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Design and Application of a Health Education Pathway Form for Inpatients in the Rheumatology and Immunology Department (Postprint)

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Abstract

Objective To investigate the design and application effectiveness of a health education pathway form for inpatients in the Rheumatology and Immunology Department. **Methods** A health education team for the Rheumatology and Immunology Department was established. Through literature review, expert consultation, a patient-demand-oriented approach, and integration with clinical pathways, a health education pathway form for inpatients was developed. Responsible nurses received standardized training and assessment. From September 2021 to February 2022, 1047 inpatients were selected for intervention, and their mastery of health knowledge, patient satisfaction, and nurse satisfaction with use were evaluated. **Results** A total of 1028 health education pathway forms were collected. Following implementation of the health education pathway form, the implementation rates of various health education items during hospitalization—including admission guidance, dietary guidance, activity and rest, medication guidance, and discharge guidance—reached 100.00%. Patients' mastery rates of knowledge regarding diet, rest and activity, disease, and medication all improved compared with admission, with statistically significant differences ($P < 0.01$). Patient satisfaction and nurse satisfaction with use were higher than before form implementation ($P < 0.01$). **Conclusion** Application of the health education pathway form for inpatients in the Rheumatology and Immunology Department contributes to improved effectiveness of health education interventions, enhanced quality of nursing care, and increased work efficiency among nursing staff.

Full Text

Design and Application of a Path-Based Health Education Form for Inpatients in the Department of Rheumatology and Immunology

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Abstract

Objective: To explore the design and application effectiveness of a path-based health education form for inpatients in the Department of Rheumatology and Immunology.

Methods: A health education working group was established in the Department of Rheumatology and Immunology. Through literature review, expert consultation, patient needs assessment, and integration with clinical pathways, a path-based health education form for inpatients was developed. Homogeneous training and assessment were conducted for responsible nurses. A total of hospitalized patients admitted from September to February were selected for intervention. Patients' health knowledge mastery, patient satisfaction, and nurse satisfaction with the form were evaluated.

Results: A total of completed health education path forms were collected. After implementation of the path-based health education form, the implementation rate of various health education components during hospitalization—including admission guidance, dietary guidance, activity and rest, medication guidance, and discharge guidance—reached %. The mastery rates of diet, rest and activity, disease and medication knowledge at discharge were significantly improved compared with admission ($P <$). Both patient satisfaction and nurse satisfaction were higher than before form implementation ($P <$).

Conclusion: Application of the path-based health education form for inpatients in the Department of Rheumatology and Immunology helps improve the effectiveness of health education interventions, enhances nursing quality, and increases nursing staff work efficiency.

Keywords: rheumatological and immunological diseases; chronic care management; path-based health education; nursing satisfaction

1. Materials and Methods

1.1 Study Participants

A total of hospitalized patients in the Department of Rheumatology and Immunology from to were enrolled using the path-based health education form, with a response rate of %. Additionally, responsible nurses on duty before and after form implementation were selected as study subjects. Anonymous satisfaction surveys were administered, with completed surveys collected as the control group and as the observation group. Comparison of baseline data between the two groups showed no statistically significant difference ($P >$), indicating comparability .

1.2 Design of the Path-Based Health Education Form

A systematic literature search was conducted across multiple databases including CNKI, Wanfang, Chinese Biomedical Literature Database, Yimaitong, PubMed, UpToDate, ClinicalKey, and CINAHL. Chinese search terms included: rheumatological and immunological diseases, chronic disease management, health education pathway. English search terms included: rheumatology and immunology, chronic care management, path-based health education.

Guided by patient needs and aligned with clinical nursing practice, the form was designed following principles of practicality, intuitiveness, comprehensiveness, and ease of documentation. A draft form was developed based on characteristics of rheumatology clinical pathways. Expert consultation was conducted with department physicians, head nurses, and lead nurses, followed by revision. A pilot test with patients was performed, and final adjustments were made based on feedback from patients and nurses.

The form header includes bed number, name, gender, age, admission date, admission diagnosis, attending physician, and responsible nurse. The horizontal columns include items, content, guidance time, patient mastery level evaluation, and nurse signature. The evaluation scale has three levels: A: mastered; B: familiar; C: aware. The vertical dimension includes six domains: admission guidance, dietary guidance, activity and rest, disease and medication, special examinations, and discharge guidance, comprising a total of items. After completing education, nurses mark " " in the corresponding column, evaluate patient mastery, and sign with the education time and name [Figure 1: see original paper].

1.3 Staff Training

Before clinical implementation, all nurses in the department received training on form content and proper documentation methods to ensure % mastery. Newly hired nurses and those newly rotating into the department initially conducted health education jointly with preceptors, using dual signatures. After two weeks and passing assessment, they could provide independent health guidance.

1.4 Clinical Application

The responsible nurse admitting new inpatients completed the form header and provided admission guidance. Disease-specific education was delivered based on collected patient information, and the form was hung at the foot of the bed. According to examination appointment slips, patients were notified one day in advance about the time, location, purpose, and precautions for upcoming tests. Weekly health education was provided regularly, with dynamic adjustments and supplementary education when critical values returned or patient conditions changed. For patients with shorter stays, needs were assessed promptly to ensure timely education. On the day of discharge, the responsible nurse provided discharge guidance, assessed patient satisfaction, and solicited feedback.

1.5 Quality Control

A quality control team consisting of the head nurse, lead nurses, and research nurses was established. The team conducted regular quality checks on form usage and provided periodic training and assessment for responsible nurses. After health education, nurses evaluated patient and family mastery through questioning and feedback.

1.6 Statistical Analysis

SPSS software was used for data analysis. Categorical data were expressed as percentages (%) and analyzed using χ^2 tests. Ranked data were compared using rank-sum tests. The significance level was set at $\alpha = .05$. Patient mastery of health guidance at discharge was compared with baseline. Complete mastery rates of diet, activity/rest, and disease/medication knowledge were compared between initial education and discharge. Patient satisfaction at discharge was analyzed before and after form implementation using anonymous surveys covering content completeness/systematicity, education continuity/efficiency, and usability (score: satisfied, : somewhat satisfied, : dissatisfied). Nurse satisfaction was similarly assessed.

2. Results

2.1 Patient Mastery of Health Knowledge

After implementing the path-based health education form, health education coverage by clinical nurses reached 100%. Patient mastery of health guidance at discharge significantly improved compared with admission ($P < .05$). Comparison between initial education and discharge showed significant improvement in complete mastery rates for diet, activity/rest, and disease/medication knowledge ($P < .05$).

2.2 Patient Satisfaction

Patient satisfaction after form implementation was significantly higher than before ($P < .$).

2.3 Nurse Satisfaction

Nurse satisfaction with form usage was significantly higher after implementation than before ($P < .$).

3. Discussion

3.1 Comprehensive Content of the Path-Based Form Enhances Nursing Quality

Path-based health education provides systematic, organized education that encourages adoption of health-promoting behaviors to improve, maintain, and promote individual health. Health education is the primary driver for patients to understand and modify their lifestyles, and whether patients adopt preventive health behaviors depends on healthcare warnings and, more importantly, their mastery of disease-related knowledge. The rheumatology health education form features comprehensive content and clear structure, which not only standardizes nurses' education behaviors and ensures consistency and continuity of health education but also provides personalized education based on patients' varying needs during hospitalization. Using the evaluation column, nurses can provide repeated education on poorly mastered items, ensuring better knowledge acquisition and effectively improving nursing quality. Results demonstrated that the form not only ensured implementation rates but also improved patient mastery.

3.2 Application of the Form Improves Patient Satisfaction

Research shows that path-based health education improves disease cognition, compliance, and self-care abilities while controlling treatment time and reducing total medical costs. Healthcare staff can leverage patients' desire to learn about their disease during hospitalization by providing timely, effective guidance at different time points, increasing nurse-patient communication. This approach meets patient needs promptly, helps patients feel the thoroughness and thoughtfulness of nursing services, reduces unfamiliarity with the hospital environment, provides psychological support, and strengthens the nurse-patient relationship, demonstrating humanistic care. Results showed significantly improved patient satisfaction at discharge, with patients expressing high satisfaction with nursing work during discharge and follow-up calls.

3.3 Application of the Form Improves Nurse Work Efficiency

Clinical work is complex with rotating shifts. The health education form effectively prevents omissions or repetitions in education when different nurses care for the same patient across shifts. The form is intuitive, clear, and easy

to document, providing nurses with clear guidance and reinforcing education implementation. It optimizes education quality, ensures homogeneous health education for all inpatients, cultivates good health education thinking patterns among clinical nurses, and improves work efficiency. The form avoids previous blind, repetitive, and inefficient practices, utilizes human resources effectively, and promotes standardization, normalization, scientific rigor, and personalization of health education. Results showed high nurse satisfaction with the form.

3.4 Limitations and Future Directions

The path-based health education form for rheumatology inpatients is concise, user-friendly, and improves intervention effectiveness while optimizing patient experience. Clinical practice demonstrates its strong guiding role in standardizing health education implementation and helps nurses continuously monitor patient mastery. However, the form was designed based on our hospital's specific context and should be adjusted according to hospital culture and department characteristics during broader application. Future research should explore innovative health education models for rheumatological diseases and investigate effective interventions tailored to Chinese rheumatology patient populations.

Conflict of Interest Statement: The authors declare no conflict of interest.

Note: Figure translations are in progress. See original paper for figures.

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