

Health Care Delivery

Optimizing Hospital Reimbursement Through Physician Awareness: A Step Toward Better Patient Care

Brian J. Cole, MD*

Susan Flics, RN†

David B. Levine, MD†

A B S T R A C T

We instituted a training program to improve the overall accuracy of medical record coding through greater physician awareness to enhance hospital reimbursement and maintain quality patient care. A physician-targeted course reviewed the prospective payment system, diagnosis-related group guidelines, ambulatory surgery reimbursement, and the relationship between

accurate physician documentation and medical record coding. Annual increases in charges from prospective surgical case assignment, proper conversion of outpatient to inpatient status, and more accurate coding of inpatient comorbidities and complications led to an estimated increase in hospital charges of \$1.6 million.

In 1995, in part due to the increasing penetration of managed care, the Hospital for Special Surgery had a deficit of nearly \$6 million based on operating expenses of \$141 million. In the early 1990s, we addressed hospital deficit by developing a program of cost awareness and cost containment.^{1,2} During this period, a surgeon-hospital cooperative team recognized substantial savings in individual supply costs. These efforts, however, had reached a plateau, shifting our attention to the

development of strategies to increase hospital revenues.

Our response to this challenge was to develop a program optimizing hospital reimbursement by improving physician awareness of the reimbursement process and educating them on how they can effect a positive change. It was our belief that improved documentation and record keeping is important for quality patient care. Awareness of the overall reimbursement process and subsequent behavior change on the part of the physician leading to proper documentation would lead to enhanced reimbursements to improve patient care environments.

Congress enacted the Tax Equity and Fiscal Responsibility Act of 1982, thereby modifying the system by which hospitals are reimbursed for the care of Medicare patients.³ This established the prospective payment system (PPS) based on diagnosis-related groups

(DRGs) as a method to reimburse hospitals for inpatient services at a predetermined amount per Medicare discharge. The DRG system defines groups of patients that consume relatively homogenous quantities of hospital resources. The ultimate impact of DRG reimbursement, however, depends on the overall payer mix.

Currently, an all-payer type DRG system predominates in New York State, maintaining the current array of private and public insurers, but requiring that they each pay the DRG determined rate for hospital services. The goals of this system are to limit cost shifting, finance uncompensated care, and reduce hospital cost growth.⁴ This program marks the transition from retrospective fee-for-service payment to a prospectively determined fixed sum based on the usual nature and severity of the illness of patients within a diagnostic grouping.

*From *Midwest Orthopaedics, Rush-Presbyterian St Luke's Medical Center, Chicago, Ill, and the †Hospital for Special Surgery, New York, NY.*

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Reprint requests: Brian J. Cole, MD, Midwest Orthopaedics, Rush-Presbyterian St Luke's Medical Ctr, 1725 W Harrison St, Ste 1063, Chicago, IL 60612.

Thus, DRGs have been the primary methodology of reimbursement in New York State since January 1, 1986. This classification is derived from 23 major diagnostic categories (MDCs) that are broken down further into 475 DRGs.⁵ An inpatient's hospital stay is assigned a particular DRG based on the combined input of diagnostic and procedure codes according to the *International Classification of Disease and Clinical Modification-9th edition* (ICD-9-CM). The ICD-9-CM considers patient attributes including principal and secondary diagnoses, procedures, complications and comorbidities, and length of stay. A particular DRG determined by the ICD-9-CM codes has an associated Service Intensity Weight (SIW). Therefore, the more complex the surgical care provided, the higher the SIW allowed and, thus, the higher the calculated reimbursement to the hospital. Reimbursement may vary by locality, wage index, market basket pricing, inflation, technology, and teaching status.

While DRGs are insensitive to individual hospital differences, several DRGs are adjusted for complications and comorbidities (CCs). CCs are conditions that require a minimum of specific documentation to be substantiated. A typical CC is a condition that is either preexisting (comorbidity) or arising (complication) during the hospital stay that prolongs the length of stay. A DRG modified by a CC will always have a higher SIW. However, these codes can be used only when there is thorough and accurate physician documentation in the medical record. In orthopedics, non-total joint patients and outpatients undergoing ambulatory surgery who are subsequently converted to an inpatient stay are most affected by CCs and accurate DRG coding.

In contrast to inpatient procedures, outpatient procedures are reimbursed at a pre-determined rate depending on the payer mix and are not subject to the ICD-9-CM and DRG determination. Thus, an additional opportunity to enhance reimbursement arises when

outpatients require subsequent admission for various case-related factors.

The purpose of this initiative was to induce a greater commitment by physicians to perform more thorough and accurate documentation of patient care with the expectation that coding precision and hospital reimbursement would improve.

MATERIALS AND METHODS

In 1995, an Accurate Coding Task Force comprised of representatives from physician staff, hospital administration, finance, Utilization Review/Quality Management (UR/QM), and medical records was appointed to study and monitor the issue of reimbursement and to develop an appropriate course of action. A comparative analysis of hospital coding practices with respect to statewide data was performed. It was determined that many of the high-volume orthopedic procedures performed were not being coded with the additional CCs that would allow for assignment to higher paying DRGs. There was insufficient medical record documentation to code these real patient events.

Furthermore, several patients who were being admitted as inpatients from ambulatory surgery had insufficient documentation to capture the DRG reimbursement rate, which was different (but not necessarily greater) from the ambulatory rate. In addition to the benefits of intervening at the time of conversion, it was believed that an initiative to prospectively assign cases based on the risk of possible conversion to inpatient status also would be beneficial in reducing reimbursement losses.

Two physician- and nurse/coder-targeted educational programs were sponsored. A 1-hour instructional course was presented to house staff reviewing these issues and their respective impact on hospital reimbursement. The goals of this initiative were to enhance house staff understanding of the prospective payment system, DRG reimbursement methodology, ambulatory surgery reimbursement, and the relationship between accurate physician documen-

tation and subsequent medical record coding. Additionally, UR/QM nurses and coding staff received specific training in ICD-9-CM coding guidelines from an industry-recognized expert.

This program highlighted three potential areas that could positively affect hospital reimbursement: prospective preadmission case assignment to either outpatient or inpatient status; accurate retrospective conversion of outpatient ambulatory cases to inpatient status postoperatively; and accurate recognition and documentation of inpatient CCs. Case studies were presented representing each of these scenarios to demonstrate potential increases in hospital reimbursement due to the recognition and documentation of these events.

Several initiatives were undertaken to operationalize this plan. An emphasis on improved physician documentation and augmented UR/QM nurse surveillance activities was placed. On a case-by-case basis, a nurse reviewer alerted physicians to potential coding opportunities. He or she assisted the physician in documenting the pertinent issues that could potentially enhance reimbursement. Physicians and UR/QM staff were readily available to advise and support more accurate coding by medical records personnel.

Fifty charts from patients who required admission during 1995 from ambulatory surgery were retrospectively reviewed to identify patterns and risk factors for subsequent admission. The Accurate Coding Task Force then began to review all elective ambulatory surgery and inpatient admissions on a prospective basis as of January 1, 1996, to permit better determination of the outpatient or inpatient status before the case was scheduled. Patients who subsequently required admission from ambulatory surgery were addressed at the time of conversion in the recovery room to accurately identify and document the reasons for admission. An Accurate Coding Table (ACT) was developed, which listed the most common CCs with the associated minimal

indications for use, including guidelines for appropriate intervention. The documentation required to substantiate and treat the CC also was provided. The ACT was placed on patient charts for convenient reference by physicians, nurses, and coders. Increases in charges for 1996 were compared to the charges generated in 1995.

The ambulatory surgery conversion portion began in January 1996. The inpatient portion began in March 1996 after the educational programs were presented. The inpatient portion was first initiated by the Spine and Trauma Services and later expanded throughout the hospital by September 1996. Monthly reports were maintained to determine if projected targets were being met. Bimonthly presentations were made, and frequent ad-hoc meetings were conducted with task force members to ensure conformance with program goals. Enhanced reimbursement resulting from the ambulatory surgery conversion program and accurate documentation of inpatient CCs was tracked.

RESULTS

A thorough review of 50 records of patients who required admission from ambulatory surgery revealed several factors that were considered predictive of inadvertent preoperative assignment to an outpatient surgery status. Seventy-two percent of the cases admitted were performed on the lower extremity. Sixty-one percent of the cases were either the last or second to last case performed in the operating room. Retrospectively, it was believed that 30% of the cases were of sufficient intensity that admission would have been predicted if adequately reviewed at the time of scheduling. Twenty-eight percent of the admissions provided no specific justification as to why the patient required admission from ambulatory surgery. The most common reasons for subsequent admission from ambulatory surgery, when provided, included perceived need for intravenous antibiotics, postoperative subcutaneous

drains, and pain management.

Based on these results, specific criteria for inpatient operating room scheduling were developed. Prior to admission, a UR/QM nurse would suggest that the patient be scheduled as an inpatient procedure anticipating admission when these criteria were satisfied. Of approximately 3800 ambulatory surgery cases, 25 were appropriately pre-assigned to inpatient status during a 10-month period in order to prospectively recognize the disease-specific DRG reimbursement. Preadmission assignment to inpatient status based on case intensity and utilization review criteria contributed \$50,000 to the program total.

While we were able to reduce the number of postoperative conversions of ambulatory cases to inpatient stays by pre-admission evaluation, 418 admissions from ambulatory surgery still required point-of-service review with respect to the appropriate DRG to assign. Without review, most of the charts in the conversion group defaulted into DRG 461: "...a procedure with a diagnosis of other contact with health services."⁵ DRG 461 has a relatively low SIW, often substantially lower than that of the associated disease-specific DRG. UR/QM nurses performed point-of-service intervention to determine the appropriateness of assigning a disease-specific DRG and the necessary documentation required to accomplish this.

Specific and acceptable reasons to assign a disease-specific DRG other than 461 included diagnosis was confirmed, but the patient required further treatment; surgery was more extensive than planned; and complications developed requiring inpatient treatment. With proper documentation of these events when they occurred, a disease-specific DRG was justified. At the time of program evaluation (10 months), approximately 3800 ambulatory surgery cases were performed, and 202 were subsequently converted to inpatient status in order to recognize the inpatient disease-specific DRG. The annual increase in reimbursement from

ambulatory surgery point-of-service conversion was \$250,000.

To assess the impact of accurately identifying CCs occurring during the inpatient stay that potentially result in the assignment of a DRG with a greater SIW, we initially focused on DRG 756: "spine fusion without a CC."⁵ Twenty-nine DRG 756 patients were identified during the first half of the study period and accurately re-coded as DRG 755 ("spine fusion with a CC").⁵ The SIWs for DRG 756 and 755 are 1.9981 and 3.2528, respectively. For each SIW point, the increase in reimbursement for the hospital is \$5000 to \$6000. The annual increase from these cases alone was estimated to be \$110,000.

Application of the accurate coding program to other frequently occurring orthopedic conditions was then performed. Using the ACT, we discovered that the most common CCs leading to a higher reimbursement included electrolyte imbalance, ileus, postoperative anemia, fever of unknown origin, decubitus ulcer, and wound hematoma. All of these conditions required very specific documentation and intervention in order to truly be considered a CC. In total, 179 charts of a total of approximately 3000 inpatient records were reviewed during the study period of 7.5 months. This aspect of the program realized \$1.3 million in enhanced reimbursement.

DISCUSSION

Improved physician documentation leading to more accurate coding of the medical record was achieved by physician awareness fostered by improved physician-nurse communication. Increases in average revenue were reported due to prospective determination of inpatient or outpatient status, point-of-service outpatient conversion to inpatient status, and coding of inpatient CCs. Appropriate preadmission assignment based on case intensity and utilization review criteria contributed \$50,000 to the program. Annual increases in reimbursement of ambulatory surgery conversions was

\$250,000, exceeding expectations. Surgeons accurately documented common perioperative events, permitting utilization of DRGs with a CC and, thus, a higher SIW. This aspect of the program realized an increase of \$1.3 million.

Reimbursement reform has had several effects on hospital admissions, average length of stay, and patient days, effectively reducing hospital utilization across most specialties. An analysis by Schwartz and Mendelson⁶ suggests that the era of cost efficiencies and savings resulting from decreased utilization have probably plateaued, and further efforts to contain spending may be reaching their limits. We have found a similar trend in our cost-containment efforts reported earlier.^{1,2}

These factors have fostered our initiative to more accurately code medical records and determine inpatient status in order to optimize reimbursement. DRGs, first developed in the 1970s at Yale University to study resource utilization, have become the core of the PPS. DRGs associated with CCs are generally coupled with higher total hospital costs, a longer hospital length of stay, more procedures per patient, increased financial risk, a larger number of outliers, and a higher mortality than patients in the same DRGs with fewer CCs.^{7,8} This underlies the importance of early recognition, intervention, and accurate documentation of CCs by medical staff to facilitate medical record coding. If the hospital can treat a patient for less than the price attached to the DRG, it, in effect, realizes a profit. Understanding that a DRG with its appropriate statistical weight is necessary to determine reimbursement is critical.

As several institutions have discovered, DRGs not associated with CCs can have a dramatic impact on hospital losses.⁹ Further outcome studies on the negative impact of CCs on hospital reimbursement are needed to better define those DRGs that are consistently under-reimbursed. For example, several trauma codes have been developed

and evaluated in response to this need based on the findings of various reports, thus narrowing the gap between cost and reimbursement.¹⁰⁻¹²

The evolution of the outpatient surgical setting has been reviewed by Duffy and Farley,¹³ who show how financial incentives and organizational structures in the hospital industry affect the mix of hospital services. They documented a decline in inpatient procedures due to a shift to the outpatient setting, new technologies, and pressures from reimbursement mechanisms and UR policies. Interestingly, while several procedures may be better reimbursed as inpatient stays, the associated costs are often higher. We encourage and perform accurate determination of the reasons for admission for all outpatient procedures independent of the level of reimbursement. Adhering to these high standards ensures quality patient care in addition to maximal hospital reimbursement.

Several authors have addressed the potential financial impact of a prospective payment system based on DRGs demonstrating the effect of "DRG creep" on reimbursement.¹⁴⁻¹⁶ Trauma admissions, commonly treated at a net loss, are a natural target for this type of intervention. Recently, Joy and Yurt¹² assessed the impact of the all-payer PPS in New York on trauma care, discovering that a review of trauma patients' records revealed several incidences of inaccurate coding. Correction of these led to significant increases in reimbursement. Similar findings by Helling et al¹⁷ have been reported. In this study, early evaluation of trauma admissions for financial profiling and discharge planning in combination with the input of a trauma nurse coordinator during the coding process by medical records personnel resulted in improvements in the cost recovery ratio (collections/cost) over a 4-year period. That nurses can effectively abstract the medical record requesting support from physicians and laboratory data also has been demonstrated by Hines.¹⁸ These stud-

ies suggest that the PPS influences the assignment of hospital discharge codes in a way that would increase payment to hospitals. Our belief, however, is that many of these changes can be ascribed merely to more accurate and thorough documentation in response to readily available objective diagnostic criteria (ie, the ICD-CM codes that determine the DRG).

We recognize that the prospective reimbursement system has influenced the assignment of hospital discharge codes in certain instances, but precise and accurate documentation of the events leading to the use of these codes was undertaken independent of their effect on reimbursement. An evaluation of the Medicare system from 1985-1988, projected nationally, has been found not to result in significant hospital over-reimbursement.¹⁹ The general tendency appears to be a balance between physician narratives leading to under-reimbursement and hospital coding leading to resequencing and over-reimbursement. Hospitals treating the sickest and most difficult patients should be compensated for resources used. The tendency to ignore comorbidities and complications in effect penalizes such facilities that choose to treat these patients. We advocate unifying this process with better integration of physicians, nurses, and medical record personnel.

The need for accurate coding extends beyond the determination of hospital reimbursement. The use of ICD-9-CM numeric codes and DRGs permit detailed monitoring of patient care, ongoing calibration of case weights, research and trend analysis, quality assurance, peer review, and risk management. To this end, we have refined our coding accuracy under the DRG system without assigning false diagnoses only for financial gain (ie, up-coding by claiming illness severity at too high a level relative to the patient's true state). Furthermore, we have resisted any temptation to "unbundle" patient problems into multiple admissions to enhance revenues.

Clearly, the PPS is an attempt to use economically stringent guidelines to manage patient care. It is the responsibility of the institution to prevent undesirable or differential treatment based on payer types. False attestation can lead to imprisonment, fines, or civil penalty. The development of the AP-DRG system and the emergence of a uniform reimbursement system based on the resource-based relative value system will undoubtedly further limit these unethical practices.

Increased awareness of the PPS has had a beneficial effect on our hospital's reimbursement over the 1996 fiscal year. We estimate that our Accurate Coding Task Force will realize an increased hospital reimbursement of almost \$1.6 million. Accuracy is paramount to any objective system that assigns specific codes describing events or occurrences; thus, we have made every effort to emphasize accuracy over reimbursement outcome.

As of January 1, 1997, New York State began its foray into free-market hospital rates, effectively eliminating state-determined hospital fees. At the time of this study, Maryland is the only remaining state that sets hospital fees. Accurate coding and physician awareness, however, will remain relevant. Documentation of CCs will demonstrate "severity of illness" necessary for

cost-based accounting systems. Per diem payment will also depend on daily adherence to medical necessity guidelines determined principally by physician-patient interactions. Finally, as hospitals begin to share in the risk of delivering cost-effective services, documenting real patient events will be necessary for hospitals to render high-quality patient care.

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