Are Physicians Closing their Doors to Medicare?
Trends and Patterns in the Provision of Physician Services to Medicare Patients.

Medicare efforts to control the cost of providing reasonable and necessary care to all eligible beneficiaries has many times led to CMS recommendations for cuts in physician service payment rates. These continued annual threats of cuts have raised concerns that some physicians might start closing their doors to beneficiaries. Past attempts to assess the impact of these threats on beneficiary access to physician services have yielded either inconclusive or inconsistent findings. Many focused on overall access and not access for patients new to Medicare or those who have had to change physicians. Anecdotes and media reports frequently highlighted access problems, even as physician and patient surveys refuted an access problem. Many of the surveys had built-in limitations. Other researchers tried to make time trend inferences using only cross-sectional data. Many physicians' groups have been accused of exaggerating access problems to posture for higher payment.

The current report contributes to the effort in an attempt to uncover more definitive results using: (1) Medicare claims data; (2) well-defined measures of access; (3) time trend measurements using data not only from sequential cross-sections of the entire physician workforce, but also tracking the claims behavior of a retrospective panel of physicians followed over a decade.

Methods

We analyzed full year Medicare Part B claims data for four cross-sectional samples and four longitudinal retrospective panels of physicians. We selected the cross-sectional samples from snapshots of the AMA Master File database in 1996, June 2000, March 2004, and September 2007. To be included in any of the samples, a physician must be (1) a graduate of an accredited U.S. Medical School; (2) at least one year beyond medical residency; (3) a full-time provider of outpatient care. We excluded 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 also excluded, as were physicians required by law to accept Medicare beneficiaries.

To ensure credible sample comparisons we created five State physician subgroups or strata. We measured "access to outpatient services" as the extent to which physicians provided services to new Medicare outpatients. The level of services for new Medicare outpatients was measured as: (1) percentage of physicians providing services to at least one new Medicare patient in the year; (2) the average number of new patient visits per 1,000 beneficiaries. The first is an aggregate measure and it is the measure used by all previous studies that used self-reports by physicians and their practices to determine if there are access difficulties. The second is a per beneficiary unit measure (an improvement on the first) that takes into consideration the number of beneficiaries in the physician's Medicare panel, but is not necessarily depended on the sum of Medicare services provided by the physician. A new visit is when no face-to-face services have been provided to the beneficiary by a physician or a colleague of the physician in a group practice in the previous 3 years. All payment data were adjusted for year-to-year inflation using the U.S.

national Consumer Price Index[1].

We used SAS statistical software for all sample selection and data management. Due to our sampling design, we used the SAS-callable SUDAAN (v10) statistical software package for all data analysis except the econometric modeling of longitudinal data for which we used MPlus (v5.2). All statistical modeling was based on the sampling weights for the physicians in our samples and estimations were by Taylor Linearization[2].

Key Findings

- About 5-7% of the universe of physicians does not have UPINs and so are likely not providing Medicare services. 26%-32% of active full-time patient care physicians did not provide any Medicare Part B services in the four years for which we analyzed claims data (they had no claims data). Other than being more likely to be sub-specialists, these physicians were not different from other physicians who provided Part B physician services..

Of the 68%-74% of sampled physicians who provided services and have claims data, we found the following:

- Compared to physicians in 1996 (the reference year), all physician groups limited their services to "new" Medicare outpatients in each of the subsequent years of our study (2000 to 2006). General Surgeons accepted about twice as many "new" Medicare patients (per 1,000 Medicare beneficiaries) as physicians of any other specialty.
- In the longitudinal sample, physicians cut their Medicare "new" patient visits by about 4.2% each year from 1996 to 2000, about 7.7% each year from 2000 to 2003, and about 2.2% each year from 2003 to 2006. This is similar to the behavior of physicians in our cross-sectional samples. Average Medicare payments to physicians per visit rose over the period 1996 to 2006, even when access to physician services was deteriorating. This relationship held for all physician groups and physician characteristics.

The results from our two-part linear growth models were that allopathic physicians were most likely not to provide new visits. Over time (1996 – 2006) the tendency of primary care physicians to provide new visits was flat. Primary care physicians are more likely to decrease the frequency at which they provide new visits. Male and urban dwelling physicians are likely to bend the rate at which they provide new visits, while over time, being an allopathic physician or being male or residing in a rural area are more likely to result in a higher frequency of new visits.

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[1] Consumer Price Index (CPI-U) from http://stats.bls.gov/cpi/ -- January 7, 2009.

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

Table 1: Basic Accounting for our study samples (1996-2006)

	Baseline*	Cross-sectional samples			Longitudinal panel sample		
Year of sample	**1996**	**2000**	**2003**	**2006**	**2000**	**2003**	**2006**
Physician universe	524,233	524,233	578,747	632,026	524,233	578,747	632,026
Physicians with no UPINs	26,736	26,736	27,201	42,346	26,736	27,201	42,346
Our physician sample size	36,808	38,294	39,223	38,578	36,771	36,222	35,356
With NO claims, NO payments	11,541	10,528	10,898	11,600	9,502	10,085	11,383
With claims but NO payments	73	400	411	271	359	421	227
With claims and payments	25,194	27,366	27,914	26,707	26,910	25,716	23,755

Notes: * Baseline sample (1996) was designed to be the reference sample for both the cross-sectional and the longitudinal panel samples.

Table2: Average annual change in new visits per 1000 beneficiaries per physician for the Longitudinal and Cross-sectional samples [3]

	Longitudinal samples				Cross-sectional samples		
	1996 to 2000	2000 to 2003	2003 to 2006		1996 to 2000	2000 to 2003	2003 to 2006
Total physician sample	-4.2%	-7.7%	-2.2%		-4.8%	-4.4%	-2.3%
Allopathic physicians	-4.2%	-7.6%	-2.3%		-4.8%	-4.4%	-2.5%
Osteopathic physicians	-4.7%	-9.2%	-1.3%		-5.2%	-5.0%	1.0%
Male physicians	-4.0%	-7.2%	-1.8%		-4.4%	-4.9%	-1.8%
Female physicians	-5.0%	-9.6%	-3.9%		-6.5%	-3.2%	-4.1%
Physicians under 45	-4.2%	-9.3%	-2.5%		-5.4%	-3.4%	-2.7%
Physicians 45-54 years old	-2.6%	-6.2%	-2.3%		-2.9%	-5.5%	-3.4%
Physicians 55-64 years old	-4.4%	-6.1%	-2.5%		-3.5%	-5.1%	0.1%
Family medicine/GP	-3.9%	-7.2%	-3.3%		-4.6%	-1.4%	-1.7%
Internal Medicine	-4.6%	-10.1%	-2.7%		-5.9%	-0.7%	-4.8%
General Surgery	-4.9%	-6.5%	-1.1%		-5.6%	-3.8%	-2.7%
Other Sub-specialty	-2.8%	-8.4%	-2.3%		-3.0%	-7.7%	-0.9%
Prim care (excl. PEDS)	-4.4%	-8.5%	-3.1%		-5.2%	-1.1%	-3.1%
Not primary care	-4.2%	-7.3%	-2.0%		-4.7%	-6.0%	-1.9%
Rural location	-4.2%	-6.5%	-0.2%		-2.7%	-6.0%	-0.5%
Urban location	-4.2%	-7.8%	-2.5%		-5.1%	-4.2%	-2.5%
Physicians in HPSA	-4.6%	-6.1%	-2.5%		-5.0%	-3.0%	-1.4%
Physicians not in HPSA	-4.2%	-7.9%	-2.2%		-4.8%	-4.6%	-2.5%
Medicare panel size							
1-99 beneficiaries	-3.5%	-7.6%	-1.3%		-4.5%	-3.3%	-2.7%
100-249 beneficiaries	-4.2%	-6.4%	-2.8%		-5.0%	-4.1%	-1.2%
250-499 beneficiaries	-3.6%	-5.6%	-1.9%		-3.1%	-4.7%	-2.0%
500-999 beneficiaries	-2.8%	-5.9%	-1.7%		-2.3%	-5.1%	-3.4%

[3] Due to inadequate sample sizes (below 500), satisfactory estimates (statistically significant from zero) could not be calculated for the following groups: "Physicians over 64 years old", "General Pediatrics", "Physicians with more than 1000 beneficiaries in their panel"

Table 3
Explaining "New visits per 1000 beneficiaries per physician" in longitudinal panel samples using two-part linear growth models.

	Modeling physicians with any new visits versus NO new visits			Modeling frequency of new visits (log-normal function)		
	Regn. coeff	**Std. error**	**p-value**	**Regn. coeff**	**Std. error**	**p-value**
Growth mean (intercept)	0.000	0.000		3.546	0.061	0.000
Slope	-0.057	0.049	0.240	-0.075	0.007	0.000
Time invariant covariates(intercept)						
Allopathic (MD) (Ref.= DO)	-0.539	0.243	0.027	-0.136	0.052	0.009
Female (Ref=Male)	-0.238	0.183	0.194	0.301	0.038	0.000
Rural location (Ref.=Urban)	-0.057	0.162	0.727	-0.182	0.035	0.000
In HPSA (Ref.=Not in HPSA)	0.379	0.364	0.299	-0.029	0.073	0.693
Time invariant covariates(slope)						
Allopathic (MD) (Ref.= DO)	0.016	0.036	0.664	0.002	0.005	0.725
Female (Ref=Male)	-0.028	0.022	0.197	-0.019	0.004	0.000
Rural location (Ref.=Urban)	0.028	0.020	0.158	0.013	0.003	0.000
In HPSA (Ref.=Not in HPSA)	-0.034	0.043	0.427	0.003	0.007	0.678
Time-variant covariates						
Year 1996						
One state practice(Ref.=Multi-state)	-0.281	0.168	0.095	0.044	0.029	0.131
Primary care (Ref.=Not PC)	1.310	0.134	0.000	-0.284	0.025	0.000
Year 2000						
One state practice(Ref.=Multi-state)	-0.059	0.099	0.550	0.072	0.016	0.000
Primary care (Ref.=Not PC)	1.013	0.123	0.000	-0.328	0.024	0.000
Year 2003						
One state practice(Ref.=Multi-state)	-0.418	0.101	0.000	0.044	0.015	0.004
Primary care (Ref.=Not PC)	1.375	0.131	0.000	-0.299	0.025	0.000
Year 2006						
One state practice(Ref.=Multi-state)	0.030	0.128	0.817	0.145	0.021	0.000
Primary care (Ref.=Not PC)	1.089	0.135	0.000	-0.291	0.027	0.000
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