

**METHOD FOR GENERATING
PATIENT-SPECIFIC FLOWSHEETS BY
ADDING/DELETING PARAMETERS**

RELATED INVENTION

System Control Structure of a Hospital Information System and Method of Using Same, invented by John Brimm, Oscar Diaz, Ron Norden-Paul, and Michael Stern, U.S. Ser. No. 116,614, filed on even date herewith, and assigned to the assignee of the present invention.

TECHNICAL FIELD

This invention relates generally to automated hospital information systems, and, in particular, to a hospital information system in which an authorized user may add patient-specific parameters to a system form or delete such parameters.

BACKGROUND OF THE INVENTION

The present invention concerns an automated clinical records management system. Such system has utility, for example, in a hospital-based patient record-keeping system. Patient record-keeping systems are used for maintaining a wide variety of types of medical records concerning clinic or hospital patients.

Hand-written patient record-keeping systems have evolved through many years of careful refinement and enhancement into systems which maintain a detailed manual record of medical information concerning each patient. To meet the needs of different hospital entities, (such as doctors, nurses, pharmacy, accounting, laboratory, etc.) requiring access to such medical information, in a manual record-keeping system various medical information is logged into multiple types of records.

In a typical manual patient record-keeping system a patient chart, usually in the form of a notebook, is maintained at the nursing station for each patient. The notebook is divided into a plurality of individual tabbed sections, such as Physicians Orders, Kardex, Nursing Care Plan, Nursing Assessment, and Laboratory.

Each of the above sections is further subdivided into a number of forms. The forms are those which are appropriate to the individual patient and/or such patient's physician. For example, within the "Laboratory" section there may appear forms for Chemistry, Hematology, Blood Gas, and Microbiology.

In addition, a "Flowsheet" chart is usually kept at the patient's bedside. On the "Flowsheet" chart there typically appear individual areas for Medications Records, Vital Signs, Intake/Output, Laboratory Results, and other categories which are dependent upon the patient's affliction, such as Ventilator, which would be used if a patient were placed on a ventilator.

One problem with a manual patient record-keeping system is the necessity to enter the patient name and associated personal identifying information such as i.d. number, bed location, etc. separately on each patient record form associated with a given patient. This is typically done using an embossed card, similar to a credit card, containing the patient's personal information. However, this process consumes a certain amount of time, and errors may result if two patients' cards are inadvertently switched.

Another problem with manual patient record-keeping systems is that, to meet the diverse requirements of the different hospital entities for whose benefit such

patient records are kept, identical information must be recorded on different forms. Again this involves additional time-consuming work and frequently causes errors to be interjected into the patient records. In addition, desired patient information may be inaccessible to a legitimate user because it is stored on a form with which such user is unfamiliar or on a form which is being accessed by another user at that time.

It has been estimated that nurses salaries account for 30%-40% of a hospital's operating budget, and that they spend 25%-40% of their time performing clerical and communications tasks. Because of changes in government regulation, insurance reimbursement policies, and competition, hospitals are increasingly under pressure to reduce their operational costs. As a result, hospital occupancy and patient length of stay have decreased, and more hospital patients are acutely ill. However, staffing levels have been reduced to cut costs. Thus, hospitals are providing care for sicker patients with fewer people, and there is a significant need for making those people more productive through hospital automation.

To maximize the productivity of hospital staff and to maximize overall patient care by making optimum use of patient data, various automated clinical record-keeping systems have been proposed and even implemented.

While automated record-keeping systems are known which organize many types of information, including information relating to customers, clients, and even medical/dental patients, no automated clinical records management system is known which provides the unmistakable benefits of an automated system and yet which very closely parallels the organization and appearance of the conventional, familiar manual hospital records charting system.

In known automated hospital record-keeping systems the user interface is typically "machine-oriented" rather than "user-friendly". The user often must proceed several layers deep through a confusing hierarchy of on-screen menus to the desired screen level. Once there, it is all too easy for the user to forget which screen level he is working in, how he got there, how to return to a more fundamental screen level, and how to move to a different screen level or to a related screen level.

Another problem with known automated patient record-keeping systems is their inflexibility regarding the user's ability to change the types and appearances of the on-screen records visually presented to the user. For example, to meet the preferences of individual hospitals, the system should be easily modified by a hospital system administrator to accommodate the particular sections and forms in use by a given hospital.

In addition, the form(s) applicable to a given patient should be capable of being amended in accordance with a change in such patient's condition. For a given physician, the relevant patient records for two different patients may vary considerably.

In known automated patient record-keeping systems the number and type of parameters displayed for a given form is predetermined and cannot be amended by the user. Typically those parameters which were displayed for any given form were those most likely to be used. However, this had the disadvantages that, for a given patient, certain parameters were unavailable, and that for many of those parameters that were available there were often large open spaces containing no val-