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United States Government Accountability Office
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September 26, 2008

The Honorable Gordon H. Smith
Ranking Member
Special Committee on Aging
United States Senate

The Honorable John D. Rockefeller IV
Chairman
Subcommittee on Health
Committee on Finance
United States Senate

Subject: *Medicare: Trends in Fees, Utilization, and Expenditures for Imaging Services before and after Implementation of the Deficit Reduction Act of 2005*

Rapid spending growth for Medicare Part B—which covers physician and other outpatient services—has heightened concerns about the long-range fiscal sustainability of Medicare.¹ Medicare Part B expenditures are expected to increase over the next decade at an average annual rate of about 8 percent, which is faster than the projected 4.8 percent annual growth rate in the national economy over this time period.² As we noted in our June 2008 report, spending on physician imaging services has been one of the fastest-growing sets of services paid for under the Medicare Part B physician fee schedule (PFS),³ the payment system used to determine fees for Medicare physician-billed services. From 2000 through 2006, Medicare spending for physician imaging services doubled from about \$7 billion to about \$14 billion—an average annual increase of 13 percent, compared to an 8 percent increase in spending for all Medicare physician-billed services over the same time period.⁴ We also found that by 2006 about two-thirds of spending on physician imaging services occurred in physician office

¹Medicare is the federally financed health insurance program for persons aged 65 and over, certain individuals with disabilities, and individuals with end-stage renal disease. In addition to services covered under Part B, Medicare covers hospital and other inpatient stays through Medicare Part A. Medicare Parts A and B are known as original Medicare or Medicare fee-for-service (FFS).

²These rates of growth are based on nominal dollars. See the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, *2008 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds* (Washington, D.C.: Mar. 25, 2008).

³Throughout this report we define “physician imaging services” as services billed by physicians and paid for under the physician fee schedule.

⁴See GAO, *Medicare Part B Imaging Services: Rapid Spending Growth and Shift to Physician Offices Indicate Need for CMS to Consider Additional Management Practices*, [GAO-08-452](#) (Washington, D.C.: June 13, 2008).

settings—an indicator of a shift toward providing imaging services in physicians’ offices as opposed to providing such services in hospital or other institutional settings.⁵

In our June 2008 report, we also noted that the growth in Medicare spending on imaging services has been more rapid among what are known as advanced imaging modalities—computed tomography (CT), magnetic resonance imaging (MRI), and nuclear medicine—when compared with the growth in spending among other, less advanced imaging modalities such as x-ray or ultrasound.⁶ We also observed that although advances in imaging technology have enabled physicians to perform a wide range of less-invasive medical tests and procedures and to diagnose and treat disease more quickly, substantial geographic variation in the utilization of imaging services indicates that not all of the increased spending may have been warranted.⁷

Congress has recently acted to address the rapid growth in spending on imaging services. Under a provision in the Deficit Reduction Act of 2005 (DRA),⁸ Medicare fees for certain imaging services covered by the physician fee schedule may not exceed what Medicare pays for these services under Medicare’s hospital outpatient prospective payment system (OPPS),⁹ which is used to pay for hospital outpatient services. The provision applies only to the fee physicians receive for performing—as opposed to interpreting—an imaging test. To the extent that PFS fees for imaging services were higher than OPPS fees, the DRA provision—known as the OPPS cap—would reduce PFS fees for such services. The Centers for Medicare & Medicaid Services (CMS), the agency within the Department of Health and Human Services (HHS) that administers Medicare, implemented the OPPS cap for imaging tests performed on or after January 1, 2007, as required by the DRA.

The OPPS cap sparked intense reaction from the imaging provider community. Specifically, physician organizations and imaging manufacturers have suggested that reduced fees as a result of the cap may inhibit physicians’ willingness to provide imaging services for Medicare beneficiaries, which in turn could affect Medicare beneficiary access to such services.¹⁰ You

⁵Depending upon the setting, Medicare pays for imaging services under different payment systems. For example, when a physician provides imaging services in an office setting, the physician may bill for and receive, under Medicare PFS, one fee for performing the imaging test and another fee for interpreting the test. If the physician bills for both, it is known as a “global bill.” In contrast, when a patient receives imaging services in an institutional setting, such as a hospital outpatient department, the physician receives a fee under PFS only for the interpretation of the test, while the fee for the performance of the test is paid to the institution under Medicare’s hospital outpatient prospective payment system (OPPS).

⁶Nuclear medicine is the use of radioactive materials in conjunction with an imaging modality to produce images that show both structure and function within the body.

⁷GAO-08-452. See also Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, D.C.: March 2005).

⁸Pub. L. No. 109-171, § 5102(b), 120 Stat. 4, 39-40 (2006).

⁹If the PFS fee exceeds the OPPS fee, providers will be paid the OPPS fee. If the OPPS fee exceeds the PFS fee, payment will be based on the PFS fee.

¹⁰Some health policy analysts dispute the assertion that payment reductions necessarily result in a lower volume of services. Some studies have suggested there is a “behavioral offset,” that is, a tendency by providers to increase the volume of services to counter the loss of revenue from individual fee reductions. See Congressional Budget Office, *Factors Underlying the Growth in Medicare’s Spending for Physicians’ Services* (Washington, D. C.: June 2007); and Stephen Zuckerman, Stephen A. Norton, and Diana Verrilli, “Price Controls and Medicare Spending: Assessing the Volume Offset Assumption,” *Medical Care Research and Review*, vol 55, no. 4 (December 1998).

asked us to provide you with information on the impact of the DRA provision on utilization and spending on physician imaging services in Medicare's fee-for-service (FFS) program. In this report we 1) examine the extent to which fees for performing imaging tests were affected by the OPSS cap in 2007 and 2) analyze trends in expenditures and utilization for physician imaging services under Medicare FFS through 2007.

To examine the extent to which fees for imaging tests were affected by the OPSS cap in 2007, we relied on three data sources. We obtained data from the 2007 physician fee schedule, which we used to identify, by modality, the imaging services to which the OPSS cap applied—that is, the imaging services for which the OPSS fee was less than the PFS fee and were therefore paid at the lower OPSS rate in 2007. We also obtained claims data for 2007 from CMS's Physician Supplier Procedure Summary (PSPS) Master File to determine the share of tests associated with imaging services subject to the OPSS cap.¹¹ We obtained data on the number of Medicare FFS beneficiaries from the 2008 Medicare Trustees report.¹² (For more detail on our data and methods, see enc. I.)

To analyze trends in expenditures and utilization for physician imaging services under Medicare, we used the same data sources and included data on the number of FFS beneficiaries from the Trustees report and PSPS claims data for 2000 to 2006. For the purposes of this report, we measured utilization of imaging services in terms of the volume—or number—of tests performed, as this component of imaging services was subject to the OPSS cap beginning in 2007. The expenditure data we report represents Medicare Part B FFS spending associated with the provision of all imaging services—the performance of the test, the interpretation of the test, and related ancillary services.¹³ We analyzed national trends in expenditures and utilization but did not examine these trends for smaller geographic areas. In order to more directly assess the impact of the OPSS cap on the change in imaging expenditures from 2006 to 2007, we performed an analysis of the factors that may have affected these expenditures, such as the number of beneficiaries in the Medicare FFS program, the volume of services provided per beneficiary, and the fees Medicare pays for those services. Although these factors affected expenditures simultaneously, our analysis allowed us to isolate each factor and determine the extent to which it alone likely affected expenditure changes from 2006 to 2007.

We examined the reliability of the claims data used in this report by performing appropriate electronic checks and checks for obvious errors such as values outside of expected ranges. We determined that the claims data we used were sufficiently reliable for the purposes of our analysis. We conducted our work from February 2008 through August 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹¹The PSPS file contains an estimated 98 percent of claims from the calendar year.

¹²The Boards of Trustees, *2008 Annual Report*.

¹³Ancillary services for imaging include items such as radiopharmaceuticals and iodine supplies. These items are necessary to provide certain imaging tests.

Results In Brief

In 2007, the OPSS cap reduced the fee for the performance of about one in four physician imaging tests overall, and fees for advanced tests were more likely than other imaging tests to be paid at the OPSS rate. All advanced imaging modalities had a higher percentage (about 65 percent) of tests paid at the OPSS rate than other imaging modalities (about 13 percent). In particular, nearly all MRIs and CTs were paid at the OPSS rate. Among advanced imaging tests, the fee reductions because of the OPSS cap varied extensively. For example, among the three most commonly performed MRIs subject to the cap, fee reductions ranged from about 21 to 40 percent.

From 2000 through 2006 both expenditures for and utilization of Medicare physician imaging services increased, but in 2007 expenditures declined while utilization continued to rise. From 2000 to 2006, on a per-beneficiary basis—a measure which accounts for the change in size of Medicare’s FFS population—expenditures increased 11.4 percent per year and in 2007 declined 12.7 percent. The implementation of the OPSS cap had the greatest impact on the decline in Medicare physician imaging expenditures in 2007, although other factors also contributed to this trend. Per-beneficiary utilization rose 5.9 percent per year from 2000 to 2006 and continued to increase in 2007, although at a slower rate of 3.2 percent. In comparing the changes from 2006 to 2007 in per-beneficiary utilization of tests paid at the OPSS rate with tests paid at the PFS rate, we found that the volume of imaging tests subject to the cap grew almost four times faster than the volume of those not subject to the cap. In commenting on a draft of this report, CMS noted that our finding of significant reductions in spending for imaging services in 2007 was consistent with its own estimate. CMS also stated it was pleased that our findings suggested that overall beneficiary access to imaging services was maintained and remains concerned about the high volume of imaging services.

Background

Medicare generally pays for physician services using a resource-based fee schedule. The fee schedule contains billing codes for more than 7,000 services. For each billing code, Medicare has determined the resources required to provide the service and expresses these resource requirements in relative value units (RVU), which account for a physician’s time, expertise, and operating costs required to deliver one service compared to other services.¹⁴ Because the resources required to deliver services may change over time, CMS reviews RVUs every 5 years. In 2007, as part of its periodic review, CMS revalued the RVUs so that physician payments more accurately reflected the cost of providing services.

In 2007, there were 839 billing codes for imaging services in the Medicare physician fee schedule. These codes fall into six modalities which can be grouped into two subcategories. The CT, MRI, and nuclear medicine modalities comprise advanced imaging tests, while ultrasound, standard imaging (which includes x-rays), and procedures that use imaging comprise other imaging tests.

¹⁴RVUs for each service are determined relative to a benchmark service defined as a mid-level office visit. For example, if a midlevel office visit had an RVU value of 1.000, a service with 1.475 RVUs is estimated to be 47.5 percent more costly to provide.

In addition to the OPPS cap, in 2006 CMS implemented a reduction in payment for certain imaging services when multiple images are made of contiguous body parts during the same office visit, known as the multiple procedure reduction (MPR). The estimated impact of the MPR was small,¹⁵ and all the procedures subject to the MPR were also subject to the OPPS cap.

In implementing the OPPS cap, CMS identified the services that would be subject to the cap, effective in 2007. Under the cap, the Medicare fee a physician receives for performing an imaging test in the physician's office or independent diagnostic testing facility (IDTF) may not exceed the fee for the same test performed under OPPS.¹⁶ As a result, if the fee under OPPS is less than the PFS fee, the physician is paid at the OPPS rate for the test. If the fee under OPPS is greater than the PFS fee, the physician is paid at the PFS rate. Because fees paid under the PFS and OPPS systems are revised each year, the services to which the OPPS cap applies may change.

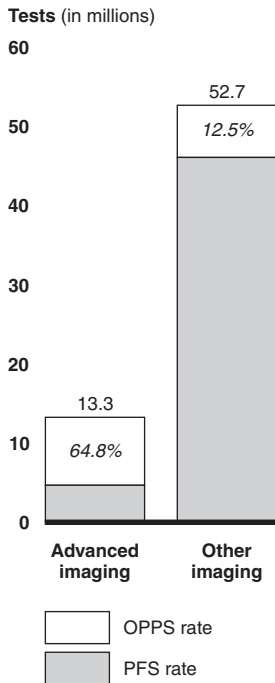
The OPPS Cap Resulted in Fee Reductions for About One in Four Imaging Tests, with a Larger Impact on Advanced Tests than Other Tests

In 2007, the OPPS cap resulted in reduced physician fees for the performance of about one in four imaging tests overall, and fees for advanced imaging tests were more likely than fees for other imaging tests to have been paid at the OPPS rate. Of the 65.9 million physician imaging tests performed in 2007, about 23 percent were paid at the OPPS rate. Fees for about 65 percent of the 13.3 million advanced imaging tests—which comprised about 20 percent of the total volume of imaging tests performed in 2007—were paid at a lower rate as a result of the OPPS cap (see fig. 1). In contrast, the fees for relatively few other imaging tests were affected by the cap, as about 13 percent of the 52.7 million other imaging tests performed in 2007 were paid at the OPPS rate.

¹⁵Using 2004 data, CMS analyzed the impact of MPR. Based on this analysis, we estimate the MPR would have reduced expenditures by 1.6 percent had the provision been in effect in that year.

¹⁶IDTFs are facilities that are independent of a hospital or physician office and only provide outpatient diagnostic services.

Figure 1: Percentage of Physician Imaging Tests Paid at OPPS Rate and PFS Rate in 2007



Source: GAO analysis of Medicare Part B claims data and physician fee schedule data.

All advanced imaging modalities had a higher proportion of fee reductions resulting from the OPPS cap when compared with other imaging modalities. Fees for over 90 percent of all CTs and MRIs were reduced as result of the OPPS cap in 2007, while only about 20 percent of the fees for ultrasounds were paid at the OPPS rate—the highest percentage among other imaging modalities (see table 1).

Table 1: Percentage of Imaging Tests Paid at the OPPS Rate by Modality, 2007

Modalities	Total tests (in millions)	Percentage of tests paid at OPPS rate
Advanced		
MRI	3.1	98.8
CT	3.8	90.8
Nuclear Medicine	6.3	32.4
Other		
Ultrasound	18.7	20.1
Imaging Procedures	5.5	15.2
Standard Imaging	28.5	7.0

Source: GAO analysis of Medicare Part B claims data and physician fee schedule data.

Among the advanced imaging modalities CMS identified as subject to the cap, the magnitude of the specific fee reductions in 2007 varied extensively. For example, as a result of the OPSS cap, the fees for the three most commonly performed MRIs subject to the cap—MRI of the lumbar spine without dye, MRI of the joints of the lower extremity without dye, and MRI of the brain with and without dye—were reduced between about 21 and 40 percent. In contrast, the fees for the three most commonly performed CTs subject to the cap—CT of the pelvis with dye, CT of the thorax with dye, and CT of the thorax without dye—were reduced between about 7 and 15 percent. The fees for two of the three most commonly performed nuclear medicine tests subject to the cap were not reduced as a result of the OPSS cap in 2007, because the OPSS rate was greater than the PFS rate (see table 2).

Table 2: Impact of OPSS Cap on the Most Commonly Performed Advanced Imaging Tests, 2007

Imaging test description	PFS rate	OPSS rate	Percentage difference
MRI of the lumbar spine w/o dye	\$557.09	\$419.90	-24.6
MRI of joints of the lower extremity w/o dye	\$519.57	\$413.08	-20.5
MRI of the brain w/ and w/o dye	\$1,025.51	\$611.29	-40.4
CT of the pelvis w/ dye	\$327.81	\$306.21	-6.6
CT of the thorax w/ dye	\$342.59	\$310.38	-9.4
CT of the thorax w/o dye	\$289.54	\$245.2	-15.3
Heart wall motion add-on	\$79.96	\$119.00	Unaffected
Heart image (3d), multiple	\$532.84	\$472.58	-11.3
Heart function add-on	\$72.01	\$111.04	Unaffected

Source: GAO analysis of 2007 Medicare physician fee schedule data.

Note: These fees represent a national average of amounts paid for globally billed physician imaging services. These tests were the most commonly performed imaging tests of those identified by CMS as subject to the OPSS cap in 2007.

Expenditures for and Utilization of Imaging Services Increased until 2007, When Expenditures Declined While Volume Continued to Increase

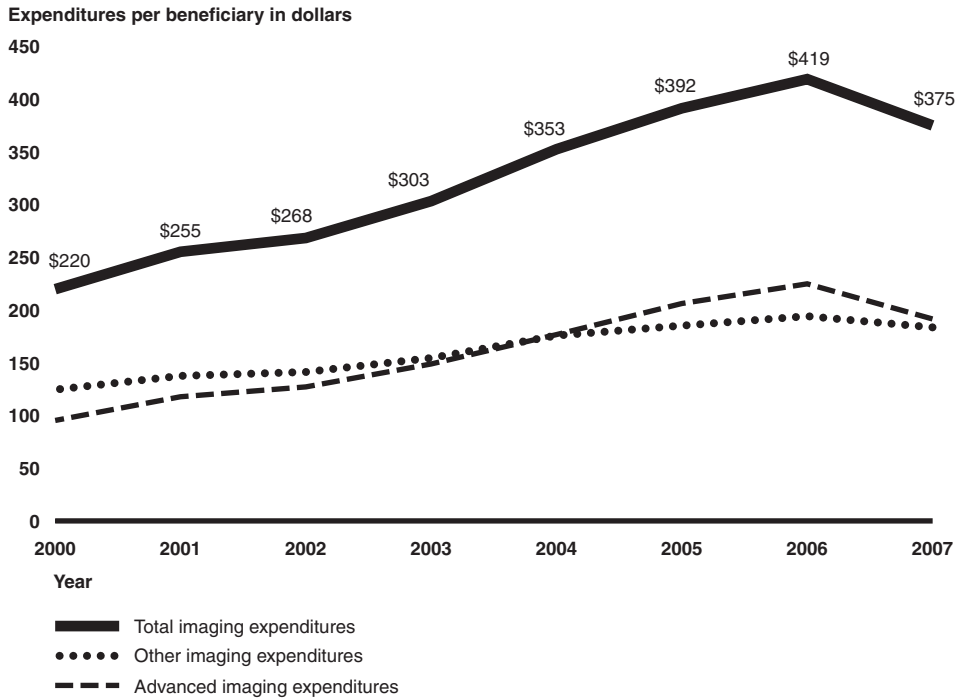
From 2000 through 2006 both expenditures for and utilization of imaging services in Medicare Part B increased, but in 2007 expenditures declined while utilization continued to rise. The implementation of the OPSS cap was the largest of several factors that contributed to the decline in Medicare expenditures for imaging services in 2007. Although expenditures declined in 2007, utilization continued to increase that year, as the volume of imaging tests subject to the OPSS cap grew almost four times faster than the volume of tests that were not subject to the cap.

After Years of Growth, Imaging Expenditures Declined in 2007, with the OPSS Cap the Largest of Several Factors Influencing the Decline

From 2000 through 2006, total Medicare expenditures for physician imaging services increased from \$6.7 billion to \$13.8 billion, an increase of 12.9 percent per year. Expressed in terms of imaging expenditures per beneficiary—a measure which accounts for the size of Medicare’s FFS population—imaging expenditures increased from \$220 to \$419, an increase of 11.4 percent per year. From 2000 through 2006, the rate of growth in spending for advanced imaging was twice the rate of growth for other imaging. Expenditures per beneficiary for advanced imaging services increased 15.4 percent between 2000 and 2006, compared with an increase of 7.7 percent over this time period for other imaging services.

In 2007, the increase in spending on physician imaging services reversed, as Medicare’s expenditures fell to \$12.1 billion—a decline of 12.7 percent from 2006. Per beneficiary, Medicare’s expenditures on physician imaging services declined 10.5 percent in 2007 to \$375. Despite this decline, per beneficiary expenditures in 2007 for physician imaging services were 70.7 percent higher than they were in 2000. In 2007, expenditures per beneficiary for advanced imaging services fell 14.8 percent, compared with a 5.4 percent decline in expenditures for other imaging services (see fig. 2).

Figure 2: Imaging Expenditures per Medicare FFS Beneficiary, 2000 to 2007



Source: GAO analysis of Medicare Part B claims data.

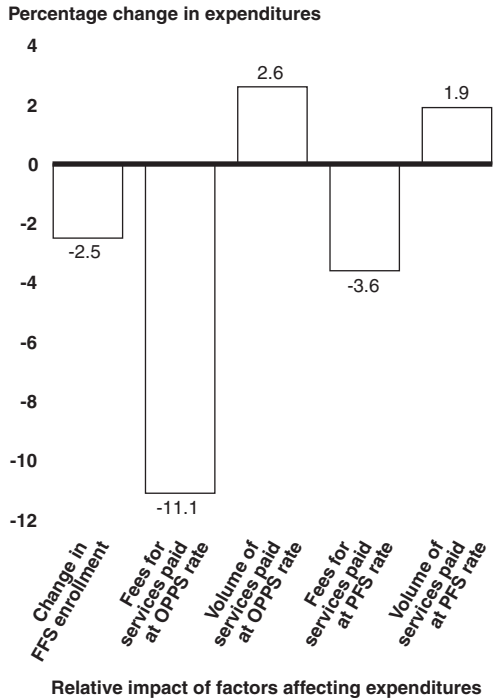
Our analysis shows that the implementation of the OPPS cap was the factor that had the greatest impact on the change in Medicare physician imaging expenditures, which declined 12.7 percent in the aggregate in 2007. Specifically, we estimate that in 2007 the implementation of the OPPS cap caused spending on physician imaging services to decline 11.1 percent. In addition, a decrease in the size of Medicare’s FFS population caused a 2.5 percent decline in expenditures,¹⁷ and a change in PFS fees for imaging services caused an additional 3.6 percent decline.¹⁸

¹⁷The decline in FFS expenditures in 2007 did not necessarily represent a net savings to the Medicare program, as the decrease in FFS enrollment that year was attributable to higher enrollment in Medicare Advantage—Medicare’s private health plan option.

¹⁸CMS revalued RVUs in 2007. Although these RVU revaluations are designed to leave aggregate Medicare PFS expenditures largely unchanged, they can result in increases or decreases in spending for specific services. In fact, CMS projected expenditures for services provided by radiologists—physicians who primarily perform imaging services—would decline 5 percent as a result of these RVU changes.

Partially offsetting the factors that contributed to the overall decline in imaging expenditures in 2007 was an increase in per-beneficiary volume of imaging services (which included tests and interpretations). This increase in volume—or utilization—exerted upward pressure on expenditures for physician imaging services in 2007. Specifically, the increase in volume of imaging services paid at the OPPS rate increased expenditures 2.6 percent, and the increase in volume of services paid at the PFS rate increased expenditures 1.9 percent (see fig. 3).

Figure 3: Relative Impact of Factors Affecting Imaging Expenditures from 2006 to 2007



Source: GAO analysis of Medicare Part B claims data and physician fee schedule data.
 Note: The impact of ancillary services, such as radiopharmaceuticals and iodine supplies, is excluded from these results because it increased total expenditures less than 0.5 percent.

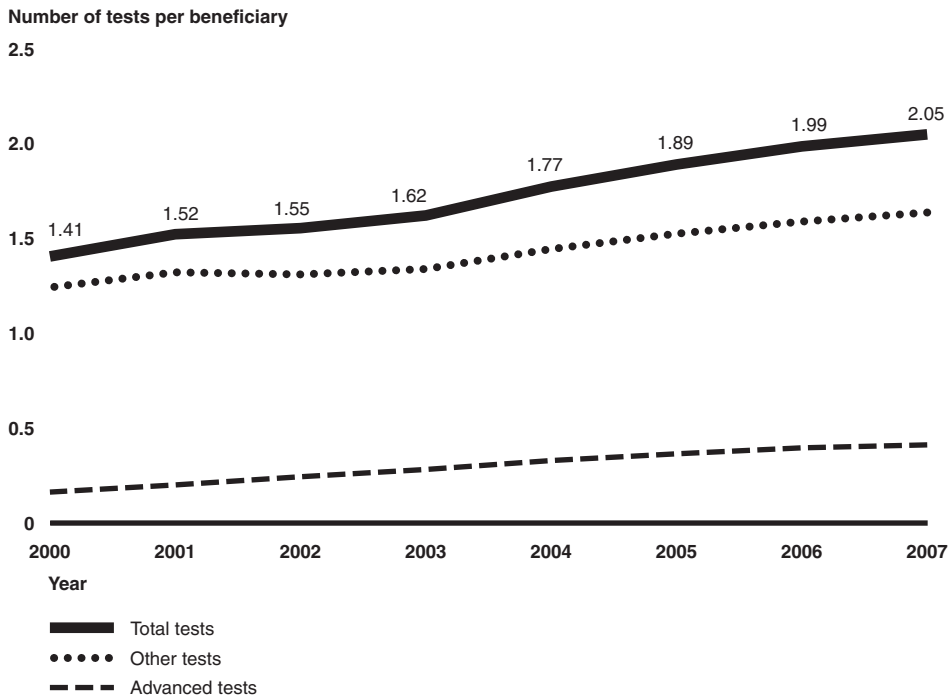
Utilization of Imaging Tests Increased from 2000 through 2007, with Utilization of Tests Paid at the OPPS Rate Increasing Almost Four Times Faster Than Tests Paid at the PFS Rate

Similar to expenditures for physician imaging services, utilization of imaging services increased from 2000 through 2006, from 42.6 million tests to 65.5 million tests. This increase represented an annual growth rate of 7.4 percent. Per beneficiary, the volume of imaging tests increased over this time period from 1.41 to 1.99, or an annual growth rate of 5.9 percent (see fig. 4). However, unlike Medicare’s expenditures for imaging services, which declined in 2007, the volume of imaging tests continued to increase to 65.9 million tests in 2007. This increase represents a 0.6 annual rate of growth for 2007. The relatively slower growth rate for 2007 in the volume of imaging tests is largely attributable to the 2.5 percent decrease in Medicare’s FFS population for that year. On a per-beneficiary basis, the volume of tests increased from 1.99 to 2.05, or 3.2 percent in 2007.

From 2000 through 2007, utilization of advanced imaging tests grew more rapidly than utilization of other imaging tests. This trend continued in 2007 as the number of advanced tests per beneficiary increased 3.9 percent, whereas the volume of other imaging tests increased 3.0 percent. Because of the more rapid growth in volume for advanced imaging

tests, the proportion of all tests that were advanced imaging increased from 12 percent in 2000 to 20 percent in 2007.

Figure 4: Imaging Tests per Medicare FFS Beneficiary, 2000 to 2007



Source: GAO analysis of Medicare Part B claims data.

As part of our analysis of utilization trends, we examined the change in utilization of tests paid at the OPPS rate compared to the utilization of tests paid at the PFS rate from 2006 to 2007. We found that the per-beneficiary volume of tests paid at the OPPS rate increased 7.4 percent, almost four times faster than the 2.0 percent rate of growth in the volume of tests paid at the PFS rate.

Concluding Observations

Although implementing the OPPS cap raised concerns that reduced fees might curtail beneficiary access to physician imaging services, our analysis suggests that this did not occur in 2007. Our results apply to the national level only and may not be indicative of trends in smaller geographic areas. Although spending for imaging services declined from 2006 to 2007, utilization of tests increased. In fact, utilization increased more for imaging tests subject to the OPPS cap than for imaging tests not subject to the cap.

Agency Comments

In commenting on a draft of this report, CMS noted that our finding of significant reductions in spending for imaging services in 2007 was consistent with its own estimate of a 20 percent reduction in payments for imaging services subject to the OPPS cap. CMS also stated it was pleased that our findings suggested that overall beneficiary access to imaging services was maintained during the first year the DRA was in effect. According to CMS, the agency remains concerned about the high volume of imaging services and their value to beneficiaries.

CMS suggested that our analysis should include two additional comparisons that, in its view, would provide further support for our concluding observations. The first was a comparison of growth rates for tests subject to the OPSS cap versus those that were not from 2000 to 2006. The second was a comparison of growth rates for capped and non-capped tests by modality from 2006 to 2007.

While further research could be interesting, we do not believe either comparison is necessary to bolster our concluding observations, which focused on the impact of the OPSS cap on beneficiary access. Despite the decline in fees for tests subject to the OPSS cap and total expenditures, the volume of tests continued to rise and the volume of tests subject to the cap rose more rapidly than the volume of tests not subject to the cap.

We are sending copies of this report to the Secretary of HHS, the Administrator of CMS, appropriate congressional committees, and other interested parties. We will make copies available to others upon request. This report is also available at no charge on GAO's Web site at <http://www.gao.gov>. If you or your staff have any questions about this report, please contact me at (202) 512-7114 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. Jessica Farb, Assistant Director; Todd D. Anderson; Manuel Buentello; Iola D'Souza; Krister Friday; and Julian Klazkin made key contributions to this report.



A. Bruce Steinwald
Director, Health Care

Scope and Methodology

Under a provision in the Deficit Reduction Act of 2005 (DRA), Medicare fees for certain imaging services covered by the physician fee schedule (PFS) may not exceed what Medicare pays for these services under Medicare’s hospital outpatient prospective payment system (OPPS), which is used to pay for hospital outpatient services.¹⁹ The provision applies only to the fee physicians receive for performing—as opposed to interpreting—an imaging test. To the extent that PFS fees for imaging services were higher than OPPS fees, the DRA provision—known as the OPPS cap—would reduce PFS fees for such services. The Centers for Medicare & Medicaid Services (CMS), the agency within the Department of Health and Human Services (HHS) that administers Medicare, implemented the OPPS cap for imaging tests performed on or after January 1, 2007. To measure the effects of the OPPS cap on fees for, spending on, and utilization of, Medicare physician imaging services, we relied on several data sources.

- We analyzed Medicare claims data from 2000 through 2007 to determine trends in expenditures for and utilization of physician imaging services from CMS’s Physician Supplier Procedure Summary (PSPS) Master File—a data source that aggregates data to the billing code designated under the Healthcare Common Procedure Coding System (HCPCS).²⁰ We analyzed national trends in expenditures and utilization and did not examine these trends for smaller geographic areas.²¹
- We analyzed data on fees from the 2007 Medicare PFS to identify codes to which the OPPS cap applied.
- We obtained data on the number of Medicare fee-for-service beneficiaries from the 2008 Medicare Trustees report.²²

We relied on the Berenson-Eggers Type of Service (BETOS) codes assigned to our claims data to determine which services could be classified as imaging.²³ We extracted data if the first digit of the BETOS code was equal to “1” in a given year, indicating that the service was imaging. We also used the BETOS code to group HCPCS codes into imaging modalities and the broad subgroups of advanced and other imaging services. Of the 652 HCPCS codes

¹⁹Pub. L. No. 109-171, § 5102(b), 120 Stat. 4, 39-40 (2006).

²⁰The PSPS file contains an estimated 98 percent of claims from the calendar year.

²¹Our analysis of trends in expenditures and utilization includes tests performed in physician offices or independent diagnostic testing facilities (IDTF). In addition our analysis of expenditures includes ancillary services and physician interpretations for tests performed in physician offices, IDTFs, and institutional settings.

²²The Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, *2008 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds* (Washington, D.C.: Mar. 25, 2008).

²³The BETOS coding system was developed primarily for analyzing the growth in Medicare expenditures by broad service categories. Each HCPCS billing code is assigned to only one BETOS category. There are 18 distinct BETOS categories for imaging services.

Enclosure I

identified by CMS as being subject to the OPSS cap in 2007, 631 were classified as imaging using the BETOS code. Because the other 21 codes were not classified as imaging using the BETOS code, we excluded them to establish a consistent code classification method across years.²⁴

In analyzing the effect of the DRA provision on fees, spending, and utilization of Medicare physician imaging services, we classified the HCPCS code as having an OPSS fee if the OPSS fee was below the PFS fee. If the PFS fee for these services was based on relative value units (RVU),²⁵ we determined the national facility and nonfacility PFS and OPSS fee.²⁶ If the fee was not based on RVUs—that is, it was set by Medicare’s claims processing contractors or by some other method—and it was on the list of codes CMS identified as subject to the OPSS cap, we classified the code as having an OPSS fee. Using the alphanumeric HCPCS codes, we differentiated tests from other imaging services including interpretations and separately billed services, such as radioactive agents and iodine supplies that accompany the imaging exam.²⁷ For the purposes of this report, we measured utilization of imaging services in terms of the volume—or number—of tests performed, as this component of imaging services was subject to the OPSS cap beginning in 2007. The expenditure data we report represents Medicare Part B fee-for-service (FFS) spending associated with the provision of all imaging services—the performance of the test, the interpretation of the test, and related ancillary services.

To analyze the factors that influenced the change in expenditures from 2006 to 2007, we examined the three primary elements that determine Part B physician spending: the size of the FFS beneficiary population, services per beneficiary, and the average fee for each service. Specifically, we examined the influence of changes in the FFS beneficiary population, OPSS fees, the volume of services paid at the OPSS rate, PFS fees, and the volume of services paid at the PFS rate, for a total of five factors.²⁸ To measure the effect of each factor, we allowed that factor to change while holding other factors constant. The percentage difference between the estimated spending as a result of allowing one factor to change relative to actual 2006 spending is our estimate of the impact of that factor. The difference between the sum of all factor impacts and the actual change is a residual that we were unable to measure directly.

²⁴Including these additional HCPCS codes in our analysis would have increased total 2007 expenditures about 1.1 percent.

²⁵RVUs measure the relative costliness of each service compared to a benchmark service defined as a mid-level office visit. For example, if a midlevel office visit had an RVU value of 1.000, a service with 1.475 RVUs is estimated to be 47.5 percent more costly to provide.

²⁶Under the physician fee schedule, the RVUs for each HCPCS billing code are adjusted to account for geographic differences in the cost of providing services. National fees do not account for these geographic adjustments. Each fee can be facility-based or nonfacility-based. Facility-based fees are paid for services that are provided in an institutional setting such as a hospital. Nonfacility-based fees are paid for services that are provided in an office-based setting such as a physician clinic.

²⁷Services for which the first digit of the HCPCS code was numeric or “G” and had no modifier to indicate that the claim was for the physician interpretation, were classified as imaging tests.

²⁸We also examined, as a separate factor, the combined effect of volume and fees for ancillary services, such as radiopharmaceuticals and iodine supplies, but ultimately excluded this factor from our results because it increased total expenditures less than 0.5 percent.

Enclosure I

We examined the reliability of the claims data used in this report by performing appropriate electronic checks and checks for obvious errors such as values outside of expected ranges. We determined that the claims data we used were sufficiently reliable for the purposes of our analysis. We conducted our work from February 2008 through August 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Comments from the Centers for Medicare & Medicaid Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

SEP 16 2008

Assistant Secretary for Legislation
Washington, DC 20201


A. Bruce Steinwald
Director, Health Care
Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Mr. Steinwald:

Enclosed are the Department's comments on the U.S. Government Accountability Office's (GAO) draft report entitled: "Trends in Fees, Utilization, and Expenditures for Medicare imaging Services Before and After the Implementation of the Deficit Reduction Act of 2005" (GAO-08-1102R).

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

Sincerely,


for Vincent J. Ventimiglia, Jr.
Assistant Secretary for Legislation

Attachment



DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

200 Independence Avenue SW
Washington, DC 20201

DATE: SEP 12 2008

TO: Vincent J. Ventimiglia, Jr.
Assistant Secretary of Legislation

FROM: Kerry Wehner
Acting Administrator

SUBJECT: Government Accountability Office (GAO) Draft Report: "Trends in Fees, Utilization, and Expenditures for Medicare Imaging Services Before and After the Implementation of the Deficit Reduction Act of 2005" (GAO-08-1102R)

Thank you for the opportunity to review and comment on the GAO report entitled "Trends in Fees, Utilization, and Expenditures for Medicare Imaging Services Before and After the Implementation of the Deficit Reduction Act of 2005" (GAO-08-1102R).

Effective January 1, 2007, the Deficit Reduction Act of 2005 (DRA) (P.L. 109-171) capped the payment for the technical component of many imaging services paid under the Medicare physician fee schedule at the amount paid under Medicare's outpatient prospective payment system (OPPS). GAO reviewed the effects of the OPPS cap on the spending and utilization of imaging services.

Between 2000 and 2006, Medicare spending on imaging services doubled, reaching approximately \$14 billion. During that time span, the average increase in Medicare spending was approximately 16 percent. Utilization of imaging services varied widely from one geographical area to another. The Centers for Medicare & Medicaid Services (CMS), the Medicare Payment Advisory Commission (MedPAC), and the imaging industry are unable to definitively explain the growth and geographic variation in imaging spending. MedPAC has suggested that the trend has been driven by a number of factors, such as the availability of costly and sophisticated new equipment, patient demand, flaws in the payment system that led to more scans being performed in doctor's offices, "defensive medicine" practiced by doctors fearful of malpractice lawsuits, or simply the desire of physicians to increase their incomes.

Still, the trend suggested cause for concern, from both a fiscal and a clinical standpoint. The rapid increase in Medicare spending for imaging services, coupled with extensive geographic variation in their use, raised questions about whether such growth is appropriate and whether all imaging services are used appropriately.

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In response to this trend, Congress enacted in the DRA reductions in payment rates for the technical component of certain imaging services paid under the physician fee schedule, capping them at the OPPS payment rates. CMS estimated that the DRA changes resulted in a 20 percent decrease in payments for these services. Consistent with this estimate, the GAO found significant reductions in payments for imaging services during 2007, particularly advanced imaging services. While imaging expenditures in 2007 declined, GAO found that the utilization of imaging services increased. GAO also found that the volume of imaging services subject to the cap grew almost 3.7 times faster than the volume of imaging services not subject to the cap.

We believe the GAO's analysis of the issue should include two additional comparisons. First, the GAO analysis should present data comparing the rate of growth in imaging services subject to the cap and not subject to the cap for the 2000-2006 period. This time trend analysis would present valuable information about the underlying growth trend for DRA cap vs. non-cap imaging services. Second, the GAO analysis should present data comparing the rate of growth from 2006 to 2007 for DRA cap and non-cap imaging services by type of imaging modality. This analysis would present a more detailed picture of the sources of imaging service growth. These analyses should provide information for more robust Concluding Observations.

We are pleased that GAO's findings suggest that overall beneficiary access to imaging services was maintained under the DRA payment rate reductions. We continue to be concerned about the high volume of imaging services and their value to beneficiaries. We appreciate the work the GAO has done on this issue and we will continue to monitor the effects of imaging payment reforms on beneficiary access to quality imaging services, as well as implement the accreditation requirements for advanced diagnostic imaging services and appropriateness demonstration that were included in the Medicare Improvement for Patients and Providers Act of 2008 (P.L. 110-275) provisions.

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