

MEDICARE IN INTERVENTIONAL PAIN MANAGEMENT: A CRITICAL ANALYSIS

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Recent years have been quite eventful for interventional pain physicians with numerous changes in the Medicare payment system with a view for the future and what it holds for interventional pain management for 2006 and beyond. On February 8, 2006, President Bush signed the Deficit Reduction Act of 2005, which cuts the federal budget by \$39 billion and Medicare and Medicaid by almost \$11 billion over five years. The Act contains a number of important provisions that effect physicians in general and interventional pain physicians in particular.

This Act provides one year, 0% conversion factor update in payments for physicians services in 2006.

Medicare has four programs or parts, namely Medicare Parts A, B, C, and D, and two funds to pay providers for serving beneficiaries in each of these program. Part B helps pay for physician, outpatient hospital, home health, and other services for the aged and disabled who have

voluntarily enrolled.

Before 1922, the fees that Medicare paid for those services were largely based on physician's historical charges. Despite Congress's actions of freezing or limiting the fee increases, spending continued to rise because of increases in the volume and intensity of physician services. Medicare spending per beneficiary for physician services grew at an average annual rate of 11.6% from 1980 through 1991. Consequently Congress was forced to reform the way that Medicare sets physician fees, due to ineffectiveness of the fee controls and reductions.

The sustained growth rate (SGR) system was established because of the concern that the fee schedule itself would not adequately constrain increases in spending for physicians' services. The law specifies a formula for calculating the SGR, based on changes in four factors: (1) estimated changes in fees; (2) estimated change in the average number of Part B

enrollees (excluding Medicare Advantage beneficiaries); (3) estimated projected growth in real gross domestic product (GDP) growth per capita; and (4) estimated change in expenditures due to changes in law or regulation.

Overall, the frequency of utilization of interventional procedures has increased substantially since 1998.

In 2006 and beyond, interventionalists will face a number of evolving economic and policy-related issues, including reimbursement discrepancies, issues related to CPT coding, issues related to utilization, fraud, and abuse..

Keywords: Interventional pain management, pain medicine, utilization, clinical effectiveness, cost effectiveness, algorithmic approach, precision diagnosis, precision treatment, sustainable growth rate formula, pay-for-performance, Centers for Medicare and Medicaid Services, Medicare Payment Advisory Commission.

The years 2005 and 2006 have been quite eventful for United States physicians in general and interventional pain physicians, in particular, with numerous changes in the Medicare payment system with a view for future and what it holds for interventional pain management for 2006 and beyond. On February 8, 2006, President Bush signed the Def-

icit Reduction Act of 2005, which cuts the federal budget by \$39 billion and Medicare and Medicaid by almost \$11 billion over five years (1). The Act contains a number of important provisions that effect physicians in general and interventional pain physicians in particular. It is not only vitally important, but mandatory for all interventional pain physicians to be educated about Medicare and its impact on interventional pain management. As interventional pain physicians, the ability to make a correct diagnosis and provide appropriate treatment may not be carried out if Medicare (which is closely followed by other insurers) does not align with the proposed treatment plan. The fundamental concept is that accessibility to physician services is dependent on

Medicare and other health care funding. As far as Medicare is concerned, it is the Medicare Payment Advisory Commission's (MedPAC) responsibility to evaluate and ensure that Medicare beneficiaries have access to necessary physician services (2). MedPAC is the non-governmental organization that is organized to provide the Federal Government with data and opinions that directly effect Medicare's finances. MedPAC also directly deals with physician reimbursement and multitude of other issues. However, there is no such agency to evaluate physician reimbursement for services provided to non-Medicare patients.

The Deficit Reduction Act provides one year, 0% conversion factor update in payments for physicians' ser-

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vices in 2006, thereby freezing the conversion factor at 2005 levels for services rendered on or after January 1, 2006. Congress also placed a one-time hold on Medicare payments from September 22-30, 2006, without interest or late penalties for the Center for Medicare and Medicaid Services (CMS). Consequently, payments that would have been made during this nine-day period will instead be made October 2, 2006, the first business day of the federal fiscal year.

The Medicare Physician Fee Schedule included a provision that reduces payment for the technical component (TC) of certain diagnostic imaging procedures that are furnished in a single session and occur on contiguous body parts, with this reduction to be phased in during 2006 and 2007. Further, the act mandates that the payment rate for imaging services delivered in physician offices does not exceed the payment rates for the identical imaging service delivered in hospital outpatient departments for 2007. The impact of this provision on interventional pain management services is not yet known.

Apart from physician services and imaging services the act also influences ambulatory surgical centers. Beginning January 1, 2007, it ensures that services delivered in an Ambulatory Surgery Center do not exceed payment rates for the same services in hospital outpatient departments. There will be small reductions for very few procedures performed in ambulatory surgery centers covering interventional pain management.

The Deficit Reduction Act also implements therapy caps of \$1740 for outpatient physical therapy, outpatient occupational therapy, and speech-language pathology which took effect on January 1, 2006. Further, the act also requires CMS to improve coding to reduce inappropriate payments for therapy services that may lead to fraud and abuse.

Other issues affecting interventional pain management in the Budget Reconciliation Act include, payments for durable medical equipment,

home health care, and regulation of specialty hospitals. The Deficit Reduction Act suspends issuance of new provider numbers for specialty hospitals for six months, or until the Department of Health and Human Services issues a strategic implementation plan on specialty hospitals to address investment, care for low-income individuals and uncompensated care. The Medicare Modernization Act (MMA) of 2003 imposed an 18-month moratorium on the referral of Medicare patients to new, physician-owned specialty hospitals. The moratorium expired on June 8, 2005, however, while CMS did not extend the moratorium, Medicare fiscal intermediaries have been instructed not to process new enrollment applications.

In March 2006, MedPAC submitted its report to Congress on Medicare Payment Policies, fulfilling its legislative mandate to evaluate Medicare payment issues and make specific recommendations to Congress. In April 2006, CMS estimated that the statutory formula used to determine the physician fee schedule update will result in a 2007 physician fee schedule update of -4.6%, resulting in a conversion factor of \$36.1542 compared to the present conversion factor of \$37.8975 (3). Underlying the negative update is growth in Medicare spending for physician services. During 2005, spending for physician services increased by 18%, with a growth in the volume and intensity of physician ser-

vices of 7.5 percentage points and 8.5% growth in total physician spending (3).

MEDICARE BASICS

Despite Medicare being the major payor of medical services in the United States, with expenditures over a billion dollars a day, providers continue to remain unaware of Medicare funding and expenditures. It is crucial to recognize that the way in which Medicare is funded has a significant effect on how Medicare providers are reimbursed.

Medicare is a nationwide program which offers health insurance protection for 43 million aged and disabled persons (4). Currently, 85% of beneficiaries obtain covered services through the “original Medicare” program (also referred to as “fee-for-service Medicare”). Under this program, beneficiaries obtain services through providers of their choice, and Medicare makes payments for each service rendered (i.e., fee-for-service) or for each episode of care. Approximately 15% of beneficiaries are enrolled in managed care organizations, under the Medicare Advantage program (formerly known as the Medicare+Choice program). These entities assume the risk for providing all covered services in return for a fixed monthly per capita payment.

Medicare has four programs or parts, namely Medicare Parts A, B, C,

Hospital Insurance Trust Fund	Supplementary Medical Insurance Trust Fund	
Part A	Part B	Part D
Payroll Taxes	Beneficiary Premiums	Beneficiary Premiums
	Interest on Government Securities	Interest on Government Securities
Interest on Government Securities	General Tax Revenues	Clawback Funds
		General Tax Revenues
Taxes on High-Income Earner's SSA checks		

Fig. 1. Sources of medicare funding for provider reimbursement. Source: Stefanacci RG. Medicare finances 101. *Medicare Patient Management*. May/June 2006; 15-24. Ref. (4)

and D (5). However, Medicare has only two funds to pay providers for serving beneficiaries in each of these program (Fig. 1). Medicare Part A is funded under the Hospital Insurance (HI) Trust Fund while Medicare Parts B and D are funded from the Supplementary Medical Insurance (SMI) Trust Fund. The HI trust fund is financed primarily by payroll taxes of 2.6% of earned income from the current workforce (5). The funding also comes from interest and a portion of certain high-income earners' Social Security Administration (SSA) payments. It is anticipated that by the year 2018, the Hospital Insurance Trust Fund will be exhausted, requiring additional sources to finance Medicare Part A (4). Medicare Part A helps pay for hospital care, skilled nursing facilities, hospice care and some home health care (4, 5).

Supplementary Medical Insurance (SMI) consists of Medicare Part B and Part D. Part B helps pay for physicians, outpatient hospitals, some home health care, and other services for the aged and disabled who have voluntarily enrolled. Part D provides subsidized access to drug insurance coverage on a voluntary basis for all beneficiaries and premium and cost-savings subsidies. The SMI Trust Fund is financed by a combination of beneficiary premiums and general tax revenues. Currently, the SMI Trust Fund consumes 10% of all personal and all corporate income tax revenue. Funding for the SMI Trust Fund is set at approximately 25% from beneficiary premiums and 75% from general tax revenues.

PHYSICIAN PAYMENT SYSTEM

The historic challenge for Medicare has been to find ways to moderate the rapid growth in spending for physician services. Before 1992, the fees that Medicare paid for those services were largely based on physician's historical charges. Spending for physician services grew rapidly in the 1980s, at a rate that was characterized as "out of control

"(4, 5). Despite the actions of Congress freezing or limiting the fee increases, spending continued to rise because of increases in the volume and intensity of physician services. Medicare spending per beneficiary for physician services grew at an average annual rate of 11.6% from 1980 through 1991. Consequently, Congress was forced to reform the way that Medicare sets physician fees, due to ineffectiveness of the fee controls and reductions (Fig. 2).

Medicare law and regulations contain very detailed rules governing payments to physicians and other providers under the fee-for-service system, under fee-for-service on the basis of a fee schedule, which also applies to services provided by certain nonphysician practitioners. These include physician assistants and nurse practitioners as well as a limited number of Medicare-covered services provided by limited licensed practitioners (chiropractors, podiatrists, and optometrists). Payments under the fee schedule are estimated at \$60.3 billion in FY2006 and \$62.8 billion in FY2007 (6, 7). The FY2007 amount represents 14.2% of total Medicare benefits.

The law specifies a formula for the annual update to the physician fee schedule. Part of this update is based on whether spending in a prior year has exceeded or fallen below a spending target (6, 7). The target, known as the sustainable growth rate (SGR), is essentially a cumulative target for Medicare spending growth over time. If spending is in excess of the target, the update for a future year is reduced; the goal is to bring spending back in line with the target. Application of the update formula would have led to a negative update for each year beginning in 2002. The update for 2002 was a negative 5.4%. However, Congress overrode the application of the formula for 2003, 2004, and 2005; each of these years saw a slight increase. The Deficit Reduction Act of 2005 (DRA, P.L. 109-171, enacted February 8, 2006) froze the 2006 conversion factor at the 2005 level. A negative reduction of 4.6% is expected to occur

in 2007 (3).

Reasons for Fee Schedule

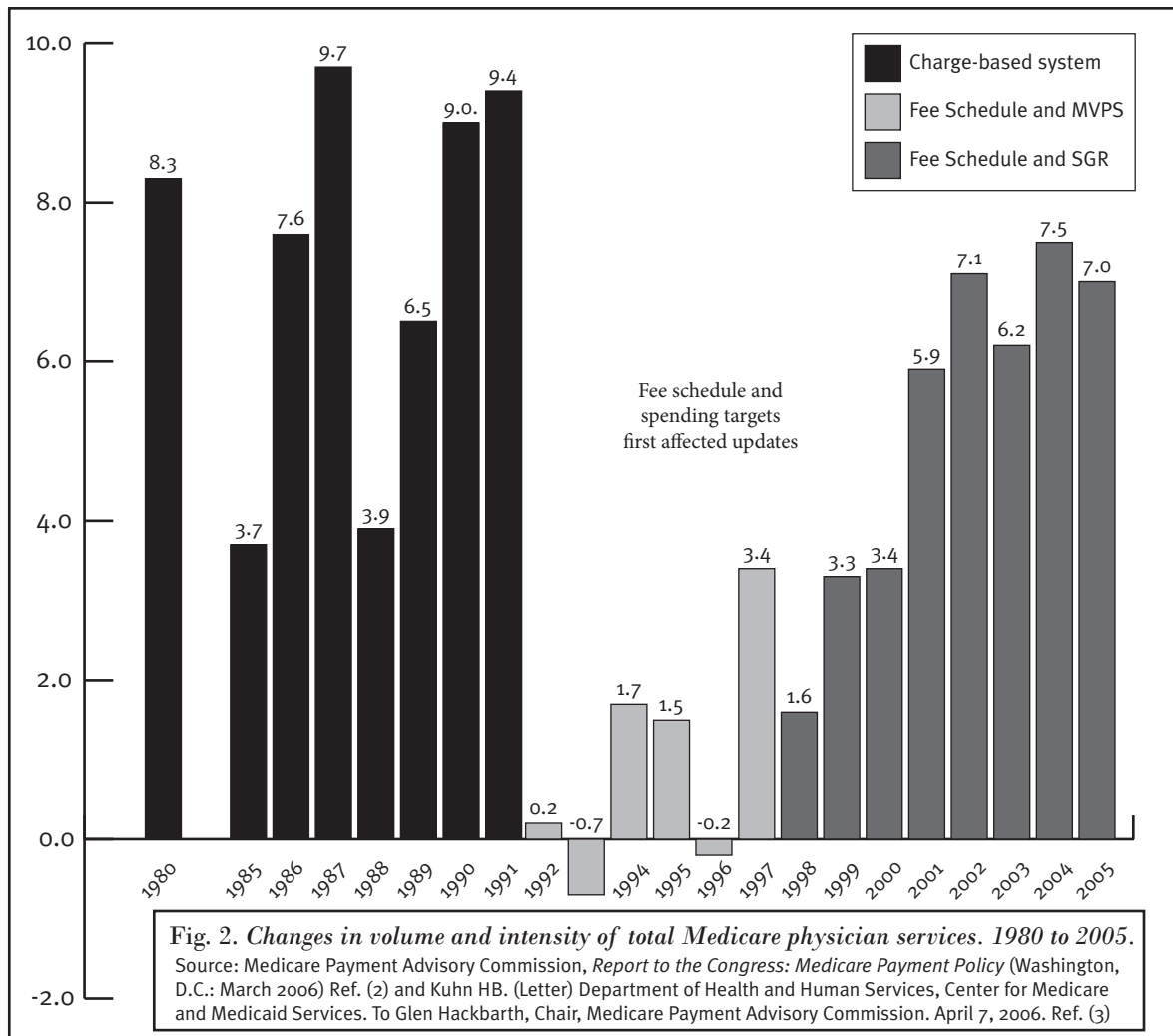
The fee schedule, established by the Omnibus Budget Reconciliation Act of 1989 (OBRA 1989, P.L. 101-239), went into effect January 1, 1992 (7). The physician fee schedule replaced the reasonable charge payment method which, with minor changes, had been in place since the implementation of Medicare in 1966. Observers of the reasonable charge system cited a number of concerns including the rapid rise in program payments and the fact that payments frequently did not reflect the resources use. Multiple concerns included the wide variations in fees by geographic region, different payments for the same service performed by physicians in different specialties, and a high price justified initially for a new procedure, which did not decline over time, even when the procedure became part of the usual pattern of care. Further, it was suggested that differentials between recognized charges for physicians visits and other primary care services versus those for procedural and other technical services were in excess of those justified by the overall resources used (7).

The fee schedule was intended to respond to these concerns by beginning to relate payments for a given service to the actual resources used in providing that service. The design of the fee schedule reflected many of the recommendations made by the Medicare Payment Advisory Commission (MedPAC) on September 30, 1997 (7).

Calculation of the Fee Schedule

The fee schedule has three components: the relative value for the services; a geographic adjustment, and a national dollar conversion factor.

Relative Value. The relative value has three components – physician work, practice expense, and malpractice expense. The relative value of each service is the sum of three components. Each of the approximately 7,500 physician service codes is assigned its own relative value. The scale used to com-



pare the value of one service with another is known as a resource-based relative value scale (RBRVS) (7). On average, the work component represents 52.5% of a service's relative value, the practice expense component represents 43.6%, and the malpractice component represents 3.9% (8). The law provides for refinements in relative value units.

- The physician work component, representing 52.5% of the relative value, measures physician time, skill, and intensity in providing a service.

- The practice expense component, representing 43.6% of the relative value, measures average practice expenses such as office rents and employee wages (which, for certain services can vary depending on whether the service is performed in a facility, such as an ambula-

tory surgical facility, or in a non-facility setting). The lower facility-based payment reflects the fact that the facility itself receives a separate payment for its cost of providing the service, while the non-facility-based payment to the physician encompasses all practice costs.

- The Malpractice expense component, representing 3.9% of the relative value, reflects average insurance costs.

Geographic Adjustment. The geographic adjustment is designed to account for variations in the costs of practicing medicine. A separate geographic adjustment is made for each of the three components of the relative value unit, namely a work adjustment, a practice expense adjustment, and a malpractice adjustment. These are added together to produce an indexed relative value unit

for the service for the locality. There are 89 service localities nationwide (7).

Conversion Factor. The conversion factor is a dollar figure that converts the geographically adjusted relative value for a service into a dollar payment amount, updated each year. Initially there was one conversion factor. By 1997, there were three factors. However, the Balanced Budget Act of 1997 (BBA97, P.L. 105-33) provided for the use of a single conversion factor beginning in 1998 (7).

The 2006 conversion factor is \$37.8975. The payment rate or conversion factor is not known yet for 2007. Anesthesiologists are paid under a separate fee schedule, which uses base and time units and a separate conversion factor (\$17.7594 in 2006). The law re-

quires that change to the relative value units under the fee schedule cannot cause expenditures to increase or decrease by more than \$20 million from the amount of expenditures that would have otherwise been made. This “budget neutrality” requirement is implemented through an adjustment to the conversion factor.

The work relative value units incorporated in the initial fee schedule were developed after extensive input from the physician community. Refinements in existing values and establishment of values for new services have been included in the annual fee schedule updates. This refinement and update process is based in part on recommendations made by the American Medical Association’s Specialty Society Relative Value Update Committee (RUC) which receives input from 100 specialty societies. The law requires a review every five years. The 1997 fee schedule update reflected the results of the first five-year review. The 2002 fee schedule reflected the results of the second five-year review. The 2007 fee schedule will reflect the results of the third five-year review.

While the calculation of work relative value units has always been based on resources used in providing a service, the values for the practice expense components and malpractice expense components were initially based on historical charges. The Social Security Amendments of 1994 (P.L. 103-432) required the Secretary to develop a methodology for a resource-based system for practice expenses which would be implemented in 1998. Subsequently, the Secretary developed a system. The Balanced Budget Act of 1997 (BBA 97, P.L. 105-33) delayed its implementation. It provided for a limited adjustment in practice expense values for certain services in 1998. It further provided for implementation of a new resource-based methodology to be phased-in beginning in 1999. The system was fully phased in by 2002.

BBA 97 also directed CMS to develop and implement a resource-based methodology for the malpractice ex-

pense component. CMS developed the methodology based on malpractice premium data. Malpractice premiums were used because they represent actual expenses to physicians and are widely available. The system was incorporated into the fee schedule beginning in 2000.

Bonus Payments. The physicians who provide covered services in any rural or urban health professional shortage area (HPSA) are entitled to an incentive payment, a 10% bonus over the amount which would otherwise be paid under the fee schedule. The Medicare Modernization Act (MMA) also provided for an additional 5% in payments for certain physicians from January 1, 2005 through December 31, 2007, in scarcity areas.

CMS, each fall, publishes in the Federal Register the relative values and conversion factor that will apply for the following calendar year. Updates to the geographic adjustment are published at least every three years. The fee schedule is generally published by November 1 and is effective January 1.

BENEFICIARY PROTECTIONS

Medicare pays 80% of the fee schedule amount for physicians’ services after beneficiaries have met the annual Part B deductible (\$124 in 2006). Beneficiaries are responsible for the remaining 20%, known as coinsurance. In the case of an assigned claim, Medicare pays the physician 80% of the approved amount. The physician can only bill the beneficiary the 20% coinsurance plus any unmet deductible (7). However, nonphysician practitioners (such as nurse practitioners and physician assistants) paid under the fee schedule are required to accept assignment on all claims. These practitioners are different from limited licensed practitioners (such as podiatrists and chiropractors), who have the option of whether to accept assignment.

When a physician agrees to accept assignment on all Medicare claims in a given year, the physician is referred to

as a participating physician. A physician who does not agree to accept assignment on all Medicare claims in a given year is referred to as nonparticipating physicians.

The major incentive for physicians to participate is that the fee schedule payment amount for nonparticipating physicians is only 95% of the recognized amount for participating physicians, regardless of whether they accept assignment for the particular service or not.

Nonparticipating physicians may charge beneficiaries more than the fee schedule amount on nonassigned claims; these balance billing charges are subject to certain limits. The limit is 115% of the fee schedule amount for nonparticipating physicians (which is only 9.25% higher than the amount recognized for participating physicians, i.e., $115\% \times .95 = 109.25\%$). Table 1 illustrates the basics of the Medicare and physician payment system, whereas Table 2 shows the billing system provisions applicable to denied charges.

CMS PROPOSED CHANGES

On June 21, 2006, CMS issued a notice proposing changes to the Medicare Physician Fee Schedule (MPFS) that will improve the accuracy of payments to physicians for the services they furnish to Medicare beneficiaries. The proposed notice includes substantial increases for “evaluation and management” services, that is, time and effort that physicians spend with patients in evaluating their condition, and advising and assisting them in managing their health. The changes reflect the recommendations of the Relative Value Update Committee (RUC) of the American Medical Association.

The proposed notice addresses two components of physician payments under the MPFS: (1) a comprehensive review of physician work relative value units (RVUs), as well as (2) a proposed change in the methodology for calculating practice expenses. Other changes in physician payment policy will be addressed in a separate proposed rule to

Table 1. *Medicare and physician payment system*

Type of physician and claim	Medicare pays	Beneficiary pays	Balance billing charges
Participating Physician – Must take ALL claims on assignment during the calendar year. (Signs a participating agreement.)	80% of fee schedule amount	20% of fee schedule amount (plus any unmet deductible)	None permitted
Nonparticipating physician – May take or not take assignment on a claim-by-claim basis.			
(A) Takes assignment on a claim	80% of fee schedule amount (recognized fee schedule amount = 95% of recognized amount for participating physicians)	20% of fee schedule amount recognized for nonparticipating physicians (plus any unmet deductible)	None permitted
(B) Does not take assignment on a claim	80% of fee schedule amount (recognized fee schedule amount = 95% of recognized amount for participating physicians)	(a) 20% of fee schedule amount recognized for nonparticipating physician (plus any unmet deductible); plus (b) any balance billing charges.	Total bill cannot exceed 115% of recognized fee schedule amount (actually 109.25% of amount recognized for participating physicians, i.e., 115% x 95%)

Adapted from O'Sullivan J. CRS Report for Congress. Medicare: Payments to Physicians. Congressional Research Service. The Library of Congress. April 17, 2006. (7).

Table 2. *Billing provisions applicable to claims denied by Medicare*

Claim submission to Medicare	Claim denied	Billing limits on denied claims
Claim submitted without advance beneficiary notice (ABN) Physician submits claim according to billing rules for assigned or unassigned claims, as appropriate.	(A) Denied because the service is categorically not covered (e.g., hearing aids)	No limits on amounts physician can charge.
	(B) Denied because service does not meet coverage criteria.	Physician cannot bill beneficiary and must refund any amounts beneficiary may have paid. ^a
Claim submitted with advance beneficiary notice (ABN) Physician submits claim according to billing rules for assigned or unassigned claims, as appropriate.	(A) Denied because the service is categorically not covered. (e.g., hearing aids)	No limits on amounts physician can charge.
	(B) Denied because service does not meet coverage criteria.	No limits on amounts physician can charge.

^a If Medicare pays under a “waiver of liability” because the physician had no reason to know that the claim would not be paid, regular billing rules apply. Adapted from O'Sullivan J. CRS Report for Congress. Medicare: Payments to Physicians. Congressional Research Service. The Library of Congress. April 17, 2006. (7)

be published at a later date. CMS will respond to public comments on both sets of proposals and announce final policies in a final rule to be issued in early November. The changes will apply to payments for services furnished to Medicare beneficiaries beginning with 2007.

These are the largest revisions ever proposed for services related to patient evaluation and management. For example, the work component for RVUs associated with an intermediate office visit, the most commonly billed physician's service, will increase by 37 percent. The work component for RVUs for an office visit requiring moderately complex decision-making and for a hospital visit also requiring moderately complex decision-making will increase by 29 percent and 31 percent respectively. Both of these services rank in the top 10 most frequently billed physicians' services out of more than 7,000 types of services paid under the physician fee schedule.

The proposed notice revises work RVUs for over 400 services to better reflect the work and time required of a physician in furnishing the service, which can include not just procedures performed, but also the services involved in evaluating a patient's condition, and determining a course of treatment (known as "evaluation and management" services). Work RVUs account for approximately \$35 billion in MPFS payments, representing more than 50 percent of overall Medicare payments under the fee schedule.

CMS estimates that the proposed work RVU changes would increase expenditures by approximately \$4.0 billion. CMS is proposing to create a separate budget neutrality adjuster that can be applied just to the work RVUs for Medicare purposes, without changing the number of work RVUs assigned to a particular service. This would preserve the integrity of the existing work RVU structure, which is often adopted by other payers.

CMS is also proposing changes to the way Medicare calculates the practice

expense portion of physician fee schedule payments. Practice expenses include both the direct costs associated with a procedure (e.g., non-physician personnel, and supplies), as well as indirect costs (e.g., office rents), which are then allocated to specific services. The practice expense RVUs do not include the costs of malpractice premiums, which are accounted for separately in the fee schedule. Practice expenses account for approximately \$30 billion in MPFS payments, representing about 45 percent of overall Medicare payments under the fee schedule.

The proposed change would make the practice expense methodology more transparent and easier to understand, would make it consistent across procedures and would utilize data that has been collected by specialty societies and reviewed by the AMA RUC. In the notice, CMS is proposing to:

- Adopt a "bottom-up" methodology for calculating direct costs. This involves using procedure-level data for clinical staff times, supplies and equipment that have been previously reviewed by the RUC;
- Modify the methodology used to calculate indirect practice expenses;
- Utilize practice expense survey data for eight specialties: allergy/immunology, cardiology, dermatology, gastroenterology, radiology, radiation oncology, urology and independent diagnostic testing facilities; and
- Eliminate an exception to the current methodology, the so-called non-physician work pool that has been used to calculate practice expense RVUs for services without physician work RVUs, and instead price these services using the standard practice expense methodology.

To ease the implementation of the change in the practice expense methodology for physician practices and to ensure continued beneficiary access to services, CMS is proposing a four-year transition to the new practice expense RVUs.

FEE SCHEDULE UPDATE

The conversion factor is the same for all services, updated each year according to a complicated formula specified in the law. The intent of the formula is to place a restraint on overall spending for physicians' services. Several factors enter into the calculation of the formula. These include (1) the sustainable growth rate (SGR) which is essentially a cumulative target for Medicare spending growth over time (with 1996 serving as the base period); (2) the Medicare economic index (MEI) which measures inflation in the inputs needed to produce physicians' services; and (3) the performance adjustment factor which modifies the update, which would otherwise be allowed by the MEI, to bring spending in line with the SGR target.

Sustainable Growth Rate

The sustainable growth rate (SGR) system was established because of the concern that the fee schedule itself would not adequately constrain increases in spending for physicians' services. While the fee schedule specifies a limit on payments per service, it does not place a limit on the volume or mix of services. The use of the SGR is intended to serve as a restraint on aggregate spending. The SGR targets are not limits on expenditures. Rather the SGR represents a glidepath for desired cumulative spending from April 1996 forward. The fee schedule update reflects the success or failure in meeting the goal. If spending over the period is above the cumulative spending target for the period, the update for a future year is reduced. If expenditures are less than the target, the update is increased. If expenditures equal the target, the update would equal the change in the MEI (7).

The law specifies a formula for calculating the SGR, based on changes in four factors: (1) estimated changes in fees; (2) estimated change in the average number of Part B enrollees (excluding Medicare Advantage beneficiaries); (3) estimated projected growth in real

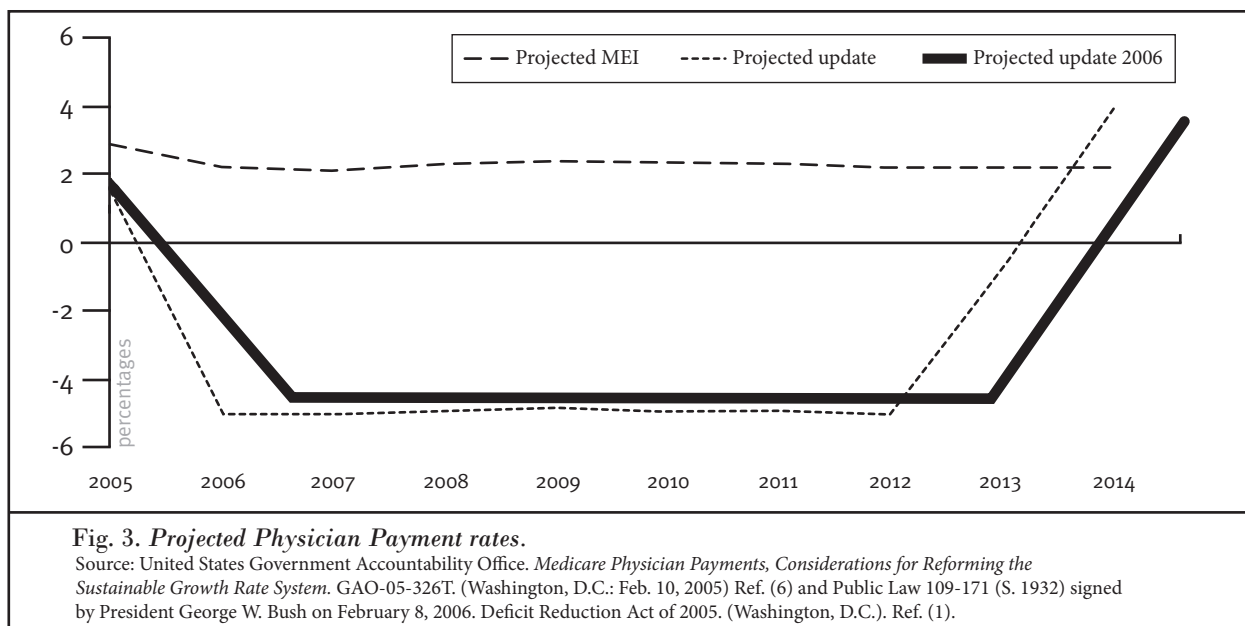


Fig. 3. Projected Physician Payment rates.

Source: United States Government Accountability Office. *Medicare Physician Payments, Considerations for Reforming the Sustainable Growth Rate System*. GAO-05-326T. (Washington, D.C.: Feb. 10, 2005) Ref. (6) and Public Law 109-171 (S. 1932) signed by President George W. Bush on February 8, 2006. Deficit Reduction Act of 2005. (Washington, D.C.). Ref. (1).

gross domestic product (GDP) growth per capita; and (4) estimated change in expenditures due to changes in law or regulations. In order to even out large fluctuations, MMA changed the GDP calculation from an annual change to an annual average change over the preceding 10 years (a “10-year rolling average”) (7).

Performance Adjustment Factor

The performance adjustment sets the conversion factor at a level so that projected spending for the year will meet allowed spending (calculated by using SGR) by the end of the year (7). The technical calculation of the adjustment factor has changed several times. The adjustment factor has been the sum of: (1) the prior year adjustment component, and (2) the cumulative adjustment component since 2001 (7). Use of both the prior year adjustment component and the cumulative adjustment component allows any deviation between cumulative actual expenditures and cumulative allowed expenditures to be corrected over several years rather than a single year (7).

However, the adjustment factor in no case can be less than minus 7% or more than plus 3%. Consequently, even though calculations have led to larger

reductions, the formula adjustment has never been minus 7%. In addition, Congress overrode the formula calculation for 2003-2006.

Medicare Economic Index

The 2004 Medicare Trustees’ re-

port announced that the projected physician fee update would be about -5% for 7 consecutive years beginning in 2006 (9). The result of this negative update on physician reimbursement is a predicted cumulative reduction in physician fees of more than 31% from 2005

Table 3. Inflation rate/physician payment update trends: 1992 to 2006

Year	Inflation Rate	Physician Payment Update	Net Change
2006	2.9%	0.0%	-2.9%
2005	2.4%	1.5%	-0.9%
2004	2.6%	1.5%	-1.1%
2003	2.5%	1.7%	-0.8%
2002	2.3%	-4.8%	-7.1%
2001	2.1%	5.0%	2.9%
2000	2.2%	5.5%	3.3%
1999	1.7%	2.3%	0.6%
1998	2.1%	2.3%	0.2%
1997	2.9%	0.6%	-2.3%
1996	2.8%	0.8%	-2.0%
1995	2.7%	7.5%	4.8%
1994	3.0%	7.0%	4.0%
1993	4.1%	1.4%	-2.7%
1992	5.1%	1.9%	-3.1%

Source: Stefanacci RG. Medicare finances 101. Medicare Patient Management. May/June 2006; 15-24. Ref. (4)

Table 4. 1998-2005 Factors of SGR-related expenditures growth

	1998	1999	2000	2001	2002	2003	2004	2005
Total Expenditures (dollars in billions)	\$50.1	\$52.6	\$58.1	\$66.3	\$70.9	\$78.2	\$87.1	\$94.5
Total Growth	1.5%	5.3%	10.3%	14.2%	7.0%	10.2%	11.4%	8.5%
Factors:								
Fees	2.1%	2.2%	4.9%	4.5%	-3.8%	1.4%	0.1%	-0.6%
Beneficiary Enrollment	-2.2%	-0.6%	0.9%	3.1%	2.9%	2.3%	1.3%	0.3%
Legislation	0.0%	0.4%	0.8%	0.1%	1.0%	0.0%	1.7%	1.2%
Volume and Intensity	1.6%	3.3%	3.4%	5.9%	7.1%	6.2%	8.0%	7.5%
GDP per capita(10-yr moving average)	1.8%	1.9%	2.0%	2.2%	2.1%	2.0%	2.3%	2.3%
V&I less GDP	-0.2%	1.4%	1.4%	3.7%	5.0%	4.3%	5.8%	5.2%

Source: Kuhn HB. (Letter) Department of Health and Human Services, Centers for Medicare and Medicaid Services. To Glen Hackbarth, Chair, Medicare Payment Advisory Commission. April 7, 2006. Ref. (3)

to 2012. Negative updates for 2004 and 2005 were also averted by MMA. During the same period it is estimated that physicians' costs of providing services, as measured by MEL, are projected to rise by 19% (10). According to the projections made by CMS Office of Chief Actuary (OACT) in July 2004, maximum fee reductions will be in effect from 2006 through 2012, while fee updates will be positive in 2014 (Figure 3). Two main reasons quoted for projected fee declines include increase in volume and intensity that exceed the SGR allowance – partly as a result of spending for Part B prescription drugs, and the minimum fee updates for 2004 and 2005 specified by MMA.

Additional downward progression on physician fees occurs due to the growth in spending for other Medicare Services that are included in the SGR system, but that are not reimbursed under the Physician Fee Schedule. Such services include laboratory tests and many Part B outpatient prescription drugs that physicians directly provide to patients. Expenditures for both types of services influenced by the physician, volume of services directly provided and fee schedule services — as well as those other services, defined by the Secretary of HHS as incident to “physician services” — were included when spending targets were introduced. It is not surprising to note that, in July 2004, CMS

projected that SGR-covered Part B drug expenditures would grow more rapidly than other physician service expenditures, thus increasing the likelihood that future spending would exceed SGR system targets. Therefore, as long as the spending for SGR Part B drugs and other incident-to services grows larger as a share of overall SGR spending, to that extent, additional pressure is put on the fee adjustments to offset excess spending and bring overall SGR spending in line with the system's targets.

Despite the SGR formula, MedPAC reimbursement recommendations to Congress are based on other factors, such as beneficiary access to services. Table 3 demonstrates trends of physician payment updates plotted against inflation rates over the last 15 years. The

net effect on physician practice profitability is the difference between physician reimbursement and input costs. The net difference for practices is actually greater than the difference using the general inflation number, since physician practice costs are increasing at a rate greater than inflation which not only includes the operating expenses but also professional liability insurance costs (5). Using an average inflation rate of 2.76% per year for the last 15 years, physician payment updates have averaged only 2.28% during the same period, resulting in a net average decrease of 0.04% (Table 3). There is approximately 23% negative change compared to physician payment updates. In reality, this may be 100% to 200% higher than the estimated cost (Table 3).

Table 5. Spending growth by type of service from 2004 to 2005.

Type of Service	Growth Rate	Percent of Spending	Contribution to Increase	Percent of Increase
Evaluation and Management	7%	37%	2.6%	31%
Procedures	9%	26%	2.5%	29%
Imaging	16%	14%	2.3%	27%
Lab and Other Tests	11%	12%	1.3%	15%
Drugs (under the SGR)	-3%	9%	-0.3%	-4%
Other Services	20%	1%	0.3%	4%
Total	8.5%	100%	8.5%	100%

Source: Kuhn HB. (Letter) Department of Health and Human Services, Centers for Medicare and Medicaid Services. To Glen Hackbarth, Chair, Medicare Payment Advisory Commission. April 7, 2006. Ref. (3)

Table 6. *Distribution across levels of office visits for established patients.*

Codes	1998	1999	2000	2001	2002	2003	2004	2005
99211	5%	5%	5%	6%	6%	6%	5%	5%
99212	18%	17%	17%	16%	15%	13%	12%	12%
99213	52%	53%	54%	54%	54%	53%	53%	52%
99214	21%	21%	21%	21%	22%	24%	26%	28%
99215	4%	4%	3%	3%	3%	3%	3%	3%

Source: Kuhn HB. (Letter) Department of Health and Human Services, Centers for Medicare and Medicaid Services. To Glen Hackbarth, Chair, Medicare Payment Advisory Commission. April 7, 2006. Ref. (3)

Spending Growth

The overall rate of SGR-related expenditure growth decreased from 11.4% in 2004 to an estimated 8.5% in 2005. However, the volume and intensity of services continued to grow at a higher rate, and that is a significant factor in the growth of SGR-related expenditures. Table 4 shows factors of SGR-related expenditures growth.

Table 5 illustrates spending growth by type of service from 2004 to 2005; procedures rank second in contributing towards the increase. Procedures represented 26% of spending, and 29% of the increase in spending for FY2005. Imaging services ranked third in contributing to the spending increase, having by far the highest growth rate of 16%. While imaging services represented

14% of spending, they accounted for 27% of the increase in FY2005 spending. Laboratory and other tests were the fourth largest contributor to increase.

The impressive rise of new imaging techniques and two provisions enacted by Congress that will sharply reduce Medicare payments for some imaging services by an estimated \$2.8 billion over a 5-year period, based on MedPAC report to the Congress has been discussed (11). According to MedPAC, between 1999 and 2004, the growth in the volume of imaging services per Medicare beneficiary outstripped the growth of other services provided by physicians (Fig. 4) (12). According to the Commission, by 2003, the share of Medicare payments to radiologists for imaging services had declined to 45% while the

share received by cardiologists has increased to 25%. In 2004, the cost of imaging services reimbursed by all health insurers and paid for out of pocket by patients accounted to close to \$100 billion, or an average of approximately \$350 per person in the United States. Figure 4 illustrates growth in volume of physician services per beneficiary from 1999 to 2004. The volume is measured as units of service multiplied by each service's relative value units from the physician fee schedule. Analysis in this figure includes claims for 100% of Medicare beneficiaries for all 12 months of each year. In addition, evaluation and management services include office visits, as well as hospital visits. The category describing "tests" excludes imaging.

Procedure code analysis of evalua-

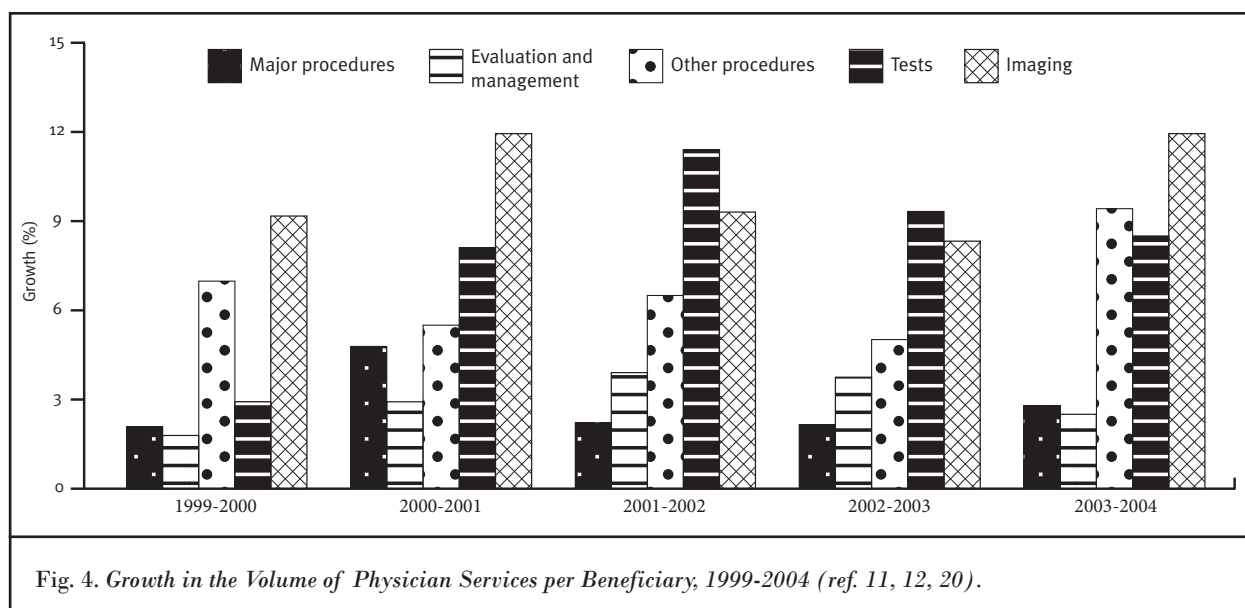


Fig. 4. *Growth in the Volume of Physician Services per Beneficiary, 1999-2004 (ref. 11, 12, 20).*

Table 7. *Minor procedures that contributed to the total increase in spending.*

Code	Description	2005 Charges (in millions)	Increase In Services	Increase In Charges	Percentage of Total SGR Spending	Contribution to Total Increase in SGR Spending
97110	Therapeutic exercises	\$1,001	25.7%	23.5%	1.06%	0.25%
97140	Manual therapy	\$377	32.1%	32.9%	0.40%	0.13%
97112	Neuromuscular reeducation	\$164	37.3%	41.6%	0.17%	0.07%
64475	Lumbar facet joint nerve block	\$77	30.0%	68.2%	0.08%	0.06%
20610	Drain/inject, joint/bursa	\$273	15.5%	17.9%	0.29%	0.05%
17304	1st stage Mohs, up to 5 specimens	\$242	16.5%	19.7%	0.26%	0.05%
64483	Lumbar transforaminal epidural	\$108	26.8%	36.2%	0.11%	0.04%
97530	Therapeutic activities	\$194	15.0%	19.0%	0.21%	0.04%
11721	Debride nail, 6 or more	\$268	5.9%	11.0%	0.28%	0.03%
	Other Minor Procedures	\$3,644	23.0%	9.9%	3.86%	0.38%
Total	All Minor Procedures	\$6,351	23.4%	15.6%	6.72%	1.05%

Source: Kuhn HB. (Letter) Department of Health and Human Services, Centers for Medicare and Medicaid Services. To Glen Hackbarth, Chair, Medicare Payment Advisory Commission. April 7, 2006. Ref. (3)

tion and management services showed that over the past several years there has been an increase in proportion of office visits in higher-level evaluation and management codes. Table 6 illustrates that, in 1998, of all evaluation and management visits for established patients in physicians' offices, 18% of allowed services were level 2 visits, and 21% were level 4 visits (3). By 2005, only 12% were level 2 visits and 28% were level 4 visits. The upward shift in the complexity of billed office visits, caused a net increase in the share of office visits at the more complex level. Similar trends are noted for other types of evaluation and management visits (3).

Minor procedure code analysis also yielded similar results, with the overall increase in procedures dominated by increase in the sub-category of minor procedures. As illustrated in Table 7, the largest contribution to the increases in this sub-category are physical therapy, dermatology, and podiatry. This table illustrates that the increases in charges and services during 2005 for nine minor procedures each contributed 0.3% percentage points or more to growth in overall spending. Of importance to interventional pain physicians is that CPT codes 64475 (lumbar facet joint injections) and 64483 (lum-

bar transforaminal epidural injection) are included in the table. Lumbar facet joint nerve blocks (CPT 64475) contributed \$77 million in charges, with demonstrated increase of 30% from 2004 to 2005 and increase in charges of 68.2%. The plan contributing 0.08% to the total SGR spending and 0.06% of the total increase in SGR spending; and Lumbar transforaminal epidural injection (CPT 64483) contributed \$108 million in charges with an increase of 26.8% increase in services from 2004 and 2005 and a 31.2% increase in charges, contributing 0.11% to the SGR total spending and 0.04% to the total increase of SGR spending.

INTERVENTIONAL PAIN MANAGEMENT

The National Uniform Claims Committee (NUCC) defined Interventional Pain Management as "the discipline of medicine devoted to the diagnosis and treatment of pain related disorders principally with the application of interventional techniques in managing subacute, chronic, persistent, and intractable pain, independently or in conjunction with other modalities of treatments" (14).

MedPAC defined interventional

techniques as minimally-invasive procedures including: percutaneous precision needle placement, with placement of drugs in targeted areas or ablation of targeted nerves; and some surgical techniques for the diagnosis and management of chronic, persistent or intractable pain such as laser or endoscopic discectomy, intrathecal infusion pumps and spinal cord stimulators (15).

In the new millennium, interventional pain management has seen the introduction of an array of new CPT codes and the expansion of interventional techniques. Coupled with this progress, interventional pain management physicians have inherited a multitude of problems, which include controlled substance use and abuse, issues related to coding, billing, documentation, and excessive utilization along with allegations of fraud and abuse (16-18).

Fraud and Abuse

While the federal government has become far more aggressive in identifying and prosecuting healthcare professionals and entities for fraud and abuse, private insurers also are becoming not only more active but are also pursuing fraud and abuse. Recent Federal Bureau of Investigation statistics show that

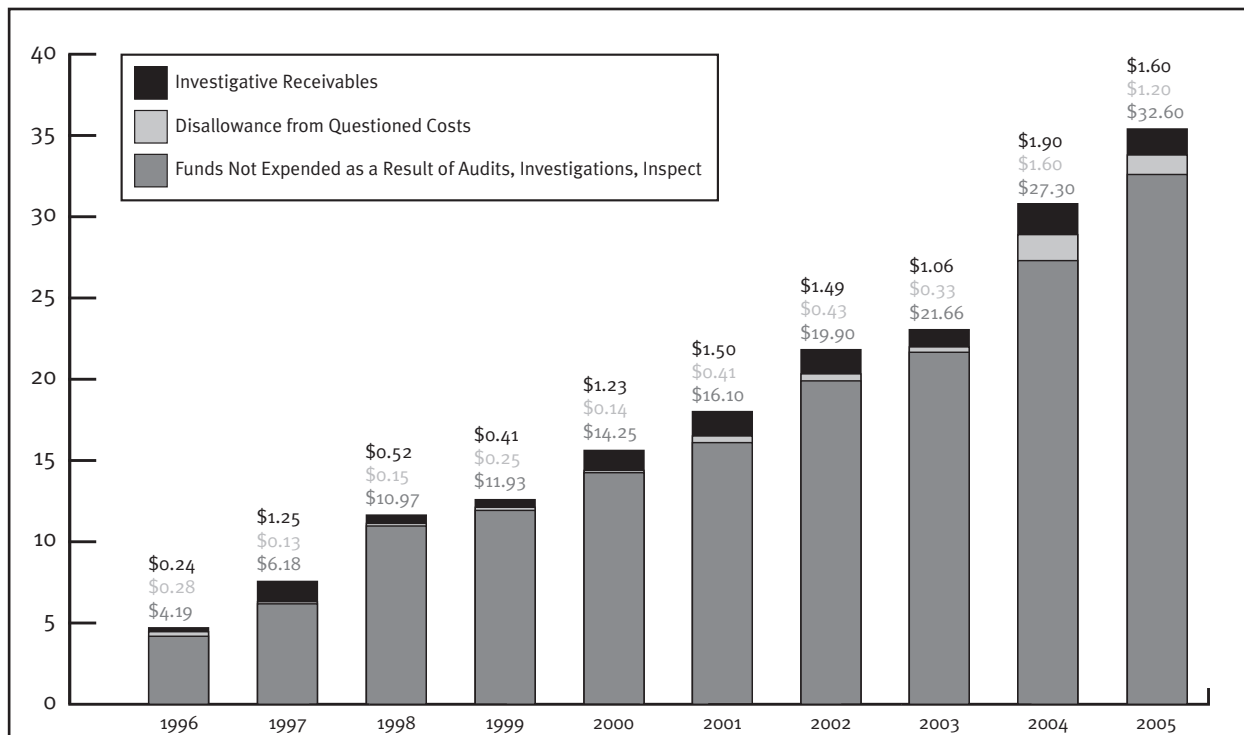


Fig 5: Cost savings (in billions of dollars) reported by Department of Health and Human Services (DHHS), Office of Inspector General (OIG) Ref (18).

60% to 75% of fraud investigations are related to government agencies, either Medicare or Medicaid; whereas 25% to 40% of the cases are investigated secondary to the complaints of private insurers (19).

For the past 10 years, physician practices have been aggressively audited by the federal and state govern-

ments, along with major third-party payors across the nation. Since 1993, there have been a record number of investigations, indictments, convictions and settlements in almost every segment of the healthcare community (18).

Figures 5 and 6 summarize savings, recoveries, civil and criminal penalties of healthcare fraud. US government fraud

and abuse recoveries and savings are estimated at \$115 per dollar invested or \$9.7 million per each OIG employee (18). The HHS Office of Inspector General also record over \$1 billion from healthcare fraud and abuse in the first half of 2006. One physician repaid the OIG \$881,000 to settle charges of billing for the professional and technical com-

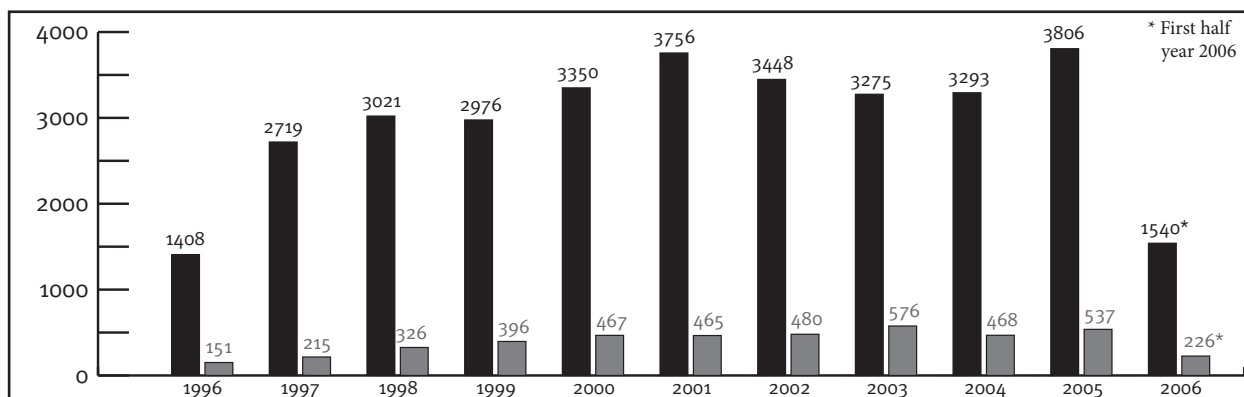


Fig 6: Provider exclusions and criminal convictions reported by Department of Health and Human Services (DHHS), Office of Inspector General (OIG) (additional convictions of Medicaid and other convictions are not included). In the first half of 1997, there were 34.1 Medicaid convictions. ref (18).

Table 8. Frequency of utilization of trigger point and ligament injections, intraarticular injections, interlaminar epidurals excluding continuous, transforaminals, facet joint interventions and implantables by various specialties for 2004, in Medicare recipients

Specialty	Trigger point & ligament injections	Intraarticular injections	Caudal epidural and Interlaminar Epidurals (Cervical, thoracic, lumbar)	Transforaminal	Facet joint interventions	Implantables
Anesthesiology	80,498 (38%)	53,523 (32%)	556,462 (80%)	218,381 (62%)	415579 (58%)	10442 (95%)
Physical medicine rehabilitation	94,793 (5%)	116,210 (8%)	81,283 (57%)	116,863 (62%)	124391 (44%)	569 (89%)
Neurology	32,076 (3%)	10,459 (4%)	14,278 (38%)	14,611 (28%)	39667 (19%)	153 (92%)
Psychiatry	1,127 (0%)	1,250 (6%)	1,200 (86%)	2,036 (94%)	627 (64%)	-
Interventional Pain Management	13,494 (18%)	15,789 (18%)	75,466 (54%)	87,903 (51%)	148563 (52)	3769 (87%)
Pain management	33,218 (22%)	25,009 (20%)	140,255 (61%)	90,070 (58%)	197039 (48%)	5465 (95%)
Neurosurgery	6,898 (3%)	854 (12%)	13,822 (56%)	8,261 (26%)	16914 (43%)	6631 (100%)
Orthopedic surgery	222,680 (3%)	2,691,761 (3%)	40,201 (43%)	21,262 (65%)	41242 (48%)	1686 (98%)
Interventional radiology	39 (100%)	1,252 (88%)	2,793 (84%)	772 (90%)	942 (93%)	-
Rheumatology	98,867 (2%)	674,039 (4%)	2,784 (15%)	744 (12%)	23289 (1%)	-
Osteopathic manipulative therapy	5,592 (0%)	4,277 (2%)	668 (49%)	384 (36%)	5284 (3%)	-
CRNA	340 (66%)	127 (88%)	14,068 (93%)	364 (84%)	442 (81%)	162 (100%)
Diagnostic radiology	468 (29%)	29,184 (70%)	43,201 (59%)	17,554 (63%)	16320 (71%)	-
Emergency medicine	3,590 (20%)	27,117 (47%)	2,614 (61%)	2,150 (73%)	2290 (33%)	11 (100%)
Family practice	116,215 (2%)	452,643 (4%)	6,016 (44%)	7,049 (41%)	21760 (7%)	-
General Practice	23,305 (1%)	70,788 (4%)	3,631 (44%)	3,712 (41%)	20317 (16%)	321 (78%)
Internal medicine	96,728 (3%)	437,394 (4%)	5,575 (20%)	4,945 (27%)	42135 (15%)	21 (100%)
General surgery	6,650 (3%)	15,809 (5%)	1,006 (35%)	1,994 (67%)	2537 (40%)	625 (100%)
Nurse Practitioner	10,224 (6%)	34,316 (7%)	689 (51%)	790 (87%)	1939 (52%)	114 (100%)
Others	391,754 (2%)	484,853 (3%)	2,811 (59%)	3,219 (60%)	26109 (15%)	879 (100%)
Total	1,238,556 (5%)	5,146,654 (5%)	1,008,823 (69%)	603,064 (58%)	1,147,386 (47%)	30848 (95%)

() shows percentage of procedures utilized in facility settings (HOPD or ASC)
 Trigger point & ligament injections – 20550, 20551, 20552, 20553 Intraarticular injections - 20600, 20605, 20610 Interlaminar epidurals – 62310, 62311
 Transforaminal – 64479, 64480, 64483, 64484 Facet joint interventions - 64470/2, 64475/6, 64622/3, 64226/7
 Implantable pumps & Stimulators - 62360/1, 62362, 63650/5, 63660, 63685/8 Source: Utilization data By Specialty from CMS (Ref. 20).

ponent of vascular services when the physician only performed the professional component. In addition, a Maine physician repaid \$200,000 to settle Stark self-referral charges that he referred patients to an oxygen company he owned.

The government also has recovered significant amounts and returned the funds to the Medicare trust fund compared to the funds appropriated from the federal budget on fraud and

abuse. The government’s health related civil fraud recoveries have been gradually increasing not only in amount, but also in proportion compared to total civil fraud recoveries.

Resource Utilization for Low Back Pain

Documentation of nonspecific low back pain in Medicare beneficiaries is growing in epidemic proportions (19).

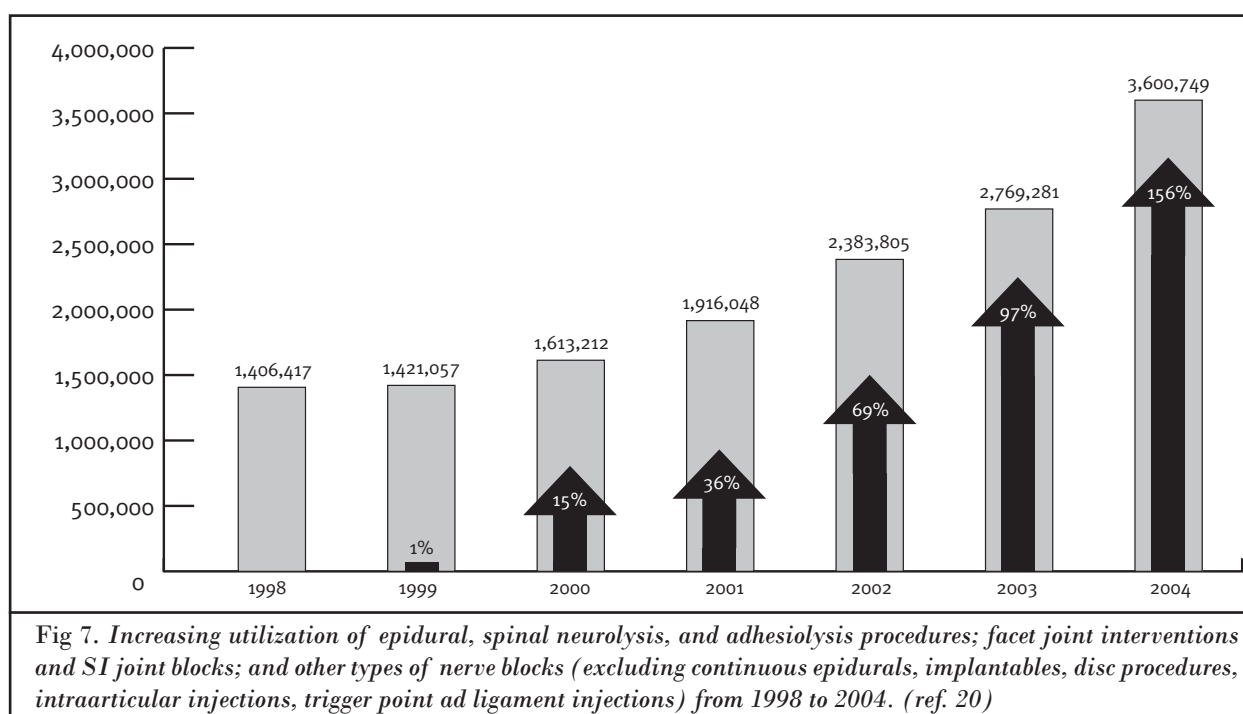
Nonspecific low back pain is one of the most common and therapeutically challenging conditions in the elderly population. Charges related to nonspecific low back pain have skyrocketed. However, the primary factor driving these increased costs relates to the increased prevalence of low back pain, Medicare claims, with national data indicated that per patient low back pain care costs are rising more slowly than general health-

Table 9. Summary of frequency of utilizations of various categories of interventional procedures (excluding continuous epidurals, implantables, disc procedures, intraarticular injections, trigger point and ligament injections) in Medicare population from 1998-2004

	1998	1999	2000	2001	2002	2003	2004
Epidural, spinal neurolysis, and adhesiolysis procedures	802,735 (76%)	803,078 (74%)	860,787 (79%)	1,013,552 (78%)	1,199,324 (74%)	1,370,862 (71%)	1,637,494 (65%)
Facet joint interventions and SI joint blocks	274,130 (73%)	304,564 (72%)	424,796 (67%)	543,509 (62%)	708,186 (58%)	884,035 (53%)	1,354,242 (46%)
Other types of nerve blocks	329,552 (33%)	313,415 (33%)	327,629 (35%)	358,987 (34%)	476,295 (33%)	514,384 (31%)	609,013 (30%)
Total	1,406,417 (65%)	1,421,057 (64%)	1,613,212 (67%)	1,916,048 (65%)	2,383,805 (61%)	2,769,281 (58%)	3,600,749 (52%)

() shows percentage of procedures utilized in facility settings (HOPD and ASC)

Source: Utilization data by Specialty from CMS (Ref. 20).



care costs. The data from 1991 to 2002 shows that the growth of total number of Medicare beneficiaries was 42.5% compared to growth of low back pain patients of 131.7%. However, the total charges increased from 1991 to 2002 in Medicare population by 310% whereas total low back pain charges increased by 387.2% indicating a smaller decrease per patient. small increase per patient.

Utilization of Interventional Techniques

Interventional techniques are per-

formed by physicians in multiple specialties, and in various settings. Thus, the frequency with which these procedures are performed depends on the nature of the procedures. A great proportion of procedures such as trigger point injections or ligament injections are performed by rheumatologists, orthopedic surgeons, podiatrists, internists, and family practitioners; intraarticular injections of various joints are performed by orthopedic surgeons, internists, and family practitioners; and the majority of other interventional proce-

dures (including epidurals, facet joint blocks, neurolytic procedures, and other nerve blocks) are often performed by pain physicians (16, 20). Officially, pain medicine or interventional pain management as recognized by the American Board of Medical Specialties includes anesthesiology, physical medicine and rehabilitation, and neurology and psychiatry. Other specialties considered with interventional pain focus are neurosurgery and orthopedic surgery. Separate designations for interventional pain management (-09) and

Table 10. Frequency of utilization of Facet joint interventions and sacroiliac joint blocks by various specialties for 2004, in Medicare recipients

Specialty	Sacroiliac Joint Injection		Cervical and Thoracic Facet Joint Blocks		Lumbar Facet Joint Blocks		Lumbar Facet Neurolysis		Cervical/Thoracic Facet Neurolysis		Total	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)		
Anesthesiology	72,475	(50%)	20,790	(51%)	42,764	(47%)	91,929	(61%)	178,976	(56%)	64,627	502,847 (58%)
Physical medicine rehabilitation	21,978	(36%)	8,425	(32%)	11,641	(39%)	36,693	(45%)	49,707	(43%)	772	148,716 (43%)
Neurology	2,836	(29%)	5,006	(13%)	6,322	(14%)	11,231	(18%)	14,825	(19%)	188	43,018 (20%)
Psychiatry	105	(70%)	22	(100%)	19	(100%)	272	(68%)	297	(58%)	0	732 (64%)
Interventional Pain Management	20,889	(39%)	9,529	(55%)	18,041	(53%)	31,182	(51%)	57,581	(51%)	2,251	176,878 (50%)
Pain management	29,112	(39%)	9,917	(46%)	21,788	(41%)	41,219	(49%)	84,305	(43%)	2,180	233,230 (47%)
Neurosurgery	1,497	(32%)	1,614	(30%)	2,119	(32%)	4,624	(43%)	6,300	(50%)	251	19,129 (41%)
Orthopedic surgery	5,562	(39%)	2,356	(30%)	2,135	(45%)	15,832	(40%)	18,640	(54%)	38	46,929 (47%)
Interventional radiology	389	(100%)	28	(100%)	17	(100%)	457	(95%)	407	(88%)	0	1,331 (95%)
Rheumatology	660	(0%)	5,937	(0%)	3,829	(0%)	8,632	(1%)	4,871	(2%)	0	23,949 (1%)
Osteopathic manipulative therapy	204	(19%)	339	(4%)	853	(3%)	1,071	(4%)	2,943	(3%)	0	5,488 (4%)
CRNA	63	(100%)	41	(41%)	14	(0%)	222	(79%)	165	(100%)	0	505 (83%)
Diagnostic radiology	3,766	(66%)	1,047	(73%)	759	(73%)	8,173	(72%)	5,688	(68%)	44	20,219 (70%)
Emergency medicine	519	(27%)	67	(49%)	102	(55%)	839	(26%)	1,101	(29%)	0	2,809 (32%)
Family practice	3,316	(6%)	1,960	(2%)	2,790	(3%)	6,720	(8%)	8,783	(6%)	120	25,327 (7%)
General Practice	1,599	(8%)	1,903	(8%)	1,905	(15%)	6,942	(9%)	7,947	(17%)	1,044	22,131 (16%)
Internal medicine	4,132	(6%)	4,477	(5%)	4,653	(9%)	12,926	(9%)	14,773	(15%)	3,321	46,666 (15%)
General surgery	448	(26%)	96	(21%)	70	(20%)	705	(23%)	1,037	(23%)	357	2,999 (38%)
Nurse Practitioner	727	(22%)	101	(63%)	137	(74%)	792	(41%)	732	(52%)	0	2,684 (44%)
Others	2,427	(15%)	3,965	(6%)	6,187	(11%)	5,933	(13%)	8,745	(12%)	40	28,655 (15%)
Total	172,704	(41%)	77,620	(34%)	126,145	(38%)	286,394	(45%)	467,823	(46%)	132,351	1,354,242 (46%)

() shows percentage of procedures utilized in facility settings (HOPD and ASC)

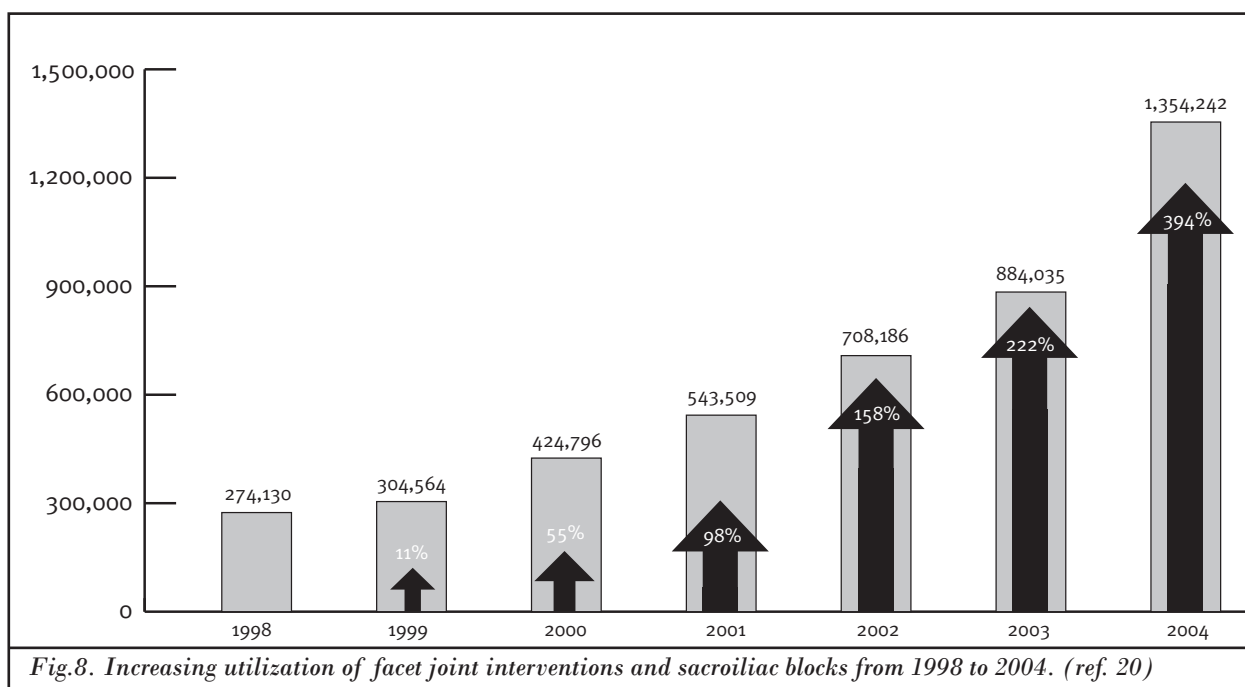
Source: Utilization data By Specialty from CMS (Ref. 20).

Table 11. Comparison of frequency of utilization of Facet joint interventions and sacroiliac joint blocks in Medicare recipients from 1998-2004

CPT	Code Description	1998	1999	2000	2001	2002	2003	2004
27096	Sacroiliac joint blocks	2,374 (86%)	2,281 (81%)	49,554 (59%)	85,664 (51%)	101,749 (48%)	128864 (42%)	172,704 (41%)
64470	C/T facet joint block – single	6,286 (65%)	6,438 (65%)	24,751(48%)	34,500 (43%)	41,935 (44%)	49958 (40%)	77,620 (34%)
64472	C/T facet joint block – additional	349 (90%)	574 (82%)	33,573 (62%)	47,684 (55%)	61,981 (53%)	75489 (49%)	126,145 (38%)
64475	L/S facet joint block – single	84,854 (64%)	87,395 (65%)	101,539 (61%)	121,234 (59%)	155,620 (55%)	189263 (51%)	286,394 (45%)
64476	L/S facet joint block add.	145,267 (75%)	163,170 (73%)	153,252 (71%)	175,854 (67%)	240,243 (61%)	299802 (55%)	467,823 (46%)
64622	L/S facet neurolysis – single	10,371 (84%)	13,079 (80%)	15,117 (84%)	18,792 (79%)	25,744 (77%)	35315 (70%)	57,053 (61%)
64623	L/S facet neurolysis – additional	24,255 (88%)	31,018 (85%)	38,206 (88%)	47,632 (81%)	63,522 (76%)	83166 (69%)	132,351 (61%)
64626	C/T facet neurolysis – single	25 (100%)	35 (100%)	2,750 (83%)	3,815 (77%)	5,190 (76%)	6877 (70%)	10,691(61%)
64627	C/T facet neurolysis – additional	349 (90%)	574 (82%)	6,054 (87%)	8,334 (77%)	12,202 (73%)	15301 (69%)	23,461 (63%)
Total		274,130 (73%)	304,564 (72%)	424,796 (67%)	543,509 (62%)	708,186 (58%)	884,035 (53%)	1,354,242 (46%)

() shows percentage of procedures utilized in facility settings (HOPD and ASC)

Source: Utilization data By Specialty from CMS (Ref. 20).



pain management or pain medicine (-72) went into effect in 2003 and 2002. Thus, any specific data reflecting utilization of services in these categories (-09 and -72) mostly retrospective and preliminary at present. For the purposes of this manuscript, interventional pain physicians were considered to be anesthesiologists, physiatrists, neurologists, and psychiatrists along with all the physicians who had an interventional pain management or pain management (medicine) designation.

Interventional pain management procedures are performed in multiple settings. Traditionally, the majority of interventional techniques were performed in the hospital outpatient departments (HOPDs). Evolution of interventional pain management as a distinct specialty, allowed other venues to offer these services, including ambulatory surgical centers and physician offices. Facility settings include HOPDs and ASCs, whereas non-facility settings include physician offices. This manuscript evaluated the frequency of interventional procedures in facility (HOPD or ASC) and non-facility (office) settings.

Table 8 illustrates the differential performance of ligament and trigger point injections, intraarticular injections, facet joint interventions, epidurals, transforaminals, and intrathecal implantables by physicians in various specialties (20). As illustrated, of a total of 1,238,556 trigger point and ligament injections, the majority were performed by primary care specialists, podiatrists, orthopedic surgeons, rheumatologists, followed by anesthesiologists and physiatrists (Table 8). Pain management physicians performed 21% (255,206 of 1,238,556) of all the procedures in this category. Orthopedic surgeons performed 18% of all the ligament and trigger point injections. In contrast, the majority of intraarticular injections (52% or 2,691,761 of 5,146,654) were performed by orthopedic surgeons. Pain physicians performed only a small proportion (4% or 222,240 of 5,146,654) of intraarticular injections.

In 2004, 1,008,823 interlaminar epidural injections (excluding continuous infusions), were performed in the Medicare population. In addition, 603,064 transforaminal epidurals were also performed. Pain physicians performed the majority of epidurals, facet joint interventions and implantables (20).

Table 9 illustrates the frequency of utilization of multiple interventional techniques excluding implantables, disc procedures, continuous epidurals, intraarticular injections, trigger point and ligament injections from 1998 to 2004. These numbers also illustrate increasing proportion of non-facility procedures, from 35% in 1998 to 48% in 2004 (20). Figure 7 illustrates a 156% increase in utilization from 1998 to 2004. The volume of these procedures increased from 1,406,417 to 3,600,749 in 2004, an average yearly increase of approximately 26%. Non-physicians performed 23% to 26% of the procedures with 370,523 in 1998, increasing to 791,559 in 2004.

Table 10 illustrates the number of facet joint interventions and sacroiliac joint injections in Medicare recipients in 2004, by various specialties (20). The pain management specialists performed these procedures 76% of the time in 1998, as compared 82% in 2004. The number of facet joint interventions and sacroiliac joint blocks performed by other physicians have increased from 64,858 in 1998 to 248,821 in 2004 in Medicare recipients. The proportion of procedures performed in facility settings also has decreased from 73% in 1998 to 46% in 2004 (Table 11). Thus, only 74,105 procedures were performed in an office setting in 1998, increasing to 731,290 in 2004. Figure 8 shows an overall increase of 394% from 1998 to 2004 with 274,130 procedures in 1998 to 1,354,242 procedures in 2004, with an average yearly increase of over 65%.

In assessing patterns of the most commonly performed procedures - interlaminar epidurals, transforaminal epidurals, spinal neurolysis, and adhesiolysis procedures were evaluated, but continuous epidurals, either in the cer-

vical spine or in the lumbar spine were excluded, as these are most commonly performed for postoperative anesthetic purposes, rather than chronic pain management. Table 8 illustrates the frequency of utilization by various specialties of the epidural procedures for 2004 (20). In contrast, Table 12 and Fig. 9 illustrate overall increase of utilization of these procedures from 1998 to 2004 (20). As shown in Fig. 9, epidural interventions have increased by 104% from 1998 to 2004 in Medicare recipients, to approximately 1.6 million from 0.8 million (20). The majority of interlaminar and transforaminal epidurals (87% or 1,398,808 of 1,611,887) were performed by pain physicians. Even so, 13% of interlaminar and transforaminal epidurals were performed by other physicians. In addition, 31% of interlaminar epidurals, 57% of cervical transforaminals and 41% of lumbar transforaminal epidurals were performed in office settings. Performance of transforaminals by primary care physicians, nurse practitioners, nurse anesthetists, physician assistants, rheumatologists, etc., specifically in an office setting, may indicate performing these procedures without fluoroscopic guidance, which is considered as inappropriate. Of interest is that three-day adhesiolysis decreased from a high of 14,430 in 2002 to 7,183 in 2003, and 2,628 in 2004. In contrast one-day adhesiolysis increased from 724 in 2002 to 9,733 in 2003 and 14,152 in 2004 (20).

The majority of implantables, 66% of 30,848 in the Medicare population in 2004, were performed by pain physicians, 21% by neurosurgeons, 5% by orthopedic surgeons, and 7% by all other specialists. Table 13 illustrates the utilization of implantables, since 1998. The growth ranged from 3% between 1998 and 1999, 8% from 1999 to 2000, 23% from 2000 to 2001, 13% from 2001 to 2002, 30% from 2002 to 2003, and 25% from 2003 to 2004 (Fig. 10).

Table 14 illustrates the distribution of the frequency of discography procedures among various specialties in the year 2004. The majority of these procedures are performed by pain manage-

Table 12. Comparison of frequency of utilization of various types epidural, spinal neurolysis, and adhesiolysis procedures in Medicare recipients from 1998-2004

HCPCS	Description	1998	1999	2000	2001	2002	2003	2004
62263	Epidural lysis of adhesions – 2 or 3 days	1,001 (88%)	1,558 (80%)	8,778 (91%)	10,463 (88%)	14,430 (83%)	7,183 (83%)	2,628 (81%)
62264	Epidural lysis of adhesions – 1day	-	-	-	-	724(84%)	9,733 (79%)	14,152 (76%)
62280	Subarachnoid neurolysis	226 (91%)	233 (68%)	197 (89%)	242 (89%)	225(100%)	233 (78%)	175 (61%)
62281	Cervical epidural neurolysis	1,719 (80%)	1,569 (72%)	1,199 (83%)	1,320 (73%)	1,305 (68%)	1,233 (59%)	848 (52%)
62282	Lumbar epidural neurolysis	9,543 (58%)	10,883 (51%)	11,139 (48%)	11,990 (55%)	10,392 (58%)	9,651(49%)	7,804 (42%)
62310	Cervical/Thoracic epidural	64,563 (86%)	69,381 (81%)	75,741 (83%)	84,385 (80%)	99,117 (76%)	109,783 (73%)	130,649 (67%)
62311	Lumbar/Sacral epidural	608,453 (85%)	619,543 (80%)	618,362 (83%)	702,713 (81%)	786,919 (77%)	838,858 (74%)	878,174 (70%)
64479	C/T Transforaminal epidural – single	3,292 (34%)	3,213 (32%)	13,454 (52%)	14,732 (52%)	18,583 (50%)	21,882 (48%)	25,182 (48%)
64480	C/T Transforaminal epidural – each additional	17,066 (22%)	12,931 (26%)	9,434 (60%)	8,537 (47%)	10,835(39%)	15,769 (34%)	18,094 (36%)
64483	L/S Transforaminal – single	45,385 (34%)	44,751 (32%)	85,006 (66%)	125,534 (72%)	177,679 (70%)	242,491(67%)	363,744 (62%)
64484	L/S Transforaminal – each additional	51,487 (23%)	39,016 (26%)	37,477 (63%)	53,133 (69%)	79,115 (64%)	114,046 (62%)	196,044 (54%)
Total		802,735 (76%)	803,078 (74%)	860,787 (79%)	1,013,552 (78%)	1,199,324 (74%)	1,370,862 (71%)	1,637,494 (65%)

() shows percentage of procedures utilized in facility settings (HOPD and ASC)
Source: Utilization data By Specialty from CMS (Ref. 20).

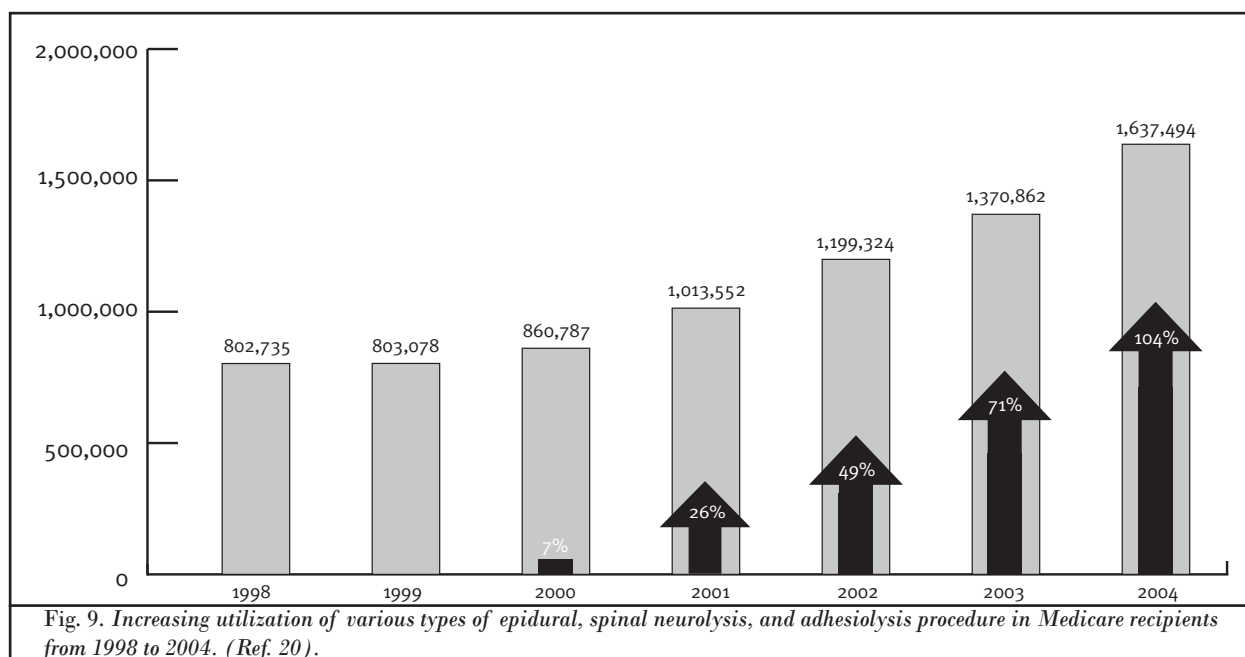


Table 13. Comparison of frequency of utilization of implantable pumps and Stimulators in Medicare recipients from 1998-2004

	1998	1999	2000	2001	2002	2003	2004
62360 Implantation or replacement of device; subcutaneous reservoir	944	1,113	602	743	618	738	556
62361 Implantation or replacement of device; non-programmable pump	108	367	373	298	213	184	299
62362 Implantation or replacement of device; programmable pump	3,414	3,739	4,625	5,241	5,557	5,486	4,986
63650 Percutaneous implantation of neurostimulator electrode	3,397	3,008	3,443	4,746	5,715	8,549	
63655 Laminectomy for implantation of neurostimulator electrodes	465	440	531	758	922	1,482	1,822
63660 Revision or removal of spinal neurostimulator	1,244	1,317	1,414	1,815	2,032	2,753	3,569
63685 Insertion or replacement of spinal neurostimulator	1,628	1,577	1,450	1,716	2,088	3,308	4,986
63688 Revision or removal of implanted spinal neurostimulator	1,176	1,133	1,297	1,523	1,803	2,209	2,247
Total	12,376	12,694	13,735	16,840	18,948	24,709	30,848

Source: Utilization data By Specialty from CMS (Ref. 20)

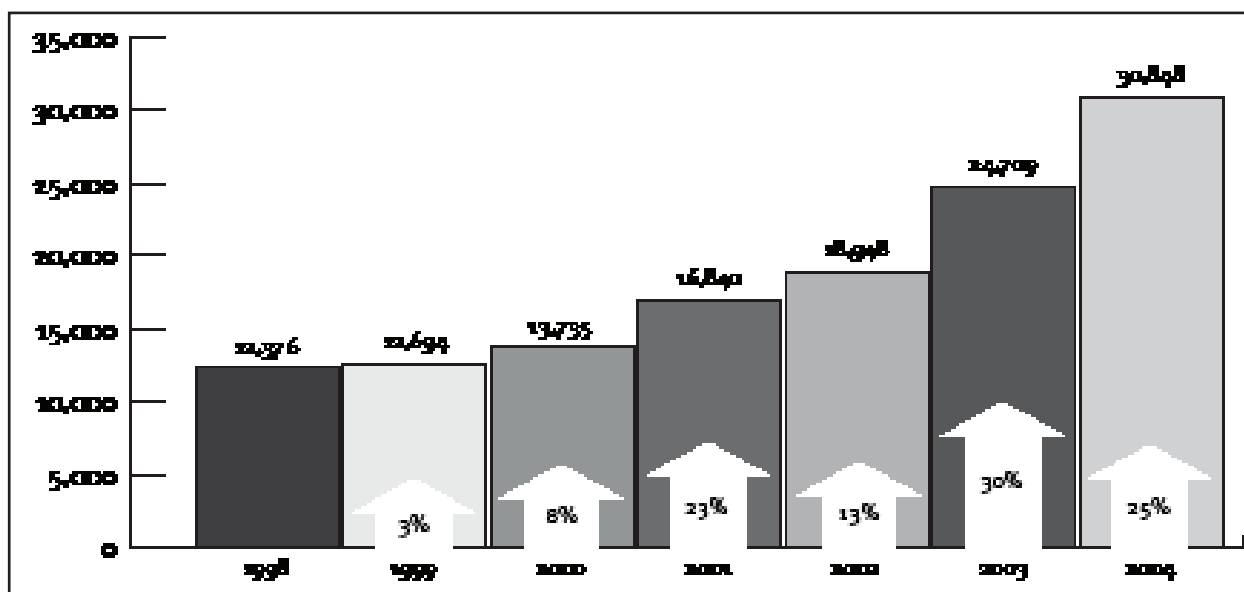


Fig. 10. Comparison of frequency of utilization of implantable pumps and stimulators in Medicare recipients from 1998 to 2004 (ref. 20)

Table 14. Comparison of frequency of utilization of discography in Medicare recipients in year 2004

Specialty	Lumbar Discography (62290)	Cervical Discography (62291)	Lumbar/Cervical Discography (62290, 62991)
Anesthesiology	5,840 (70%)	514 (78%)	6,354 (71%)
Physical medicine rehabilitation	2,453 (77%)	113 (100%)	2,566 (78%)
Neurology	138 (64%)	51 (71%)	189 (66%)
Interventional Pain Management	2,371 (57%)	312 (71%)	2,683 (59%)
Pain management	2,971 (78%)	350 (83%)	3,321 (79%)
Neurosurgery	393 (82%)	40 (100%)	433 (83%)
Orthopedic surgery	2,217 (97%)	140 (100%)	2,357 (97%)
Interventional radiology	459 (97%)	12 (100%)	471 (97%)
Diagnostic radiology	3,629 (81%)	451 (68%)	4,080 (79%)
Emergency medicine	45 (31%)	0	45 (31%)
Family practice	89 (85%)	19 (100%)	108 (88%)
General Practice	15 (100%)	0	15 (100%)
Internal medicine	64 (63%)	0	64 (63%)
Others	33 (100%)	0	33 (100%)
Total	20,717 (76%)	2,002 (79%)	22,719 (76%)

() shows percentage of procedures utilized in facility settings (HOPD and ASC)
 Source: Utilization data By Specialty from CMS (Ref. 20).

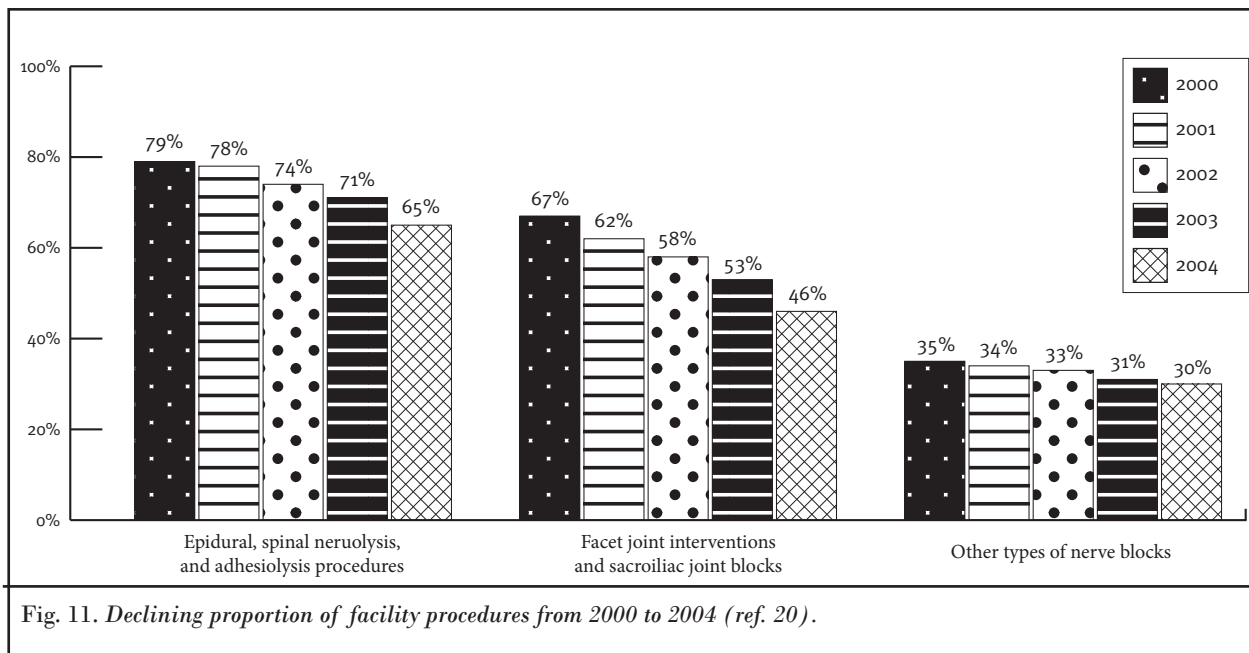


Fig. 11. Declining proportion of facility procedures from 2000 to 2004 (ref. 20).

Table 15. Comparison of frequency of utilization of various types of nerve blocks excluding all types of epidurals, disc injections, implantables, intraarticular injections, trigger point injections and facet joint blocks in Medicare recipients for 1998-2004

HCP/CS	1998	1999	2000	2001	2002	2003	2004
64400	9,363 (36%)	7,402 (26%)	7,173 (28%)	6,749 (37%)	7,341 (36%)	8,199 (36%)	8,598 (34%)
64402	2,523 (55%)	2,040 (51%)	2,001 (54%)	1,801 (52%)	2,007 (48%)	1,631 (44%)	1,461 (55%)
64405	25,305 (37%)	24,826 (33%)	25,424 (33%)	29,913 (32%)	34,695 (27%)	39,341 (26%)	45,252 (21%)
64408	258 (00%)	348 (04%)	478 (03%)	248 (0%)	727 (1%)	551 (5%)	128 (0%)
64410	35 (100%)	67 (81%)	26 (100%)	30 (100%)	27 (100%)	56 (70%)	28 (100%)
64412	1,170 (28%)	1,436 (14%)	1,261 (14%)	1,482 (14%)	1,418 (18%)	1,386 (8%)	1,891 (4%)
64413	10,014 (21%)	6,963 (32%)	5,738 (36%)	5,677 (38%)	5,762 (29%)	5,967 (36%)	5,530 (37%)
64415	9,037 (69%)	15,061 (79%)	18,771 (89%)	23,662 (92%)	29,533 (94%)	36,999 (94%)	53,301 (96%)
64417	1,750 (66%)	1,834 (73%)	2,002 (84%)	2,225 (90%)	2,676 (94%)	3,203 (91%)	5,292 (95%)
64418	9,961 (24%)	9,705 (21%)	10,657 (21%)	12,365 (16%)	10,837 (18%)	13,382 (17%)	16,183 (16%)
64420	7,936 (43%)	7,138 (39%)	8,058 (45%)	7,839 (40%)	6,209 (36%)	5,463 (39%)	4,656 (37%)
64421	19,485 (66%)	18,311 (59%)	16,645 (66%)	16,509 (66%)	16,644 (59%)	17,661 (54%)	19,057 (49%)
64425	5,557 (55%)	5,555 (52%)	5,550 (55%)	6,212 (47%)	7,022 (43%)	5,122 (44%)	6,244 (37%)
64430	757 (38%)	532 (32%)	750 (33%)	2,185 (23%)	5,445 (15%)	5,519 (16%)	12,335 (11%)
64435	1,926 (15%)	1,437 (06%)	1,809 (14%)	1,850 (21%)	1,971 (21%)	753 (23%)	772 (31%)
64445	22,513 (14%)	19,488 (16%)	19,883 (17%)	22,195 (16%)	26,238 (19%)	27,779 (23%)	39,822 (37%)
64450	127,904 (17%)	122,147 (17%)	124,154 (19%)	119,234 (22%)	159,530 (21%)	159,139 (16%)	194,666 (13%)
64505	6,532 (08%)	5,894 (06%)	5,606 (08%)	4,862 (7%)	4,885 (9%)	4,757 (8%)	3,289 (11%)
64510	12,968 (81%)	11,626 (82%)	9,950 (80%)	9,473 (81%)	10,233 (77%)	9,589 (73%)	8,696 (69%)
64520	14,637 (68%)	12,903 (63%)	12,254 (73%)	12,522 (69%)	16,099 (58%)	12,135 (69%)	14,680 (63%)
64530	1,538 (88%)	1,329 (90%)	1,348 (92%)	1,334 (89%)	1,366 (88%)	1,608 (86%)	1,437 (89%)
64600	735 (58%)	772 (51%)	577 (58%)	655 (47%)	701 (52%)	647 (43%)	587 (37%)
64605	209 (67%)	191 (60%)	164 (46%)	54 (100%)	38 (100%)	82 (66%)	36 (100%)
64610	561 (100%)	698 (100%)	597 (100%)	509 (100%)	615 (100%)	546 (94%)	418 (97%)
64613	16,606 (18%)	11,988 (25%)	14,136 (25%)	18,957 (24%)	25,190 (20)	29,960 (18%)	33,082 (15%)
64620	1,752 (86%)	1,755 (85%)	2,141 (87%)	1,862 (85%)	2,003 (78%)	2,213 (72%)	1,923 (76%)
64630	16 (100%)	16 (100%)	30 (100%)	97 (11%)	340 (19%)	293 (9%)	164 (0%)
64640	17,375 (46%)	20,933 (31%)	25,910 (28%)	31,529 (22%)	76,280 (13%)	94,648 (9%)	103,241 (8%)
64680	1,129 (94%)	1,020 (90%)	1,227 (88%)	1,247 (77%)	1,387 (54%)	1,708 (47%)	1,201 (63%)
22520	NA	NA	1,654 (100%)	7,812 (0%)	9,656 (99%)	12,240 (99%)	12,870 (94%)
22521	NA	NA	1,654 (100%)	7,898 (0%)	9,420 (99%)	11,804 (99%)	12,173 (94%)
Total	329,552 (33%)	313,415 (33%)	327,629 (35%)	358,987 (34%)	476,295 (33%)	514,384 (31%)	609,013 (30%)
% of Change from previous year	-	-5%	3%	11%	33%	8%	18%

Source: Utilization data by Specialty from CMS () shows percentage of procedures utilized in facility settings (HOPD and ASC) (Ref. 20)

ment physicians followed by radiologists with the remainder performed by physicians from other specialties.

Table 15 summarizes the performance of distribution of the multitude of peripheral nerve blocks and sympathetic blocks in Medicare recipients from 1998 to 2004 (20). This excludes all types of epidurals, disc injections, implantables, intraarticular injections, trigger point injections, and facet joint interventions. Most of the nerve block procedures were performed in an office setting. The frequency of these procedures has increased from 329,552 in 1998 to 609,013 in 2004, with an overall increase of 85% from 1998 and an average annual increase of 14%. About 25% of these procedures were performed by non-pain physicians from 2000 to 2004 (20). Figure 11 illustrates that there was a decline in proportion of the procedures performed in facility settings from 2000 to 2004.

SOLUTIONS TO A BROKEN SYSTEM

Many observers contend that the SGR system is flawed and should therefore not be used in making the annual update calculation. MedPAC, which replaced the Physician Payment Review Commission (PPRC), consists of 17 part-time members and a full-time staff with a broad mandate to advise Congress on issues that affect the Medicare program. MedPAC took the lead in recommending new policies that relate to physician payment services.

In 2001, MedPAC, recommended that:

. . . the Congress replace the SGR system with an annual update based on factors influencing the unit costs of efficiently providing physician services. MedPAC's recommendation would correct three problems. First, although the SGR system accounts for changes in input prices, it fails to account for other factors affecting the cost of providing physician services, such as scientific and technological advances and new federal regulations. Second, it is

difficult to set an appropriate expenditure target with the SGR system because spending for physician services is influenced by many factors not explicitly addressed, including shifts of services among settings and the diffusion of technology. The SGR system attempts to sidestep this problem with an expenditure targeted based on growth in real GDP, but such a target helps ensure that spending is affordable without necessarily accounting for changes in beneficiaries' needs for care. Third, enforcing the expenditure target is problematic. An individual physician reducing volume in response to incentives provided by the SGR system would not receive a proportional increase in payments. Instead the increase would be distributed among all physicians providing services to Medicare beneficiaries.

These problems with the SGR system can have serious consequences. Updates under the SGR system will nearly always lead to payments that diverge from costs because actual spending is unlikely to be the same as the target. When this occurs, payments will either be too low, potentially jeopardizing beneficiary access to care, or too high, making spending higher than necessary (21).

While there is general agreement that the SGR system needs to be replaced or modified, a consensus has not developed on a long-term solution. With mounting pressure from physician and payment community, Congress is looking into various options: replacing the formula and linking updates to payment adequacy, making administrative changes to current formula calculation, modifying the current formula, establishing volume changes, and enacting evidence-based medicine with pay for performance.

Linking Updates to Payment Adequacy

MedPAC, in fact has specifically recommended repeal of the SGR system and to update payments for physicians' services based on the estimated change in input prices for the coming year less an adjustment for savings

attributable to increased productivity (21). MedPAC, since 2002, continued to recommend an update based on changes in input prices minus an adjustment for productivity growth. It is reflected in the March 2006 report recommending a 2007 update utilizing changes in input prices (estimated at 3.7%) minus an adjustment for productivity growth (estimated at 0.9%) (8).

However, MedPAC emphasizes that the annual update should not be automatic, but should be linked to a number of factors including beneficiary access to services, the quality of services provided, and appropriateness of cost increases. MedPAC while concluding that current payment rates are adequate, recommended that payment rates should be updated by the projected change in physicians' costs less an adjustment for productivity growth.

Administrative Changes to Current Formula

While a change in the formula would require legislation, some observers have suggested that there are things CMS could do administratively to ease the impact of the current formula. Proponents argue that these changes could somewhat moderate the negative updates that are predicted. One change which has been suggested for several years is the removal of covered Part B prescription drugs from the SGR baseline (thereby removing this rapidly escalating cost factor from the calculation). However, CMS has consistently stated that it cannot make this change retrospectively without legislation. It further noted that making such a change would not result in a positive update for 2006 or the subsequent few years.

Modification of Current Formula

Modifying the current formula is the most common suggestion from MedPAC and the physician community alike. The Government Accountability Office (GAO) identified possible modifications to the current system, including using actual spending from a new, more recent base year (instead of 1996)

Table 16. *Projected effect on fee updates and physical services spending under current law and selected potential options for the SGR system, 2006 to 2014.*

Options	Minimum fee update	Years with negative fee update	Maximum fee update	Cumulative expenditures increase relative to current law
Current law	-5.0%	8	+3.9%	----
Eliminate spending targets	+2.1%	0	+2.4	22%
Modify spending targets				
Set allowable growth to GDP+1 percent	-5.0%	6	+5.3%	4%
Reset spending base for SGR targets	-2.3%	6	+2.2%	13%
Remove Part B drugs	-5.0%	5	+5.3%	5%
Combine all three modifications	+2.2%	0	+2.8%	23%

Source: CMS OACT

for making the SGR calculation; eliminating the cumulative target mechanism and returning to a system of annual targets; and modifying the allowance for volume and intensity growth to more closely reflect technological innovation and changes in medical practice. It further noted that some of these options could be combined (9) (Table 16).

Volume and Intensity Changes

It has been noted that a negative update to the conversion factor does not mean an overall reduction in physician spending (7). CBO estimates, using the current law update formula, that spending under the fee schedule will climb from \$60.3 billion in FY2006 to \$63.6 billion in 2011 (7). While part of the increase is attributable to increasing numbers of beneficiaries, part reflects the increased volume of services per beneficiary.

Volume changes reflect both changes in the number of services and the complexity or intensity of services. Volume increased by 6.2% between 2003 and 2004; the largest increase was recorded for imaging services which in-

creased 11% (8). Part of the increases in volume may be attributable to beneficial uses of new technology; however, not all increases may be appropriate.

Deficit Reduction Act (DRA) requires MedPAC to conduct a study and report to Congress by March 1, 2007 on its recommendations for mechanisms that could be used to replace the SGR system. The study is required to review options for controlling volume while still maintaining beneficiary access to services.

Cost of Reform Options

Any change in the current payment formula that would avert the scheduled negative update would involve considerable costs. For example, CBO estimates that the DRA provision freezing the 2006 conversion factor at the 2005 level cost \$7.3 billion over the FY2006-FY2010 period (7).

In April 2006, the CBO released preliminary estimates of the impact of a number of different options. If the 2007 conversion factor was frozen at the 2006 level, it would cost \$10.8 billion over the FY2007-FY2011 period and \$4.7 bil-

lion over the FY2007-FY2016 period (reflecting the fact the conversion factor would be further reduced in future years under the SGR formula). A 1% update in 2007 would cost \$17 billion over the FY2007-FY2011 period and \$6.6 billion over the FY2007-FY2016 period. Excluding changes in spending attributable to the proposal from the Part B premium would increase these costs. A permanent fix would be even more costly than a temporary one-year or two-year fix. Replacing the SGR formula with an increase tied to the Medicare economic index (MEI) would cost \$58 billion over the FY2007-FY2016 period and \$218.2 billion over the FY2007-FY2016 period.

BENEFICIARY ROLE IN PAYMENT SYSTEM

Payments for physicians' services account for close to 50% of Part B costs (7). Increased spending on physicians' services therefore has a considerable impact on overall Part B costs, and by extension on the amount beneficiaries are required to pay in monthly Part B premiums.

By law, beneficiary premiums equal 25% of Part B program costs. The 2005 monthly premium (\$78.20) represented a 17.4% increase over the 2004 premium (\$66.60). The 2006 premium (\$88.50) is 13.2% over the 2005 amount.

The 2006 amount was computed prior to passage of the DRA provision preventing a negative update to the conversion factor. This provision has the effect of increasing Part B costs and by extension, the Part B premium. The increase will first be reflected in the 2007 premium amount.

Issues Related to Patient Access

Numerous questions have been raised about beneficiaries continued access to care. In 2002, the year the conversion factor was cut, press reports in many parts of the country documented many cases where beneficiaries were unable to find a physician because physicians in their area were refusing to

accept new Medicare patients. Despite slight increases in the updates for 2003, 2004, and 2005, (and the freeze in 2006), some physicians claim that program payments continue to fall significantly short of expenses (7). They suggest that problems will be magnified if the cuts, scheduled to begin in 2007, are allowed to go into effect (7). However, these suggestions have not been supported by MedPAC or CMS.

In an April 2006 article of AMA¹, it was shown that a projected Medicare reimbursement cut of 5% next year and cumulative cuts of 34% over the next nine years would force physicians to make difficult choices when it comes to seeing elderly and disabled patients. The AMA concluded from the results of a recent member connect survey of more than 8,000 doctors, results showing that 16% of the physicians will stop accepting new patients, whereas 3% will stop accepting established patients. This survey also showed that 29% of the physicians will decrease seeing new patients in contrast to 20% decrease seeing established patients. Further, this survey showed that at least 50% of the physicians will defer medical equipment purchase, reduce time spent with Medicare patients, defer health information technology purchase, begin referring complex cases, and stop providing certain services.

MedPAC and CMS demonstrated that beneficiary access to physicians' services is generally good, based on periodic analyses. In fact, MedPAC's 2006 report reviewed several surveys conducted between 2003 and 2005. Comparing access for Medicare beneficiaries with that for privately insured persons age 50 to 64. Based on these surveys, it was concluded that for both groups access to physicians was good and for some indicators was slightly better for the Medicare population. Similarly, in the CMS-sponsored Consumer Assessment of Health Plans Survey for Medicare fee-for-service (CAHPS-FFS), almost all (95%) beneficiaries in 2004 reported having small or no problems receiving care they or their doctor thought

necessary. A second survey by CMS targeted 11 market areas suspected of access problems. This Targeted Beneficiary Survey, conducted in 2003 and 2004, found that even in these selected areas, only a small percentage of patients had access problems attributed to physicians not taking new patients (7). The Center for Studying Health Systems Change (HSC) reported that after a significant decline from 1997 to 2001, access to physicians' services had stabilized between 2001 and 2003. In this study, while only 9.9% of Medicare beneficiaries reported delaying or not getting need care in 2003, compared to 11.0% in 2001, it was 17.4% in 2003 and 18.4% in 2001 among the privately insured near-elderly population (7).

Physician Supply

MedPAC reported that the growth in the number of physicians regularly billing Medicare fee-for-service patients has more than kept pace with the recent growth in the Medicare population. MedPAC reported that in 2004, 483,945 physicians regularly billed Medicare, accounting for 12.5 physicians per 1,000 Part B Medicare beneficiaries. This represented an increase from the physician population ratio of 11.7 recorded in 1999. Over the 1999-2004 period, Part B enrollment grew 4.8%, the number of physicians with 15 or more Medicare patients grew 11.9%, and the number with 200 or more Medicare patients grew 20.7% (7).

A related concern is the possible decline in the percentage of physicians accepting new Medicare patients. However, MedPAC reports that the large majority of physicians in the U.S. are willing to accept new Medicare patients. It cites results from a 2004-2005 survey by HSC showing that only 3% of practices open to new private patients completely closed their practices to new Medicare patients, while 73% reported that they accepted all new Medicare patients (7).

While access remains good for Medicare beneficiaries, many observers are concerned that the situation could change if future cuts slated to occur

through application of the SGR methodology are allowed to occur. MedPAC does not support the consecutive annual cuts called for in the law. It is concerned that such cuts could threaten beneficiary access to physicians' services over time, particularly those provided by primary care physicians.

In March 2006, the AMA announced the results of its recent physician survey, indicating 45% of physicians would decrease or stop seeing new Medicare patients if the 2007 cuts were allowed to go into effect.

EVIDENCE BASED MEDICINE

Multiple concerns facing policy makers include increased volume and intensity, but also wide geographic variations in the number and intensity of services provided, even among physicians in the same specialty. Further, analyses of these geographic variations shows that increased service use does not necessarily translate into increased quality or improved health outcomes. Consequently, MedPAC, Congress, CMS, and some physician groups have recommended incorporating quality measurements based on evidence-based medicine into the payment calculation. The systems will allow physicians with higher quality performance to receive higher reimbursement, while those with lower quality performance would be paid less. It has been labeled this "pay for performance" (or "P4P").

In 2005, MedPAC recommended approaches that would allow Medicare to differentiate among providers when making payments as a way to reduce inappropriate volume of services and improve quality. It suggested that as a first step, Congress should adopt budget neutral pay for performance programs, starting with a small share of payments. For physicians, the first step would be a set of measures related to the use and functions of information technology.

MedPAC was concerned that the issue of increased volume, particularly for imaging services needed to be ad-

dressed. It recommended that Medicare measure resource use and share the results with physicians on a confidential basis; physicians would be able to compare their resource use with that of their peers (22).

CMS, in conjunction with a number of stakeholders, has reported that it is taking a variety of steps to analyze what utilization changes are associated with improvements in health and which have limited or questionable health benefits (23). CMS worked with AMA and some specialty societies to develop quality measures. CMS also planned on undertaking a number of demonstration projects, several mandated by Congress, aimed at testing P4P principles, which included Physician Group Practice Demonstration, Medicare Health Care Quality Demonstration, and Medicare Care Management Performance Demonstration.

In October 2005, CMS announced a physician voluntary reporting program (PVRP), which would begin January 1, 2006 (24). Under PVRP, physicians who chose to participate would report information to CMS about the quality of care they provided. Physicians choosing to report would select those measures relevant to the services they provided. The measures would come from a group, selected by CMS, of 36 evidence-based clinically valid measures widely recognized as being appropriate for indicating quality of care. However, there would be no penalty for physicians who did not report, nor would claims be denied for failure to report information.

Due to objections from physician community on December 23, 2005, CMS announced revisions to the PVRP. It reduced the number of evidence-based measures to a "starter set of 16." It also provided for the collection of quality information using the administrative claims system rather than retrospective chart abstraction (the usual source of clinical data for quality measures). To assist this process, CMS has developed specific codes (labeled G codes) to report data for the calculation of quality

measures.

RELEVANCE TO INTERVENTIONAL PAIN MANAGEMENT

Interventional pain management is an emerging specialty. Consequently, the problems faced by this specialty may be disproportionate compared to established specialties. Interventional pain management is also faced with increased utilization. Increased utilization will reduce the reimbursement for procedures, as the total amounts dispensable are limited, also known as budget neutrality. Rapid advances in interventional pain management have enhanced the ability of physicians to diagnose and treat a variety of painful conditions. This enhanced ability often leads to improved outcomes for patients. However, these improvements, combined with a rise in entrepreneurial activity by physicians, the practice of defensive medicine in order to avoid malpractice suits, and the power of patients who demand more tests and treatments, have led to sharp increases in the volume of interventional pain management services and the expenditures for them. This may have similar effects as imaging services. For imaging services, in recent years, growth in spending has outstripped that of most other services covered by Medicare and private insurers (11). In response, similar to imaging, many private insurers either have narrowed or may narrow their provider networks, may require all interventional pain management services be pre-authorized, and may either have imposed or may impose other constraints to prove medical necessity and brand many procedures as experimental or investigational. Much of the rapid growth in interventional techniques is attributable to the expanded coverage of the procedures in multiple settings including facility and non-facility, increased understanding of the pain and the ability of understanding by the patient community to be managed for their pain problems, the emergence of sophisti-

cated and accurate diagnostic and therapeutic interventions, and the emergence of evidence-based medicine and clinical guidelines based on evidence-based medicine (25-27).

Based on growth patterns and various other issues, Medicare and other insurers have been developing coverage policies at various levels. While coverage policies generally reduce utilization, they may also improve appropriate care by documentation of medical necessity, and reduce fraud and abuse investigations. Since interventional pain management is a predominantly procedural based service in contrast to pain medicine, which is a cognitive based service, the recent proposed changes to the physician fee schedule methodology could be harmful for the specialty of interventional pain management. At the same time, this may be an opportunity for interventional pain management to establish not only its distinctive nature differing from pain medicine and other specialties, but also to establish practice values, within the framework of budget neutrality. Thus far, interventional pain management has been valued predominantly as anesthesiology with lowest practice expense. However, the distinctive and diverse nature of interventional pain management deserves a separate survey to provide appropriate data to Medicare. Thus, American Society of Interventional Pain Physicians will participate in a specialty survey to be conducted by the American Medical Association.

CONCLUSION

In 2006 and beyond, interventionalists will face a number of evolving economic and policy-related issues, including reimbursement discrepancies, issues related to CPT coding, issues related to utilization, fraud, and abuse. With a new assault on the growth of Medicare spending overall by the administration, Congress, private insurers and the public, the rapid increase in expenditures for medical services in gen-

eral, and physician services in particular, will remain a highly visible target. Interventional pain management is no exception. Present issues relate to a proposed decrease in payment rate of 4.6% for 2007 and also major threat of steep cuts in reimbursement rates for interventional pain management procedures in ambulatory surgery centers, expected to be followed by in-office settings. During these trying times, MedPAC is preparing to accelerate its plan to recommend refinements of Medicare's physician fee schedule. In this process, the commission has concluded that the overpricing of some services, including imaging services, has been a factor in the rapid increase in their use (28). However, interventional pain management may not be too far behind. Even though, there is growing recognition of the clinical effectiveness of interventional pain management, interventional technology should be investigated and evidence of effectiveness must be documented, before they are used widely.

The importance of interventional pain management techniques has been heralded by the physicians and patients alike. However, it is imperative for the specialty of interventional pain management to prove the effectiveness of the diagnostic and therapeutic interventional techniques and improvement in quality of life and billed evidence to that effect. Further, it is also imperative that interventional pain physicians prove to be an asset even though, numerous efforts to produce evidence-based medicine and efforts to account for the quality and effectiveness of interventional techniques are being put forth, these efforts will be hampered as long as the turf wars between the society of interventional pain physicians and other societies continue without hindrance. These issues are similar to the turf wars between radiologists and other specialists (11). In general, such struggles will only dilute the power of the interventional pain management community in future deliberations.

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