

Maternity Nursing Care For Pregnant Woman, Mrs. S, Experiencing Anemia In The Working Area Of The Raya Public Health Center Pematangsiantar

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Abstract

Anemia is one of the most common health problems experienced by pregnant women due to low hemoglobin levels in the blood. Based on data from the World Health Organization (WHO) in 2025, the prevalence of anemia in pregnant women reached 36.5%, affecting approximately 51 million women worldwide. Anemia can cause fatigue, dizziness, loss of appetite, nausea, and increase the risk of complications for the mother and fetus. This study aims to provide maternity nursing care to pregnant women with anemia. This study used a descriptive qualitative method with a case study approach. The subject of the study was a pregnant woman diagnosed with anemia. This study was conducted for five days, from April 14 to April 18, 2026, in the working area of the Raya Community Health Center, Pematangsiantar. Data were collected through interviews, observations, physical examinations, and documentation. This study identified three nursing diagnoses: Ineffective Peripheral Tissue Perfusion, Nutritional Imbalance: Less Than Body Requirements, and Activity Intolerance. After five days of nursing care, the patient's condition improved, evidenced by the absence of dizziness and blurred vision, warm extremities, improved skin color, increased ability to perform daily activities, improved appetite, reduced nausea, and increased hemoglobin levels. Maternity nursing care provided to second-trimester pregnant women with anemia is carried out through education on fulfilling nutritional needs with iron-rich foods, encouraging regular consumption of iron (Fe) and vitamin C supplements, maintaining adequate fluid intake according to body needs, ensuring adequate rest, morning sun exposure, and doing light exercise. This study is expected to be a reference for health workers in improving maternity nursing services, especially for pregnant women with anemia, through health education, nutritional management, and regular monitoring of

hemoglobin levels.

Keywords: Nursing Care for Pregnant Women, Pregnant Women, Anemia

INTRODUCTION

Maternity nursing provides quality care from professional health workers who identify, focus on, and adapt to the physical and psychosocial needs of the mother, family, and newborn, making the family the basic unit in society that has an important function in giving birth, raising children, and supporting each other. (Related et al., 2022).

Pregnancy is the process of sperm and ovum uniting, resulting in fertilization in the endometrium. Pregnancy begins from fertilization to birth. The normal duration of pregnancy is calculated from the first day of menstruation to 280 days (40 weeks) or 9 months and 7 days (Rasida, 2020). Pregnancy is a phase of increased physiological and nutritional needs, one of which is iron. Iron plays a vital role in the formation of functional hemoglobin and the transport of oxygen throughout the body, including to the fetus. Iron deficiency during pregnancy can cause anemia, which increases the risk of miscarriage, premature birth, low birth weight, and even maternal and infant mortality (Basit et al., 2023).

Anemia in pregnant women is a condition that often occurs when the hemoglobin level in the pregnant woman's blood drops below the normal standard, which is less than 11 g/dL. Anemia can cause various complications for both the mother and the fetus, such as premature birth, low birth weight (LBW), and an increased risk of maternal and infant mortality. (Merdawati et al., 2021) Anemia is a condition in which red blood cells decrease or hemoglobin levels decrease, thereby reducing the oxygen-carrying capacity of the mother and fetus to meet the needs of vital organs. The low oxygen-carrying capacity of the blood causes the heart to increase its heart rate. A heart that continues to work hard can lead to heart failure and other complications such as preeclampsia. Pregnant women with anemia are also at risk of bleeding during childbirth, which can result in death. (Folami, 2017).

Anemia during pregnancy can negatively impact maternal and infant morbidity and mortality. The effects of anemia on the fetus include intrauterine growth retardation (IUGR), premature birth, growth restriction, low birth weight (LBW), and an increased risk of stillbirth. The effects of anemia on pregnant women include shortness of breath, fatigue, palpitations, hypertension, sleep disturbances, preeclampsia, miscarriage, and an increased risk of bleeding before and during labor, even maternal death. (Nia Khusniyati et al., 2025).

According to data from the World Health Organization (WHO) in 2022, anemia in non-



pregnant women of childbearing age was 29.6% or around 462 million women and in pregnant women 35.5% or around 50 million women. According to the 2025 Global Anemia Estimates from the World Health Organization (WHO), the prevalence of anemia in pregnant women (aged 15–49 years) reached 36.5% or around 51 million women in 2023. The anemia rate in all women of reproductive age was 30.7%, or around 495 million women while in non-pregnant women it was 30.5% or around 491 million women. This shows that anemia remains a serious health problem for the global community, where the prevalence in pregnant women is higher than in the general population. (Al-Zein & Al-Khawaldeh, 2015).

According to data from the World Health Organization (WHO), maternal mortality rates were very high in 2023, with approximately 260,000 women dying during and after pregnancy and childbirth. Low-income countries had a maternal mortality rate of approximately 272,650 (92%) in 2023. Meanwhile, Eastern Europe and South Asia achieved the largest maternal mortality reduction ratios, at 38 to 9 and 405 to 117, respectively (Khair et al., 2024).

In the United States, during August 2021–August 2023, the prevalence of anemia was higher among women (13.0%), or approximately 43,420 women, than among men (5.5%), or approximately 18,370 men. The lowest prevalence of anemia was among children aged 2–11 years (4.7%), or approximately 15,698 people, and quite high among adults aged 60 years and older (12.5%), or approximately 41,750 people. The highest prevalence of anemia was found in.

Non-Hispanic Black women (31.4%) or approximately 103,540 people and non-Hispanic Black men (10.8%) or approximately 36,072 people aged 2 years and older compared to all other racial and Hispanic origin groups. The prevalence of anemia decreases with increasing overall family income and in men and women aged 2 years and older (United States, 2021-2023). Meanwhile, data from developing African countries in 2023 showed that pregnant women with anemia reached 59.1% or approximately 27 million pregnant women experienced anemia, which is the highest number compared to other countries (Doenges et al., 2022).

According to the 2024 Indonesian Health Survey (SKI), 3 out of 10 pregnant women experience anemia. The proportion of pregnant women experiencing anemia from 2022 to 2023 was 61%, or approximately 169,580 people. The prevalence of anemia according to gestational age during pregnancy was 84.6%, or approximately 235,188 people, aged 15-24 years, 33.7%, or approximately 93,686 people, aged 25-34 years, 33.6%, or approximately 93,408 people, and aged 44-54 years, 24%, or approximately 66,720 people. Anemia in pregnant women is a health problem that can increase maternal and neonatal mortality rates. The maternal mortality rate (MMR) in Indonesia in 2020 was 189 per 100,000 births. Indonesia's live birth rate is higher than that of Southeast Asian countries such as Malaysia, Brunei, Thailand, and Vietnam. Meanwhile,



Indonesia's neonatal mortality rate (NA) is the third highest in Southeast Asia, at 9.3 deaths per 1,000 live births. Between 2022 and 2023, maternal deaths increased from 4,005 to 4,129, and neonatal deaths from 20,882 to 29,945 (Megasari, 2021).

Based on the 2022 North Sumatra Health Profile, the prevalence of anemia in pregnant women is still relatively high, namely 42.3% or around 6,300 pregnant women. Serdang Bedagai Regency as part of the province also noted that cases of anemia in pregnant women are still frequently found in antenatal services, including at the Sawit Indah Perbaungan Hospital (Health Center) North Sumatra, 2022. Based on the 2023 Pematangsiantar City Health Profile, the number of pregnant women in 2022 was 4,309 people with coverage of Iron tablet provision of 77% or 3,317 people and increased to 89% or 3,835 people in 2023 as an effort to prevent anemia. In 2022, 209 pregnant women were recorded as having anemia. (Kurniati et al., 2023).

Initial survey data collected by researchers from the work area of the Pematangsiantar City Public Health Center (Puskesmas Raya), data on pregnant women with anemia during the last 1-year period was 31 in 2025, with details: 2 in October, 1 in November, and 2 in December. Meanwhile, in 2026, there were 4 people with details: 3 in January, and 1 in February (Puskesmas Raya Medical Records, Pematangsiantar City). (Agustina, 2022) .

Based on the results of observations conducted by researchers on February 27, 2026, on clients obtained by researchers from community health center officers on the highway due to anemia in pregnant women, it was found that the main complaints experienced by pregnant women were frequent dizziness, fatigue, weakness, teary eyes, pale skin, shortness of breath, palpitations, and decreased appetite. The treatment measures provided by community health center officers were the provision of blood-boosting tablets (Fe Tablets), education on how to take medication, nutrition and nutrition education, monitoring hemoglobin (HB) levels, and education about the danger signs of severe anemia symptoms. (Nurarif & Kusuma, 2024).

According to research (Chakim, Amer, Janah, & Hedyanto 2023), Nursing Care for the Elderly for Mrs. S with Anemia in the Dahlia Ward, Dr. Soeselo Regional Hospital, Tegal Regency. Based on the research results, anemia is a disease characterized by a decrease in hemoglobin in the body. Hemoglobin is a metalloprotein, namely an iron-containing protein in red blood cells, which functions to carry oxygen from the lungs to the body. It is hoped that the research results show that patients can consume iron, nutritious food, and a good diet.

According to research (Simaramere, Supernatural Powers Manurung, & Mido Ester J. Sitorus 2023). Factors that influence the compliance of pregnant women in consuming iron tablets and their relationship with the incidence of anemia in pregnant women. The results of this study are the results of Bivariate Analysis showing that knowledge ($\alpha = 0.029$), attitude ($\alpha =$



0.044), family support ($\alpha = 0.001$) and access to health services ($\alpha = 0.004$) are factors that influence maternal compliance in consuming Fe tablets. Meanwhile, Multivariate Analysis shows that knowledge is a factor that influences maternal compliance in consuming Fe Tablets. Maternal Compliance There are no factors that cause anemia in pregnant women.

Based on this, the researchers are interested in compiling a scientific paper entitled "Fostering" Nursing Care for Pregnant Women with Anemia in the Pematangsiantar Raya Community Health Center Work Area with the aim of implementing comprehensive nursing care for pregnant women and in accordance with appropriate nursing care standards for pregnant women with anemia.

METHOD

The research design used in this study is a qualitative descriptive study with a case study approach. (Zheng & Yan, 2023) Qualitative research is "research that produces descriptive data in the form of written or spoken words from people and observable behavior." Moleong explains that this research is very useful in understanding behavioral patterns and social interactions in depth. This study uses a case study approach that aims to describe how maternity nursing care is provided to pregnant women with anemia in the work area of the Pematangsiantar Raya Community Health Center. (Esmond, 2013) The research subjects are individuals who are the source of data in the study, who are selected based on certain criteria that have been determined by the researcher. In this study, the research subject is 1 respondent who meets the research criteria. (Melli et al., 2024).

The data analysis in this study was conducted descriptively, grouping data based on nursing problems and patient responses to the interventions provided. Data analysis was conducted by comparing patient conditions before and after nursing care. Data presentation was arranged in tabular form, systematically describing the assessment results, nursing actions, and nursing evaluations in accordance with the research objectives (Nasrabadi et al., 2021).

RESULTS

This research was conducted in the working area of the Raya Pematangsiantar Community Health Center. Raya Community Health Center has 4 villages/districts, and consists of 10,002 residents. Raya Community Health Center has general medical service facilities for adults, adolescents, children and the elderly, also serves dental checkups, pregnancy, immunization and implements various types of health programs and Posyandu. The research is entitled "Maternal Nursing Care for Pregnant Women with Anemia in the Working Area of Raya



Pematangsiantar Community Health Center, with one respondent (pregnant woman) with anemia, located on Jl. Padang Sidempuan No. 45. This research was conducted for 5 days. Starting from March 14 to March 18, 2026. This research was conducted with the implementation of nursing care, starting from conducting assessments, formulating problems, establishing diagnoses, making nursing interventions, implementing nursing and making evaluations and documenting all research results.

ANALYSIS

Table 1. Data Analysis

NO	Data	Etiology	Nursing Problems
1	DS: - The client stated that she had been complaining of dizziness, especially while doing household activities for the past week. - The client reported seeing stars appearing and disappearing, especially when standing up suddenly and during household activities for the past week. DO: - The client looks pale. - The client's conjunctiva appears anemic (pale). - The client's mucous membranes of the lips and nail beds appear pale.	Decreased hemoglobin concentration (Anemia) ↓ Decreased blood flow rate ↓ Peripheral blood flow resistance ↓ O2 flow to the tissues decreases ↓ pale skin, slightly cold extremities, dizziness, blurred vision	Ineffective Peripheral Perfusion

NO	Data	Etiology	Nursing Problems
	- The client's skin looks pale. - Akral feels a bit cold. - Low Hemoglobin (Hb) level: 9.7 gr/dL - Pulse: 100 x/minute, feels strong and fast - CRT < 2 seconds - RR: 22 x/minute - Blood pressure: 100/80 mmHg - S: 36.6 °C	Dizziness, pulse 100 x/minute, CRT < 2 seconds ↓	
2	DS: - The client stated that he had no appetite for the past week. - The client stated that she had been complaining of nausea that had come and gone for the past week. - The client said that he only ate 5-6 spoonfuls. - The client said that the portion of food was never finished. - The client said to drink 6 glasses a day. DO:	Anemia Deficiency of folic acid, vitamin B12, and iron. ↓ Psychological factors (reluctance to eat) ↓ Lack of appetite, nausea, weight loss, requires high intake of iron, protein, calories, and vitamins.	Malnutrition

NO	Data	Etiology	Nursing Problems
	- Weight loss from 49 kg to 47 kg. - The client appears to require a high intake of iron, protein, calories, and vitamins. - Hb 9.7 gr/dL - Blood pressure: 100/80 mmHg - Pulse rate: 100 x/minute - RR: 22x/minute - S:36.6°		
3	DS - The client stated that he had been feeling weak for the past week. - The client stated that she had been tiring easily, especially during household activities, for the past week. - The client stated that he took a nap for about 2 hours. - The client stated that she sleeps about 6 hours each night and sometimes has difficulty sleeping at night due to dizziness and discomfort during pregnancy. - The client stated that household activities were limited and assisted by her husband or family.	Anemia ↓ Deficiency of folic acid, vitamin B12, and iron. ↓ Weakness (due to anemia) ↓ Gets tired quickly, unable to do long activities, limited daily activities, looks weak, muscle strength 4/5	Intolerant Activities

NO	Data	Etiology	Nursing Problems
	DO: - The client appears weak. - The client appears to be performing activities at a pace appropriate to his or her abilities. - The client appears to tire easily during activities. - The client appears to be able to perform only light activities. - The client appears to be limiting activity. - Muscle strength 4/5 - Blood pressure: 100/80 mmHg - Pulse rate: 100x/minute - RR: 22x/minute - S: 36.6°C		

After providing nursing care to Mrs. S in providing maternity nursing care to pregnant women with anemia in the working area of the UPTD Raya Pematangsiantar Health Center for 5 days (April 14–18, 2026), the researcher will discuss the gap between the theoretical review of nursing and the case review obtained in its application in the field which consists of:

Evaluation

Based on the results of interviews and physical examinations on Mrs. S (28 years old) with a medical diagnosis of anemia with obstetric status G3P2A0H2 gestational age 21 weeks (second trimester), the client complained of dizziness especially when doing household activities since the last 1 week as well as blurred vision that comes and goes especially when standing suddenly and when doing activities. The client also said that she had a lack of appetite since the



last 1 week, often experienced nausea that came and went, was only able to finish about 5-6 tablespoons at each meal, never finished her portion of food, and drank about 6 glasses of water every day. In addition, the client complained of feeling weak, easily tired especially when doing household activities, so that daily activities were limited and the client rested more. The client also said that she took a nap for about 2 hours and slept about 6 hours at night. On objective examination, the client looked pale and weak, the conjunctiva looked anemic, the mucosa of the lips and nail beds looked pale, the skin looked pale, and the acral felt slightly cold. The client's weight decreased from 49 kg to 47 kg, muscle strength 4/5. Laboratory tests show a hemoglobin (Hb) level of 9.7 g/dL. The client appears to require a high intake of iron, protein, calories, and vitamins. Vital signs show a blood pressure of 100/80 mmHg, a strong and regular pulse of 100 beats/min, a respiratory rate of 22 breaths/min, a body temperature of 36.6°C, and a capillary refill time (CRT) of <2 seconds. These assessment data indicate impaired peripheral perfusion, nutritional deficits, and activity intolerance associated with anemia in pregnancy (Borges et al., 2014).

Nursing Diagnosis

A nursing diagnosis is a clinical assessment of a client's response to actual or potential health problems or life processes. In prioritizing and formulating the nursing problem in this case study, the researcher referred to the Indonesian Nursing Diagnosis Standards (IDHS) developed by the Indonesian National Nurses Association (PPNI). This diagnosis is based on an analysis of subjective and objective data found during the assessment to determine appropriate and measurable nursing interventions (Chiu et al., 2021).

Based on the results of the assessment, physical examination, and data analysis that have been carried out, the nursing diagnosis is determined according to the problems that exist in Mrs. S, namely Ineffective Peripheral Perfusion related to decreased hemoglobin concentration, Nutritional Deficit related to psychological factors (reluctance to eat), and Activity Intolerance related to weakness.

Nursing Interventions

Nursing intervention is a nursing plan that will be carried out by nurses to patients according to the established diagnosis so that patient needs can be met. In theory, nursing plans are written according to the plan and outcome criteria. Nursing interventions in this study focused on nursing problems in the form of ineffective peripheral perfusion, nutritional deficits, and activity intolerance with the aim that after nursing actions, peripheral circulation is expected





to increase, nutritional status improves, and activity tolerance increases with outcome criteria: decreased complaints of dizziness, decreased conjunctival anemia (pale), improvement in slightly cold acral, increased portion of food consumed, increased body weight, and decreased complaints of fatigue. Based on the Indonesian Nursing Intervention Standards (SIKI) and the Indonesian Nursing Outcome Standards (SLKI), nursing interventions (planning) prepared for Mrs. S include: very detailed OTEK actions are (Grove & Gray, 2018).

Nursing Implementation

The main nursing implementation in this study was the implementation of Circulation Maintenance (including recommendations for morning sunbathing, adequate hydration, light exercise, and collaborative Fe tablets), Nutrition Management, and Energy Management for Mrs. S in the work area of the UPTD Pematangsiantar Raya Community Health Center. This action was carried out for 5 consecutive days, the researcher carried out the implementation on the first day, then continued with an evaluation of the level of peripheral circulation perfusion, nutritional intake, and the client's activity tolerance level, and on the second to fifth days, education about an iron-rich diet and recommendations for morning sunbathing were given consistently for 10 minutes. The instruments used were in accordance with the Standard Operating Procedure (SOP) for each intervention, including a food intake observation sheet and monitoring of vital signs before and after the procedure. (Sanchez et al., 2020) Before the procedure was carried out, Mrs. S was evaluated regarding complaints of dizziness, meal portions, and fatigue levels. The researcher then provided nursing interventions, followed by a re-evaluation of the patient's clinical response.

Nursing Evaluation

Evaluation in nursing care aims to determine the results of actions and changes in the client's condition after the implementation of nursing by comparing the results and outputs of nursing and outcome criteria. Data obtained during the evaluation conducted for 5 days on April 14–18, 2026 obtained the results that Mrs. S's clinical symptoms complaints decreased significantly, her circulation status improved, her nutritional needs were met, and her activity tolerance increased. (Karo & Baua, 2019) .

This success is in line with the research of Rahmawati, D., & Handayani, S. (2025) entitled "Midwifery Nursing Care for Anemic Pregnant Women with Ineffective Peripheral Perfusion Nursing Problems", which states that the provision of planned nursing care is very effective in reducing the intensity of dizziness complaints and improving peripheral circulation in pregnant



women. This is also supported by the research of Astuti, W., & Wijaya, A. (2024) in their study entitled "Implementation of Circulation Care and Iron Supplementation Education to Improve Tissue Perfusion in Pregnant Women with Anemia", which emphasizes that circulation management interventions are proven to be effective in increasing comfort and improving the condition of peripheral acral warmth in patients. Thus, the gradual recovery of circulation signs in Mrs. S proves that the circulation management provided has succeeded in achieving the optimally determined outcome criteria. (Polit & Beck, 2018).

The results of this evaluation are in line with the research of Lestari, P., & Ningrum, A. (2024) entitled "Nursing Care for Anemic Pregnant Women in Meeting Nutritional Needs", which states that there is a significant influence in providing comprehensive nursing care on increasing the appetite of pregnant women. These results are also in line with the research of Fitriani, R., & Maisarah (2025) entitled "Nutrition Management and High Iron Diet Counseling in Pregnant Women with Nutritional Deficiencies: A Case Study", which explains that controlling environmental comfort and modifying the presentation of warm food has been proven effective in increasing the duration and quality of patient nutritional intake during treatment. (Sharma et al., 2025) The increase in fulfilling Mrs. S's nutritional needs, from initially only being able to finish a few spoons to being able to finish the entire portion of food, proves that the nutritional management provided has achieved optimal outcome criteria.

CONCLUSION

Based on the purpose of the case report conducted by the researcher regarding the nursing care of Mrs. S in the working area of UPTD Puskesmas Raya Pematangsiantar, the researcher can conclude that during the assessment of Mrs. S, data was found that the client complained of dizziness, blurred vision, lack of appetite, nausea, weakness, fatigue and experienced limitations in carrying out daily household activities, and clinical signs were found in the form of pale skin color, anemia conjunctiva (pale), the client's lip mucosa and nail beds looked pale. The acral felt slightly cold, body weight decreased from 49 to 47 kg, muscle strength 4/5, pulse rate 100x / minute, CRT < 2 seconds and Hemoglobin (Hb) level 9.7 gr / dL. In accordance with the results of the assessment, the researcher determined three nursing diagnoses, namely: Ineffective Peripheral Perfusion related to Decreased Hemoglobin Concentration, Nutritional Deficit related to Psychological Factors (Eating Reluctance), and Activity Intolerance related to Weakness.

Meanwhile, the researcher's intervention focused on peripheral circulation management, collaboration in administering iron (Fe) tablets, nutritional management



(education on iron-rich nutrition and small but frequent portions), and energy management (education on gradual activity and energy conservation). After carrying out nursing actions for 5 consecutive days from April 14–18, 2026, the researcher obtained the final results related to Ineffective Peripheral Perfusion which was partially resolved with the outcome criteria being dizziness, weakness, and blurred vision disappearing, skin color starting to become reddish and the extremities feeling warm, hemoglobin starting to increase to 10.1 gr/dl. In Nutritional Deficit, the problem was declared completely resolved because the quality of nutritional intake increased, the client was able to finish 1 portion of food served, nausea disappeared, and the client's weight returned from 47 kg to 49 kg. In Activity Intolerance, the problem was declared completely resolved with the outcome criteria being the client's energy quality increasing and the client being able to carry out light daily activities independently without complaints of excessive weakness. The conclusion states that maternity nursing care is one of the non-pharmacological measures to overcome problems in cases of anemia which is carried out comprehensively and effectively by providing education on fulfilling high iron nutrition, encouraging regular consumption of iron (Fe) and vitamin C rich tablets, consuming sufficient fluids according to the body's needs, getting enough rest, sunbathing in the morning, and doing light exercise.

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