SYSTEM AND METHOD FOR MANAGING PATIENT MEDICAL RECORDS

MICROFICHE APPENDIX

A Microfiche Appendix of the presently preferred source code is attached and comprises 10 sheets, having a total of 916 frames. The Microfiche Appendix contains material which is subject to copyright protection. The copyright owner has no objection to the facsimile reproduction by anyone of the Microfiche Appendix, as it appears in the Patent and Trademark Office patent files or records, hut otherwise reserves all copyright rights whatsoever.

BACKGROUND OF THE INVENTION

This invention relates to a system and method for managing patient medical information. More particularly, this invention relates to a system and method for improving medical clinic information management and examination information handling.

Medical clinics generally process patient scheduling, medical history, billing, and clinical information in discrete ways. Typically, clinical examination notes and patient charts are kept in meticulously maintained paper files using standard paper charting techniques. Information relating to the patient of a particular physician or clinic is often kept in several places. Further, the use of paper charting results in many storage and retrieval challenges. Physicians will sometimes dictate segments or summaries of patient examinations for later transcription by secretaries into a computer database. This process is time consuming and inefficient.

The various available methods and systems for recording and manipulating different types of patient information are typically limited to discrete computer programs or handwritten methods. Meaningful manipulation of patient information on a clinical basis, or even by physician, can be difficult due to differing locations of the information and various formats used to store the information. The information required for each of the separate data files of these computer programs may overlap and lead to redundant data entry tasks being performed. The tasks that may be performed on various separate electronic databases often require learning to operate different user interfaces. Additionally, many clinics operating under health maintenance organization (HMO) oversight are required to audit the examination notes of physicians for consistency and trends in diagnoses and treatment. The lack of computerized databases for monitoring and updating clinical examination data and the time consuming process of retranscribing and editing paper charts into a computer database, can complicate this auditing process.

Accordingly, there is a need for a comprehensive system and method of managing patient scheduling, insurance, clinical examination, billing, and prescription information. Such a system would have a common user interface to allow different medical personnel access to centralized files regarding patients. It would be advantageous to have a method for concurrently recording examination and diagnoses notes in a database during patient examination. Further, a common graphic user interface capable of accessing all necessary tasks through a common database structure would be advantageous.

SUMMARY OF THE INVENTION

The present invention provides for a comprehensive method of managing and manipulating clinical medical

information for use by medical professionals. One aspect of the present invention includes a method for creating, managing, updating and analyzing patient information in a medical database on at least one computer having a processor, a data entry device, a memory, and a display. A medical professional compiles a database of patient data including demographic, insurance, and billing information. A receptionist may schedule patient appointments and automatically generate reminders. Nurses and physicians can then enter patient medical history and vital statistics data during a patient office visit into a common relational database. Medical alerts are displayed to warn of allergies the patient may have. A physician may update progress notes during a patient examination by entering in subjective data, objective data, assessments and treatment plan data via a graphic user interface on a computer in the examination room. Preferably, the physician may enter examination data via a voice input device, a computer pen or a keyboard. The examination data may be left as handwriting digitally stored or translated into text from the detected handwriting when a computer pen is used. The date may also be translated into text and stored as text from voice input.

According to another aspect of this invention a medical information system for managing patient medical history and examination data is provided. The system includes a processor, a display in communication with the processor, memory in communication with the processor for storing and manipulating patient data, and an input device such as a keyboard, computer pen or microphone for receiving patient data. The processor preferably includes patient identification means for responding to information entered at the input device and accessing a particular patient's datafile from the memory. Also, the processor has patient examination means to receive and display patient data to a physician during an office visit. The patient examination means preferably include an allergy warning mechanism that retrieves allergy information for the particular patient and displays an allergy warning on the display.

Another aspect of the present invention is a graphic user interface, displayed on a computer display device, for use in storing and retrieving patient medical information held in a database. The graphic user interface consists of a main menu screen having a plurality of function buttons for selecting one of a predetermined number of patient medical information screens. The function buttons include appointment, patient information, clinical, report and utilities buttons. An appointment screen is accessible via the appointment button. A patient information interface is accessible via the patient information button. A user may also access either a clinical examination interface accessible or a reports screen accessible via the clinical, utilities or reports buttons, respectively.

Another aspect of the present invention is a relational database including a set of data tables associated with the above system and interface. The tables store the information entered by the system user, and the relationships among various tables allows the user to retrieve and manipulate the stored information in a variety of ways. For example, a particular table may point to another table to allow the user to retrieve the data from both tables and analyze the relationship or association between both sets of data. This gives the physician, insurer, or other health care provider the unique ability to examine the efficacy of medical procedures, diagnoses, prescriptions, costs or other variables within a particular practice groups.

Another advantage of the presently preferred embodiments is that multiple items of information, previously recorded on separate paper and electronic media, may now