



# Exploring the Design of Hospital Customer Relationship Management System

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**Abstract:** At present, linking "Internet+" technology and medical services have brought great convenience to people's life, connecting patients and medical personnel through the Internet to enjoy convenient and quality medical services anytime and anywhere. Adhere to the concept of "patient-oriented", study the actual application of the hospital's customer relationship management system, ensure that medical services are standardized and in place, improve patients' satisfaction with medical services and loyalty to the hospital, improve the relationship between patients and medical staff, so that the hospital can provide better services and enhance competitiveness.

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With the continuous development of "Internet+" technology, information technology has a great impact on medical services. Many hospitals have introduced customer relationship management (CRM) systems to improve service and become more competitive in the market. Currently, there is no longer the traditional simple relationship between doctors and patients which involves treatment. The characteristics of the medical institution as a service industry are more distinct. A patient-oriented approach has been gradually established in the service line of medical institutions. With the hospital's CRM system, the information technology can help in maintaining a good relationship with customers, exploring

customers' needs, improving the effectiveness of customer resource utilization, and making the health care organization more sustainable.

## 1 Overview of the hospital customer relationship management system

Firstly, the hospital CRM system service subject is the customer, is considered to be a business management category of the system, the innovation of hospital service system, the introduction of modern business management into medical institutions. The features of hospital business, including the hospital's operation and management, business management, medical and nursing services, technical skills etc., to acquire more customers and become loyal hospital customers, and to improve competitiveness in the market.

The customers in the hospital's CRM involve not only the patients but also the medical staffs and administrators within the hospital, who are internal customers. Meanwhile, patients and their families, third-party payers, and community services are external customers. CRM can manage relationships with all customers and help hospitals improve their service capabilities and increase their competitiveness.

Like the customer management system of other enterprises, the hospital CRM is established to explore customer needs, customize medical services, making medical services more in line, improving customer loyalty, and establishing harmonious and friendly long-term service relationships. The CRM carries out refined management of customers, collates and analyzes customer information in place, effectively supports the hospital in making decisions,

constantly improves service capabilities, shapes good hospital reputation, expands hospital influence, focus on patient needs, takes patient needs as the guidelines, and improves various hospital management systems.

## **2 Implementation of the hospital customer relationship management system**

The hospital management system should provide comprehensive management of customer information and establish a personalized customer relationship management system that meets the hospital's medical services and customer needs. Hospital CRM systems work and need to be supported by data. The WeChat management system (WMS) hosts the data source for the customer management system. The WMS brings together all hospital information, including registration, cases, pharmacy management, medical examination arrangements, etc. Using WMS, the hospital CRM system can be integrated, conduct analysis, and exploring customer demand from the analysis results to support the hospital's decision-making.

### **2.1 Customer information management**

Customer information management can retrieve personal information about the customer from the WMS, including the patient's consultation, cases, details of address, phone number, contact number, occupation, and diagnostic status. Information about the group medical examination at the hospital, such as the name list of patients can be obtained via WMS too. The management of customer information should be refined to classify customers, extract customer data, and analyze it to obtain the following information, taking into account the demand for medical services within the hospital: The most recent payment data, patients who visit the hospital more recently will respond positively from the service entitlements; The frequency of patient spending, in general, patients who frequently come to a hospital are more satisfied with this hospital; The amount of patient spending, patients who pay a higher amount of money in the hospital are more satisfied with the hospital services and have the potential to continue spending. The above customer information had helped hospitals to value customer. Such application of customer information should be considered by the hospital management in making decisions that can help the hospital in maintaining existing customers

and attracting new customers<sup>[1]</sup>.

### **2.2 Follow-up management of chronic diseases**

The hospital's CRM system allows for the follow-up of patients with chronic diseases. For patients with special medical histories, the system can personalize medical services. The management system searches for relevant data in the WMS, filters and classifies patients, sets the timelines and requirements, to follow up with the patients. Some patients with chronic diseases, such as elderly people with hypertension, have a difficulty to undergo treatment in the hospital. Therefore, hospital traces these patients through CRM and take control of their conditions, thus reducing the frequency of patients visiting the hospital for treatment, which is a great convenience for patients besides saving hospital's resources.

Based on data validation, the CRM system can provide the status of chronic disease follow-ups and patient feedback promptly, conduct surveys and statistical analysis on customer satisfaction and customer loyalty, and analyze customer behaviour. This fully improves the data utilization rate in the WMS. Besides, WMS can solve the professional questions raised by clients during follow-up by the doctors, schedule the follow-up consultation to keep track of the client's condition and provide feedback to the return patient in the next visit. Moreover, the CRM system can centralize the management of various types of chronic disease follow-up visits via disassembly and assembly operations, thus improving the physician follow-up efficiency. Considering the patients, follow-up management effectively can provide convenience to customers and improve the competitiveness of the hospital<sup>[2]</sup>.

### **2.3 Self-service management**

The use of current information technology has provided more convenience to hospital treatment. Among those, the hospital provides varieties of online platforms for customers to get in touch with the hospital services, such as registration, consultation and complaints, through telephone, website and WeChat platform. Through self-service systems, customers can enquire for the answers from the medical staffs or record the questions and subsequently answered by other professionals. Customers can make appointments on the various platforms provided by the hospital, including surgery, beds, consultation time, etc. Therefore, this saves time

for the consultation and hospitalization, making full use of medical resources, and can also inquire about medical conditions, make online payments, print various documents, etc. Besides, self-service systems save time and smoothen the medical treatments. The hospital's CRM system is connected to these platforms to analyze and verify customer self-registration. The system can achieve automatic management, making it more convenient for patients to register, diagnose and pay the bills. Besides, customers can easily check the doctor's availability, drug prices and service fee details. Through self-service management, the hospital responds to customer needs more quickly and effectively, reducing customer waiting time and increasing customer satisfaction.

#### **2.4 Internal administrative management**

The services provided by hospitals often focus on external customers but can neglect internal management and provide inadequate support to internal departmental staff. The internal management of the hospital department is responsible for most of the work of the hospital and is the department that has direct contact with external customers and directly carries out the maintenance of the doctor-patient relationship. The use of CRM system to support the work of the department not only can meet customer's demand, understand customer's opinion on hospital services, help the hospital to implement customer satisfaction, but also promote the innovative concept in medical and nursing staffs. Besides, it also can optimize the service process, broaden the scope of services, improve work efficiency, reduce the obstacles encountered by medical and nursing staffs in the diagnosis and treatment process, and provide quality services to customers. The refinement of the internal management of the department is consistent to serve customers, both of which are important elements in the hospital's CRM system<sup>[3]</sup>.

#### **2.5 Management of information feedback**

The relationship between the hospital and the customer to establish the development of the direction of satisfaction and trust, requiring the hospital CRM system to provide more convenient, humane and responsive service. In terms of information feedback, such as customer evaluation management, customers contact with the medical staffs or hospital for pertinent evaluation. Based on the fondness, the hospital can give customer feedback, and innovation

management to improve the service level of medical staff, but also to a clear understanding of customer evaluation of the hospital, for subsequent decision-making development to provide support. The customer feedback of medical information needs to be processed on time, thus customers feel that there is service staff availability in hospital. Focusing on timeliness and quality can provide customers with good online medical services. To establish interfaces between the information feedback system and mobile phones, websites, WeChat platforms can meet the customer needs and improve customer satisfaction such as posting birthday wishes, weather forecasts, newsfeed, medical service information and so on<sup>[4]</sup>.

### **3 Key to hospital CRM implementation**

The use of hospital CRM systems for services and internal management is a necessity for the development of the healthcare market. The necessity and importance of this system are being recognized by hospital strategic decisions. To achieve better service management results, the management system needs to be continuously innovated. Many hospital management concepts are conservative and fundamentally do not understand the significance of the existence of the CRM system. In the innovation of software and hardware, the demand for innovation is not getting enough attention, plus more lagging. The key to the deep usage of hospital CRM in the following aspects.

#### **3.1 Achievability of the strategy**

Hospital CRM systems should be available and universally utilized. If the hospital blindly goes online to manage the system without researching business flows and various needs, it will not be able to provide satisfactory services. This will be a great loss for the hospital and affects the experience of customer services. Hospitals must firstly identify their business chain, the differences with other enterprises, according to business needs, service requirements for system design. Hospital decision-makers should be clear about the CRM system to be comprehensive management of each isolated project, the development of the strategy can not be over-ambitious, to each business chain were designed to meet the needs, and then aggregated into the management system. Besides, the intersection of different business chains need to be completely designed, thus the data in the

micro-management platform can supply the entire system for usage<sup>[5]</sup>.

### 3.2 Training a cadre of personnel

Hospital CRM marketing is far-reaching, and the attitude of all levels of the hospital towards the system is important. Hospital decision-makers set the right strategic direction and coordinate the needs of each department. Using the CRM system is a skill that is required throughout the hospital, and all personnel should be trained on the system and be proficient in the hospital CRM system. A ladder of personnel is developed, with decision-makers completing the strategy, middle-ranged managers overseeing the details of use, and junior staffs involved in training and proficiency in its use. Personnel at all levels should be regularly supervised to ensure that the management system can be utilized successfully

### 3.3 Meticulous management of customer information

The design and application of the CRM system must be customer-centred. Many hospitals do not conduct the adequate evaluation of customer information collection and management during system design, resulting in incomplete and erroneous information entry and message errors, which affects the subsequent business of the management system and makes it difficult to extract useful data for accurate analysis of customers. The success of the CRM system does not only lie in technology and efficiency but also the customer-centred concept. Therefore, using this concept for the system designs can enhance the customer services' experience later on.

## 4 Conclusion

The application of hospital CRM system has helped

in classifying customers, managing customer information, gaining an in-depth understanding of customer needs, establishing a customer-centred database with full-scale label information, and providing patients with targeted, customized and personalized medical services. Besides, the hospital CRM systems have introduced the "patient-oriented" concept by strengthening the hospital's capability in customer management, enhancing service capability, establishing a long-term and stable relationship with patients, maintaining a good relationship between doctors and patients, exploring customer needs, managing customers' information effectively, increasing resource utilization efficiency, and making medical treatments more efficient. This enables service providers to compete for a place in the marketplace.

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