

Exploration on application of ITIL based operation and maintenance management system in hospital information management

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ABSTRACT. *In this paper, specific analysis was performed by starting from the background of the formation of information technology infrastructure library(ITIL) based management concept, and application of ITIL based management concept in multiple aspects was put forward based on this, for example, the strategic development goal of operation and maintenance management was determined in hospital information management, the development direction of operation and maintenance service design was clarified, the operation and maintenance management ability of hospital information system was enhanced, and the operation and maintenance safety management of hospital information system is strengthened. It is hoped that the hospital can pay attention to the effective use of the operation and maintenance management system during the information management, and can standardize personnel's work behaviors in strict accordance with the operation and maintenance management system and promote the construction of hospital informatization management when they improve personnel's professional management skills.*

Keywords: *operation and maintenance management; hospital; information management; specific application*

1. Introduction

The overall informatization management system of the hospital has a close relationship with the construction of the operation and maintenance system. Of which, the most important work contents refer to project management, information system software management and information safety management, etc. This paper initiates the elaboration on the background of the formation of information technology infrastructure library (ITIL) based management concept and put forwards the performances of specific application of ITIL based management concept in hospitals. It is hoped that the hospital information management department can focus on hospital information safety issue through the effective use of ITIL, make efforts to improve the hospital personnel's understanding of ITIL based management concept, and take effective measures to safeguard the rights and

interests of the hospital even in the event of some risk situations, thus laying a foundation for the long-term development of the hospital in the future.

2. Background of formation of ITIL based management concept

The ITIL based management concept was originally a management concept proposed by the British Government Information Centre, Computer and Telecommunications Agency (CCTA). The ITIL based management concept is widely used in the IT service industry and has certain practicality and scientificity. The ITIL based management concept summarizes the effective management methods in various fields in Europe, plays an important role in normalizing the management concepts, and is helpful for the planned and rhythmic management of the IT industry. The ITIL based management concept is to carry out management work by taking the IT industry as the core, which can further promote the smooth development of management work^[1]. In addition, the ITIL based management system has received sufficient attention in hospital information management, and the ITIL based management model has been used to establish a corresponding information service management process to standardize the work behaviors of the personnel in charge of hospital information service management. Even when encountering some urgent problems in the course of carrying out work, these personnel can turn their passive working state into active working state, thus creating conditions for the smooth development of hospital business in the future.

3. The significance of applying IITIL based management concept in hospital information management

In the process of hospital information management, the effective use of IITIL based management concept is an inevitable choice for the long-term development of the hospital, which can further promote the long-term development of the hospital and play an important role in helping the hospital improve the management level in the future.

3.1 Facilitating accurate assessment

When carrying out information management work, the hospital can effectively evaluate the effect of IT services through the effective use of ITIL based management concept, so that management personnel can timely grasp the development status of the hospital, help the hospital to form a standardized management system, and thus reducing the probability of occurrence of problems in hospital services.

3.2 Important guarantee for smooth development of work

There are great differences in information resources in different periods of the

hospital. Therefore, relevant departments of the hospital are required to carry out analysis and management by applying ITIL based management concept, which facilitate the hospital to build a reasonable and scientific service management system, provide important guarantees for personnel to carry out management work and further promote the improvement of hospital information management quality, and thus play an important role in promoting the hospital to develop in the right direction.

3.3 Optimizing the overall resource structure of the hospital

Through the effective use of the ITIL based management concept, the efficiency of the IT organization can be improved, and the overall resources of the hospital can be used reasonably and effectively, which will play an important role in improving the overall economic benefits of the hospital in the future.

3.4 Reducing the probability of occurrence of risks

The hospital effectively combines ITIL based management concept and IT service concept, which can promote the smooth development of hospital IT services, has certain stability and timeliness, and can effectively reduce the probability of occurrence of work fault to a certain extent ^[2]. It is of great help for hospital to improve patient satisfaction.

4. Application of ITIL based operation and maintenance management system in hospital information management

4.1 Determining the strategic development goals of operation and maintenance management

Determining the strategic development goal of operation and maintenance management is the basic condition for the healthy development of hospitals. Therefore, the hospital management personnel should carry out statistical analysis of the information management status of various departments of the hospital at the current stage, and formulate a correct development goal in combination with the operation and maintenance management concept. First of all, the leaders at decision-making level of the hospital should make specific plans for the development direction of hospital informatization, and make scientific and effective decisions on the work items of the information management department of the hospital. Secondly, the middle-level management personnel of the hospital should formulate the specific operation procedures and service standards uniformly. Finally, the personnel providing hospital information technology support should give full play to the work enthusiasm and maintain the data safety of the hospital service system to the greatest extent, which will have an important impact on determining the correct development goal of the operation and maintenance management of the

hospital in the future.

4.2 Clarifying the development direction of operation and maintenance service design

When carrying out information management work, the hospital leaders should conduct effective analysis according to the actual development status of the hospital, and should clearly clarify the design development direction based on services^[3]. First of all, the central engineers should be analyzed according to their own capability maturity model. For example, the engineers are divided into team groups according to their character characteristics and work ability, paying respect to the personality development of the design engineer; the specific operation and maintenance management personnel can be effectively divided into first-line, second-line and third-line operation and maintenance support personnel; each operation and maintenance personnel should be clear about his or her own work responsibilities; secondly, the information management personnel should be divided into software maintenance team, terminal hardware maintenance team and data statistics team according to operation and maintenance management contents. Finally, the information management personnel can classify hospital information management events and divide them into three levels: high, medium and low levels.

4.3 Improving the operation and maintenance management ability of the hospital information system

In the management work of the hospital, there is much in common between the ITIL management work and the hospital clinical service work, and there is a close relationship. Therefore, in the information management work of the hospital, each personnel is required to accurately grasp the ITIL based management concept and the work skills of the information system, carry out analysis according to the working status of the hospital information management, take effective ways to carry out the ITIL based management, and further improve the management ability of the hospital information management personnel^[4]. In this process, the personnel of each department of the hospital is required to conduct accurate analysis and exercise by using the management model, make innovation by combining with the current management mode of the hospital and plan a reasonable development direction for hospital information management in the future, this will help simplify the working process of the hospital information management personnel, reduce the corresponding difficulty and play an important role in promoting the hospital to achieve the goal of information management. Based on this, the hospital should carry out professional training for information management personnel. Starting from the basic work, it is ensured that the information management personnel can effectively use ITIL based management concept, so as to provide an important guarantee for carrying out the work smoothly in the future.

4.4 Strengthening the operation and maintenance safety management of hospital information systems

The analysis is carried out based on the overall status of operation and maintenance service management of the hospital, so as to understand that the operation and maintenance safety management plays an important role in helping the various departments of the hospital to carry out the work smoothly. Therefore, the leaders of the hospital should pay more attention to the complete management of operation and maintenance and strengthening the management, which reduce the probability of occurrence of work faults. In this process, the hospital should use the operation and maintenance management model for analysis and practice, and actively construct an active management model, so that relevant personnel can be clear about the work direction and objectives; the work enthusiasm of personnel is mobilized, so that every personnel can actively participate in the operation and maintenance management of the hospital information system. Not only that, when the operation and maintenance safety management of hospital information systems is strengthened, it is also necessary for relevant personnel to accurately detect the equipment used in the work, so as to timely and effectively discover the problems existing during the use of the equipment, which is helpful to reduce the probability of occurrence of hospital information management risks in the future ^[5]. Therefore, strengthening the operation and maintenance safety management of the hospital information management system can promote the smooth development of hospital management and provide an important basis for the healthy development of China's medical industry in the future.

4.5 Strengthening the change management of operation and maintenance of hospital information system

With the continuous development and change of the hospital, the information in each department of the hospital is also constantly changing. Therefore, the hospital management personnel should strengthen the change management of personnel's operation and maintenance, so as to keep the hospital away from the interference of external factors. The hospital information management work at ordinary times will always be affected by various factors, most obviously in aspects such as hospital clinical management. For example, if the information management personnel of the hospital have sufficient change ability, when some urgent problems occur in clinical work, they can effectively combine with the operation and maintenance management concept to effectively control the influencing factors of various aspects of the hospital, and can effectively resolve the clinical issues faced by the hospital. In this process, the information management personnel must strictly follow the management rules and regulations to carry out the work. When the role of change management of operation and maintenance is highlighted, each personnel must be enabled to work wholeheartedly; when the importance level of the change management of operation and maintenance is promoted, the overall professional skills of the personnel can be improved.

5. Conclusion

In summary, through the effective use of ITIL based management concept, the hospital can help personnel in hospital information management department to timely find loopholes in their works and accurately grasp the status of hospital information management, so as to facilitate the information management personnel to constantly optimize the quality of hospital operation and maintenance services and reduce the probability of occurrence of hospital information management risks, which can promote the healthy development of China's medical undertakings when improving the efficiency of information management, and thus provide an important basis for achieving development goal of hospital formatization in future.

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