March 2006

MEDICARE PAYMENT

CMS Methodology Adequate to Estimate National Error Rate

G A O
Accountability * Integrity * Reliability

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Why GAO Did This Study

The Centers for Medicare & Medicaid Services (CMS) estimated that the Medicare program paid approximately $20 billion (net) in error for fee-for-service (FFS) claims in fiscal year 2004. CMS established two programs—the Comprehensive Error Rate Testing (CERT) Program and the Hospital Payment Monitoring Program (HPMP)—to measure the accuracy of claims paid.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 directed GAO to study the adequacy of the methodology that CMS used to estimate the Medicare FFS claims paid in error. GAO reviewed the extent to which CMS's methodology for estimating the fiscal year 2004 error rates was adequate by contractor type for (1) the CERT Program, (2) the HPMP, and (3) the combined national error rate (including both the CERT Program and the HPMP).

GAO reviewed relevant CMS documents and reports related to the CERT Program and the HPMP. In addition, GAO reviewed work performed by the Department of Health and Human Services (HHS) Office of Inspector General (OIG) and its contractor that evaluated CMS's fiscal year 2004 statistical methods and other aspects of the error rate estimation process. GAO also conducted interviews with officials from CMS, HHS's OIG, and their contractors.

www.gao.gov/cgi-bin/getrpt?GAO-06-300.

To view the full product, including the scope and methodology, click on the link above. For more information, contact A. Bruce Steinwald at (202) 512-7101 or steinwalda@gao.gov.

What GAO Found

The methodology used by CMS for the CERT Program was adequate to estimate the fiscal year 2004 error rates by contractor type—carrier, durable medical equipment regional carrier (DMERC), and fiscal intermediary (FI). Carriers pay claims submitted by physicians, diagnostic laboratories and facilities, and ambulance service providers. DMERCs pay claims submitted by durable medical equipment suppliers. FIs pay claims submitted by hospitals, home health agencies, hospital outpatient departments, skilled nursing facilities, and hospices. The methodology was adequate because CMS used a large sample—about 120,000 claims—and an appropriate sample selection strategy. For these fiscal year 2004 error rate estimates, CMS made improvements in the collection of medical records that supported the sampled claims. These medical records were appropriately reviewed to determine whether there were errors in payment. CMS used valid statistical methods to estimate the fiscal year 2004 error rates for the carrier, DMERC, and FI contractor types.

The methodology used by CMS for the HPMP was adequate to estimate the fiscal year 2004 error rate by quality improvement organizations (QIO), which are responsible for ascertaining the accuracy of coding and payment of Medicare FFS paid claims for acute care inpatient hospital stays. CMS's sampling methods were adequate because the agency used a large sample, approximately 40,000 claims, that was representative of the population from which it was drawn in terms of average dollar amount per claim. Also, the HPMP had adequate processes in place to ensure appropriate determinations of error. CMS used valid statistical methods to estimate the fiscal year 2004 error rate for the QIO contractor type.

The fiscal year 2004 contractor-type error rate estimates for the CERT Program and the HPMP were appropriately combined to determine the national Medicare error rate through the use of a valid statistical method. CMS estimated the national Medicare error rate by averaging the carrier, DMERC, and FI contractor-type error rates in the CERT Program and the QIO contractor-type error rate in the HPMP, weighted by each contractor type's share of total Medicare FFS payments.

In written comments, HHS noted that GAO found CMS's methodology adequate for estimating the fiscal year 2004 national Medicare FFS error rate. HHS also noted that CMS is continually committed to refining the processes to estimate, as well as lower, the level of improper payments in the Medicare FFS program.

Medicare Net FFS Error Rates and Dollars of Claims Paid in Error, Fiscal Year 2004

CMS program	Contractor type	Error rate (percentage)	Dollars paid in error (in billions)
CERT Program	Carrier	10.7	$6.5
	DMERC	11.1	1.0
	FI	15.8	9.3
HPMP	QIO	3.6	3.1
National Medicare FFS error rate	**All contractor types**	**9.3**	**$19.9**

Source: CMS.

_____ **United States Government Accountability Office**

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GAO

Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

March 24, 2006

The Honorable Charles E. Grassley
Chairman
The Honorable Max Baucus
Ranking Minority Member
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United States Senate

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The Honorable William M. Thomas
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The Honorable Charles B. Rangel
Ranking Minority Member
Committee on Ways and Means
House of Representatives

The Centers for Medicare & Medicaid Services (CMS), the agency that
administers the Medicare program, monitors the accuracy of claims paid
for services provided to Medicare beneficiaries. Each fiscal year, CMS
reports an estimate of the claims paid in error based on a sample of claims
from previous years. In fiscal year 2004, CMS reported an error rate of
9.3 percent, which represented approximately $20 billion in error out of
the approximately $214 billion in fee-for-service (FFS) payments.[1] The
fiscal year 2004 error rate estimated the percentage of FFS payments that
did not comply with Medicare's payment rules for a sample of claims that

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[1]Unless otherwise specified, dollars paid in error and error rates discussed in this report
are net amounts. Net dollars paid in error were calculated by subtracting dollars paid in
error that were due to underpayments from those that were due to overpayments. The net
dollars paid in error were then used to estimate the error rate. CMS also reported gross
dollars paid in error and error rates in fiscal year 2004. Gross dollars paid in error were
calculated by adding dollars paid in error that were due to underpayments to those that
were due to overpayments.

GAO-06-300 Medicare Error Rate

included inpatient discharges that occurred from July 1, 2002, through June 30, 2003, as well other services that were paid in 2003. The fiscal year 2004 Medicare FFS error rate was significantly higher than the goal of 4.8 percent for that fiscal year, which CMS set under the Government Performance and Results Act of 1993 (GPRA).[2]

CMS uses several types of contractors to ensure the payment accuracy of Medicare claims,[3] including carriers,[4] durable medical equipment regional carriers (DMERC),[5] fiscal intermediaries (FI),[6] and quality improvement organizations (QIO).[7] Using contractor-specific error rate information, CMS estimates an error rate for each type of contractor; the agency produces a national Medicare error rate by aggregating the four contractor-type error rates. In its fiscal year 2004 Medicare error rate report, CMS stated that it planned to use error rate information to help determine the underlying reasons for claim errors, such as incorrect coding, and implement corrective actions.[8] In a congressional testimony in July 2005, the Director of CMS's Office of Financial Management stated

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[2]GPRA requires agencies to develop multiyear strategic plans, annual performance goals, and annual performance reports. See Pub. L. No. 103-62, 107 Stat. 285.

[3]In a few cases, program safeguard contractors are responsible for ensuring the payment accuracy of Medicare claims. Program safeguard contractors are Medicare contractors that conduct activities to address or prevent improper payments.

[4]Carriers are health insurers and pay claims submitted by physicians, diagnostic laboratories and facilities, and ambulance service providers.

[5]DMERCs are health insurers and pay claims submitted by durable medical equipment suppliers. In fiscal year 2004, a program safeguard contractor, TriCenturion, was responsible for medical review and for lowering the error rates in its region.

[6]FIs are almost exclusively health insurers and pay claims submitted by home health agencies, non-prospective payment system (PPS) hospitals, hospital outpatient departments, skilled nursing facilities, and hospices. PPS is a reimbursement method used by Medicare where the payment is made based on a predetermined rate and is unaffected by the provider's actual costs.

[7]QIOs (formerly known as peer review organizations) are responsible for ascertaining the accuracy of coding and payment of paid Medicare FFS claims for acute care inpatient hospital stays—generally those that are covered by PPS—for Medicare beneficiaries in all 50 states, the District of Columbia, and Puerto Rico. Unlike carriers, DMERCs, and FIs, however, QIOs do not process and pay claims. These activities are conducted by FIs.

[8]See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare Fee-for-Service Payments Report Fiscal Year 2004* (Baltimore, Md.: December 2004).

that CMS plans to create performance incentives for contractors.[9] CMS is also implementing a multiyear contractor reform initiative, which will reduce the number of contractors responsible for paying claims.

To monitor the accuracy of Medicare FFS claims paid by contractors, CMS established two programs—the Comprehensive Error Rate Testing (CERT) Program and the Hospital Payment Monitoring Program (HPMP).[10] Through the CERT Program, CMS monitors payment decisions made by three types of contractors—carriers, DMERCs, and FIs. It does this through a review of the claims and submitted medical record documentation to ensure that there is support for the payment based on the information reviewed for a sample of paid claims. CMS uses a similar process for the HPMP for a sample of claims that are reviewed by QIOs for accuracy of payment.

The Department of Health and Human Services (HHS) Office of Inspector General (OIG)[11] estimated the error rate for each fiscal year from 1996 through 2002. CMS made significant changes to the methodology, including substantially increasing the size of the sample used to estimate the error rate, when it assumed responsibility for estimating the Medicare error rate in fiscal year 2003. CMS has continued to make changes to the methodology in subsequent years.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 requires that we study the adequacy of the methodology that CMS used to estimate Medicare error rates and to make recommendations as deemed appropriate.[12] Specifically, we report on the extent to which the methodology used by CMS to estimate the fiscal year 2004 Medicare error rates was adequate (1) by contractor type (carrier, DMERC, and FI) for the CERT Program, (2) by contractor type (QIO) for the HPMP, and (3) for the

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[9]See Senate Homeland Security and Governmental Affairs Subcommittee on Federal Financial Management, Government Information and International Security, *Hearing on Medicare and Medicaid Improper Payments*, Statement of the Director of Office of Financial Management, Centers for Medicare & Medicaid Services, 109th Congress, July 12, 2005.

[10]Each program monitors the accuracy of paid claims that constitute approximately 50 percent of Medicare's FFS payments annually.

[11]OIG regularly conducts audits, evaluations, and investigations pertaining to HHS programs.

[12]Pub. L. No. 108-173, § 921(b)(3), 117 Stat. 2066, 2388-89.

combined national error rate (including the CERT Program and the HPMP).

To conduct our analysis of the adequacy of the methodology that CMS used to estimate fiscal year 2004 Medicare error rates, we reviewed relevant documents, including CMS's Medicare error rate reports for fiscal years 2003 and 2004, CERT and HPMP program documentation, and HHS OIG reports evaluating the fiscal year 2004 CERT Program and HPMP.[13] In addition, we reviewed work performed by an OIG contractor that evaluated CMS's statistical sampling and estimation methodology for the fiscal year 2004 Medicare error rate, including the contractor's report and supporting workpapers. We interviewed OIG officials; OIG contractor staff; CMS officials; and staff of the CERT subcontractor responsible for calculating the error rates for carriers, DMERCs, and FIs and the national error rate for fiscal year 2004. Commenting on the adequacy of the methodology used in any other years was beyond the scope of our work. However, it is important to note that changes in the methodology may affect the estimation of the error rates and thus the comparability of these rates over time.

As part of our assessment of the adequacy of the methodology that CMS used to estimate the Medicare error rates for fiscal year 2004, we reviewed the reliability of these estimates by examining the precision of the contractor-specific error rates, the contractor-type error rates, and the national error rate. Precision is the amount of variation between an estimate (such as the error rate for a sample of Medicare FFS paid claims) and the result that would be obtained from measuring the entire population (such as the error rate for all Medicare FFS paid claims). We examined precision of the error rate estimates by assessing relative precision, which is the standard error[14] of the error rate estimate divided by the estimate itself. Estimates with lower relative precision are more reliable. For the purposes of this report, we established that a relative precision of no greater than 15 percent was within the acceptable statistical standard for precision.[15] We chose relative precision because it

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[13]Since the creation of the CERT Program and the HPMP in 2003, OIG has conducted annual reviews of the programs as part of its oversight of work performed for HHS by contractors.

[14]The standard error is a measure of variation around the estimate, in this case, the error rate.

[15]See, for example, M.H. Hansen, W.N. Hurwitz, and W.G. Madow, *Sample Survey Methods and Theory*, vol. I (New York, N.Y.: John Wiley & Sons, Inc., 1953), 130.

allows for better comparison of the reliability of the range of error rates across contractors.[16]

During the course of our work, CMS published a report in November 2005 that included its fiscal year 2005 error rates.[17] While an evaluation of the methodology used to estimate the fiscal year 2005 error rates was outside the scope of our work, we reviewed the report and included references in this report where appropriate.

For more information on our scope and methodology, see appendix I. We performed our work from April 2005 through March 2006 in accordance with generally accepted government auditing standards.

Results in Brief

We found that the methodology used by CMS for the CERT Program was adequate to estimate the fiscal year 2004 error rates by contractor type (carrier, DMERC, and FI). CMS's sample of 120,000 claims was sufficiently large to reliably estimate the error rate and was appropriately selected. Further, CMS used systematic sampling with a random start, a method that is designed to ensure that the sample is representative of the population. CMS also had appropriate procedures in place to collect medical records from providers, such as physicians, durable medical equipment suppliers, and hospital outpatient departments, which supported the paid claims. Additionally, the processes used by CMS to identify and categorize payment errors were adequate because they ensured that the reviews conducted of the medical records supporting the paid claims were performed according to the established procedures for the CERT Program. This included adequate qualifications and training of those individuals conducting the medical record reviews. Further, CMS used valid statistical

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[16]To provide illustration, consider that one contractor has an error rate of 11.9 percent with a standard error of 2.1 percent and a second contractor has an error rate of 20.4 percent also with a standard error of 2.1 percent. The standard errors are the same, but relative precision, which is calculated by dividing the standard error by the error rate estimate, illustrates that the reliability of the estimates is different. Relative precision of the error rate estimate for the first contractor is 17.6 percent, while the relative precision of the error rate estimate for the second contractor is 10.3 percent. This indicates that the second contractor's error rate estimate is more reliable.

[17]See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare FFS Payments Long Report (Web Version) for November 2005*. 2005. https://www.cms.hhs.gov/apps/er_report/preview_er_report.asp?from=public&which=long &reportID=3 (downloaded Jan. 26, 2006).

methods to estimate the fiscal year 2004 carrier, DMERC, and FI contractor-type error rates and standard errors.

We found also that the methodology used by CMS for the HPMP to calculate the fiscal year 2004 contractor-type error rate for QIOs was adequate to reliably measure claims paid in error. We found the sampling methods to be adequate because CMS's sample of approximately 40,000 claims was sufficiently large to estimate the QIO contractor-type error rate. It was also representative of the population from which it was drawn in terms of average dollar amount per claim. Based on our review of oversight work of the HPMP conducted by OIG, we also found that the process used in the HPMP to collect the medical records that support the claims selected for review was adequate. Additionally, the processes CMS used to identify and categorize payment errors were adequate because they ensured that the reviews conducted of the medical records supporting the paid claims were performed according to established procedures for the HPMP. This included adequate qualifications and training of those individuals conducting the medical record reviews. CMS also used valid statistical methods to estimate the QIO contractor-type error rate and standard error.

The fiscal year 2004 error rates by contractor type (carrier, DMERC, FI, and QIO) were appropriately aggregated to determine the national Medicare error rate through the use of a valid statistical method. CMS estimated the national Medicare error rate by averaging the error rates of the four contractor types (carrier, DMERC, FI, and QIO), weighted by each contractor type's proportion of total Medicare FFS payments.

In written comments on a draft of this report, HHS noted that we found the CMS methodology adequate for estimating the fiscal year 2004 national Medicare FFS error rate. HHS also noted that CMS is continually committed to refining the processes to estimate, as well as lower, the level of improper payments in the Medicare FFS program.

Background

In fiscal year 2003, CMS assumed responsibility for estimating the national Medicare error rate, a responsibility that had previously been held by HHS OIG. OIG began estimating the national Medicare error rate in fiscal year

1996,[18] and continued doing so for each subsequent fiscal year through 2002. The transfer of responsibilities for estimating the national Medicare error rate to CMS coincided with the implementation of the Improper Payments Information Act of 2002 (IPIA). The IPIA requires federal agencies to estimate and report annually on the extent of erroneous payments in their programs and activities.[19] The IPIA defines an improper payment as any payment that should not have been made or that was made in an incorrect amount, including both under- and overpayments. All agencies that identify a program as susceptible to significant improper payments, defined by guidance from the Office of Management and Budget (OMB) in 2003 as exceeding both 2.5 percent of total program payments and $10 million,[20] are required to annually report to Congress and the President an estimate of improper payments and report on corrective actions.

In addition to estimating the national Medicare error rate for purposes of compliance with the IPIA, CMS also began producing contractor-specific error rate estimates beginning in fiscal year 2003 to identify the underlying causes of errors and to adjust action plans for carriers, DMERCs, FIs, and QIOs. To produce these contractor-specific error rate estimates for fiscal year 2004, CMS sampled approximately 160,000 claims. The contractor-specific error rate information was then aggregated by the four contractor types (carrier, DMERC, FI, and QIO), which were ultimately combined to estimate the national Medicare error rate. Under the methodology previously used by OIG to estimate the national Medicare error rate, 6,000 claims were sampled. While the sample size used by OIG was sufficient to estimate the national Medicare error rate, it was not sufficient to reliably estimate the contractor-specific error rates. Additionally, the increased sample size improved precision of the national Medicare error rate estimate.

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[18]According to OIG testimony in February 2000, OIG began estimating the national Medicare error rates in fiscal year 1996 as part of its audit of CMS's financial statements. See House Committee on the Budget, Statement of Inspector General, Department of Health and Human Services, *Hearing on Medicare and Medicaid: HHS High-Risk Programs*, 106th Congress, February 17, 2000.

[19]Pub. L. No. 107-300, 116 Stat. 2350 (codified at 31 U.S.C. § 3321 note).

[20]OMB Mem. M-03-13 (2003).

CMS Programs to Monitor the Payment Accuracy of Medicare FFS Claims

The objective of the CERT Program and the HPMP is to measure the degree to which CMS, through its contractors, is accurately paying claims. Through the CERT Program, CMS monitors the accuracy of Medicare FFS claims that are paid by carriers, DMERCs, and FIs. In fiscal year 2004, the Medicare error rates by contractor type as estimated through the CERT Program were 10.7 percent for the carrier contractor type, 11.1 percent for the DMERC contractor type, and 15.8 percent for the FI contractor type. (See table 1.)

Table 1: Medicare FFS Error Rates and Dollars of Claims Paid in Error, Fiscal Year 2004

CMS program	Contractor type	Error rate (percentage)	Dollars paid in error (in billions)
CERT Program	Carrier	10.7	$6.5
	DMERC	11.1	1.0
	FI	15.8	9.3
HPMP	QIO	3.6	3.1
National Medicare FFS error rate	**All contractor types**	**9.3**	**$19.9**

Source: CMS.

Notes: This table reflects net Medicare FFS error rates and dollars of claims paid in error. Based on data provided in CMS's fiscal year 2005 error rate report, we calculated the net Medicare FFS error rates and net dollars paid in error for fiscal year 2005 by contractor type as follows: carriers—6.0 percent and $4.1 billion; DMERCs—8.6 percent and $0.8 billion; FIs—3.2 percent and $2.0 billion; and QIOs—3.8 percent and $3.5 billion. The national Medicare FFS error rate and dollars paid in error were 4.4 percent and $10.3 billion. See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare FFS Payments Long Report (Web Version) for November 2005.* 2005. https://www.cms.hhs.gov/apps/er_report/preview_er_report.asp?from=public&which=long&reportID=3 (downloaded Jan. 26, 2006).

Through the HPMP, CMS monitors the accuracy of paid Medicare FFS claims for acute care inpatient hospital stays—generally those that are covered under the prospective payment system (PPS). For fiscal year 2004, the Medicare error rate for the QIO contractor type, as estimated through the HPMP, was 3.6 percent. (See table 1.)

CERT Program

To estimate contractor-specific Medicare FFS error rates for the CERT Program, CMS reviews a sample of claims from each of the applicable contractors, which included 25 carriers, 4 DMERCs, and 31 FIs for the fiscal year 2004 error rates. These error rates are then aggregated by contractor type. (See fig. 1.) For fiscal year 2004, CMS contracted with

AdvanceMed to administer the CERT Program. AdvanceMed sampled approximately 120,000 claims submitted from January 1, 2003, through December 31, 2003, to estimate the fiscal year 2004 contractor-specific and contractor-type error rates for the CERT Program.

Figure 1: Medicare FFS Error Rates Estimated through the CERT Program
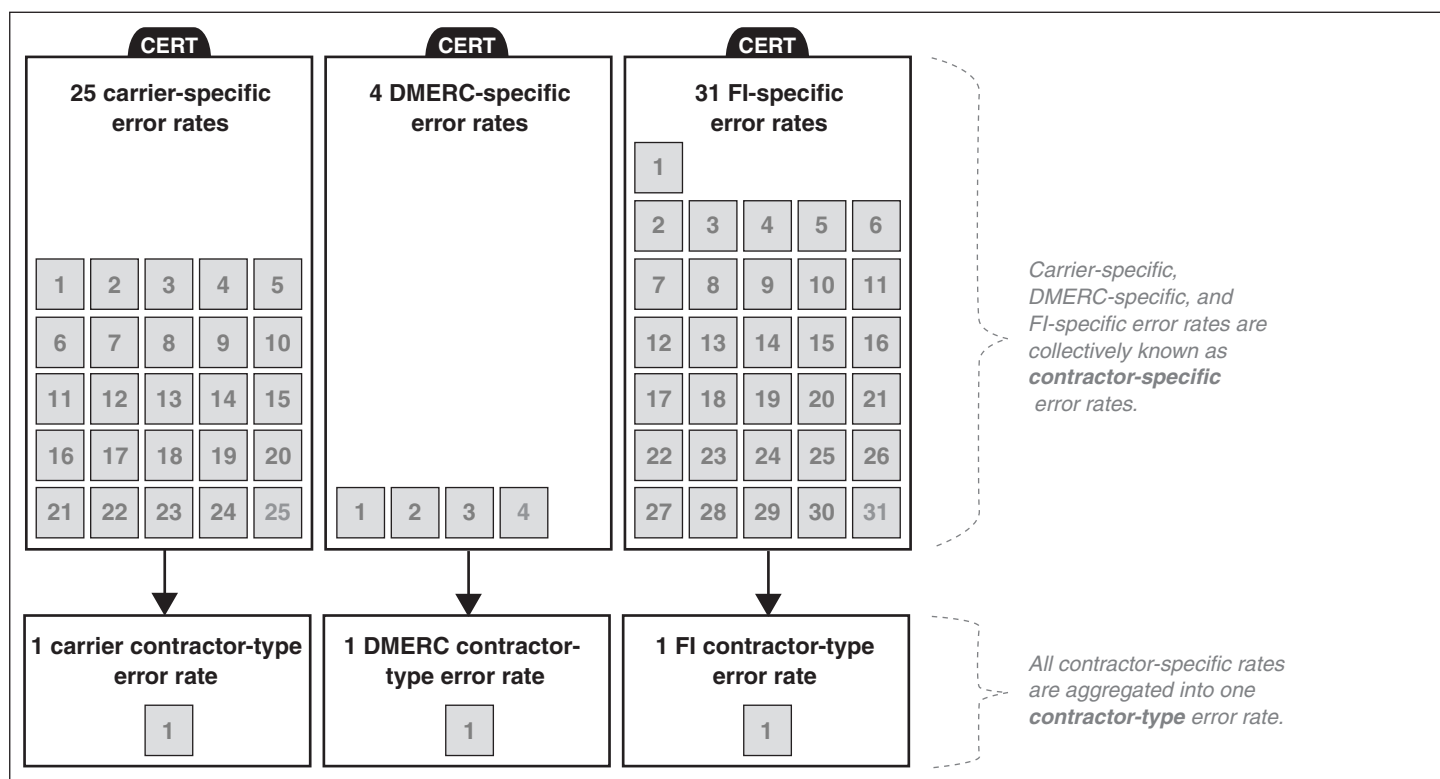
Source: GAO analysis of CMS data.

For each of the approximately 120,000 sampled claims, AdvanceMed requested the medical records from the provider that rendered the service or from the contractor that processed the related claim, if the contractor previously performed a medical review on the claim. If a provider did not respond to the initial request for medical records after 19 days, AdvanceMed initiated a series of follow-up procedures in an attempt to obtain the information. The follow-up procedures with nonresponding providers for fiscal year 2004 included three written letters and three contacts by telephone. Additionally, in fiscal year 2004, OIG followed up directly with nonresponders on claims over a certain dollar amount. If

medical records were not received within 55 days of the initial request, the entire amount of the claim was classified by AdvanceMed as an overpayment error.

When medical records were received from the provider or from the contractor, CERT medical review staff reviewed the claim (which billed for the services provided) and the supporting medical records (which detailed the diagnosis and services provided) to assess whether the claim followed Medicare's payment rules and national and local coverage decisions.[21] Claims that did not follow these rules were classified by AdvanceMed as being in error. Providers whose claims were reviewed were allowed to appeal these claims, and if the error determination for a claim was overturned through the appeals process, AdvanceMed adjusted the error rate accordingly. For the fiscal year 2004 error rate, AdvanceMed notified individual carriers, DMERCs, and FIs of their respective payment errors.[22]

HPMP

For the HPMP, CMS analyzes a sample of claims across QIOs to estimate Medicare error rates by state, because QIOs are organizations with state-based service areas. CMS estimated the QIO contractor-type error rate by aggregating the QIO error rate estimates for each of the 50 states, the District of Columbia, and Puerto Rico. (See fig. 2.) Through the HPMP, CMS sampled approximately 40,000 claims for acute care inpatient hospital discharges that occurred from July 1, 2002, through June 30, 2003, to estimate the fiscal year 2004 state-specific and contractor-type error rates for QIOs.

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[21]In Medicare, decisions about whether and under what circumstances new procedures or devices are covered are made nationally by CMS or locally by Medicare contractors for beneficiaries in their service areas.

[22]In the fiscal year 2005 error rate report, CMS reported that carriers, DMERCs, and FIs collected overpayments identified during the November 2005 error rate reporting period. Further, CMS reported that the agency will instruct carriers, DMERCs, and FIs to make payments to providers in underpayment cases identified for the November 2006 and later reports. See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare FFS Payments Long Report (Web Version) for November 2005*.

Figure 2: Medicare FFS Error Rates Estimated through the HPMP

HPMP

52 QIO error rates for the 50 states, the District of Columbia, and Puerto Rico

1	2	3	4	5	6	7		
8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43
44	45	46	47	48	49	50	51	52

*The 52 QIO error rates are also known as **contractor-specific** error rates.*

1 QIO contractor-type error rate

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*All contractor-specific rates are aggregated into one **contractor-type** error rate.*
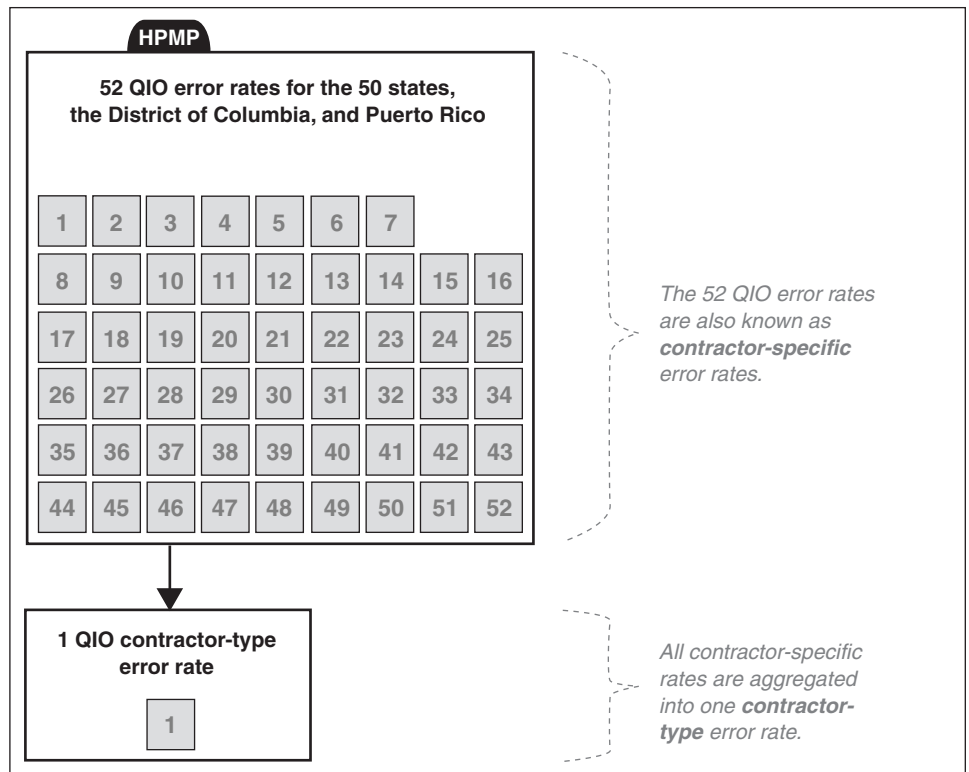
Source: GAO analysis of CMS data.

For fiscal year 2004, CMS contracted with two organizations known as Clinical Data Abstraction Centers (CDAC)—AdvanceMed and DynKePRO—that were responsible for requesting medical records from providers for each of the approximately 40,000 sampled claims. Each CDAC was responsible for reviewing the sampled claims, which were assigned on the basis of the geographic location where the discharge occurred. Upon receipt of the medical records, CDAC admission necessity reviewers screened the related claims for the appropriateness of the hospitalization and, with the exception of claims from Maryland, coding specialists independently recoded diagnosis-related groups (DRG) based

on the records submitted.[23] Because Maryland does not use DRG coding, nonphysician reviewers screened claims from Maryland to determine whether the length of the acute care inpatient hospital stay was appropriate.[24, 25] Claims that failed the screening process, including those where the admission was determined to be unnecessary or where an inappropriate DRG code was used, were forwarded to the QIO responsible for the state where the discharge occurred for further review. Records not received by the CDACs within 30 days of the request for information were "canceled" and referred to the QIO to be processed as overpayment errors caused by nonresponse. The QIO referred these claims to the FI responsible for paying the claim for the necessary payment adjustments.

At the QIO, claims forwarded from the CDACs underwent further review, primarily medical necessity admission reviews and DRG validations. Determinations of error were made by QIO physician reviewers. Providers whose claims were reviewed were given the opportunity to provide comments or discuss the case and pursue additional review, which could result in an appeal to an administrative law judge. After the matter was resolved, resulting in a determination that a provider was either underpaid or overpaid, the QIO forwarded the claim to the FI for payment adjustment.

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[23]DRG coding is the classification system used by Medicare to group patients according to diagnosis, type of treatment, age, and other criteria. Under PPS, hospitals are paid a predetermined rate for treating patients based on the specific DRG category, regardless of the actual cost of care for the individual.

[24]Maryland is the only state that does not use the PPS system for acute care inpatient hospitals. Maryland instead has an alternative payment system, known as an all-payer system, in which the state decides each hospital's level of reimbursement and requires that all payers be charged the same rate for the same service. Medicare and Medicaid pay the state-approved rates.

[25]Claims from Maryland with length of stay errors are considered medically unnecessary services. Length of stay reviews identified cases of potential delayed discharge. For example, the patient was medically stable, and continued hospitalization was unnecessary.

Estimation of the National Medicare FFS Error Rate

CMS estimated the national Medicare FFS error rate by combining the three contractor-type error rates (carrier, DMERC, and FI) from the CERT Program and the one contractor-type error rate (QIO) from the HPMP. (See fig. 3.)

Figure 3: Medicare FFS Error Rates That Produce the National Error Rate
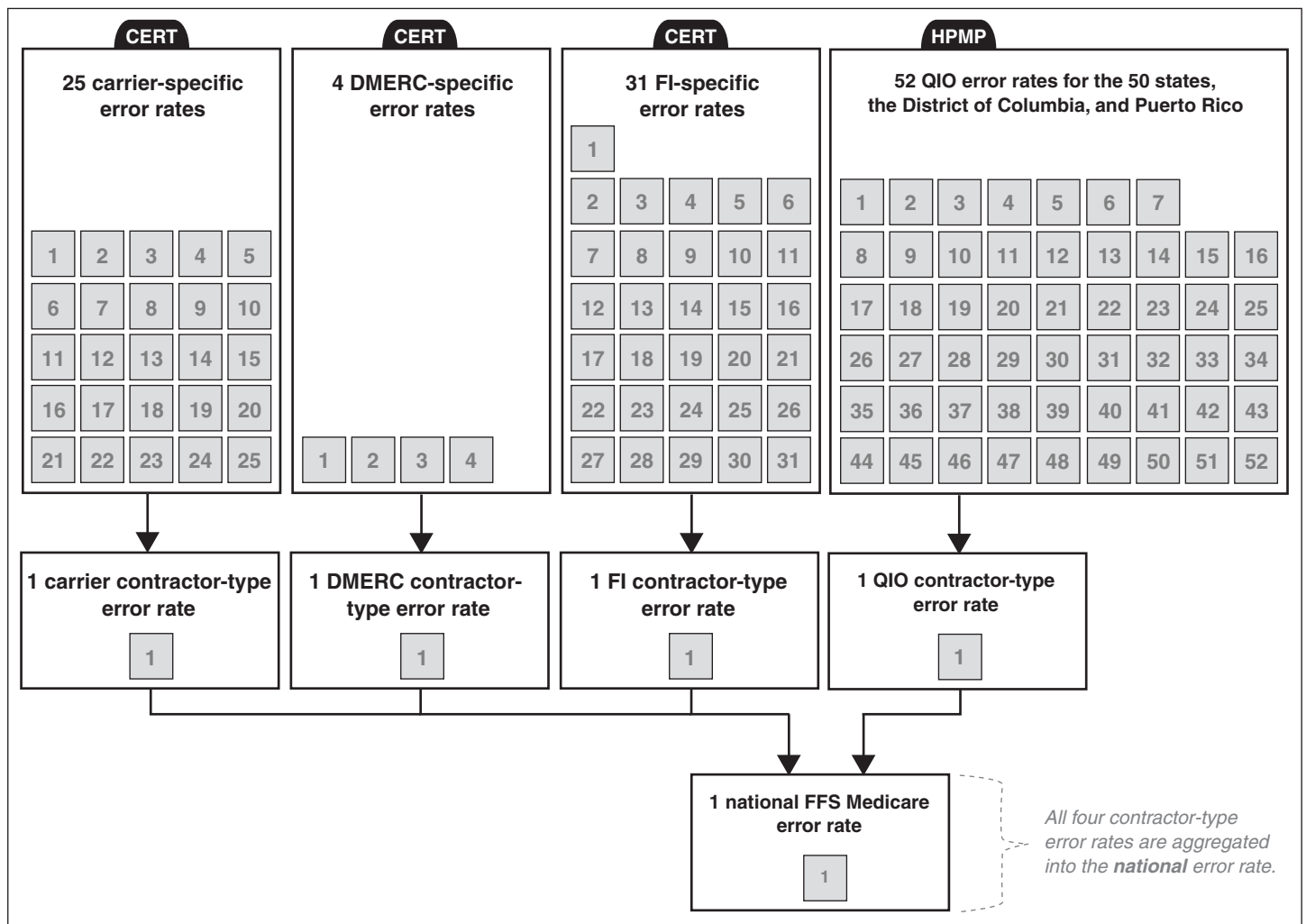
Source: GAO analysis of CMS data.

Medicare FFS claims that were paid in error as identified by the CERT Program and the HPMP for the fiscal year 2004 error rates were sorted into one of five categories of error:

- Insufficient documentation: Provider did not submit sufficient documentation to support that the services billed were actually provided.
- Nonresponse: Provider did not submit any documentation to support that the services billed were actually provided.
- Medically unnecessary services: Provider submitted sufficient documentation, but the services that were billed were deemed not medically necessary or the setting or level of care was deemed inappropriate.
- Incorrect coding: Provider submitted documentation that supported a different billing code that was associated with a lower or higher payment than that submitted for the services billed.
- Other: Provider submitted documentation, but the services billed did not comply with Medicare's benefit or other billing requirements.

See table 2 for the national Medicare FFS error rate by category of error for fiscal year 2004.

Table 2: National Medicare FFS Error Rate by Category of Error, Fiscal Year 2004

	Net errors as a percentage of total dollar amount sampled (fiscal year 2004)
Category of error	
Insufficient documentation	4.1
Nonresponse	2.8
Medically unnecessary	1.6
Incorrect coding	0.7
Other	0.2
National Medicare FFS error rate	**9.3**

Source: CMS.

Notes: This table reflects net Medicare FFS error rates generated by both the CERT Program and the HPMP. Numbers do not sum to total because of rounding.

As reported in CMS's fiscal year 2004 Medicare error rate report, the agency planned to use the error rates to help determine the underlying reasons for claim errors, such as incorrect coding or nonresponse, and

implement corrective action plans for carriers, DMERCs, FIs, and QIOs.[26] Draft statements of work, dated February and April 2005, for carriers, DMERCs, and FIs set goals for contractors to achieve a paid claims error rate of less than a certain percentage, to be determined by CMS. According to the standards for minimum performance on QIO statements of work that ended in 2005 for some QIOs and 2006 for other QIOs,[27] QIOs are evaluated on 12 tasks, one of which is the HPMP. QIOs have to meet the performance criteria standards on 10 tasks set forth by CMS to be eligible for a noncompetitive contract renewal.

CMS's use of the error rates is being done in the context of the agency's current effort to significantly reform its contracting efforts for the payment of Medicare claims.[28] By July 2009, CMS plans to reduce the total number of contractors responsible for paying Medicare claims to 23 total contractors, which the agency refers to as Medicare administrative contractors (MAC). CMS also plans to institute performance incentives in the new contracts, which will be based on a number of different factors, including the Medicare error rates. According to CMS's report to Congress on Medicare contracting reform, CMS believes that the consolidation of Medicare contractors and the integration of processing for Medicare claims[29] will lead to a reduced Medicare error rate.[30]

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[26]See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare Fee-for-Service Payments Report Fiscal Year 2004.*

[27]CMS entered into multiyear contracts with QIOs divided into three groups. Each of the three groups had different contract end dates.

[28]See GAO, *Medicare Contracting Reform: CMS's Plan Has Gaps and Its Anticipated Savings Are Uncertain,* GAO-05-873 (Washington, D.C.: Aug. 17, 2005).

[29]Under the current contracting structure, Medicare Part A and Part B claims are paid by different types of contractors. Part A covers inpatient hospital care, skilled nursing facility care, some home health care services, and hospice care, which are paid by FIs. Part B services include physician and outpatient hospital services, diagnostic tests, mental health services, outpatient physical and occupational therapy, ambulance services, some home health services, and medical equipment and supplies, which are paid by carriers and DMERCs. Under the reformed structure, MACs will be responsible for both Part A and B claims.

[30]See Department of Health and Human Services, *Medicare Contracting Reform: A Blueprint for a Better Medicare* (Washington, D.C.: Feb. 7, 2005).

CMS Methodology Adequate for Estimating the Error Rates in the CERT Program

The methodology used by CMS in the CERT Program to estimate error rates by contractor type (carrier, DMERC, and FI) in fiscal year 2004 was adequate. We found that the sample size and the use of systematic sampling with a random start were adequate to reliably estimate the Medicare error rates by contractor type. The CERT Program also had adequate processes in place to collect medical records and to accurately identify and categorize payment errors. The statistical methods that CMS used to estimate the contractor-type error rates were valid.

Sampling Methods

The sample size that CMS used in the CERT Program, approximately 120,000 claims, was sufficiently large to produce reliable estimates of the fiscal year 2004 Medicare error rates by contractor type (carrier, DMERC, and FI). CMS selected 167 claims each month on a daily basis from each of the 60 contractors, including 25 carriers, 4 DMERCs, and 31 FIs.[31] This sample generated error rate estimates by contractor type within acceptable statistical standards, such as relative precision of no greater than 15 percent.[32] Specifically, the error rate for the carrier contractor type was 10.7 percent with a relative precision of 3.7 percent, the error rate for the DMERC contractor type was 11.1 percent with a relative precision of 13.5 percent, and the error rate for the FI contractor type was 15.7 percent with a relative precision of 4.5 percent.

Further, we found that the sampling methods were adequate because CMS used a systematic sample with a random start.[33] Sampling methods that employ a random start are designed to ensure that the sample selected is representative of the population from which it is drawn. We reviewed CERT Program documentation, which described the use of a systematic sample with a random start. The OIG contractor reviewed the computer

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[31]While CMS selected an equal sample from each contractor, the final sample sizes among contractors varied. Some selected claims were excluded from the final sample because the claims were missing information, such as dates of service and provider or patient information.

[32]Relative precision of no greater than 15 percent is considered to be within acceptable statistical standards. See, for example, Hansen, Hurwitz, and Madow, 130.

[33]Systematic sampling is a selection procedure by which the sample is selected from the population (Medicare claims) on the basis of a uniform interval, such as every fifth claim, between sampling units (claims), after a random starting point has been determined. The uniform interval is determined by dividing the given sample size into the population size and dropping decimals in the result. The random start is determined by using an acceptable method of selecting random numbers and is a number between 1 and the uniform interval.

program used for the CERT Program sample selection and verified that the claims were selected according to the documentation. CMS officials told us that the CERT Program conducts tests to compare the sampled claims to the population of claims. For example, CMS compared the percentage of claims sampled in each category of Medicare-covered service to the percentage of claims in the population by category of Medicare-covered service. CMS provided us with an example of this test for one contractor's claims from January 2003 through June 2003.

While the relative precision of the fiscal year 2004 error rate estimates by contractor type for the CERT Program was within acceptable statistical standards of no greater than 15 percent, the relative precision of half of the contractor-specific error rate estimates was not. (See app. II for contractor-specific error rate information, including the estimates and corresponding relative precision, for carriers, DMERCs, and FIs.)

Thirty of the 60 contractor-specific error rates had relative precision that were not within acceptable statistical standards.[34] Additionally, the relative precision of the contractor-specific error rates showed wide variation within each contractor type. Relative precision among carriers ranged from 8.9 percent to 17.0 percent; among DMERCs, relative precision ranged from 12.3 percent to 20.7 percent; and among FIs, relative precision ranged from 10.3 percent to 42.5 percent. As demonstrated by the range in relative precision among FIs, for example, the error rate estimate for one FI was nearly four times more reliable than the error rate estimate for another.

The variation in relative precision among the contractor-specific error rate estimates was due, in part, to the sampling method CMS used for the CERT Program. CMS took an equal sample size from each contractor despite the fact that individual contractors accounted for varied amounts of Medicare claim volumes and total payments. For example, the claim volume for carriers in 2003 ranged from a minimum of 5.3 million claims to a maximum of 206 million claims; total payments for carriers in 2003 ranged from a minimum of $168 million to about $6.7 billion.

CMS officials told us that they plan to reallocate the CERT Program sample at the contractor level by increasing the sample size for those

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[34]Of the 30 contractor-specific error rates with relative precision above acceptable statistical standards, 25 were FIs.

contractors that are not reaching CMS's targeted precision and by decreasing the sample size for those contractors that are reaching targeted precision and achieving low error rates. In September 2005, CMS officials reported that this change to the methodology is expected to be implemented for the fiscal year 2007 error rate estimation, which will be based on claims processed in parts of 2006 and 2007. We support CMS's planned changes to its sampling methodology. We believe that reallocation of the sample as planned by CMS will improve the relative precision of these estimates. If future samples were based on the volume of claims or total payments of each contractor and the relative precision of the contractor-specific error rate rather than on the current basis of an equal allocation across contractors, relative precision would likely be improved for the contractor-specific error rates of those targeted contractors that were allocated a larger sample. This is because relative precision improves with increased sample size. There would also likely be decreased variation in relative precision across all contractor-specific error rates.[35] These results could be achieved without increasing the overall sample size for the CERT Program.

Medical Record Collection Process

Based on our review of oversight work conducted by OIG, we found that the process CMS used to collect medical records from providers for the CERT Program was adequate. Staff of AdvanceMed, the CMS contractor responsible for administering the CERT Program, were responsible for requesting medical records for each of the approximately 120,000 sampled claims used to estimate the fiscal year 2004 error rates. According to an OIG review of CMS's corrective actions to improve nonresponse in the CERT Program for fiscal year 2004, AdvanceMed conducted a timely and systematic follow-up with providers that did not respond to initial requests for medical records.[36] For the medical records collection process for the fiscal year 2004 error rates, CMS implemented corrective actions in the CERT Program to address the factors associated with the high rate of nonresponse experienced during the medical records collection process

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[35]See, for example, W.G. Cochran, *Sampling Techniques*, *3rd Ed.* (New York, N.Y.: John Wiley & Sons, 1977), 96-99.

[36]See Department of Health and Human Services, Office of Inspector General, *Review of Corrective Actions to Improve the Comprehensive Error Rate Testing Process for Obtaining Medical Records*, A-03-04-00005 (Washington, D.C.: June 2004). See also Department of Health and Human Services, Office of Inspector General, *Review of Providers' Responsiveness to Requests for Medical Records Under the Comprehensive Error Rate Testing Program*, A-01-04-00517 (Washington, D.C.: September 2004).

for the prior fiscal year. According to the CMS fiscal year 2003 error rate report, for example, the agency found that some nonresponse in fiscal year 2003 was due to providers' lack of familiarity with AdvanceMed.[37] In previous years when OIG had responsibility for estimating the Medicare error rate, OIG requested medical records directly from providers; providers were familiar with OIG and understood the importance of complying with the requests. However, when the responsibility for estimating the Medicare error rate was transferred to CMS, many providers were unfamiliar with AdvanceMed and may have been reluctant to submit medical records to an unknown company. Another factor that caused provider nonresponse in fiscal year 2003, according to the CMS report, was providers' confusion about the submission of medical records within the constraints of the privacy regulations issued by HHS under the Health Insurance Portability and Accountability Act of 1996,[38] which limit the use and release of individually identifiable health information. According to the CMS report, CMS found that providers were sometimes unaware that sending medical records to the CERT Program contractor was permissible under the regulations. As reported in the OIG review cited previously, CMS implemented corrective actions that increased provider compliance with medical record requests in fiscal year 2004. According to the OIG report, CMS conducted educational efforts to clarify the role of AdvanceMed. Additionally, OIG further reported that CMS took action to address providers' concerns about compliance with the privacy regulations by revising its request letters to providers to highlight AdvanceMed's authorization, acting on CMS's behalf, to obtain medical records as requested. OIG told us that CMS instructed carriers, DMERCs, and FIs to refer certain claims for nonresponding providers to OIG for follow-up.[39]

These improvements in the process used to collect medical records in the CERT Program helped reduce nonresponse. According to information provided to us by CMS, the percentage of error caused by nonresponse in the CERT Program decreased from 61 percent for fiscal year 2003 to

[37]See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare Fee-for-Service Payments Fiscal Year 2003* (Baltimore, Md.: December 2003).

[38]45 C.F.R. Parts 160 and 164 (2005).

[39]Claims greater than $40 were referred to OIG for follow-up.

34 percent in fiscal year 2004.[40] According to CMS's fiscal year 2005 error rate report, the agency continued several corrective actions to address nonresponse for sampled claims for the fiscal year 2005 error rates.[41] Further, beginning with claims sampled to estimate the fiscal year 2006 Medicare error rates, CMS transferred the medical record collection duties to a second contractor, Lifecare Management Partners, which the agency refers to as the CERT Program documentation contractor. CMS officials told us that the CERT Program documentation contractor is automating the medical record collection process and eliminating paper copies of documentation.

Identification and Categorization of Payment Errors

Based on our review of OIG's fiscal year 2004 CERT Program evaluation, we concluded that the processes used in the CERT Program to identify and categorize payment errors for fiscal year 2004 were adequate because the medical record reviews were performed appropriately and the CERT Program staff conducting the reviews were adequately trained and qualified.[42] Staff of the CERT Program contractor, AdvanceMed, reviewed the medical records to verify that claims were processed according to Medicare payment rules; if not, a claim was found to be in error and assigned to one of five categories of error (insufficient documentation, nonresponse, medically unnecessary, incorrect coding, or other). We reviewed work conducted by OIG that found AdvanceMed, the CMS contractor responsible for administering the CERT Program, had appropriate controls in place to ensure that the medical record reviews were performed in accordance with established CERT Program

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[40]In fiscal year 2003, 54.7 percent of the national Medicare error rate was due to nonresponse. In fiscal year 2004, nonresponse decreased to 29.7 percent of the national Medicare error rate.

[41]According to CMS's fiscal year 2005 error rate report, the CERT Program reduced error caused by nonresponse in fiscal year 2005 through several corrective actions, including educating providers about the CERT Program and encouraging providers to submit medical records by fax. Unlike fiscal year 2004, for which CMS reported net error rates, in fiscal year 2005, CMS reported only gross error rates and gross dollars paid in error; therefore we can only compare gross figures for nonresponse for fiscal years 2004 and 2005. As a percentage of the total gross Medicare error rate, nonresponse decreased from 30.7 percent in fiscal year 2004 to 13.5 percent in fiscal year 2005. See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare FFS Payments Long Report (Web Version) for November 2005*.

[42]See Department of Health and Human Services, Office of Inspector General, *Oversight and Evaluation of the Fiscal Year 2004 Comprehensive Error Rate Testing Program*, A-03-04-00007 (Washington, D.C.: November 2004).

procedures. We also reviewed work by OIG, which examined the educational and training requirements for medical record reviewers as established in the CERT Program and assessed selected training files for selected medical record reviewers. OIG officials told us that they found these selected CERT Program medical record reviewers to be adequately trained and qualified.

OIG found that AdvanceMed did not complete all required quality assurance reviews within the designated time frame. CMS told OIG that it planned to reduce AdvanceMed's workload. AdvanceMed conducts quality assurance reviews on a sample of medically reviewed claims to validate the initial reviewer's decision on whether a claim was paid in error. OIG found that for the fiscal year 2004 CERT Program, AdvanceMed completed 984 of the required 2,587 quality assurance reviews by the required date. To determine whether these quality assurance reviews ensured the reliability of the CERT Program claims review process, OIG randomly sampled 45 of the 2,587 claims selected for quality assurance reviews. Of these 45 claims, AdvanceMed had completed a quality assurance review on 5 claims. OIG reported that the results of the 5 quality assurance reviews confirmed the results of the initial medical record reviews. Further, OIG reported that AdvanceMed stated that a backlog of medical reviews prevented the completion of the required quality assurance reviews within the prescribed time frame. In response to the OIG report on the fiscal year 2004 CERT Program evaluation, CMS commented that with Lifecare Management Partners assuming responsibilities for medical record collection for the fiscal year 2006 Medicare error rate estimation, AdvanceMed's workload would be reduced. As a result, CMS commented that this will free up the necessary resources for AdvanceMed to comply with the quality assurance requirements. Further, in its response to the OIG report, CMS commented that both AdvanceMed and Lifecare Management Partners are required to report to the agency on the results of the quality assurance activities conducted. According to OIG's evaluation of the fiscal year 2005 CERT Program, OIG found that AdvanceMed completed all of the required quality assurance reviews.[43]

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[43]See Department of Health and Human Services, Office of Inspector General, *Oversight and Evaluation of the Fiscal Year 2005 Comprehensive Error Rate Testing Program*, A-03-05-00006 (Washington, D.C.: November 2005).

Statistical Methods

We found that the statistical methods used to estimate the error rates and standard errors by contractor type (carrier, DMERC, and FI) for the CERT Program were adequate. Based on our review of the computer programming code that generated the error rate estimates and standard errors by the CERT Program subcontractor responsible for calculating the contractor-type error rates, The Lewin Group, we found that the statistical methods were based on standard statistical principles and were used appropriately. For each contractor type, the stratified combined ratio estimation method was used to calculate the error rate by taking the difference between the overpaid dollars and the underpaid dollars divided by the total dollars paid by Medicare for FFS claims of each contractor type.[44] The payment errors from the sample were then extrapolated to the population for each contractor type to estimate total payment errors. Further, The Lewin Group used a standard statistical method to calculate the standard errors of each of the contractor-type error rates.[45] This method is appropriate for obtaining the standard error of an estimate when the stratified combined ratio estimation method is used and is valid for large sample sizes, such as that used for the CERT Program.

CMS Methodology Adequate for Estimating the Error Rate in the HPMP

We found that the methodology used by CMS was adequate to produce a reliable estimate of the fiscal year 2004 Medicare error rate for the one contractor type (QIO) in the HPMP. We found the methodology adequate because the sample size was large enough to produce a reliable error rate estimate. Additionally, the sample was representative of the population. We found also that the methodology was adequate because the HPMP contractors responsible for collecting the medical records for the sampled claims, as well as for identifying and determining errors, had appropriate controls in place to ensure that established procedures were followed. Further, the statistical method that CMS used to calculate the contractor-type error rate was valid.

Sampling Methods

The sample size that CMS used for the HPMP, about 40,000 claims, was sufficiently large to produce a reliable estimate of the fiscal year 2004 error rate for the QIO contractor type. Using a systematic sample, CMS selected 62 discharge claims per month for the District of Columbia,

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[44]See, for example, Cochran, 164-166.

[45]The Lewin Group used the Taylor series approximation method to calculate the standard errors. See, for example, Cochran, 319.

Puerto Rico, and each state except Alaska. CMS selected 42 claims per month for Alaska. The QIO contractor-type error rate was 3.6 percent with a relative precision of 5.6 percent. The relative precision for the QIO contractor-type error rate estimate is within acceptable statistical standards (a relative precision of no greater than 15 percent).

For the QIO contractor-type error rate to be a reliable estimate, it was necessary that the sample of discharge claims from which the error rate was estimated be representative of the population from which it was drawn. CMS's documentation stated that the HPMP used a systematic sample selection process with a random start, which is a generally accepted method of sampling that is designed to ensure that the sample drawn is representative of the population. Our review of the computer programming code that selected the sample, however, found that a random start was not used.[46] To determine whether the HPMP sample was compromised by the lack of a random start and whether it represented the population from which it was drawn, we examined the OIG contractor's comparison of the June 2003 sample to a re-created version of the June 2003 population file from which the sample was drawn.[47] Based on our review, we found that the HPMP sample was representative of the population from which it was drawn in terms of average dollar amount per claim.

While relative precision of the fiscal year 2004 QIO contractor-type error rate estimate was within acceptable statistical standards, relative precision of most of the state-specific QIO error rate estimates was not. (See app. II for state-specific QIO error rate information, including the error rate estimates and corresponding relative precision.) Only three states' error rate estimates—Kentucky, Massachusetts, and New Mexico— had relative precision of less than 15 percent. Additionally, there was wide

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[46]A CMS official told us and provided documentation that beginning with the fiscal year 2006 error rate estimation, the HPMP will move to a simple random sample in which all records are chosen at random within each state, thus eliminating the need for systematic sampling. Simple random sampling is also an accepted method of sampling to achieve a sample that is representative of the population from which it was drawn.

[47]It was not possible for the OIG contractor to obtain the exact June 2003 population file because the file is continuously updated and previous versions are not retained. We did not believe it was necessary to compare every month's sample to the population from which it was drawn because the large size of the annual sample (approximately 40,000 claims) and population (approximately 11.5 million claims) would make the task too burdensome, and the fact that the sample was drawn in the same manner each month meant the results from one month should not differ significantly from the results from any other month.

variation in relative precision of the state-specific QIO error rate estimates. Relative precision of the state-specific QIO error rates ranged from 10.5 percent in Massachusetts to 83.3 percent in Mississippi. The differences in relative precision of these state-specific QIO error rate estimates indicate that the error rate estimate for the QIO that served Massachusetts was eight times more reliable than the error rate estimate for the QIO that served Mississippi. The variation in relative precision was due, in part, to the sampling methods used by CMS for the HPMP. CMS took an equal sample size for each state except Alaska, despite the fact that there was significant variation between states in the overall volume of discharge claims and total payments. The number of discharges per state varied from a low of 15,166 in Wyoming to a high of 825,845 in Florida.[48] Similarly, total dollars paid for acute-care inpatient hospital stays varied from less than $100 million in Wyoming to a high of $7.5 billion in California.

Although in February 2006 a CMS official told us the agency has no plans to reallocate the HPMP sample, CMS could adopt a similar sampling strategy as it plans to do for the CERT Program. If future state samples were based on the volume of discharge claims or total payments per state and the relative precision of the state-specific QIO error rates, rather than on the current basis of an equal allocation per state, relative precision would likely be improved for the state-specific QIO error rates in those states that were allocated a larger sample since relative precision improves as sample size increases. There would also likely be decreased variation in relative precision across all state-specific QIO error rates.[49] These results could be achieved without increasing the overall sample size for the HPMP.

In addition to issues with the wide variation of relative precision of the state-specific QIO error rate estimates, we also found large differences in the average dollar amount per claim between the state-specific samples for some states and the respective state populations. These differences suggest that the samples drawn for more than half of the states were not representative of each state's population. Based on our examination of the OIG contractor's comparison of the state samples and the state

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[48]The range reported here does not reflect the claims or total payment volume in Alaska since CMS takes a smaller sample from Alaska than from all other states, the District of Columbia, and Puerto Rico.

[49]See, for example, Cochran, 96-99.

populations for June 2003, we found that the ratio of the average dollar amount per claim in a state's sample to the average dollar amount per claim in a state's population varied from 62 percent in Maryland to 143 percent in Kentucky. Twelve states had a ratio above 110 percent, and 16 states had a ratio below 90 percent.[50] It is still possible for the national HPMP sample to be representative of the national HPMP population even if all of the state-specific samples are not representative of their state populations. The larger size of the HPMP sample overall mitigates the problems identified in the smaller state-specific samples.

Medical Record Collection Process

Based on our review of oversight work of the HPMP conducted by OIG,[51] we found that the process CMS used for collecting medical records from providers was adequate. OIG selected 46 discharge claims that were sampled for the HPMP to determine if the CDACs, AdvanceMed and DynKePRO, followed established HPMP procedures for obtaining and reviewing medical records to identify payment errors. OIG found that the CDACs generally had appropriate controls in place to ensure that the medical records were obtained and reviewed according to established HPMP procedures. Of the 46 discharge claims reviewed, OIG found that in two instances a required follow-up letter to the provider was not sent due to an error by a substitute CDAC employee. However, the medical records for these two discharge claims were obtained within 30 days of the original request, which resulted in no adverse effect on the error rate estimates. Overall, nonresponse for fiscal year 2004 represented approximately 5.1 percent of the total QIO contractor-type error rate of 3.6 percent, or 0.2 percent of all discharge claims reviewed through the HPMP.

The issue with providers not responding to requests for medical records was not as significant an issue for the HPMP as it was for the CERT Program. According to the CMS report on the fiscal year 2005 error rate, nonresponse was less problematic in the HPMP because of several factors, including the following: (1) providers were more likely to respond to requests from the HPMP since the average claim value was higher than the

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[50]A ratio of 100 percent would mean that the average claim amount in the sample was equal to the average claim amount in the population.

[51]See Department of Health and Human Services, Office of Inspector General, *Oversight and Evaluation of the Fiscal Year 2004 Hospital Payment Monitoring Program*, A-03-04-00008 (Washington, D.C.: November 2004).

average claim value in the CERT Program;[52] (2) providers were more familiar with the HPMP than with the CERT Program; and (3) providers were paid the cost of providing medical records by the HPMP, but not by the CERT Program.[53]

Identification and Categorization of Payment Errors

Based on our review of OIG's fiscal year 2004 HPMP evaluation,[54] we concluded that the CDACs (AdvanceMed and DynKePRO) generally had processes in place to adequately identify and categorize claims paid in error in the HPMP for fiscal year 2004. OIG officials told us that they found the medical record reviewers, both admission necessity reviewers and DRG coding specialists, at the two CDACs met CMS's qualifications for these positions.[55] As part of its review of the fiscal year 2004 HPMP, OIG reviewed 46 discharge claims that were part of the sample for estimating the QIO contractor-type error rate. Based on that review, OIG reported that the CDACs generally had appropriate controls in place to ensure that admission necessity and DRG validation reviews were performed in accordance with CMS established procedures and that the results of those reviews were adequately maintained, updated, and reported.

As part of the internal HPMP quality control process, two activities were conducted regularly to ensure the reliability and accuracy of CDAC reviews both within each CDAC and across the two CDACs. Each CDAC randomly chose 30 claims per month to be reviewed by two of its medical record reviewers for intra-CDAC tests. Each CDAC compared the results of the two medical record reviews to determine the reliability of reviews within the CDACs and reported the results of the comparisons to CMS. The CDACs performed inter-CDAC tests to assess the reliability of the

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[52]For example, according to our analysis of data provided by the HPMP, the average claim value for claims reviewed for the fiscal year 2004 error rate for QIOs was approximately $7,500. According to our analysis of Medicare claims data from the Part B Extract Summary System Carrier Data File, the average claim value for carriers in 2003 was $32.

[53]See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare FFS Payments Long Report (Web Version) for November 2005*.

[54]See Department of Health and Human Services, Office of Inspector General, *Oversight and Evaluation of the Fiscal Year 2004 Hospital Payment Monitoring Program*.

[55]According to OIG, CMS requires that CDACs employ admission necessity reviewers who are licensed practical nurses with utilization review experience. CMS requires that coding specialists be registered health information administrators, registered health information technicians, or certified coding specialists.

reviews between the two CDACs. For these tests, an additional 30 claims were chosen at random per quarter by each of the CDACs for review by a medical records reviewer at the other CDAC. As part of its evaluation of the fiscal year 2004 HPMP, OIG selected 45 claims that went through the intra-CDAC process and 42 claims that went through the inter-CDAC process to determine if these quality control activities ensured the reliability of the CDAC review process. OIG reported that the quality control reviews were generally operating effectively to ensure the reliability of the review process and the consistency of the error rate determination decisions.[56]

From the same evaluation of the fiscal year 2004 HPMP, OIG found that the CMS contractor tasked with calculating the dollar amounts paid in error, Texas Medical Foundation, used a method that produced an amount of dollars in error that in some cases differed from what OIG found to be the amount of dollars in error. For claims identified by a QIO as having errors caused by changes in DRG codes, Texas Medical Foundation used a method that produced different dollar amounts in error than would have been produced if it had used the software that FIs used to pay the original discharge claims.[57] The Texas Medical Foundation calculated a different amount in error for about 76 percent of 200 incorrectly coded claims that OIG reviewed. However, OIG reported that the differences did not have a significant effect on the QIO contractor-type error rate estimate. A CMS official told us that the agency has not invested in modifying the software for use by the Texas Medical Foundation for technical and financial reasons. For example, the software requires modifications using a specific programming language for which CMS has limited personnel with the needed expertise.

Statistical Methods

We verified the statistical methods CMS used to estimate the QIO contractor-type error rate and standard error in the HPMP by reviewing

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[56]See Department of Health and Human Services, Office of the Inspector General, *Oversight and Evaluation of the Fiscal Year 2004 Hospital Payment Monitoring Program.*

[57]FIs, which are responsible for paying acute-care inpatient hospital claims, use a software program available on the CMS Web site, PRICER, to calculate the Medicare payment amount. The program calculates the Medicare payment amount using information supplied on the provider claim and current national and hospital-specific factors related to the payment amount. CMS stated that the PRICER program does not consider all of the factors used by FIs when pricing acute-care inpatient hospital claims.

the computer programming code that produced this information. We found that the methods CMS used were adequate because they were based on standard statistical methods and were applied appropriately. To estimate the QIO contractor-type error rate, CMS weighted[58] each state-specific QIO error rate according to that state's share of the total Medicare FFS payments for acute-care inpatient hospital claims nationwide. This method is referred to as a stratified mean per unit estimation.[59] Like the CERT Program, CMS used a standard statistical method to calculate the standard error of the estimate.[60] In our review of the computer programming code that generated the QIO contractor-type error rate estimate, we found that CMS used annual instead of monthly weights in its estimate of the annual total dollars paid in error.[61] It would have been more appropriate for CMS to have used monthly weights because the HPMP sample was drawn on a monthly, not an annual, basis. However, when we reviewed the OIG contractor's comparison of the estimate of annual dollars paid in error using annual weights to what the estimate would have been had CMS used monthly weights, we concluded that the use of annual weights did not significantly affect the QIO contractor-type error rate estimate. A CMS official told us and provided us with documentation that beginning with the HPMP's fiscal year 2005 error rate estimation process, monthly weights are being used.

CMS Methodology Adequate for Estimating the National Error Rate

CMS appropriately combined the error rates under the CERT Program and the HPMP to estimate the fiscal year 2004 national Medicare error rate. CMS estimated the national Medicare error rate by averaging the error rates of the four contractor types (carrier, DMERC, FI, and QIO), weighted by each contractor type's share of total Medicare FFS payments. Likewise, CMS calculated the standard error, or precision, of the national error rate based on the standard error of each of the four types of contractors' error

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[58]To better ensure that data from a sample represent data from the population from which they are drawn, the sample data are often adjusted to reflect the probability of a specific data point, in this case an acute-care inpatient hospital discharge claim, being chosen. This process is called weighting. Sample weights reflect the different probabilities that each claim has of being chosen as part of the sample. The less likely a claim is to be selected, the larger its sample weight.

[59]See, for example, Hansen, Hurwitz, and Madow, 172-173.

[60]CMS used a Taylor series linear approximation method.

[61]To estimate the total annual dollars paid in error for QIOs, CMS projects the dollar amounts found in error in the sample to the broad population.

rate estimates, weighted by each contractor type's proportion of total Medicare FFS payments. The methods CMS used to calculate the national error rate and the standard error were statistically valid, since the units of measurement, which in this case were Medicare claims, of the four error rates that were combined were mutually exclusive (independent) among contractor types.[62] Each contractor type consisted of multiple individual contractors. These contractors were independent in that one contractor's estimated error rate or standard error did not affect the estimates of other contractors, since the claims in the population and in the sample were not overlapping among contractors.

Concluding Observations

Since assuming responsibility for estimating the national Medicare error rate in fiscal year 2003, CMS has made changes to the methodology, which have provided CMS with more detailed information about the error, thereby allowing the agency to better identify the underlying causes of error and implement corrective action plans to address them. For example, CMS significantly increased the size of the sample used to estimate the Medicare FFS claims paid in error. The increased sample size allowed the agency to estimate not only the error rate at the national level, but also more detailed error rates at the contractor-type and contractor-specific levels. Further, CMS has made changes in the way it collects medical records from providers in an effort to reduce the rate of error caused by nonresponse and insufficient documentation. These changes may affect the error rate estimates and thus the comparability of the estimates over time. Consequently, users of the error rate information should exercise caution when making year-to-year comparisons.

Our work focused on the methodology CMS used to estimate the national Medicare error rate and contractor-type error rates for fiscal year 2004. For these error rates, we found the methodology adequate for that year. Under CMS's contracting reform initiative, there will be fewer individual contractors (carriers, DMERCs, and FIs). If CMS maintains the same overall sample size, the sample sizes of the remaining individual contractors would be increased. Reliability of the contractor-specific error rate estimates is likely to improve with the larger sample sizes. Until then, the wide variation in reliability of the contractor-specific error rate

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[62]Statistical theory demonstrates that combining the estimates based on independent samples is a valid estimate of the aggregate of the samples. See, for example, Hansen, Hurwitz, and Madow, 190.

estimates may preclude meaningful comparisons across individual contractors.

Agency Comments

We received written comments from HHS (see app. III.) In responding to our draft report, HHS noted that we found the CMS methodology adequate for estimating the fiscal year 2004 national Medicare FFS error rate. HHS also noted that CMS is continually committed to refining the processes to estimate, as well as lower, the level of improper payments in the Medicare FFS program.

In its comments, HHS noted improvement in the national Medicare error rate from fiscal years 2004 to 2005. The department attributed the decline in the error rate to marked improvement in the nonresponse (which CMS now calls "no documentation") and the insufficient documentation error rates. Commenting on the adequacy of the fiscal year 2005 methodology was beyond the scope of our work; however, as we noted in the draft report, changes in the methodology may affect the estimation of the error rates and thus the comparability of these error rates over time. For example, we discussed in the draft report that CMS has made changes in the way it collects medical records from providers in an effort to reduce the rate of error caused by nonresponse and insufficient documentation. These changes primarily affected HHS's processes for calculating an annual error rate estimate for the Medicare FFS program. This may represent a refinement in the program's estimation methodology rather than improved accountability over program dollars.

The national Medicare error rates for fiscal years 2004 and 2005 provided by HHS in its comments are not comparable to the error rates cited in this report for fiscal years 2004 and 2005. HHS provided gross error rates, which were calculated using gross dollars paid in error. Gross dollars paid in error were calculated by adding dollars paid in error that were due to underpayments to those that were due to overpayments. As noted in the draft report, we reported net error rates. Net error rates were calculated using net dollars paid in error. Net dollars paid in error were calculated by subtracting dollars paid in error that were due to underpayments from those that were due to overpayments.

HHS also provided technical comments, which we have addressed as appropriate.

We are sending copies of this report to the Secretary of Health and Human Services, the HHS Inspector General, the Administrator of CMS, and appropriate congressional committees. We will also provide copies to others upon request. In addition, the report is available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-7101 or steinwalda@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix IV.

A. Bruce Steinwald
Director, Health Care

Appendix I: Scope and Methodology

We reviewed the following components of the Centers for Medicare & Medicaid Services's (CMS) methodology for estimating the fiscal year 2004 error rate:

- Sampling methods, including sample size, sample selection, sample representation, and precision of the estimates.
- The medical records collection process.
- Identification and categorization of claims payment error, including the medical record review process and quality assurance reviews.
- Statistical methods used to estimate the error rates and precision.

To conduct our analysis of CMS's sampling methods, we reviewed work performed by the Department of Health and Human Services (HHS) Office of Inspector General (OIG) contractor that assessed these methods and CMS documentation for the fiscal year 2004 Medicare error rate. For the Comprehensive Error Rate Testing (CERT) Program, we reviewed the program manual, which described the CERT Program sampling methods as well as CMS's Medicare error rate reports for fiscal years 2003 and 2004.[1] For the Hospital Payment Monitoring Program (HPMP), we reviewed the program manual and the HPMP computer programming code that generated the sample to verify that the sample was taken in accordance with the procedures outlined in the manual. Additionally, we reviewed the OIG contractor's comparison of the June 2003 sample and a re-created version of the June 2003 sampling frame, or population, for the HPMP. It was not possible for the OIG contractor to obtain the exact June 2003 population file because the file is continuously updated and previous versions are not retained. We did not believe it was necessary to compare every month's sample to the population from which it was drawn because of the large size of the sample (approximately 40,000 discharge claims) and population (approximately 11.5 million discharge claims), and the fact that the sample was drawn in the same manner each month.

To conduct our analysis of CMS's medical record collection and review processes and identification and categorization of payment errors, we relied primarily on reports published by OIG. Since 2003, OIG has conducted annual reviews of the CERT Program and the HPMP as part of

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[1]See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare Fee-for-Service Payments Fiscal Year 2003* (Baltimore, Md.: December 2003). See also Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Improper Medicare Fee-for-Service Payments Report Fiscal Year 2004* (Baltimore, Md.: December 2004).

its review of work performed for HHS by contractors. These annual reviews examine whether the CERT Program and HPMP contractors have appropriate controls in place to ensure that the medical record reviews and quality assurance reviews were performed in accordance with established procedures. We reviewed OIG's annual reviews of the CERT Program and the HPMP for fiscal year 2004.[2] Our analysis of provider nonresponse within the CERT Program relied on two OIG studies of CMS's actions to reduce nonresponse implemented for the CERT Program for fiscal year 2004.[3] For the HPMP, we also reviewed four intra-Clinical Data Abstraction Center (CDAC) reports and two inter-CDAC reports, which were quality assurance reviews intended to assess the consistency of review decisions both within and across CDACs.

To conduct our analysis of CMS's statistical methods, we reviewed the OIG contractor's computer programming code, which replicated CMS's estimation of the error rates for carriers, durable medical equipment regional carriers (DMERC), and fiscal intermediaries (FI), as calculated by the CERT Program subcontractor responsible for statistical analysis of the error rates for fiscal year 2004. We reviewed CMS's computer programming code, which calculated the HPMP error rate for quality improvement organizations (QIO). In conducting these reviews of the computer programming codes for both the CERT Program and the HPMP, we verified that each code appropriately implemented a methodology that employed standard statistical principles and was used appropriately.

To inform all aspects of our study, we interviewed OIG officials with oversight responsibility for the error rate estimation, OIG contractor staff who conducted the evaluation of the statistical methodology, CMS officials with programmatic responsibilities for the CERT Program and the

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[2]See Department of Health and Human Services, Office of Inspector General, *Oversight and Evaluation of the Fiscal Year 2004 Comprehensive Error Rate Testing Program*, A-03-04-00007 (Washington, D.C.: November 2004). See also Department of Health and Human Services, Office of Inspector General, *Oversight and Evaluation of the Fiscal Year 2004 Hospital Payment Monitoring Program*, A-03-04-00008 (Washington, D.C.: November 2004).

[3]See Department of Health and Human Services, Office of Inspector General, *Review of Corrective Actions to Improve the Comprehensive Error Rate Testing Process for Obtaining Medical Records*, A-03-04-00005 (Washington, D.C.: June 2004). See also Department of Health and Human Services, Office of Inspector General, *Review of Providers' Responsiveness to Requests for Medical Records Under Comprehensive Error Rate Testing Program*, A-01-04-00517 (Washington, D.C.: September 2004).

HPMP, and staff of the CERT Program subcontractor for statistical analysis.

We performed our work from April 2005 through March 2006 in accordance with generally accepted government auditing standards.

Appendix II: Fiscal Year 2004 Error Rate Information by Contractor Type—Carriers, DMERCs, FIs, and QIOs

Contractor	CMS targeted sample size[a]	Total Medicare fee-for-service payments in fiscal year 2004[b] (in dollars)	CMS estimated paid claims error rate (percentage)	CMS estimated standard error[c] (percentage)	Relative precision[d] (percentage)
Carrier[e]					
Triple S, Inc. PR/VI	2,004	$689,224,693	17.9	1.6	8.9
BCBS AR NM/OK/LA	2,004	2,293,083,008	12.7	1.2	9.4
NHIC CA	2,004	6,837,462,204	10.8	1.1	10.2
NHIC MA/ME/NH/VT	2,004	3,323,197,031	9.6	1.0	10.4
TrailBlazer TX	2,004	5,169,066,589	14.1	1.5	10.6
BCBS RI	2,004	232,458,933	13.5	1.5	11.1
GHI NY	2,004	372,383,958	14.3	1.6	11.2
Palmetto GBA OH/WV	2,004	4,226,979,481	10.6	1.2	11.3
First Coast Service Options FL	2,004	7,367,509,907	9.7	1.1	11.3
BCBS UT	2,004	287,713,078	10.2	1.2	11.8
First Coast Service Options CT	2,004	1,106,082,763	7.6	0.9	11.8
TrailBlazer MD/DC/DE/VA	2,004	4,158,091,772	9.2	1.1	12.0
BCBS AR AR/MO	2,004	2,292,786,396	10.6	1.4	13.2
HGSA PA	2,004	3,606,318,041	9.7	1.3	13.4
WPS WI/IL/MI/MN	2,004	8,126,245,486	11.1	1.6	14.4
Cahaba GBA AL/GA/MS	2,004	3,868,072,306	11.1	1.6	14.4
BCBS KS KS/NE/Kansas City	2,004	1,581,255,014	6.9	1.0	14.5
Palmetto SC	2,004	1,189,260,267	13.1	1.9	14.5
Noridian CO/ND/SD/WY/IA	2,004	1,865,892,800	9.5	1.4	14.7
Empire NY/NJ	2,004	7,268,107,083	10.8	1.6	14.8
Noridian AZ/HI/NV/AK/OR/WA	2,004	4,981,083,701	10.7	1.6	15.0
AdminaStar IN/KY	2,004	2,708,331,380	10.0	1.5	15.0
HealthNow NY	2,004	1,358,023,183	8.2	1.3	15.9
CIGNA ID/TN/NC	2,004	4,830,134,495	10.9	1.8	16.5
BCBS MT	2,004	193,432,019	5.3	0.9	17.0
All carriers	**50,100**	**$79,932,195,591**	**10.7**	**0.4**	**3.7**
DMERC[f]					
TriCenturion Region A[g]	2,004	$1,364,899,356	7.3	0.9	12.3
AdminaStar Federal-Region B	2,004	2,241,150,409	6.6	0.9	13.6
CIGNA-Region D	2,004	1,800,134,845	11.6	2.1	18.1
Palmetto GBA Region C	2,004	4,928,003,571	14.0	2.9	20.7
All DMERCs	**8,016**	**$10,334,188,182**	**11.1**	**1.5**	**13.5**

Contractor	CMS targeted sample size[a]	Total Medicare fee-for-service payments in fiscal year 2004[b] (in dollars)	CMS estimated paid claims error rate (percentage)	CMS estimated standard error[c] (percentage)	Relative precision[d] (percentage)
FI[h]					
UGS CA/HI/AS/GU/NMI	2,004	$6,003,110,480	20.4	2.1	10.3
Palmetto GBA SC	2,004	6,194,956,951	10.3	1.1	10.7
Mutual of Omaha	2,004	11,797,457,474	26.8	3.2	11.9
First Coast Service Options FL	2,004	2,472,517,626	23.0	2.9	12.6
TrailBlazer TX/CO/NM	2,004	4,556,783,468	14.1	2.0	14.2
Cahaba GBA AL	2,004	705,028,658	15.5	2.2	14.2
Trispan MS/LA/MO	2,004	1,675,273,646	15.8	2.6	16.5
BCBS RI	2,004	781,806,244	19.3	3.2	16.6
Empire NY/CT/DE	2,004	5,811,286,709	17.2	2.9	16.9
UGS VA/WV	2,004	1,449,840,434	16.6	2.8	16.9
COSVI PR/VI	2,004	158,822,429	11.9	2.1	17.6
Medicare Northwest OR/ID/UT	2,004	711,126,486	14.6	2.6	17.8
Palmetto GBA NC	2,004	3,190,067,317	16.7	3.0	18.0
Veritus PA	2,004	2,079,132,007	14.7	2.7	18.4
UGS MI/WI	2,004	4,952,538,415	13.5	2.5	18.5
Anthem NH/VT	2,004	641,811,111	9.0	1.7	18.9
BCBS WY	2,004	83,003,027	14.7	2.8	19.0
BCBS AZ	2,004	325,070,959	7.3	1.4	19.2
CareFirst MD/DC	2,004	2,159,553,514	25.3	4.9	19.4
Cahaba GBA IA	2,004	4,273,518,964	5.6	1.1	19.6
Noridian MN/ND	2,004	1,309,949,370	16.2	3.3	20.4
BCBS AR	2,004	481,442,284	26.1	5.5	21.1
BCBS NE	2,004	299,081,984	12.8	2.7	21.1
Anthem MA/ME	2,004	2,852,313,346	10.4	2.2	21.2
BCBS GA	2,004	2,105,558,870	6.9	1.5	21.7
BCBS KS	2,004	512,584,700	10.0	2.2	22.0
AdminaStar IN/IL/KY/OH	2,004	9,610,571,631	12.2	2.7	22.1
BCBS MT	2,004	229,695,544	6.8	1.7	25.0
BCBS OK	2,004	1,109,256,221	8.6	2.2	25.6
Riverbend TN/NJ	2,004	3,622,031,691	9.7	3.0	30.9
Premera WA/AK	2,004	1,004,968,329	7.3	3.1	42.5
All FIs	**62,124**	**$83,160,159,889**	**15.7**	**0.7**	**4.5**

Contractor	CMS targeted sample size[a]	Total Medicare fee-for-service payments in fiscal year 2004[b] (in dollars)	CMS estimated paid claims error rate (percentage)	CMS estimated standard error[c] (percentage)	Relative precision[d] (percentage)
QIO by state[i]					
Massachusetts	744	$2,135,744,081	8.6	0.90	10.5
Kentucky	744	1,482,350,516	9.3	1.10	11.8
New Mexico	744	324,592,033	6.1	0.90	14.8
Maine	744	417,801,848	4.6	0.70	15.2
Louisiana	744	1,388,303,707	5.8	0.90	15.5
Arkansas	744	851,144,822	4.5	0.70	15.6
Illinois	744	3,864,432,432	4.4	0.70	15.9
Delaware	744	271,799,810	4.2	0.70	16.7
Maryland	744	2,067,187,033	3.0	0.50	16.7
Iowa	744	812,196,278	3.6	0.60	16.7
Indiana	744	1,784,654,000	4.1	0.70	17.1
Nevada	744	402,837,978	4.6	0.80	17.4
New Hampshire	744	328,223,324	3.4	0.60	17.6
Florida	744	5,696,783,961	5.1	0.90	17.6
Michigan	744	3,467,564,282	3.9	0.70	17.9
West Virginia	744	729,042,409	4.4	0.80	18.2
Vermont	744	164,700,697	3.3	0.60	18.2
South Dakota	744	232,787,316	3.8	0.70	18.4
Ohio	744	3,469,584,344	3.2	0.60	18.8
Alabama	744	1,603,881,531	3.2	0.60	18.8
Rhode Island	744	269,904,786	4.2	0.80	19.0
Virginia	744	1,933,408,829	3.5	0.70	20.0
Oklahoma	744	964,748,057	3.5	0.70	20.0
Alaska	504	100,985,029	3.5	0.70	20.0
North Dakota	744	216,246,500	2.0	0.40	20.0
South Carolina	744	1,408,487,704	5.4	1.10	20.4
New Jersey	744	3,595,399,138	2.9	0.60	20.7
Puerto Rico	744	376,450,167	4.8	1.00	20.8
Utah	744	389,527,711	3.8	0.80	21.1
Connecticut	744	1,295,269,906	3.2	0.70	21.9
New York	744	6,522,717,692	2.6	0.60	23.1
Idaho	744	237,198,385	2.6	0.60	23.1
Texas	744	5,573,613,357	4.2	1.00	23.8

Contractor	CMS targeted sample size[a]	Total Medicare fee-for-service payments in fiscal year 2004[b] (in dollars)	CMS estimated paid claims error rate (percentage)	CMS estimated standard error[c] (percentage)	Relative precision[d] (percentage)
North Carolina	744	2,720,223,476	2.1	0.50	23.8
Washington	744	1,253,681,476	2.1	0.50	23.8
Oregon	744	689,865,040	2.5	0.60	24.0
Pennsylvania	744	4,290,842,680	2.5	0.70	28.0
Nebraska	744	500,351,357	1.4	0.40	28.6
District of Columbia	744	393,305,231	1.3	0.40	30.8
Kansas	744	762,382,857	2.8	0.90	32.1
Georgia	744	2,215,263,714	2.1	0.70	33.3
Arizona	744	1,081,388,500	2.4	0.80	33.3
Tennessee	744	2,093,513,706	1.7	0.60	35.3
Missouri	744	1,935,671,182	1.1	0.40	36.4
Wyoming	744	99,863,364	1.1	0.40	36.4
California	744	7,517,783,935	4.6	1.70	37.0
Wisconsin	744	1,575,519,000	1.0	0.40	40.0
Minnesota	744	1,412,860,400	1.0	0.50	50.0
Colorado	744	703,166,846	1.3	0.70	53.8
Hawaii	744	203,010,800	0.5	0.30	60.0
Montana	744	226,885,429	0.7	0.50	71.4
Mississippi	744	884,792,083	1.2	1.00	83.3
All QIOs	**38,448**	**$84,939,940,736**	**3.6**	**0.20**	**5.6**

Source: GAO analysis of CMS data.

Note: This table reflects net paid claims error rates.

[a]For carriers, DMERCs, and FIs, sample size was the targeted number of claims drawn for the fiscal year 2004 error rate estimates for each contractor. While CMS selected an equal sample from each of these contractors, the final sample sizes varied among contractors. Some selected claims were excluded from the final sample because the claims were missing information, such as dates of service and provider or patient information. For QIOs, the targeted sample size was the actual sample size.

[b]We calculated total Medicare fee-for-service payments by dividing the projected improper payment by the paid claims error rate. According to the CMS fiscal year 2004 error rate report, CMS did not adjust projected improper payments data to exclude beneficiary co-payments, deductibles, and reductions to recover previous overpayments. This means that the improper payment amounts appear larger than they would otherwise. However, error rates are unaffected.

[c]Standard error is a measure of variation around the estimate, in this case the error rate.

[d]Relative precision equals the contractor's standard error divided by the contractor's paid claims error rate.

[e]Carriers are health insurers and pay claims submitted by physicians, diagnostic laboratories and facilities, and ambulance service providers.

[f]DMERCs are health insurers and pay claims submitted by durable medical equipment suppliers.

[g]For the fiscal year 2004 error rate,TriCenturion, a program safeguard contractor, was responsible for medical review in one of the four DMERC regions. Program safeguard contractors are Medicare contractors that conduct activities to address or prevent improper payments. As such, it was TriCenturion, not the DMERC, which was responsible for lowering the error rates in its region.

[h]FIs are almost exclusively health insurers and pay claims submitted by home health agencies, non-prospective payment system (PPS) hospitals, hospital outpatient departments, skilled nursing facilities, and hospices. PPS is a reimbursement method used by Medicare where the payment is made based on a predetermined rate and is unaffected by the provider's actual costs.

[i]QIOs (formally known as peer review organizations) are responsible for ascertaining the accuracy of coding and payment of paid Medicare FFS claims for acute care inpatient hospital stays—generally those that are covered by PPS—for Medicare beneficiaries in all 50 states, the District of Columbia, and Puerto Rico. Unlike carriers, DMERCs, and FIs, however, QIOs do not process and pay claims. These activities are conducted by FIs.

DEPARTMENT OF HEALTH & HUMAN SERVICES   Office of Inspector General

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Washington, D.C. 20201

MAR − 8 2006

Mr. A. Bruce Steinwald
Director, Health Care
U.S. Government Accountability Office
Washington, DC 20548

Dear Mr. Steinwald:

Enclosed are the Department's comments on the U.S. Government Accountability Office's
(GAO) draft report entitled, "MEDICARE PAYMENT: CMS Methodology Adequate To Estimate
National Error Rate" (GAO-06-300). These comments represent the tentative position of the
Department and are subject to reevaluation when the final version of this report is received.

The Department provided several technical comments directly to your staff.

The Department appreciates the opportunity to comment on this draft report before its publication.

Sincerely,

Daniel R. Levinson
Inspector General

Enclosure

The Office of Inspector General (OIG) is transmitting the Department's response to this draft
report in our capacity as the Department's designated focal point and coordinator for U.S.
Government Accountability Office reports. OIG has not conducted an independent
assessment of these comments and therefore expresses no opinion on them.

<u>COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
ON THE U.S. GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT
REPORT ENTITLED, "MEDICARE PAYMENT: CMS METHODOLOGY
ADEQUATE TO ESTIMATE NATIONAL ERROR RATE" (GAO-06-300)</u>

The Department of Health and Human Services (HHS) appreciates the opportunity to
comment on the draft report. HHS appreciates the time and resources GAO invested in
researching and reporting the methodology for estimating a national Medicare Fee-for-
Service (FFS) error rate. GAO found the Centers for Medicare & Medicaid Services
(CMS) methodology adequate for estimating the fiscal year 2004 national Medicare FFS
error rate. CMS is continually committed to refining the processes to estimate, as well as
to lower, the level of improper payments in the Medicare FFS program.

The Medicare FFS error rate has significantly improved, from 10.1 percent in 2004 to
5.2 percent in 2005. CMS reviewed approximately 160,000 FFS Medicare claims in
2005 as part of its Medicare comprehensive error rate-testing (CERT) program. The
detailed review of a sample of Medicare FFS claims provides an accurate statistical error
rate estimate on individual contractors, types of service, and provider types. CMS is now
able to identify specific problem areas and target improvement efforts. The CERT
program reflects the agency's increased commitment to use detailed data and analysis in
managing the Medicare program through identifying and reducing improper payments.

The significant reduction in the Medicare FFS error rate from 2004 to 2005 is largely
attributed to marked improvement in the no-documentation and the insufficient
documentation error rates. Since the CERT program began, CMS and Medicare
contractors have focused a large part of their efforts on educating providers about CERT
and the importance of responding to CERT requests for medical records. This has
dramatically reduced the number of no-documentation errors. Provider education also
helped reduce the insufficient documentation error rate to just over one percent.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

A. Bruce Steinwald, (202) 512-7101 or steinwalda@gao.gov

Acknowledgments

In addition to the contact named above, Debra Draper, Assistant Director; Lori Achman; Jennie Apter; Dae Park; and Ann Tynan made key contributions to this report.

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