Research on Refined Management of Electronic Medical Record Information

Jue Wang

Jilin FAW General Hospital, Jilin, Changchun, 13000, China

1183289449@qq.com

Keywords: electronic medical records, refined management, Intelligence

Abstract: To explore the process of standardized management of electronic medical records, and to ensure and gradually promote the refined management of electronic medical record information resource sharing through legal means. Promote the generation and archiving of electronic medical records, improve the ICD-10 and ICD-9-CM-3 coding dictionary libraries. In order to meet the refined management of electronic medical record information by the people and gradually shift towards personalized, intelligent, and scientific information services centered on patients, it is necessary to establish an international information exchange and resource sharing platform with clinical departments.

1. Introduction

With the rapid development of modern information technology, the implementation of "cross regional medical insurance" and "grouping by disease" payment models urgently requires refined and scientific management of electronic medical records to meet the growing demand for medical information. As a comprehensive clinical information platform, electronic medical records can provide complete, secure, communicative, and exploitable clinical information resources On this basis, establish a platform that complies with international standards and conducts information exchange and resource sharing with various clinical departments, which is a development trend based on electronic medical records and science.

2. Promote the generation and archiving of basic information in electronic medical records, and improve the ICD-10 and ICD-9-CM-3 standard dictionaries

Establishing an electronic medical record production and archiving program that meets timeliness, authenticity, and confidentiality is a prerequisite for implementing refined management. Electronic medical records are composed of three major systems: HIS, LIS, and PACS. To achieve the sharing of electronic medical record information resources, medical record administrators need to regularly review the submitted electronic medical record information online and archive it in PDF format in a timely manner. Only in this way can clinical medical, scientific research, medical insurance, and other departments be provided with electronic medical record information unrelated to HIS to meet the needs of clinical medicine, scientific research The need for electronic medical record information sharing among medical insurance and other departments. On this basis, the management of electronic medical records also has great convenience: it is convenient for centralized browsing, restoration, sharing, and printing of medical records, saving costs; It is conducive to the formation of electronic medical records with legal effect as proof of electronic signature; Secondly, through security technologies such as permission control and hardware keys, the modification and printing of medical records can be effectively controlled. Therefore, in the network environment, the borrowing, querying, printing, and communication of electronic medical record data are all secure. How to ensure the timeliness, authenticity, and security of electronic medical records is a prerequisite for achieving refined management of medical records.[1]

  DOI: 10.25236/icemeet.2023.021

3. Establishing and improving ICD-10 and ICD-9-CM-3 standard dictionaries is of great significance for achieving refined management of clinical medical record information

With the application of "clinical" and "scientific research", the gradual implementation of "classification by disease" by the National Health Commission, and the urgent need for statistical analysis of medical information, the quality of coding personnel and the accuracy of coding are urgently needed. Therefore, it is necessary to strengthen the understanding of ICD coding among clinical physicians, strengthen communication and exchange among coders, and promote the development and improvement of disease coding dictionaries for ICD-10 and ICD-9-CM3. In order to adapt to the changes in future new work methods and meet the prepayment requirements of DRGs, it is necessary to strengthen the accuracy and timely entry of medical record homepage information, improve the quality of medical services, and set up dictionaries in a timely manner, so that all diagnostic and surgical procedures use dictionaries that are consistent with the data sources of DRGs' disease groups. When the doctor fills out the diagnostic report, the code is synchronously connected. In the later stage of the process, the coder and statistician only need to verify the diagnostic results, thereby improving the quality and efficiency of the overall work process, and setting all processes to run in a one-way manner to ensure information consistency. This requires the establishment of a complete and standardized workflow between the Medical Record Management Statistics Department and the clinical departments, financial settlement offices, medical insurance and other departments of the hospital. At the same time, the ICD-10 and ICD-9-CM3 standards have been revised and improved according to the needs of clinical medicine, teaching, scientific research, and medical insurance. Among them, clinicians, coders, formulation of coding standards, coding workflow, and clinical application needs are important factors that affect the quality of coding. Therefore, it is necessary to further improve the real-time and real-time performance of the code base. Manage the users of the electronic medical record classification dictionary library, and establish two functions: an administrator and a user query. The system administrator is a senior medical record administrator who is proficient in the principles of international disease classification and can add or delete dictionaries as needed. The query users can be doctors or other medical personnel. Therefore, in order to apply electronic medical record information to various fields such as clinical, scientific research, and medical insurance, and move from standardized management to refined management, it is necessary to improve the quality of ICD classification work.[2]

4. Strengthening the electronic argumentation of electronic medical records is the legal guarantee for achieving its refined and scientific management

The electronic proof system is an important legal guarantee for the sharing and exchange of electronic medical record information. According to Article 14 of the Electronic Signature Law of the People's Republic of China, a legitimate and valid electronic signature shall be consistent with a written signature and seal. Due to the uniqueness of user names and signatures, as well as the relevant information generated by electronic medical records (time, IP address), it can be reflected in the medical process. In order to ensure the security of the electronic medical record information exchange platform and the privacy of patients, it is necessary to manage their permissions (access and printing). Users have obtained USB hardware digital certificates related to specific users through the Electronic Commerce Authority Authority (CA). When a user enters the medical record system, they need to insert their credentials into the USB port. After confirming the user's identity, they can establish corresponding permissions based on the information on the credentials. Therefore, strengthening the management of clinical medical personnel's professional qualification certificates and timely reporting to the Center (CA) is an effective and legal basis for ensuring the authenticity and security of electronic signatures. At the same time, we will increase the scanning and archiving of unstructured cases (important information such as patient signed consent forms), and upload them together with my ID card to the electronic medical record information system. On this basis, by segmenting and associating sensitive and insensitive data, high complexity encryption, and

partitioned storage, while ensuring data security, data availability is ensured.[3]

5. Build a standardized electronic medical record information sharing and exchange platform to achieve the goal of developing from refined management to intelligent and personalized management

Based on the collection, storage, and centralized standardized management of patient electronic medical records, a medical signaling sharing and business collaboration platform has been established that combines clinical information systems with hospital information management systems. It is the foundation and carrier for achieving unified integration, resource integration, and efficient operation among various businesses within the hospital. In addition, the hospital information platform is also a key link in supporting cross regional and institutional medical information sharing and business collaboration centered on patients. Therefore, building a set of electronic medical record data standard interfaces and software operation platforms that are suitable for general use both domestically and internationally is to achieve the development goal of "patient-centered" medical insurance for everyone proposed by smart medicine, and to achieve the direction of personalized and scientific development of electronic medical record management refinement.

6. Conclusion

In order to better achieve its refined and scientific management, it is necessary to build an international platform for sharing and circulating electronic medical record information resources. At present, the development of electronic medical record information in major hospitals in China is fragmented, and data exchange and interconnection are difficult. There is a lack of complete presentation from the homepage to the content, and the encoding format of the data is not using international standard languages. It is not well compatible with old data, nor can it ensure the continuity of data information, nor can clinical medical staff present the complete scientific research data. Therefore, building a unified and unified electronic medical record exchange platform in China and around the world is an urgent issue that needs to be addressed. When establishing their own medical information resource platforms, medical institutions should consider the long term and try to use internationally recognized data languages such as HL7, XML, and CDA as much as possible, establish an offline information standardization resource platform, and provide interfaces for different data information resources. The research results of this project will provide technical support for the deep development and scientific management of medical archives. On this basis, according to internationally accepted standards and regulations, integrate structured and unstructured data to achieve the storage, archiving, and exchange of information resources. In order to meet the needs of clinical, scientific research, healthcare, and other aspects, we need to develop more structured information exchange and utilization services based on standard units, and gradually explore a refined and scientific management method based on the CDA standard structure to meet the people's requirements for electronic medical record information management from refinement to intelligence and personalization. In summary, in the era of information technology, medical record managers should be able to keep up with the increasing demands of people for medical information services, conduct in-depth research on the development of their own disciplines and the laws of standardized management, explore the needs of users and society, establish a unified, standardized, and standardized workflow, and improve the refined management of electronic medical record information resources. Only in this way can we more conveniently and quickly meet people's needs from standardized and refined management to intelligent and personalized management.

References

[1] Li Can, Xie Dan. Research on the Automatic Extraction Method of Admission Record

Information from Traditional Chinese Medicine Electronic Medical Records [J]. World Science and Technology - Modernization of Traditional Chinese Medicine, Vol.25, pp.05, pp.1615-1622, 2023.

[2] Ma Chunhua. Application Analysis of Big Data Technology in Hospital Electronic Medical Record Information Management System [J]. Digital Communication World, no.05, pp.110-112, 2023.

[3] Yan Weiping. Advantages and Development Strategies of Electronic Medical Record Management Systems [J]. China Health Standards Management, Vol.14, no.01, pp.11-14, 2023.