⁴ states that midwives are pretty busy with other MCH services while excluding several essential things in ANC services, such as counselling, because of this limited time, which causes midwives to experience poor performance.

Communication by Health Workers

Article ⁴⁵ states that poor communication barriers by health workers will not build relationships and personal approaches in antenatal care and will not understand the importance of training that can develop and improve ANC services.

Research Limitations

This scoping Review obtained an incomplete review, where the term integrated ANC was only used in Indonesia. Hence, researchers needed help finding articles that discussed in-depth interprofessional collaboration practices for integrated ANC services in developed countries.

CONCLUSION

Ten journals met the inclusion criteria based on a search of 1,534 selected papers. Of the ten articles reviewed, it was found that the role of interprofessional collaborative practice among various health workers had yet to carry out their duties according to responsibility. Every profession, as well as developing and empowering human resources. Obstacles were found in supporting facilities, skills, awareness and communication by Health workers, which must be overcome to obtain integrated ANC services to increase visits and obtain quality pregnancy checks, thereby reducing cases of maternal and neonatal deaths. Integrated Antenatal Care services must be provided comprehensively and with quality to mothers undergoing pregnancy to ensure that pregnant women can go through the pregnancy and delivery period safely and give birth to healthy and safe babies. One of the most essential benefits of interprofessional collaboration in Antenatal Care health services is improving the quality of patient services and increasing patient satisfaction. Implementing interprofessional collaboration in health services can reduce

complication rates, duration of patient hospitalization, conflicts between health professionals, and patient mortality rates.

ACKNOWLEDGEMENTS

Thanks to 'Aisyiyah University Yogyakarta for providing support and the opportunity to conduct this scoping Review.

CONFLICTS OF INTEREST

There is no conflict of interest in this Review.

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