

The Effectiveness of Discharge Planning Implementation in Diabetes Mellitus Patient to Improve Patient's Discharge Readiness

Dwi Nanda Pratiwi¹, Kholid Rosyidi Muhammad Nur¹, Nurfika Asmaningrum¹, Gede Darmawan Puthro²

¹ Faculty of Nursing, Universitas Jember, Indonesia

² Bali Mandara Hospital, Indonesia

Correspondence should be addressed to:

Dwi Nanda Pratiwi

dwinandapратиwi01@gmail.com

Abstract:

Diabetes mellitus sufferers experience disturbances in the system of regulating blood sugar levels, insulin is not sufficient to cope so that blood sugar levels increase. This causes patients to require long-term care, so they must be given discharge planning. This research aims to analyze the effectiveness of implementing discharge planning in diabetes mellitus patients to increase patient readiness to go home in the Cempaka Room at Bali Mandara Hospital. The research method used univariate descriptive analysis, and the sample used was in accordance with predetermined inclusion and exclusion criteria and then one respondent was selected. The research results showed that a 61-year-old patient with a diagnosis of diabetes mellitus who met the criteria was given discharge planning and measured using the adult Indonesian version of the patient discharge readiness scale instrument. The pre-test results showed that the patient's readiness level for discharge was 49.52% with a total score of 104 (level II). After implementing discharge planning, the level of patient readiness for discharge increased to 64.28% with a total score of 135 (level III). The implementation of patient discharge planning has proven to be effective in increasing patient discharge readiness, as evidenced by an increase in patient discharge readiness from level II to level III. Therefore, in providing nursing care, it is necessary to pay attention to the patient's detailed needs and fulfill them by implementing discharge planning so that patients have a good level of readiness to go home to reduce recurrence, complications, and patient readmissions.

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INTRODUCTION

Damage to the pancreas, which produces the hormone insulin, can lead to increased blood sugar levels, indicating the presence of the degenerative condition known as diabetes mellitus. This carbohydrate, fat, and protein metabolism disruption can cause various health issues and complications (Irwan, 2016; Kurniyawan et al., 2023). Diabetes mellitus is one of the non-communicable diseases that many people suffer from. Based on data from the International Diabetes Federation (IDF), the number of people with diabetes worldwide in 2021 will reach 537 million. This figure is projected to increase further in 2030 to 643 million; in 2045, it will reach 783 million. IDF data also shows that Indonesia is in fifth place with the highest number of people with diabetes, namely 19.5 million in 2021 (IDF, 2022). Bali Province has a large number of diabetes mellitus sufferers; namely, in 2020, it reached 52,282 sufferers (Dinkes, 2021). Diabetes mellitus, especially type 2, is included in the top 10 diseases treated at Bali Mandara Hospital, with a prevalence in 2023 of 84 outpatient cases and also 84 inpatient cases (RSBM, 2023).

People with DM often experience acute and chronic complications that can be life-threatening. All parties must be involved in preventing and managing DM, a disease that impacts the quality of human resources and increases health costs. As a nurse, one of your key responsibilities is discharge planning, a vital aspect of your caregiving role. Discharge planning begins when the patient receives medical services and continues by providing information about post-discharge medical needs and self-care at home, ensuring treatment continuity until the patient is ready to return home (Rofi'i, 2022; Rizqullah, et al., 2023). Implementing discharge planning can improve follow-up care, prevent recurrence, improve the quality of care, and help patients achieve quality of life (Rosya et al., 2020; Kurniyawan et al., 2023). In diabetes mellitus patients, long-term plans must be made for ongoing needs, monitoring and managing the condition, and who is responsible for the interventions chosen (Doenges et al., 2019).

However, the discharge planning by PPA has not been implemented optimally. Based on a preliminary study, an assessment was carried out regarding nurses' knowledge about discharge planning; as many as 10 nurses (50%) had insufficient knowledge, which impacted the implementation of discharge planning. Suppose the implementation of discharge planning is not good. In that case, the goal of providing discharge planning cannot be fully achieved. Hence, the patient is not yet ready to go home and can experience readmissions, relapses, increasing knowledge, and others (Wahyuningsih et al., 2023; Dinda, et al., 2022). Based on this description, researchers are interested in analyzing the application of discharge planning, especially in diabetes mellitus patients in the Cempaka Room at Bali Mandara Hospital, so that it is hoped that this can be used as evaluation material to improve the quality of the application of discharge planning.

STUDY DESIGN

This research used a descriptive design and a case study on one patient diagnosed with diabetes mellitus in the Cempaka room of the Bali Mandara Hospital. The research was carried out on 10-16 March 2024. The population and research sample consisted of 4 diabetes mellitus patients treated in the Cempaka Room RSBM from 26 February to 23 March 2024, and 1 of them underwent an assessment and discharge planning. The research instrument uses the adult Indonesian version of the patient discharge readiness scale to measure the level of patient readiness pre-and post-implementation of discharge planning. The ethical considerations in this research, including providing informed consent, maintaining confidentiality, ensuring fairness, and expediting the process, were rigorously adhered to.

PATIENT INFORMATION

Mrs. S (61 years old) was admitted to the RSBM emergency room at 18.00 WITA (5/3/2024) and then transferred to the HCU room to receive treatment with closer supervision. The patient was transferred to the Cempaka Room on March 9, 2024, at 17.20 WITA. An assessment was carried out on the patient with the results of vital signs: blood pressure 114/92 mmHg, pulse 101x/minute, RR 24x/minute, SpO₂ 95% with NC 2 pm, complaining of shortness of breath, coughing, frequent urination, mouth feels dry and often thirsty, feet ache, wounds and edema +1. The patient had a history of pulmonary tuberculosis 10 years ago and Covid-19 4 years ago. The patient was also hospitalized several times due to the shortness of breath she felt. Before entering RSBM, the patient was treated at Sanjiwani Hospital for 2 weeks, went home for 1 day, and was admitted to the Emergency Room (ER) at Kasih Ibu Saba Hospital due to recurrent shortness of

breath and was referred to the RSBM ER. The patient's father has a history of diabetes mellitus. Meanwhile, the patient knew she had diabetes mellitus when she entered RSBM.

CLINICAL FINDINGS

In this study, the patient's medical diagnosis was diabetes mellitus. When entering the Cempaka Room RSBM, the patient was identified and entered the criteria for discharge planning because the patient was elderly and needed help to continue therapy and continuous care because he had diabetes mellitus. Apart from that, the patient has a history of re-hospitalization because this month, she has been in the emergency room 3 times, thus strengthening that the patient needs discharge planning. In addition, the patient was given the Readiness for Hospital Discharge Scale-Indonesian version questionnaire and a total score was found to be 104, which means the patient was at readiness level II. This means that the patient has the desire to go home but cannot yet care for himself and manage the disease. Therefore, it is necessary to carry out discharge planning to increase the patient's readiness to return home.

THERAPEUTIC INTERVENTION

Patients whose discharge readiness scale is still lacking are given the implementation of discharge planning, which is integrated into nursing care. The patient underwent a detailed needs assessment using discharge planning. It was found that the patient needed knowledge about the disease, signs and symptoms of the disease, complications, follow-up on disease management while in hospital, medicines consumed, especially at home, patient self-care, wound care, diet, control schedule, and non-pharmacological management that can be done at home.

The nursing diagnoses were ineffective breathing patterns, instability of blood glucose levels, and ineffective peripheral perfusion diagnoses. Based on the diagnosis of an ineffective breathing pattern, nursing intervention, namely airway management, results in an improved breathing pattern. Another diagnosis was instability of blood glucose levels, which was given hyperglycemia management intervention with the nursing outcome of increased stability of blood glucose levels.

The diagnosis of ineffective peripheral perfusion was also confirmed with circulation care interventions, and peripheral perfusion outcomes improved. Implementation is carried out for 7 days by implementing the predetermined treatment plan and providing health education toward discharge planning. The patient was evaluated every day, and on the seventh day, it was found that the nursing problem had been resolved and the patient had gained a comprehensive understanding and skills according to his needs. After being given the implementation of discharge planning, the patient's level of readiness for discharge is reviewed.

RESULT

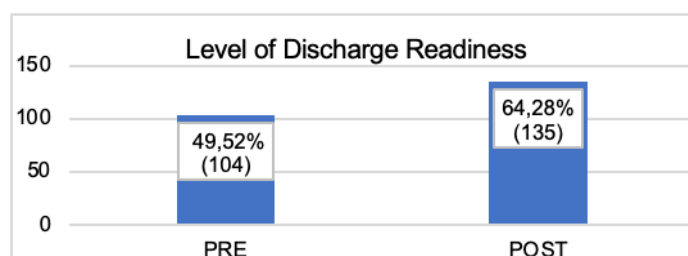


Figure 1. Comparison of Discharge Readiness Levels Pre and Post Discharge Planning

From measuring the patient's discharge readiness, a total score of 135 was obtained, which means that after being given discharge planning, the patient was at discharge readiness level III. At this level, the patient already can carry out self-care, so the patient's readiness to go home increases from level II to level III.

DISCUSSION

Case Description

Nursing Assessment

During the assessment, they identified significant symptoms in patients that are often associated with diabetes mellitus. The patient was experiencing frequent thirst (polydipsia), frequent urination (polyuria), and fatigue. Additionally, the patient had lost weight from 48 kg to 45 kg without a clear cause. These symptoms are typical in diabetes mellitus sufferers. The patient also often felt hungry, which is another common symptom of diabetes mellitus (Alfaqih et al., 2022). The client also experienced diabetic foot, where his feet were swollen +1 and some wounds took a long time to heal. This is a complication of diabetes mellitus which is caused by damage to blood vessels and nerves and minimal blood flow to the feet. High blood sugar conditions also cause bacteria and fungi to multiply easily, decreasing the body's ability to heal itself. In reviewing the case of Mrs. S, the researcher found that there was a hereditary factor in the incidence of diabetes mellitus, namely from the client's father. Heredity is a risk factor for type 2 DM along with obesity (Febrinasari et al., 2020). A person who has a hereditary history of DM has a 2.4 times greater risk of suffering from DM compared to someone who does not have a hereditary history. This condition will be made worse if you do not maintain your lifestyle (Yusnanda et al., 2019).

Nursing Diagnoses

The nursing diagnoses were made were 3 diagnoses with priority diagnoses, namely ineffective breathing pattern related to difficulty breathing because the client experienced shortness of breath, tachypnea breathing 24x/minute, prolonged expiratory phase, and the use of assistive breathing muscles. This condition is suspected due to suspected pulmonary TB. The following diagnosis is instability of blood glucose levels, arising from subjective data such as the client feeling often tired and lethargic, the mouth feeling dry, and often thirsty. Apart from that, based on the assessment, objective data was obtained that the client had urinated 3 times/8 hours and had fasting blood sugar of 156 mg/dL. The client's previous blood sugar was normal, namely 127 mg/dL. This shows instability in the client's blood glucose levels, supported by data that correspond to major and minor data. Based on these adjustments, a diagnosis of unstable blood glucose levels related to insulin resistance was made (Andriani & Hasanah, 2023). The third diagnosis in Mrs. S was ineffective peripheral perfusion related to hyperglycemia because objective data found that the client's CRT was >3 seconds, cold acral, pale skin color, decreased skin turgor, and leg edema +1. This happens because the client has diabetic foot, where blood glucose levels are high, causing narrowing of the blood vessels and obstructing blood flow around the wound (Amrie, 2021).

Nursing Intervention

The nursing intervention given to Mrs. S, namely the priority diagnosis of ineffective breathing pattern with the criteria of results after 4 x 24 hours, it is hoped that the breathing pattern will improve with the criteria of dyspnea and lengthening of the expiratory phase will decrease and

breathing frequency will improve. Clients are given airway management intervention, which is the main intervention. This is in accordance with the theory because the client experiences a condition of incomplete lung expansion due to parts of the lung that do not contain air or have collapsed, so the patient requires adequate oxygenation. In addition, with non-pharmacological therapy, the semi-Fowler position has been proven to increase oxygen saturation and reduce respiratory frequency (Prasetyowati, 2023).

Patient Mrs. S with diabetes mellitus is also given hyperglycemia management to improve blood sugar levels so that they are within the normal range. Patients are also given education, including monitoring blood glucose levels independently, diet, and managing diabetes with insulin and medication. In addition, clients are given education regarding knowledge about disease, signs and symptoms of disease, complications, follow-up disease management while in hospital, medicines consumed especially at home, patient self-care, wound care, control schedules, and non-medical management pharmacology that can be done at home according to the results of the assessment using discharge planning. Patient Mrs. S with diabetic foot problems, is also given circulation care interventions by preventing infection and caring for feet and nails as well as education, including exercise recommendations, checking bath water temperature, skincare, and diet. Foot care has been proven to improve peripheral blood circulation in people with type 2 diabetes mellitus (Adam & Isytiaroh, 2021).

Nursing Implementation

Nursing implementation will start from March 11, 2024, to March 16, 2024, in accordance with the plans that have been made. Implementation is carried out according to predetermined nursing interventions, including observation, therapy, education, and collaboration (PPNI, 2018). The implementation of nursing care is carried out every day in accordance with student services, which Cempaka Room nurses accompany. Implementation is carried out by actively inviting patients and families to understand better the care provided using leaflet media. This is because using leaflet media as an application for discharge planning can increase the patient's readiness to go home because it is related to the value of the patient's needs and desires, which have been studied and evaluated and which have been fulfilled so that the patient is able to understand the illnesses and problems that may arise at home (Aisyah et al., 2023).

Nursing Evaluation

Nursing evaluations are carried out every day summatively and formatively. Evaluations are written in SOAP format to document client progress records, which include subjective, objective data, assessment, and ongoing planning. Evaluation on the last day found that Mrs. S has conditions in line with expectations based on the output standards that have been set. When diagnosed with an ineffective breathing pattern, the client is not short of breath, the expiratory phase and breathing frequency improve. Apart from that, Mrs. S with diabetes mellitus also received an evaluation that the symptoms had subsided and were controlled, so the intervention was stopped. On this last day, the patient's readiness to return home was also assessed.

Effectiveness of Implementing Discharge Planning to Increase Patient Discharge Readiness

Based on the adult version of the patient discharge readiness scale or the Indonesian Readiness for Hospital Discharge Scale (RHDS) questionnaire, it can be seen that the patient is at readiness level II with a score of 104, which means that the patient does not have the ability but has the desire to go home. Patients are at level II readiness because they do not yet have abilities such as the physical ability to care for themselves, knowledge about caring for themselves after

going home, taking care of medical needs after going home, limitations that are permitted and not permitted to be carried out, and so on which are still lacking and needs to be improved. Therefore, patients are implemented with discharge planning, which is integrated with nursing care, in which health education is provided regarding the necessary needs based on the identification that has been carried out. After 7 days of treatment, the patient is assessed for their readiness to return home.

After taking measurements on the last day, the results showed that there was an increase in patient readiness to return home from those who were given a score of 104 before being given discharge planning at readiness level II, which increased to a score of 135, which means they were at readiness level III after being given discharge planning to patients which was integrated with nursing care during those 7 days. Discharge planning is implemented from when the patient enters, during treatment, and until the patient goes home. This aims to minimize patient care days and treatment costs. This increase in readiness for discharge is due to an increase in the patient's ability to care for themselves because they have gained knowledge about independent self-care and experienced an increased quality of life (Li et al., 2024).

In implementing discharge planning, not only is the patient prepared, but the patient and family are prepared physically, psychologically, and socially to be independent, able to continue ongoing care for the patient, able to take care of referrals, maintain current health, and improve health with knowledge and skills. already owned (Aisyah et al., 2023). Providing discharge planning to diabetes mellitus patients is carried out by students and nurses in the Cempaka Room based on the discharge planning format of the Bali Mandara Hospital. The discharge planning form used does not follow the discharge planning form based on the Decree of the Indonesian Ministry of Health HK.01.07/Menkes/1128/2022, which consists of 2 forms: A and B. The form used at RSBM is only form B, which consists of patient criteria and their needs. Meanwhile, form A, which contains screening, assessment, problem-risk identification, and patient service management planning, still needs to be created.

The process of implementing discharge planning in the Cempaka RSBM Room is still rarely carried out because the discharge planning form is not included in the files provided by outpatient admissions and is kept separately in the room so nurses often forget and are supported by the habit of providing discharge planning only verbally when the patient will go home and has not yet been documented. Based on observations, discharge planning is limited to room orientation when the patient first enters, providing information about the doctor and the treatment to be carried out, administering medication during treatment, and a summary of the patient's discharge. In this case, the patient's needs have yet to be assessed in detail, such as the knowledge and skills needed to care for themselves so that when they are at home, the patient can carry out care independently.

Discharge planning is provided to all patients who meet the established criteria, such as elderly patients (> 60 years) with memory problems, LBW babies, patients with limited/impaired mobility, patients who need help to continue ongoing therapy and care, and Patients who need help with daily activities. Even though there are patient criteria listed at the nurse station, discharge planning is not implemented due to the culture of implementing discharge planning only in the form of a brief resume of patients returning home in the form of a control schedule, medication that needs to be taken, and diet. The implementation of discharge planning, which is not yet optimal, can be influenced by nurses' performance factors, which are divided into individual and psychological factors. These individual factors include age, gender, education level, marital status, length of work, and psychological factors such as nurses' attitudes and motivation in implementing discharge planning (Irmawati et al., 2021).

Diabetes mellitus patients need care with collaboration between professional care providers and families to help manage. Implementing discharge planning is necessary to help patients achieve recovery, minimize the length of hospital treatment so that costs are lower, avoid disease complications, and understand home management, which can be measured by the patient's readiness to go home. A structured discharge readiness assessment incorporating the patient's perspective into care practices can reduce the high rate of patients returning to the hospital after discharge (Weiss et al., 2019).

CONCLUSION

Based on the results of the implementation and analysis of integrated discharge planning in nursing care services provided to diabetes mellitus patients who have a history of readmissions 3 times a month, the results obtained are that providing nursing care to patients with diabetes mellitus by the nursing process including assessment, diagnosis, intervention, implementation and nursing evaluation.

Effective discharge planning was implemented to increase patient discharge readiness, as evidenced by increased discharge readiness from levels II to III. Therefore, in providing nursing care, it is necessary to pay attention to the patient's detailed needs and fulfill them by implementing discharge planning so that patients have a good level of readiness to go home to reduce recurrence, complications, and patient readmissions.

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CONFLICT OF INTEREST

This research process has no conflict of interest until the article is reviewed.

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