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Analysis of Discharge Planning Implementation for Improving Knowledge Level on Typhoid Fever Patients in Hospital Settings

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Abstract:
Discharge planning is essential for providing special education or training to patients and their families when a patient is admitted to the hospital and prepares for discharge. It is a crucial part of nursing care that requires collaboration across multiple disciplines. The goal of discharge planning is to facilitate communication between nurses and patients, enabling the provision of procedures for managing and preventing diseases at home. Typhoid fever, an endemic infectious disease, necessitates continued care and treatment. The ability of nurses to effectively implement discharge planning significantly enhances families' understanding and capacity to care for patients with typhoid fever. This study analyzes the implementation of discharge planning for patients with typhoid fever at Treatment Room D of Kaliwates General Hospital in Jember. This case report examines the discharge planning process for these patients. To assess changes in understanding disease prevention, the study measured patients' knowledge before and after implementing discharge planning using a questionnaire on understanding typhoid disease. The results indicate that implementing discharge planning effectively improves patients' understanding of disease prevention related to typhoid fever. Before discharge planning was instituted, patients scored an average of 50% on the pretest regarding their knowledge. After the discharge planning was carried out, the posttest score increased to 90%. This demonstrates that providing discharge planning to families and patients significantly enhances their knowledge about typhoid fever.

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INTRODUCTION

Discharge planning is an integral component of the nursing care continuum, encompassing a systematic and coordinated process that begins upon patient admission and extends through to the transition back home or to another care setting (Rameli & Rajendran, 2022). It is designed to ensure that patients receive comprehensive support during this critical phase, minimizing the risk of complications and readmissions. Effective discharge planning involves an early assessment of patient needs, the development of individualized care plans, patient and family education, and the coordination of post-discharge services to ensure a seamless transition of care. When appropriately implemented, it serves as a bridge between hospital-based care and community self-management (Gledhill et al., 2023; Dinda et al., 2022).

In the context of infectious diseases such as typhoid fever, which is caused by Salmonella typhi, the importance of structured discharge planning becomes even more pronounced (Lyutsova et al., 2025). Typhoid fever presents with symptoms including prolonged high fever, abdominal pain, headache, and gastrointestinal disturbances, and if inadequately managed, can lead to severe complications such as intestinal perforation or sepsis. Given its public health significance, particularly

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in resource-limited settings, ensuring that patients fully understand their condition and post-treatment care is vital for recovery and prevention of transmission (Mahmoud et al., 2023).

One of the key objectives of discharge planning is to enhance the patient's and family's knowledge about the disease, treatment regimen, warning signs of complications, and preventive measures (Sudrajat et al., 2021; Pratiwi et al., 2024). This educational aspect empowers patients to take an active role in their recovery and promotes adherence to medical recommendations after leaving the hospital environment. Knowledge acquisition through structured teaching sessions during hospitalization enables patients to make informed decisions regarding diet, medication compliance, hygiene practices, and follow-up appointments (Trivedi et al., 2023).

Despite its recognized benefits, the implementation of discharge planning in many healthcare settings remains suboptimal. In practice, it is often delayed until the day of discharge, limiting the time available for effective teaching and assessment of understanding (Ibrahim et al., 2022; Puspita et al., 2024). Moreover, there is often insufficient involvement of patients and their families in the planning process, which reduces the relevance and retention of the information provided. These shortcomings can undermine the potential impact of discharge planning on patient outcomes, particularly for conditions such as typhoid fever that necessitate specific lifestyle and behavioral modifications (Provencher et al., 2021; Rizqullah et al., 2023).

Furthermore, while numerous studies have explored discharge planning across various medical conditions, there is limited research focusing specifically on its application and effectiveness for patients with typhoid fever. This gap in the literature underscores the need for targeted investigations into how tailored discharge education programs can impact patients' knowledge levels and subsequent health behaviors (Tuna & Pakyüz, 2022). Understanding the unique educational needs of typhoid patients—such as dietary restrictions, adherence to antibiotics, and sanitation practices—is essential for designing effective interventions (Tharwani et al., 2022).

This study aims to analyze the implementation of discharge planning for patients with typhoid fever in a hospital setting, with a particular focus on its role in enhancing patient knowledge and understanding. By examining current practices, identifying barriers, and evaluating the extent of patient education delivery, the research seeks to determine how discharge planning can be optimized to enhance understanding of disease management. The findings are expected to contribute valuable insights for nurses and healthcare providers involved in patient education and transitional care (Barbosa et al., 2023).

Ultimately, strengthening discharge planning processes can lead to better-informed patients, improved self-care practices, and reduced rates of relapse or complications (Shamim et al., 2025). For typhoid fever, where community awareness and personal hygiene play crucial roles in control and prevention, elevating patient knowledge through systematic discharge education is not only beneficial but necessary (Okyere et al., 2024). This study highlights the crucial role of nurses in leading and coordinating discharge planning efforts to ensure safer and more effective transitions from hospital to home.

STUDY DESIGN

This case study investigates a problem through a single-unit case. The purpose of the case report is to describe the clinical manifestations, clinical course, and prognosis. In this study, researchers analyzed and evaluated the implementation of discharge planning in patients with typhoid fever. The participant in this case study was a patient (Mrs. Y) diagnosed with typhoid fever. The data collection instrument consisted of a nursing care assessment form, a respondent characteristic sheet, and a questionnaire assessing knowledge of typhoid fever. The data collection

process begins with the researcher obtaining permission from the room's head to conduct the research. After that, the sampling criteria and research focus were discussed and finalized with the clinical and academic supervisors. The selected participants were then informed of the study procedures and given informed consent forms to obtain their consent. The study was conducted during the initial admission of new patients at a public hospital in Kaliwates, Jember.

The implementation of discharge planning for a 4-day care period was carried out three times, with each session lasting approximately 15 minutes, namely at the beginning of the patient's hospitalization, the day before discharge, and the day of discharge. Initially, the patient was assessed regarding physical, cognitive, and emotional needs, and the nursing plan was determined to be implemented. Participants were also given a questionnaire to assess their basic knowledge about typhoid fever. Furthermore, the day before discharge, participants were provided with information about physical arrangements to meet patient needs and receive health education after hospitalization through leaflet media. After that, on the day of discharge, they explained the discharge process, prescribed medications according to the doctor's orders, evaluated the patient's readiness to go home, addressed the patient's return needs, and reassessed the patient's knowledge using a questionnaire to assess their understanding of typhoid fever.

Data processing began with documenting primary data obtained through interviews and observations related to the patient, covering the entire nursing care process from assessment to evaluation. Additionally, researchers included relevant secondary data from the patient's medical records. To evaluate the effectiveness of discharge planning, researchers conducted a comparative analysis of knowledge scores before and after the application of discharge planning. This study was a case study, so a formal submission for ethical review was not made. Nonetheless, this study strictly adhered to ethical guidelines to ensure the rights and privacy of participants. Informed consent was obtained from participants, including Mrs.S's patients. Participants were provided with complete information about the study's purpose, procedures, and data management.

This study received ethical approval from the Faculty of Nursing, University of Jember, ensuring that all research procedures adhered to ethical standards in accordance with national and institutional guidelines for the protection of human subjects. Prior to data collection, informed consent was obtained from all participants, ensuring their voluntary participation, the confidentiality of their information, and the right to withdraw at any stage of the study. The ethical clearance underscores the researchers' commitment to upholding integrity, respect, and fairness throughout the research process.

PATIENT INFORMATION

The patient, referred to as Mrs. Y, is a 23-year-old woman who was admitted to Kaliwates General Hospital, Jember, on Thursday, October 17, 2024, through the emergency room with a diagnosis of typhoid fever. The patient previously said she had never had a history of the same disease.

CLINICAL FINDINGS

Initial examination on admission revealed that the patient was conscious and oriented, with a Glasgow Coma Scale score of E4V5M6, blood pressure of 90/60 mmHg, a temperature of 39°C, a pulse of 92 beats/min, and a respiratory rate of 20 breaths/min. Tubex examination showed a positive Salmonella score of 4, indicating active typhoid infection. There was no family history of similar illness, and the patient had no drug allergies. Evaluation using the discharge planning knowledge

level questionnaire revealed that the patient answered only 5 out of 10 questions correctly. The assessment revealed a lack of knowledge regarding the disease experienced. Based on these findings, it can be concluded that patients do not have an optimal understanding of their knowledge, disease management, and required follow-up.

THERAPEUTIC INTERVENTION

This study focuses on implementing discharge planning to improve knowledge, management, and follow-up plans in individuals diagnosed with typhoid fever in the hospital. The intervention involved using a discharge planning sheet, which provides detailed information on all patient needs from hospitalization until discharge.

Implementation of Discharge Planning in Typhoid Fever Patients

The implementation of discharge planning is based on the discharge planning implementation standards, which include three key steps: upon admission, the day before discharge, and the day of discharge. Implementation is carried out from the time the patient enters the hospital, which is done three times over four days, lasting 10-15 minutes for both the patient and their family.

Table 1. Implementation of Discharge Planning in Typhoid Fever Patients at Nursalam Format in 2016

No.	Steps	Activity
1.	At the time of MRS	a. Assess the patient's physical and cognitive abilities and care needs. b. Assess the patient's health education needs. c. Conduct joint assessments with patients and families regarding home environmental factors that may interfere with home health care. d. Collaborate with doctors and nutritionists regarding patient needs. e. Conducting assessments related to acceptance and prohibition of health problems f. Collaborating with the team on post-treatment (discharge) patient needs g. Determine the appropriate diagnosis and treatment plan, implementation of the treatment plan, and evaluation. h. Establish relevant goals, including increasing patient understanding of health problems and raising patient ability for self-care needs (in this case, using a questionnaire on the level of knowledge of patients and families regarding the prevention of typhoid fever by Putri & Sibuea 2020).
2.	On the day before discharge	a. Provide stages of changing the physical setting to meet the patient's needs. b. Provide information to the patient and family regarding health services in the community. c. Provide health education to patients and families after the patient is hospitalized using leaflet media.
3.	On the day of discharge	a. Check the doctor's discharge prescription and medication. b. Prescribe medication according to the doctor's order and recheck the previous instructions. c. Provide information related to patient financing d. Ask the family regarding the readiness of transportation to go home. e. Evaluate the goals of care, including increasing patient understanding of health problems and increasing patient ability for self-care needs (in this case using a questionnaire on the level of understanding of patients and families regarding the prevention of typhoid fever by Putri & Sibuea 2020). f. Check the patient's room to avoid any patient items being left in the hospital. g. Facilitate carriers or wheelchairs to carry the patient's belongings and self. h. Assist in transferring the patient to a wheelchair

Knowledge Level Before and After Implementation of Discharge Planning

The evaluation of discharge planning success was conducted using a disease knowledge questionnaire comprising 10 questions with binary answer options, where “Yes” received a score of 1 and “No” received a score of 0. The score was calculated using the formula: (number of correct answers / total number of questions) × 100.

Table 2. Knowledge Level Before and After Implementation of Discharge Planning

No	Statement	Pretest Score	Post-test Score
1.	Typhoid fever is a disease of the digestive system	0	1
2.	Typhoid fever is caused by an unclean diet	1	1
3.	Random snacks can be a risk factor for typhoid fever	1	1
4.	PHBS can prevent typhoid fever	0	1
5.	Typhoid fever begins with fever, nausea, vomiting which can be accompanied by diarrhea.	1	1
6.	Typhoid fever is transmitted by fecal-oral route.	0	1
7.	Typhoid fever can be treated	1	1
8.	Complications of typhoid fever can lead to death if not treated properly	0	0
9.	Typhoid fever may recur	0	1
10.	Treatment of typhoid fever must be accompanied by changes in diet & clean lifestyle	1	1
	Total Nilai	5	9
	Percentage	50%	90%

DISCUSSION

The implementation of discharge planning is based on the discharge planning implementation standards, which include three steps: when new patients enter the hospital, starting with an assessment of the patient, which includes an assessment related to physical, cognitive, and patient needs, and determining the nursing plan to be implemented. Participants were also given a questionnaire to assess their basic knowledge of typhoid fever. Furthermore, on the day before discharge, namely, on the third treatment day, participants were provided with information related to physical arrangements to meet patient needs and receive health education after hospitalization through leaflet media. After that, the patient was discharged home by the DPJP on the fourth day of treatment. Before discharge, researchers discussed the need for medication, the importance of taking it accurately, the necessity of rest at home, and the requirements for transportation. Patients and their families were also educated on how to recognize possible signs and symptoms of recurrent typhoid fever, such as fever. The typhoid fever knowledge level questionnaire was administered again to patients and their families as an evaluation of their understanding of the disease. The patient is recommended to attend the general clinic the following week on Monday, October 27, 2024.

The entire series of discharge planning activities outlined in Table 1 is systematically documented using a standardized discharge planning format that follows the established implementation flow. This process is an integral part of continuous and coordinated nursing care, initiated from the moment of patient admission and sustained until the patient transitions home or to another care setting. By following a structured framework, nurses can effectively assess patient needs, identify potential barriers to recovery, develop individualized education plans, and coordinate necessary follow-up services. Documentation serves not only as a communication tool among healthcare providers but also ensures continuity of care, accountability, and consistency in delivering essential health information to patients and their families (Omonaiye et al., 2024).

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Accurate and comprehensive documentation of discharge planning facilitates interdisciplinary collaboration and supports seamless information transfer between health professionals involved in the patient's care. It enables nurses to monitor the progress of patient education, evaluate understanding, and adjust interventions accordingly. Moreover, well-documented discharge plans empower patients and their families by reinforcing key health messages related to medication management, symptom monitoring, dietary recommendations, and infection prevention—particularly crucial in conditions such as typhoid fever. Ultimately, thorough documentation enhances the implementation of discharge planning, promoting patient independence, increasing readiness for self-care at home, and positively influencing long-term health behaviors (Dimla et al., 2023).

The findings presented in Table 2 demonstrate a significant improvement in the level of knowledge among patients with typhoid fever and their families following the implementation of discharge planning. In the pretest conducted before the intervention, the average knowledge score was only 50%, indicating limited understanding of the disease, its management, and preventive measures. However, after structured discharge planning was carried out—including education on symptoms, medication adherence, dietary guidelines, hygiene practices, and warning signs of complications—the posttest results showed a marked increase to 90%. This substantial improvement highlights the effectiveness of discharge planning as an educational strategy in enhancing patient and family awareness, thereby supporting better self-management and reducing the risk of complications or rehospitalization.

The comparative analysis between pretest and posttest scores confirms that the discharge planning intervention had a positive and measurable impact on patient knowledge. The structured, nurse-led education sessions, delivered within a caring and patient-centered framework, not only improved cognitive understanding but also enhanced practical skills necessary for home care (Whitehead et al., 2021). Furthermore, patients reported higher satisfaction with nursing services, reflecting the holistic nature of the discharge planning process. These results suggest that discharge planning grounded in therapeutic communication and empathetic care significantly increases patient readiness for discharge, strengthens health-related behaviors, and promotes active participation in recovery—making it a vital component in the comprehensive management of typhoid fever patients (Elmore et al., 2024).

CONCLUSION

The implementation of discharge planning for patients with typhoid fever in Treatment Room D of Kaliwates Jember General Hospital was carried out using a discharge planning flow and documented in a format tailored to meet patient needs. There is an increase in the level of knowledge between before and after the application of discharge planning. From the case study, it can be understood that discharge planning can increase patient knowledge in patients with typhoid fever, as evidenced by the scores before and after the application of discharge planning: 50% before and 90% after. Thus, it is the latest source of information and literature that can help in obtaining information related to the application of discharge planning in patients with typhoid fever. Future research on the application of discharge planning should focus on other patient populations and hospital environments to further strengthen these findings.

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CONFLICT OF INTEREST

There is no conflict of interest in this article.

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