

ANTENATAL CARE FOR PREGNANT WOMEN WITH DIABETES MELLITUS AT TPMB ROSLINA

**Mahlia Akila¹, Myrna Lestari AB², Hendrika Wijaya Kartini Putri³,
Fatiyani⁴, Aida Fitriani^{5*}, Cut Aja Nuraskin⁶**

¹⁻⁶Poltekkes Kemenkes Aceh

* Corresponding email: aida.fitriani@poltekkesaceh.ac.id

ABSTRACT

Gestational diabetes mellitus is a pregnancy complication that can increase the risk of maternal and fetal morbidity and mortality if not detected and managed optimally. Comprehensive antenatal care services play a crucial role in early detection, monitoring maternal and fetal conditions, and preventing complications through a systematic midwifery management approach. The objective is to describe the implementation of antenatal care for pregnant women with diabetes mellitus at TPMB Roslina using the Varney Seven-Step Midwifery Care Management approach and SOAP documentation. This research method used a descriptive method with a case study design. The research subject was a 32-year-old pregnant woman, G2P1A0, 30 weeks and 5 days of gestation, with a diagnosis of gestational diabetes mellitus. Data collection was carried out through anamnesis, observation, physical examination, obstetric examination, supporting examinations, and review of medical documentation. The results of the assessment showed that the mother experienced polyuria, polydipsia, fatigue, a family history of diabetes mellitus, and a random blood sugar level of 215 mg/dL, which supports the diagnosis of gestational diabetes mellitus. Midwifery care included education on dietary management, safe physical activity during pregnancy, blood glucose monitoring, fetal well-being monitoring, and collaboration with obstetricians and gynecologists. The implementation of comprehensive antenatal care through the Varney Seven-Step Midwifery Care Management can support early detection and optimal control of gestational diabetes mellitus, as well as monitoring the condition of the mother and fetus.

Keywords: *antenatal care, gestational diabetes mellitus, midwifery care, high-risk pregnancy, case study.*

INTRODUCTION

Pregnancy is a physiological process that involves various anatomical, physiological, metabolic and hormonal changes to support the growth and development of the fetus (Hertati & Stefanicia, 2025; Maolinda et al., 2025). Although most pregnancies proceed normally, certain conditions can increase the risk of maternal and perinatal complications, one of which is diabetes mellitus (DM). Diabetes mellitus in pregnancy is a metabolic disorder characterized by hyperglycemia due to impaired insulin secretion, insulin action, or both. This condition can be diabetes mellitus that existed before pregnancy (pregestational diabetes) or gestational diabetes mellitus (GDM) that is first diagnosed during pregnancy. The increasing prevalence of diabetes in women of reproductive age makes diabetes in pregnancy a public health problem that requires special attention because it is associated with increased morbidity and mortality of both mothers and babies (Kurniawan et al., 2025; Maimunah et al., 2023; Mega et al., 2024).

The World Health Organization estimates that the prevalence of hyperglycemia in pregnancy will continue to increase due to rising obesity rates, changes in dietary patterns, lack of physical activity, and increasing maternal age during pregnancy. Gestational diabetes mellitus is estimated to occur in approximately 5–20% of pregnancies, depending on population characteristics and the diagnostic method used. In Indonesia, the increasing number of pregnant women with diabetes also presents a challenge to maternal health services because the disease often goes undetected early in pregnancy. This condition causes mothers to seek medical attention only when complications begin to arise, increasing the risk of adverse pregnancy outcomes (Sofais et al., 2025; Umar et al., 2025).

Hyperglycemia during pregnancy impacts both the mother and the fetus. In the mother, diabetes increases the risk of preeclampsia, gestational hypertension, urinary tract infections, polyhydramnios, operative delivery, and postpartum hemorrhage. Meanwhile, in the fetus, macrosomia, shoulder dystocia, neonatal hypoglycemia, hyperbilirubinemia, respiratory distress, congenital abnormalities, and even perinatal death can occur if blood glucose levels are not optimally controlled. Therefore, early detection and management of diabetes during the antenatal period are crucial components in efforts to reduce maternal and infant morbidity and mortality (Harahap et al., 2026; Sitanggang & Ananda, 2025).

Antenatal care (ANC) is a comprehensive and continuous health service provided to pregnant women to monitor the condition of the mother and fetus, detect risk factors as early as possible, provide health education, and carry out necessary interventions according to obstetric care standards. For pregnant women with diabetes mellitus, ANC focuses not only on monitoring fetal growth but also includes controlling blood glucose levels, regulating diet, physical activity, monitoring weight gain, detecting maternal complications, and collaborating with obstetricians and internists if conditions requiring further treatment are found (Ante et al., 2026; Fitriani et al., 2023; Yulianti et al., 2024).

Midwives play a strategic role in providing continuous midwifery care to pregnant women with diabetes mellitus. This role includes screening for risk factors, identifying signs and symptoms of hyperglycemia, providing education on diabetes diets, monitoring adherence to therapy, counseling on safe physical activity during pregnancy, and monitoring fetal well-being through routine antenatal checkups. Systematic midwifery care using the Varney midwifery management approach enables midwives to identify actual and potential problems, enabling more targeted interventions (Julianti & Zahara, 2025; Rositawati et al., 2026).

Various studies have shown that implementing integrated antenatal care (ANC) for pregnant women with diabetes mellitus can improve glycemic control, reduce the incidence of macrosomia, reduce obstetric complications, and improve neonatal outcomes. This success is greatly influenced by the regularity of ANC visits, maternal compliance with health worker recommendations, family support, and multidisciplinary collaboration. Therefore, antenatal care should not only focus on physical examinations but also include education, maternal empowerment, and ongoing monitoring throughout pregnancy (Apriana et al., 2021; Hutabarat, 2025; Norani et al., 2024).

As a primary obstetric care facility, Roslina Midwifery Center plays a crucial role in providing antenatal care to high-risk pregnant women, including those with diabetes mellitus. Midwives at Roslina Midwifery Center are responsible for conducting comprehensive assessments, providing care in accordance with midwifery practice standards, and making timely referrals if conditions requiring further treatment are identified. Systematic documentation of care is also crucial to ensuring quality and continuity of care.

This case report was prepared to illustrate the implementation of antenatal care for pregnant women with diabetes mellitus using Varney's seven-step midwifery management approach documented in the form of SOAP. Through this case presentation, it is hoped that it can provide an overview of

the assessment process, establishing an obstetric diagnosis, planning, implementation, evaluation, and the importance of collaboration in the management of pregnant women with diabetes mellitus in primary obstetric care. In addition, this report is expected to be a reference for midwives in improving the quality of antenatal care for pregnant women with high-risk pregnancies so as to support the achievement of a healthy pregnancy, safe delivery, and babies born in optimal condition.

METHODS

This study used a case study design with a descriptive approach that aims to comprehensively describe the implementation of antenatal care for pregnant women with diabetes mellitus at the Roslina Independent Midwife Practice (TPMB). The case study approach was chosen because it allows researchers to explore in depth the process of assessment, establishing an obstetric diagnosis, planning, implementation, and evaluation of care provided to clients in accordance with midwifery practice standards.

The subject in this case study was a pregnant woman diagnosed with gestational diabetes mellitus who met the criteria for a high-risk case in antenatal care. The case was selected purposively based on the consideration that the client required continuous pregnancy monitoring and comprehensive midwifery care throughout the pregnancy. The client's identity has been disguised using initials to maintain confidentiality and comply with research ethics.

The case study was conducted at Roslina TPMB during the antenatal observation period. Data were collected using primary and secondary data collection techniques. Primary data were obtained through anamnesis, direct observation, systematic physical examination using the inspection, palpation, percussion, and auscultation approach, as well as obstetric examination and monitoring of maternal vital signs. Secondary data were obtained from Maternal and Child Health (KIA) books, medical records, previous examination results, and documentation of antenatal care services available at TPMB.

Case analysis was conducted using Varney's Seven-Step Midwifery Care Management approach, which includes baseline data collection, data interpretation to establish a diagnosis or obstetric problem, identification of potential diagnoses or problems, identification of the need for immediate intervention through collaboration or referral, development of a care plan, implementation of midwifery interventions, and evaluation of care outcomes. The entire care process was documented using the Subjective, Objective, Assessment, and Plan (SOAP) format to ensure continuity of care, facilitate clinical evaluation, and meet midwifery practice documentation standards.

RESULTS AND DISCUSSION

Mrs. R, 32 years old, G2P1A0, came to TPMB Roslina at 30 weeks and 5 days of gestation for an antenatal care visit. She complained of frequent thirst, frequent urination, especially at night, fatigue, and faster weight gain compared to her previous pregnancy. Her family history indicated that her mother had type 2 diabetes mellitus. In her previous pregnancy, she delivered a baby weighing 4,100 grams by cesarean section due to suspected macrosomia.

The results of the general examination showed a good general condition, compos mentis consciousness, blood pressure 120/80 mmHg, pulse 84 beats/minute, respiration 20 times/minute, body temperature 36.7°C, body weight at the time of the visit 78 kg with a pre-pregnancy body mass index of 29 kg/m². Obstetric examination showed a fundal height of the uterus according to gestational age, cephalic presentation, fetal heart rate 144 beats/minute, active fetal movement, and no signs of pregnancy danger were found.

Laboratory tests revealed a random blood sugar level of 215 mg/dL, and an oral glucose tolerance test met the criteria for gestational diabetes mellitus. Urine tests showed no proteinuria, and the hemoglobin level was 11.5 g/dL. Based on the assessment, an obstetric diagnosis of G2P1A0 was established for gestational diabetes mellitus at 30 weeks and 5 days.

The results of this case study indicate that identifying risk factors early in the antenatal visit plays a crucial role in detecting gestational diabetes mellitus. A history of obesity before pregnancy, a family history of diabetes mellitus, and a history of delivering a macrosomic baby are risk factors that increase the likelihood of developing diabetes during pregnancy. These findings align with various studies that suggest that increasing maternal age, excess body mass index, a family history of diabetes, and previous obstetric history are key determinants of gestational diabetes mellitus (Ridiana et al., 2025; Sofais et al., 2025).

The mother's complaints of polyuria, polydipsia, and fatigue are clinical manifestations of hyperglycemia. Although some pregnant women exhibit no typical symptoms, laboratory screening is still necessary to confirm the diagnosis. In this case, the elevated random blood sugar levels were confirmed by the results of an oral glucose tolerance test, thus confirming the diagnosis of gestational diabetes mellitus. Early detection through antenatal care allows healthcare providers to intervene promptly before complications arise for the mother or fetus (Olii et al., 2024).

Midwifery care in this case was structured using Varney's Seven-Step Midwifery Management approach. This approach provides a systematic framework, from assessment to evaluation, allowing for comprehensive identification of the mother's needs. Documentation using the SOAP format also facilitates monitoring of the mother's condition at each visit and enhances continuity of midwifery care.

The primary interventions provided include education on dietary management, safe physical activity during pregnancy, blood glucose monitoring, and adherence to antenatal visits. Non-pharmacological therapy is the initial option for most mothers with gestational diabetes mellitus and has been shown to improve glycemic control when implemented consistently. Education provided by midwives plays a crucial role in increasing mothers' understanding of their condition, thus improving adherence to lifestyle changes (Mardiah & Pranoto, 2023).

Collaboration between midwives, obstetricians and gynecologists, and nutritionists is a crucial part of managing diabetes during pregnancy. This collaboration aims to determine the need for further therapy, monitor fetal growth, and prevent maternal and neonatal complications. A multidisciplinary approach has been recommended in various practice guidelines for its ability to improve pregnancy outcomes in women with diabetes (Idaningsih, 2021).

Evaluation during the observation period showed improvement in the mother's clinical condition, indicated by a reduction in subjective complaints, decreased blood glucose levels, and fetal growth appropriate for gestational age. No signs of preeclampsia, polyhydramnios, or fetal well-being were observed during the monitoring period. These results demonstrate that comprehensive, continuous, and collaborative antenatal care can support the management of gestational diabetes mellitus while maintaining optimal maternal and fetal well-being.

The findings of this case study reinforce the critical role of midwives in primary healthcare facilities in screening for risk factors, providing ongoing education, monitoring maternal adherence to therapy, and making appropriate referrals if pregnancy complications are identified. Implementing comprehensive antenatal care standards is expected to reduce the risk of pregnancy complications due to diabetes mellitus and improve the quality of maternal and infant health services.

CONCLUSION

Antenatal care for pregnant women with diabetes mellitus at TPMB Roslina, conducted using Varney's Seven-Step Midwifery Care Management approach and documented in SOAP format, systematically identifies obstetric problems and supports comprehensive and continuous care. A thorough assessment allows for early detection of gestational diabetes mellitus, allowing prompt interventions tailored to the mother's needs.

The implementation of care, which included education on dietary management, safe physical activity during pregnancy, blood glucose monitoring, fetal well-being monitoring, and collaboration with obstetricians and gynecologists, contributed to the improvement of the mother's condition during the observation period. Evaluations showed a decrease in subjective complaints, better blood glucose control, and stable maternal and fetal conditions with no obstetric complications observed during the monitoring period.

This case study confirms that regular, comprehensive, and collaborative multidisciplinary antenatal care is a crucial component in the management of pregnant women with diabetes mellitus. The role of midwives as primary care providers is crucial for early detection, education, monitoring, and appropriate referrals, all of which contribute to optimal pregnancy outcomes for both mother and baby.

REFERENCES

Ante, D., Friscila, I., Mariana, F., & Haryono, I. A. (2026). Faktor Pengetahuan Dan Sikap Ibu Hamil Terhadap Kunjungan Anc K1 Dan K4 Di Wilayah

- Kerja Puskesmas Murung Pudak. *Proceeding Of Sari Mulia University Midwifery National Seminars*, 1–8.
<https://ocs.unism.ac.id/index.php/PROBID/article/view/1430>
- Apriana, W., Friscila, I., & Kabuhung, E. I. (2021). Hubungan Pengetahuan dan Akses Informasi dengan Tingkat Kecemasan tentang Kehamilan Selama Masa Pandemi Covid-19 pada Ibu Hamil di Wilayah Kerja Poskesdes Mantangai Tengah Kabupaten Kapuas. *Proceeding Of Sari Mulia University Midwifery National Seminars*.
<https://ocs.unism.ac.id/index.php/PROBID/article/view/701>
- Fitriani, A., Mauyah, N., Wahyuni, Y. F., & Friscila, I. (2023). Edukasi Pentingnya Kunjungan ANC Pada Ibu Dengan Media Syair Aceh Di Desa Lancok. *JMM (Jurnal Masyarakat Mandiri)*, 7(5), 5264–5273.
<https://doi.org/https://doi.org/10.31764/jmm.v7i5.17405>
- Harahap, S. A., Harahap, R. S., & Salsabilla, N. (2026). Diabetes Melitus dalam Kehamilan: Diagnosis, Penatalaksanaan, dan Dampaknya terhadap Ibu dan Janin. *Jurnal Pandu Husada*, 7(1), 85–93.
<https://doi.org/10.30596/jph.v7i1.26451>
- Hertati, D., & Stefanicia, S. (2025). Peningkatan Pengetahuan Ibu Hamil Dalam Pemanfaatan Potensi Pangan Lokal Ikan Patin. *Jurnal Perak Malahayati: Pengabdian Kepada Masyarakat*, 7(2), 108–121.
<https://doi.org/10.33024/JPM PKM.V7I2.23716>
- Hutabarat, J. T. (2025). Peran Kepatuhan Kunjungan Antenatal Care Terhadap Komplikasi Kehamilan Di Kota Bandar Lampung. *Nusantara Hasana Journal*, 5(6), 132–146. <https://doi.org/10.59003/nhj.v5i6.1738>
- Idaningsih, A. (2021). Asuhan Kebidanan Kehamilan. In *LovRinz Publishing*. <https://eprints.triatmamulya.ac.id/1483/1/145>. Buku Ajar Asuhan Kebidanan Ibu Hamil.pdf
- Julianti, R., & Zahara, E. (2025). Edukasi Skrining Faktor Resiko Diabetes Melitus Gestasional Dengan Pemeriksaan Gula Darah Pada Ibu Hamil Di Desa Baru Samadua Aceh Selatan. *OPTIMAL: Jurnal Pengabdian Kepada Masyarakat Bidang Ilmu Kebidanan*, 2(2), 64–69.
<https://doi.org/10.5281/zenodo.19688352>
- Kurniawan, B., Priyono, A. F., Putri, C. V., Egiestine, D. P., Waldan, R. A., Susanto, K., Lisa, M., Diandra, N., & Angelina, R. U. (2025). Pengenalan Gestasional Diabetes Melitus Pada Ibu Hamil. *Jurnal Abdimas Kedokteran & Kesehatan*, 3(1), 52–66.
<https://doi.org/10.33024/jakk.v3i1.18995>

- Maimunah, M., Friscila, I., Maolinda, W., & Zulliati, Z. (2023). Efektivitas Terapi Moxa Dan Akupresur Untuk Perubahan Presentasi Janin DI PMB DELIMA WM. *Proceeding of Sari Mulia University Midwifery National Seminars*, 5(01), 106–114.
- Maolinda, W., Mohtar, M. S., Friscila, I., & Hasanah, S. N. (2025). Perbedaan Penggunaan Moxa dan Prenatal Yoga terhadap Perubahan Posisi Janin Abnormal. *Malahayati Nursing Journal*, 7(3), 1071–1077. <https://doi.org/10.33024/MNJ.V7I3.17489>
- Mardiah, A., & Pranoto, H. H. (2023). Asuhan Kebidanan Continuity of Care Pada Ny. L Usia 26 Tahun di PMB Emi Narimawati Pleret Bantul. *Jurnal Ilmiah Multidisiplin*, 2(10), 5029–5041.
- Mega, A., Widiawati, I., Sarawati Handayani, D., Aryuti Nirmala, S., & Dwi Prasetyono, J. (2024). Efforts To Prevent Gestational Diabetes Mellitus Through Preconception Counseling And Nutrition Regulation: Systematic Review. *International Conference On Interprofessional Health Collaboration And Community Empowerment*, 6(1), 87–100. <https://doi.org/10.34011/icihcce.v6i1.311>
- Norani, N., Friscila, I., Anisa, F. N., Fitriani, A., & Hartinah, H. (2024). Media Informasi Tentang Komplementer Pada Masa Kehamilan Di Desa Sigam Kotabaru. *Compromise Journal: Community Proffesional Service Journal*, 2(2), 1–6. <https://doi.org/https://doi.org/10.57213/compromisejournal.v2i2.245>
- Olii, N., Astuti, E. R., Tompunuh, M. M., Ibrahim, F., Podungge, Y., Yulianingsih, E., Temenggung, I., Anjarwati, P., Mahmud, P. A., & Malipi, R. (2024). Skrining Diabetes Melitus Gestasional Melalui Pemeriksaan Glukosa Darah Pada Ibu Hamil. *JMM (Jurnal Masyarakat Mandiri)*, 8(2), 2352–2361. <https://doi.org/10.31764/jmm.v8i2.21327>
- Ridiana, U., Pratamaningtyas, S., Kundarti, F., & Sendra, E. (2025). Hubungan Indeks Massa Tubuh Dengan Kejadian Diabetes Melitus Gestasional Di Wilayah Rumah Sakit Kota Kediri. *Jurnal Ilmu Kesehatan*, 16(1), 1–5. <https://doi.org/10.35966/ilkes.v16i1.422>
- Rositawati, R., Herliani, Y., & Khairiyah, I. ir. (2026). Persepsi Ibu Hamil Trimester I Mengenai Perilaku Deteksi Dini Diabetes Melitus di UPTD Puskesmas Cipedes Kota Tasikmalaya. *Jurnal BIMTAS: Jurnal Kebidanan Umtas*, 10(1), 42–49. <https://doi.org/10.35568/bimtas.v10i1.7868>
- Sitanggang, H. B., & Ananda, D. T. (2025). Determina Kehamilan Resiko

- Tinggi: Systematic Review. *Excellent Midwifery Journal*, 8(1), 268–285.
- Sofais, D. A. R., Rustandi, H., Junika, A., & Susanti, D. (2025). Status Glikemik Ibu, Obesitas, dan Faktor Gaya Hidup sebagai Penentu Risiko Diabetes Gestasional: Perspektif Kesehatan Masyarakat. *Jurnal Manajemen Asuhan Keperawatan*, 10(1), 17–26. <https://doi.org/10.33655/mak.v10i1.239>
- Umar, M. Y., Rohani, S., Fitriana, F., & Sukarni, S. (2025). Penyuluhan Diabetes Gestasional Dan Dampaknya Terhadap Kesehatan Ibu Dan Janin Di Puskesmas Way Halim Bandar Lampung. *Jurnal Pengabdian Kepada Masyarakat Ungu (ABDI KE UNGU)*, 7(5), 208–211. <https://doi.org/10.30604/abdi.v7i3.2208>
- Yulianti, R. E., Friscila, I., Mariana, F., & Lestari, Y. P. (2024). Hubungan Kpelayanan ANC Terpadu Dengan Kepuasan Ibu Hamil di Puskesmas Hikun. *Sari Mulia University Midwifery National Seminars*, 1–10. <https://ocs.unism.ac.id/index.php/PROBID/article/view/1434>