Continuity of Midwifery Care Supports Maternal Outcomes in Case Study

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Abstract. General Background: Comprehensive midwifery care covering pregnancy, childbirth, postpartum, newborn, and family planning is essential in reducing maternal mortality rates through a Continuity of Care (CoC) approach. Specific Background: In clinical practice, CoC implementation ensures continuous monitoring and management of maternal and neonatal conditions across all stages of care. Knowledge Gap: However, detailed case-based evidence describing the application of CoC in real clinical settings remains limited. Aims: This study aims to examine the continuity of midwifery care provided to Mrs. L at Aisyiyah Siti Fatimah General Hospital, Tulangan, Sidoarjo, from pregnancy to contraceptive planning. Results: Using a descriptive case study approach with direct subjective and objective data collection, the findings indicate that CoC was implemented from the third trimester of pregnancy through childbirth, postpartum, newborn care, and family planning. The care was conducted according to physiological midwifery standards, and all stages proceeded smoothly without pathological conditions. Novelty: This study provides a comprehensive case-based illustration of Continuity of Care implementation across the full maternal and neonatal care cycle in a hospital setting. Implications: The findings support the application of CoC as a structured approach in midwifery practice to maintain standard care delivery and ensure maternal and neonatal well-being.

Keywords: Continuity of care; Midwifery care; Maternal health; Newborn care; Case study

1 Introduction

One useful indicator for assessing the health status of the community and the level of welfare of a country is the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). All pregnancies have the potential for difficulties or complications, so it is important for mothers to undergo pregnancy check-ups with health workers in order to detect early signs of pregnancy complications [1].

In East Java Province, the maternal mortality rate (MMR) has been significantly reduced in 2022. According to data obtained from the East Java Health Office, the MMR in East Java in 2022 was 93/100,000 live births, a significant decrease from 234.7/100,000 live births in 2021. The maternal mortality rate also exceeded the 2022

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target for East Java, which was 96.42 per 100,000 live births, thereby exceeding the national target [2].

On the other hand, maternal and infant mortality rates in Sidoarjo also experienced a significant decline. The MMR target for 2022 is 51.8 per 1,000 live births (LB), but it can reach 37.31 per 1,000 LB. The IMR target is 3.53 per 1,000 LB, but it can reach 2.41 per 1,000 LB [3].

Continuity of care (COC) is a type of care that is provided continuously from the choice of contraception to the pregnancy period. COC has many benefits for pregnant women and infant growth and development, including that the ideal application of COC can prevent various complications during pregnancy, childbirth, and the postpartum period. The ideal use of COC can also break the chain of stunting, as medical personnel monitor the growth and development of the baby from the womb. Medical personnel will recommend midwifery care appropriate to the condition of the pregnant woman and her ability to meet her nutritional needs [4].

During pregnancy, continuity of care can begin because this period is vulnerable to complications that can endanger pregnant women and fetuses. Pregnant women should have at least six regular check-ups with their doctor, consisting of two check-ups in the first trimester, one check-up in the second trimester, and three check-ups in the third trimester. This is done to ensure that both the mother and baby are healthy [5].

The Ministry of Health also has a COC optimization program to help pregnant women, women in labor, and postpartum women obtain medical examinations or access to health services. The program is expected to reduce the maternal mortality rate during pregnancy by at least six times, and in postpartum women by four times, including newborn examinations. It is hoped that this will maximize the early detection of pregnancy, childbirth, and postpartum problems, as well as prevent stunting [6].

To address maternal health issues, a continuous midwifery care approach must be implemented. This approach consists of a series of continuous and sustainable service activities starting from pregnancy, childbirth, postpartum, newborns, and family planning. This method describes the personal circumstances of women and their health needs, so that there is a therapeutic relationship between women and health professionals, especially with midwives in dealing with health problems [7].

Based on the above description, the author aims to conduct a case study on the implementation of COC services at Aisyiyah Siti Fatimah General Hospital provided to Mrs. L in a comprehensive and continuous manner, starting from pregnancy, the childbirth process, postpartum care, newborn care, up to family planning (FP) contraception planning.

2 Method

This research uses a descriptive method with a comprehensive case study approach *(Continuity of Care) and* midwifery authority to provide midwifery care to pregnant women in the third trimester, the delivery process, the postpartum period, newborns, and contraceptive method planning. This case study began on September 25, 2024.Subjective and objective data were used to compile this study. Subjective data were obtained from patient, family, and health worker anamnesis, and objective data

were obtained from the results of physical examinations and supporting examinations in accordance with the required data.

Data collection began with an introduction and approach, medical history, physical examination of pregnancy, delivery assistance, newborn care, postpartum care, and contraceptive use. After that, the data obtained is documented and analyzed based on the latest midwifery theory and reliable evidence. The data obtained is documented and then analyzed in accordance with the latest midwifery theory and evidence-based practice. The instrument used is the SOAP assessment sheet.

3 Results

3.1 Midwifery Care for Pregnant Women

At the Aisyiyah Siti Fatimah Hospital Obstetrics Clinic on October 5, 2024, Mrs. L underwent a pregnancy examination with an obstetrician because she was experiencing abdominal tightness and back pain. According to subjective data, Mrs. L had visited this obstetrics clinic for antenatal care (ANC) six times. From Mrs. L's medical history, it was found that her last menstrual period began on January 10, 2024, and her estimated delivery date was October 17, 2024. Currently, Mrs. L is 40 weeks pregnant and in the final stage of her third trimester. This is Mrs. L's second pregnancy. During her pregnancy, Mrs. L had one antenatal care (ANC) visit at 10 weeks of pregnancy, three visits at 20 weeks, 26 weeks, and 31 weeks, and two visits at 37 weeks and 40 weeks.

Data collection was obtained directly from the patient and compiled comprehensively. During her third trimester pregnancy visit, Mrs. L experienced back pain and tightness. She also complained of mucus discharge without blood. Physical examination revealed a pre-pregnancy weight of 60 kg, current weight of 68 kg, height of 155 cm, and BMI of 27. Blood pressure was 124/70, RR 19x/m, pulse 80x/m, temperature 36°C, and breasts were enlarged, clean, with prominent nipples. There were no unusual lumps. There were no complaints regarding the digestive system; the abdomen was enlarged longitudinally; linea nigra and striae lividae were visible; and there were no Braxton Hicks contractions or visible fetal movements. On Leopold's examination, the first part of the fetus is palpable, soft, and not elastic, Tfu 3 fingers below the xiphoid process, Leopold 2 shows elongated resistance on the right side of the mother's abdomen and a small part on the left side, Leopold 3 palpates the large part of the fetus, which is round, elastic, and cannot be moved, and Leopold 4 is divergent. A vaginal touch (VT) examination revealed 1 cm dilation; fundal height 30 cm, fetal heart rate 145 beats per minute, and no varicose veins on the upper or lower extremities. Mrs. L. was advised to go home first as the contractions were still infrequent. The mother was advised to move around, such as walking, playing ball sports or gym ball, then lying on her left side. The midwife advised that if there was amniotic fluid leakage and the abdomen felt tight more frequently with contractions lasting 10 minutes three times with a contraction duration of 20-30 seconds, then it was recommended to return immediately.

According to supporting data, laboratory tests conducted on October 5, 2024, showed results of HB 11.5 g/dL, blood type AB+, negative urine protein, random GDA 125, and non-reactive HIV/HBSAG/STI. Additionally, the ultrasound results conducted on October 5, 2024, showed a single fetus, adequate amniotic fluid, no

umbilical cord entanglement, placenta not covering the birth canal, single, EFW: 3050 grams, djj +, male gender, intrauterine, head already engaged in the PAP (pelvic inlet).

The results of the GIIP1A0 analysis at 40 weeks showed that the head was in a single position, alive, intrauterine, the pelvis had been tested, and the mother and fetus were well. There were no symptoms of abdominal tightness or back pain, and the mother did not yet meet the requirements for labor preparation, signs of labor, and referral anticipation. Information (KIE) about labor preparation, including signs of labor and what to bring during labor, was provided to the mother and her husband.

3.2 Midwifery care for the laboring mother

On October 7 at 6:00 a.m., Mrs. L returned to Aisyiyah Siti Fatimah General Hospital with complaints of more frequent abdominal cramps, bloody discharge, and amniotic fluid leakage. The results of Mrs. L's physical examination showed that she was in good condition, with a blood pressure of 124/88 mmHg, a pulse of 84 beats per minute, a respiration rate of 16 breaths per minute, and a temperature of 36°C. After examination, Leopold 1 showed Tfu 3 fingers below the pubic bone, the buttocks were palpable at the fundus, Leopold 2 showed the back on the right and a small part on the left, Leopold 3 showed the head and entry into the pelvis, Leopold 4 showed divergence and a 2/5 descent of the head, Tfu 30 cm, Fetal heart rate 135 times per minute with Doppler, and uterine contractions 3 times in 10 minutes, each lasting 20 seconds. The examination is ongoing, and the results show 4 cm dilation, 50% effacement, intact amniotic membranes, occipital presentation, palpable small fontanelle on the right front, Hodge I descent, and no small part below the lowest part.

The results show that with GIIP1AO analysis at 40 weeks, the mother and fetus are in good condition with active phase of labor. Management included informing the mother and family about the examination results, providing information, education, and counseling (IEC) to obtain consent for normal delivery and providing a clear consent form, advising the mother to meet her nutritional, fluid, and bowel needs, advising the mother to walk around to speed up cervical dilation, and observing labor with a partograph and preparing equipment and medications for delivery. The mother felt a strong urge to push at 09:00 WIB, and her water broke spontaneously at 09:30 WIB. During examination, it was found that the membranes had ruptured spontaneously, there was 10 cm dilation, 100% effacement, cephalic presentation, the right anterior fontanelle was palpable, and there were no small parts at the lowest part of the fetus. According to the analysis, the mother had entered the second stage of labor.

Informing the mother about the examination results, advising her to push during contractions, providing delivery assistance according to the 60 steps of Normal Delivery Care (APN), teaching relaxation techniques between contractions, performing Djj examinations between contractions, and meeting the mother's nutritional and fluid needs between contractions were all actions taken for the mother. Because the perineum was soft and not rigid, an episiotomy was not performed. At 10:10 a.m., the mother was guided to push, and the baby was born spontaneously, crying strongly, with red skin, active movements, an Apgar score of 7-8, male gender, cared for, kept warm, and given the Early Breastfeeding Initiation (EBI) method. Active management of the third stage of labor began with a blood pressure reading of 118/70; no second fetus; oxytocin 10 IU administered IM at 10:15 AM; and controlled stretching of the umbilical cord was

performed. The placenta was delivered completely at 10:25 AM, uterine contractions were good, Tfu 2 cm below the center, uterine fundus massage was good, and the uterus contracted well. An exploration was performed to ensure no placental membranes were left behind and to check for tears in the birth canal, and suturing was performed under local anesthesia, with the procedure completed at 11:00 AM. After the procedure was completed, the mother was cleaned and given medications. It was recommended that the mother not hold back urination and frequently feel for normal uterine contractions.

3.3 Newborn care

Newborn care for a baby born on October 7, 2024, at 10:10 a.m. Western Indonesian Time, was provided for a newborn with a gestational age of 40 weeks, born spontaneously, with vital signs within normal limits, birth weight of 3,050 grams, red skin color, no abnormalities or congenital defects, and a length of 50 cm. head circumference 34 cm, and chest circumference 34 cm. Apgar scores were 8-9-10, with no issues identified. The infant cried strongly, was male, and had no congenital abnormalities. The infant had already urinated and defecated, and its condition was warm. Examination results indicated that the full-term neonate, two hours old, was in good general condition and had no physical defects. Management The newborn was given a vitamin K injection in the left thigh and gentamicin eye ointment at 10:30 AM, and an HB 0 injection in the right thigh at 1:30 PM. The baby was placed in a shared care unit, kept warm, and given adequate breast milk.

3.4 Postpartum care

Postpartum care for Mrs. L on October 7, 2024, at 4:00 p.m. Western Indonesian Time, a 6-hour postpartum examination was performed. Mrs. L complained of pain at the incision site. Physical examination results showed blood pressure of 124/78 mmHg, pulse rate of 80 beats per minute, respiratory rate of 20 breaths per minute, temperature of 36.4°C, good uterine contractions, uterus at the umbilical level, and an empty bladder. Genital examination revealed lochia rubra, half a pad's worth of blood, a wet and clean suture wound, clean and enlarged breasts, a small amount of colostrum, no masses, and a firm consistency. Management included communicating the examination results, providing health education and information (KIE) regarding physiological pain in the perineal suture wound, as well as KIE on applying cold compresses to the perineal suture wound and teaching about perineal wound care and personal hygiene. Postpartum midwifery care was provided, including nutrition information, ambulation, adequate rest and sleep, proper breastfeeding techniques, breastfeeding the baby as often as possible and on demand, and warning signs for postpartum mothers and newborns. Analysis of the P20002 examination results showed that the mother and baby were in good condition 6 hours after delivery with suture wound pain.

The second examination was conducted on the second day postpartum, October 8, 2024. The mother reported that her milk production was still not smooth. She and her family were then taught about massage points to facilitate milk production. The mother was allowed to go home and continue her postpartum care at home. During the third visit ( ) on the sixth day postpartum on October 14, 2024, the patient reported that her milk production had increased and the suture wound was no longer painful. Physical examination results showed vital signs of blood pressure 129/84 mmHg, pulse 80 x/m,

respiration 20 x/m, temperature 36.5℃, good uterine contractions, fundal height 2 fingers below the umbilicus, and empty bladder. Genitourinary examination revealed lochia sanguinolenta, with blood volume equivalent to half a pad, a perineal suture wound that was still moist, no discharge from the suture, no edema, and no swelling in the upper or lower extremities.

3.5 Midwifery Care for Contraceptive Users

Midwifery care for contraceptive acceptors and information provision for family planning (FP) contraceptive use planning were provided on October 14 at 08:00 WIB during the mother's postpartum check-up. The midwife counseled the mother on the benefits of the family planning program, types of contraceptives, and how they work. Finally, the mother and her husband decided to become FP acceptors after the postpartum period was over. The mother and her husband planned to use an intrauterine device (IUD) and have it inserted after the postpartum period was over. The midwife provided counseling to the mother and her husband, especially about the chosen IUD contraception. Analysis of the P20002 postpartum examination results on day 6 of the prospective IUD FP acceptor.

4 Discussion

4.1 Midwifery care for pregnant women

Based on the examination results and medical history, it is known that Mrs. L has undergone her second pregnancy checkup six times with an obstetrician at the Obstetrics Clinic of Aisyiyah Siti Fatimah General Hospital. During the first trimester, Mrs. L had three prenatal visits with a specialist at the Obstetrics Clinic of RSU.Aisyiyah Siti Fatimah Hospital, and during the second trimester, Mrs. L had three prenatal visits with a specialist. This is in accordance with the minimum number of visits that pregnant women must undergo during pregnancy. Antenatal care encompasses all actions taken from conception until before childbirth, provided to pregnant women.

The goal is for all pregnant women to receive comprehensive, quality antenatal care so that they can have a positive pregnancy and delivery experience and give birth to healthy, high-quality babies. This also provides added value for pregnant women in fulfilling their roles as women, wives, and mothers, and helps them optimize early pregnancy detection. To maintain the health of the mother and baby, during pregnancy, mothers should consult with doctors and health workers at least six times periodically for antenatal checkups: twice during the first trimester, once during the second trimester, and three times during the third trimester of pregnancy [8].

4.2 Midwifery care for laboring mothers

Most women give birth through normal delivery or vaginal delivery. The theory of normal delivery continues to be updated to improve the safety and comfort of mothers and babies in line with developments in medical science and technology. The author argues that the process of fetal delivery will be faster because this is the second

pregnancy, the age gap between the last child is not far, and the management of the first stage of labor involves mobility such as walking or playing sports balls or gym balls. Cervical dilation in primigravida and multigravida refers to the process of cervical dilation during normal delivery, and fetal presentation will be faster. Women who are pregnant for the first time are called primigravida, while women who have had more than one child are called multigravida [9].

Since Mrs. L only required 90 minutes from complete dilation to delivery, this labor is classified as rapid because her cervix was softer, and the dilation process was faster than her previous experience. Mothers undergoing labor are advised to walk frequently, meet their nutritional and fluid needs during labor preparation, and also require emotional support, nutrition, fluids, and elimination; walking to find a comfortable position can accelerate cervical dilation [10].

4.3 Midwifery Care for Newborns

Newborn care begins with Early Breastfeeding Initiation (EBI). Keeping the baby warm, administering a 1 mg vitamin K injection in the left thigh and HB0 immunization in the right thigh, and applying gentamicin eye ointment. This is in accordance with newborn care standards, as EBI has many benefits, one of which is reducing infant mortality rates (IMR) caused by hypothermia, which is a decrease in body temperature. Direct skin-to-skin contact between mother and baby can help maintain the newborn's body temperature and expose the baby to beneficial bacteria from the mother's skin, which can help build the baby's immune system and protect them from disease [11].

Early breastfeeding after childbirth allows the bond between mother and baby to form more quickly. Early breastfeeding initiation can help mothers indirectly reduce pain and trauma after childbirth. The more often babies breastfeed and stimulate the nipples during the first few weeks, the more prolactin and breast milk are produced. Early breastfeeding can stimulate the pituitary gland, which can delay ovulation and menstruation. According to research, early breastfeeding initiation can prolong the duration of breastfeeding, increase the likelihood of breastfeeding in the first months of life, and also help increase the amount of exclusive breast milk given to babies. Babies who are given early breastfeeding initiation immediately after birth interact more with their mothers and cry less frequently [12]. Newborns are given vitamin K to prevent intracranial hemorrhage and umbilical cord bleeding, while eye ointment is given to prevent eye infections due to passing through the birth canal.

4.4 Midwifery Care for Postpartum Mothers

During postpartum care, patients complain of pain in the stitches five hours after delivery. This is a physiological complaint caused by trauma to the birth canal. Cold compresses and lavender aroma can relieve this pain. Many studies show that relaxation techniques can reduce discomfort after delivery, relieve pain, and lead to a more positive experience and better well-being. The objective of this outreach activity is to increase the knowledge of midwives and postpartum mothers about the benefits and methods of using lavender aromatherapy to relieve perineal pain experienced by postpartum mothers, thereby reducing the use of pharmacological therapy [13]. Ideally, postpartum and newborn visits should be conducted four times: at six hours, six days, two weeks, and six weeks after childbirth. Congenital Hypothyroidism Screening

(CHS) is an examination or screening test conducted on newborns to distinguish babies who do not suffer from Congenital Hypothyroidism (CH) from other babies [14]. CHS is performed 24 hours after birth, or 72 hours, with the most tolerant sample collection.

4.5 Midwifery Care for Contraceptive Users

Family Planning (KB) is one of the government's important programs in its efforts to improve the welfare of women, both individually and collectively. The goal of the KB program is to improve maternal health and reproductive quality in Indonesia. Providing systematic and comprehensive counseling on the advantages, benefits, and duration of each contraceptive method will give postpartum mothers insight into choosing the right contraceptive method according to their needs. The effectiveness rate of its use reaches 99.4 percent, and it has the ability to control population growth [15].

Use of the Nova T IUD. Family planning is one way for married couples to control the number of children they want to have. The intrauterine device (IUD) is a contraceptive device that is inserted into the woman's uterus to prevent pregnancy. It is also known as a long-acting reversible contraceptive (LARC) and is very effective in spacing pregnancies. The mother and her husband plan to use the IUD contraceptive because the mother wants to use this method immediately after giving birth. This decision has been discussed with her husband because the mother wants to breastfeed her baby until the age of two [16].

The advantages of the IUD contraceptive method are that it can be used by all women of reproductive age and couples of childbearing age, it is highly effective (0.8% pregnancy rate per 100 women in the first year), it can be adjusted immediately after insertion, it lasts up to ten years without needing to replace the device, and it can improve sexual relations because there is no longer any worry about pregnancy. However, the IUD method has some drawbacks, including changes in the menstrual cycle, typically within the first three months and thereafter. Menstruation may become longer and heavier, there may be bleeding between periods, menstruation may be slightly more painful, and it may prevent STIs (Sexually Transmitted Infections).

5 Conclusion

The midwifery care and implementation of Continuity of Care for Mrs. L at Aisyiyah Siti Fatimah General Hospital went smoothly. The patient was very cooperative with various procedures and was punctual in her follow-up visits during pregnancy, childbirth, and the postpartum period. The author concludes that the implementation of Continuity of Care in midwifery services provides significant benefits and has great potential for identifying complications during pregnancy, childbirth, and the postpartum period. Therefore, it can be concluded that midwifery care for pregnancy, childbirth, the postpartum period, newborns, and family planning is carried out in a physiological manner.

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