The Complexities of Medical Record Computerization

BY SR. GERALDINE M. HOYLER, CSC

Hospitals have adapted to the reality that the Health Care Financing Administration (HCFA), in an effort to contain costs and increase efficiency, is always considering changes to Medicare Part A. One change HCFA is now looking at would require hospitals to completely computerize each patient's medical record. The legislation demanding all hospitals to be using electronic patient records was introduced June 23, 1992, by Sen. Christopher S. "Kit" Bond, R-MO. If the legislation is passed, hospitals will be required to computerize their medical records as early as January 1, 1996.

At first glance this hardly seems a financial concern, but further review indicates otherwise. Implementing an electronic medical record system will be costly, not only to purchase the computer hardware and software, but to bring about the changes in the facility's ordinary operating procedures. In a time when all resources are scarce, such a system must benefit the hospital, as well as the federal government.

With electronic medical record systems in place, hospitals could develop new methods of analyzing patient care patterns and their outcomes. This should lead to more effective ways of rendering care to patients. In addition, the electronic medical record will provide almost all patient information to the government in a standardized format and thus facilitate its analysis of hospital and physician utilization patterns and costs related to them.

One Approach

A hospital's response to HCFA's proposal must meet the needs of Medicare, but at the same time increase the effectiveness of the hospital's operations. Approaching this requirement as an opportunity to systematize medical information in the best interests of patients and staff will make it possible for good to come from the change, including cost savings and improved patient care.

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Computerizing Patient Information

Today, many large hospitals have some portion of the medical record process computerized—usually the front end (containing patient demographic information) and the back end (containing summary reports). Many hospitals also transmit results of diagnostic tests to the patient care units from the diagnostic areas, using the patient care computer system as a transmission device. But few hospitals retain these reported results for merging with the front- and back-end information, which eventually is included in the permanent patient medical record.

Small hospitals for the most part have not had the resources to computerize patient information systems and thus lack the electronic interfaces found in larger facilities. Although the admitting process may be linked by computer to the billing system (and some computerized demographic information is thus available), it is highly unlikely that small hospitals will be able to meet HCFA's electronic medical record requirements by January 1, 1996, the date the act could take effect. Some hospitals—including rural hospitals and those which have already begun installing or developing electronic medical record systems—would be exempt until January 1, 1998.

The Design

If HCFA decides to require hospitals to implement electronic medical records, the following assumptions could be made about the design:

- The system requirements will conform to the government's need for information, not to the hospital's need.
- The system will facilitate retrospective information review rather than patient care during a stay.
- Data will be coded using some required standardized system rather than allowing facilities to use hospital-specific coding.
- No existing computer system will be able to meet the governmental requirements.

This is not an all-inclusive list of what might

happen, but some cost ramifications are evident. All changes to standard coding, whether the codes be diagnosis-related groups, CPT-4 (the coding system required for all clinical-ancillary coding on bills), or UB-82 (the coding system required for all bills submitted to Medicare), have been costly. These costs have occurred in two primary areas: personnel training and computer system hardware and software changes and upgrades.

The cost involved in implementing a standardized electronic medical record system will be no different. The new system will require personnel and medical staff training. New computer systems will be necessary. And, as with any change, new quality controls will need to be developed and implemented.

All Staff Will Be Affected

When other reporting requirements were implemented, a limited number of personnel, primarily in the business office and medical records departments, were required to make major changes in how they reported information. Other personnel became accustomed to the new language and adopted it when its use became prevalent in the institution's language. But they were not required to become literate in the new language to function successfully.

The change HCFA is currently contemplating will force all personnel in the clinical areas to use the new coding and language system in place of the one the hospital has used in the past. Perhaps more important, all clinical staff and the entire medical staff will be required to become both computer literate and computer users.

Limited Individuality

As now envisioned, the information HCFA will require will be included as narrative charting in a form acceptable to Medicare. To make the electronic record usable to Medicare, some systematic coding format will be necessary that will probably not be hospital specific. This may require significant changes in hospital internal procedures, language, and practices which could take up to 10 years to develop and implement (see "Bringing Rationality to Information Transfer," *Health Progress*, April 1992, pp. 20-24).

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One of the most disconcerting ramifications is that this change will appear to limit the individuality of each hospital's approach to medical care. Because all information will have to be codable, all hospitals will have to conform to newly redefined ways of presenting and discussing medical and patient care information. This new "language" will require significant training time.

Learning from Other Reporting Requirements

The work done to implement other reporting requirements, especially in connection with UB-82 and CPT-4 codes, should help hospitals implement this new process if HCFA adopts it.

Care givers currently personalize the language they use to describe patients' treatment and progress. To make this language usable in a computerized format, it must be standardized. Providers will likely develop an alphanumeric system to describe patients' treatment and response. This type of discipline exists in describing diagnosis and intervention, but is less frequently found in treatment documentation. Just as the previous coding requirements created a standardized language, so too, the language of the patient charting process will become standardized.

Getting Ready

Some hospitals have begun to standardize the language of their own charting process—as a precursor to implementing the nationwide standardized coding—even without the computer systems to support it. Others are developing the computer systems and later will add the standardized language and coding systems, to be issued by the Department of Health and Human Services between June 30, 1994, and January 1, 1995. These are some of the challenges hospitals will face if and when Medicare requires electronic medical records. □