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Medicare Physician Payment Systems: Impact of 2011 Schedule on Interventional Pain Management

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Physicians in the United States have been affected by significant changes in the patterns of medical practice evolving over the last several decades. The recently passed affordable health care law, termed the Patient Protection and Affordable Care Act of 2010 (the ACA, for short) affects physicians more than any other law. Physician services are an integral part of health care. Physicians are paid in the United States for their personal services. This payment also includes the overhead expenses for maintaining an office and providing services. The payment system is highly variable in the private insurance market; however, governmental systems have a formula-based payment, mostly based on the Medicare payment system. Physician services are billed under Part B.

Since the inception of the Medicare program in 1965, several methods have been used to determine the amounts paid to physicians for each covered service. Initially, the payment systems compensated physicians on the basis of their charges. In 1975, just over 10 years after the inception of the Medicare program, payments changed so as not to exceed the increase in the Medical Economic Index (MEI). Nevertheless, the policy failed to curb increases in costs, leading to the determination of a yearly change in fees by legislation from 1984 to 1991. In 1992, the fee schedule essentially replaced the prior payment system that was based on the physician's charges, which also failed to live up to expectations for operational success. Then, in 1998, the sustainable growth rate (SGR) system was introduced. In 2009, multiple attempts were made by Congress to repeal the formula – rather unsuccessfully. Consequently, the SGR formula continues to hamper physician payments. The mechanism of the SGR includes 3 components that are incorporated into a statutory formula: expenditure targets, growth rate period, and annual adjustments of payment rates for physician services. Further, the relative value of a physician fee schedule is based on 3 components: physician work, practice expense (PE), and malpractice expense that are used to determine a value ranking for each service to which it is applied. On average, the work component represents 53.5% of a service's relative value, the fee component represents 43.6%, and the malpractice component represents 3.9%.

The final schedule for physician payment was issued on November 24, 2010. This was based on a total cut of 30.8% with 24.9% of the cut attributed to SGR. However, as usual, with patchwork efficiency, Congress passed a one-year extension of the 0% update, effective through December 2011. Consequently, CMS issued an emergency update of the 2011 Medicare fee schedule, with multiple revisions, resulting in a reduction of the conversion factor of \$36.8729 from December 2010 to \$33.9764 for 2011.

Key words: Health policy, physician payment policy, physician fee schedule, Medicare, sustained growth rate formula, interventional pain management, regulatory reform

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Physicians in the United States have been affected by significant changes in the pattern(s) of medical practice evolving over the last several decades. These changes include new measures to: 1) curb increasing costs, 2) increase access to patient care, 3) improve the quality of health care, and 4) pay for prescription drugs (1-6). Escalating health care costs have focused concerns about the financial impact of health care and solvency of Medicare, which in turn has fostered a renewed interest in the economic basis of interventional pain management practices. The historic enactment of affordable health care, the Patient Protection and Affordable Care Act of 2010 (the ACA, for short), has changed the entire landscape of the practice of medicine in the United States (7-19). The ACA has far reaching goals including insuring 34 million more Americans. However, it falls short in fixing multiple aspects of the health care system including cost and quality (8-19). Consequently, health care reform, contrary to the administration's opinions, will result in highly regulated health care in the United States, with empowerment of insurers and finally, indiscriminate cost cutting based on partisan, irresponsible, unaccountable evidence-based medicine (EBM) and comparative effectiveness research (CER), creating a shadow government with enormous powers (3-42).

In recent years, the health care industry in general, and care of chronic pain in particular, for both patients and providers, have taken a beating as most patients do not stop getting sick or stop seeking treatment for their conditions during a down economy (8,19,43-47). For patients requiring interventional pain management services, a lack of finances, the loss of jobs, and an increase in co-pays leads them to defer medical spending for their conditions in favor of paying for daily necessities (19). Because of a multitude of factors, such as downward pressure on patients seeking interventional pain management, issues of reimbursement, and increasing operational costs, physicians can find themselves in financial difficulties. The levels of distress are variable. Many of the techniques utilized by businesses during an economic downturn are not applicable to interventional pain management. Economic downturn and troubled times have affected not only physicians, but ambulatory surgery centers, as well as hospitals and all sectors of health care.

Medicare paid over \$60 billion in 2008 and \$64 billion in 2009 for physician services (42) with sub-

stantial turbulence during 2010 due to a partisan Congress, passage of ACA, and a piecemeal extension holding off on cuts from taking effect was enacted, resulting in no cuts during 2010, and for 2011 (7). Thus, all that the physician community hoped for was to stay afloat without any significant cuts, with the passage of multiple temporary fixes and finally, a short-term fix for 2011 (1,3-5,48-50). However, on December 29, 2010, the Department of Health and Human Services (DHHS) Centers for Medicare and Medicaid Services (CMS) issued transmittal 828 entitled, "Emergency Update to the CY2011 Medicare Physician Fee Schedule Database," which reduces the conversion factor from December 2010 \$36.8729 to CY 2011 conversion factor of \$33.9764 – a 7.9% reduction (51). This essentially is lower than the fee schedule of 2008, which was \$34.1350, 2009, which was \$36.0666, and 2010, which was \$36.8729 (51-55).

In this manuscript, we will critically analyze various issues related to Medicare payments for interventional pain physicians and the impact of ACA on physician services.

1.0 PHYSICIAN SERVICES PAYMENT SYSTEM

Physician services include office visits, surgical procedures, and a broad range of other diagnostic and therapeutic services. These services are furnished in all settings, including physicians' offices, hospitals, and ambulatory surgical centers. Consequently, procedures provided in an office setting are also affected by physician payment regulations. Physician services are billed to Part B, for which Medicare paid approximately \$64 billion in 2009, accounting for 13% of total Medicare spending (42).

Medicare pays for physician services based on a list of services and their payment rates, called the physician fee schedule. Under the physician fee schedule, the unit of payment is generally the individual service, such as an office visit or a diagnostic procedure. These products range from narrow services such as an injection to broader bundles of services associated with surgical procedures, which include the surgery and related visits. All services – surgical and non-surgical – are classified and reported to CMS according to Healthcare Common Procedure Coding System (HCPCS), which contains codes for about 7,000 distinct services (56). Medicare is a nationwide program which offers health insurance protection for 43.292 million aged and disabled persons in 2011. Currently approximately 80% of those beneficiaries obtain covered services through the original

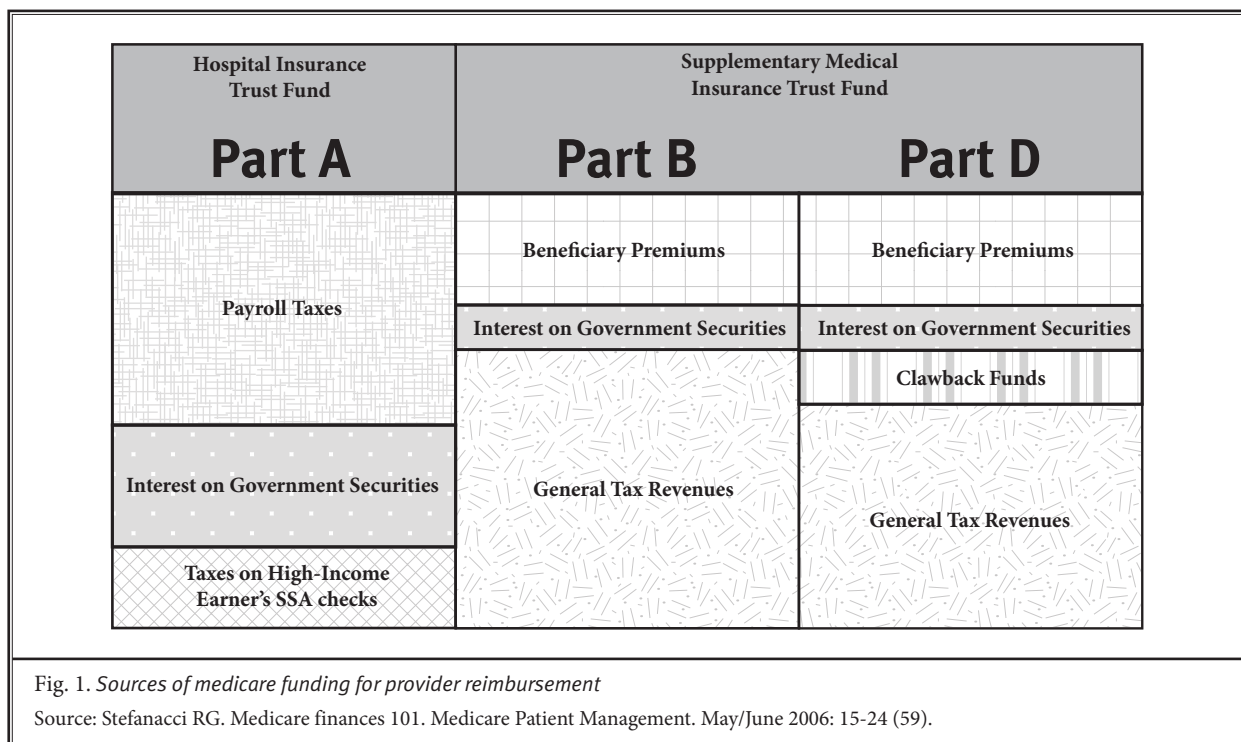
Medicare program, also referred to as fee-for-service (FFS) Medicare. The remaining 20% of beneficiaries are enrolled in managed care organizations, under Medicare Advantage organizations. Under the FFS program, beneficiaries obtain services through providers of their choice, and Medicare makes payment for each service rendered or for each episode of care, whereas under the Medicare Advantage program, the entities which insure Medicare beneficiaries assume the risk for providing all covered services in return for a fixed monthly per capita payment. Further, in the FFS program, the deductible is \$100 per enrollee with a 20% co-pay, whereas in the Medicare Advantage program, the deductibles can range up to \$6,700 (57). Overall, Medicare enrollees in 2009 were 42.846 million. In 2010, it was 43.932 million. Of this, in 2009, Medicare Advantage plan enrollment was 11.098 million and in 2010, it was 11.683 million. Medicare Advantage is by law expected to cover all the services provided by FFS, even though these regulations are frequently not followed.

2.0 MEDICARE BASICS

Medicare has 4 programs or parts, namely Medicare Parts A, B, C, and D. However, Medicare has only

2 funds to pay providers for serving beneficiaries in each of these programs as illustrated in Fig. 1 (58,59). 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% earned income from the current workforce (59). The funding also comes from interest and a portion of certain high income earners or Social Security Administration (SSA) payments. Medicare Part A helps pay for hospital care, skilled nursing facilities, hospice care, and some home health care.

SMI consists of Medicare Part B and 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-saving subsidies. The SMI trust fund is financed by a combination of beneficiary premiums and general tax revenues. Funding for the SMI trust fund is set at approximately 25% from beneficiary premiums and 75% from general tax revenue.



3.0 EVOLUTION OF PHYSICIAN PAYMENT SYSTEM

In the United States, physicians are paid for their personal services. This payment also includes the overhead expenses for maintaining an office and providing services. The payment system is highly variable in the private insurance market; however, governmental systems have a formula-based payment, mostly based on the Medicare payment system.

Since the inception of Medicare programs in 1965, several methods have been used to determine the amounts paid to physicians for each covered service. Initially, payment systems compensated physicians on the basis of their charges and allowed physicians to balance their books by billing beneficiaries for the full amount above what Medicare paid for each service. While these were considered to be the "golden years" by physicians practicing in the 1960s, this halcyon era was short lived. In 1975, just 10 years after the inception of the Medicare program, payments changed so as not to exceed the increase in the Medical Economic Index (MEI) (60-62). Nevertheless, the policy failed to curb increases in costs, leading to the determination of a yearly change in fees by legislation from 1984 to 1991 (60-62).

In 1992, the fee schedule essentially replaced the prior payment system that was based on physicians' charges. Finally, after multiple attempts at modification, the system was replaced by a new mechanism — the sustainable growth rate (SGR) system in 1998. In 2009, multiple attempts were made by Congress to repeal the formula. The House of Representatives passed such a bill, but replaced it with another formula which is considered the same or more onerous than SGR (63). H.R. 3961 replaced SGR with a target growth rate (TGR), but it never became law. This might have resulted in elimination of the projected cuts with a clean slate, but physicians would have seen their Medicare rates slashed again in 2011. The TGR formula could have resulted in the following: 1) allow physician payment rates to be slashed if government-set spending targets are exceeded (historically they have been every year since 1997); 2) tie spending targets to the gross domestic product (GDP) similar to SGR, consequently, physicians would continue to be punished when the economy slows down; 3) tie physician reimbursement rates to utilization, continuing to punish providers who focus on delivering high-quality care while rewarding those who focus on volume.

3.1 Resource-Based Relative Value System

Since January 1, 1992, Medicare has paid for physicians' services based on national uniform relative value units (RVUs), based on the relative resources used in furnishing services. The national RVUs are established for physician work, practice expense (PE), and malpractice expense (52-56)

Starting in 1998, practice expense relative value units (PERVUs) were also developed with consideration of general categories of expenses (such as office rent and wages of personnel, but excluding malpractice expenses) comprising PEs. Separate PERVUs were established for procedures that can be performed in both non-facility settings, such as physicians' offices, and a facility setting, such as a hospital outpatient department (HOPD). The difference between the facility and non-facility RVUs reflects the fact that a facility typically receives separate payment from Medicare for its costs of providing the service, apart from payment for physicians' services. Consequently, the non-facility RVUs reflect all of the direct and non-direct PEs of providing a particular service — essentially representing the facility portion of the office expense.

Similar to PERVUs, resource-based malpractice relative value units (MPRVUs) were established for services furnished on or after 2000. The MPRVUs were based on malpractice insurance premium data collected from commercial and physician-owned insurers from every state.

Since the initial implementation, RVUs have been refined several times. The first 5-year review of physician work RVUs was effective in 1997; the second 5-year review was effective in 2002. The third 5-year review of physician work RVUs was effective on January 1, 2007. As part of the 2007 final rule, CMS implemented a new methodology for determining resource-based PERVUs and are transitioning it over a 4-year period. This has led to significant cuts in physician payments and office overhead payments for interventional techniques.

Adjustments to RVUs are budget neutral. Further, to calculate the payment for every physician's service, the components of the fee schedule, namely physician work, PE, and MPRVUs, are adjusted by a geographic practice cost index. The index reflects the relative costs of physician work, PE, and malpractice expense in an area compared to the national average cost for each component.

3.2 Sustained Growth Rate (SGR) Formula

The sustained growth rate (SGR) formula which is in effect now continues to hamper physician payments.

The mechanism of the SGR includes 3 components that are incorporated into a statutory formula: first, expenditure targets, which are established by applying a growth rate (calculated by a formula) to spending during a base period; second, the growth rate period; and third, the annual adjustments of payment rates for physicians' services, which are designed to bring spending in line with expenditure targets over time. Further, as described earlier, the relative value of a physician fee schedule is based on 3 components — physician work, practice expense (PE), and medical economic indexes (MEIs) that are used to determine a value ranking for each service to which it is applied. On average, the work component represents 52.5% of a service's relative value, the PE component represents 43.6%, and the malpractice component represents 3.9% (64). The volume and intensity of services have increased on average about 4.5% from 1997 through 2009. Since 2002, spending (as measured by the SGR method) has consistently been above the targets established by the formula (1,51,64,65). Figure 2 illustrates changes in the volume and intensity of total Medicare physician services from 1980 to 2007 (66).

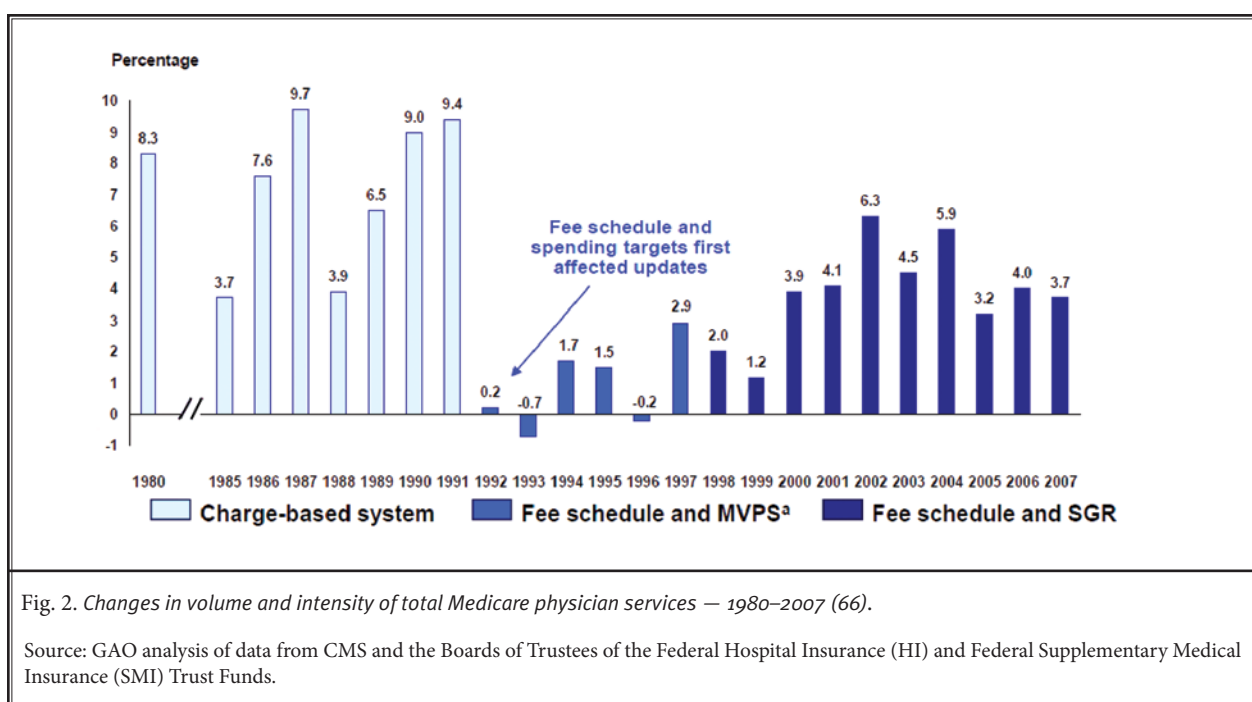
The SGR reductions in payment rates for physician services resulted in a cut of 4.8% in 2002 (67) with additional cuts of 4.4% in 2003 (68). In 2003, Congress responded by increasing payments for physician services

by 1.6% instead of the projected 4.4% cut (69). In 2004 and 2005, the Medicare Modernization Act (MMA) replaced the scheduled rate reduction with an increase of 1.5%. In 2006, the Deficit Reduction Act (DRA) held 2006 payment rates at their 2005 level, overriding an additional impending 4.4% reduction (70). In 2007, Congress again approved holding the 2008 payments at the 2005 level, thereby avoiding a proposed additional 5.1% reduction (71). From 2008 to 2011, repeated temporary measures were also undertaken (48-55,72-74).

3.3 Medicare Advantage (MA) Programs

The MA programs provide Medicare beneficiaries with an alternative to the FFS Medicare program. It enables them to choose a private plan to provide their health care. Those private plans can use alternative delivery systems and care management techniques. They also have the flexibility to innovate. While the commission supports the private plans in the Medicare program, it continues to consistently express concerns about the MA payment system.

In the Medicare Payment Advisory Commission's (MedPAC) analysis of data on enrollment, availability, payments, benefits, and quality, they found the following (72): first, about 22% of Medicare beneficiaries were enrolled in MA plans in 2008 and all beneficiaries had access to an MA plan in 2009; second, plans pro-



vide enhanced benefits to enrollees and overwhelmingly these benefits are not financed out of plan efficiency, but rather by the Medicare program and other beneficiaries, and at a high cost. MedPAC has estimated that each dollar's worth of enhanced benefits in private FFS plans costs the Medicare program over \$3. Third, quality is not uniform among MA plans or plan types. MedPAC commented that high quality plans tend to be established health maintenance organizations; more recent plans have lower rankings on many measures.

MedPAC's report to Congress stated that 9.9 million Medicare beneficiaries were enrolled in MA plans as of November 2008 and payments to MA plans continue to exceed what Medicare would spend for similar beneficiaries in FFS; MA payments per enrollee are projected to be 114% of comparable FFS spending for 2009. All in all, it appears that the MA program continues to be more costly than the traditional program.

Overall, there were 42.846 million Medicare enrollees in 2009. In 2010, it was 43.932 million. Of this, in 2009, Medicare Advantage Plan enrollment was 11.098 million and in 2010, it was 11.683 million (57).

Even so, MA plans pay physicians and facilities at a lower rate than Medicare with higher co-payments and significant deductibles for non-participating providers, who are not recognized. As per the MedPAC report, Medicare is paying at a rate of approximately 80% for

private payers. Private payers follow a similar philosophy as government payers and pay a certain percentage higher than Medicare reimbursement. Thus, cuts in Medicare will have a ripple effect with major benefits for the private insurance industry and substantial losses to providers.

3.4 Relative Value Determination of Physician Services

Three types of resources, physician work, practice expense (PE), and malpractice expense, are estimated for each service as relative value units (RVUs) (73,74). The total RVUs for a service measures its resource use relative to the resource use of all other physician services in the fee schedule. The Medicare payment for a service is the product of its RVUs and a conversion factor that translates the RVUs into dollars. If the RVUs do not accurately reflect the variation and resource use across physician services, then some services in the fee schedule will be overvalued and others undervalued. Figure 3 illustrates various steps involved in physician payment determination (56).

Consequently, inaccuracies in the fee schedule could cause adverse consequences for Medicare beneficiaries, providers, and the overall program. Access to undervalued services could be compromised if physicians could no longer afford or would be unwilling to provide them.

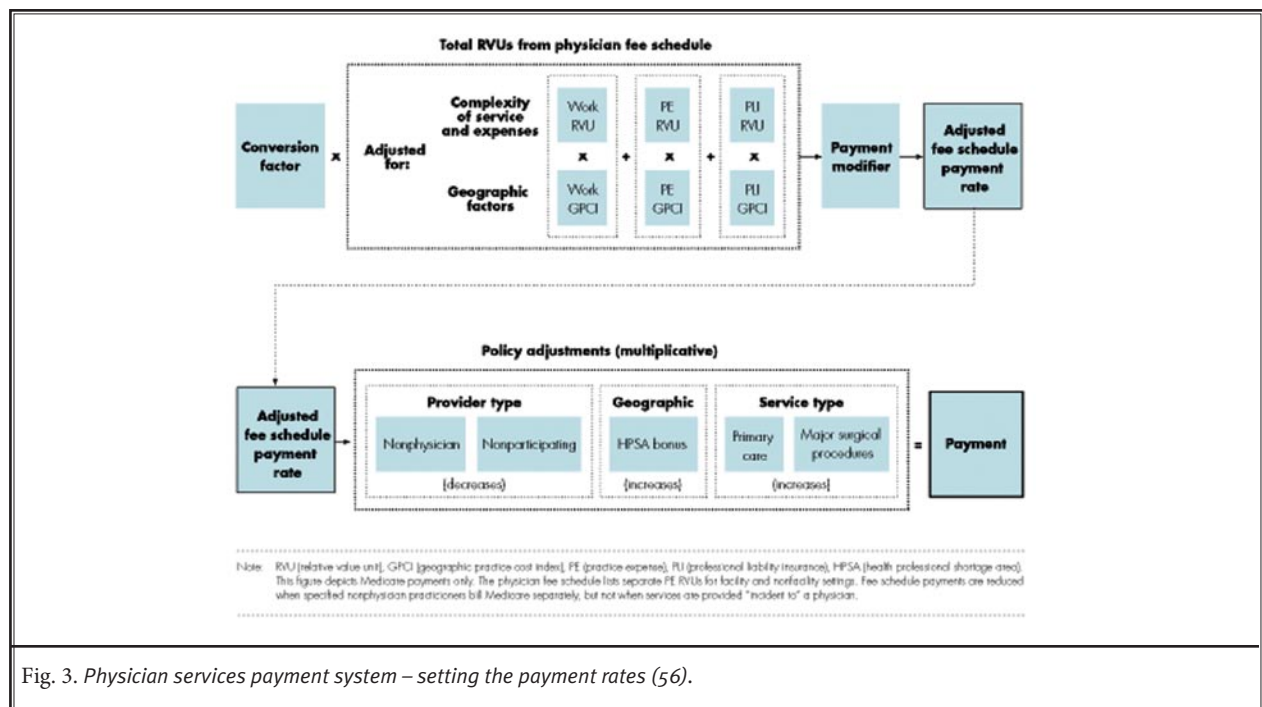


Fig. 3. Physician services payment system – setting the payment rates (56).

There is a widespread belief that evaluation and management services are undervalued, which has held down the income of physicians in primary care relative to other physician specialties (75). However, overall, even though this is believed to have contributed to declining numbers of U.S. medical school graduates practicing primary care, if some services are undervalued, then others are overvalued, which could have equally negative and widespread consequences for health care delivery.

ACA affects all segments of health care; it includes a section addressing the identification of potentially misvalued services, the collection of data to facilitate appropriate adjustments, and validation of the RVUs (7). Further, CMS is required to review and revise the relative rankings of all physician services at least every 5 years. In addition to this systematic process, CMS annually assigns values to new services, adjusts rankings for certain existing services, and makes other changes to the physician fee schedule. CMS in general follows recommendations from the American Medical Association (AMA)/Specialty Society Relative Value Scale Update Committee (RUC) and others in making these changes.

The 2 largest components of the fees, physician work and PEs, comprise about 95% of Medicare physician payments (54,73). Even though the data and methods for estimating the work and PE resources for each physician service has been updated and improved, annual changes to the fee schedule still raise comments about the accuracy of the RVUs (73). Consequently, questions persist about the adequacy of the data, the transparency of the processes, the involvement of medical speciality societies, CMS oversight, and the standards against which the estimates are valued (73).

To address the numerous difficulties and issues related to service and determination of costs for various components, a new physician practice information survey (PPIS) was established in 2007. The PPIS, administered in 2007 and 2008, was designed to update the specialty-specific practice expense per hour (PE/HR) data used to develop PERVUs. The PPIS is a multispecialty, nationally represented PE survey of both physicians and non-physician providers using a consistent survey instrument and methods highly consistent with those used in the past. The PPIS gathered information from 3,656 respondents across 51 physician specialties and health care professional groups. One hundred responses were from interventional pain management practitioners. Their survey was separate from pain medicine and anesthesiology. The PPIS is considered the most comprehensive source of PE survey information available to date. CMS proposed

to utilize the PE/HR developed using PPIS data for all Medicare recognized specialties that participated in the survey for payments effective January 1, 2010, including interventional pain management. While there have been positive and negative comments about PPIS data for interventional pain management it opened the avenue which we have been trying to open for the last decade. As shown in Table 1, interventional pain management is one of the beneficiaries of PPIS along with multiple other specialties, including pain medicine and anesthesiology. Originally, interventional pain management was paid based on payment assignments for anesthesiology. Subsequently, with input from specialty societies, following the survey, as shown in Table 1, interventional pain management payments increased from \$59.04 to \$156.79, in contrast to pain medicine which went from \$59.04 to \$122.42, and anesthesiology which went from \$19.76 to \$29.36 (54).

3.5 Medicare Spending on Physician Services

Medicare spending for FFS per beneficiary for physician services has increased annually. In the decade between 1998 and 2008, Medicare spending per FFS beneficiary on physician services increased more than 75% (76). It has been stated that even though the physician portion of Medicare spending is declining, the growth of spending on physician services is one of several contributing factors to Part B premium increases over this time period, resulting in continued issues with an SGR fix and non-SGR cuts (76). Further, per capita spending for disabled beneficiaries under age 65 is lower than per capita spending for aged beneficiaries with \$1,617 vs. \$1,911 in 2008. Overall, over the first 12 years of the SGR policy (1997 to 2008), Medicare spending for physician services – per beneficiary – increased by 90%. Medicare spending on physician services grew much more rapidly over this 12-year period than both the payment rate updates and the MEI. Physician fee schedule payment updates totaled 17% and the MEI increased 34% as illustrated in Fig. 4. Growth in the volume of services provided contributed significantly more to the rapid increase in Medicare spending than payment rate updates. Both factors, which included updates and volume growth, combined to increase physician expenses. The criticism is forwarded even though payment rate updates were only 17% compared to MEI, which increased 34% by their own estimates. In addition, it also has been stated that the number of physicians providing services to beneficiaries has kept pace with growth in the beneficiary population from 2001 to 2006, with the number of physicians per

Table 1. Indirect PE/HR for the specialties that have PPIS survey data.

Specialty	Previous indirect PE/HR	Final rule indirect PE/HR	Previous indirect %	Final rule indirect %
All Physicians	\$59.04	86.36	67	74
Allergy and Immunology	153.29	162.68	62	67
Anesthesiology	19.76	29.36	56	82
Audiology	59.04	72.17	67	85
Cardiology	131.02	88.04	56	65
Cardiothoracic Surgery	61.75	67.83	68	83
Chiropractor	49.60	65.33	69	86
Clinical Laboratory (Billing Independently)	66.46	68.32	37	37
Clinical Psychology	29.07	20.07	90	93
Clinical Social Work	29.07	17.80	90	97
Colon & Rectal Surgery	53.93	90.84	77	80
Dermatology	158.49	184.62	70	70
Emergency Medicine	36.85	38.36	88	94
Endocrinology	49.60	84.39	69	73
Family Medicine	52.79	90.15	62	76
Gastroenterology	101.30	96.78	70	75
General Practice	52.79	78.59	62	69
General Surgery	53.93	82.73	77	82
Geriatrics	49.60	54.14	69	74
Hand Surgery	98.56	148.78	72	77
Independent Diagnostic Testing Facilities	466.16	501.45	50	51
Internal Medicine	49.60	84.02	69	76
Interventional Pain Medicine	59.04	156.79	67	70
Interventional Radiology	118.48	82.56	58	81
Medical Oncology	141.84	145.81	59	59
Nephrology	49.60	66.00	69	80
Neurology	66.05	110.39	74	87
Neurosurgery	89.64	115.76	86	87
Nuclear Medicine	118.48	39.80	58	77
Obstetrics/Gynecology	69.74	99.32	67	67
Ophthalmology	103.28	170.07	65	70
Optometry	59.04	88.02	67	77
Oral Surgery (Dentist only)	96.01	173.19	71	65
Orthopaedic Surgery	98.56	131.40	72	81
Osteopathic Manipulative Therapy	59.04	53.93	67	93
Otolaryngology	96.01	141.54	71	75
Pain Medicine	59.04	122.42	67	70
Pathology	59.80	74.98	70	74
Pediatrics	51.52	76.27	62	69
Physical Medicine and Rehabilitation	84.92	110.13	71	84
Physical Therapy	35.17	57.26	65	84
Plastic Surgery	99.32	134.81	67	74
Podiatry	59.04	74.76	67	82
Psychiatry	29.07	30.10	90	94
Pulmonary Disease	44.63	55.26	76	74
Radiation Oncology (Hospital Based & Freestanding)	114.00	165.10	50	57
Radiology	118.48	95.60	58	71
Rheumatology	84.92	98.08	71	67
Urology	119.57	97.01	69	73
Vascular Surgery	60.10	83.98	63	73

Source: Department of Health and Human Services, Centers for Medicare & Medicaid Services. 42 CFR Parts 410, 411, 414, 415, 485, and 498. Medicare Program; Payment Policies Under the Physician Fee Schedule and Other Revisions to Part B for CY 2010; Final Rule; Medicare Program; Solicitation of Independent Accrediting Organizations To Participate in the Advanced Diagnostic Imaging Supplier Accreditation Program; Notice. Final Rule with comment period. November 25, 2009 (54).

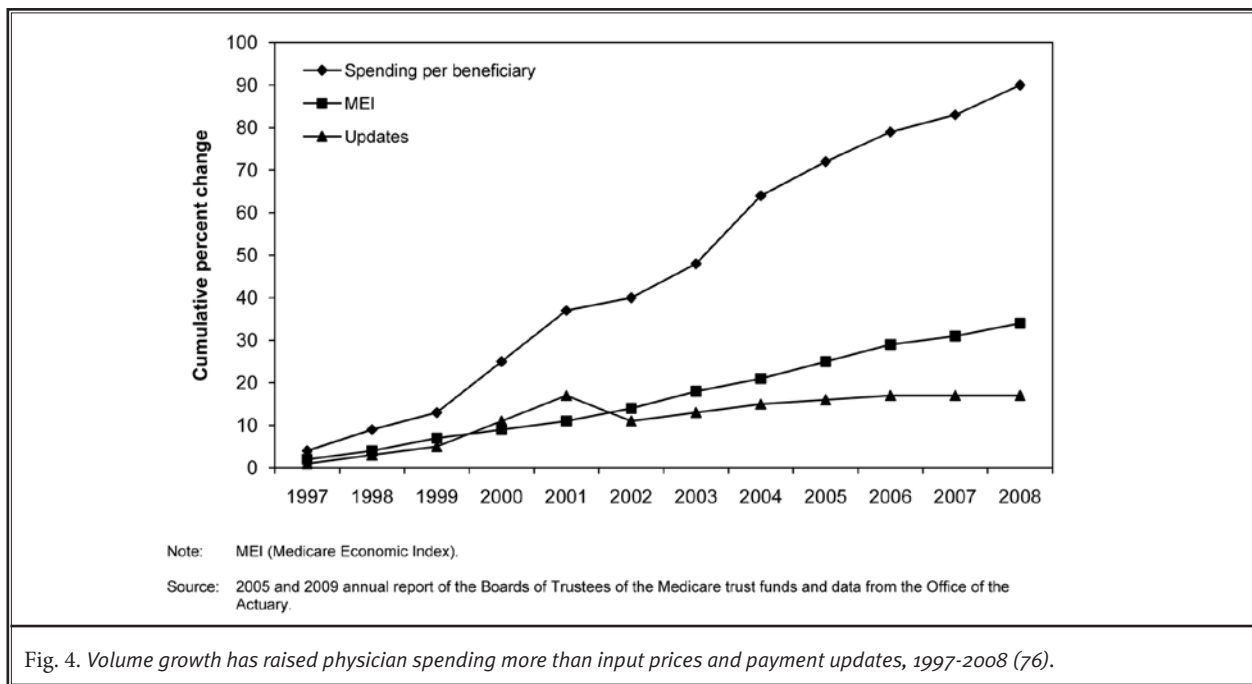


Fig. 4. Volume growth has raised physician spending more than input prices and payment updates, 1997-2008 (76).

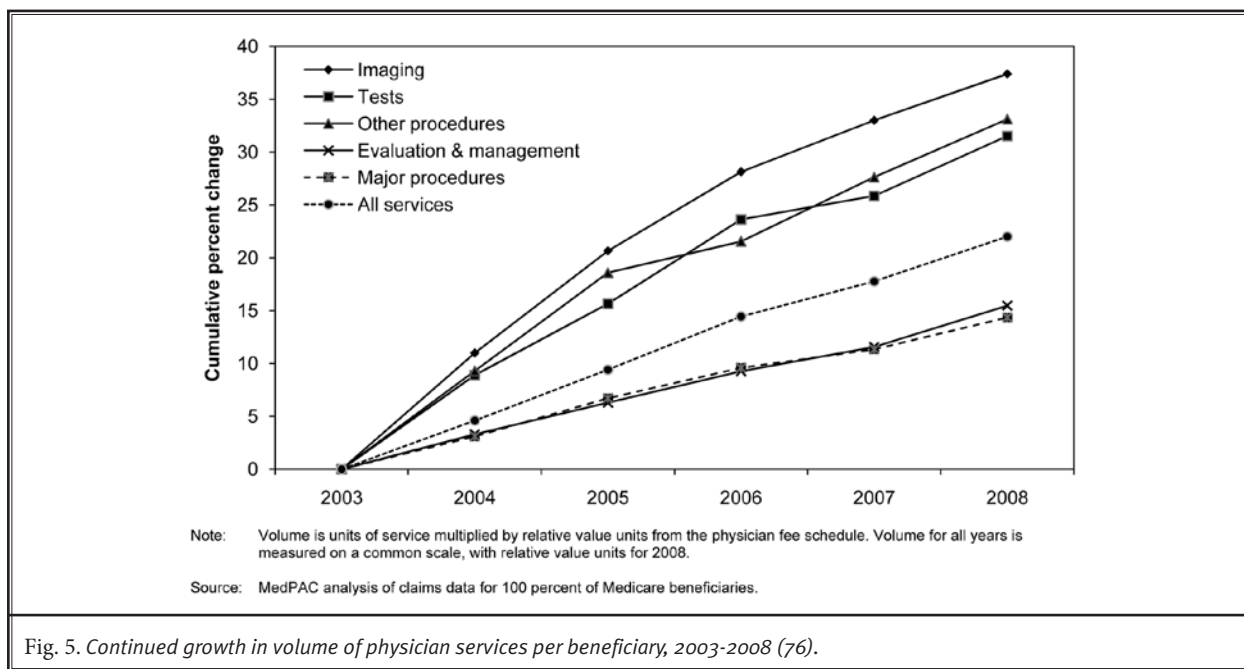


Fig. 5. Continued growth in volume of physician services per beneficiary, 2003-2008 (76).

1,000 beneficiaries being maintained relatively steady at a little more than 14 (76).

It is of concern to Medicare and all involved that services continue to grow in volume per beneficiary. From 2003 to 2008, the volume of physician services grew by 22% (76). By specific types of services, imaging,

tests, and other procedures, which include procedures other than major procedures each grew at a rate higher than 30%. The comparable growth rates for major procedures and evaluation and management services were relatively lower at 14.3% and 15.5%, respectively (Fig. 5). Even though a decline in volume growth has

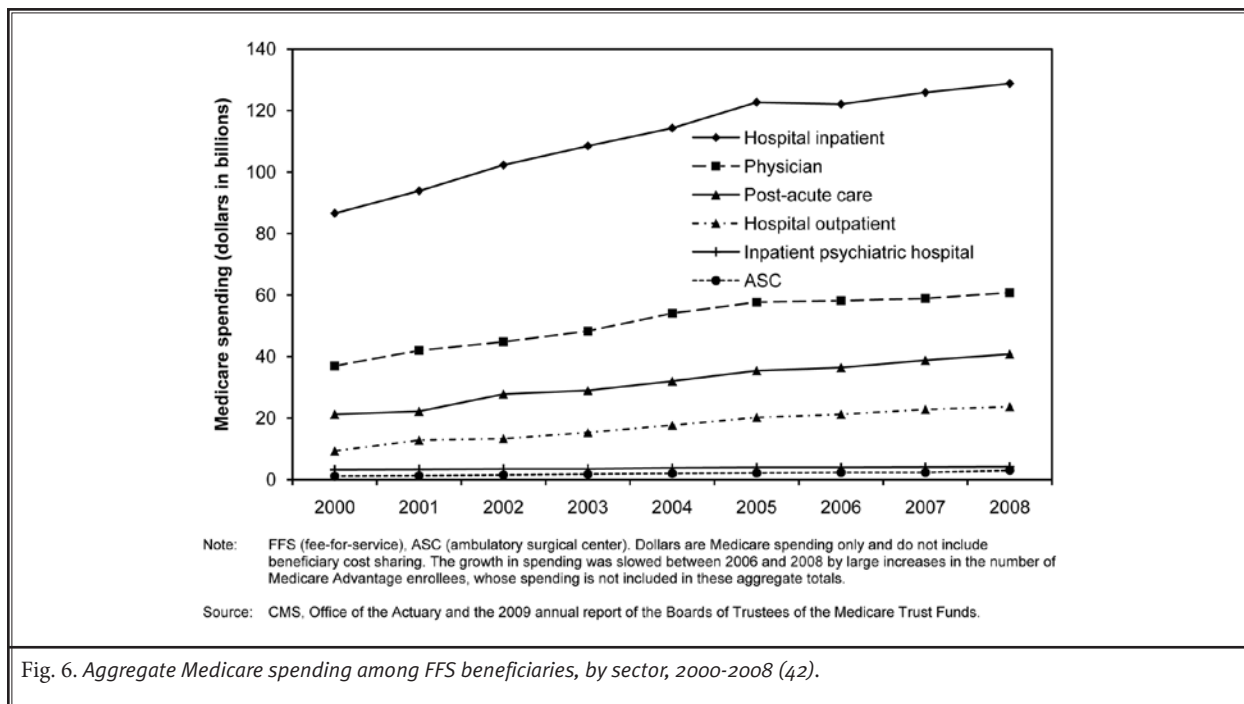


Fig. 6. Aggregate Medicare spending among FFS beneficiaries, by sector, 2000-2008 (42).

been seen, it continues to be a problem. From 2007 to 2008, services in the test category grew the most. They increased 4.5%; other procedures were next at 4.3%; followed by evaluation and management at 3.5%; imaging at 3.3%; and major procedures at 2.7%. MedPAC believes that rapid volume growth might be a sign that some services in the physician fee schedule are mispriced. MedPAC also states that because of the disproportionate growth in service volume, consultations have been eliminated (54). Further, MedPAC illustrates that professional liability insurance premiums have been declining gradually from 2007.

The most recent publication from MedPAC provides data on national health care and Medicare spending. Medicare spending among FFS beneficiaries grew strongly in most sectors from 2000 through 2005. The rate of growth slowed in 2006 through 2008, reflecting a decline in FFS enrollment, as many beneficiaries changed their enrollment to a Medicare Advantage Plan (Fig. 6) (42). Physician payments were number 2 just behind hospital inpatient, but above postacute care hospital outpatient, in-patient psychiatric hospital, and ambulatory surgery center payments. However, Medicare spending per beneficiary in FFS Medicare increased steadily in most sectors from 2000 through 2008 (Fig. 7) (42). This trend contrasts with slowed aggregate spending in FFS

Medicare from 2006 to 2008 caused by a decline in the number of FFS beneficiaries.

Of the \$1.9 trillion spent on personal health care in the United States in 2008, Medicare accounted for 23%, or \$444 billion, which excludes certain administrative and business costs. In addition, spending by all public programs – including Medicare, Medicaid, state children's health insurance program, and other programs – accounted for 47% of health care spending. Medicare continues to be the largest single purchaser of health care in the United States. Thirty-five percent of spending was financed through private health insurance payers and 14% from consumer out-of-pocket spending (Fig. 8) (42).

However, this data is in contrast to actual projections. In 2006 and 2007, it was projected that health care costs would be over \$2.1 trillion in 2006 and over \$2.8 trillion in 2010, reaching almost \$3 trillion in 2011 (77). Despite all our concern and complaints, health care expenses in 2008 and in 2009 were less than the projections of \$2.3 and \$2.5 trillion (78).

Figure 9 illustrates Medicare's share of total spending which varies by type of service (42). These services vary largely because Medicare covers an older, sicker population and does not cover services such as long-term care. In 2008, Medicare accounted for 29% of spending on hospital care, 21% of physician and clinical services, 41% of home health services, 19% of nursing home

Medicare Physician Payment Systems

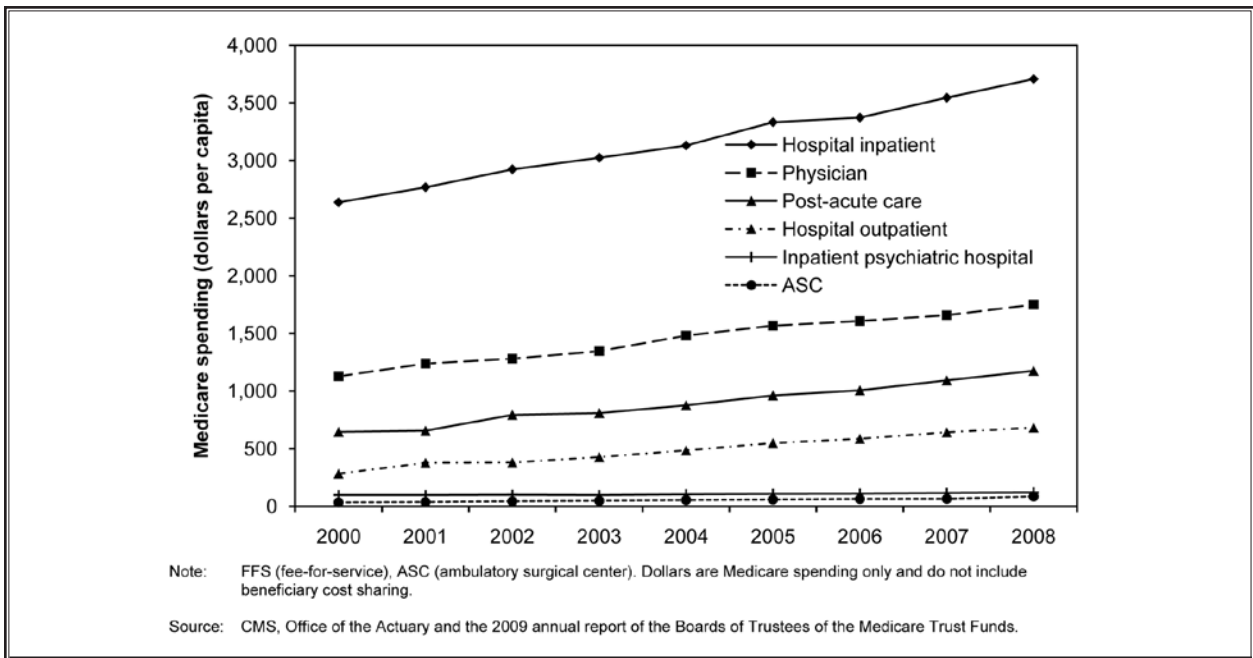


Fig. 7. Per capita Medicare spending among FFS beneficiaries, by sector, 2000-2008 (42).

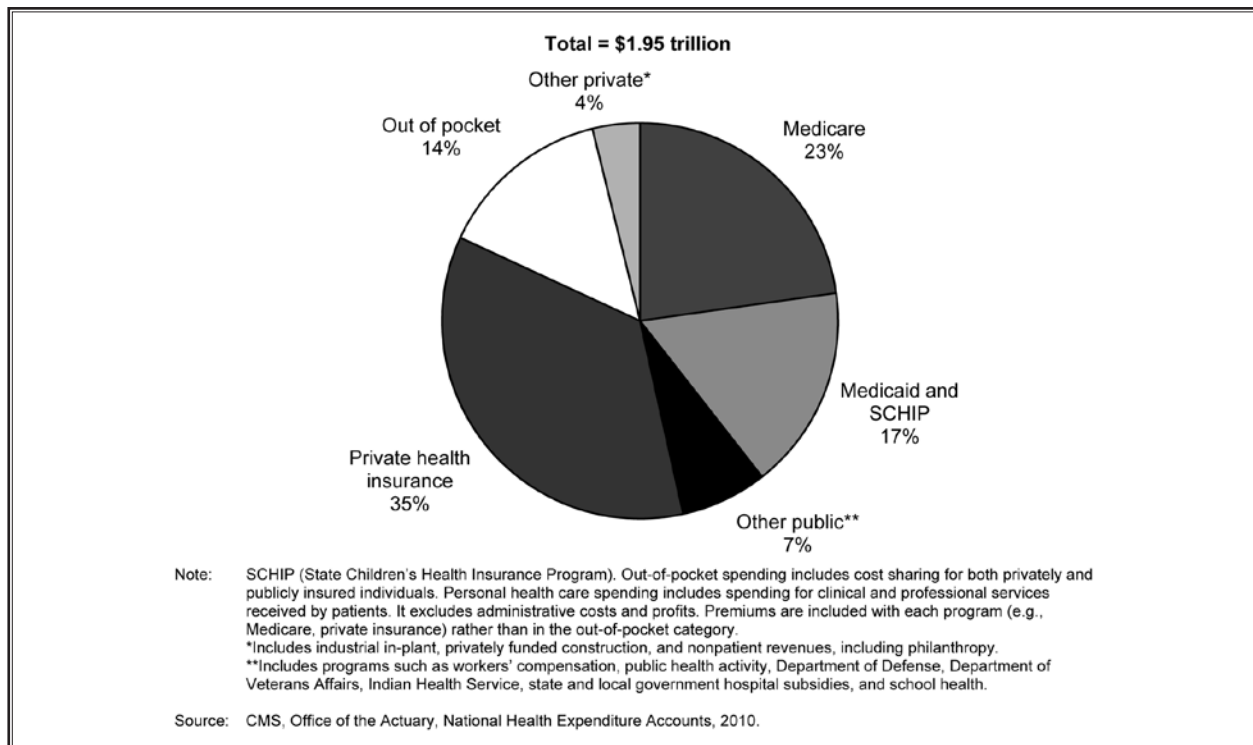


Fig. 8. Medicare made up over one-fifth of spending on personal health care in 2008 (42).

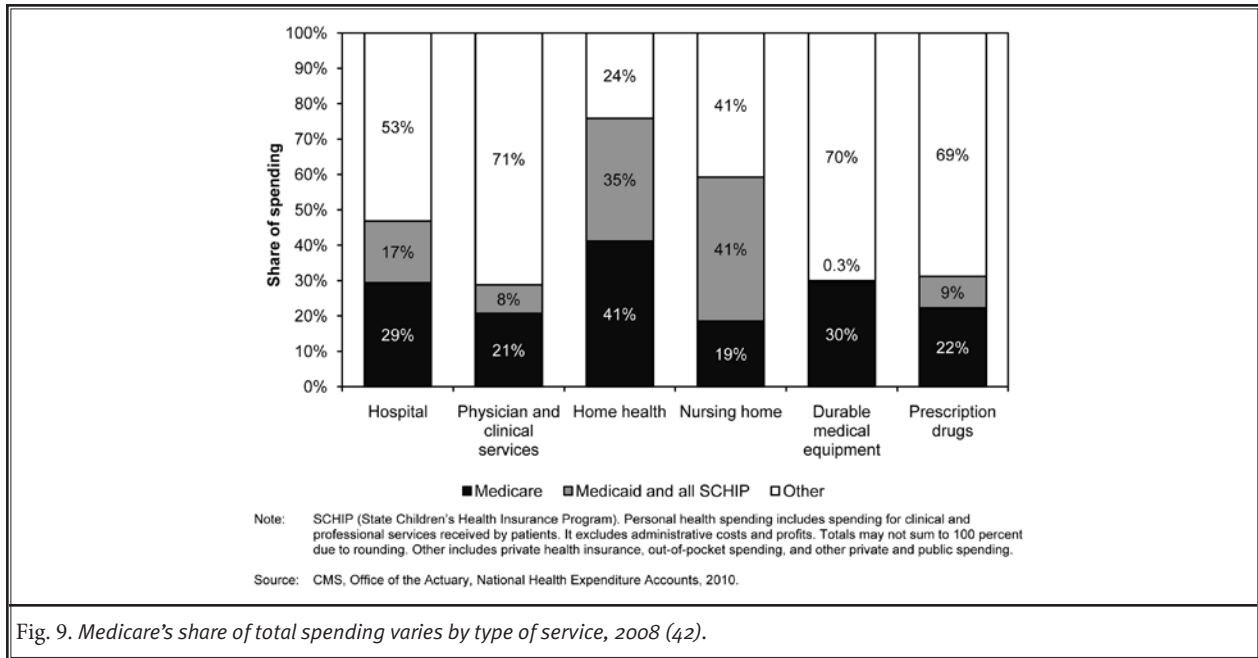


Fig. 9. Medicare's share of total spending varies by type of service, 2008 (42).

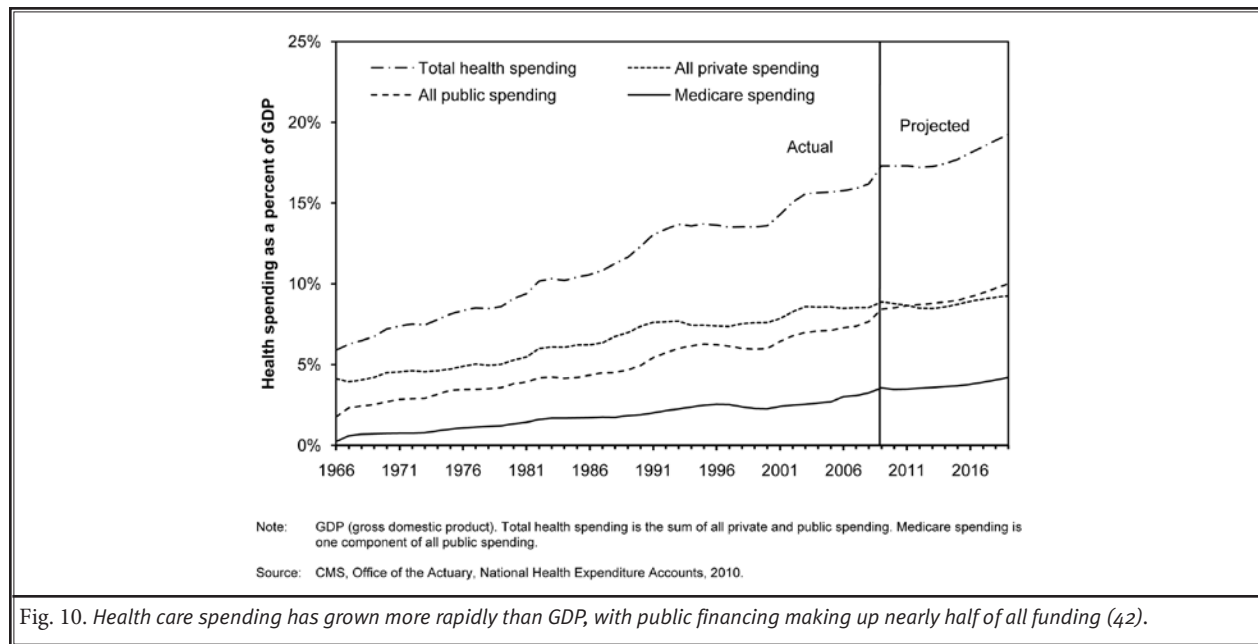


Fig. 10. Health care spending has grown more rapidly than GDP, with public financing making up nearly half of all funding (42).

care, 30% of durable medical equipment, and 22% of prescription drugs. However, health reform missed a major opportunity in controlling costs. Obviously Medicare has the lion's share of home health services and nursing home care, along with durable medical equipment costs and the cost of prescription drugs. The new health care law missed an opportunity to control these costs. Rather, the administration is approaching it through fraud and abuse investigations, etc (7,8,19).

As illustrated in Fig. 10, health care spending has grown more rapidly than GDP, with public financing making up nearly half of all funding (42). As a share of GDP, total health spending has increased from about 6% in 1965 to about 16% in 2008. It is projected to reach almost 20% of GDP in 2019. Health spending's share of GDP was stable throughout much of the 1990s due to slower spending growth associated with greater use of managed care techniques and higher enrollment

in managed plans, as well as a strong economy. However, ACA will reduce spending only by 0.5%; thus, instead of 20% of GDP in 2019, it will be 19.5%, which will not cure all the ills of health care that make providers nervous about the future.

3.6 The Future of Health Care in the United States

Medicare spending during this time has also grown as a share of the economy from less than 1% in 1965 to about 3% in 2008, with projections suggesting that Medicare spending will make up 4% of GDP by 2019. Further, in 2008, all public spending made up about 47% of the total health care spending and private spending made up 53%, but these percentages are expected to reverse by 2019 with a public share of 52% and private share of 48%. However, with the enactment of ACA, these projections might be quite off; public spending might increase by as much as 60% to 70% (7,8,19).

Not surprisingly, as most private insurers are adopting the principles of Medicare, rates of growth in per capita spending for Medicare and private insurance over the long-term have been quite similar (Fig. 11). Medicare spending has grown nearly 13-fold, from \$37 billion in 1980 to \$468 billion in 2008, which includes benefit payments and administrative expenses; however, benefit payments alone increased to \$491 billion in 2009 with inpatient hospital services by far the largest spending category (27%), followed by managed

care (22%), physicians (13%), outpatient prescription drugs provided under Part D (12%), and other FFS settings (8%) (42). Inpatient hospital payments, as well as FFS, were actually reduced from 1999 to 2009. Inpatient hospital expenses were 41% in 1999, whereas they were 27% in 2009 due to a shift of multiple services into outpatient settings. However, the physician fee schedule, constituting 16% of total spending, or \$280 billion in 1999, was reduced to 13% in 2009, or \$491 billion. Physician payments constituted 14.2% of total Medicare benefits in 2007 (42,76). One of the discrepancies might be that managed care payments, constituting 22% of the payments, enrolls less than 20% of the beneficiaries. Medicare spending for services is illustrated in Fig. 12, showing the physician fee schedule at 16% of expenses in 1999 and 13% in 2009 (42).

Medicare FFS spending is concentrated among a small number of beneficiaries as shown in Fig. 13. In 2006, the costliest 5% of beneficiaries accounted for 39% of the annual Medicare FFS spending and the costliest quartile accounted for 83% (42). By contrast, the least costly half of beneficiaries accounted for only 4% of FFS spending. Costly beneficiaries tend to include those who have multiple chronic conditions, those using inpatient hospital services, those who are dually eligible for Medicare and Medicaid, and those who are in the last year of life. It appears that chronic pain management is not counted as an expensive condition (42).

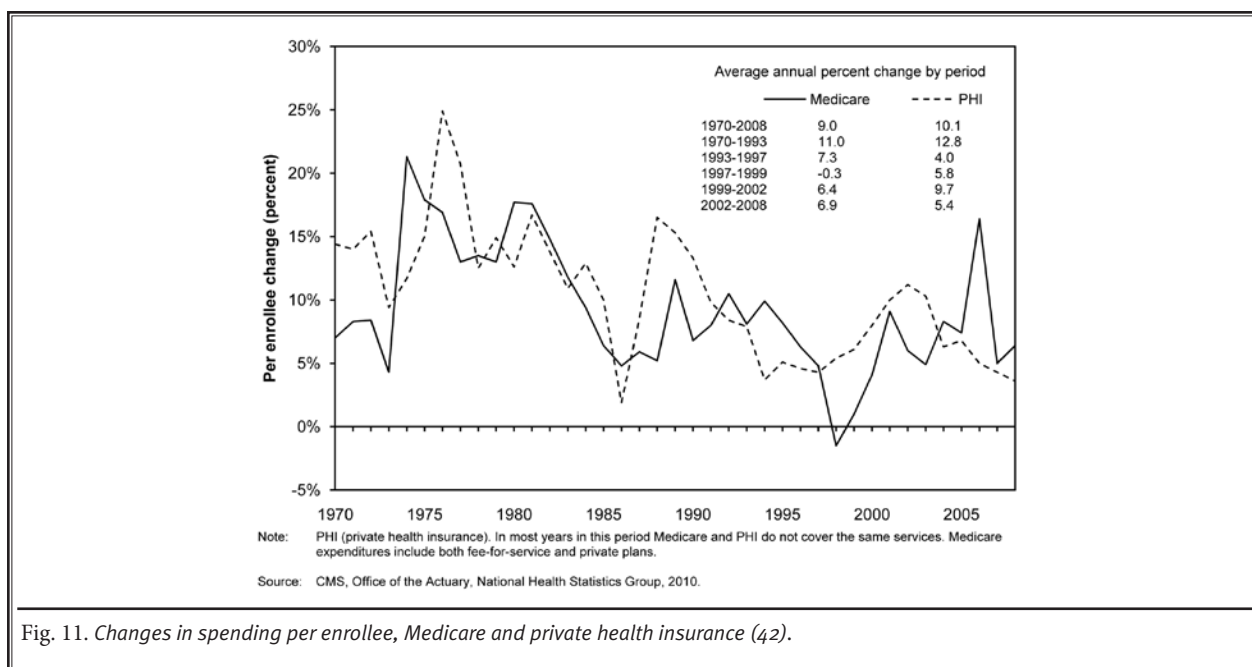
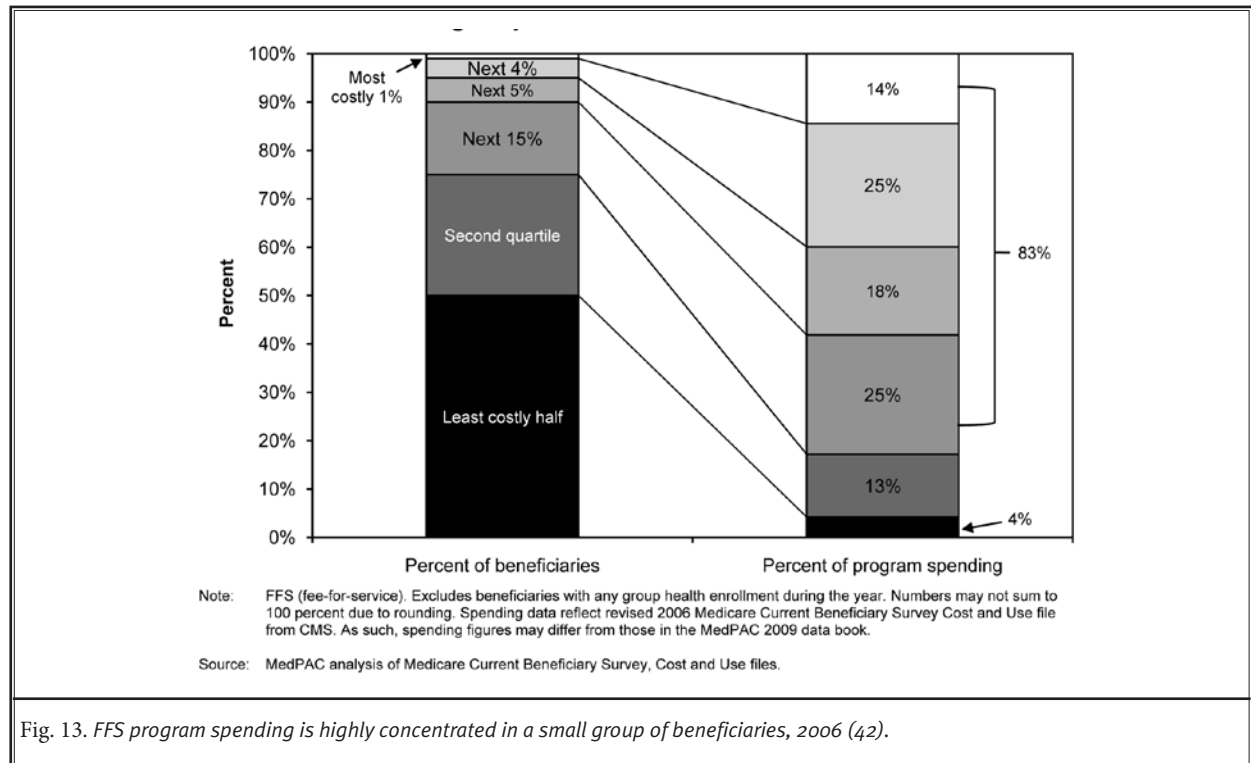
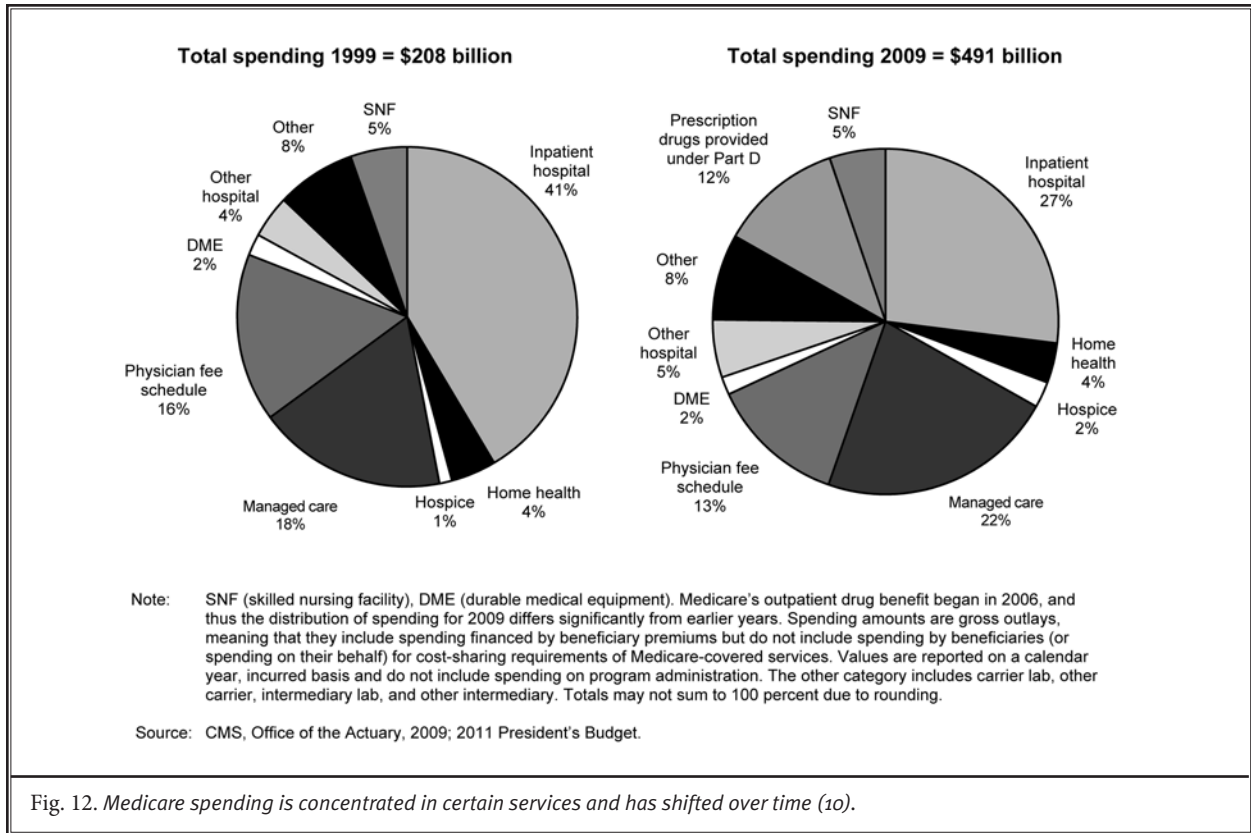


Fig. 11. Changes in spending per enrollee, Medicare and private health insurance (42).



4.0 INTERVENTIONAL PAIN MANAGEMENT

4.1 Waste, Abuse, and Fraud

In a report from September 2008, the Department of Health and Human Services, Office of Inspector General (DHHS-OIG), reported that Medicare paid over \$2 billion in 2006 for interventional pain management (interventional pain management procedures) (79). This report also showed that from 2003 to 2006, the number of Medicare claims for facet joint injections increased by 76% (79). Overall, payments for facet joint injections increased from \$141 million in 2003 to \$307 million in 2006, representing both physician and facility payments. The findings of the OIG report (79) also illustrated that 63% of facet injection services allowed by Medicare in 2006 did not meet the Medicare program requirements, resulting in approximately \$129 million in improper payments. Facet joint injection services provided in an office were more likely to have an error than those provided in an ASC or HOPD. The error rates

were lower in a facility setting compared to an office setting (51% versus 71%). Further, based on specialty error, the rate in an office setting, interventional pain management (-09) scored the best with a 12% error rate, whereas several specialties scored a 100% error rate. Anesthesiology had a 63% error rate, pain medicine (-72) a 56% error rate, and physical medicine and rehabilitation a 50% error rate. Tables 2 and 3 illustrate the errors in 2006 in the Medicare population for facet

Table 2. Error rate by setting and error type for Medicare facet joint injection services—physician claims, 2006.

Type of Error	Office	Facility
Documentation*	49%	22%
Coding	30%	32%
Medical Necessity	10%	5%
Any Error*	71%	51%

Source: OIG analysis of medical review results, 2008. (79)

Table 3. Physician specialty error rate in an office setting for sample.

Specialty	Specialty Code	Any Error in Office*		Services in Office*		Percentage of Services With an Error in Office
		Sample Frequency	Sample Percentage	Sample Frequency	Sample Percentage	
Neurosurgery	14	3	2%	3	1%	100%
General Surgery	02	1	1%	1	0%	100%
Pathology	22	1	1%	1	0%	100%
Nurse Practitioner	50	1	1%	1	0%	100%
Emergency Room	93	1	1%	1	0%	100%
Physician Assistant	97	1	1%	1	0%	100%
General Practice	01	36	25%	37	18%	97%
Internal Medicine	11	13	9%	15	7%	87%
Family Practice	08	7	5%	9	4%	78%
Neurology	13	8	6%	11	5%	73%
Rheumatology	66	5	4%	7	3%	71%
Pediatric Medicine	37	2	1%	3	1%	67%
Orthopedic Surgery	20	9	6%	14	7%	64%
Anesthesiology	05	30	21%	48	23%	63%
Pain Management	72	14	10%	25	12%	56%
Physical Medicine and Rehabilitation	25	8	6%	15	7%	53%
Interventional Pain Management	09	2	1%	17	8%	12%
Diagnostic Radiology	30	0	0%	1	0%	0%

* Figures are based only on the sample and are not projected to the population.

Source: OIG analysis of medical review results, 2008. (79)

joint injections. Finally, the OIG report also illustrated that approximately 35% of Medicare facet joint injections were performed by non-interventional pain physicians, 19% by general practitioners, internists, and family practice physicians, while the remaining 16% were performed by orthopedic surgeons, neurologists, and rheumatologists (79).

The OIG also published a report on transforaminal epidural injections titled "Inappropriate Medicare Payments for Transforaminal Epidural Injection Services" which reported that 34% of transforaminal epidural injection services allowed by Medicare in 2007 did not meet Medicare requirements, resulting in approximately \$68 million in improper payments (80). The number of Medicare physician claims for transforaminal epidural injection services increased by 130% from 2003 to 2007. Over 295,000 Medicare beneficiaries received transforaminal epidural injection services in 2007. Nineteen percent of transforaminal epidural injection services had a documentation error, which was more likely to occur in office settings. Thirteen percent of transforaminal epidural injection services had a medical ne-

cessity error, 8% had a coding error, while 7% had an overlapping error.

From 2003 to 2007, Medicare physician payments for transforaminal epidural injections, increased by almost 150%. Physician payments for transforaminal epidural injections increased from \$57 million in 2003 to \$141 million in 2007. These payments represent approximately 11% of all Medicare physician payments for interventional pain management services.

Friedly et al (81) documented that between 1994 and 2001, there was a 271% increase in lumbar epidural steroid injections and a 231% increase in facet joint injections. They also showed that the total inflation-adjusted reimbursement cost (professional fees only) for lumbosacral injections increased from \$24 million to over \$175 million.

Manchikanti et al (82-84) showed overall increases in IPM services were 74% per 100,000 Medicare beneficiaries from 2002 to 2006. However, for general physicians, the increases were 349% compared to 69% for interventional pain management and 40% for other specialties (Table 4). Consequently, the yearly increase

Table 4. Utilization of IPM services by specialty groups.

Specialty	IPM services				Facet joint intervention services				Epidural procedures			
	2002 Services	2006 Services	% ↑ 2002	Annual increase	2002 Services	2006 Services	% ↑ 2002	Annual increase	2002 Services	2006 Services	% ↑ 2002	Annual increase
Extended IPM	1,999,000 (80.8%)	3,618,300 (78.5%)	81%	20.3%	529,220 (87.1%)	1,256,860 (74.5%)	137%	34.3%	1,080,320 (91.5%)	1,724,440 (91.3%)	60%	15%
Per 100,000 Medicare population	4,935	8,349	69%	17.3%	1,307	2,900	122%	30.5%	2,667	3,979	49%	12.3%
General Physicians	85,140 (3.4%)	409,400 (8.9%)	381%	95.3%	24,300 (4.0%)	314,420 (18.6%)	1194%	298.5%	22,780 (1.9%)	46,700 (2.5%)	105%	26.3%
Per 100,000 Medicare population	210	945	349%	87.3%	60	725	1109%	277.3%	56	108	92%	23%
Other Specialties	388,780 (15.7%)	582,660 (12.6%)	50%	12.5%	54,240 (8.9%)	116,900 (6.9%)	116%	29%	78,040 (6.6%)	117,000 (6.2%)	49%	12.3%
Per 100,000 Medicare population	960	1344	40%	10%	134	270	101%	25.3%	193	270	39%	9.8%
Total	2,472,920	4,610,360	86%	21.5%	607,760	1,688,180	178%	44.5%	1,181,140	1,888,140	60%	15%
Per 100,000 Medicare population	6,106	10,638	74%	18.5%	1,501	3,895	160%	40%	2,916	4,357	49%	12.3%

Extended IPM - Anesthesiology, Pain Management, Neurology, Neurosurgery, Orthopedic Surgery, Physical Medicine and Rehabilitation, and Psychiatry
 General Physicians - General Practice, Family Practice & Internal Medicine

Source: Manchikanti L, et al. Analysis of growth of interventional techniques in managing chronic pain in the Medicare populations: A 10-year evaluation from 1997 to 2006. *Pain Physician* 2009; 12:9-34 (82).

for general physicians was 87.3%, whereas it was 17.3% for interventional pain management.

They also showed that the proportion of patients receiving interventional pain management services per 100,000 Medicare population increased by 137%, the number of visits increased by 144%, and services increased 197%. The increases were 117% in Medicare patients for epidural procedures from 1997 to 2006, whereas for facet joint interventions, the increases were 624%, along with a 596% increase for spinal cord stimulation, with a total increase of 197%. There were significant geographic differences noted with an 11.6-fold difference (431% vs. 37% increase) between Florida and California in 2006. The differences were also significant in that patients under 65 years of age showed an increase of 504% per 100,000 Medicare population compared to 355% for those over 65 years for facet joint injections. Utilization of facet joint interventions by specialties was very interesting; overall a 122% increase was seen for interventional pain management professionals (anesthesiology, pain management, neurology, neurosurgery, orthopedic surgery, physical medicine and rehabilitation, and psychiatry); the increases were 398% for nurse practitioners and CRNAs; and 1,109% for general physicians (general practice, family, and internal medicine), giving a 100% annual increase for nurse practitioners and CRNAs and 277% annual increase for general physicians. The utilization of fluoroscopy was also based on specialty with an increase seen in all specialties; the lowest utilization of fluoroscopy was seen by general physicians. Thus, 86% of pain physicians utilized fluoroscopy compared to only 19% of general physicians. The overall utilization of fluoroscopy was 63% of total patients.

4.2 Allegations of Lack of Evidence

Interventional pain management has been criticized for a lack of evidence for the increasing prevalence of chronic pain and also for the lack of effectiveness of interventional techniques. However, enormous evidence is presented with regards to escalating disabilities and the economic impact of chronic pain (85-87). A study by Freburger et al (86) showed an annual increase of 11.6% of overall prevalence of low back pain across all demographic groups. The controversial issues of duration and chronicity of pain have been resolved with extensive literature illustrating that chronic pain lasts for months to years with recurrence and tends to relapse (87-94). Overall, high pain intensity and high interference has been reported in approximately 17% of the patients (95),

whereas high pain intensity and disability have been reported in 25% of patients with low back pain (96,97). In addition, the research also shows that pain prevalence and pain-related disability are higher in the elderly (98). Finally, the health and economic impact of chronic pain has been stressed very frequently (86,87,98-103).

The literature concerning interventional pain management continues to be vigorously debated with claims of ineffectiveness and inappropriate care (20-41,104,105). However, advances in understanding the structural basis of chronic spinal pain, principles of EBM, and CER might have increased utilization (27-29,32,33,39-41,106-134).

4.2.1 Controlled Diagnostic Interventional Techniques

Precision diagnostic blocks are used to clarify multiple challenging situations, in order to determine the pathophysiology of clinical pain, the site of nociception, and the pathway of afferent neural signals. Diagnostic facet joint nerve blocks have been shown to have significant evidence classified as moderate to strong in the diagnosis of low back pain without radiculitis or disc herniation, utilizing multiple studies with strict criteria of 80% pain relief and the ability to perform previously painful movements with controlled diagnostic blocks (131-157). These studies showed the prevalence of lumbar facet joint pain is 21% to 40% in a heterogeneous population with chronic low back pain, and 16% in post lumbar surgery syndrome with confidence intervals (CIs) ranging from 9% to 23% in post surgery syndrome, and 14% to 53% in the heterogeneous population, with an overall average prevalence of 31% (95% CI; 28%-33%). They also showed false-positive rates of 17% to 49% with CIs ranging from 10% to 59% with an overall false-positive rate of 30% (95% CI; 27%-33%) (132). The prevalence for cervical facet joint blocks was estimated as 36% to 54% with CIs ranging from 27% to 75% in patients in a heterogeneous population with an average of 49% (95% CI; 45%-52%). In addition, prevalence was shown to be 36% (95% CI of 22%-51%) in patients after surgical intervention. False-positive rates with a single block are 27% to 63% with CIs ranging from 15% to 78% with an average of 49% (95% CI; 44%-54%) (131). For thoracic facet joint nerve blocks, the prevalence was shown as 34% to 48% with CIs ranging from 22% to 62%. The average prevalence was 40% (95% CI; 33%-48%). False-positive rates of single local anesthetic blocks have been shown to range from 42% to 58% with CIs ranging from 26% to 78%. The av-

erage false-positive rate was 42% (95% CI; 33%–51%) (116). Even so, significant debate surrounds the value and validity of diagnostic facet joint nerve blocks (22,24-31,36,38,41,158-160).

In contrast, in the diagnosis of lumbar discogenic pain, moderate evidence has been shown with a prevalence of 26% to 39% of discogenic pain with false-positive rates of 12.5% (79,108,130,135,148). As one would expect, the role of provocation discography incites more debate than diagnostic lumbar facet joint nerve blocks (161-173). However, the evidence for cervical and thoracic discogenic pain has been shown to be much less convincing with limited evidence (115,119).

The prevalence of sacroiliac joint pain is estimated to range between 10% and 38% using a double block paradigm in the study population (129). The false-positive rate of single, uncontrolled, sacroiliac joint injections is 20% to 54% (129,135,156,157). However, the evidence is considered at a lower level for the diagnosis of sacroiliac joint pain.

4.2.2 Therapeutic Interventions

Staal et al (23) evaluated low back pain treatments with facet joint interventions, as well as epidural injections. They concluded that there was moderate evidence with 2 trials including 210 patients that facet joint injections with corticosteroids are not significantly different from placebo injections for short-term pain relief and improvement of disability (174,175). However, Datta et al (132) utilized strict inclusion criteria of 80% pain relief with ability to perform previously painful movements with controlled diagnostic blocks and utilized at least 6 months of relief for short-term. Staal et al (23) also considered medial branch blocks for therapy. However, they utilized only one old study by Manchikanti et al (176). Staal et al (23) concluded that there was no difference even though they failed to take into consideration the design of the study — non inferiority or equivalence trial versus efficacy trial, based on lack of placebos. Datta et al (132) utilized stricter criteria as described above with utilization of 2 studies and appropriate analysis (176,177). Further, new evidence has been published for all 3 regions of the spine (178-180).

Similarly, in relation to epidural injections, they reached inappropriate conclusions (23). In contrast, the guidelines of the American Society of Interventional Pain Physicians (ASIPP) (39) and multiple systematic reviews (111-114) reached different conclusions

with Level I evidence for short and long-term relief (\leq 6 months and $>$ 6 months) in managing chronic low back and lower extremity pain secondary to lumbar disc herniation and/or radiculitis and discogenic pain without disc herniation or radiculitis; Level II-1 or II-2 for caudal epidural injections in managing low back pain of post surgery syndrome and spinal stenosis. They also reached conclusions which were different for interlaminar epidural injections with Level II-2 – III for blind interlaminar epidural injections. For lumbar transforaminal epidural injections, the level of evidence was II-1 for short-term relief and Level II-2 for long-term relief in managing chronic low back and lower extremity pain. In addition, significant evidence has been published since the publication of ASIPP guidelines, systematic reviews, Chou and Huffman's guidelines, and some after the critique on the APS guidelines (22,28-31,181-191).

Chou et al (22,104) published a study of non-surgical interventional therapies for low back pain by searching manuscripts published through July 2008. Evidence selection included RCTs and systematic reviews. They concluded fair evidence of moderate benefit compared with placebo injection for short-term pain relief in patients with radiculopathy. Chou and Huffman (22) also concluded that there was no evidence for diagnostic or therapeutic facet joint interventions based on inclusion of poorly conducted studies (174,192-202). In contrast, Datta et al (132) concluded that evidence for the diagnosis of lumbar facet joint pain with controlled local anesthetic blocks was Level I or II-1. The indicated level of evidence for therapeutic lumbar facet joint interventions was Level II-1 or II-2 for lumbar facet joint nerve blocks, Level II-2 or II-3 evidence for radiofrequency neurotomy, and Level III (limited) evidence for intraarticular injections. As illustrated above, multiple manuscripts have been published involving all 3 regions of the spine and evaluating therapeutic effectiveness of facet joint nerve blocks and epidural injections (181-191).

A reassessment of Chou et al's evaluation (28), utilizing Chou et al's criteria, showed good evidence for lumbar facet joint nerve blocks, fair evidence for lumbar provocation discography, and fair to poor evidence for sacroiliac joint blocks to diagnose sacroiliac joint pain. The reassessment illustrated that Chou et al have utilized multiple studies inappropriately and have excluded appropriate studies. Also, Chou et al failed to eliminate their bias in their study evaluations. The reassessment, using appropriate methodology and

including high quality studies, shows evidence that differs from the published APS guidelines (22).

The conclusions of APS and our critical assessment based on grading of good, fair, and poor, agreed that there was fair evidence for spinal cord stimulation in post lumbar surgery syndrome, and poor evidence for lumbar intraarticular facet joint injections, lumbar interlaminar epidural injections, caudal epidural steroids for conditions other than disc herniation or radiculitis, sacroiliac joint injections, intradiscal electrothermal therapy, endoscopic adhesiolysis, and intrathecal therapy (29). However, the reassessment of APS guidelines for other interventional techniques, utilizing their own criteria, showed fair evidence for therapeutic lumbar facet joint nerve blocks, caudal epidural injections in disc herniation or radiculitis, percutaneous adhesiolysis in post lumbar surgery syndrome, radiofrequency neurotomy, and transforaminal epidural injections in radiculitis (29).

The spinal injections health technology assessment for Washington State (159) was performed by authors without any experience in interventional pain management with only one being a physician. This essentially translates into all of them being methodologists. This review showed ineffectiveness for all types of spinal injections based on what we believe to be a flawed analysis of the available evidence. The authors did not appear to appreciate the difference between an active-control trial and a placebo-control trial and the effect of placebo and nocebo.

In summary, Manchikanti (160), in his peer review, concluded that this review (159) failed to ensure that the objectives were met, that the methods and analysis were not consistent with good methodology and were biased.

5.0 PHYSICIAN PAYMENT SCHEDULE FOR 2011

The final schedule for physician payments was issued on November 24, 2010 (55). This was based on a total cut of 30.8% with 24.9% of the cut attributed to SGR. However, CMS issued an emergency update of the CY2011 Medicare physician fee schedule database on December 29, 2010 (51).

Due to multiple revisions and additions of RVUs, the conversion factor associated with the CY2011 final rule has been revised. Legislative changes subsequent to the issuance of the 2011 final rule have led to further revisions of the values published in the 2011 final rule correction notice, including a change to the conversion factor. Thus, an emergency update has been issued by CMS (51).

5.1 Changes to the Fee Schedule in 2010

On March 2, 2010, the Temporary Extension Act of 2010 (48) was signed into law which extended through March 31, 2010, the 0% update to the physician fee schedule that was in effect for claims with dates of services from January 1, 2010 through February 28, 2010. In addition, on April 15, 2010, the Continuing Extension Act of 2010 (49) was signed into law, extending through May 31, 2010 the 0% update to the PFS that was in effect for claims with dates of services from January 1, 2010 through March 31, 2010; the provisions were retroactive to April 1, 2010.

On June 25, 2010, the Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010 was signed into law (203). This law required application of a 2.2% update to the physician fee schedule for claims with dates of services from June 1, 2010 through November 30, 2010. As a result of this change, the physician fee schedule conversion factor of \$36.8729 applies for services furnished during this time period.

On November 30, 2010, President Obama signed into law the Physician Payment and Therapy Relief Act of 2010 (204). As a result of the Physician Payment and Therapy Relief Act of 2010, a new reduced therapy fee schedule amount (20% reduction on the PE component payment) was enacted. Further, this also enabled the application of a 25% multiple procedure payment reduction on the PE component of payment for therapy services furnished in HOPD and other facility settings. In addition, a 20% therapy multiple procedure payment reduction will apply to therapy services furnished in clinicians' offices and other settings (49,50).

On December 15, 2010, President Obama signed into law the Medicare and Medicaid Extenders Act of 2010 (50).

5.2 Medicare and Medicaid Extenders Act of 2011

The important part of physician reimbursement is the physician payment update in this regulation passed on December 15, 2010 (50). This averts the negative update that would otherwise have taken effect on January 1, 2011, in accordance with the final rule. The Medicare and Medicaid Extension Act provides for a 0% update to the physician fee schedule for claims with dates of service January 1, 2011, through December 31, 2011. While the physician fee schedule update will be 0%, other changes to the RVUs, including misvalued code initiative and rescaling of the RVUs to match the revised MEI rates, are budget neutral. To make those

changes budget neutral, CMS made an adjustment to the conversion factor. The revised conversion factor to be used for physician payment as of January 1, 2011 is \$33.9764—a 7.9% reduction. The calculation of the CY conversion factor is illustrated in Table 5.

The Medicare and Medicaid Extenders Act extends the existing 1.0 floor on the physician work geographic practice cost index for services furnished through December 31, 2011.

Other issues include extension of Medicare physician fee schedule mental health add-ons, extension of the exceptions process for the Medicare therapy caps, and extension of the moratorium that allowed independent laboratories to bill for the technical component of physician pathology services furnished to hospital patients.

The MEI states that prevailing charge levels beginning after June 20, 1973, may not exceed the level from the previous year except to the extent that the secretary finds, on the basis of appropriate economic index data, that such a higher level is justified by year to year economic changes. Consequently, Medicare has continued to use the MEI as part of the statutory update formula when the physician fee schedule was implemented. Beginning July 1, 1975, and continuing through 2010, the MEI has been used and has been described as serving its purposes by reflecting the weighted average annual price change for various inputs needed to furnish physicians' services. As such, the index is necessarily a fixed weight input price index, with an adjustment for the change in economy-wide, private nonfarm business multifactor productivity.

The MEI comprises 2 broad categories: 1) physicians' own time; and 2) physicians' PE. The MEI was first published on June 16, 1975 and became effective for services furnished beginning July 1, 1975. The original MEI has a base period of 1971. The structure of the original MEI remained essentially unchanged from its original until the 1993 final rule in which Medicare finalized a comprehensive rebasing and revision pro-

cess with a 1989 base year. The new index was based in part on the recommendation of the congressionally-mandated meeting of experts held in March 1987. In addition, the MEI was again rebased in the 1999 final rule which moved the cost structure of the index from a 1989 base to a 1996 base. The methodology for the productivity adjustment was revised in the 2003 final rule to reflect the percentage change in the 10-year moving average of economy-wide-private non-farm business multifactor productivity in contrast to previous adjustment of the index by a measure of labor productivity. The current form of the MEI was detailed in the 2004 final rule, which updated the cost structure of the index from a base year of 1996 to 2000 (205).

For the 2011 physician fee schedule update, Medicare has rebased and utilized MEI to reflect appropriate physicians' expenses in 2006. In revising, Medicare proposed to exclude the pharmaceutical cost category since pharmaceuticals are neither paid for under the physician fee schedule, nor are they included in the definition of physician services for purposes of calculating the physician update via the SGR system. They also proposed to exclude expenses associated with separately billable supplies, since these items are not paid under the physician fee schedule. Medicare used the AMA physician practice information survey (PPIS) data to determine the expenditure weights in the MEI for all of the major cost categories including total expenses, physicians' earnings, physicians' benefits, employed physician payroll, non-physician compensation, office expenses, professional liability insurance, medical equipment, medical supplies, and other professional expenses. Medicare also desegregated both non-physician compensation and office expenses into subcategories reflecting more detailed explanations.

However, it appears that since they have used the 2006 cost basis, some of the effects of the PE survey have been negated, resulting in a 7.9% overall reduction based on the MEI adjustment.

Table 5. Illustration of calculation of the CY 2011 conversion factor.

December 2010 Conversion Factor		\$36.8729
MMEA "Zero Percent Update"	0.0 percent (1.000)	
CY 2011 RVU Budget Neutrality Adjustment	0.4 percent (1.0043)	
CY 2011 Rescaling to Match MEI Weights Budget Neutrality Adjustment	-8.3 percent (0.9175)	
CY 2011 Conversion Factor		\$33.9764

6.0 2011 PHYSICIAN PAYMENT SCHEDULE FOR INTERVENTIONAL PAIN MANAGEMENT PROCEDURES

Even though significant improvement has been seen with the PE value of interventional pain management going from \$59.04 to \$156.79 per hour, now in the second year of implementation, the reductions in

the MEI and inclusion of fluoroscopy for transforaminal epidural injections and reduction for add-on codes have resulted in some cuts. Overall, the specialty of interventional pain management, as shown in Table 6, is better than other specialties, but it also has taken a beating secondary to the adjustment in the MEI made in the last minutes of December, 2010.

Table 6. Physician fee schedule for top 30 interventional procedures.

CPT	Description	2010 (CF=\$36.8729)		2011 Without Cut (CF=\$36.8729)		2011 With 7.86% Cut (CF=\$33.9764)	
		Non-Facility (Office)	Facility (ASC/Hospital)	Non-Facility (Office)	Facility (ASC/Hospital)	Non-Facility (Office)	Facility (ASC/Hospital)
27093	Injection procedure for HIP arthrography – without anesthesia	\$181.51	\$71.20	\$201.33	\$77.43	\$189.25	\$70.33
27096	(G0260)Injection procedure for sacroiliac joint, arthrography	\$171.54	\$70.09	\$208.70	\$81.12	\$184.49	\$70.67
62263	Percutaneous epidural adhesiolysis - 2 or 3 days	\$645.97	\$379.24	\$836.28	\$472.34	\$708.75	\$399.56
62264	Percutaneous epidural adhesiolysis – 1 day	\$388.83	\$228.36	\$472.71	\$269.54	\$412.47	\$232.40
62282	Neurolytic epidural, L/S	\$281.11	\$136.87	\$313.42	\$158.92	\$293.22	\$139.64
62290	Injection procedure for discography each level: lumbar	\$315.05	\$168.22	\$366.15	\$192.11	\$331.95	\$170.56
62291	Injection procedure for discography each level: C/T	\$295.50	\$161.58	\$350.29	\$186.58	\$313.26	\$164.45
62310	Cervical epidural	\$212.49	\$101.08	\$265.48	\$120.21	\$230.36	\$103.29
62311	Lumbar epidural	\$185.19	\$83.74	\$221.61	\$97.71	\$197.74	\$84.94
62318	Epidural or subarachnoid, catheterization, C/T	\$221.72	\$99.24	\$264.01	\$111.72	\$236.82	\$99.21
62319	Catheterization, epidural, L/S	\$202.53	\$93.70	\$184.36	\$106.56	\$188.91	\$94.11
64400	Injection, anesthetic agent; trigeminal nerve, any division or branch	\$105.88	\$64.19	\$127.58	\$76.33	\$112.80	\$66.59
64405	Greater occipital nerve	\$105.14	\$76.37	\$129.79	\$91.44	\$112.46	\$79.50
64418	Suprascapular nerve	\$130.23	\$72.68	\$152.29	\$83.70	\$136.92	\$73.39
64420	Intercostal, single	\$153.84	\$65.30	\$121.68	\$75.96	\$135.91	\$66.59
64421	Intercostal, multiple, regional block	\$227.62	\$90.01	\$166.30	\$104.72	\$195.36	\$91.74
64450	Other peripheral nerve or branch	\$98.50	\$68.62	\$114.31	\$75.59	\$102.27	\$68.63
64480	Cervical transforaminal epidural injections add-on	\$136.87	\$81.53	\$137.90	\$74.11	\$126.39	\$66.93
64483	Lumbar/sacral transforaminal epidural injections	\$257.50	\$106.98	\$234.51	\$116.89	\$240.21	\$102.61
64484	Lumbar/sacral transforaminal epidural injections add-on	\$131.70	\$67.88	\$98.82	\$59.00	\$106.35	\$53.00
64490	Cervical and thoracic facet joint injections 1st Level (ld 64470)	\$167.12	\$109.94	\$213.13	\$120.94	\$196.38	\$111.44
64491	Cervical and thoracic facet joint injections 2nd Level (ld 64472)	\$82.27	\$63.08	\$105.46	\$68.21	\$97.17	\$62.86
64492	Cervical and thoracic facet joint injections 3rd Level (ld 64472)	\$83.33	\$64.16	\$106.56	\$69.32	\$98.19	\$63.88
64493	Paravertebral facet joint or facet joint nerve; lumbar/sacral, 1st Level (old 64475)	\$151.25	\$93.34	\$189.90	\$101.77	\$174.98	\$93.77
64494	Paravertebral facet joint or facet joint nerve; lumbar/sacral, 2nd Level (old 64476)	\$73.78	\$53.86	\$95.13	\$57.89	\$87.66	\$53.34

Table 6 (cont.). Physician fee schedule for top 30 interventional procedures.

64495	Paravertebral facet joint or facet joint nerve; lumbar/sacral, 3rd Level (old 64476)	\$74.85	\$54.95	\$96.61	\$58.63	\$89.02	\$54.02
64622	Destruction by neurolytic agent, paravertebral facet joint nerve; lumbar or sacral, single level	\$314.68	\$175.97	\$377.95	\$214.23	\$335.01	\$182.79
64623	Destruction by neurolytic agent, paravertebral facet joint nerve; lumbar or sacral, each additional level	\$116.58	\$49.07	\$141.22	\$58.26	\$125.03	\$49.95
64626	Destruction by neurolytic agent, paravertebral facet joint nerve; cervical or thoracic, single level	\$372.97	\$236.47	\$456.86	\$291.66	\$398.54	\$247.69
64627	Destruction by neurolytic agent, paravertebral facet joint nerve; cervical or thoracic, each additional level	\$158.63	\$57.55	\$192.11	\$68.58	\$170.90	\$58.78
64640	Destruction by neurolytic agent; other peripheral nerve or branch	\$214.71	\$167.49	\$232.67	\$183.63	\$217.79	\$168.18
64680	Destruction by neurolytic agent, with or without radiologic monitoring; celiac plexus	\$295.50	\$159.00	\$347.34	\$184.36	\$313.60	\$163.09

7.0 CONCLUSION

The United States is facing widespread challenges to its healthcare system. A historic reform has been passed by Congress and signed into law whose survivability is not quite known yet. However, the ACA effects are already felt at multiple levels, mostly negative. Interventional pain management, an aggressive and evolving speciality with ownership being claimed by numerous specialties, has the most to lose. Consequently, it is imperative for all physicians, and especially interventional pain physicians, to maintain access and provide care based on evidence. Finally, it is best to put

major financial incentives aside in favor of the system, rather than ourselves, which will create greater value for our services and gain respect.

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