



**Assessing the Deficit  
Reduction Act  
Limits on Imaging  
Reimbursement:  
Cross-Site  
Comparisons of Cost  
and Reimbursement**

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**THE MORAN COMPANY**

# **Assessing the Deficit Reduction Act Limits on Imaging Reimbursement: Cross-Site Comparisons of Cost and Reimbursement**

## **Introduction**

In §5102 of the Deficit Reduction Act of 2005 (“DRA”), Congress enacted special payment rules limiting reimbursements, beginning in 2007, for the technical component (“TC”) of imaging services performed in the office setting<sup>1</sup>. Under the DRA policy, reimbursements for imaging services performed in the office would equal the lesser of the amount provided under the Medicare Physician Fee Schedule (“MPFS”), or the amount payable to hospitals under the Outpatient Prospective Payment System (“OPPS”).

In the spring of 2006, a new organization, the Access to Medical Imaging Coalition (“AMIC”), formed to advocate elimination or mitigation of this policy. AMIC believed the policy would impose substantial payment reductions for a significant subset of imaging procedures performed in the office. It is our understanding that, in its communications with Congress regarding this policy, AMIC was asked to answer two questions:

- How will payments under the DRA policy compare to the cost of performing these imaging procedures in the office setting?
- In the aggregate, how do present payments for imaging services in the office setting compare to payments for similar services in the outpatient hospital setting?

AMIC engaged The Moran Company to help provide answers to these questions. This report presents the findings of our analysis, accompanied by a discussion of the data we used and the methodologies we employed in reaching these findings. Our findings can be summarized as follows:

1. We found that 126 of the 145 procedures (87%) whose payment would be affected by the DRA caps would be paid, under those caps, an amount less than the estimated cost of performing the procedure in the office setting. We used a cost estimation concept consistent with the Centers for Medicare and Medicaid (“CMS”) Town Hall methodology to compute the practice expense component of the MPFS.

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<sup>1</sup> The vast majority of imaging procedures permit separate reimbursement for the “technical component” associated with generating the image, as distinct from the “professional component” associated with having a trained physician read and interpret the images generated. When the same Medicare provider performs both services, that provider can bill a “global” fee. Under the DRA policy, payment limits on the TC component apply even if the global fee is billed.

2. We found that aggregate payments for imaging services across the office and hospital outpatient settings are very close to equal<sup>2</sup>. We compared 2006 payment rates in both settings (prior to application of the caps) using constant volumes for the procedures in 2004.
  - a. When payments for imaging services are compared across sites of care, volume weighted payments in the office are slightly higher, by 0.6%, when weighting is done by the volume of procedures performed in the office.
  - b. When volume is weighted by the volumes performed in the outpatient hospital setting, however, MPFS payments are 2.9% below OPFS payment levels prior to the implementation of the DRA.
3. We conclude from this that current payment policy, prior to the application of the DRA caps, does not exhibit a bias toward higher payments in one setting versus another.
4. Once the DRA caps are implemented, however, imaging reimbursement in the office would be materially lower, an estimated 16-18% less than in the outpatient setting.

Our analysis was completed in June of 2006. On June 29, 2006 CMS published a Notice of Proposed Rulemaking regarding MPFS practice expense and five year review payment policies and methodology (CMS-1512-PN). On August 8, 2006, CMS published the MPFS proposed rule (CMS-1321-P) and the OPFS proposed rule (CMS-1506-P) for calendar year (CY) 2007. Each of these proposed rules contain payment policy changes and proposed methodological revisions which were not taken into consideration in this analysis. Additionally, with the release of the MPFS CY 2007 proposed rule (CMS-1321-P), CMS published a list of codes that will be subject to §5102 of the DRA (Addendum F of CMS-1321-P). This addendum was not available at the time of our analysis and accordingly, the list of codes used in this analysis (as discussed below) differ from those in Addendum F of the MPFS CY 2007 proposed rule. Finally, this analysis does not take into consideration any projected updates to the conversion factor (e.g., for CY 2007 the CF is currently estimated to decrease by 5.1%).

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<sup>2</sup> The estimated cost of procedure analysis discussed in section I of this report did not take differences in payment policy into account, however the site of care analysis discussed in section II of this report does take differences in payment policy across settings (e.g., multiple procedure reductions and outlier payments) into account.

## **I. Estimated Cost of Procedures Affected by DRA Reimbursement Limits**

### Procedures Subject to the Policy

Our first task in developing these estimates was to determine which services might be subject to the policy. The statute applies the “lesser of MPFS or OPFS” test to “imaging services”.<sup>3</sup> After developing an initial list of AMA Current Procedure Terminology (CPT®)<sup>4</sup> and/or Healthcare Common Procedure Coding System (HCPCS) codes, we consulted with the American College of Radiology, which is a member of the Access to Medical Imaging Coalition, and employed a list of services modified by their comments and suggestions.

The full list of codes evaluated was provided to AMIC in an Appendix (Appendix A) and includes 524 CPT®/HCPCS codes which have associated technical component modifiers<sup>5</sup>. Certain imaging related services which also have associated technical component modifiers were excluded from our analysis as they fell into one of the following categories: a) carrier priced under the MPFS and therefore national reimbursement rates were unavailable, for example Positron Emission Tomography (PET)<sup>6</sup>; b) certain imaging guidance services; c) imaging services used intra-operatively; d) mammography services and computer-aided detection (CAD) services associated with mammography; e) radiation oncology services; f) services that are not covered by Medicare or are restricted by Medicare (i.e. N or R status indicator) under the physician fee schedule; g) certain nuclear medicine services; and h) services related to a pregnant uterus or fetus as these are not relevant to most Medicare patients.

### Payment Rates in 2006

To determine which procedures might be subject to the DRA payment rules, we used payment rates for both the MPFS and OPFS based on the respective Final Rule payment rates for these systems for calendar year 2006, the last year for which we had final payment rates for both systems. The MPFS rates were calculated using the total non-

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<sup>3</sup> The statute explicitly excludes both screening and diagnostic mammography services from these caps. In the case of therapeutic services that involve imaging, such as treatment planning, certain nuclear medicine services and certain guidance procedures, it is possible that the Secretary, in implementing this policy, could conclude that the DRA limits apply to the technical component of such services if they have discrete billing codes under the AMA CPT® and/or HCPCS. We, however, did not include most of these services in our analysis.

<sup>4</sup> CPT® is a trademark of the American Medical Association.

<sup>5</sup> As stated in the introduction section of this report, the list of codes used in this analysis was developed in June 2006, prior to publication of CMS’s proposed list of codes subject to the DRA (CMS-1321-P, Addendum F).

<sup>6</sup> Carrier priced codes were included in the site of service analysis as we were able to estimate price by average carrier payment rates extracted from the 2004 Part B Summary and OPFS files.

facility relative values, multiplied by the 2006 conversion factor.<sup>7</sup> The OPPS rates were based on the published rates for the APC to which each procedure maps under Appendix B of the final OPPS rule for 2006.<sup>8</sup>

### Estimated Cost

We developed our estimates of procedure-level, office-based cost using the most recent data available from CMS regarding procedure level cost of performing imaging services in the non-facility setting.<sup>9</sup> The methodology we used parallels the cost determination methodology CMS employs in establishing relative values under the practice expense component of the MPFS in several ways, but differs in that we are using these data to generate absolute estimates of cost as opposed to relative costs.

We start with the direct cost input values presented for clinical labor, medical supplies, and medical equipment, expressed as absolute dollars per procedure performed. We have published values for 494 of the 524 procedures on our list.<sup>10</sup> For the 30 procedures without published input values, we were unable to compute estimated cost. In some instances, our approximation of cost may be underestimated, as the CMS “Town Hall” data source was missing values for supplies (this occurred in 7 instances as noted on Appendix A) or was missing values for supplies and equipment (this occurred in 5 instances as noted in Appendix A).

To estimate indirect costs (that is, practice overhead costs unrelated to the performance of individual procedures), we employed the methodology CMS proposed to use in its Town Hall discussion. Under that methodology, CMS determined its indirect cost estimates on an indirect cost base including both the direct cost inputs, and the dollar value of the applicable physician work values. Using indirect cost data generated from survey data under the practice expense computation methodology, CMS generated procedure-level “Indirect Practice Costs Indices” (IPCIs) that reflect a blend of indirect cost information from the respective specialties performing each procedure, in proportion to each specialty’s share of total procedure volume.<sup>11</sup> Under the CMS Town Hall methodology,

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<sup>7</sup> The technical components of these procedures have no work values under the Resource-Based Relative Value Scale (RBRVS), hence the payment rates are the sum of the applicable practice expense and malpractice weights.

<sup>8</sup> For certain services, such as Magnetic Resonance Angiography (MRA), multiple C codes under OPPS correspond to one CPT code for that group of services under the physician fee schedule. When this occurred, a single OPPS rate was not available and accordingly, an OPPS rate was not included in the comparison of cost to payment analysis, however these codes were included in the analysis across sites of care.

<sup>9</sup> Since this analysis was performed prior to release of the Notice of Proposed Rulemaking regarding MPFS practice expense and five year review payment policy (i.e. CMS-1512-PN) and prior to the MPFS proposed rule for 2007 (CMS-1321-P), we employed the data CMS published on its website in February 2006 in conjunction with its “Town Hall” presentation of alternative practice expense methodologies.

<sup>10</sup> In 37 cases no CPEP data was included in the published Town Hall database. Therefore we used the CPEP data published in the 2005 Final Rule database for these services.

<sup>11</sup> To maintain consistency with the CMS Town Hall methodology, we used the IPCIs published by CMS in February 2006. The American College of Radiology, however, pointed out to us that the “practice expense per hour” values CMS used for radiology were, while supposedly based on supplemental survey data

these IPCIs were multiplied by the dollar value of the direct cost base to generate indirect cost weights, which were then added to the direct cost weights to calculate the practice expense RVUs. We followed this approach, but used the methodology to generate dollars per procedure values, rather than relative weights.

Said a different way, we are using the “official” cost inputs CMS published in its February 2006 Town Hall practice expense meeting. For direct costs, we are using the CPEP values, as they have been refined by the AMA RUC/PEAC process. For indirect costs, we are using the CMS Town Hall methodology of physician work (which for codes in this analysis is equal to zero) plus the direct cost, adjusted by a procedure-level IPCI.

### Comparison of Costs to Payment

In Appendix A, we present our findings comparing our procedure-level cost estimates to the payment rates that would have been applicable had the DRA payment policy been implemented in 2006. We compared the MPFS rates to the corresponding OPFS rates at the procedure level, applying the “lesser of” policy to determine which procedures would have been capped, in that year, had this policy applied. We then compared the payment outcome to the cost estimate, and identified cases where cost exceeded payment.<sup>12</sup>

In summary, we found that 145 of the 494 codes for which we have complete data, were found to be affected by the DRA payment limits. Of these, 126 procedures, or 87% of the procedures, would be paid at a rate below the estimated cost of performing them in the office setting.

Procedure-level comparisons are shown in Appendix A.

## **II. Payments for Imaging Services Across Sites of Care**

### Data and Methodology Issues

To generate a consistent comparison of payments across sites of care, we used claims data from the 2004 Carrier and Outpatient Standard Analytical Files to calculate procedure-level scalars to adjust for payment policy differences across settings. On the

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submitted by ACR, materially lower than the actual survey values, apparently due to trimming and reweighting of survey records. Since we do not know the details of how CMS’s methodology contractor re-weighted the survey data, we cannot determine what adjustments might be appropriate to the IPCI data used by CMS.

<sup>12</sup> Note that we are comparing 2006 payment rates to cost estimates generated using data on direct cost inputs (i.e. CPEP data) as published by CMS during the 02/15/06 Town Hall meeting or as published by CMS in the 2005 final rule database. This comparison is meaningful as the direct cost input dollar values are not linked to any particular year. The original CPEP direct cost input values were first generated in 1996-1997. After initial implementation of the resource-based practice expense methodology in 1999, these values were then “refined” via a five-year process involving the Practice Expense Advisory Committee (PEAC) of the AMA. The refined values for each procedure are not, in general, indexed to make them strictly comparable to payment rates across payment years. For this reason, we believe that the methodology we have employed produces what are likely to be conservative estimates of procedure-level cost.

office side, we used actual claims to determine what proportion of payment lines would have been reduced, in 2004, under the 25% reduction policy for multiple imaging procedures applicable to 2006. We then determined, for each procedure, the percentage change in payment that would have resulted.<sup>13</sup> On the outpatient hospital side, we looked at actual outlier payments for claims including imaging procedures in 2004, and calculated, for each procedure, the average percentage increase in payments that resulted from outlier payments.<sup>14</sup>

In performing our analyses, we had to set aside procedures for which data were not available under one system or another in either 2004 or 2006. We trimmed 21 codes for missing data. In several instances we had to crosswalk codes to make the payment values comparable across settings. Four MR angiography codes show up as CPT codes in the office setting, but are billed based on C-codes in the OPSS. Hence we clustered these procedures so that payments are based on the CPT volume when using the MPFS payment methodology, while payments under the OPSS policy are done at the APC level. For PET codes that are carrier-priced, and have no fee schedule values in 2006, we simulated MPFS payment rates based on actual carrier payments for the TC component in 2004.<sup>15</sup>

To account for case mix differences for imaging services in each setting, we calculated volume-weighted estimates of aggregate payment differences across settings. To do this we used the volume of cases observed in the office in 2004 and the volume observed in the hospital outpatient department in 2004, along with corresponding 2006 payment policies.

Our findings are outlined on the following page.

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<sup>13</sup> Under the MPFS, CMS has, by regulation, implemented a series of payment reductions for multiple procedures when two or more imaging studies are conducted of “contiguous body parts.” Those regulations identify “families” of procedures, which, if reported on the same claim for the same date of service, invoke the 25% multiple procedure reduction policy.

<sup>14</sup> In outlier claims that included non-imaging services, we pro-rated the outlier payment value based on charges. Our analysis did not include outlier payments for claims involving MRA or PET.

<sup>15</sup> We extracted the volume of services and payments from 2004 Part B Summary and OPSS files. We estimated a payment rate based on carrier payments in 2004 by taking an average payment per unit based on TC unit payments, and inflating that rate by .015% to account for the conversion factor increase in 2005 (0% increase in 2006). A number of PET codes dropped out of the analysis due to a lack of data. The 2004 service volume for the remaining PET codes (accounting for approximately 99% of PET payments in both systems) from the carrier file was priced using the 2006 OPSS rates, matching 2004 codes to 2006 equivalent codes. The 2004 service volume from the OPSS claims file was priced using the estimated average Carrier payment rate described above. PET codes excluded from the analysis were: 78608, G0030, G0032, G0033, G0034, G0036, G0039, G0040, G0041, G0042, G0043, G0233, due to no paid “TC” units in the 2004 Carrier File; 78459, 78810, G0031, G0044, G0046, G0231, G0232, due to only one or two paid “TC” units in the 2004 Carrier File which is too low a number to derive an average payment rate; G0038 due to no paid volume; and G0234 due to no OPSS payment rate.

### Comparison of Payments for Imaging Services in Alternative Settings:

2006 Payment Policies & 2004 Volumes

Volumes Used:	MPFS		OPPS	
Rules & Rates:	MPFS	OPPS	MPFS	OPPS
Total Payments (\$M)	\$6,341	\$6,302	\$5,730	\$5,900
MPFS Payments as a % of OPPS	100.6%		97.1%	

As these data suggest, aggregate payments under both systems, when adjusted for comparability across disparate system features, are roughly comparable prior to application of the DRA policy. The data in the next table break out the effects of the adjustments for comparability.

### Effects of Methodology Differences on Payment Comparison

2006 Payment Policies & 2004 Volumes

Excludes outlier payments for MRA and PET procedures

	Based on MPFS Procedure Volumes		
	MPFS Rates (\$M)	MPFS % OPPS	OPPS Rates (\$M)
Raw Rate Comparison	\$6,402	104.8%	\$6,108
Effects of Multiple Procedure Reduction	-\$61		
Effects of Outlier Payments			\$194
Adjusted Payments	\$6,341	100.6%	\$6,302

In this analysis, we are using the MPFS volumes in both settings to standardize the comparison. In the first line, we show how these volumes would weight up to total payments based solely on payment rate differences. We find that payments under the MPFS would be 4.8% higher than would be obtained by using the OPPS rates across the same volumes.

When the other major differences between systems are taken into consideration, however, the comparison approaches neutrality. Applying the multiple procedure reduction for contiguous body part studies lowers total MPFS payments by \$61.3 M, or roughly 1%. Meanwhile, outlier payment adjustments increase payments under the OPPS methodology, for these same volumes, by \$194 M, or by more than 3%. As a result, the “system to system” comparison shows the MPFS rates being, on average, 0.6% higher than the OPPS rates.

## Procedure-Level Variation in Effects

When we look at procedure-level variations in this basic comparison, we find that the effects are heavily concentrated, both pro and con, in a limited number of procedures. As the data in the below table suggest, cross-site disparities are not uniform across procedures. While the MPFS rates produced weighted payments roughly \$38 million higher than under the OPSS, this average masks large swings at the procedure level. The top ten procedures not effected by the DRA cap, ranked by the dollar magnitude of the payment disparity, had MPFS payments fall short of OPSS payments by \$579 M, or by 34.2% on average. The top ten most effected procedures, by contrast, show MPFS payments \$725 million (36.8%) higher than would be paid under the OPSS methodology and rates.

The table below shows the concentration of these differentials.<sup>16</sup>

### **Procedure-Level Variation in Estimated Effect of DRA Across Sites of Service**

hcpcs2004	Description	2004 MPFS Volume Under 2006 MPFS Payment Rules	2004 MPFS Volume Under 2006 OPSS Payment Rules (millions of dollars)	Diff Btwn MPFS and OPSS
<b>Top Ten Codes Not Effected by DRA (MPFS Payment Falls Short of OPSS Payment)</b>				
93307	Echo exam of heart	\$455	\$566	-\$111
93320	Doppler echo exam, heart	\$208	\$309	-\$100
71020	Chest x-ray	\$114	\$202	-\$88
78478	Heart wall motion add-on	\$110	\$168	-\$58
78480	Heart function add-on	\$110	\$167	-\$57
76519	Echo exam of eye	\$48	\$91	-\$42
93350	Echo transthoracic	\$21	\$59	-\$38
73560	X-ray exam of knee, 1 or 2	\$27	\$58	-\$31
71010	Chest x-ray	\$19	\$45	-\$27
76514	Echo exam of eye, thickness	\$2	\$28	-\$26
Estimated Total Dollars		\$1,113	\$1,692	
Estimated Net Difference in MPFS Payment to OPSS Payment				-\$579
<b>Top Ten Codes Most Effected by DRA (MPFS Payment Greater than OPSS Payment)</b>				
G0125	PET, regional imaging or whole body, single pulmon. nodule	\$53	\$32	\$22
73721	Mri jnt of lwr extre w/o dye	\$130	\$105	\$25
93925	Lower extremity study	\$86	\$51	\$34
72158	Mri lumbar spine w/o & w/dye	\$125	\$67	\$59
72148	Mri lumbar spine w/o dye	\$252	\$181	\$70
93325	Doppler color flow add-on	\$354	\$277	\$77
76075	Dxa bone density, axial	\$214	\$127	\$87
93880	Extracranial study	\$297	\$208	\$89
78465	Heart image (3d), multiple	\$848	\$744	\$104
70553	Mri brain w/o & w/dye	\$336	\$178	\$159
Estimated Total Dollars		\$2,695	\$1,971	
Estimated Net Difference in MPFS Payment to OPSS Payment				\$725
Other Procedures Estimated Total Dollars		\$2,532	\$2,640	
Other Procedures Estimated Net Difference				-\$108
All Procedures Estimated Total Dollars		\$6,341	\$6,302	
All Procedures Estimated Net Difference				\$38

<sup>16</sup> This analysis excludes the MRA codes because the coding disparities across settings make direct comparisons unmeaningful.

The “lesser of MPFS or OPFS” payment policy under the DRA will, if implemented, have a highly concentrated effect on the limited number of procedures for which MPFS rates happen to be higher than the corresponding OPFS rates – while having no effect at all on the substantial number of procedures where MPFS payment is, at present, below the OPFS rates. As a result, our present finding of rough balance in payments for imaging services across sites of care would be materially altered toward lower aggregate payments in the office. While the exact comparison awaits final details on how CMS intends to implement the DRA policy, the manner in which CMS finalizes its proposal to revise the practice expense methodology for calculating RVUs, and any updates to the conversion factor, we anticipate that aggregate payments for the TC portion of imaging services would be 16-18% lower in the office setting than the aggregate amount of comparable APC payments in the hospital setting, holding volumes constant.