ROBERT GRAHAM CENTER

AAFP Center for Policy Studies

Effects of Proposed Primary Care Incentive Payments on Average Physician Medicare Revenue and Total Medicare Allowed Charges

A White Paper

The Robert Graham Center

May, 2009

Funding/Support: This study was conducted with the support of the American Academy of Family Physicians Foundation but adherent to the rigorous editorial independence provisions of the Robert Graham Center.

Disclosures: The content was not approved or restricted by the AAFP or the AAFPF. The information and opinions contained in research from the Graham Center do not necessarily reflect the views or policy of the AAFP or the AAFPF.

There is considerable concern about a future primary care physician shortage and potential constriction of access to primary care. Much has been made of the Medicare Payment Advisory Commission (MedPAC) 2008 survey results which showed an increase in the number of new Medicare beneficiaries experiencing difficulty finding a primary care physician. Newspapers have reported on an increase in primary care physicians limiting or stopping Medicare participation. Recent studies show a drastically reduced interest in primary care among trainees.[1] At least three studies show strong associations between interest in primary care and the income disparity between primary care physicians and other specialists.[2] The Council on Graduate Medical Education recently reported to Congress that this loss of interest is compounded by the expansion of subspecialist training by teaching hospitals over the last decade.[3] It gives would-be primary care physicians greater options for subspecialty training. The expansion of options for subspecialty training could cut the output of primary care to half of current production if these trends are not reversed.

In June 2008, MedPAC commissioners suggested that there may be a need to selectively boost primary care physician payment, saying:

> *The Congress should establish a budget-neutral payment adjustment for primary care services billed under the physician fee schedule and furnished by primary-care-focused practitioners. Primary-care-focused practitioners are those whose specialty designation is defined as primary care and/or those whose pattern of claims meets a minimum threshold of furnishing primary care services. The Secretary would use rulemaking to establish criteria for determining a primary-care-focused practitioner.*[4]

In 2009 hearings regarding the physician workforce, members of the Senate Finance Committee also appeared willing to consider payment reform in support of primary care:

> *We need to take a hard look at the way that we pay health care providers. As part of that examination, we should ask: Do today's payment systems properly reward providers who offer high-quality care? Do these payment systems encourage medical students to choose careers in critical fields, like primary care?*
>
> *Senator Max Baucus,* Chairman [5]

On April 29, 2009 the Senate Finance Committee released ***Description of Policy Options; Transforming the Health Care Delivery System: Proposals to Improve Patient Care and Reduce Health Care Costs*.** The listed options include an incentive payment for primary care services for physicians who meet a threshold of 60% of services in outpatient settings. The incentive would be at least 5% that may be budget neutral or other sources.[6]

In this white paper, we model the current incentive proposal, other related options, and potential costs to Medicare. We then discuss impact, unintended consequences, and concerns.

Data Used:

1. Full year 2006 Medicare Part B claims data for a representative cross-sectional sample of physicians;
2. Cross-sectional sample of physicians selected from a snapshot of the AMA Master File database from April 2006;
3. Geographic data (rural/urban designation) based on where physician services are provided as indicated in the Medicare claims data;
4. Supplementary data from CMS Medicare Statistics and Chart Book and data on physician practice economics from a 2004 Lewin Group study[7]

Sampling Methods:

Full year 2006 Medicare Part B claims data for a representative cross-sectional sample of about 40,000 physicians was analyzed. The sample was selected from an April, 2006 AMA Master File database. The sample included: (1) graduates of accredited U.S. Medical Schools; (2) at least one year beyond residency; (3) full-time providers of outpatient care. Physicians who provided services to less than 100 beneficiaries, with more than half of their visits coded as new, retired physicians and physicians over 70 years old were excluded, as were physicians required by law to accept Medicare beneficiaries such as those practicing in community health centers, prisons, or the Indian Health Service.

The sample was selected randomly using a single-stage stratified sampling design without replacement. The UPIN numbers of physicians in the sample were submitted to CMS to obtain the complete calendar year (January 1 to December 31) of Medicare non-institutional office-based (Carrier) claims data for each physician in the sample. We used SAS statistical software for sample selection and data management. We used the SAS-callable SUDAAN (v10) statistical software package for all analysis. All statistical modeling was based on the sampling weights for the physicians in our samples and estimations were by Taylor Linearization[8].

Simulation Modeling Methods:

Physicians were grouped by self identified specialties. Primary care physicians included Family Medicine, Internal Medicine, Pediatrics, and Geriatrics. Physician medical care services were identified using CPT codes. ”Primary Care services” included: office visits (codes 99201–99215); nursing home visits (codes 99304–99340); and home visits (codes 99341–99350). For each physician, the percentage of total “allowed charges” representing the value of their “primary-care services” was calculated. This was used to group physicians according to the threshold percentage of their allowed charges. We used average patient panels derived from a prior Lewin study, and the total annual revenue from all payers (including Medicare) was estimated for each physician based on the sum of “payments” in the claims data.

The effect of the proposed increases in allowed charges (5%, 25%, 50%, 100%) as incentive payments to Primary Care physicians with “Primary Care services” thresholds of 0%, 50%, 60%, 70% were then assessed on the average physician’s annual revenue and charges allowed by Medicare. The same was also done including non-primary care physicians in the event that the incentives are applied to them as well (appendix). We also assessed the costs of these incentives assuming a budget-neutral annual balance. The effect on rural and urban physicians was also assessed using the Rural-Urban Commuting Area Codes (RUCA).

Findings:

TABLE: Impact of the 60% threshold, 5% incentive (Full Tables included in the Appendix).

Proposed Incentive	Increase in average physician Medicare annual revenue			Cost if restricted to four Primary Care specialties	Cost if given to all physicians at 60% threshold
	Family Medicine/GP	Family Medicine/GP % Medicare revenue (% total revenue)			
5%	$1,977	2.5%	(0.68%)	$287,751,382	$399,394,510
25%	$9,884	12.5%	(3.4%)	$1,438,756,909	$1,996,972,551
50%	$19,768	24.9%	(6.7%)	$2,877,513,818	$3,993,945,102
100%	$39,536	49.9%	(13.5%)	$5,755,027,636	$7,987,890,204

1) A 5% incentive would increase Medicare revenue for family physicians and general practice doctors by 2.5% (incentive applied to the applicable codes only) or a little less than $2000 per year. For the average family physician, this would be less than a 1% increase in overall revenue.
2) A 50% incentive would increase Medicare revenue for family physicians and general practice doctors by 25% (incentive applied to the applicable codes only) or a little less than $20,000 per year. For the average family physician, this would be a 6.7% increase in overall revenue.
3) Eligible codes (office visit, nursing home, home visit) only make up 12.1% of all Part B claims dollars, so increases in Part B for designated primary care services has relatively small effects on total Part B, and even less if you apply thresholds for payment eligibility
4) A 5% incentive would cost $288 million, a 0.26% change in overall charges; a 50% incentive would cost $2.9 billion, a 2.6% change in overall charges– if restricted to primary care physicians (family medicine, general internal medicine, geriatrics, and general pediatrics)
5) The 60% threshold would capture nearly 60% of family physicians but a lower proportion of rural physicians, likely due to their naturally broader scope of practice.

Discussion:

A 5% Medicare incentive will make a relatively small change in primary physician income. Even if the incentive were applied to all Medicare claims, and not limited to the eligible "primary care" claims, it would only add $4,000 to the average family physician's revenue (income is a smaller percentage of revenue). A 50% incentive would increase the average family physician's revenue by $20,000 - $40,000 (6.7%-13.4% increase depending on the claims to which the incentive applies). The 50% incentive would be a much more meaningful reduction in the income gap between primary care and subspecialty physicians. It would be even more meaningful if other payers followed Medicare's lead. With the 60% threshold and restricting

incentive payments to (all) primary care physicians, the net shift in Part B dollars is $2.9 billion annually. This would be a small reversal of fortunes for primary care compared to the much larger shift to other specialties over the last decade as a result of the imbalances in RVU weighting.

We appreciate the intent of developing physician thresholds tied to a set of "primary care" codes with the intent of some rebalancing of the income disparities under Medicare. If any Congressional solution must occur within the current framework of Medicare, this is an important one. However, it may have some ***unintended consequences***, including:

1) ***Further restriction of Primary Care Scope of Practice***: The restriction of the threshold and incentive to office visit, nursing home, and home visit codes is not supportive of the broader basket of services including inpatient care and office procedures envisioned necessary for the Patient Centered Medical Home or the "new model of practice" envisioned by the Future of Family Medicine Study. This approach is likely to promote primary care services within the context of this narrow definition, and will likely draw some primary care physicians back to doing more primary care in their practice; however, it may be too narrow for practices that must deliver a broader scope of primary care. For example, this narrow scope of "primary care" codes ***will penalize*** a greater proportion of ***rural physicians*** who must deliver a broader scope of care in the absence of other specialists and health care resources (appendix table 4). The Senate Finance Committee and the CMS should require further study to understand other codes that fit within the scope of primary care, and particularly the settings that are at more risk of not meeting the threshold, such as rural and safety-net clinics.

2) ***Persistent rewards for volume, over efficiency and patient-centeredness:*** Keeping payment reform restricted to fee-for-service provision of payment does not directly support other features of the Patient Centered Medical Home and Chronic Care Model such as chronic care management, phone care, email care, group visits, disease educators, or social work services. Practices receiving the incentive payment may elect to use some of the increase revenue to provide these un-reimbursed services, but the incentives are still aligned for higher volumes of face-to-face visits between patients and providers rather than team-based, cost containing patient-centered care.

Other options that should be considered in support of primary care's functions and evolution to the Patient Centered Medical Home:

1) Revise or develop ***a new process for*** more fairly ***applying relative values to primary care*** activities. Value should account for the real value of these physicians and their services to Medicare beneficiaries in the context of improved care and reduced costs, especially within Part A Medicare costs.

2) ***Blended payment models*** that offer some per member per month or similar coverage for care and care management functions performed outside of face-to-face visits. These support teams and services that are difficult to consider under strictly fee-for-service payment models.

3) Consider ***differential payments to achieve better physician distribution*** and access to care in rural and underserved areas. The differential could grow depending on overlapping needs (rural and underserved). The Physician Scarcity Area incentive payment that sunset in June of 2008 was additive to geographic Health Professional Service Area incentives and our preliminary evaluation of the PSA incentive was that it was associated with greater migration of physicians (primary care and other specialists) into those areas. Tiered differentials may help overcome a longstanding problem of poor physician distribution.

Appendix

Table 1:

Effects of Primary care Incentive payments on Average Physician Medicare Revenue and Total Allowed Charges (Percentage Change)

	Family Medicine/GP	Other PC	Sub-spec.	2006 Total
Average physician annual revenue from all Medicare claims	$79,300	$154,769	$175,032	
Total all Medicare allowed charges	$8,548,433,425	$20,882,075,535	$80,704,508,041	$110,135,017,000

With PC specialty filter and NO threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue (total revenue)		% increase in total Medicare annual allowed charges		% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Family Medicine/GP	Other PC	
5%	3.3% (0.89%)	2.3%	2.1%	1.4%	0.4%
25%	16.3% (4.4%)	11.6%	10.6%	7.2%	2.2%
50%	32.6% (8.8%)	23.3%	21.2%	14.4%	4.4%
100%	65.2% (17.6%)	46.6%	42.3%	28.7%	8.7%

With PC specialty filter and 50% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue (total revenue)		% increase in total Medicare annual allowed charges		% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Family Medicine/GP	Other PC	
5%	2.9% (0.78%)	1.6%	1.9%	1.0%	0.3%
25%	14.3% (3.9%)	7.9%	9.3%	4.9%	1.6%
50%	28.7% (7.7%)	15.8%	18.6%	9.7%	3.3%
100%	57.4% (15.5%)	31.5%	37.3%	19.5%	6.6%

With PC specialty filter and 60% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue (total revenue)		% increase in total Medicare annual allowed charges		% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Family Medicine/GP	Other PC	
5%	2.5% (0.68%)	1.2%	1.6%	0.7%	0.3%
25%	12.5% (3.4%)	5.8%	8.1%	3.6%	1.3%

50%	24.9% (6.7%)	11.6%	16.2%	7.2%	2.6%
100%	49.9% (13.5%)	23.2%	32.4%	14.3%	5.2%

With PC specialty filter and 70% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue		% increase in total Medicare annual allowed charges		% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Family Medicine/GP	Other PC	
5%	1.9% (0.51%)	0.8%	1.2%	0.5%	0.2%
25%	9.3% (2.5%)	4.0%	6.1%	2.5%	0.9%
50%	18.6% (5.0%)	7.9%	12.1%	4.9%	1.9%
100%	37.3% (10.1%)	15.9%	24.2%	9.8%	3.7%

All Specialties and NO threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	3.3%	2.3%	1.5%	2.1%	1.4%	0.6%	0.9%
25%	16.3%	11.6%	7.5%	10.6%	7.2%	3.2%	4.6%
50%	32.6%	23.3%	15.1%	21.2%	14.4%	6.5%	9.1%
100%	65.2%	46.6%	30.1%	42.3%	28.7%	13.0%	18.2%

All Specialties and 50% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	2.9%	1.6%	0.5%	1.9%	1.0%	0.2%	0.5%
25%	14.3%	7.9%	2.4%	9.3%	4.9%	1.0%	2.4%
50%	28.7%	15.8%	4.8%	18.6%	9.7%	2.1%	4.8%
100%	57.4%	31.5%	9.6%	37.3%	19.5%	4.1%	9.6%

All Specialties and 60% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other	Sub-spec.	Family	Other PC	Sub-spec.	

		PC		Medicine/GP			
5%	2.5%	1.2%	0.3%	1.6%	0.7%	0.1%	0.4%
25%	12.5%	5.8%	1.6%	8.1%	3.6%	0.7%	1.8%
50%	24.9%	11.6%	3.2%	16.2%	7.2%	1.4%	3.6%
100%	49.9%	23.2%	6.4%	32.4%	14.3%	2.8%	7.3%

All Specialties and 70% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	1.9%	0.8%	0.2%	1.2%	0.5%	0.1%	0.2%
25%	9.3%	4.0%	0.9%	6.1%	2.5%	0.4%	1.2%
50%	18.6%	7.9%	1.9%	12.1%	4.9%	0.8%	2.5%
100%	37.3%	15.9%	3.7%	24.2%	9.8%	1.6%	4.9%

Sources: RGC analysis of 2006 Medicare Part B nationally representative sample of physicians.

Table 2:

Effects of Primary care Incentive payments on Average Physician Medicare Revenue and Total Allowed Charges (Dollars)

Percentages are based on:

	Family Medicine/GP	Other PC	Sub-spec.	2006 Total
Average physician annual revenue from all Medicare claims	$79,300	$154,769	$175,032	
Total all Medicare allowed charges	$8,548,433,425	$20,882,075,535	$80,704,508,041	$110,135,017,000

With PC specialty filter and NO threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$2,584	$3,605	$0	$181,002,693	$300,115,142	$0	$481,117,835
25%	$12,922	$18,027	$0	$905,013,467	$1,500,575,708	$0	$2,405,589,175
50%	$25,845	$36,053	$0	$1,810,026,935	$3,001,151,416	$0	$4,811,178,350
100%	$51,690	$72,106	$0	$3,620,053,869	$6,002,302,832	$0	$9,622,356,701

With PC specialty filter and 50% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$2,274	$2,440	$0	$159,262,062	$203,137,309	$0	$362,399,371
25%	$11,370	$12,202	$0	$796,310,311	$1,015,686,545	$0	$1,811,996,856
50%	$22,741	$24,403	$0	$1,592,620,622	$2,031,373,090	$0	$3,623,993,712
100%	$45,481	$48,806	$0	$3,185,241,245	$4,062,746,179	$0	$7,247,987,424

With PC specialty filter and 60% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$1,977	$1,794	$0	$138,443,335	$149,308,047	$0	$287,751,382
25%	$9,884	$8,968	$0	$692,216,673	$746,540,236	$0	$1,438,756,909
50%	$19,768	$17,936	$0	$1,384,433,347	$1,493,080,471	$0	$2,877,513,818
100%	$39,536	$35,873	$0	$2,768,866,694	$2,986,160,942	$0	$5,755,027,636

With PC specialty filter and 70% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$1,478	$1,230	$0	$103,530,179	$102,370,443	$0	$205,900,622
25%	$7,391	$6,149	$0	$517,650,896	$511,852,215	$0	$1,029,503,111
50%	$14,783	$12,298	$0	$1,035,301,792	$1,023,704,431	$0	$2,059,006,222
100%	$29,566	$24,596	$0	$2,070,603,583	$2,047,408,861	$0	$4,118,012,445

All Specialties and NO threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$2,584	$3,605	$2,331	$181,002,693	$300,115,142	$523,231,202	$1,004,349,037
25%	$12,922	$18,027	$11,656	$905,013,467	$1,500,575,708	$2,616,156,009	$5,021,745,184

50%	$25,845	$36,053	$23,312	$1,810,026,935	$3,001,151,416	$5,232,312,018	$10,043,490,368
100%	$51,690	$72,106	$46,624	$3,620,053,869	$6,002,302,832	$10,464,624,036	$20,086,980,737

All Specialties and 50% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$2,274	$2,440	$743	$159,262,062	$203,137,309	$166,744,571	$529,143,942
25%	$11,370	$12,202	$3,715	$796,310,311	$1,015,686,545	$833,722,854	$2,645,719,710
50%	$22,741	$24,403	$7,429	$1,592,620,622	$2,031,373,090	$1,667,445,707	$5,291,439,419
100%	$45,481	$48,806	$14,858	$3,185,241,245	$4,062,746,179	$3,334,891,414	$10,582,878,839

All Specialties and 60% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$1,977	$1,794	$498	$138,443,335	$149,308,047	$111,643,128	$399,394,510
25%	$9,884	$8,968	$2,487	$692,216,673	$746,540,236	$558,215,642	$1,996,972,551
50%	$19,768	$17,936	$4,974	$1,384,433,347	$1,493,080,471	$1,116,431,284	$3,993,945,102
100%	$39,536	$35,873	$9,948	$2,768,866,694	$2,986,160,942	$2,232,862,568	$7,987,890,204

All Specialties and 70% threshold

Proposed Adjustment in allowed charges	% increase in average physician Medicare annual revenue			% increase in total Medicare annual allowed charges			% Increase in grand total allowed charges
	Family Medicine/GP	Other PC	Sub-spec.	Family Medicine/GP	Other PC	Sub-spec.	
5%	$1,478	$1,230	$288	$103,530,179	$102,370,443	$64,550,291	$270,450,913
25%	$7,391	$6,149	$1,438	$517,650,896	$511,852,215	$322,751,453	$1,352,254,564
50%	$14,783	$12,298	$2,876	$1,035,301,792	$1,023,704,431	$645,502,907	$2,704,509,129
100%	$29,566	$24,596	$5,752	$2,070,603,583	$2,047,408,861	$1,291,005,813	$5,409,018,258

Sources: RGC analysis of 2006 Medicare Part B nationally representative sample of physicians.

Table 3. Percent of physician specialties that meet the various thresholds

Primary care services threshold	% of physicians that meet the primary care threshold				
	FM/GP	IM	Peds	Geriatrics	Others
50%	68.6%	48.9%	27.5%	72.4%	10.5%
60%	58.8%	38.2%	23.3%	63.2%	7.3%
70%	45.2%	27.5%	21.0%	53.9%	4.8%
80%	32.5%	18.0%	18.5%	44.7%	3.0%
90%	18.9%	10.0%	15.7%	27.6%	1.5%

Table 4. Percent of physicians that meet the various thresholds: rural vs. urban

	% rural	**% urban**
Physicians that meet 60% PC threshold	19.1%	80.9%
Physicians that DO NOT meet 60% PC threshold	24.8%	75.2%
All physicians in our simulation sample	22.0%	78.1%

Comparisons:

CT and MRI imaging (2006)	$5 Billion[9]
Coronary Stents (2002)	$6.2 Billion[10]

Test of how our model approximates that of MedPAC (June, 2008 report)

Tables 4 and 5 demonstrate that our analysis of Medicare Claims is representative of what MedPAC used for the June 2008 report.

Table 5. Distribution of physicians who bill primary care, 2006 Comparing RGC 2006 Medicare sample to MedPAC data

	RGC Part B 2006 non-institutional only		MedPAC Part B 2006 institutional & non-institutional	
Specialty	# of physicians	% of total physicians	# of physicians	% of total physicians
Primary Care	11,829	35.5%	152,929	31%
Other physicians	21,477	64.5%	344,143	69%
	33,306		497,072	

Sources:
1. RGC analysis of 2006 Medicare Part B nationally representative sample of physicians.
2. MedPAC analysis of 2006 claims data Report to the Congress: Reforming the Delivery System, June 2008, Table -2-3 page 34.

Table 6. Percent of allowed charges from primary care services Comparing RGC 2006 Medicare sample to MedPAC data

	RGC Part B 2006 non-institutional only	MedPAC Part B 2006 institutional & non-institutional
Geriatric Medicine	65.1%	65.0%
Family Medicine	58.4%	62.5%
Internal Medicine	38.9%	44.4%
Pediatric Medicine	36.1%	36.5%
Other physicians	17.4%	13.4%

Sources:
1. RGC analysis of 2006 Medicare Part B nationally representative sample of physicians.
2. MedPAC analysis of 2006 claims data Report to the Congress: Reforming the Delivery System, June 2008, Table -2-1 page 28.

References

[1] Hauer KE, Durning SJ, Kernan WN, Fagan MJ, Mintz M, O'Sullivan PS et al. Factors associated with medical students' career choices regarding internal medicine. JAMA 2008; 300(10):1154-1164.

[2] Ebell MH. Future salary and US residency fill rate revisited. JAMA 2008; 00(10):1131-1132.
Ebell MH. Choice of specialty: It's money that matters in the USA. JAMA 1989;262(12):1630.
Phillips RL, Dodoo MS, Petterson S, Xierali I, et al. Specialty and Geographic Distribution of the Physician Workforce: What Influences Medical Student & Resident Choices? AAFP (Washington, DC). 2009.

[3] Salsberg E, Rockey PH, Rivers KL, Brotherton SE, Jackson GR. US Residency Training Before and After the 1997 Balanced Budget Act. JAMA. 2008; 300(10):1174-1180.

[4] http://www.medpac.gov/documents/Jun08_EntireReport.pdf, Chapter 2

[5] http://finance.senate.gov/hearings/statements/031209mb.pdf

[6] http://finance.senate.gov/healthreform2009/finalwhitepaper.pdf, p 38.

[7] The Lewin Group. Financial model for sustaining family medicine and primary care practices. July 15, 2004. Available at: http://www.futurefamilymed.org.

[8] Research Triangle Institute (2008). ***SUDAAN Language Manual, Release 10.0 , pg 52,*** Research Triangle Park, NC: Research Triangle Institute

[9] http://www.gao.gov/new.items/d08452.pdf

[10] http://content.healthaffairs.org/cgi/content/full/24/1/52