

ARTICLE INFORMATION

Received: June 13, 2026

Revised: June 27, 2026

Available online: July 03, 2026

at: <https://e-jurnal.iphorr.com/index.php/mchc>

Preconception midwifery care through a continuity of care approach: A case study

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

Abstract

Background: Maternal health during the preconception period is an essential determinant in preparing women for healthy pregnancy and reducing maternal risks. Continuity of Care (CoC) is a continuous midwifery care approach that emphasizes comprehensive and individualized services throughout the reproductive life cycle.

Purpose: To describe the implementation of continuity of care in preconception midwifery services among four women.

Method: This descriptive case study described the implementation of preconception midwifery continuity of care among four women. The study was conducted in the Air Dingin Health Center working area, Padang, from November to December 2025. The subjects consisted of four women in the preconception period. Data collection was carried out through interviews, patient records, and SOAP documentation, while the Varney seven-step management approach was used to describe the continuity of care provided.

Results: The findings showed that each client presented different preconception conditions and risk factors requiring individualized interventions. The continuity of care included health screening, communication, information and education, counseling, nutritional guidance, stress management, vaccination education, reproductive planning, and preparation for pregnancy. Continuous midwifery care the care process provided opportunities to identify risk factors and deliver individualized counseling and education of preconception health, supported early identification of maternal risk factors, and encouraged readiness for healthy pregnancy.

Conclusion: The implementation of Continuity of Care during the preconception period contributed to describe the implementation through promotive and preventive approaches.

Suggestion: Continuous and individualized preconception care is recommended to improve women's preparedness and support better maternal health outcomes.

Keywords: Continuity of Care; Health Promotion; Maternal Health; Midwifery Care; Preconception Period.

INTRODUCTION

Maternal and reproductive health remain global health priorities. Although substantial international efforts have been undertaken to reduce the Maternal Mortality Ratio (MMR) in line with the Sustainable Development Goals (SDGs), many countries continue to fall short of the established targets. In Indonesia, the MMR declined by approximately 45% over the last decade, decreasing from 346 to 189 deaths per 100,000 live births; however, this figure remains considerably higher than the SDG target of fewer than 70 deaths per 100,000 live births (Central

Statistics Agency, 2020).

Futhermore, another study reported that Indonesia's MMR reached 305 per 100,000 live births in 2015, emphasizing the importance of implementing Continuity of Care (CoC) as a strategy to reduce maternal mortality (Andriani, Rachmadani, Natasha, & Saptari, 2021). At the national level, the Ministry of Health of the Republic of Indonesia has established integrated regulations to strengthen reproductive health services. Ministry of Health Regulation No. 21 of 2021 governs reproductive health services across

the continuum of care, from the preconception period through postpartum care, while Ministry of Health Regulation No. 2 of 2025 reinforces a life-course approach to reproductive health interventions (Legal Documentation and Information Network within the Audit Board, 2021).

These policies highlight the importance of early risk identification and intervention before conception while ensuring continuity of healthcare services. At the local level, despite the implementation of the “zero maternal death” initiative in Padang, maternal mortality remains a concern. In 2024, Padang City recorded 12 maternal deaths, reflecting a decrease compared to 23 cases reported in 2023. Similarly, infant mortality also declined in 2024, with a total of 116 cases, including 78 neonatal and 38 post-neonatal deaths. Several contributing factors have been identified, including maternal education and health literacy, maternal health conditions during pregnancy, delivery assistance, management of maternal and neonatal emergencies, environmental conditions, healthcare infrastructure, treatment of neonatal complications, sanitation and access to clean water, vaccination status, financing mechanisms, and public health interventions (Padang City Health Service, 2025).

The preconception period refers to the stage prior to conception, during which couples planning pregnancy require adequate physical and psychological preparation. During this phase, multiple risk factors including malnutrition, chronic diseases, infections, psychosocial conditions, and unhealthy lifestyles can be identified and modified. Preconception screening plays an essential role in detecting conditions such as infertility and facilitating appropriate management strategies. Preconception care encompasses physical and supporting examinations, Tetanus Toxoid (TT) vaccination, nutritional supplementation, and reproductive health Communication, Information, and Education (CIE) (Kostania & Tazkiyah, 2024). Another study reported that, during the COVID-19 pandemic, primary healthcare centers successfully delivered the minimum standard components of preconception services, including physical examinations, TT vaccination, nutritional interventions, and health education. Therefore, improving health readiness before pregnancy has the potential to increase the likelihood of healthy pregnancies and reduce

maternal and neonatal complications (Azizah, 2021).

The Continuity of Care (CoC) midwifery model refers to the provision of comprehensive and continuous care delivered by a dedicated care team including midwives, students, and clinical supervisors from the preconception period through pregnancy, childbirth, and postpartum care. CoC emphasizes sustained and personalized relationships between women and healthcare providers. Numerous studies have demonstrated the effectiveness of this model previous research reported highly favorable outcomes from integrated CoC implementation in Surabaya, including 91% normal deliveries, 95% healthy newborns, and 100% normal postpartum maternal conditions (Roosihermatie, Nugroho, & Senewe, 2023). Additionally, other research through a comprehensive systematic review, found that midwife-led CoC models significantly increased spontaneous vaginal births, reduced cesarean section and preterm birth rates, and lowered the risk of low Apgar scores and low birth weight. The protective effect of CoC on maternal and neonatal outcomes has been consistently supported by evidence (Kuipers, Jenkins, Watson, King, & Zemouri, 2025).

Despite the growing body of evidence supporting CoC, research specifically addressing preconception Continuity of Care in Indonesia remains limited. Another study highlighted the importance of continuity throughout pregnancy, particularly through at least four antenatal care visits with skilled midwives; however, limited attention has been given to the preconception phase (Andriani et al., 2021).

RESEARCH METHOD

This study employed a descriptive approach with a case study design to describe the implementation of Continuity of Care (CoC) in strengthening maternal health during the preconception period. This approach was selected to obtain a comprehensive understanding of health conditions, risk factors, and the continuity of midwifery interventions provided throughout the care process.

The study was conducted in the service area of Air Dingin Primary Health Center, Koto Tangah District, Padang City, West Sumatra, from November to December 2025. The study participants consisted of four women in the preconception period who were selected purposively based on the criteria of

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

Preconception midwifery care through a continuity of care approach: A case study

reproductive-aged women planning pregnancy and willing to participate throughout the continuum of care.

The primary research instrument was based on Varney's seven-step midwifery management framework, with documentation using the SOAP format (Subjective, Objective, Assessment, and Plan) to ensure systematic recording of care. Data were collected through interviews, direct observation, health examinations, and review of patient records. Continuity of Care interventions were delivered through communication, information, and education (CIE), counseling, risk factor screening, nutritional

education, vaccination, stress management, and pregnancy preparation tailored to each client's individual needs. Data were analyzed descriptively to identify health conditions, risk factors, interventions provided, and client responses during the period of care. The study was conducted in accordance with ethical principles, including informed consent, confidentiality, beneficence, and non-maleficence.

Ethics approval was obtained from the Andalas University ethics committee under number: 3710/UN16.02.D/PP/2025. Written informed consent was obtained from all clients prior to data collection. Client identities were anonymized using initials.

RESEARCH RESULTS

Table The Implementation of Continuity of Care (CoC) Midwifery Services During the Preconception Period

Client	Main findings	Risk factors	CoC intervention	Client response/follow-up
Ms. A, 31 years	Limited knowledge of TT	First pregnancy planning at age 31	Preconception counseling, education	Improved understanding of TT immunization and agreed to complete the recommended schedule
Mrs. W, 34 years	Obesity, previous cesarean sections	Approaching advanced maternal age, long interpregnancy interval	Nutritional counseling, pregnancy planning	Agreed to improve dietary habits and attend follow-up for weight management before pregnancy.
Ms. I, 27 years	Limited knowledge of obesity	Metabolic risk	Vaccination education, lifestyle counseling	Demonstrated improved awareness of metabolic risks and committed to lifestyle modification.
Mrs. M, 34 years	SVT history, repeated cesarean sections, work stress	Cardiac and obstetric risk	Stress management, referral/collaboration advice	Accepted referral for collaborative care and agreed to regular preconception follow-up.

The implementation of Continuity of Care (CoC) midwifery services during the preconception period in the working area of Air Dingin Primary Health Center, Padang City, was conducted among four women in the preconception period presenting with different characteristics and health risk factors. Care was provided continuously through health assessment, communication, information and education (CIE),

counseling, risk factor screening, and individualized interventions based on each client's needs.

The assessment findings indicated that all clients required strengthened preconception health through promotive and preventive approaches. In the first client (Ms. A, 31 years old), limited knowledge regarding the benefits of Tetanus Toxoid (TT) vaccination and age-related risk factors associated

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

with planning a first pregnancy were identified. Interventions included reproductive health education, preconception counseling, and improving understanding of the importance of vaccination prior to pregnancy.

The second client (Mrs. W, 34 years old) presented with several risk factors, including age approaching advanced maternal age, Class I obesity, a prolonged interpregnancy interval, and a history of repeated cesarean sections. The care provided included pregnancy preparation counseling, nutritional education, reproductive health monitoring, fertility awareness education, and support for safe pregnancy planning.

The third client (Ms. I, 27 years old) demonstrated limited understanding regarding the purpose of preconception vaccination and had nutritional status classified as Class I obesity. Interventions focused on education regarding the benefits of vaccination, nutritional counseling, and strengthening healthy lifestyle behaviors to support reproductive readiness.

The fourth client (Mrs. M, 34 years old) had a history of Supraventricular Tachycardia (SVT), repeated cesarean sections, and stress related to workload. Care interventions included education regarding pregnancy risks, stress management counseling, reinforcement of psychological readiness, and recommendations for collaborative healthcare services according to her medical condition.

Overall, the implementation of Continuity of Care during the preconception period demonstrated that a continuous care approach supports early identification of maternal risk factors, improves women's knowledge and readiness for pregnancy, and strengthens promotive and preventive efforts within maternal healthcare services..

DISCUSSION

Preconception care represents an essential stage in preparing women's health before pregnancy. Assessment during this phase extends beyond physical health and includes reproductive health literacy, obstetric risk factors, nutritional status, underlying medical conditions, and psychological readiness. Findings from the assessment and examination of four clients demonstrated the importance of implementing promotive, preventive, and educational approaches to improve pregnancy

readiness.

For the first client (Ms. A, 31 years old), her general health condition was considered good; however, she demonstrated limited understanding regarding the benefits of premarital Tetanus Toxoid (TT) vaccination and presented with age-related risk factors associated with first pregnancy planning. TT vaccination provides protection against tetanus through a five-dose schedule to achieve optimal immunity (Yulizawati & Aprilia, 2024). Limited knowledge regarding the purpose and benefits of vaccination may contribute to delayed or declined vaccination and consequently increase the risk of maternal and neonatal tetanus.

This finding highlights the continuing need for reproductive health education as a core component of preconception services. Previous research reported a significant association between maternal age, parity, and educational level with women's attitudes toward TT vaccination (Girsang, Meidita, Nainggolan, Gultom, & Hidayati, 2025). Additionally, emphasized that healthcare professionals play a critical role in improving individual knowledge and vaccination uptake through education regarding the definition, benefits, objectives, and importance of vaccination (Rachman, Nurida, & Uning, 2022). Nutritional assessment showed that a mid-upper arm circumference (MUAC) of 30 cm indicated no risk of chronic energy deficiency; however, a BMI of 25.39 kg/m² was categorized as Class I obesity. Previous studies have demonstrated that pre-pregnancy overweight status is associated with increased obstetric complications, including gestational diabetes and hypertensive disorders during pregnancy (Lewandowska, Więckowska, & Sajdak, 2020). These findings are supported who emphasized that preconception care focused on weight management through dietary modification and regular physical activity may reduce pregnancy-related complications (Cha, Smart, Braxter, & Faulkner, 2021). A prolonged interpregnancy interval also requires attention. The recommended interval is approximately 18-24 months following the previous delivery, while intervals ≥60 months are considered high risk. Another research reported that women with non-ideal pregnancy intervals had a 2.5-fold greater risk of incomplete abortion (Lestari & Hamudi, 2025).

Furthermore, a history of repeated cesarean sections due to CPD warrants careful monitoring

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

DOI: 10.56922/mchc.v5i3.3435

because uterine scarring may increase the risk of uterine rupture in subsequent pregnancies, requiring individualized birth planning and comprehensive antenatal care (Gultom, Sisthaningrum, & Prihantini, 2025). For the third client (Ms. I, 27 years old), participation in premarital vaccination was primarily motivated by administrative requirements rather than an understanding of its health benefits. This finding reflects a gap in reproductive health literacy and awareness of preconception care. Anthropometric assessment identified Class I obesity with normal MUAC and a waist circumference suggestive of increased metabolic risk. This combination may increase the likelihood of gestational diabetes and hypertensive disorders if no appropriate intervention is implemented. Previous research emphasized that weight reduction strategies should prioritize healthy and sustainable lifestyle modifications because extreme dietary restrictions may negatively affect hormonal balance and menstrual regularity (Loa, Nabuasa, & Sir, 2022).

For the fourth client (Mrs. M, 34 years old), overall physical readiness for pregnancy was considered adequate; however, several risk factors were identified, including a history of Supraventricular Tachycardia (SVT), repeated cesarean deliveries, and work-related stress. SVT is a cardiac arrhythmia characterized by rapid and regular heart rhythm originating above the ventricles and has been associated with recurrent episodes and increased obstetric complications during pregnancy (Bekiaridou, Coleman, Sharma, George, Liu, Gianos, & Mountantonakis, 2024). Therefore, another study emphasized the importance of preconception counseling, cardiology evaluation before pregnancy, and multidisciplinary collaboration to minimize maternal and fetal risks (Regitz-Zagrosek, Roos-Hesselink, Bauersachs, Blomström-Lundqvist, Cifková, De Bonis, & Warnes, 2018).

Repeated cesarean delivery also increases the risk of uterine rupture and placental implantation disorders, including placenta previa and placenta accreta spectrum, necessitating classification as a high-risk pregnancy with intensive monitoring (Sari, Hastati, & Pasaribu, 2024). From a psychological perspective, stress during the preconception period should also receive attention because chronic activation of stress hormones, including cortisol and catecholamines, may disrupt reproductive hormonal balance, affecting

ovulation and conception outcomes. Therefore, education regarding stress management, work-life balance, regular physical activity, and social support should be integrated into preconception care.

Overall, these four cases demonstrate that pregnancy readiness is influenced not only by biological conditions but also by reproductive health literacy, nutritional status, obstetric history, underlying medical conditions, and psychological preparedness. Comprehensive preconception care through education, risk screening, and continuous support remains an essential strategy for achieving healthy and safe pregnancies.

CONCLUSION

The implementation of preconception continuity of care among four women showed that each client had different needs and risk factors, including limited reproductive health literacy, obesity, previous cesarean section, long interpregnancy interval, supraventricular tachycardia, and work-related stress. Individualized midwifery care through screening, education, counseling, nutritional guidance, stress management, and referral planning supported promotive and preventive preconception care. Further studies with larger samples and follow-up are needed to evaluate changes in maternal readiness and pregnancy outcomes.

SUGGESTION

Preconception care services should be strengthened through a comprehensive and continuous approach that emphasizes improving reproductive health literacy, early identification of maternal risk factors, and optimization of women's health conditions before pregnancy. Integrated education, counseling, and ongoing support are expected to improve women's readiness across physical, nutritional, medical, and psychological dimensions. In addition, stronger interprofessional collaboration among healthcare providers is needed to enhance the quality of maternal healthcare services, support safer pregnancy planning, and reduce the risk of maternal and neonatal complications.

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

REFERENCES

- Andriani, H., Rachmadani, S. D., Natasha, V., & Saptari, A. (2021). Continuity of maternal healthcare services utilisation in Indonesia: analysis of determinants from the Indonesia Demographic and Health Survey. *Family medicine and community health*, 9(4), e001389.
- Azizah, A. N. (2021). Analisis Pelayanan Prakonsepsi Pada Calon Pengantin. *Jurnal Kebidanan Indonesia*, 12(2).
- Bekiaridou, A., Coleman, K. M., Sharma, N., George, D., Liu, Y., Gianos, E., & Mountantonakis, S. E. (2024). Clinical significance of supraventricular tachycardia during pregnancy in healthy women. *Clinical Electrophysiology*, 10(7_Part_1), 1304-1312.
- Central Statistics Agency. (2020). Mortalitas Di Indonesia Hasil Long Form Sensus Penduduk 2020. Retrieved from: <https://www.bps.go.id/id/publication/2024/02/02/f1e801ce263e5d1520375f59/mortality-in-indonesia-the-results-of-population-census-2020.html>
- Cha, E., Smart, M. J., Braxter, B. J., & Faulkner, M. S. (2021). Preconception care to reduce the risks of overweight and obesity in women of reproductive age: an integrative review. *International journal of environmental research and public health*, 18(9), 4582.
- Girsang, R. Y., Meidita, D. D., Nainggolan, W. E., Gultom, R. F. B., & Hidayati, Y. (2025). Faktor yang berhubungan dengan imunisasi tetanus toxoid pada ibu hamil. *Journal of Midwifery Care*, 5(02), 233-240.
- Gultom, A., Sisthaningrum, N. M. E. V., & Prihantini, N. N. (2025). G2P1A0 37-38 Weeks Pregnant with Cephalopelvic Disproportion, Previous Caesarean Section Scar and Anemia: Risk Factors, Prevention and Management-Case Report. *Kesans: International Journal of Health and Science*, 5(1), 107-112.
- Kostania, G., & Tazkiyah, N. D. (2024). Studi Kasus Asuhan Kebidanan Pada Masa Prakonsepsi Dengan Infertilitas Sekunder. *Malang Journal of Midwifery (majory)*, 6(1), 34-45.
- Kuipers, Y., Jenkins, H., Watson, S., King, M., & Zemouri, C. (2025). Midwife continuity of care: A systematic review and meta-analysis of case-control and cohort studies. *International Journal of Nursing Studies*, 105300.
- Legal Documentation and Information Network within the Audit Board. (2021). Peraturan Menteri Kesehatan Nomor 21 Tahun 2021 tentang Penyelenggaraan Pelayanan Kesehatan Masa Sebelum Hamil, Masa Hamil, Persalinan, dan Masa Sesudah Melahirkan, Pelayanan Kontrasepsi, dan Pelayanan Kesehatan Seksual. Retrieved from: <https://peraturan.bpk.go.id/Details/314519/permenkes-no-21-tahun-2021>
- Lestari, D. R., & Hamudi, J. P. (2025). The Relationship Between Interpregnancy interval and Incomplete Abortion: A Case-Control Study: Hubungan Jarak Kehamilan Dengan Kejadian Abortus Inkomplit: Case Control Study. *Napande: Jurnal Bidan*, 4(1), 21-26.
- Lewandowska, M., Więckowska, B., & Sajdak, S. (2020). Pre-pregnancy obesity, excessive gestational weight gain, and the risk of pregnancy-induced hypertension and gestational diabetes mellitus. *Journal of clinical medicine*, 9(6), 1980.
- Loa, W. W., Nabuasa, E., & Sir, A. B. (2022). Hubungan antara Berat Badan, Diet, Aktivitas Fisik dan Tingkat Stres dengan Gangguan Siklus Menstruasi. *Media Kesehatan Masyarakat*, 4(1), 34-43.
- Padang City Health Service. (2025). Profil Kesehatan Kota Padang 2024. Retrieved from: <https://www.scribd.com/document/953706303/din-kes-68620969cd51f-2>

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

DOI: 10.56922/mchc.v5i3.3435

Preconception midwifery care through a continuity of care approach: A case study

- Rachman, A. N., Nurida, A., & Uning, M. (2022). Faktor-Faktor Orangtua Mengambil Keputusan Pemberian Imunisasi. Retrieved from: <https://journal.um-surabaya.ac.id/index.php/proceedingseries/article/view/18440>
- Regitz-Zagrosek, V., Roos-Hesselink, J. W., Bauersachs, J., Blomström-Lundqvist, C., Cifková, R., De Bonis, M., & Warnes, C. A. (2018). 2018 ESC guidelines for the management of cardiovascular diseases during pregnancy: the task force for the management of cardiovascular diseases during pregnancy of the European Society of Cardiology (ESC). *European heart journal*, 39(34), 3165-3241.
- Roosihermatie, B., Nugroho, A. P., & Senewe, F. P. (2023). A Study of Maternal Health Services By Private Midwives in Surabaya City, Indonesia. Retrieved from: https://www.researchgate.net/publication/378752417_A_Study_Of_Maternal_Health_Services_By_Private_Midwives_In_Surabaya_City_Indonesia
- Sari, C. I., Hastati, S., & Pasaribu, M. (2024). Hubungan riwayat kuretase dan riwayat sectio caesarea dengan plasenta previa di RSUD Abdoel Wahab Sjahranie Samarinda periode 2020-2022. *J Ilmu Kedokteran dan Kesehatan*, 11(8), 1526-35.
- Yulizawati, & Aprilia, P. Z. (2024). Asuhan Kebidanan Berkelanjutan (Continuity of Care) Masa Prakonsepsi. Retrieved from: <https://penerbitmafy.com/produk/asuhan-kebidanan-berkelanjutan-continuity-of-care-masa-prakonsepsi/>

Suci Anggina, Siska Bradinda Putri Sudirman*, Aldina Ayunda Insani

Universitas Andalas

Corresponding author: *Email: siskabradindaputri@gmail.com

DOI: 10.56922/mchc.v5i3.3435