ROBERT
GRAHAM
CENTER

AAFP Center for Policy Studies

Estimated Effects of Sec. 1721 of draft bill HR 3200 "America's Affordable Health Choices Act of 2009" on physician gross revenue

Martey Dodoo, PhD

A White Paper
The Robert Graham Center
August, 2009

Executive Summary:

Sec. 1721 of HR 3200 (July, 2009) *"requires that State Medicaid programs reimburse for primary care services furnished by physicians and other practitioners at no less than 80% of Medicare rates in 2010, 90% in 2011, and 100% in 2012 and after."*

We estimated the effects of the proposed Sec. 1721. These are our main findings, if implemented:

1. The proposal would remove the current considerable reimbursement rate variation among States, and as a result will also have varied effects on physician gross revenue across States.
2. Physicians in several states with Medicaid rates similar to Medicare will see no appreciable change in gross revenue.
3. Due to wide state-to-state variation in Medicaid rates, averaged nationally, Family Physicians will see a 4% increase in gross revenue by 2012.
4. However, several states with Medicaid rates lower than Medicare will see increases of up to 48% (California) by 2012. For the average California family physician, this could mean revenue increases of nearly $50,000.
5. This proposal could significantly increase access for Medicaid patients to primary care services and more adequately reward primary care physicians already caring for these people.

Background:

House draft bill H.R. 3200 was introduced in the House on July 13, 2009. Since then it has undergone committee consideration and a mark-up session. Section 1721 of HR 3200 relates to payments to primary care physicians and *"requires that State Medicaid programs reimburse for primary care services furnished by physicians and other practitioners at no less than 80% of Medicare rates in 2010, 90% in 2011, and 100% in 2012 and after."* It further *"maintains the Medicare payment differentials between physicians and other practitioners. The federal government would pay 100% of the incremental costs attributable to this requirement."*

The objective of this white paper is to report on analyses to assess and estimate the effects of Section 1721 of draft bill HR 3200 on the total gross revenue of the average physician nationally and the total gross revenue of the average family physician in each State. It takes into consideration the variation in current Medicaid fee rates and a proxy for the volume of services provided from State to State.

Data and Sources:

We used four main sources of data:
(1) Full year 2006 Medicare Part B Carrier claims data for a cross-sectional sample of about 40,000 physicians representative of each State in the Union (except Vermont);
(2) Medicare-Medicaid primary care service reimbursement fee ratios by State from Zuckerman, Williams, and Stockley (2009)
(3) Medicare-Medicaid enrolment ratios by State from The Urban Institute, Kaiser Commission, and Mathematica Policy Research analysis of CMS State/County Market Penetration Files, July 2008.
(4) 2006 National Ambulatory Medical Care Survey (NAMCS) to estimate the ratio of Medicaid-Medicare visits by physician specialty.
(5) Average patient panels derived from the 2003 AAFP Member Profile Survey and the *Physician Socieconomic Status: 2000-2002 Edition*, American Medical Association, Center for Health Policy Research, 2001.

The representative cross-sectional sample of physicians was selected from an April, 2006 AMA Master File database. It included: (1) graduates of accredited U.S. Medical Schools; (2) at least one year beyond residency; (3) full-time providers of outpatient care. It was selected randomly using a single-stage stratified sampling design without replacement and sampling weights were calculated for each physician. 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, and used the SAS-callable SUDAAN (v10) statistical software package for all analyses to estimate physician revenue from Medicare. All such statistical estimation was based on the sampling weights for physicians in our sample and estimations were by Taylor Linearization.

Methods

From the Medicare claims data we estimated the annual gross revenue obtained from providing Medicare primary care services by the average physician. Our definition of "Primary Care services" followed that by MedPAC and Sec. 1121 of HR 3200 and included: office visits (codes 99201–99215); nursing home visits (codes 99304–99340); and home visits (codes 99341–99350).

Gross Revenue is defined as the product of the average Physician Fee Rate and the average Volume of Services. It can be represented algebraically as:

$$REV_D = T_D \cdot V_D \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$
$$REV_E = T_E \cdot V_E \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(2)$$

Where REV = Gross revenue, T = Reimbursement fee rate, V = Volume of services, "subscript E" represents the Medicare program and "subscript D" represents the Medicaid program.

We combined equations (1) and (2) above, and estimated annual gross revenue obtained from providing Medicaid services by the average physician, using the following formula derived from (1) and (2) above as follows:

$$REV_D = \frac{T_D}{T_E} \cdot \frac{V_D}{V_E} \cdot REV_E \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3)$$

So $\frac{T_D}{T_E}$ represents the Medicare-Medicaid primary care service reimbursement fee ratio, and $\frac{V_D}{V_E}$ is the Medicare-Medicaid volume ratio. In our estimation, we used Medicare and Medicaid enrollment numbers as proxies for the volume of services.

Thus the estimated gross revenue from Medicaid is calculated by taking the product of the revenue from Medicare together with the product of the two ratios (fee ratio and enrollment ratio). When both ratios are above 1.0, the effect on gross revenue would be expected to be relatively large. Similarly when both ratios are below 1.0 the effects would be expected to be relatively small. The effect cannot be easily predicted however when one of the ratios is greater than 1.0 and the other is less than 1.0. To estimate the actual effect on physician revenues, we substituted the actual ratios and average revenue from Medicare.

We used average patient panels derived from the 2003 AAFP Member Profile Survey and estimated total annual gross revenues from all payers (Medicare, Medicaid, and all other payers). We used the base year (2009) total annual gross revenue from all payers to the average physician, as the denominator for estimating the relative effects for each year.

We estimated the effect of the proposed Sec. 1721 of the draft bill by calculating the average physician revenue from Medicaid if Medicaid were paid at the same rate as Medicare – this is the proposal for primary care services in 2012. Thus in that year the proposal would set T_D equal to T_E for primary care services in equation (30 above. Consequently equation (3) becomes equation (4) below. We used Equation (4) to estimate the gross revenue from Medicaid for the average physician in 2012:

$$REV_D = \frac{V_D}{V_E} \cdot REV_E \text{...}(4)$$

Then we estimated the revenue from Medicaid in 2010 and 2011, which should be 80% and 90% of the 2012 Medicaid revenue respectively.

Major Findings

We present the estimated effects of Sec. 1721 on average physician gross revenue by specialty in Table 1. It includes estimates for 5 physician specialty groups: Family Physicians; General Pediatricians, General Internists, Geriatricians and an aggregated group of subspecialties. In Table 1 are the nation-wide estimated effects on the average physician nationally by specialty. These estimates were obtained by using the nation-wide number of visits by Medicare and Medicaid patients who saw a physician from the 2006 NAMCS, as proxies for the volume of services by physician specialty.

In Table 2 we present the estimated effects on the average family physician's gross revenue within each State of the Union (with the exception of Tennessee and Puerto Rico, two States with no data on the Medicare-Medicaid fee ratio, and Vermont the only State for which we did not have Medicare Part B Carrier claims data). A list of the Medicare-Medicaid ratios for each State is presented in an Appendix table.

Effects of Sec 1721 nation-wide

(1) The effects of implementing Sec. 1721 of draft bill HR 3200nation-wide (Table 1), would be increases in the gross average revenues of family physicians by 2% in 2010, 3% in 2011, and 4% in 2012. Those are the average effects expected nation-wide and the average effects within each of the four census regions of the country are of similar magnitude (lower panel of table 1).

(2) In contrast, there is substantial variation in effects among physician specialties (upper panel of Table 1.) Thus the effect of Sec 1721 on Pediatricians and Family/Geriatric Medicine (FPG) would be relatively large. This is because a large proportion of those physicians' services are to Medicaid beneficiaries. We found for example that Pediatricians have a Medicaid to Medicare visit ratio = 27.04, and physicians in Family/Geriatric Medicine (FPG) have a Medicaid to Medicare visit ratio = 3.45. Thus we found pediatricians get up to a 10% increase in gross revenues by 2012, and physicians in Family/Geriatric Medicine get up to 14% increase in gross revenues.

Table 1: Estimated effects of Sec. 1721 on average nation-wide physician gross revenue by specialty.

	Avg annual rev from Medicare primary care services	Avg annual rev from Medicaid: (2009)	Change in average gross revenue		
			2010	**2011**	**2012**
Family Medicine	$81,575	$39,428	**2%**	**3%**	**4%**
Internal Medicine	$117,376	$25,739	**1%**	**2%**	**3%**
Pediatrics	$26,972	$478,080	**4%**	**7%**	**10%**
FPs certified in Geriatrics	$129,119	$292,295	**6%**	**10%**	**14%**
Subspecialties	$78,719	$19,194	**1%**	**2%**	**3%**
North East Region	$67,778	$33,181	**2%**	**3%**	**4%**
Mid West Region	$74,415	$33,207	**2%**	**3%**	**4%**
South Region	$94,469	$37,135	**2%**	**3%**	**4%**
West Region	$92,027	$34,602	**1%**	**2%**	**4%**

Notes: (1) These are changes in average **gross** revenue estimates NOT income or net revenue.

(2)They were derived using (a) Medicaid-Medicare fee ratios were from: "The Kaiser Family Foundation, statehealthfacts.org," and (b) Medicaid-Medicare volume ratios were from volume of visit ratios estimated from the 2006 NAMCS for patient visits to physicians.

Effects of Sec 1721 in each State (Table 2)

(1) We found rather wide variations in the relative effects on physicians of all specialty types from Sec. 1721 between States that currently have their Medicaid fee rates close to their Medicare fee rates and those that do not.

(2) Family physicians in States like Alaska, the District of Columbia, Idaho, North Dakota, Oklahoma and Wyoming that have the product of the two ratios (fee ratio and enrollment ratios) close to one, will be expected to get close to no effects from implementation of Sec 1721. While family physicians in States like California, Delaware, New York, and Rhode Island, will gain with as much as 39 and 48% increases in gross revenue by 2012.

In summary

Medicaid is a state administered program with each state setting its own guidelines regarding eligibility, what services are covered, and the rates at which physicians are reimbursed for those services. The proposed Sec. 1721 of HR 3200 would remove the considerable reimbursement rate variation among States, and as a result will also have varied effect on physician revenue across States. In some states, the potential for revenue increases is large, but in States with Medicaid-Medicare payment parity, there may be no change.

It is worth noting that the success of the North Carolina Access II program is due in part to the fact that Medicaid rates were raised to 95% of Medicare rates. This was good incentive for broad physician participation that increased access for patients and built a stable platform on which to add other medical home and community health functions.

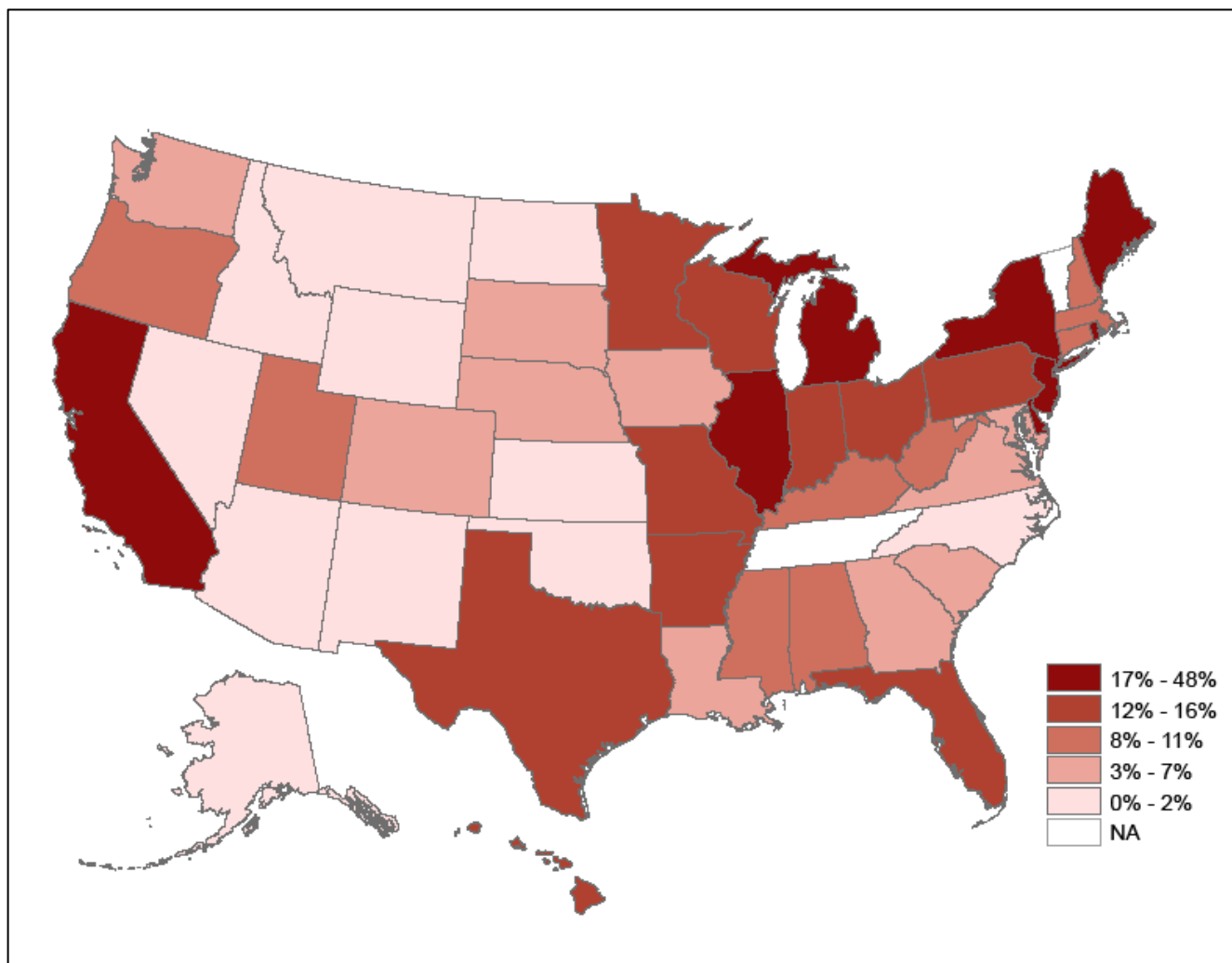**Figure 1: Estimated Effects of Sec 1721 on average family physician total gross revenue in each State**

Legend:
- 17% - 48%
- 12% - 16%
- 8% - 11%
- 3% - 7%
- 0% - 2%
- NA

Table 2: Estimated Effects of Sec 1721 on average family physician total gross revenue in each State.

	Estimated Average Gross Family Physician Revenue (2009)		Change in total gross revenue for an average family physician (proposed)		
	from Medicare	from Medicaid	2010	2011	2012
Alabama	$25,874	$24,504	1%	5%	10%
Alaska	$113,478	$330,384	0%	0%	0%
Arizona	$95,313	$155,803	0%	0%	2%
Arkansas	$101,828	$117,874	2%	8%	15%
California	$89,289	$99,094	30%	39%	48%
Colorado	$45,731	$38,111	0%	1%	5%
Connecticut	$68,753	$51,848	1%	4%	8%
Dist. of Columbia	$108,071	$142,291	0%	0%	0%
Delaware	$49,640	$51,037	24%	31%	39%
Florida	$133,024	$69,646	7%	9%	12%
Georgia	$84,337	$114,630	0%	2%	7%
Hawaii	$45,636	$33,052	7%	11%	16%
Idaho	$60,220	$63,513	0%	0%	0%
Illinois	$76,905	$60,425	11%	16%	21%
Indiana	$71,750	$46,316	7%	11%	15%
Iowa	$49,648	$39,867	0%	0%	4%
Kansas	$67,178	$54,645	0%	0%	2%
Kentucky	$80,323	$74,708	0%	4%	9%
Louisiana	$71,447	$107,444	0%	0%	5%
Maine	$63,604	$40,070	14%	19%	24%
Maryland	$67,483	$57,782	0%	3%	7%
Massachusetts	$50,113	$46,918	1%	6%	11%
Michigan	$80,716	$55,135	9%	14%	18%
Minnesota	$48,089	$28,804	8%	11%	15%
Mississippi	$49,879	$69,402	0%	3%	9%
Missouri	$98,646	$71,789	6%	10%	14%
Montana	$40,287	$27,704	0%	0%	1%
Nebraska	$51,553	$37,693	0%	3%	6%
Nevada	$92,196	$67,282	0%	0%	2%
New Hampshire	$137,138	$64,046	3%	6%	8%
New Jersey	$48,944	$14,537	12%	15%	18%
New Mexico	$60,673	$105,017	0%	0%	1%
New York	$43,952	$27,989	23%	28%	33%
North Carolina	$73,375	$82,110	0%	0%	2%
North Dakota	$112,164	$78,074	0%	0%	0%
Ohio	$93,579	$69,827	6%	10%	15%
Oklahoma	$83,800	$102,150	0%	0%	0%
Oregon	$39,851	$28,297	1%	4%	8%
Pennsylvania	$80,246	$47,219	7%	12%	16%
Rhode Island	$45,959	$18,692	22%	27%	32%
South Carolina	$132,539	$153,491	0%	2%	7%

	Estimated Average Gross Family Physician Revenue (2009)		Change in total gross revenue for an average family physician (proposed)		
	from Medicare	from Medicaid	2010	2011	2012
South Dakota	$57,730	$44,038	0%	2%	5%
Texas	$81,756	$82,186	6%	11%	16%
Utah	$44,093	$39,019	2%	6%	11%
Virginia	$39,087	$27,746	0%	1%	4%
Washington	$89,910	$110,637	0%	0%	4%
West Virginia	$96,436	$77,966	1%	5%	9%
Wisconsin	$55,967	$42,264	6%	11%	15%
Wyoming	$44,042	$55,505	0%	0%	0%

Notes: There are no estimates for Tennessee and Puerto Rico because there were no Medicare-Medicaid Fee indices for those two areas at the data source, and for Vermont because our data did not include Medicare claims from Vermont.

Appendix Table
Medicaid-to-Medicare Ratios

State	Medicaid-to-Medicare 2008 Fee Ratio ($\frac{T_D}{T_E}$), primary care services	Medicaid-to-Medicare Enrollment Ratio ($\frac{V_D}{V_E}$), 2006
Alabama	0.782	1.211
Alaska	1.403	2.075
Arizona	0.973	1.680
Arkansas	0.776	1.493
California	0.470	2.359
Colorado	0.870	0.957
Connecticut	0.784	0.962
Dist. of Columbia	1.001	1.316
Delaware	0.471	2.182
Florida	0.549	0.953
Georgia	0.860	1.581
Hawaii	0.644	1.124
Idaho	1.030	1.024
Illinois	0.574	1.369
Indiana	0.609	1.060
Iowa	0.892	0.900
Kansas	0.940	0.865
Kentucky	0.804	1.156
Louisiana	0.900	1.670
Maine	0.525	1.199
Maryland	0.823	1.041
Massachusetts	0.776	1.206
Michigan	0.592	1.154

Minnesota	0.578	1.037
Mississippi	0.842	1.653
Missouri	0.654	1.113
Montana	0.964	0.713
Nebraska	0.818	0.894
Nevada	0.927	0.787
New Hampshire	0.672	0.695
New Jersey	0.406	0.731
New Mexico	0.985	1.758
New York	0.358	1.778
North Carolina	0.950	1.178
North Dakota	1.009	0.690
Ohio	0.662	1.127
Oklahoma	1.000	1.219
Oregon	0.778	0.913
Pennsylvania	0.624	0.943
Rhode Island	0.365	1.116
South Carolina	0.861	1.346
South Dakota	0.846	0.902
Texas	0.681	1.476
United States (average)	0.655	1.310
Utah	0.763	1.160
Virginia	0.882	0.805
Washington	0.923	1.333
West Virginia	0.766	1.056
Wisconsin	0.666	1.134
Wyoming	1.171	1.077

Notes:

(1) Medicaid-Medicare fee ratios are from: "The Kaiser Family Foundation, statehealthfacts.org." Data Source: Stephen Zuckerman, Aimee Williams, and Karen Stockley, "Medicaid Physician Fees Grew By More Than 15 Percent From 2003 to 2008, Narrowing Gap With Medicare Physician Payment Rates," Health Affairs, April 2009; available at http://www.kff.org/medicaid/kcmu042809oth.cfm.