

Construction of a Content Framework for Community Cancer Follow-up Services Based on Cancer Survivorship Care Theory: A Postprint Study

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Abstract

Background: China has established a nationwide cancer registration system, providing a data foundation for community cancer follow-up services. However, the current distribution of medical resources is imbalanced and service efficiency is low, making it difficult to meet the demands of chronic disease management for cancer. Therefore, it is necessary to focus on key service components and explore the establishment of an effective and replicable community cancer follow-up service model to improve the quality of cancer survivorship care. **Objective:** This study aims to construct a framework for community cancer follow-up service content suitable for China's national conditions, identify core service components, and provide a basis for improving existing cancer follow-up management models in China. **Methods:** First, a preliminary framework for community cancer follow-up service content was constructed based on the theoretical framework of cancer survivorship care quality. Second, a systematic review of literature and policy texts related to community cancer follow-up services was conducted by searching English databases such as PubMed and Web of Science, as well as Chinese databases including CNKI and Wanfang Data, supplemented by the Google Scholar search engine. The search period was limited to 2000-2023 to focus on and extract the core content of community cancer follow-up services. Finally, from December 2023 to February 2024, consultation questionnaires were sent to experts via email. Two rounds of Delphi expert consultation were completed after assessing expert engagement, authority, and coordination. Items were adjusted and modified through qualitative and quantitative analysis to determine the final framework for community cancer follow-up service content. **Results:** A total of 18 experts participated in the two rounds of consultation. The response and effective rates for both rounds were 100%, indicating high engagement; the authority coefficients were all >0.7 , indicating good authority; and the P-values of the coordination coefficients were all <0.05 . The final framework for community cancer follow-up service content includes

4 primary categories: health monitoring, medical intervention, health promotion, and health assessment; 8 secondary categories: risk factor monitoring, routine physical examination and re-examination, risk avoidance intervention, use of recommended therapies, health knowledge popularization, health experience exchange, cancer prognosis assessment, and chronic disease comorbidity assessment; as well as 24 sub-category items. Conclusion: It is recommended to use this content framework as a guide to focus on strengthening the capacity training of general practitioner teams in areas such as cancer chronic disease management and rehabilitation guidance. Community cancer follow-up service content should be actively expanded to enhance the attractiveness of follow-up services and provide comprehensive support for patients' physical and mental recovery.

Full Text

Study on Constructing a Content Framework for Follow-up of Cancer in Primary Care Based on the Cancer Survivorship Care Quality Framework

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Abstract

Background: China has established a nationwide cancer registry system that provides a solid data foundation for cancer follow-up services in primary care. However, the imbalance in medical resource allocation and the low efficiency of existing services hinder the chronic disease management of cancer. Therefore, it is essential to identify key service components and develop an effective, replicable cancer follow-up service model in primary care to enhance the quality of cancer survivorship care.

Objective: This study aimed to construct a content framework for follow-up of cancer in primary care suitable for China's national context, identify core service

components, and provide evidence for improving the current cancer follow-up management model in China.

Methods: First, based on the Cancer Survivorship Care Quality Framework (CSCQF), a preliminary content framework was developed. Second, a systematic review of literature (2000-2023) and policy documents was conducted across databases including PubMed, Web of Science, CNKI, and Wanfang Data to identify core components. Finally, from December 2023 to February 2024, two rounds of Delphi expert consultations were conducted via email with 18 experts. Items were refined through qualitative and quantitative analyses.

Results: The response and validity rates for both rounds were 100%; the authority coefficient exceeded 0.7, and coordination coefficient P -values were all < 0.001 . The final framework comprises 4 primary categories (health monitoring, medical intervention, health promotion, and health assessment), 8 secondary categories, and 24 specific subcategories.

Conclusion: This framework should guide practice, emphasizing the strengthening of general practitioners' capacity in chronic cancer management and rehabilitation. Expanding the scope and attractiveness of community-based follow-up will provide comprehensive support for patients' physical and psychological recovery.

Keywords: Cancer; Follow-up; Primary care; Cancer registry system; Delphi method

1. Introduction

Community cancer follow-up services based on cancer registration systems can leverage the big data advantages of existing systems and the "gatekeeper" function of community health service institutions. Currently, China's national cancer registration projects cover 2,806 districts and counties, reaching approximately 99.8% of the population [?]. Community health institutions offer accessibility and continuity, allowing them to identify and address issues related to cancer or comorbidities promptly [?].

While international research on shared-care models between specialists and primary care is increasing [?], China's community services still primarily focus on survival follow-up [?]. Implementation remains uneven; while Shanghai manages 80% of surviving patients through basic public health projects [?], other regions face challenges such as inexperienced teams and privacy concerns [?]. This study utilizes the Cancer Survivorship Care Quality Framework (CSCQF) to construct a model suitable for China's national context.

2. Subjects and Methods

2.1 Preliminary Construction of the Content Framework

The framework was based on the CSCQF proposed by NEKHLYUDOV et al. [?]. The original five dimensions were optimized for the Chinese community context: “physical effects” and “psychosocial effects” were merged into **Health Monitoring**; “prevention of recurrence” and “chronic medical conditions” were integrated into **Health Assessment**; and “health promotion” was retained. A new **Medical Intervention** dimension was introduced based on literature and policy reviews.

2.2 Literature and Policy Review

A systematic search of databases (PubMed, Web of Science, CNKI, Wanfang) from 2000 to 2023 yielded 915 documents. After screening for relevance to community-based adult cancer rehabilitation, 50 articles were included. Additionally, 40 policy texts from the National Health Commission and other official sources were analyzed to refine the preliminary 24 sub-categories.

[Figure 1: see original paper]

2.3 Delphi Expert Consultation

Eighteen experts in oncology, public health, and health management were selected based on their research experience and willingness to participate. Two rounds of consultations were conducted between December 2023 and February 2024. Experts scored items on importance and feasibility using a Likert scale.

The authority coefficient C_r was calculated as $C_r = (C_a + C_s)/2$, where C_a is the judgment basis and C_s is familiarity. Coordination was measured using Kendall's W :

$$W = \frac{12S}{m^2(n^3 - n) - m \sum_{j=1}^m T_j^2}$$

where n is the number of indicators and m is the number of experts [?].

3. Results

3.1 Expert Profiles and Authority

The 18 experts represented major regions (Beijing, Shanghai, Shandong, Shaanxi). 72% held doctoral degrees and 89% held senior professional titles. The authority coefficient was 0.831 in the first round and 0.834 in the second, indicating high reliability.

3.2 Coordination and Consensus

The coordination coefficient for the first round was 0.239 ($P < 0.001$) and 0.189 ($P < 0.001$) for the second. Although the coefficient decreased slightly, the

significant P -values and high response rates (100%) confirmed strong consensus.

3.3 Framework Revisions

Based on expert feedback, “health intervention” was renamed “medical intervention” to emphasize clinical attributes. “Chronic disease assessment” was updated to “chronic disease comorbidity assessment” to reflect the complexity of cancer patients’ health. Three sub-categories were deleted (disclosure of health information, family classroom, and vaccination) as they failed to meet the importance and feasibility thresholds. New items added included “basic nursing services” and “protection of private information.”

4. Discussion

4.1 Practical Operability and Sustainability

The use of the Delphi method ensured that the framework balanced scientific rigor with practical applicability. By incorporating feedback from frontline clinicians, the framework includes feasible items like “peer interaction” and “audio-visual health materials,” which are sustainable within the resource constraints of community health centers [?].

4.2 Evolution of Care Philosophy

The revisions reflect a shift toward holistic care. Moving from “risk adjustment” to “prognosis assessment” and emphasizing “comorbidity management” aligns the framework with real-world clinical scenarios where cancer survivors often face multiple health challenges [?]. The inclusion of privacy protection addresses ethical requirements in the digital health era [?].

4.3 Policy Alignment and Implementation

The framework aligns with the “Healthy China 2030” goals and the “Cancer Prevention and Control Action Plan (2023–2030)” [?, ?]. By standardizing follow-up content, it facilitates the “sinking” of medical resources from tertiary hospitals to the grassroots level, promoting a patient-centered, multi-level health management system [?].

5. Conclusion

This study established a community cancer follow-up framework comprising 4 primary categories, 8 secondary categories, and 24 sub-categories. It bridges international survivorship concepts with China’s primary care reality. Future research should focus on multi-regional empirical validation to test the framework’s effectiveness across different economic and resource settings.

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

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