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# Continuity of midwifery care for Mrs. "G" with Spina Bifida in infant at RD Maternity clinic, Bandung city

Lia Novita[1], Yanti Herawati[2]
[1]Bhakti Kencana University, [2]Dharma Husada Health Sciences College

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**ABSTRACT**
The incidence of spina bifida varies between two to ten cases per thousand births in various regions worldwide. The Ministry of Health of the Republic of Indonesia has conducted sentinel surveillance. From the results of this surveillance, congenital abnormalities of the nervous system rank second among the most commonly found congenital anomalies in Indonesia, with a percentage of 22.3%. One way to reduce MMR and IMR is by providing continuous midwifery care from pregnancy to family planning through the midwifery management approach. The purpose of providing Continuity of Care is early detection of complications that can threaten life, thus worsening the condition of the mother and baby. The method used during the case study was the Continuity of Care method, which includes collecting subjective and objective data, establishing diagnoses, providing management, and documenting in SOAP format. Visits were conducted 9 times: once during pregnancy, once during childbirth, 4 times during the postpartum period, and 3 times during the newborn period. In the third trimester of pregnancy, the mother experienced discomfort, namely frequent urination and back pain, which could be addressed by providing health education about limiting drinks at night and avoiding caffeinated drinks, as well as providing mechanical body health education. There were no problems found during Mrs. G's delivery. During childbirth, the mother received loving care. During the postpartum period, no problems were found, and visits were conducted according to postpartum care standards. Spina bifida was found in the newborn. The baby received care according to the standard care for normal newborns, followed by referral. No other problems were found in the newborn. The conclusion from the assessment of pregnancy, childbirth, postpartum, and newborn care for Mrs. G was conducted according to midwifery service standards. The problems and discomfort experienced could be addressed. In this case, there was a gap where the patient underwent routine examinations with midwives and doctors, but the case of spina bifida was not detected. This may be due to the fact that spina bifida cannot be detected by midwife examinations, and during ultrasound examinations, it is not clearly visible due to the fetus's position. Midwives are expected to be able to continuously improve the quality of midwifery services and take preventive and management measures for cases of spina bifida.



**Corresponding Author:**
Lia Novita
Bhakti Kencana University
Liaisamidwife5@gmail.com

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## INTRODUCTION

Pregnancy and chilbirth represent thr outcomes of conception and the process of delivering the conception result. Complications can arise for pregnant women during childbirth due to the complexity of the process. These complications can lead to the direct death of pregnant or delivering mothers. According to the World Health Organization (WHO), the Maternal Mortality Ratio (MMR) refers to maternal Deaths resulting from the processes of pregnancy, childbirth, and the postpartum period. It serves as an indicator of women's health status. MMR is one of the targets of the Global Sustainable Development Goals (SDGs), aiming to reduce MMR to 70 per 100,000 live births by 2030.

Maternal death and morbidity remain serious health issues in developing countries. According to the 2014 WHO report, about 99% of all maternal deaths due to problems or complications during pregnancy and childbirth occur in developing countries. MMR in Southeast Asian countries, including Indonesia, is 214 per 100,000 live births, with Indonesia having the highest MMR in Southeast Asia.

The number of maternal deaths in Indonesia increased by approximately 500 deaths in 2020 compared to the number in 2019. From 1991 to 2015, MMR per 100,000 live births fluctuated, with a decrease observed from 2018 to 2019 in Indonesia. In West Java in 2017, healthcare professionals were still below the target of 75.77% from the 90% target. Maternal deaths are often caused by three types of delays: delay in recognizing danger signs and making decisions for referral, delay in reaching healthcare facilities, and delay in receiving adequate assistance at referral facilities.

The number of maternal deaths per district/city in West Java province during the period from January to July 2020 was 416 cases, which was almost the same as in 2019 (417). However, in 2020, there was still a tendency for an increase because not all districts/cities reported maternal deaths. The causes of maternal death are still dominated by bleeding (28%) and hypertension (29%), although other causes are also high at 24% (West Java Provincial Health Office, 2020).

The number of infant deaths in Bandung City was 82 cases in 2020, a significant decrease of 32 deaths compared to 2019. The maternal mortality rate in Bandung City is not available. Throughout 2020, there were 28 maternal deaths out of 34,366 live births in Bandung City. The number of maternal deaths in 2020 decreased by one case compared to the previous year, which was 29 cases (West Java Provincial Health Office, 2020).

Based on the causes of maternal death, classic causes such as bleeding (35%), hypertension (22%), and other indirect causes, including non-obstetric diseases (32%), remain significant. According to routine data from the Ministry of Health, and based on the 2012 population census, maternal deaths are caused by bleeding (20%), hypertension (32%), and postpartum complications (31%). Eighty percent of complications leading to maternal deaths include postpartum bleeding, infections usually occurring after childbirth, high blood pressure during pregnancy (preeclampsia and eclampsia), and unsafe abortions. The main causes of maternal deaths throughout Indonesia include postpartum bleeding, pregnancy hypertension, and infections.

The incidence of spina bifida varies from two to ten cases per thousand births in

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various regions worldwide. The Ministry of Health (MOH) of the Republic of Indonesia has conducted sentinel surveillance with 13 selected hospitals in 9 provinces since September 2014. From the surveillance results, congenital anomalies of the nervous system (anencephaly, spina bifida) rank second among the most common congenital anomalies found in Indonesia after musculoskeletal system anomalies (clubfoot) with a percentage of 22.3%.

Spina bifida refers to a congenital anomaly involving neural tube defects (NTDs) where the spinal cord is split (bifid) as a result of the failure of closure of the embryonic neural tube during the fourth week of intrauterine life. Spina bifida is generally classified into open/spastic spina bifida (open lesions) or occult spina bifida (closed lesions) based on whether there is involvement of nerve tissue and protrusion of the lesion area. Open/spastic spina bifida is an NTD characterized by protrusion in the lesion area accompanied by nerve tissue and/or meninges protruding from their normal positions, while occult spina bifida is an NTD that does not have protrusion in the lesion area but is characterized by hair patches on the skin above the vertebrae arches that do not fuse without involving nerve tissue below.

Many risk factors for NTD occurrence have been identified such as first-trimester fever in pregnant women, gestational diabetes, use of antiepileptic drugs by pregnant women, genetic and environmental factors, folate acid fortification diet in pregnant women, and family history with the same birth defect. Prevention of spina bifida occurrences can be done through folic acid supplementation during pregnancy.

## METHODS

This research used a descriptive method with a case study approach conducted at the RD Maternity Clinic in Bandung City. The research sample was Mrs. G with a baby diagnosed with spina bifida.

## RESEARCH RESULTS

After conducting Continuity of Care for Mrs. G, starting from antenatal care, childbirth care, postpartum care, and newborn care. Midwifery care during Mrs. G's pregnancy at the age of 25 years was conducted 9 times. With the regularity of antenatal care visits and ultrasound examinations by a specialist doctor, Mrs. G's pregnancy proceeded without complications and in an integrated manner.

Midwifery care during Mrs. G's childbirth, she delivered on April 7, 2023, at 12:30 p.m. The first stage of labor lasted 5 hours, the second stage lasted 30 minutes, and the third stage lasted 5 minutes. Mrs. G's childbirth process went smoothly and safely. In the fourth stage, 2 hours postpartum, the mother's condition was stable, and no bleeding was identified.

Midwifery care during Mrs. G's postpartum period included three home visits. During the postpartum visits, complaints about insufficient breast milk were addressed with complementary oxytocin massage. Subsequent visits showed increased breast milk production. Midwives provided counseling on postpartum needs and signs of postpartum

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danger. The postpartum period progressed well without perceived danger signs.

Midwifery care for Mrs. G's newborn was conducted with three visits. Mrs. G's baby was born on April 7, 2023, at 12:30 p.m., spontaneously with spina bifida. The midwife provided counseling to the family about the baby's condition and referred them to the Hermina Arcamanik Hospital for further management of the baby's spina bifida. Mrs. G's baby has been discharged home and advised to consult further with the neurology and oral surgery specialists.

## Discussion

This discussion chapter will elaborate on the comprehensive midwifery care that has been carried out continuously (Continuity of Care), discussing whether there is a gap between literature review and implementation. The discussion conducted adheres to midwifery management using the Varney and SOAP methods, including subjective and objective data assessment, data analysis, midwifery care management, and evaluation.

### Midwifery Care During the Third Trimester of Pregnancy

In the case study of Mrs. G, examinations were conducted 9 times during pregnancy. In the First Trimester, 3 examinations were conducted, in the Second Trimester, 3 examinations were conducted, and in the Third Trimester, 3 examinations were conducted at the RD Midwifery Clinic.

According to the Ministry of Health of Indonesia (2013), Antenatal care visits should be conducted at least 4 times during pregnancy, with the following time frame: once in the first trimester (before 16 weeks of gestation), once in the second trimester (between weeks 24-28), and twice in the third trimester (between weeks 30-32 and between weeks 36-38). Based on theory and the case of Mrs. G, there was no gap as she underwent 9 examinations, meeting the standards of antenatal examinations.

According to Sulistyawati (2009), during pregnancy, there are systemic changes in the body that all require physical adaptation. During this adaptation process, mothers may experience discomfort, which is physiological but still requires prevention and care. During the first examination, the mother complained of frequent urination, and the personnel provided guidance and care such as drinking plenty of water during the day and reducing water intake in the evening to reduce nocturnal urination and prevent insomnia due to nocturnal urination, avoiding coffee, tea, and soda. During the second examination, the mother complained of back pain. Personnel provided guidance and care such as avoiding lifting heavy objects, maintaining good body posture during activities, and using a pillow when sleeping to straighten the back. The mother's complaints were physiological and normal. In the theory and the case of Mrs. G, there was no gap.

The standard ANC (antenatal care) service is a minimum of 10Ts: weight gain of at least 9 kg during pregnancy, a height of at least 145 cm, normal blood pressure of 120/60 mmHg, minimum LILA size of 23.5 cm, uterine fundus measurement (Fundal Height) useful for assessing fetal growth, determining fetal presentation, and normal fetal heart rate of 120-160/minute, Tetanus Toxoid immunization, Iron supplementation (minimum 90 tablets) during pregnancy, laboratory tests including blood type, hemoglobin, urine examination, HIV and syphilis tests, and malaria tests in endemic areas, case management,

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and counseling for referral purposes. Mrs. G's standard 10T examinations were complete, and there was no gap between reality and theory.

In this case, there is a gap in that the patient underwent routine examinations with midwives and doctors, but the spina bifida case in the baby was not detected by the examiner. This may be because the occurrence of spina bifida cannot be detected by midwives' examinations, and it is possible that during the ultrasound examination, it was not clear due to the fetus's position covering the lesion.

## CONCLUSION

After providing Comprehensive Midwifery Care for Mrs. G with Spina Bifida, the following conclusions can be drawn. Pregnancy; During Mrs. G's pregnancy, examinations were conducted 9 times regularly and in accordance with the pregnancy examination regulations. During the pregnancy, there were no abnormal complaints, and the pregnancy progressed well, but the spina bifida anomaly was not known during ANC. Childbirth; Comprehensive midwifery care during Mrs. G's childbirth during stages I, II, III, and IV showed no gaps between theory and practice. Postpartum; During Mrs. G's postpartum period, no signs of abnormality were found, only complaints about insufficient breast milk at the beginning of the postpartum period, but it was given complementary midwifery care using oxytocin massage. Subsequent visits showed increased breast milk production. The postpartum period progressed well without perceived danger signs. Newborn Baby; Midwifery care for Mrs. G's newborn baby identified the anomaly of spina bifida. The baby was given formula milk at the hospital and at home because the mother's breast milk was insufficient. Counseling was provided to encourage the mother to breastfeed her baby with breast milk because it stimulates breast milk production.

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