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FROM: June Gibbs Brown
Inspector General

SUBJECT: Monitoring the Accuracy of Hospital Coding (OEI-01-98-00420)

TO: Nancy-Ann Min DeParle
Administrator
Health Care Financing Administration

Since the inception of Medicare's prospective payment system (PPS) in 1984, the Office of Inspector General has played an active role in monitoring diagnosis related group (DRG) upcoding. In this final memorandum report, I would like to share with you some concerns that have evolved out of our recent work in this area. While we understand that the Health Care Financing Administration (HCFA) is taking steps to increase monitoring of DRG coding, we elaborate here on our areas of concern and offer some options that HCFA could take to improve monitoring and oversight of DRG coding.

Background

In our recent report, "Using Software to Detect Upcoding of Hospital Bills" (OEI-01-97-00010), we examined the ability of commercially available software to identify DRG upcoding through analysis of electronic claims data. We used two software products to identify 299 hospitals with a high suspected rate of upcoding. We then used accredited medical records professionals to perform a blinded DRG validation on a sample of over 2,600 claims from 50 of these hospitals and a control group of 20 hospitals.

In the course of conducting this study, we developed serious concerns about the potential for abuse of the DRG system through upcoding and about HCFA's oversight of the accuracy of DRG coding. Specifically we found that, although the hospital payment system is functioning well as a whole, the system has significant vulnerabilities to upcoding that can easily be avoided. We also found that, despite these vulnerabilities, HCFA is not performing routine, ongoing monitoring and analysis of DRG coding to detect problematic DRGs, hospitals, and coding situations that require administrative, educational, or law enforcement intervention.

Findings

The DRG system is vulnerable to abuse by providers who wish to increase reimbursement inappropriately through upcoding, particularly so within certain DRGs. Our analysis found noticeable, detectable, and curable upcoding abuses among providers and within specific DRGs.

- ▶ In a focused sample from a group of 299 hospitals that computer software identified as high upcoders, we found that an average of 11 percent of DRG bills submitted during 1996 were upcoded, versus 5 percent of bills among a control sample of hospitals.

Identifying Hospitals that Upcode		
	Average Upcoding Rate	Average Downcoding Rate
OIG Experimental sample - hospitals with a high predicted rate of upcoding (n=50)	11.4%	5.1%
OIG Control sample - hospitals without a high predicted rate of upcoding (n=20)	5.2%	3.9%

Source: Office of Inspector General, "Using Software to Detect Upcoding of Hospital Bills" (OEI-01-97-00010), August 1998.

The average rate of upcoding in the control sample of hospitals (those without a high predicted rate of upcoding) was not statistically different from the average downcoding rate. However, among hospitals that the software predicted would have a high rate of upcoding, the average upcoding rate was more than twice that of downcoding. The difference between upcoding and downcoding in these hospitals suggests intentional abuse of the DRG system by some providers.

- ▶ Using data from both our focused review and the more broadly representative 1996 DRG validation performed by HCFA's clinical data abstraction centers (CDAC), we found that certain DRGs are particularly susceptible to upcoding.

Three Highly Vulnerable DRGs						
	OIG Experimental Sample		OIG Control Sample		CDAC Sample	
	Up-coded	Down-coded	Up-coded	Down-coded	Up-coded	Down-coded
DRG 79: Respiratory Infections	37.7% (n=60)	0.0% (n=0)	18.5% (n=5)	0.0% (n=0)	11.0% (n=48)	0.7% (n=3)
DRG 416: Septicemia	21.2% (n=14)	0.0% (n=0)	16.7% (n=3)	0.0% (n=0)	13.3% (n=49)	1.1% (n=4)
DRG 14: Specific Cerebrovascular Disorders	10.1% (n=10)	0.0% (n=0)	6.7% (n=2)	0.0% (n=0)	3.5% (n=24)	0.4% (n=3)

Claims billed for these three DRGs show a clear pattern that exemplifies the upcoding seen in a group of over half a dozen DRGs we examined. These DRGs were upcoded

disproportionately, especially by our experimentally identified upcoding hospitals, but also among hospitals from the general population represented by the CDAC review and our control sample.

The HCFA does not routinely analyze readily available billing and clinical data that could be used to proactively identify problems in DRG coding.

- ▶ The HCFA does not routinely analyze data from the annual validation of DRG coding performed by its Clinical Data Abstraction Centers.

Since 1995, HCFA has used two specialized contractors called Clinical Data Abstraction Centers to validate the DRGs on an annual national sample of over 20,000 claims billed to Medicare. On a monthly basis, the CDACs report detailed data on each claim reviewed to HCFA's Office of Clinical Standards and Quality. These data include original and validated diagnostic coding, original and validated DRGs, and reasons for any variance between the DRGs. The purpose of this validation effort is to provide HCFA with insight as to the accuracy of DRGs billed to Medicare.

However, we found that HCFA performs no routine, ongoing analysis of CDAC data. In our interviews with staff at the two HCFA components that have responsibility for DRGs – the Office of Clinical Standards and Quality, and the Center for Health Plans and Providers – staff were unable to identify any routine monitoring and analysis of CDAC data. In our review of HCFA's instructions to the peer review organizations (PROs), contractors that have statutory responsibility for DRG oversight, we found no instructions advising them to perform regular analysis of CDAC data.

Yet we believe that analysis of CDAC data can be of great value to HCFA in overseeing the accuracy of DRG coding. For example, in HCFA's 1996 DRG validation, the CDACs found a 4 percent upcoding rate with estimated net overpayment of \$183 million. Some may suggest that overpayments of \$183 million in an \$80 billion program (less than one-quarter percent) indicate that the DRG payment system does not have major problems with upcoding and warrants no further analysis. However, our analysis presented above shows that by digging below the immediate surface, upcoding problems are readily apparent.

- ▶ The HCFA does not routinely analyze data from hospitals, despite the fact that these data are ideally suited for monitoring and analysis of DRGs.

The HCFA maintains valuable clinical, demographic, and administrative data that form the underlying basis of each of the over 10 million DRG-based claims billed to Medicare each year. Data for each hospitalization include diagnosis codes, procedure codes, beneficiary demographics, admission and discharge detail, cost reporting data, and hospital identifier for linkage with provider demographics. Whether used on its own to monitor billing patterns and trends or used to further explore potential problem areas identified within CDAC data, data from hospital claims can provide valuable information to assist in HCFA's oversight of DRG coding.

However, we found that HCFA does not make routine use of data from hospital claims for monitoring and analysis of DRG coding. In our interviews with staff at both HCFA's Office of Clinical Standards and Quality and its Center for Health Plans and Providers, staff were unable to identify any routine monitoring and analysis of DRG billing data. Interviews at HCFA's Program Integrity unit, within the Office of Financial Management, revealed that HCFA conducts some limited analysis of billing data. However, this analysis is done on a very broad level, primarily to identify coverage issues.

We also reviewed HCFA's current instructions to the Medicare PROs. We found no instructions to the PROs advising them to perform any routine monitoring and analysis of DRG coding, despite the fact that PROs already have a complete set of inpatient billing data provided to them by HCFA. In fact, HCFA staff told us that the PROs were instructed not to do "coding projects" within their current contract. We did find that PROs are involved in sporadic activity around DRG oversight; however, this activity often is in support of an OIG investigation.

Recommendation

The HCFA should perform routine monitoring and analysis of hospital billing data and clinical data to proactively identify aberrant patterns of upcoding.

The HCFA is taking steps toward increased monitoring for DRG upcoding. For example, the agency is considering an increased role for monitoring DRG upcoding within the next round of contracts with the Medicare PROs. We offer our recommendation within this context. The following approaches are examples that the agency may wish to consider as it develops its monitoring and analysis approach to detect upcoding.

- ▶ As a starting point, the agency could routinely analyze the DRG validation data that it receives from the clinical data abstraction centers with which it contracts.
- ▶ The agency could opt to organize its monitoring effort in a variety of ways. It might choose to use its own staff; alternatively, it might determine that the preferable route is to contract with an outside party with which it currently has a contract, such as the fiscal intermediary fraud units or the peer review organizations; or it might work with a new entity under the Medicare Integrity Program.
- ▶ The agency could use a variety of analytical approaches, such as examining claims data for patterns, trends, change pairs, and spikes in DRG billing volume. This analysis also could include examination of coding validation data for trends in miscoding as a way to detect problem DRGs, providers, or coding situations.
- ▶ The agency could establish criteria, policies, and procedures to make referral for collection to the Office of Inspector General or to fiscal intermediaries, as appropriate, from providers who are deliberately exploiting and abusing the system through upcoding claims for payment.

Comments on the Draft Report

The HCFA concurs with our recommendation that it perform routine monitoring and analysis of hospital billing and clinical data to proactively identify aberrant patterns of upcoding. In its comments, HCFA specified the actions that it will take to reduce DRG upcoding. These actions are:

- ▶ Establish a payment error prevention program in the upcoming PRO 6th Scope of Work to focus on reducing inappropriate DRG payments.
- ▶ Expand the size and content of the annual CDAC DRG validation and use it to identify trends in coding practices and to point out problem areas.
- ▶ Pilot a program in which a selected Medicare fiscal intermediary will use PRO/CDAC data to identify aberrancies and develop cases for referral to law enforcement.
- ▶ Procure a statistical analysis contractor to conduct statistical and trend analysis.

We applaud the steps that HCFA will take to increase monitoring and oversight of the accuracy of DRG coding. We look forward to working with HCFA in the future as we continue our work in this area.

The full text of HCFA's comments on our draft report appears on the following pages.

In Closing

Our work in DRG coding is continuing. We are currently developing reports on specific DRGs to illustrate techniques that can be used to detect aberrant upcoding situations. We look forward to continuing our work with you to eliminate DRG upcoding from the Medicare program and to ensure that Medicare pays accurately for all services delivered.

If you have any questions, you may call me or George Grob, Deputy Inspector General for Evaluation and Inspections, or have your staff call Mary Beth Clarke at (202) 619-2481.

continued and expanded in size and content in order to look for other types of payment errors such as unnecessary services, appropriate settings, and poor quality of care. It will serve as a first-level monitor which will identify trends in coding practices and point out potential problem areas. At the same time, we are procuring a statistical analysis contractor that will be tasked with conducting the same types of analysis undertaken by the OIG. It is expected that this analysis will lead to early detection of the trends resulting from the kinds of abuse that might occur among chain hospitals that span states in their operations.

We will also pilot a program of inpatient medical review at a selected fiscal intermediary (FI). The pilot project will routinely use CDAC/PRO data and FI inpatient hospital data that identify aberrant coding, billing, utilization, and/or expenditure patterns in order to target review in vulnerable areas at greatest risk of inappropriate payment. In instances where DRG validation adjustments or medical review identify areas of potential fraud, the FI will develop cases and make appropriate referrals to law enforcement. The pilot project will provide invaluable information for later incorporation into our Medicare Integrity Program contracting strategy.

Additionally, our coding staff is actively involved in providing advice when potential coding abuses arise. We frequently receive informal information from hospitals, contractors (including the CDACs), and other organizations indicating that hospitals may be initiating new types of coding abuse. Upon receiving this information, our staff promptly develops an article for publication in "Coding Clinic", a publication by the American Hospital Association that is used as the official source of ICD-9-CM coding policy. In addition the articles serve to put the coding community on notice. The articles are cited by PROs, OIG, and the Department of Justice when investigating potential abuse, alerting other components to the need for improved edits or provider education or that possible enforcement actions may be indicated.

Additional Comments

The OIG utilized commercially available computer software in an attempt to identify hospitals with a pattern of upcoding. The OIG did not find the current software particularly valuable in identifying areas of abuse, and correctly pointed out that the CDAC data are of much greater value in identifying upcoding. While we agree that HCFA should have an ongoing process for analyzing its contractor and billing data, we encourage the OIG to continue its efforts to monitor software development in order to determine when such software might be of greater value to HCFA. Additionally, OIG may want to undertake a review of billing software in order to see how accurately those packages track HCFA policy.