

Chapter 5

Selected Implementation Issues: The Hospital Perspective

Selected Implementation Issues: The Hospital Perspective*

The preceding chapters have examined potential hospital behavior toward technology use and adoption when faced with a prospective per-case payment system based on Diagnosis Related Groups (DRGs). As noted earlier, potential behavior toward technology is predicted to vary as specific features of a system vary. In addition to the general and specific incentives provided by the system, a number of issues concerning implementation arise that should be noted by policymakers. These issues assume even greater importance in view of the recently legislated Medicare payment system. Thus, this chapter will briefly examine issues involving the implementation of a DRG reporting system to support per-case payment. It will not focus on implementation issues from the perspectives of the Health Care Financing Administration (HCFA) of the Department of Health and Human Services or the intermediaries who will also be involved in the operation of the new system.

PATIENT DATA ISSUES

Classification and Coding Errors

Because assignment of patients to DRGs requires data from the patients' discharge abstracts, the accuracy and timeliness of these data have come under question. Several studies have been undertaken under the auspices of the Institute of Medicine (IOM) of the National Academy of Sciences to determine just how accurate and timely the data are, and how various procedures might be employed to ensure data reliability (57,58,59).

In each study, a sample of patient records was reabstracted by a trained field team of Registered Record Administrators and compared with the original data compiled by either the abstract services (for the first study), HCFA (for the Medicare data in the second study), or the National Center

● This chapter incorporates work by Diane E. Hamilton, Ralph E. Berry, and Nancy L. Kelly of Policy Analysis, Inc.

Implementation issues encompass a variety of problems with varying cost implications. Two important aspects of implementation of the new Medicare DRG payment system will be described in this chapter: data and coding issues and hospital administrative issues. Data issues exist because of the reliance of the classification process on data summaries (discharge abstracts) of the patients' hospital medical records. These issues include classification and coding errors, and DRG "gaming" or "creep." Administrative issues exist because the administrative burden to hospitals obviously increases when any new type of payment system is introduced, particularly one as complex as a DRG payment system is likely to be. For example, hospitals will need to institute procedures to improve the quality of information, including a reduction in missing data in medical charts.

for Health Statistics (NCHS) (for the third study). For diagnosis and procedures, two types of data discrepancies were possible. Ordering discrepancies would reflect problems in determining which of several diagnoses or procedures should be regarded as principal. Coding discrepancies would reflect errors in assigning a diagnosis or procedure code number.

Findings from these studies indicated that hospital data on admission date, discharge date, and sex were highly reliable; however, this was not the case when diagnosis and procedure data were examined. For all diagnoses combined, when codes were compared (up to four digits), Medicare data were reliable in only 59.5 to 64.1 percent of the cases. In the study of abstract service data, the comparable figures had been 66.8 to 77.5 percent, and in the NCHS study, 63.4 to 86.0 percent. Further, Medicare data concerning the pres-

ence of **additional diagnoses were reliable** in 74.5 percent of the cases, and the reliability level for Medicare principal procedures was **78.9** percent. Finally, in the abstract service and NCHS studies, the field team concluded that in **4.6** percent of the cases, the correct diagnosis code was a matter of judgment. This was **also** true for **1.7** percent of all procedures in the Medicare study.

It should be noted, however, that the data used in IOM studies were for 1974 and 1977. A second and even more important consideration is that the studies were based on detailed coding of diagnoses and procedures; therefore, discrepancy rates did not reflect error rates that might occur when cases were aggregated into DRGs. In fact, in a study of coding error at the DRG level, reliability increased to **76.7** percent (69). **A third problem with extrapolating from these studies is that the discharge abstracts studied were not produced for payment purposes. When payment depends on the accuracy and timeliness of discharge abstracts, their importance increases and data reliability should improve. Monitoring by peer review organizations (PROS) in the new system should give hospitals added incentive to improve their data collection and coding procedures.**

The dependence of payment on coded diagnoses and procedures in a DRG payment system raises the possibility of deliberate changes in coding conventions. Several authors (4,77,91) **have noted that the ability to maximize payment by changing diagnosis codes could be a serious problem. "DRG creep" was defined by Simborg as a deliberate and systematic shift in a hospital's reported case mix in order to improve payment (77). As described in chapter 2, the primary basis for subdivision of cases into discrete DRGs is the principal diagnosis. Using the original DRG classification system, Simborg pointed out that by changing the sequence of discharge diagnoses for patients with more than one diagnosis, a higher priced DRG can result. If done systematically, perhaps using sophisticated computer programs, a more costly case mix would result.**

It should be noted that the potential for "coding creep" exists with all available case-mix measures and is potentially even more problematic with those requiring subjective severity determination. To some extent, the new DRGs limit the discre-

tion permitted in the assignment of DRGs, reducing but not eliminating the "upcoding" possibilities that the original DRG system offered. Under the modified DRG system, only significant, predetermined secondary diagnoses (complications and comorbidities) or age can lead to a case being included in a higher cost DRG; i.e., sequence no longer matters. In addition, a surgical procedure hierarchy is now used to assign patients who had surgery to DRG categories. Where there are multiple medical and surgical conditions, the one involving the major surgical procedure becomes the principal one. Thus, surgery takes precedence.

Data processing sophistication should increase within the hospitals in response to the new Medicare payment system. For example, it would pay a hospital to use its computer to screen for uncomplicated cases or certain DRGs that the medical records department should review for potential undercoding (77). DRG creep, or deliberate overcoming, can be controlled in two ways. First, PROS or other review organizations can screen certain DRGs for overcoming. This function was specifically assigned to PROS by the new Medicare law. Second, the potential gains from DRG creep would diminish if DRG prices are regularly reestimated. New prices or weights would reflect the new distribution of patients among DRGs and the new average costs per DRG. Over time, reestimation of weights would cause the more profitable DRGs to become less profitable, and the less profitable ones more profitable. Thus, one could expect a gradual decline in the potential for "gaming" via DRG creep with periodic reestimation of DRG prices.

Clearly, these improvements can be expected from the hospital industry as administrators, medical records personnel, and particularly physicians become more aware of the reimbursement implications of inaccurate data. Obviously, improvements of this type have potentially significant resource implications for the hospital industry, as well as third party payment agencies. These costs should be considered when the potential impact of a DRG reimbursement system is assessed. New Jersey has conducted educational programs for medical records personnel, physicians, nurses, and hospital administrators. Data accuracy has improved subsequently (22,76), **though some DRG creep may exist in New Jersey (14).**

HOSPITAL ADMINISTRATIVE ISSUES

The foregoing discussion of problems in data accuracy and timeliness in the use of DRGs is indicative of the need for improvements in the procedures used for data abstraction and coding. Researchers who have examined some of the problems have suggested several areas in which improvements should be made.

First, because a great deal of the error is introduced at the hospital level, programs to improve the quality of the information should be instituted. These might include additional training for persons abstracting information from the medical record, routinization of hospital procedures so that activities of billing personnel could be limited to information transfer (rather than interpretation of the medical record data), and instructional programs for physicians in classifying diagnoses, determining principal diagnosis, and completing the medical record* (12). Again, New Jersey has implemented these suggestions and has found them to be successful (22,48,49).

The medical record should also be completed in a timely fashion in order to bill third parties as soon after discharge as possible. In this case, physicians must be encouraged to complete the medical record as soon after discharge as possible. Also, for some hospitals, additional medical records personnel may be necessary.

A third suggestion for improving data quality is to establish direct, timely links among error detection, feedback, and training (10). (In fact, the New Jersey system has instituted many editing and educational initiatives throughout that State.) It is suggested that this error detection should include, as a supplement to data checks by the computer, a regular program for independently reabstracting samples of records. New Jersey Professional Standards Review Organizations have done this to monitor DRG assignments of patients to DRGs (14). **As stated** earlier, however, these types

● Demlo and her colleagues (12) have also suggested that if the practice of determining principal diagnosis by referring to the first-listed item on the face sheet of the medical record continues, the medical record format itself might be revised so that the conditions are recorded in order of priority with the principal diagnosis listed first.

of improvements are not without cost or time implications, and there is some evidence to suggest that these improvements may increase the average cost of preparing a bill under a DRG-based payment system.

Some preliminary results of the effect of DRG payment on hospital behavior and performance are available from the New Jersey DRG payment experience (98). To assess the effect of the experimental DRG-based payment system on hospital organization and procedures, comparisons were made between matched samples of participating and nonparticipating hospitals. Based on that comparison, the following conclusions were reached:

1. the importance of the medical records departments has increased dramatically in participating hospitals. This was considered to be the result of the required expansion of the departments' functions and personnel, as well as the need for better trained personnel;
2. the medical staff in the participating hospitals has become more directly involved in hospital operations; and
3. the quantity and type of information collected in DRG hospitals has expanded, allowing for the development of more sophisticated management information systems.

A second portion of the New Jersey analysis examined the quality and timeliness of data before and after the institution of the new payment system and found that while data accuracy improved, the length of time needed to produce the data increased. Although the abstract face sheet incompleteness rate decreased, the amount of time required by the medical records and patient billing departments increased. The author stated that as hospitals become more experienced with the system, it is likely that the time needed to process data will decrease (98).

The details of the methods of the New Jersey evaluation are not yet publicly available, so that interpretation of the results must be preliminary. Nevertheless, there is some indication that imposition of a DRG-based reimbursement scheme requires additional administrative resources. The

magnitude of these additional resources and the implications for Medicare payment cannot necessarily be inferred from this preliminary analysis. Some hospitals could be expected to incur larger cost increases than others as a result of differences

in current hospital procedures. It is hoped by proponents that the increased administrative burden would be offset by the cost savings attributable to the imposition of a flat-rate, prospective payment system.