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Patient Journey Map In Chronic Disease Management: Theory, Practice And Future

Juan Xu*, Ran Li, Songnan Yao, Qianlin Sun, Haizhen Guo

The Affiliated Hospital of Qingdao University, Qingdao 266000, Shandong, China

**Author to whom correspondence should be addressed.*

Abstract: This review aims to comprehensively discuss the application status, theoretical basis, practical methods, empirical research, challenges, and future development direction of patient journey map in chronic disease management. By integrating current advances in academia and practice, this paper suggests that the patient journey map is an effective tool that can significantly improve the efficiency and quality of care delivery, increase patient engagement, and optimize the allocation of health care resources in chronic disease management. Nevertheless, the popularization and deepening application of patient journey map also faces a series of problems, such as difficulties in data collection, challenges in technology integration, and resistance to organizational change. In the future, with the progress of technology and policy support, the patient journey map is expected to become a key force to promote the innovation of chronic disease management model. Through in-depth analysis of these problems and opportunities, this paper provides valuable reference and enlightenment for healthcare providers, policy makers and relevant stakeholders.

Keywords: Patient journey map; Chronic disease; Chronic disease management

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1. Introduction

Chronic disease is an abbreviation for chronic non-communicable diseases (NCDs). It does not refer to a specific illness, but rather serves as a general term encompassing a group of non-communicable diseases characterized by prolonged onset periods and the absence of curative treatment once the disease manifests [1, 2]. Common chronic diseases encompass coronary heart disease, stroke, hypertension, malignant tumors, diabetes, and chronic respiratory diseases. According to the WHO report, 7 of the 10 leading causes of death in 2019 were chronic non-communicable diseases (chronic diseases), with the number of deaths reaching 33.2 million, accounting for 73.6% of the total global deaths, an increase of 28% over 2000 [3]. Facing the increasingly complex and severe situation of prevention and control for chronic diseases, chronic disease management is facing great challenges. The patient journey map represents a relatively novel approach to gaining insights into

the patient experience, and it is increasingly being adopted [4]. It aims to improve the overall quality of chronic disease management by visualizing patients' experience throughout the medical process, helping medical service providers identify service breakpoints, optimize resource allocation, and improve patient satisfaction.

2. Theoretical basis of patient journey map

2.1. Definition and origin

The patient journey is a journey that begins with the discovery of one's discomfort or symptoms, through diagnosis, treatment, recovery, and management of the disease [5]. The patient journey map is a tool that visually presents the path followed by the patient at all stages of the medical care trajectory and the emotional experience of the patient during this process. This tool first appeared in the commercial field, and then gradually penetrated into the medical service industry, especially in chronic disease management, showing great potential. The patient journey map was initially conceived as a market research tool, designed to assist business enterprises in comprehending consumers' motivations and behaviors [6].

2.2. Core values

2.2.1.Patient centered

(1) Enhanced patient engagement: Patient journey map enable patients to better understand and participate in their own treatment by documenting and analyzing their entire medical process, improving treatment compliance and satisfaction.

(2) Improved doctor-patient communication: With patient journey map, clearer communication can be achieved between doctors and patients, reducing misunderstandings and information asymmetry, and enhancing trust relationships [7].

2.2.2. Systemic perspective

Comprehensive understanding of patients: Patient journey map comprehensively records the medical experience of patients from multiple perspectives and links, helping healthcare providers to have a more comprehensive understanding of patients' conditions, to formulate more scientific and reasonable treatment plans [8, 9].

2.2.3. Personalized treatment

According to the specific needs and experiences of patients, more personalized treatment plans are formulated to improve the treatment effect.

Enhanced patient education: Through the patient journey map, it is possible to identify patient deficiencies in knowledge and skills and provide targeted educational materials and training courses to help patients better manage their disease.

2.2.4. Optimizing the medical service process

(1) Streamline processes: Identify and eliminate unnecessary steps to reduce patient waiting time and inconvenience.

(2) Improve efficiency: By optimizing the process, improve the efficiency of medical services, reduce medical costs, and improve patient satisfaction.

2.2.5. Promoting the long-term management of chronic diseases

(1) Continuous monitoring and support: Patient journey map can help healthcare providers to continuously monitor changes in a patient's condition and provide necessary support and interventions.

(2) Multidisciplinary cooperation: By setting up a team of multidisciplinary experts including doctors, nurses, dietitians and psychological counselors to provide a full range of services and ensure that patients receive comprehensive care [10].

3. Application of patient journey map in chronic disease management

3.1. Design principle

3.1.1. Patient-centered

(1) Focus on patients experience: The design process is always to the patient's needs and experience as the core, to ensure that the map can reflect the patient's feelings and needs.

(2) Respect for patient privacy: When collecting and processing patient data, privacy protection regulations are strictly followed to ensure the safety of patient information.

3.1.2. Data driven

(1) Multi-source data collection: Use a combination of qualitative data (e.g., in-depth interviews, focus group discussions) and quantitative data (e.g., electronic health records, medical expense data) to get a comprehensive picture of the patient [11].

(2) Data validation and update: Verify and update data regularly to ensure the accuracy and timeliness of the map.

3.1.3. Systemic perspective

(1) Comprehensive coverage: Covers the entire process of the patient from the onset of symptoms to treatment to recovery or long-term management, ensuring the integrity of the map.

(2) Multi-link analysis: From registration, consultation, examination, treatment to follow-up and other links to conduct detailed analysis, identify the problems and opportunities in each link.

3.1.4. User friendly

(1) Visual presentation: Charts, flow charts, and other forms are used to make the map easy to understand and use.

(2) Concise and clear: Avoid redundant information and highlight key nodes and main activities.

3.1.5. Flexibility and extensibility

(1) Adapt to different requirements: Design and considering the specific requirements of the patients with different groups, the map has a certain flexibility.

(2) Continuous improvement: According to the practical application of the feedback, and constantly optimize and improve map and make it more in line with the actual demand.

3.1.6. Multidisciplinary cooperation

(1) Interdisciplinary team: Establish by doctors, nurses, dieticians, psychological consultants, and other

multi-disciplinary team of experts, jointly participate in the design and implementation of the map.

(2) Collaborative: Associated with patients, families, communities, and institutions closely to ensure the practicability and validity of the map.

3.1.7. Technical support

(1) Using modern technology: Combining big data, artificial intelligence, telemedicine and other technologies to improve the intelligent level and application range of maps.

(2) Platform integration: Integrate the patient journey map into the existing medical information system to achieve data interconnection.

3.1.8. Policy and ethics

(1) Compliance with laws and regulations: Strictly abide by relevant laws and regulations in the design and use process to ensure compliance.

(2) Ethical considerations: Ethical issues are fully considered in the design and implementation process to ensure that patients' rights are not infringed.

3.2. Production process

First, identify the target group and research purpose; Secondly, qualitative and quantitative methods are used to collect data, such as questionnaire survey, in-depth interview, data analysis, etc; Then, organize and analyze the data to extract the key contacts and service breakpoints; Finally, visualize the results using charts and other forms, and share them with stakeholders to discuss improvement measures.

4. Empirical study and case study

4.1. Review of research at home and abroad

Currently, the patient journey map has been extensively utilized in the management of chronic conditions such as diabetes, hypertension, heart disease, cancer, and others. Previous studies have shown that patient journey map can significantly improve patient satisfaction, reduce rehospitalization rate and reduce unnecessary medical expenditure in chronic disease management. For example, a U.S. study showed significant improvements in glycemic control with the use of patient journey maps to optimize diabetes care [12].

4.2. Successful case sharing

By mapping the journeys of patients with cardiovascular disease, a British health care organization found that patients often experience delays in referrals, resulting in missed opportunities for treatment. As a result, they have simplified the referral process, reduced waiting times, and greatly improved patient satisfaction and treatment outcomes [13].

5. Challenges and countermeasures

5.1. Data Collection Challenges

Collecting high-quality data is the basis for making a patient journey map, but in practice, there may be problems such as data dispersion, inconsistent format, and sensitive information protection. To solve this

problem, the data collection process can be standardized and the data security measures can be strengthened.

5.2. Technology integration issues

Patient journey map with the existing information system seamless docking, is the prerequisite to realize the automatic data collection and analysis. This requires strong technical support, including the development of specialized software platforms, the establishment of data exchange standards, etc.

5.3. Organizational resistance to change

Changing existing work processes and cultural atmosphere often meets employee resistance and management hesitation. Therefore, it is necessary to gradually eliminate the resistance to change through education and training, incentive mechanism, demonstration effect and other means.

6. Future prospects

6.1. Technology-driven Innovation

With advancements in cutting-edge technologies like artificial intelligence and machine learning, the future patient journey map will become even more intelligent and personalized. For example, algorithms can automatically analyze large amounts of patient data to predict potential risk factors and intervene in advance to achieve true preventive medicine.

6.2. Policy and System guarantee

The government and health management departments should give sufficient attention and support to patient journey map at the policy level, such as setting up special funds, formulating guidelines, and encouraging pilot projects, to pave the way for its large-scale application.

7. Conclusion

The application of patient journey map in chronic disease management reflects the transformation of modern medical service to “people-oriented” concept. Through continuous exploration and practice, it is believed that this tool will enhance the efficiency of the medical service, to improve the harmonious doctor-patient relationship and promoting the health welfare aspects make an even bigger impact.

Disclosure statement

The authors declare no conflict of interest.

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