Applied information Technology in Improving the Administration of Drugs that Target Safety Information Warning Platform

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Abstract. In this paper in order to improve the safety as the goal of rational drug use by Oracle to establish a standardized and practical information on pharmaceutical enforcement database to obtain development tools to monitor rational drug, prescription from a doctor into prescription medication before pharmacy consultation and exchange of information, providing pharmacy services in three areas to build knowledge in order to improve the administration of information security as the goal of early warning systems and medicine formulations.

1. Introduction

Adverse drug events (ADEs) refers to the damage associated with the drug, can be divided into prevention and non-prevention, research shows that there is a direct or indirect relationship not only with the death of ADEs, and significantly increase the cost of hospitalization and prolonged hospitalizations, cause enormous personal and social economic and spiritual losses. Therefore, today through information technology to reduce preventable ADEs has become a hot topic. Then, especially for medication errors due to lack of physician knowledge of drugs "caused" as a result of ADEs. Foreign to CPOE, CDSS mainly domestic oriented places PASS, two systems mainly based on the "drug-drug" review made to some extent, can reduce medication errors, but did not significantly reduce the incidence of preventable ADEs and hospital costs and time play a limited role; and PASS the latter study is a blank.

Rational drug use is a relative concept, and many objective condition and subjective factors can lead to treat penggunae of drugs, such as rational use can occur in all aspects of drug use, such as doctor doctor write a prescription, patient or families according to prescribed medicine storing apotekermes. With the trend of hospital pharmacist focus on promote rational drug use, carry out pharmacy services, patient-centered medication is safe and effective, the economy has become an important duty of every pharmacist. However, due to the lack of specialized clinical pharmacist team, plus a reasonable judgment to choice of drug treatment programs need to have a high clinical skills and a wealth of comprehensive knowledge of the drug, making the country the main work still remains in clinical pharmacy consulting on medication.

2. Research situation analysis and planning system goals

Development and design of security administration early warning system, the basic task is to determine through flexible operating system processing features available to the user a good user interface. To accomplish this task, the general practical to divide the system into good correlation functional modules, each module to achieve a certain function, especially the conversion and transfer of information within the system function. Overall, the safety administration early warning system should be able to receive, handle all types of data, has the following features:

(1) Fully functional sub-module system functions more comprehensive, to include data into drug inquiries, drug information, consulting information services. Extensive many system information, as well as other other commonly used functions.

(2) Features with desktop application. According to different functional modules using the appropriate personalized interface.

(3) Excellent data security settings. For each user, you can change the data on which this machine, but you can not delete the data on the machine.

(4) Flexible search all kinds of query entered by the user, the system can automatically generate commands to operate, should be able to support, including attachments Site Search.

(5) Excellent visualization support. Based on the client desktop running time, the data processing capability returned depend on the report type format and is data, under the data processing requirements, to achieve WYSIWYG visualization.

Sistem system target is health and medical, its features include the medical staff, system is divided into the following, function module, the rational drug use query module, drug information module, the module package insert Xunyiwenyao module, system information module shown in Figure 1.

Figure 1. Functional block diagram of the system

(1) Rational drug inquiry

Rational drug use query is based on a back medical staff administered with patient's condition and give the medicine, here, click "Ado to find," and click a Adotratic to after to test interactionCo drug interactions Drug Name List" box, check on the right Dasi of the "test" to perform the detection a same text results are displayed in the right side of the "drug test results to each other" box. Drug interactions and displays the results in the text box below.

(2) Drug Information

Drug information module divided under three sub-module, generic drugs information, drug information changes, drug entry, as shown in Figure 2.

Figure 2. Drug Information Modules

① Drug Generic Name: Nong. The user can first select query input method (including pharmaceutical ID, phonetic code, Chinese name, license number), then a simple query or detailed queries and query the records show that big box into the middle of the box. Finally, you can click the button to view the big box under the details of drugs.

② Drug changes: Asist relates to modify drug information, so the user can only have accurate and complete drug name, the next step is to modify. Finally, the user can select the "Save Changes" or "discard changes".

③ Drug Entry. User can purchase online or hospital new drug for may vacancy. Finally, you can select "Add" or "Exit".

(3) Drug Instructions

Package insert module the user can retrieve drugs first, and then retrieve all the information into a text box to display drugs, medicines pictures displayed on the right side of the space.

(4) Find doctors asked drug

When you open the module the user can revise per the type of "disease to determine" as "simple search" and "Exact" and the query results display, in the middle big box, and you can click the button at the big box under the various disease accurate view contents.

(5) System Information

Under the system information module further divided into five, sub-modules. About this system, software registration, account settings, log out, exit the system. As shown in Figure 3.
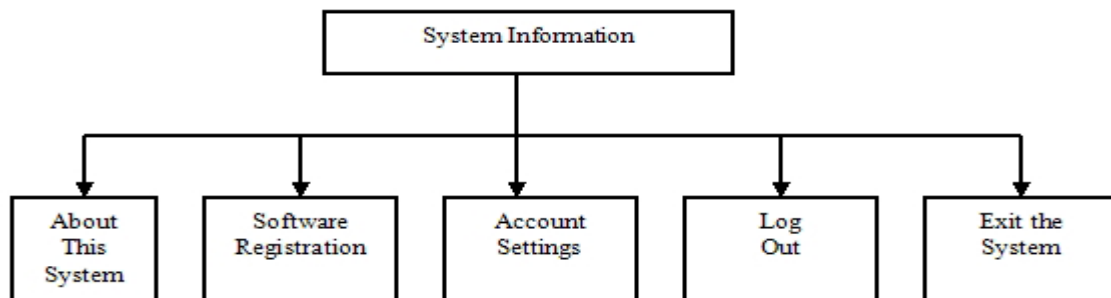
Figure 3. System Information Block Diagram

3. The overall safety warning system administration framework

(1) Safety warning system design principles of administration

(2) The modular design

The modular design approach is a strategy, together after the first minute refers to the entire development of the system was split into a number of functional modules, each functional module for independent development, design and testing, and then each module logically connected. Module is able to operate independently of the program Pengguan specific tasks, clear each module structure, easy to develop and modify. Use of modules that can achieve information hiding and functional independence.

Information recovery means to each program and data structure is encapsulated in a separate module, do not expose the internal approach. When you upgrade the system update, developers can modify the code and structure through the background. Information hidden features improve the software can be modified and portability, there are very important in modern software design.

Functional independence refers to each module realize a single function at the same time, separate function, but also has the objectives, and requirements and functional interconnection between functional modules, hierarchy maintaining data independence of the features of the module, it is an important principle of the system design must be followed.

(3) Database design

Database design is an application design process is actually a system design process, generally including, design requirements logic analysis, physical design using logical. Design physical design, implementation use phase. But in the design database design especially in the two-dimensional table design, and practical application of the system to be considered and should be combined, with reference to each other, complement each other important. Here is the actual structure of the system need to design a database table is mainly based on two-dimensional relationship.

Table 1. Table user information

Field Name	Field Type	Field Description	Remark
Full name	Varchar(50)	User name	Primary key, can not be empty
Password	Varchar(50)	Password	No
Address	Varchar(50)	Address	
Mailbox	Varchar(50)	Mailbox	
Number	Varchar(50)	Number	

4. Conclusions

From the actual demand research study, analyzes the development of methods to study the safety warning. System admin strategy based on .NET development platform, C # programming language, SQL Server technology, developed based on C / S mode security to drug warning system.

According to the actual needs of research and learning to make this analysis of the safety warning system administration over all design, but for a detailed overall transceiver design of the system according to the user's basic needs and functional requirements, individual system functions module. The system Studio 2010 as a platform for the development system functional. Selection is Visual Studio 2010 as a development platform for security warning system. The early warning system has been designed and implemented. The system has a good interface, can greatly enhance the user experience.

Acknowledgement

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