

## CONTINUOUS OBSTETRIC CARE (*CONTINUITY OF CARE*) WITH UMBILICAL CORD WRAPPING IN MRS. N IN THE INDEPENDENT PRACTICE OF SUMIATI NORTH LABUHAN BATU REGENCY

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### ABSTRACT

The Maternal Mortality Rate (MMR) and Infant Mortality Rate (AKB) in Indonesia are still a big challenge in an effort to realize the golden generation of 2045. Continuous midwifery services, or Continuity of Care (CoC), is a strategic approach to improve the quality of pregnancy care, childbirth, postpartum care, newborn care, and family planning. This case study aims to provide a comprehensive overview of midwifery care for Mrs. N, a pregnant woman with an umbilical cord circumference, delivered continuously at PMB Sumiati, Kualuh Hulu District. This study uses a qualitative descriptive approach with case study methods and management of midwifery care based on Varney. The results of the care showed that CoC was able to detect complications early, provide appropriate action at the time of delivery with umbilical cord wrapping, and improve maternal understanding of postpartum care and contraceptive use. This approach not only improves service quality but also builds an empathetic relationship between midwives and patients, ultimately supporting efforts to reduce AKI and AKB significantly.

**Keywords:** *Continuity Of Care, Umbilical Cord Circumference, Independent Practice*

### Introduction

Indonesia is facing significant challenges in efforts to reduce the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR), which are the leading indicators of the success of the maternal and neonatal health care system. Based on the 2023 Indonesian Health Survey (IHS), AKI is still at 189 per 100,000 live births, and AKI is 16 per 1,000 live births. This figure is far from the Sustainable Development Goals (SDGs) target set for 2030 and is an obstacle to realizing the vision of a Golden Indonesia 2045 (BKPK, 2023). In Asia, 20-30% of all cancers occur. In Indonesia, 90-

100 cases per 100,000 people. (N. Tahun et al., 2024)

Childbirth is the process of expelling a fetus that occurs during full-term pregnancy (37-42 weeks) and is born spontaneously with a posterior presentation that occurs within 18 hours without complications for either the mother or the fetus. (Riska 1, 2, 3 I, 2018)

Anxiety is a concept with the assumption that there is a feeling of frustration towards something that can interfere with a person's ability to think and achieve the desired goals. Based on research by Gourount, et al with research subjects of 133 gravida with a gestational age of 9-37 weeks, it shows that anxiety

occurs in 50% in the first trimester, 71.4% in the second trimester and 80% in the third trimester. (M. Tahun et al., 2022)

Nutrition plays a major role in determining the cause of disease. Adequate nutritional intake is crucial in life, especially for pregnant women, as malnutrition can lead to various health problems. (Purba et al., 2024)

One approach that has proven effective in improving the quality of midwifery services is the Continuity of Care (CoC) model, which provides continuous care by one health worker from pregnancy and childbirth through the postpartum and newborn periods, and into family planning. This model not only emphasizes the medical aspect but also builds emotional, educational, and social closeness between healthcare workers and patients. Research shows that applying CoC can reduce complications, increase maternal involvement in decision-making, and accelerate early detection of pregnancy risks, such as umbilical cord circumference (Åberg et al., 2024).

Maternal and child health issues require greater attention because they impact the future generation. (Damanik et al., 2025)

The longer first stage of labor in primigravidas causes the pain to last longer, coupled with a lack of information and experience in dealing with labor pain, which increases the risk of fatigue, which can lead to anxiety, tension, fear, and even panic. (Damanik et al., 2025)

Insufficient nutritional intake during pregnancy can impact the fetus, including increasing the risk of low birth weight (LBW). This is caused by iron deficiency and maternal low knowledge about the importance of antenatal care. (Tasnim et al., 2024)

Umbilical cord circumference is one of the obstetric complications often

found during childbirth, which can disrupt the oxygen supply to the fetus and increase the risk of asphyxia. Proper management and early detection through the CoC approach are the primary keys in handling this case. Midwifery Independent Practice (PMB), as the spearhead of midwifery services at the community level, has an essential role in implementing the CoC to provide comprehensive, holistic, and humanistic services to pregnant women (Haghani et al., 2023).

There are many factors that cause teenagers to marry early, namely knowledge, education, economy, the role of peers and promiscuity (Situmorang. Friza Novita., 2024)

This study aims to explore in depth the application of Continuity of Care in cases of umbilical cord winding, through a case study of continuous midwifery care for Mrs. N at PMB Sumiati, Kualuh Hulu District. The results of this study are expected to serve as a basis for strengthening the midwifery service model that is responsive to the needs of mothers and babies, as well as for accelerating the reduction of AKI and AKB towards sustainable health Development (Sari et al., 2018)

## Research Methods

This study uses a qualitative descriptive approach with a case study design to describe in depth the process of continuous obstetric care (Continuity of Care) in Mrs. N, a pregnant woman with umbilical cord wrapping, which was carried out at the Sumiati Midwife Independent Practice (PMB), Kualuh Hulu District, North Labuhan Batu Regency, North Sumatra.

The research was carried out at PMB Sumiati from August 2024 to February 2025. This PMB was chosen

because it actively implements the complete CoC model, covering pregnancy, childbirth, postpartum, and newborn services.

This prevention can be done as early as possible in babies and toddlers by giving hepatitis B immunization.(Murdalena et al., 2024)

The subject in this study is Mrs. N, a 37-year-old G3P2A0, who receives comprehensive obstetric care at the PMB. The selection of subjects was carried out using a purposive sampling technique, which is a deliberate selection based on the following criteria: Experiencing pregnancy with complications of umbilical cord circumference; receiving complete obstetric care (pregnancy to family planning); being willing to be a respondent; and following all stages of care.

Data were collected through: in-depth interviews with mothers and health workers; direct observation at each stage of nursing; documentation of the study format, SOAP, KIA book, partograph, and other medical records.

The impact of early marriage includes giving birth to low birth weight babies, abortions and others. (Berbakti, 2024)

The research procedure follows the steps of midwifery care based on the Varney Midwifery Care Management model, namely: Subjective and objective data assessment, Identification of diagnoses and actual problems, Detection of potential issues, Determination of immediate actions, Preparation of care planning, Implementation of interventions, Evaluation of results, Documentation with SOAP approach.

Salah satu menurunkan angka kematian bayi (AKB) yaitu melalui pemberian ASI eksklusif pada bayi. Angka kematian bayi merupakan indikator yang

lebih peka untuk mengukur derajat kesehatan masyarakat

The data are analyzed qualitatively and descriptively through the processes of data reduction, data presentation, and conclusion drawing. The data's validity is strengthened through triangulation of sources (mothers, midwives, and documents) and member checks to ensure the findings' validity.

## Result

This study describes the application of continuous midwifery care (Continuity of Care) in Mrs. N, age 37, G3P2A0, who underwent the pregnancy process to family planning services at the Sumiati Midwife Independent Practice (PMB). Care is provided in accordance with midwifery service standards and follows Varney's management approach, with SOAP documentation.

### a. Pregnancy Care

Mrs. N came for the first time at 39 weeks 3 days pregnant with complaints of abdominal pain radiating to the back and discharge mucus mixed with blood. The results of Leopold's palpation showed a single intrauterine fetus in the back of the head position with a DJJ of 140x/min. It was found that a one-time umbilical cord circumference around the neck based on ultrasound examination. Pregnancy care is carried out according to the 10T standard, including education on the danger signs of childbirth, monitoring nutritional status, and psychological counseling to reduce anxiety before childbirth.

### b. Childbirth Care

The delivery process occurs spontaneously in PMB, as shown by a partograph indicating physiological labor progress. During period II, midwives observed a one-time umbilical

cord around the baby's neck at birth. Immediate action is taken using the uncomplicated winding-removal technique. The baby was born with a body weight of 3,100 grams, a length of 50 cm, and an APGAR score of 7-8-9. Early Breastfeeding Initiation (IMD) was initiated immediately.

c. Postpartum Care

Postpartum care was provided in 4 visits, with monitoring of uterine involution, lochia excretion, and lactation. The mother showed no signs of infection or complications. Breastfeeding education and psychological management are provided to prevent baby blues. Exclusively breastfeeding mothers do well from day one.

d. Newborn Care

The baby shows stable vital signs, active reflexes, and no signs of breathing distress. Babies receive exclusive breast milk and Hepatitis B immunization as well as vitamin K in the first hours of life. Cord care education, temperature monitoring, and immunization schedules are given to mothers.

e. Family Planning Care

At the fourth visit (the final postpartum period), the mother decided to use the contraceptive method of the Lactation Amenorrhea Method after being given counseling on various birth control methods. No side effects have been reported. Mothers understand the importance of pregnancy spacing and family planning.

f. CoC Service Evaluation

The entire series of care from pregnancy to birth control went smoothly, and no complications were found. Continuous service increases maternal trust in midwives, improves adherence to visits, and accelerates the detection and treatment of umbilical cord wounds.

## Discussion

Continuity of Care (CoC) has proven to be a strategic approach in improving the quality of maternal and neonatal services. In Mrs. N's case, all stages of care — from pregnancy and cord wrapping to the postpartum period, the newborn period, and family planning — are consistently provided by the same midwife. This has a positive impact on building trust, increasing maternal compliance with ANC visits, and detecting complications early.

a. Early detection of umbilical cord circumference

During pregnancy, through routine monitoring and examination of Leopold and ultrasound, it was found that there was a cord twist. This detection aligns with the findings of Tuna et al. (2024), who reported that regular monitoring of fetal position and heart rate in the third trimester is essential for identifying potential complications of childbirth. Early knowledge of fetal conditions allows health workers to develop appropriate action strategies during delivery.

b. Shipping Management with Umbilical Cord Circumference

The case of a circular umbilical cord wound found during childbirth is still classified as physiological if it does not cause fetal perfusion disorders. In this case, the baby was born with a good APGAR score without signs of asphyxia. According to the practice guidelines [Ministry of Health of the Republic of Indonesia, 2021], releasing the coil immediately after the head is born can help prevent hypoxia and neonatal complications. Practical assistance and communication during periods I and II also reduce maternal anxiety and facilitate the delivery process.

c. The Role of CoC in Postpartum Care and Newborns



After delivery, the CoC provides continuous monitoring during the postpartum period and of the newborns. The results of this study strengthen the (WHO) study, which states that the continuity of services until the postpartum period is essential to prevent postpartum complications such as bleeding or infection, as well as to ensure that babies receive exclusive breastfeeding and timely immunizations.

This aligns with the research of S. N. Sinaga (2022), which emphasizes that quality management of maternal and child health services in antenatal care is a key to ensuring the overall success of midwifery care.

IMD performed immediately after birth has also been shown to improve the baby's temperature stability and accelerate the mother-child bond. Active counseling during the postpartum period helps mothers understand the importance of breastfeeding and of caring for their babies independently at home. This is supported by the research, which highlights the significant relationship between maternal knowledge and the success of exclusive breastfeeding. In this case, the continuous education provided through the CoC model ensured that Mrs. N had the necessary expertise and psychological readiness to provide exclusive breast milk successfully from day one.

d. Family Planning Counseling and Communication Effectiveness

In the final phase of the service, contraceptive counseling is provided with a participatory approach, allowing the mother to consciously and responsibly choose the method of lactation amenorrhea. This strengthens the principle of women-centered care and supports the national family planning program in reducing the risk of high-risk pregnancies.

Consistent service by the same health workers also creates open, comfortable, and trusting communication. This aligns with the findings of K. Sinaga et al., which demonstrate a significant relationship between effective midwife communication and the level of satisfaction among pregnant women in antenatal care services. Such effective communication in the CoC model not only improves patient satisfaction but also ensures a strong mother-midwife bond, facilitating better health outcomes.

e. Contribution to the Reduction of AKI and AKB

With the thorough implementation of CoC, Mrs. N's case shows that complications can be detected and treated early, thereby avoiding over-intervention. This is in line with the goals of SDG 3.1 and 3.2, namely reducing AKI and AKB, as well as with Law No. 17 of 2023 concerning maternal and child health as a basic national priority service.

### Conclusion

The application of continuous obstetric care (Continuity of Care) in Mrs. N, who experienced a pregnancy with an umbilical cord circumference, showed the effectiveness of the CoC model in improving the quality of maternal and neonatal services. Early detection of umbilical cord circumference through routine monitoring, appropriate childbirth interventions, and continuity of care through the postpartum period and into family planning provides positive clinical outcomes for both mother and baby. The CoC approach also builds strong relationships between midwives and patients, improves adherence to visits, and strengthens overall health education. This study confirms that holistic and sustainable midwifery services are an essential pillar in

efforts to reduce the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR), while supporting the achievement of the Golden Indonesia 2045 vision.

### Suggestion

- a. For Health Workers (Midwives): It is expected to implement the Continuity of Care model consistently in service practice, emphasizing early detection of complications and an empathetic approach to patients.
- b. For Health Institutions: It is necessary to strengthen training and referral systems that support the implementation of CoC, including the use of technology such as teleconsultation and digital recording systems.
- c. For Governments and Policymakers: It is recommended to expand the implementation of the CoC as a national standard for midwifery services and encourage regulations that support the independent practice of community-based midwives.
- d. For Further Investigators: Follow-up studies with a larger sample size and a quantitative approach are needed to assess the effectiveness of CoC on obstetric complications in a population.

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