Development of Quality Evaluation Indicators for Transitional Care of Inflammatory Bowel Disease Patients Based on Donabedian' s Three-Dimensional Quality Model

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Abstract

Objective: To construct quality evaluation indicators for continuing care in patients with inflammatory bowel disease (IBD), providing a basis for evaluating the quality of continuing care for clinical IBD patients. Methods: Based on the theoretical framework of the "Structure-Process-Outcome" three-dimensional quality management model, a draft of evaluation indicators was constructed through literature review and qualitative interviews. Two rounds of Delphi expert consultation were conducted to score the importance of indicators and revise their content, and the analytic hierarchy process (AHP) was used to determine indicator weights. Results: A total of 15 experts were included for two rounds of consultation, with a questionnaire response rate of 100% for both rounds. The expert authority coefficients were 0.930 and 0.919, respectively, and Kendall' s coefficients of concordance were 0.149 and 0.177 ($P<0.05$). The mean importance score for each indicator ranged from 4.33 to 5 points. The final constructed quality evaluation indicators for continuing care in IBD patients included 3 first-level indicators, 10 second-level indicators, and 39 third-level indicators. Conclusion: The evaluation indicators for continuing care quality in IBD patients constructed in this study are scientific, reliable, and practical, and can provide a reference for evaluating the quality of continuing care in IBD patients.

Full Text

Construction of Continuous Nursing Quality Evaluation Indicators for Inflammatory Bowel Disease Patients Based on Donabedian' s Three-Dimensional Quality Model

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Abstract

Objective: To construct continuous nursing quality evaluation indicators for inflammatory bowel disease (IBD) patients and provide a basis for evaluating the quality of continuing care for clinical IBD patients.
Methods: Based on the three-dimensional quality management model of "structure-process-outcome," an initial draft of evaluation indicators was constructed through literature review and qualitative interviews. Two rounds of Delphi expert consultation were conducted to score the importance of indicators and revise content, and the analytic hierarchy process was used to determine indicator weights.
Results: A total of 15 experts participated in two rounds of consultation. The questionnaire recovery rate was 100% for both rounds, with expert authority coefficients of 0.930 and 0.919, respectively. Kendall' s harmony coefficients were 0.149 and 0.177 ($P < 0.05$). The mean importance scores for each indicator ranged from 4.33 to 5. The final continuous nursing quality evaluation indicator system for IBD patients included 3 first-level indicators, 10 second-level indicators, and 39 third-level indicators.
Conclusion: The continuous nursing quality evaluation indicators for IBD patients constructed in this study are scientific, reliable, and practical, and can provide references for evaluating the quality of continuing care for IBD patients.

Keywords: Inflammatory Bowel Disease; Continuous Nursing; Delphi Technique; Nursing Quality Indicator; Nursing Management Research

Inflammatory bowel disease (IBD) is a chronic, nonspecific intestinal inflammatory disease of unknown etiology, including Crohn' s disease and ulcerative colitis [**?**]. In the past 30 years, the number of IBD patients in China has increased by 919,000 cases [**?**]. Due to its characteristics of recurrent attacks and prolonged course, patients frequently transition between hospital, community, and home settings. Continuous nursing [**?**] refers to a series of nursing activities that ensure patients receive coordinated and continuous care when transferring

between different healthcare settings (e.g., from hospital to home) or within the same healthcare setting (e.g., between different hospital departments), typically including planning, referral, follow-up, and guidance. Previous studies [**?**] have shown that providing continuous nursing for patients can improve medication adherence, quality of life, and self-management behaviors. The National Nursing Career Development Plan (2021-2025) [**?**] states that medical institutions should actively provide continuous nursing and offer convenient, professional medical and nursing services for discharged patients. However, current domestic management of continuous nursing for IBD patients remains inadequate, with inconsistent implementation standards across regions and a lack of quality control over the practice process, making systematic and scientific evaluation of continuous nursing quality impossible. To ensure the quality of continuous nursing for IBD patients, constructing corresponding quality evaluation indicators is crucial [**?**]. This study, using Donabedian' s "structure-process-outcome" three-dimensional quality model as the theoretical framework, aims to construct a scientific, systematic, and practical set of continuous nursing quality evaluation indicators for IBD patients to provide a basis for evaluating clinical continuous nursing quality.

1.1 Formation of the Research Team

The research team consisted of seven members: one chief nurse (Director of Nursing Department) responsible for overall research design and quality control; one chief nurse (Head Nurse of Internal Medicine and Digestive Department) responsible for coordination, expert selection, and invitation; one digestive department research nurse (master' s degree) and one digestive department specialist nurse responsible for drafting initial indicators, distributing and collecting expert consultation questionnaires, revising indicators, and data analysis; and one digestive department associate chief nurse and two digestive department charge nurses responsible for supplementing and refining indicator content.

1.2 Development of the Initial Indicator Draft

Based on the three-dimensional quality structure model and combined with the actual implementation of continuous nursing for IBD, an initial draft of continuous nursing quality evaluation indicators for IBD patients was constructed through literature review and qualitative interviews. First, literature review was conducted using English search terms including "inflammatory bowel disease, Crohn disease, ulcerative colitis, transitional care, transition* of care, continuity of care, continuity of nursing, continuity of hospital care, seamless care, discharge planning, discharge program, support program, follow up after discharge, nursing quality, indicator system, evaluation indicators, structure-process-outcome model, sensitive indicators, system construction, quality evaluation" to search PubMed, Web of Science, Cochrane Library, CINAHL, BMJ Best Practice, and UpToDate databases. Chinese search terms included "inflammatory bowel disease, ulcerative colitis, Crohn' s disease, continuous nurs-

ing, extended nursing, continuity of care, transitional care, continuous services, continuous care, discharge planning, discharge nursing, pre-discharge preparation, telephone follow-up, home visits, community nursing, quality, nursing quality, quality evaluation, quality indicators" to search CNKI, Wanfang, Chinese Biomedical Database, and Yimaitong databases. A total of 3,092 articles were retrieved, and after removing duplicates, irrelevant articles, and those without full-text access, 21 articles were finally included. Second, qualitative interviews were conducted with five IBD patients and five nursing managers and clinical nurses involved in IBD continuous nursing. Based on the interview content, the research team held two rounds of discussions and formed an initial draft of continuous nursing quality evaluation indicators for IBD, including 3 first-level indicators, 10 second-level indicators, and 47 third-level indicators.

1.3 Development of the Expert Consultation Questionnaire

The expert consultation questionnaire consisted of four parts: (1) a letter to experts introducing the background, purpose, and significance of the study and reminding them of the questionnaire return deadline; (2) the main body of the questionnaire with instructions for completion, using a 5-point Likert scale for rating the importance of indicators at each level (1 = very unimportant to 5 = very important), with a comment section after each item; (3) an expert basic information survey including gender, age, education, professional title, years of work experience, and professional field; and (4) an authority degree survey including experts' familiarity with the content and basis for judgment.

1.4 Selection of Consultation Experts

Considering the authority, representativeness, comprehensiveness of consultation results, and questionnaire recovery, experts from IBD specialist clinical nursing, nursing management, medical, and nursing education fields were selected as consultation objects. Expert inclusion criteria were: (1) bachelor' s degree or above; (2) associate senior professional title or above; (3) at least 10 years of experience in digestive specialty clinical nursing, nursing management, medical, or education work; and (4) high enthusiasm for this study. All experts provided informed consent.

1.5 Delphi Consultation Process

From October to November 2023, the researchers conducted consultations via email or paper questionnaires, with expert opinions returned within two weeks for each round. To ensure questionnaire recovery rate, experts who had not responded within 10 days were sent reminder messages [**?**]. After the first round of consultation, modifications, organization, and analysis were conducted based on the results and expert opinions to form the second-round consultation questionnaire. In the second round, experts were provided with feedback from the previous round for further consultation. After two rounds, expert opinions converged, so the consultation was stopped. Indicators were deleted if they had an

importance mean score < 4 and/or coefficient of variation > 0.25 [**?**], combined with expert opinions and statistical results.

1.6 Statistical Analysis

Excel 2019 and SPSS 24.0 were used for data entry, organization, and analysis. Count data were described using frequency and percentage, and measurement data were described using ($\bar{x}\pm s$). Expert enthusiasm was represented by the questionnaire effective recovery rate; authority was represented by the authority coefficient (Cr); expert opinion concentration was indicated by the mean and standard deviation of importance scores; and expert opinion coordination was indicated by coefficient of variation and Kendall' s harmony coefficient, with P < 0.05 considered statistically significant. SPSSAU 21.0 online analysis software was used to calculate indicator weights, combined weights, and consistency coefficients. The analytic hierarchy process was applied to determine weights for indicators at each level, and the product method was used to calculate combined weights for each third-level indicator.

2.1 Basic Information of Experts

Fifteen experts from 10 tertiary hospitals and 2 universities in six provinces and municipalities (Shanghai, Guangdong, Hubei, Shaanxi, Zhejiang, and Jiangsu) participated in the two rounds of expert consultation. The experts' average age was (49.73 ± 6.79) years; 4 had 10-20 years of work experience, 6 had 21-30 years, and 5 had >30 years. Professional fields included medical (IBD direction, 2), IBD clinical nursing (5), nursing management (5), and nursing education (professors in digestive system diseases, 3). Education levels included doctoral (5), master' s (2), and bachelor' s (8) degrees. Professional titles included senior (8) and associate senior (7).

2.2 Expert Enthusiasm and Authority

Two rounds of consultation were conducted with 15 experts, with both questionnaire recovery and effective rates at 100%. In the first round, 14 experts provided constructive opinions, and in the second round, 5 experts provided opinions, with opinion proposal rates of 93.33% and 33.33%, respectively. The expert authority coefficients for the two rounds were 0.930 and 0.919, respectively, with judgment basis coefficients of 0.940 and 0.928, and familiarity coefficients of 0.920 and 0.910.

2.3 Expert Opinion Coordination

Kendall' s harmony coefficients for the two rounds of expert consultation were 0.149 and 0.177, respectively, with ^{2} test P values < 0.001, indicating that expert opinions tended to be consistent.

2.4 Expert Consultation Results

After two rounds of expert consultation, indicators were revised based on screening criteria, expert opinions, and group discussions as follows. In the first round: (1) Six third-level indicators were deleted: three had coefficient of variation > 0.25 ("duration/frequency of IBD specialist doctor/nurse guidance to community from discharge hospital," "ratio of IBD patients in acute and remission phases," "days lost from work/school due to IBD"); and three were considered weak in feasibility and relevance by experts ("development of IBD patient continuous nursing plan (jointly formulated by hospital multidisciplinary team, primary caregivers in family, and/or third-party receiving institutions)," "establishment of IBD continuous nursing clinic," "incidence of IBD patient-related adverse events (falls, pressure injuries, self-harm/suicide)"). (2) Six third-level indicators were modified: "reasonable composition of IBD continuous nursing personnel" was modified to "establishment of IBD continuous nursing team including clinical responsible nurses, at least one nutrition specialist nurse, ostomy specialist nurse, IBD full-time nurse, and doctor, with volunteers included if conditions permit" because experts considered the standard for reasonable composition needed clarification; "establishment of management specifications for IBD continuous nursing operation site, equipment, facilities, and items" had site requirements deleted because experts considered there was no unified standard for site size; "direct patient access telephone or helpline" was modified to "direct patient assistance channels: telephone or network, etc." because experts considered online consultation more convenient in the current internet era; "connection of IBD continuous nursing personnel inside and outside the hospital" was modified to "connection of IBD continuous nursing personnel between hospital and medical consortium" because experts considered the description of inside/outside personnel was not specific; "conducting various forms of health education outside the hospital" was modified to "conducting various forms of health education outside the hospital, such as distributing manuals, holding lectures, and symposiums" because experts considered the forms needed explanation; "incidence of IBD patient-related complications" was modified to "incidence of IBD-related severe complications (toxic megacolon, massive hemorrhage, acute intestinal perforation)" because experts considered complications needed to be defined. (3) Four third-level indicators were merged: "service appointment platform" with "continuous nursing information platform"; "discharge plan" with "follow-up plan"; "online follow-up" with "remote service"; "unplanned readmission rate" with "short-term non-elective readmission and re-intervention rate after surgery." (4) Two third-level indicators were added: "establishment of IBD patient and caregiver communication platform" and "IBD patient disease activity and outcome."

In the second round, three second-level indicators were modified: "discharge assessment" content added "patient' s psychological adaptability" ; "discharge health education" content added "psychological and emotional management" ; "patient and family satisfaction with continuous nursing" was modified to

"patient or family satisfaction with continuous nursing." The final version of continuous nursing quality evaluation indicators for IBD included 3 first-level indicators, 10 second-level indicators, and 39 third-level indicators, as shown in Table 1 . All judgment matrices at each level satisfied consistency tests, with consistency ratio (CR) values < 0.1.

Continuous Nursing Quality Evaluation Indicators for Inflammatory Bowel Disease Patients

Indicator	Importance Score (points, $\bar{x}\pm s$)
I. Structure Indicators	
I-1 Organizational Structure	4.93 ± 0.26
I-1-1 IBD continuous nursing management structure	4.87 ± 0.35
I-1-2 Establishment of IBD continuous nursing team, including clinical responsible nurses, at least one nutrition specialist nurse, ostomy specialist nurse, IBD full-time nurse, and doctor, with volunteers included if conditions permit	25.690
I-1-3 Clear organizational responsibilities for IBD continuous nursing	4.80 ± 0.41
I-1-4 Clear team member responsibilities for IBD continuous nursing	4.80 ± 0.41
I-2 Work System	4.80 ± 0.56
I-2-1 IBD continuous nursing management system	4.87 ± 0.35

Indicator	Importance Score (points, $\bar{x}\pm s$)
I-2-2 IBD continuous nursing staff access system	4.73 ± 0.59
I-2-3 IBD continuous nursing staff training system	4.67 ± 0.62
I-2-4 IBD continuous nursing staff assessment system	4.87 ± 0.35
I-2-5 IBD continuous nursing operation system, including service objects, processes, methods, frequency, etc.	4.80 ± 0.41
I-3 Platform Management	4.87 ± 0.35
I-3-1 Management specifications for IBD continuous nursing equipment, facilities, and items	25.013
I-3-2 IBD continuous nursing information platform with functions for patient records, follow-up plans, health education, etc.	4.93 ± 0.26
I-3-3 Direct patient assistance channels for IBD: telephone or network, etc.	4.80 ± 0.41
I-3-4 Communication platform for IBD patients and caregivers	4.53 ± 0.74

Indicator	Importance Score (points, $\bar{x}\pm s$)
II. Process Indicators	
II-1 In-hospital Preparation	
II-1-1 Discharge assessment for IBD patients, mainly including continuous nursing service needs assessment, information literacy ability, family/social/school support, psychological adaptability, etc.	4.87 ± 0.35
II-1-2 Joint development of IBD patient discharge and follow-up plans by nurses, doctors, and patients (families)	4.93 ± 0.26

Indicator	Importance Score (points, $\bar{x}\pm s$)
II-1-3 Effective IBD discharge health education (disease-related knowledge, medication, nutrition, exercise, diet, self-management, weight monitoring, condition monitoring, symptom management, fertility guidance, emergency handling, psychological and emotional management, etc.) with provision of easy-to-understand educational materials	4.80 ± 0.41
II-1-4 Notification of continuous nursing processes and methods for patients, with provision of relevant materials (paper and/or electronic) for IBD continuous nursing	4.80 ± 0.41
II-1-5 Mastery of health knowledge (disease, treatment, complication prevention and identification, caregiving knowledge) by IBD patients and/or caregivers	4.87 ± 0.35

Indicator	Importance Score (points, $\bar{x}\pm s$)
II-2 In-hospital and Out-of-hospital Connection	
II-2-1 Connection of IBD continuous nursing personnel between hospital and medical consortium	50.668
II-2-2 Continuity of IBD patients' diagnosis and treatment process, nursing, and follow-up plans within the hospital	4.93 ± 0.26
II-3 Out-of-hospital Services	
II-3-1 Implementation of continuous nursing forms, content, and frequency according to system requirements	4.80 ± 0.56
II-3-2 Response to patient consultations by continuous nursing team within system-specified time	4.93 ± 0.26
II-3-3 Establishment of green channel for IBD patients with severe complications requiring hospitalization	4.87 ± 0.52

Indicator	Importance Score (points, $\bar{x}\pm s$)
II-3-4 Conducting various forms of health education outside the hospital, such as distributing manuals, holding lectures, and symposiums	4.93 ± 0.26
II-3-5 Provision of online follow-up or remote services for IBD patients, such as WeChat platform, mobile medical APP, or telephone	4.80 ± 0.41
III. Outcome Indicators	
III-1 Patient Compliance Behavior	
III-1-1 Rate of correct medication adherence among IBD patients	4.73 ± 0.46
III-1-2 Rate of condition self-monitoring implementation among IBD patients	4.87 ± 0.35
III-1-3 Lifestyle adherence rate among IBD patients, including diet, activity, etc.	4.93 ± 0.26
III-1-4 Rate of scheduled follow-up implementation among IBD patients	4.93 ± 0.26
III-2 Patient Clinical Outcomes	

Indicator	Importance Score (points, $\bar{x}\pm s$)
III-2-1 Incidence of IBD-related severe complications (toxic megacolon, massive hemorrhage, acute intestinal perforation)	4.33 ± 0.62
III-2-2 Nutritional status of IBD patients (nutrition risk screening scale, weight, BMI, albumin, hemoglobin, etc.)	4.93 ± 0.26
III-2-3 Self-management ability of IBD patients	4.93 ± 0.26
III-2-4 Quality of life of IBD patients	4.93 ± 0.26
III-2-5 Disease activity and outcome of IBD patients	4.60 ± 0.63
III-3 Continuous Nursing Service Satisfaction	
III-3-1 Satisfaction of IBD patients or families with continuous nursing	4.53 ± 0.64
III-3-2 Satisfaction of IBD continuous nursing-related practitioners	4.53 ± 0.52
III-4 Socioeconomic Benefits	

III-4-1 Unplanned readmission or re-intervention rate after discharge or surgery among IBD patients	4.47 ± 0.74

3.1 Scientificity and Reliability of the Constructed Indicators

This study used the "structure-process-outcome" three-dimensional quality evaluation model as the theoretical framework, combined literature review and qualitative interviews with staff and patients to construct the initial indicator draft, revised indicators through two rounds of expert consultation, and quantified each indicator using the analytic hierarchy process to form the formal continuous nursing quality evaluation indicators for IBD patients. The indicator construction process applied scientific methods and incorporated stakeholder opinions, demonstrating good scientificity [**?**]. The reliability of research results is determined by expert sources, enthusiasm, authority, and coordination degree, with expert selection being a crucial step in Delphi consultation [**?**]. This study used purposive sampling to select 15 experienced experts from six provinces and municipalities in IBD medical, nursing, management, and education fields, all with senior professional titles, ensuring good representativeness of the constructed quality evaluation indicators. The expert positive coefficient should generally not be lower than 50% [**?**], and this study achieved 100% questionnaire recovery rate in both rounds, with opinion proposal rates of 93.33% and 33.33%, indicating good expert enthusiasm. The expert authority coefficient is a quantitative evaluation index of expert representativeness and authority in the field, with Cr > 0.8 indicating good expert confidence [**?**]. The authority coefficients for the two rounds were 0.930 and 0.919, respectively, indicating high authority in the IBD field and ensuring persuasiveness of research results. Kendall' s coefficients for the two rounds were 0.149 and 0.177 ($P < 0.001$), indicating relatively consistent expert opinions on indicators. The analytic hierarchy process was used to analyze indicator weights at each level and conduct consistency tests, with $CR < 0.1$, indicating reasonable weight settings for indicators at all levels [**?**].

3.2.1 Structure Indicators Focus on Organizational Structure and Platform Management

Structure indicators include three second-level indicators (organizational structure, work system, and platform management) and 13 third-level indicators. Among the second-level indicators, organizational structure and platform management had heavier weights of 33.767% and 33.356%, respectively, indicating that reasonable organizational structure and management platform are primary conditions for implementing IBD continuous nursing, consistent with Lu Xueping' s research findings [**?**]. Among third-level indicators, "establishment of IBD continuous nursing team," "clear organizational responsibilities for IBD

continuous nursing," and "IBD continuous nursing operation system" had the highest combined weights (2.647% each), with coefficient of variation of 0, indicating expert consensus that establishing a continuous nursing team with clear responsibilities and developing operation systems play crucial roles in implementing IBD patient continuous nursing. IBD is a chronic, recurrent disease requiring long-term regular medication, and patients may face problems such as malnutrition [**?**] and intestinal stomas [**?**]. Therefore, multidisciplinary cooperation is needed to provide continuous nursing services for IBD patients, integrate medical resources, form an efficient collaborative work model, and meet different care needs of patients. IBD continuous nursing services are completed in different healthcare settings, requiring clear definition of organizational responsibilities and division of labor among different departments to ensure efficient operation of continuous nursing. Systems are guiding principles that ensure normal operation of various medical tasks [**?**], and establishing continuous nursing operation systems as evaluation indicators can not only ensure patient safety but also promote team communication and collaboration, improving work efficiency. Platforms are the foundation for ensuring smooth implementation of continuous nursing. The National Health Commission' s Action Plan for Further Improving Nursing Services (2023-2025) [**?**] states that tertiary hospitals and some qualified secondary hospitals should use information technology to provide online nursing consultation, nursing follow-up, and home nursing guidance for discharged patients with nursing needs through developing mobile APPs and nursing service follow-up systems, solving routine, specialist, and disease-specific nursing problems after discharge. This study' s indicators, combined with policies and China' s actual conditions, modified telephone consultation from literature to network consultation, making evaluation indicators more operable.

3.2.2 In-hospital Preparation and Out-of-hospital Services Are Important Components of Process Indicators

Process indicators include three second-level indicators (in-hospital preparation, in-hospital and out-of-hospital connection, and out-of-hospital services) and 12 third-level indicators. Among them, in-hospital preparation had the highest weight (33.784%), higher than in-hospital and out-of-hospital connection and out-of-hospital preparation, consistent with Zhao Qing' s research findings [**?**]. This indicates that experts believe continuous nursing in China' s current medical environment is still in its early stage, dominated by in-hospital services. Although the country has vigorously advocated and developed a hospital-community-family integrated continuous nursing model in recent years, many obstacles exist in implementation. Among the second-level indicator "in-hospital preparation," three third-level indicators had the highest combined weights (2.647% each): "discharge assessment," "health education," and "knowledge mastery," indicating expert consensus that accurate discharge assessment, health education based on assessment, and evaluation of knowledge mastery are equally important. Accurate assessment is the prerequisite for continuous nursing implementation, health education is the core step, and knowledge mas-

tery is the ultimate goal, with three closely linked and interlocking components. Among third-level indicators under "out-of-hospital services," "establishment of green channel for IBD patients with severe complications requiring hospitalization"had the highest weight (2.747%). IBD patients may develop life-threatening severe complications such as acute massive hemorrhage and acute intestinal perforation [**?**], and establishing a hospitalization green channel can more effectively respond to emergency patient needs, reduce patient risks, and improve patient experience and satisfaction.

3.2.3 Outcome Indicators Include Patient Compliance and Clinical Outcomes

Outcome indicators include four second-level indicators (patient compliance behavior, patient clinical outcomes, continuous nursing service satisfaction, and socioeconomic benefits) and 14 third-level indicators. The first two second-level indicators hold equally important positions in IBD patient continuous nursing, with weights of 25.602% each. The focus of continuous nursing is to improve patient compliance and self-management ability, thereby improving clinical outcomes [**?**]. Among the second-level indicator "patient compliance behavior," the third-level indicator "rate of correct medication adherence among IBD patients" had the highest combined weight (2.674%). Research shows that IBD patients' medication adherence can reduce disease exacerbation and delay complication occurrence [**?**]. Therefore, strengthening medication guidance and adherence monitoring is a key focus of IBD continuous nursing and is important for improving patient health outcomes. Among the second-level indicator "patient clinical outcomes," third-level indicators "IBD patient self-management ability" and "IBD patient quality of life" had the highest combined weights (2.647% each). Self-management and quality of life have always been concerns in nursing. Research shows that nurse-led continuous nursing interventions can improve patients' self-management ability and quality of life [**?**, **?**]. Therefore, nursing work plays an important role in improving patient self-management ability and quality of life, and using these indicators to evaluate nursing quality is scientifically reliable.

The indicators included in this study are relatively comprehensive, considering socioeconomic benefits, but their weight is lower than other indicators (23.554%), possibly because data on IBD patient readmission and hospitalization days due to IBD are difficult to obtain in China, mainly from patient self-reports, making statistical operation difficult and result accuracy suboptimal. Future development of improved information systems can facilitate statistics for this indicator.

This study constructed continuous nursing quality evaluation indicators for IBD patients based on the "structure-process-outcome" three-dimensional quality model through literature review, qualitative interviews, Delphi expert consultation, and analytic hierarchy process. These indicators can provide reference for clinical implementation of IBD continuous nursing, and future work will further conduct clinical application and performance evaluation of the indicators

to provide ideas for quality improvement of IBD continuous nursing.

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