

**EXCELLENT GERMANY NURSING CARE MANAGEMENT FOR
Mrs. S WITH TYPE 2 DIABETES MELLITUS AT THE SOCIAL
SERVICES UPTD FOR THE ELDERLY IN BINJAI NORTH
SUMATRA PROVINCE SOCIAL SERVICES
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ABSTRACT

Type 2 Diabetes Mellitus (T2DM) is a degenerative disease whose prevalence continues to increase from year to year in various countries around the world. This disease is better known by the public as "diabetes" and is characterized by increased blood sugar levels (hyperglycemia) which are fluctuating and tend to persist for a long time, especially after eating. Objective: To provide geriatric nursing care for patients with type 2 diabetes mellitus at the Elderly Service Unit of the Binjai Social Service, North Sumatra Province. Method: This study uses a case study design with a qualitative descriptive approach. Subject: The study used one elderly patient with type 2 diabetes mellitus. Data collection was carried out through various methods, namely interviews, direct observation of the patient's condition, and physical examination to obtain a more accurate picture of the patient's condition. Results: Based on the results of the assessment that has been carried out, four nursing diagnoses were found that can be established, including: Instability of blood glucose levels, Sleep pattern disorders, Skin integrity disorders. Interventions carried out with health education about diabetes mellitus, Teaching diabetes foot exercises, using lotion. Evaluation showed significant improvements in the physical and psychological parameters of patients. Conclusion: Health education carried out can increase success in providing nursing care with diabetes mellitus

Keywords: Social Services, Diabetes Mellitus, Care Management

Introduction

Gerontological nursing is a branch of nursing that focuses on the care of the elderly, with the main goal of maintaining and improving the quality of life, independence and physical, psychological, social and spiritual functions of the elderly (Yan et al., 2022). According to the WHO, health problems frequently experienced by the elderly are hypertension, diabetes mellitus, heart disease, cancer, chronic obstructive pulmonary disease (COPD), arthritis, and stroke. These diseases are the leading causes of death and disability in

the elderly population worldwide (Kusumo, 2021). With the increasing number of health problems in the elderly, the author raises one of the health issues in the elderly, namely type 2 diabetes mellitus. Type 2 diabetes mellitus is a chronic disease that commonly occurs in the elderly and poses a serious challenge in health services. This disease is characterized by impaired glucose metabolism due to insulin resistance or decreased insulin secretion, which can lead to serious complications if not optimally managed (Hossain et al., 2024).

Diabetes is a disease where the body cannot produce or use insulin properly, causing a buildup of glucose in the blood (Yohanes, 2022). In Indonesia, diabetes mellitus with complications is the leading cause of death, reaching 6.7%. Globally, diabetes causes 70% of deaths and more than half of the global disease burden. From the International Diabetes Federation (IDF) data in 2020, the number of people suffering from diabetes mellitus in the SEA (South East Asia) region will increase by 68% from 152 million people in 2045 and the prevalence will increase by 30% to 11.3% in 2045. In 2021 the SEA (South East Asia) region will spend 65.3 billion dollars for diabetes mellitus sufferers, which is a 6.7% share of global expenditure. The Southeast Asia region has the 3rd highest proportion of undiagnosed diabetes with 51.2% and the highest proportion of pregnancies affected by hyperglycemia in the IDF region with 25.9%. Although Southeast Asia is home to 16.8% of the world's diabetes sufferers, diabetes expenditure in this region is only USD 10.1 billion, or 1% of total global expenditure (Tambunan, 2024).

According to 2020 data from the International Diabetes Federation (IDF), the prevalence of diabetes in 2021 reached 10.5%, or 537 million adults, with one in 10 people aged 20-79 years having diabetes worldwide. By 2030, the number of people with diabetes is estimated to reach 643 million (11.3%), and by 2045, the number is projected to increase to 12.2%, or 783 million. According to IDF data, Indonesia ranks 7th for diabetes mellitus with 10 million residents and is estimated that Indonesia will experience an increase and occupy 6th position with a percentage of 16.2 million people experiencing diabetic foot ulcer complications (DFU) in 2040 (Tambunan, 2024). DM is called a silent killer and

some also call it the mother of disease. Chronic complications of diabetes mellitus in Indonesia consist of neuropathy 60%, coronary heart disease 20.5%, diabetic ulcers 15%, retinopathy 10%, and nephropathy 7.1% (Rika Widianita, 2023). Data from the 2018 Basic Health Research (RISKESDAS) from the Ministry of Health shows that the prevalence of diabetes mellitus in Indonesia increased from 6.9% in 2013 to 8.5% in 2018. East Nusa Tenggara (NTT) Province had the lowest prevalence at 0.8%, while Jakarta Province had the highest at 3.4%. According to Riskesdas, the prevalence of diabetes in women was 1.7% higher than in men (1.4%), and the prevalence in urban areas (2.0%) was higher than in rural areas (1.0%). (Ministry of Health, 2018 in Saputri 2020)

In North Sumatra, in 2019, the percentage of people with diabetes mellitus was 249,519, of whom 144,521 received healthcare services. While 104,998 people, or 57.92%, did not seek healthcare services. The increase in cases of Type 2 DM has resulted in an increase in complications experienced by Type 2 Diabetes Mellitus patients, including peripheral neuropathy (foot ulcers) of 10-60% (Simatupang, 2023). Based on the initial survey that the author has conducted at the UPTD for Elderly Social Services in Binjai on March 19, 2025, data was obtained on the number of elderly people at the UPTD for Elderly Social Services in Binjai, as many as 198 elderly people and 16 elderly people were diagnosed with diabetes mellitus who had problems.

Research Method

This research is a descriptive case study that focuses on one particular case, where the researcher begins the research based on descriptive theory. This study aims to explain the research results in

detail, especially in the field of nursing. This Scientific Paper uses a nursing care approach that includes assessment, nursing diagnosis, nursing intervention, nursing implementation and evaluation in the application of nursing care strategies. This Scientific Paper is entitled "Excellent service management of geriatric nursing care for Mrs. S with Type 2 Diabetes Mellitus at the UPTD for Elderly Social Services in Binjai, North Sumatra Province in 2025". This case study was conducted at the UPTD Elderly Services Binjai, North Sumatra Province in 2025. The implementation time of Nursing Care Management for Mrs. S with Type 2 Diabetes Mellitus was from March 24-27, 2025 and April 8-9, 2025. The subject of this case is Mrs. S with Type 2 Diabetes Mellitus who lives in the Lotus Guesthouse, UPTD Social Services for the Elderly, Binjai.

Data analysis in this study was conducted descriptively based on the principles of nursing care management. The data collection process began with interviews and observations, which were then analyzed using data reduction techniques to filter information relevant to nursing care needs. This stage aims to formulate appropriate nursing interventions for elderly people with type 2 diabetes mellitus and support the nursing implementation process. In this case study, the instrument used in data collection was a nursing care format for the elderly that complies with applicable standards, including the stages of assessment, nursing diagnosis, nursing intervention, nursing implementation, evaluation, and documentation.

Result

Mrs. S is a 63-year-old woman of Javanese descent and a Muslim. Her highest education was junior high school.

Information regarding her health condition was obtained directly from the patient. Currently, the patient is diagnosed with type 2 diabetes mellitus. The main complaints experienced by Mrs. S include weakness, frequent urination, drowsiness, itching in both hands and feet, cramps, frequent thirst, excessive drinking, dizziness, flu, and excessive sweating. Vital examination showed BP 150/85 mmHg, HR 87x/i, RR 22x/i, KGDS 299 mg/dl and fasting blood glucose 143 mg/dl. These complaints appeared intermittently for 3 days and were triggered by genetic factors and obesity. The patient's efforts to reduce the complaints were by resting and regularly taking metformin twice a day as recommended by the doctor. Mrs. S entered the nursing home on June 24, 2024 of her own free will.

Based on the assessment results, Mrs. S's mental status was found to be well maintained, with orientation to time, person, and place. The patient's memory was also classified as good, indicated by her ability to recognize basic information accurately. Eye contact during the interview was good, indicating attention and engagement. The patient's affect was stable, with no signs of emotional disturbance such as anxiety or depression. An assessment of functional status indicated that Mrs. S was in the independent category. She was able to perform various basic daily activities independently, including bathing, dressing, using the toilet, controlling continence, changing positions, and eating without assistance. The overall level of independence of the elderly can be categorized as good.

Nursing Diagnosis (a) Instable blood glucose levels related to impaired blood glucose tolerance, as evidenced by the patient's frequent thirst, frequent urination, leg cramps, dizziness, fatigue, drowsiness, weakness and lethargy, blurred vision, and a random blood glucose level of 299 mg/dl. (b) Disturbed sleep patterns related to lack of sleep control, as evidenced by the patient's report of only sleeping 4 hours a night, waking up 1-2 times to urinate, and difficulty falling back to sleep. (c) Impaired skin integrity related to changes in pigmentation, as evidenced by the patient's report of itching on both hands and feet, and the patient's skin showing blackish scratch scars. Blood glucose level of 299 mg/dl.

Implementation Wednesday, March 26, 2025 Unstable blood glucose levels related to impaired blood glucose tolerance (1) Identify possible causes of hyperglycemia by monitoring the patient's intake and activity patterns. (2) Monitor blood glucose levels by checking the patient's daily blood glucose level. Blood glucose level is 299 mg/dl. (3) Teach dietary compliance by providing direct education using leaflets on the importance of diet in diabetes management. (4) Teach diabetic foot exercises directly using simple foot exercises performed at least twice daily for 10-15 minutes. Wednesday, March 26, 2025 Disturbed sleep patterns related to lack of sleep control 1. Identify activity and sleep patterns by scheduling the patient's daily activities and reducing cell phone use. (bedtime at 9:00 PM WIB, wake up at 5:30 AM WIB for prayer). 2. Identify factors that disrupt sleep (the patient's sleep is disturbed due to heat and frequent urination). 3. Identify foods and drinks that disrupt sleep. By reducing

water consumption before bedtime. 4. Modifying the environment by using fans to reduce nighttime heat. 5. Limiting nap time to activities such as gardening and socializing with friends at the shelter. 6. Establishing a regular sleep schedule (only one hour nap from 2:00 PM to 3:00 PM) and a nighttime sleep schedule from 9:00 PM to 5:00 AM. Wednesday, March 26, 2025 Impaired Skin Integrity related to changes in pigmentation 1. Identify the cause of impaired skin integrity by assessing the overall skin condition: darkening of the skin, moisture (dry skin), and the presence of scars from scratches and abrasions, which are caused by systemic conditions such as diabetes. 2. Recommend using moisturizer after bathing and before bed to maintain skin moisture and prevent damage.

At this stage, the nurse conducts an evaluation based on the objectives, outcome criteria of the intervention, and the achievement of each nursing action that has been carried out. The evaluation is carried out on the implementation of the intervention for three days, by assessing the progress and results of each established nursing diagnosis. In the first nursing diagnosis, the evaluation on the last day, the client stated that thirst and urination were reduced and the patient understood how to do diabetic foot exercises and did them every day for 10-15 minutes. In the second nursing diagnosis, the evaluation on the last day, the patient stated that he was able to sleep at night because he had controlled his activity patterns and limited naps. The patient no longer yawned and looked fresh. In the third nursing diagnosis, the evaluation on the last day, the patient stated that his feet and hands were no longer itchy and the blackness on the patient's skin appeared to have reduced.

Discussion

Based on theory, data collection in nursing care is carried out through interviews, observations, and examinations covering various aspects such as physical, mental, social, and spiritual. The theoretical assessment format includes complete patient identity data, including name, address, age, educational history, employment, religion, ethnicity, and functional status (Bima, 2024). In the context of geriatric nursing, assessment of the elderly also includes a comprehensive physical examination, and the geriatric assessment includes a mental status assessment, which is an assessment of the psychological condition of the elderly to determine mental disorders such as disorientation, confusion, or mood swings. The KATZ index functional assessment is used to assess the elderly's ability to perform basic daily living (ADL) (A Sembiring, 2024). Cognitive/affective status assessments include the Short Portable Mental Status (SPMSQ) to detect mild to moderate cognitive impairment. The Mini Mental State Exam (MMSE) is used to assess the elderly's overall cognitive function, including orientation to time/place, attention, memory, language, and calculation (Bima, 2024).

The Beck Depression Inventory (IDB) is an instrument for identifying levels of depression in the elderly through a series of statements describing mood, negative thoughts, and physical symptoms. This assessment provides baseline data for discussion with the healthcare team in planning nursing care (Basuki, 2024). Furthermore, this approach provides an opportunity for the elderly to speak and convey their feelings, both physically and emotionally. The link between the theoretical assessment format and the assessment practice conducted by the author on Mrs. S appears highly relevant.

In its implementation, the author provides space for the patient to communicate openly. This allows in-depth information gathering, especially regarding the patient's mental and cognitive condition (Basuki, 2024). Nursing diagnoses for patients with diabetes mellitus are theoretically established according to (Khoirunnisa et al., 2023) as follows: (1) Instable blood glucose levels related to hyperglycemia. (2) Acute pain related to physiological injuring agents. (3) Impaired skin integrity related to peripheral neuropathy (L Simanjuntak, DR Sari, 2024).

During the assessment of Mrs. Based on the patient's signs and symptoms, a nursing diagnosis was obtained based on the 2017 Indonesian Nursing Diagnosis Standards (SDKI) : (1) Instable blood glucose levels related to impaired blood glucose tolerance, as evidenced by the patient's frequent thirst, frequent urination, leg cramps, dizziness, fatigue, and weakness and lethargy. Random blood glucose level: 299 mg/dl. (2) Disturbed sleep patterns related to lack of sleep control, as evidenced by the patient's reported sleep duration of only 4 hours, frequent waking to urinate, and difficulty falling back to sleep. (3) Impaired skin integrity related to changes in pigmentation, as evidenced by the patient's report of itching on both hands and feet, and the presence of blackish scratch marks on the patient's skin. Blood glucose level: 299 mg/dl.

In the nursing implementation stage, the nurse implemented the intervention plan that had been designed for Mrs. S for 3 days, Mrs. S received interventions that focused on completing the three nursing diagnoses. The main intervention provided was diabetic foot exercises, which have the benefits of (1) Improving blood circulation to help

smooth blood flow to the lower extremities, thereby preventing ischemia and complications of diabetic foot wounds. (2) Reducing the risk of peripheral neuropathy, this exercise stimulates the nerves and muscles of the feet, reducing numbness, tingling and pain due to peripheral nerve damage (Wijayanti, 2023). (3) Improving mobility and balance, helping to maintain muscle strength, joint flexibility, and body coordination, thereby reducing the risk of falls in the elderly. (4) Controlling blood glucose levels, light activities such as foot exercises can help lower blood glucose levels by increasing metabolism. (5) Providing quality of life, which provides a sense of relaxation, increases independence, and supports the overall mental health of the elderly (Candra Dinata et al., 2024)

Conclusion and Suggestion

Based on a case study of nursing care for Mrs. S, a patient with type 2 diabetes mellitus at Wisma Teratai, the Binjai Elderly Social Services Unit (UPTD), the author can draw the following conclusions: The assessment results for Mrs. S, a patient with type 2 diabetes mellitus, revealed a blood glucose level of 299 mg/dl, a fasting blood glucose level of 143 mg/dl. She complained of frequent thirst, frequent urination, weakness, drowsiness, itching of both hands and feet, dizziness, flu-like symptoms, sweating, and BP: 150/85 mmHg, HR: 87 x/i, RR: 22 x/i. The nursing diagnoses identified for Mrs. S with diabetes mellitus in this case are: a. Instable blood sugar levels related to impaired blood glucose tolerance. b. Disturbed sleep patterns related to lack of sleep control. c. Impaired skin integrity related to changes in pigmentation

Nursing interventions were developed using the SIKI (2017) guidelines developed by the author. The intervention performed on Mrs. S was Diabetic Foot Exercises. The nursing implementation provided to Mrs. S was in accordance with the nursing interventions mentioned above and met the needs of patients with type 2 diabetes mellitus. Evaluation results of Mrs. S after the implementation of nursing care for a patient experiencing unstable blood glucose levels that were not resolved because glucose levels were within abnormal limits.

Suggestion For Nursing Students

The researcher hopes that the results of this study will broaden horizons and provide learning experiences in the field, while also increasing the author's knowledge and understanding of nursing care for elderly patients with type 2 diabetes mellitus. Students are expected to use diabetic foot exercise exercises as a therapy to improve peripheral vascularization in DM patients. This is expected to help them provide better and more appropriate nursing care. For Educational Institutions The author hopes that educational institutions can provide accurate, comprehensive, and easily accessible information to students. Furthermore, it is strongly recommended that institutions provide access to scientific journals and the latest research results in the health sector, particularly those related to the care of patients with type 2 diabetes mellitus and the benefits of foot exercises in improving peripheral circulation. This will be an important source of knowledge supporting the development of competency and the quality of nursing services. For the Binjai Elderly Social Services Unit The Binjai Elderly Services Unit is recommended to establish a policy that ensures that every DM patient receives

structured and intensive exercise education, both in groups and individually. This step is crucial to prevent complications, given that DM is a chronic condition that requires special attention.

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