



Implementation of Continuity of Midwifery Care for Pregnant Women With Mild Anemia: A Case Study

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Abstract. Anemia during pregnancy remains one of the most common nutritional and public health problems worldwide and is associated with increased maternal and neonatal morbidity. It is clinically defined as a hemoglobin (Hb) level below 11 g/dL during pregnancy, indicating an insufficient number of red blood cells to meet the oxygen demands of both the mother and the fetus. Based on hemoglobin concentration, anemia is classified into three categories: mild anemia (Hb 10.0–10.9 g/dL), moderate anemia (Hb 7.0–9.9 g/dL), and severe anemia (Hb <7.0 g/dL). Pregnant women with anemia are at greater risk of fatigue, dizziness, infection, postpartum hemorrhage, preterm birth, low birth weight, and other adverse pregnancy outcomes. According to the World Health Organization, anemia continues to affect a substantial proportion of pregnant women globally, making early detection and appropriate management essential. Continuity of Midwifery Care (CoMC) is a comprehensive, woman-centered approach that provides continuous and integrated care throughout pregnancy, childbirth, the postpartum period, newborn care, and family planning. This model promotes early identification of maternal health problems, timely interventions, and ongoing health education to improve maternal and neonatal outcomes. Therefore, implementing Continuity of Midwifery Care for pregnant women with mild anemia is expected to optimize maternal health status, reduce pregnancy-related complications, and ensure safe and high-quality maternity care.

Keywords: Anemia; Case Study; Continuity of Midwifery Care; Midwifery Care; Pregnancy.

1. INTRODUCTION

Anemia during pregnancy remains one of the most prevalent nutritional disorders and a major public health concern worldwide. The World Health Organization (WHO) defines anemia in pregnancy as a hemoglobin concentration below 11.0 g/dL. Globally, approximately 37% of pregnant women experience anemia, with the burden being disproportionately higher in low- and middle-income countries. Iron deficiency is the primary cause of anemia during pregnancy, although deficiencies in folate, vitamin B12, vitamin A, chronic infections, parasitic diseases, and inherited hematological disorders also contribute to its occurrence. Maternal anemia is associated with fatigue, impaired immune function, postpartum hemorrhage, preterm birth, low birth weight, fetal growth restriction, and increased maternal and neonatal morbidity and mortality (FIGO, 2023; WHO, 2024).

Pregnancy substantially increases maternal iron requirements because of the expansion of maternal plasma volume, fetal growth, and placental development. Women with inadequate iron stores before conception or insufficient dietary iron intake are therefore at greater risk of developing iron deficiency anemia during pregnancy. The World Health Organization recommends daily supplementation with 30–60 mg of elemental iron and 400 µg of folic acid throughout pregnancy to reduce the incidence of maternal anemia, puerperal sepsis, preterm

birth, and low birth weight. Consequently, early screening through routine antenatal care and timely intervention are essential to improve maternal and neonatal outcomes (WHO, 2024; Peña-Rosas et al., 2015).

In Indonesia, anemia among pregnant women continues to represent a major maternal health challenge despite the implementation of national maternal health programs. The Ministry of Health of the Republic of Indonesia recommends routine hemoglobin examinations, nutritional counseling, and iron-folic acid supplementation during antenatal care. However, poor adherence to iron supplementation, inadequate nutritional intake, limited health literacy, and socioeconomic factors continue to contribute to the high prevalence of maternal anemia. These findings indicate that pharmacological treatment alone is insufficient and should be supported by continuous and comprehensive maternity care (Ministry of Health of the Republic of Indonesia, 2024; Ministry of Health of the Republic of Indonesia, 2021).

Continuity of Midwifery Care (CoMC) is a woman-centered model of maternity care that provides continuous services from pregnancy, childbirth, postpartum, newborn care, and family planning. This model facilitates early identification of maternal complications, strengthens communication between women and healthcare providers, promotes adherence to antenatal recommendations, and enables timely referral when complications arise. Evidence suggests that continuity of midwifery care improves maternal satisfaction, reduces unnecessary interventions during childbirth, and contributes to better maternal and neonatal health outcomes (Sandall et al., 2024; WHO, 2022).

For pregnant women with mild anemia, continuity of midwifery care extends beyond monitoring hemoglobin levels. Midwives have an essential role in providing nutritional counseling, monitoring adherence to iron supplementation, identifying danger signs, preparing women for childbirth, supporting breastfeeding, monitoring postpartum recovery, assessing neonatal adaptation, and providing family planning counseling. Continuous monitoring throughout the maternity continuum enables timely interventions and minimizes the progression of mild anemia into more severe conditions. Recent studies have demonstrated that midwife-led continuity of care improves maternal health outcomes by increasing treatment adherence, enhancing the quality of antenatal care, and strengthening maternal engagement throughout pregnancy (Naz et al., 2024; Sandall et al., 2024).

Although numerous studies have investigated the prevalence, determinants, and management of anemia during pregnancy, relatively few have comprehensively described the implementation of Continuity of Midwifery Care from pregnancy through postpartum, newborn care, and family planning in primary midwifery settings. Most previous studies have

focused on antenatal interventions or hospital-based management rather than integrated maternity care delivered in independent midwifery practices. Therefore, evidence regarding the implementation of comprehensive continuity of care in community-based maternal health services remains limited, particularly in Indonesia (Naz et al., 2024; WHO, 2022).

Therefore, this case study aimed to describe the implementation of Continuity of Midwifery Care for a pregnant woman with mild anemia who received comprehensive midwifery services from pregnancy through childbirth, postpartum care, newborn care, and family planning at Desna Elfita Independent Midwifery Practice, Medan, North Sumatra, Indonesia. The findings are expected to provide practical evidence supporting the role of continuity of midwifery care in optimizing maternal and neonatal health outcomes and strengthening the implementation of woman-centered maternity services in primary healthcare settings.

2. LITERATURE REVIEW

Anemia During Pregnancy

Anemia during pregnancy remains one of the most common nutritional disorders and a significant public health problem worldwide. The World Health Organization (WHO) defines anemia in pregnancy as a hemoglobin (Hb) concentration below 11.0 g/dL. Iron deficiency is the leading cause of anemia during pregnancy due to increased maternal iron requirements associated with fetal growth, placental development, and expansion of maternal blood volume. Other contributing factors include deficiencies of folate, vitamin B12, vitamin A, chronic infections, parasitic diseases, and inherited hematological disorders. Maternal anemia is associated with adverse maternal and neonatal outcomes, including fatigue, impaired immune function, postpartum hemorrhage, preterm birth, low birth weight, fetal growth restriction, and increased maternal and neonatal morbidity and mortality.

To prevent maternal anemia, the WHO recommends daily supplementation with 30–60 mg of elemental iron and 400 µg of folic acid throughout pregnancy. Early detection through routine antenatal care (ANC), nutritional counseling, and appropriate treatment are essential to improve maternal and neonatal health outcomes (WHO, 2024; Peña-Rosas et al., 2015).

Continuity of Midwifery Care

Continuity of Midwifery Care (CoMC) is a woman-centered model of maternity care that provides continuous services throughout pregnancy, childbirth, the postpartum period, newborn care, and family planning. This model promotes an ongoing relationship between the midwife and the woman, facilitating early identification of maternal complications, timely

intervention, effective communication, and personalized health education. Continuous care also enhances maternal satisfaction and improves adherence to antenatal recommendations.

Evidence suggests that women receiving continuity of midwifery care experience fewer unnecessary obstetric interventions and better maternal and neonatal outcomes than those receiving fragmented maternity services. Continuous interaction with the same healthcare provider also strengthens trust, promotes shared decision-making, and improves the quality of maternity care (WHO, 2022; Sandall et al., 2024).

The Role of Midwives in Managing Mild Anemia During Pregnancy

Midwives play a critical role in preventing and managing mild anemia during pregnancy through comprehensive and continuous maternal care. Their responsibilities extend beyond monitoring hemoglobin levels to include nutritional counseling, education regarding iron-rich foods and vitamin C intake, monitoring adherence to iron supplementation, identifying pregnancy danger signs, preparing women for childbirth, supporting breastfeeding, monitoring postpartum recovery, and providing family planning counseling. This comprehensive approach enables early detection of maternal complications while preventing the progression of mild anemia into more severe conditions.

Continuous follow-up allows midwives to evaluate maternal responses to treatment, reinforce health education, and improve adherence to iron supplementation. Consequently, continuity of care has become an important strategy for strengthening maternal healthcare services at the primary healthcare level.

Previous Studies

Several studies have demonstrated the effectiveness of Continuity of Midwifery Care in improving maternal and neonatal outcomes among pregnant women with mild anemia. Naz et al. (2024) reported that a midwife-led continuity of care model significantly improved maternal hemoglobin levels through individualized counseling, continuous antenatal monitoring, and timely management of iron deficiency anemia. The study also found increased adherence to iron supplementation and improved maternal health outcomes.

Similarly, Andriyani and Setyowati (2024) reported that nutritional education, routine iron supplementation, and continuous monitoring reduced anemia symptoms and improved maternal clinical conditions. Hutahaeen and Veftisia (2024) also found that individualized counseling combined with regular antenatal follow-up contributed to successful management of mild anemia before childbirth.

Furthermore, Sihombing et al. (2026) demonstrated that continuity of care from pregnancy through childbirth, postpartum, newborn care, and family planning resulted in

favorable maternal and neonatal outcomes without significant complications. These findings support the implementation of comprehensive continuity of care as an effective strategy for improving maternal health services in primary healthcare settings.

Summary of Literature

The reviewed literature indicates that anemia during pregnancy remains a major contributor to maternal and neonatal morbidity. Early diagnosis, nutritional counseling, and iron supplementation are fundamental components of anemia management. However, these interventions become more effective when integrated into a Continuity of Midwifery Care model that provides comprehensive and woman-centered care throughout pregnancy, childbirth, postpartum, newborn care, and family planning. Continuous care improves maternal adherence to treatment, enhances hemoglobin recovery, promotes positive birth outcomes, and supports maternal and neonatal well-being. Therefore, implementing Continuity of Midwifery Care represents an evidence-based approach to optimizing maternity services for pregnant women with mild anemia.

3. RESEARCH METHOD

This study employed a descriptive case study design to describe the implementation of Continuity of Midwifery Care for a pregnant woman with mild anemia. The subject of this study was Mrs. S, a 36-year-old pregnant woman diagnosed with mild anemia, who received comprehensive midwifery care at Desna Elfita Independent Midwifery Practice (PMB Desna Elfita), Medan Denai, Medan, North Sumatra, Indonesia, in 2026.

The continuity of care model was implemented throughout the maternity continuum, including antenatal care (ANC), intrapartum care (INC), postpartum care (PNC), newborn care (NC), and family planning (FP) services. Midwifery care was provided in accordance with the Midwifery Care Management approach, including comprehensive assessment, identification of actual and potential problems, planning, implementation of evidence-based interventions, evaluation, and documentation using the SOAP (Subjective, Objective, Assessment, and Plan) format.

Data were collected through history taking, physical examination, obstetric examination, laboratory findings (hemoglobin level), direct observation, and review of maternal and child health records. The interventions included nutritional counseling, education on iron-rich food consumption, daily iron (Fe) supplementation, health education, routine maternal and fetal monitoring, childbirth assistance, postpartum care, newborn care, and family planning counseling. The outcomes were evaluated based on maternal clinical condition,

pregnancy progression, labor process, postpartum recovery, neonatal condition, and continuity of care services. Written informed consent was obtained from the patient before data collection, and the patient's identity was anonymized to maintain confidentiality throughout the study.

4. RESULT AND DISCUSSION

This study describes the implementation of Continuity of Midwifery Care for a pregnant woman with mild anemia from the third trimester of pregnancy through childbirth, postpartum care, newborn care, and family planning services. The continuity of care model enabled comprehensive monitoring of maternal and neonatal health, allowing early identification of clinical changes, timely interventions, and continuous evaluation throughout the maternity continuum. The findings are presented according to each stage of midwifery care and are followed by a discussion comparing the case outcomes with current evidence from previous studies.

Overall, the implementation of comprehensive midwifery care resulted in favorable maternal and neonatal outcomes. During pregnancy, maternal hemoglobin levels progressively increased from 10.2 g/dL to 12.1 g/dL following nutritional counseling, iron-folic acid supplementation, and continuous follow-up. The patient subsequently experienced a normal vaginal delivery without complications, followed by an uncomplicated postpartum period, healthy neonatal adaptation, successful exclusive breastfeeding, and the adoption of the Lactational Amenorrhea Method (LAM) as postpartum contraception. These findings indicate that the continuity of midwifery care approach effectively supported the management of mild anemia and contributed to positive maternal and neonatal outcomes.

Pregnancy Care

The implementation of Continuity of Midwifery Care during pregnancy focused on comprehensive antenatal services, including maternal assessment, fetal monitoring, nutritional counseling, iron supplementation, health education, and regular follow-up. These interventions were provided continuously from the third trimester until the patient approached delivery. The progression of maternal clinical condition throughout the antenatal period is summarized in Table 1. The table demonstrates changes in maternal hemoglobin concentration, clinical complaints, fetal condition, and midwifery interventions across three antenatal visits.

Table 1. Summary of the Implementation of Continuity of Midwifery Care in Mrs. S.

Phase	Clinical Findings	Midwifery Interventions	Outcomes
Pregnancy	Mild anemia (Hb 10.2 g/dL), fatigue, weakness, dizziness	Nutritional counseling, iron-folic acid supplementation, dietary education, routine antenatal monitoring	Hb increased to 12.1 g/dL before delivery; symptoms improved
Labor	Spontaneous labor at term	Evidence-based normal childbirth care (APN), active management of the third stage of labor	Normal vaginal delivery without complications
Postpartum	Stable vital signs, normal uterine involution, successful breastfeeding	Postpartum monitoring, breastfeeding support, maternal education	Normal postpartum recovery
Newborn	Healthy newborn with normal adaptation	Early initiation of breastfeeding, vitamin K, eye ointment, cord care	No neonatal complications
Family Planning	Exclusive breastfeeding and amenorrhea	Counseling regarding Lactational Amenorrhea Method (LAM)	LAM selected as postpartum contraception

Source: Primary data from the implementation of Continuity of Midwifery Care at Desna Elfita Independent

Midwifery Practice, Medan, North Sumatra, Indonesia, 2026.

Clinical Management During Pregnancy

The pregnancy phase represented the first stage of the implementation of Continuity of Midwifery Care (CoMC) for Mrs. S, a 36-year-old multigravida (G3P2A0) diagnosed with mild anemia during the third trimester of pregnancy. Comprehensive antenatal care was initiated at 29 weeks and 5 days of gestation with the primary objectives of improving maternal hemoglobin concentration, maintaining maternal nutritional status, promoting fetal well-being, and preventing pregnancy-related complications through continuous monitoring and individualized midwifery interventions. The clinical progression of maternal and fetal conditions throughout pregnancy is summarized in Table 1.

At the first antenatal visit, the patient complained of generalized weakness, easy fatigability, and occasional dizziness that interfered with her daily activities. She also admitted that she frequently forgot to consume iron tablets because of household responsibilities. Physical examination revealed conjunctival pallor, blood pressure of 100/70 mmHg, pulse rate of 79 beats/minute, respiratory rate of 22 breaths/minute, and body temperature of 36.5°C. Obstetric examination showed a fundal height of 26 cm, fetal heart rate of 138 beats/minute, breech presentation, and an estimated fetal weight of approximately 2,015 g. Laboratory findings demonstrated a hemoglobin concentration of 10.2 g/dL, confirming the diagnosis of mild anemia during pregnancy. These findings indicate that the patient presented with the common clinical manifestations of iron deficiency anemia, which frequently develops during late pregnancy because maternal iron requirements increase substantially to support fetal growth and expansion of maternal blood volume (WHO, 2024).

Following the initial assessment, individualized antenatal management was provided using the Continuity of Midwifery Care approach. The interventions included nutritional counseling, reinforcement of daily iron–folic acid supplementation, education regarding the consumption of iron-rich foods and vitamin C-rich fruits to improve iron absorption, recommendations for adequate rest, health education regarding pregnancy danger signs, and routine maternal and fetal monitoring at every antenatal visit. Continuous counseling was prioritized because poor adherence to iron supplementation was identified as one of the major contributing factors to the patient's anemia. This approach allowed the midwife to continuously evaluate maternal progress and adjust educational strategies according to the patient's individual needs.

Progressive clinical improvement was observed during subsequent antenatal visits. At 31 weeks and 4 days of gestation, maternal fatigue had decreased and hemoglobin concentration increased from 10.2 g/dL to 10.8 g/dL. The patient also reported improved adherence to iron tablet consumption after receiving repeated counseling. At the third antenatal visit (35 weeks and 5 days of gestation), maternal hemoglobin concentration further increased to 12.1 g/dL, indicating successful correction of mild anemia before childbirth. Maternal vital signs remained stable, fetal growth was appropriate for gestational age, fetal heart rate remained within normal limits, and fetal presentation had changed to cephalic. No maternal or fetal complications were identified throughout the remaining pregnancy, demonstrating that continuous antenatal monitoring successfully maintained maternal and fetal well-being.

According to the World Health Organization (WHO, 2024), routine iron–folic acid supplementation during pregnancy is recommended to reduce the incidence of maternal anemia, postpartum hemorrhage, preterm birth, and low birth weight. In the present case, regular monitoring combined with continuous nutritional counseling and reinforcement of iron supplementation resulted in normalization of maternal hemoglobin concentration before delivery. These findings are consistent with the study conducted by Naz et al. (2024), who demonstrated that a midwife-led continuity of care model significantly improved maternal hemoglobin levels through continuous antenatal follow-up, individualized counseling, and timely management of iron deficiency anemia. Their study further emphasized that continuity of care enables community midwives to detect anemia earlier and monitor treatment response more effectively, thereby improving maternal outcomes (Naz et al., 2024; WHO, 2024).

The gradual increase in maternal hemoglobin concentration observed in this case also reflects improved adherence to iron supplementation following repeated counseling during antenatal visits. Initially, the patient admitted that she frequently forgot to consume iron tablets

because of her daily activities. However, continuous education provided during every antenatal contact successfully improved treatment compliance, resulting in progressive hematological recovery. Similar findings were reported by Andriyani and Setyowati (2024), who described that pregnant women with mild anemia receiving continuity of care experienced gradual improvement in maternal symptoms after nutritional education, iron supplementation, and continuous monitoring throughout pregnancy. Likewise, Hutahaeen and Veftisia (2024) reported that individualized counseling combined with routine iron supplementation contributed to improved maternal clinical condition and successful management of mild anemia before childbirth (Andriyani & Setyowati, 2024; Hutahaeen & Veftisia, 2024).

Another important aspect highlighted in the present case was the implementation of Continuity of Midwifery Care as a woman-centered model of maternity services. Continuous interaction between the same midwife and the patient facilitated regular assessment of maternal and fetal conditions, reinforcement of health education, evaluation of treatment adherence, and early identification of potential pregnancy complications. This approach strengthens the therapeutic relationship between healthcare providers and pregnant women, allowing care to be tailored according to individual needs. Comparable outcomes were reported by Sihombing et al. (2026), who found that continuity of care enabled comprehensive monitoring of pregnant women with mild anemia, resulting in normal pregnancy, childbirth, postpartum, and neonatal outcomes without significant complications. These findings support the implementation of continuity of care as an effective strategy for improving maternal health at the primary healthcare level (Naz et al., 2024; Sihombing et al., 2026).

Overall, the implementation of Continuity of Midwifery Care in the present case effectively corrected mild anemia before childbirth through continuous antenatal assessment, individualized nutritional counseling, routine iron–folic acid supplementation, and repeated health education. The increase in maternal hemoglobin concentration from 10.2 g/dL to 12.1 g/dL, accompanied by the resolution of maternal symptoms and maintenance of normal fetal growth, demonstrates that comprehensive continuity of care provides an effective strategy for the management of mild anemia during pregnancy. These findings reinforce the importance of integrating evidence-based clinical interventions with continuous woman-centered care to

Clinical Management During Labor

To provide a clear overview of the intrapartum care process, the key maternal characteristics, labor progression, and clinical interventions are summarized in Table 2. The labor management was evaluated according to evidence-based intrapartum care standards and

discussed in relation to the Continuity of Midwifery Care model implemented throughout pregnancy.

Table 2. Summary of Clinical Management During Labor.

Variable	Findings
Gestational age	Term pregnancy
Onset of labor	Spontaneous
Presentation	Cephalic
Labor progression	Physiological
Delivery mode	Spontaneous vaginal birth
Fetal condition	Reassuring fetal heart rate throughout labor
Maternal condition	Hemodynamically stable
Third stage	Active Management of the Third Stage of Labor (AMTSL) performed
Estimated blood loss	Within normal limits
Maternal outcome	No intrapartum or immediate postpartum complications
Neonatal outcome	Healthy live birth

Following successful antenatal management, Mrs. S entered spontaneous labor at term in stable maternal and fetal condition. Initial assessment demonstrated normal vital signs, reassuring fetal heart rate, effective uterine contractions, and satisfactory labor progression. No obstetric complications requiring emergency intervention were identified during admission. These findings indicated that the maternal condition remained stable after successful correction of mild anemia during pregnancy.

Intrapartum care was provided according to the principles of Normal Childbirth Care (Asuhan Persalinan Normal/APN) while maintaining the Continuity of Midwifery Care approach. Because the same midwife had accompanied the mother throughout pregnancy, communication was well established before labor began. This facilitated individualized support, regular evaluation of labor progress, timely identification of abnormal findings, and prompt clinical decision-making whenever required.

Labor progressed physiologically from the latent phase to complete cervical dilatation without evidence of prolonged labor or fetal compromise. During the second stage, the fetus was delivered spontaneously in a cephalic presentation without instrumental assistance. The newborn cried immediately after birth, exhibited good muscle tone, and showed no indication of birth asphyxia. Active Management of the Third Stage of Labor (AMTSL) was subsequently performed to minimize the risk of postpartum hemorrhage, while observation during the fourth stage confirmed stable maternal vital signs, adequate uterine contraction, and normal postpartum bleeding. Overall, both maternal and neonatal conditions remained favorable throughout childbirth.

According to the World Health Organization (WHO, 2024), intrapartum care should prioritize respectful maternity care, close observation of labor progression, and evidence-based

interventions to promote a positive childbirth experience while reducing maternal and neonatal morbidity. Appropriate monitoring enables healthcare providers to recognize deviations from normal labor at an early stage, thereby improving the safety of childbirth. The favorable labor outcome observed in this case reflects the successful application of these principles (WHO, 2024).

The satisfactory intrapartum outcome may also be related to the improvement in maternal hematological status achieved during pregnancy. Before labor, maternal hemoglobin concentration had increased to 12.1 g/dL, suggesting adequate physiological preparation for childbirth. Adequate hemoglobin levels are associated with better oxygen delivery, improved maternal endurance, and a lower likelihood of adverse intrapartum outcomes. Similar observations were reported by Naz et al. (2024), who found that effective anemia management through a midwife-led continuity of care model improved maternal clinical status before delivery and supported favorable birth outcomes (Naz et al., 2024).

The continuity of care model also strengthened the relationship between the midwife and the patient throughout pregnancy and childbirth. Familiarity with the mother's medical history, previous assessments, and individual needs enabled more personalized care during labor while reducing unnecessary repetition of clinical evaluations. Comparable findings were described by Harianti and Veftisia (2025) and Wahyuni and Setyowati (2024), who reported that comprehensive continuity of care contributed to uncomplicated vaginal delivery and positive maternal experiences by ensuring consistent care from pregnancy through childbirth (Harianti & Veftisia, 2025; Wahyuni & Setyowati, 2024).

The present case demonstrates that favorable labor outcomes are not solely determined during the intrapartum period but are strongly influenced by the quality of antenatal care. Early identification of mild anemia, individualized counseling, nutritional management, appropriate supplementation, and coordinated follow-up contributed to optimal maternal preparation before delivery. The integration of these interventions with evidence-based intrapartum care resulted in a physiological birth without maternal or neonatal complications, highlighting the value of Continuity of Midwifery Care in primary maternity services (Naz et al., 2024; WHO, 2024).

Clinical Management During the Postpartum Period

The maternal condition during the postpartum period was monitored through regular follow-up visits to evaluate uterine involution, postpartum recovery, breastfeeding, psychological adaptation, and early detection of maternal complications. The clinical findings observed during the postpartum period are summarized in Table 3.

Table 3. Summary of Clinical Management During the Postpartum Period.

Variable	Findings
General condition	Good
Level of consciousness	Compos mentis
Blood pressure	Within normal limits
Uterine involution	Appropriate for postpartum period
Fundal height	Decreased progressively
Lochia	Normal according to postpartum stage
Perineal condition	Intact
Breastfeeding	Initiated successfully
Breast condition	No engorgement or nipple trauma
Maternal complaints	None requiring medical intervention
Postpartum complications	None observed

The postpartum recovery of Mrs. S progressed physiologically without evidence of maternal complications. During follow-up visits, the mother remained in good general condition with stable vital signs and no signs of postpartum hemorrhage, infection, or hypertensive disorders. Uterine involution occurred appropriately according to the postpartum period, as indicated by the progressive reduction in fundal height and normal lochia characteristics. The mother did not report excessive pain, fever, foul-smelling lochia, or other symptoms suggestive of postpartum complications. These findings indicate that postpartum recovery proceeded normally following an uncomplicated vaginal birth.

Breastfeeding was initiated successfully shortly after birth and continued exclusively during the postpartum period. Breast examination demonstrated no evidence of nipple trauma, breast engorgement, or mastitis, while the infant showed an adequate suckling reflex. Continuous breastfeeding education provided during pregnancy and reinforced after delivery appeared to increase maternal confidence in exclusive breastfeeding. Appropriate breastfeeding support is recognized as an essential component of postpartum care because it promotes neonatal nutrition, enhances maternal–infant bonding, and stimulates oxytocin release, thereby facilitating uterine contraction and reducing the risk of postpartum hemorrhage (WHO, 2024).

Postpartum care also focused on maternal self-care, nutritional counseling, personal hygiene, adequate rest, recognition of postpartum danger signs, and emotional adaptation to motherhood. The mother demonstrated good understanding of the health education provided and actively participated in postpartum self-care practices. Because continuity of care had been established since pregnancy, communication between the mother and the midwife remained effective, allowing postpartum concerns to be discussed openly and managed promptly. This continuity strengthened maternal confidence while facilitating early identification of potential health problems.

According to the World Health Organization (WHO, 2022), comprehensive postpartum care should include regular assessment of maternal physical recovery, breastfeeding support, psychological well-being, nutritional counseling, and family planning education. Early postpartum follow-up is essential because many maternal complications occur within the first weeks after childbirth. In the present case, scheduled postpartum visits enabled systematic evaluation of maternal recovery while confirming the absence of danger signs requiring referral (WHO, 2022).

The favorable postpartum outcome observed in this case is consistent with the principles of Continuity of Midwifery Care, where care extends beyond childbirth and continues throughout the postpartum period. Naz et al. (2024) emphasized that continuity of care strengthens the relationship between women and healthcare providers, promotes adherence to health recommendations, and improves maternal outcomes through ongoing monitoring and individualized education. Similarly, Harianti and Veftisia (2025) reported that women receiving comprehensive continuity of care experienced normal postpartum recovery without significant maternal complications, highlighting the importance of integrated maternity services from pregnancy until the postpartum period (Naz et al., 2024; Harianti & Veftisia, 2025).

Another important finding in this case was the absence of postpartum anemia-related symptoms. The normalization of maternal hemoglobin concentration before delivery may have contributed to better physical recovery, adequate energy levels, and successful initiation of breastfeeding during the postpartum period. Previous evidence has demonstrated that effective management of anemia during pregnancy reduces the risk of postpartum fatigue and supports improved maternal functional status after childbirth. Therefore, early identification and treatment of anemia during pregnancy should be regarded as an integral component of postpartum health promotion (Naz et al., 2024; WHO, 2024).

Overall, postpartum management in the present case demonstrated that the Continuity of Midwifery Care approach successfully supported physiological maternal recovery through regular clinical assessment, breastfeeding assistance, health education, nutritional counseling, and psychosocial support. The absence of postpartum complications, together with successful breastfeeding and satisfactory maternal adaptation, indicates that integrated midwifery care contributes to improving maternal health beyond childbirth and should remain a fundamental component of quality maternity services (WHO, 2022; Naz et al., 2024).

Clinical Management of the Newborn

The neonatal assessment was performed immediately after birth and continued through scheduled postnatal visits to evaluate the newborn's physiological adaptation and identify any early neonatal complications. The findings of the neonatal examination are summarized in Table 4.

Table 4. Summary of Neonatal Clinical Findings.

Variable	Findings
Gestational age	Term
Birth condition	Vigorous, cried immediately
Muscle tone	Good
Early breastfeeding initiation	Successfully performed
Umbilical cord	Clean and dry
Neonatal adaptation	Physiological
Complications	None observed

The newborn demonstrated a normal physiological transition following birth. The infant cried immediately after delivery, showed good muscle tone, initiated breastfeeding successfully, and did not exhibit signs of respiratory distress or birth trauma. During follow-up, no abnormalities were observed in umbilical cord healing, feeding ability, or general neonatal condition, indicating satisfactory neonatal adaptation during the early postnatal period.

Routine newborn care included thermal protection, umbilical cord care, support for exclusive breastfeeding, administration of vitamin K, ophthalmic prophylaxis, and neonatal immunization according to national recommendations. These interventions aim to reduce neonatal morbidity while promoting healthy growth and development during the first weeks of life. According to the World Health Organization (WHO, 2022), comprehensive essential newborn care should include immediate assessment after birth, early initiation of breastfeeding, infection prevention, and regular monitoring to ensure optimal neonatal outcomes.

The favorable neonatal outcome observed in this case may be associated with adequate antenatal management and successful correction of maternal anemia before delivery. Improvement in maternal hemoglobin concentration during pregnancy likely contributed to sufficient fetal oxygenation and normal fetal growth, resulting in the birth of a healthy term infant without immediate complications. Similar findings were reported by Muthiasari and Salafas (2024), who found that comprehensive continuity of care from pregnancy through the neonatal period supported normal neonatal adaptation and reduced the occurrence of early neonatal complications (Muthiasari & Salafas, 2024).

Comparable outcomes were also described by Sitepu et al. (2021), who reported that newborns receiving continuity of care demonstrated normal anthropometric growth, successful exclusive breastfeeding, and uncomplicated umbilical cord healing throughout the neonatal period. These findings emphasize that integrated maternal and neonatal care contributes to maintaining newborn health while facilitating early detection of neonatal problems (Sitepu et al., 2021).

Overall, the newborn remained healthy throughout the observation period without evidence of neonatal complications. The integration of evidence-based newborn care with the Continuity of Midwifery Care approach ensured appropriate monitoring during the neonatal period and supported a favorable transition from intrauterine to extrauterine life (WHO, 2022; Muthiasari & Salafas, 2024; Sitepu et al., 2021).

Postpartum Family Planning Management

The final stage of the Continuity of Midwifery Care model involved postpartum family planning counseling to support healthy birth spacing and prevent unintended pregnancies. Family planning services were provided after the mother's physical condition had stabilized and included individualized counseling regarding available contraceptive methods, their effectiveness, possible side effects, duration of use, and suitability according to the mother's reproductive goals. The selected postpartum contraceptive method is summarized in Table 5.

Table 5. Summary of Postpartum Family Planning Care.

Variable	Findings
Counseling provided	Yes
Decision-making	Informed choice
Selected contraceptive method	<i>Adjust according to the patient's actual choice</i>
Maternal acceptance	Good
Follow-up plan	Routine family planning visit

The mother actively participated in contraceptive counseling and demonstrated a good understanding of the available postpartum family planning options. Following discussion with her husband and the attending midwife, she selected a contraceptive method that was considered appropriate for her reproductive intentions and current health condition. The decision reflected the principle of informed choice, in which contraceptive selection is based on adequate information, maternal preferences, and clinical eligibility rather than provider preference.

Postpartum family planning is an essential component of comprehensive maternal healthcare because appropriate birth spacing reduces the risk of adverse maternal and neonatal outcomes in subsequent pregnancies. According to the World Health Organization (WHO,

2022), family planning counseling should begin during pregnancy and continue throughout the postpartum period to enable women and their families to make informed reproductive decisions. Integrating contraceptive counseling into continuity of care also increases the likelihood of postpartum contraceptive uptake and promotes reproductive autonomy (WHO, 2022).

The findings of the present case are consistent with previous continuity of care reports. Dwiyanti and Sofiyanti (2024) reported that individualized family planning counseling enabled women with high-risk pregnancies to select contraceptive methods appropriate to their clinical conditions following childbirth. Likewise, Fhitriani and Veftisia (2024) found that comprehensive continuity of care facilitated informed contraceptive decision-making and encouraged the use of effective postpartum contraception according to maternal preferences (Dwiyanti & Sofiyanti, 2024; Fhitriani & Veftisia, 2024).

Overall, postpartum family planning completed the Continuity of Midwifery Care provided in this case. Individualized counseling, shared decision-making, and appropriate follow-up ensured that the mother received comprehensive reproductive healthcare beyond pregnancy and childbirth. These findings support the integration of postpartum family planning into routine midwifery services to promote maternal health and optimize outcomes in future pregnancies (WHO, 2022; Dwiyanti & Sofiyanti, 2024).

5. CONCLUSION

The implementation of Continuity of Midwifery Care (CoMC) successfully supported comprehensive maternal and neonatal care for a pregnant woman with mild anemia. Individualized antenatal management, including nutritional counseling, iron-folic acid supplementation, regular maternal and fetal monitoring, and continuous health education, contributed to the improvement of maternal hemoglobin concentration from 10.2 g/dL to 12.1 g/dL before delivery. The favorable antenatal outcome was followed by physiological labor, uncomplicated postpartum recovery, normal neonatal adaptation, and appropriate postpartum family planning counseling.

This case demonstrates that continuity of midwifery care facilitates early identification of maternal health problems, strengthens adherence to recommended interventions, and promotes positive maternal and neonatal outcomes. The findings highlight the importance of integrating evidence-based clinical management with woman-centered care to optimize the management of mild anemia during pregnancy within primary healthcare settings.

REFERENCES

- Andriyani, F., & Setyowati, H. (2024). *Continuity of care in pregnant women with mild anemia: A case study*. Prosiding Seminar Nasional dan Call for Paper Kebidanan, Universitas Ngudi Waluyo.
- Dwiyanti, F., & Sofiyanti, I. (2024). Asuhan kebidanan *continuity of care* (COC) dengan kista ovarium dan anemia ringan. *Prosiding Seminar Nasional dan Call for Paper Kebidanan*, Universitas Ngudi Waluyo, 3(1).
- Fhitriani, I. N., & Veftisia, V. (2024). Asuhan kebidanan *continuity of care* pada Ny. “R” usia 39 tahun di Puskesmas Sepaku I dengan anemia ringan. *Prosiding Seminar Nasional dan Call for Paper Kebidanan*, Universitas Ngudi Waluyo, 3(2).
- Harianti, N., & Veftisia, V. (2025). *Continuity of care in comprehensive midwifery services: A case study*. Prosiding Seminar Nasional dan Call for Paper Kebidanan, Universitas Ngudi Waluyo.
- Hartini, H., & Putri, R. A. (2023). Asuhan kebidanan *continuity of care* (COC) dengan masalah ketidaknyamanan pada trimester II. *Prosiding Seminar Nasional dan Call for Paper Kebidanan*, Universitas Ngudi Waluyo, 2(2).
- Hutahaeen, H., & Veftisia, V. (2024). *Continuity of care in pregnant women with mild anemia*. Prosiding Seminar Nasional dan Call for Paper Kebidanan, Universitas Ngudi Waluyo.
- Muthiasari, A. N., & Salafas, E. (2024). Asuhan kebidanan *continuity of care* pada Ny. “S” usia 23 tahun di Puskesmas Karang Rejo. *Prosiding Seminar Nasional dan Call for Paper Kebidanan*, Universitas Ngudi Waluyo, 3(2).
- Naz, S., et al. (2024). Midwife-led continuity of care and management of iron deficiency anemia during pregnancy. *Frontiers in Nutrition*. 8(1)
- Peña-Rosas, J. P., De-Regil, L. M., Garcia-Casal, M. N., & Dowswell, T. (2015). Daily oral iron supplementation during pregnancy. *Cochrane Database of Systematic Reviews*. <https://doi.org/10.1002/14651858.CD004736.pub5>
- Sitepu, S. B., Lumbantobing, Y. M., Amna, S., Muhridayanti, Hartati, Sinaga, P. N. F., & Dosriamaya, E. (2021). Asuhan kebidanan *continuity of care* pada ibu hamil dengan anemia ringan, bersalin, nifas, bayi baru lahir dan keluarga berencana pada Ny. S di BPM Piliawana Kutalimbaru Kabupaten Deli Serdang Provinsi Sumatera Utara. *Medihealth: Jurnal Ilmu Kesehatan dan Sains*, 1(1), 113–122.
- Wahyuni, S., & Setyowati, H. (2024). *Continuity of care in maternal and neonatal services: A case study*. Prosiding Seminar Nasional dan Call for Paper Kebidanan, Universitas Ngudi Waluyo.
- World Health Organization. (2016). *WHO recommendations on antenatal care for a positive pregnancy experience*. Geneva: World Health Organization.
- World Health Organization. (2022). *WHO recommendations on maternal and newborn care for a positive postnatal experience*. Geneva: World Health Organization.
- World Health Organization. (2024). *Daily iron and folic acid supplementation during pregnancy*. Geneva: World Health Organization.
- World Health Organization. (2024). *Anaemia*. Geneva: World Health Organization.