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Rural Primary Care Physician Payment 2006–2009: What a Difference Three Years *Doesn't* Make

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Key Policy Implications

- The 2007 Medicare Physician Fee Schedule Final Rule that increased compensation for cognitive (Evaluation and Management) services at a rate exceeding increases for procedural services resulted in modest increases in rural primary care physician income in a prototypical practice.
- A prototypical *cognitive* primary care practice realized a higher percentage increase in income, but a prototypical *procedural* practice realized a larger dollar increase in income (due to a higher 2007 baseline income).
- However, additional changes to the Medicare Physician Fee Schedule between 2006 and 2009 reduced intended primary care physician compensation increases, resulting in only minimal increases in primary care physician income when adjusted for inflation.

Introduction

The Resource Based Relative Value Scale (RBRVS) is the system by which the Centers for Medicare and Medicaid Services (CMS) calculates Medicare physician payment. In brief, Medicare assigns a *relative value to* each Current Procedural Terminology (CPT®) code based on the relative value of three costs—physician work, practice expense, and malpractice insurance. Medicare adjusts each relative value unit (RVU) for geographic cost differences, and then applies a conversion factor (CF) to translate these values into dollar physician payments. Previous RUPRI Center briefs have described the RBRVS methodology in detail and Medicare physician payment policy implications.[1,2,3,4]

In November 2006, CMS released the Medicare Physician Fee Schedule Final Rule for calendar year 2007, which increased the relative value of certain Evaluation and Management (E&M) physician services (defined by unique CPT codes). To maintain budget neutrality, payment increases in E&M services were offset by payment decreases in other physician services. Although many physician specialties deliver E&M services, primary care physicians (family medicine, internal medicine, pediatric, and geriatric) most frequently deliver E&M services. Rural physicians are predominantly primary care physicians. Thus, targeted E&M service payment changes are of great importance to rural physicians.

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This analysis presents the impact of Medicare's E&M service valuation adjustment (implemented January 1, 2007) on two prototypical primary care practices—one providing only cognitive (E&M) services *(cognitive* practice*)* and another providing a mix of procedures and E&M services *(procedural* practice*)*. We believe the prototypical *procedural* practice will more closely approximate typical rural primary care practices because subspecialists performing procedures, such as gastroenterologists performing colonoscopies, are less available in rural areas than in urban areas. Consequently, many rural primary care practices offer procedural services that otherwise would not be readily accessible in rural communities.

Methods

We make multiple assumptions about each prototypical practice that are reasonable based on interviews with rural primary care doctors conducted by Mueller and MacKinney,[5] interactions with a rural physician alliance (unpublished discussions of the impact of changes to CPT-based payments), and one author's (MacKinney) experience in rural primary care practice. We acknowledge that there is wide variation in the service mix (CPT code distribution) among primary care practices. Nonetheless, wide practice variation increases the importance of understanding new payment policies in different practice scenarios.

Figure 1.

E&M CPT Code Distribution			
Established Office Visits		**New Office Visits**	
99211	5%	99201	6%
99212	16%	99202	25%
99213	55%	99203	43%
99214	21%	99204	19%
99215	3%	99205	6%

We assume that the distribution of patient E&M visit levels in each practice (e.g., established office visit CPT codes 99211, 99212, 99213, 99214, 99215) mirrors national distribution patterns (Figure 1).[6] Next, we assume practice volume and service mix based on MacKinney's experience. In the *cognitive* practice, the physician provides 20 E&M office visits per day, 12 hospital visits per week, and 10 nursing home visits per month (Figure 3 – next page). In the *procedural* practice, the *procedural* practice physician provides 13 E&M office visits per day, 9 hospital visits per week, and 5 nursing home visits per month (Figure 3 – next page). In addition, the procedural physician performs procedures such as colonoscopy, vasectomy, skin biopsy, skin lesion excision, joint tap/injection, and laceration repair. For both practices, we assume the physician sees patients in the clinic, hospital, and nursing home 4.5 days per week and 46 weeks per year. Total patient visits for both practices are similar. We validate our prototypical practice assumptions with 2006 Medical Group Management Association (MGMA) data for (1) median physician income (non-metro practice without obstetrics), (2) RVU_{total} and RVU_{work} (all family physician practices), and (3) compensation to collection ratio (Midwest single specialty practice).[7] Please see Figure 2.

Figure 2.

Validation – MGMA 2006 Data		
Median income	$157,713	Non-metro FP, no OB
RVU_{total}	7,661	All FP practices
RVU_{work}	4,073	All FP practices
Compensation to collection ratio	0.457	Midwest single specialty practice

We apply both the 2006 RVUs and then the 2009 RVUs to each service (defined by CPT code) delivered by the physician. Although both the CF[8] and the Geographic Practice Cost Indices[9] (GPCIs) changed between 2006 and 2009, we hold these values constant to assess practice revenue change secondary only to the 2007 change in relative values for targeted E&M services. We also hold constant service volumes and service mix from year to year. To calculate practice revenue, we use Medicare payment calculation methodology

described in a previous RUPRI Center brief.[10] However, we assume an overall CF equal to 115% of the 2006 Medicare CF. This rate assumes that the prototypical practices receive 50% of revenue from Medicare and 50% from other payers, and that on average, non-Medicare payers reimburse physicians at a rate 30% higher than Medicare.[11] Lastly, we assume a practice overhead of 55%, which is then used to determine physician income.

Importantly, the two practices are *prototypical* and thus do not represent any single primary care practice. In fact, almost all primary care practices offer both cognitive and procedural services. However, rural primary care practices are more likely to offer a greater variety and volume of procedures than urban primary care practices for reasons noted above. Changes to a practice's service mix may significantly change both the revenue change and percent change from 2006 to 2009. Nonetheless, the prototypical practices provide an opportunity to assess the impact of legislative change on both practice and physician income.

Figure 3.

Cognitive (Typical Urban) Practice Assumptions		
	E&M clinic visits per day	20
	Hospital admissions per week	4
	Hospital visits per week	12
	Patient care days per week	4.5
	Patient care weeks per year	46
	% established patients	95%
	Nursing home admissions per month	1
	Nursing home visits per month	10

Cognitive Practice Service Frequency

CPT Code	CPT Description	Annual Frequency
E&M		
99211	Office/outpatient visit, est	197
99212	Office/outpatient visit, est	624
99213	Office/outpatient visit, est	2,161
99214	Office/outpatient visit, est	837
99215	Office/outpatient visit, est	115
99201	Office/outpatient visit, new	13
99202	Office/outpatient visit, new	52
99203	Office/outpatient visit, new	90
99204	Office/outpatient visit, new	39
99205	Office/outpatient visit, new	13
99222	Initial hospital care	184
99232	Subsequent hospital care	552
99305	Nursing facility care, init	12
99309	Nursing fac care, subseq	120
Procedures		
44388	Colonoscopy	0
93015	Cardiovascular stress test	0
55200	Incision of sperm duct	0
11401	Exc tr-ext b9+marg 0.6-1 cm	0
20552	Inj trigger point, 1/2 muscl	0
57460	Bx of cervix w/scope, leep	0
11100	Biopsy, skin lesion	0
17261	Destruction of skin lesions	0
12002	Repair superficial wound(s)	0
17110	Destruct lesion, 1-14	0
57420	Exam of vagina w/scope	0
20605	Drain/inject, joint/bursa	0
	TOTAL	5,008

Procedural (Typical Rural) Practice Assumptions		
	E&M clinic visits per day	13
	Hospital admissions per week	3
	Hospital visits per week	9
	Patient care days per week	4.5
	Patient care weeks per year	46
	% established patients	95%
	Nursing home admissions per month	0.5
	Nursing home visits per month	5

Procedural Practice Service Frequency

CPT Code	CPT Description	Annual Frequency
E&M		
99211	Office/outpatient visit, est	128
99212	Office/outpatient visit, est	405
99213	Office/outpatient visit, est	1,404
99214	Office/outpatient visit, est	544
99215	Office/outpatient visit, est	74
99201	Office/outpatient visit, new	9
99202	Office/outpatient visit, new	34
99203	Office/outpatient visit, new	58
99204	Office/outpatient visit, new	25
99205	Office/outpatient visit, new	8
99222	Initial hospital care	138
99232	Subsequent hospital care	414
99305	Nursing facility care, init	6
99309	Nursing fac care, subseq	60
Procedures		
44388	Colonoscopy	92
93015	Cardiovascular stress test	92
55200	Incision of sperm duct	23
11401	Exc tr-ext b9+marg 0.6-1 cm	184
20552	Inj trigger point, 1/2 muscl	230
57460	Bx of cervix w/scope, leep	46
11100	Biopsy, skin lesion	138
17261	Destruction of skin lesions	276
12002	Repair superficial wound(s)	138
17110	Destruct lesion, 1-14	276
57420	Exam of vagina w/scope	92
20605	Drain/inject, joint/bursa	92
	TOTAL	4,988

Results

To provide a specific illustration of physician income change secondary to new regulations, we use North Dakota as an example (two other predominantly rural Medicare Localities and one urban Medicare Locality are also depicted as examples in Figure 4). The 2007 fee schedule update would have increased physician compensation in both North Dakota prototypical primary care practices. The physician in the *cognitive* practice would have realized a 17.5% compensation increase ($25,854) due to the 2007 fee schedule update for targeted E&M services. In comparison, the physician in the *procedural* practice would have realized a 15.8% compensation increase ($30,712) due to the 2007 fee schedule update for targeted E&M services (Figure 4). Although the physician in the procedural practice would have realized greater financial gain, the relative increase was slightly greater for the *cognitive* practice versus the *procedural* practice. However, changes to the CF and GPCIs between 2006 and 2009 significantly limited these gains. Returning to North Dakota and including all Medicare Physician Fee Schedule changes between 2006 and 2009, the prototypical *cognitive* practice physician realized only a 10.5% compensation gain ($15,525) and the prototypical *procedural* practice physician realized only an 8.6% compensation gain ($16,653). After considering a 6.1% increase in the Consumer Price Index (CPI) from January 2006 to January 2009,[12] the relative compensation gain for a North Dakota *procedural* practice physician from 2006 to 2009 was only 2.5%.

Figure 4.

Change in Physician Income	Baseline **2006**	2007 E&M RVU change only **2009**		All RVU, GPCI, CF changes 2006-2009 **2009**	
	Cognitive	Cognitive	Change	Cognitive	Change
North Dakota	$147,709	$173,563	17.5%	$163,234	10.5%
Mississippi	$146,716	$172,481	17.6%	$165,533	12.8%
Rest of Massachusetts	$166,210	$193,233	16.3%	$183,866	10.6%
Los Angeles	$173,327	$201,337	16.2%	$195,918	13.0%
	Procedural	Procedural	Change	Procedural	Change
North Dakota	$194,743	$225,455	15.8%	$211,396	8.6%
Mississippi	$193,141	$223,613	15.8%	$215,088	11.4%
Rest of Massachusetts	$223,571	$257,678	15.3%	$245,229	9.7%
Los Angeles	$233,476	$268,974	15.2%	$263,197	12.7%

Discussion

Because few non-primary care proceduralists deliver services in rural areas, rural primary care practices will tend to provide more procedures than urban primary care practices. Therefore, we assume that our prototypical *procedural* practice tends to more closely represent rural primary care practices and our prototypical *cognitive* practice tends to more closely represent urban primary care practices. The January 1, 2007, Medicare Physician Fee Schedule update that increased RVUs for targeted E&M physician services should preferentially benefit primary care practices that focus on cognitive services compared to primary care practices that include procedural services. As expected, we found that the regulation would have relatively benefited *cognitive*

primary care practices marginally more than *procedural* primary care practices, although the *procedural* practice would have continued to generate more revenue than the *cognitive* practice. However, the effect of all Medicare physician payment changes in the past three years significantly reduced the anticipated revenue increases for both prototypical practices.

Accompanying the Final Rule describing the E&M services value change, a CMS news release stated that the "new payment rates will encourage increased physician/patient communication" and will increase physician work RVUs for an intermediate office visit (CPT code 99213) by 37%.[13] In fact, for a prototypical *procedural* practice in North Dakota, the net increase in physician income from 2006 to 2009 was only 8.6%. After accounting for a 6.1% increase in the Consumer Price Index, a rural North Dakota physician providing procedures and E&M services to his or her community realized only a 2.5% increase in real revenue—hardly enough to "encourage increased physician/patient communication." In 2007, Ginsberg and Berenson reported that the E&M RVU update "accomplished little."[14] Unfortunately, in the past two years, "little" has become even less. As noted in prior RUPRI Center briefs, incremental changes to the RBRVS system will be unlikely to encourage primary care specialty choice or support rural practice location.

The CMS final rule for physician payment as of January 1, 2010, further increases payment for E&M services and makes other changes that will benefit primary care practices, such as increasing payment for the Initial Preventive Physical Exam visit. The CMS press release states: "Taking all changes in the final rule … into account, CMS projects that payments to … family physicians … will increase between 5 and 8 percent, prior to the application of the negative update required by the SGR."[15] This policy brief illustrates that variations in practice service mix (CPT code distribution) and payer mix (Medicare and other payers) will result in much lower increases in primary care physician *income* than as implied in press releases. The same general statement can be made about the effects of legislative changes currently under consideration, including E&M code payment increases for practices meeting certain E&M services proportion criteria.

Note: The RUPRI Center can calculate the impact of Medicare Physician Fee Schedule changes on a prototypical practice in any Medicare Locality. Furthermore, if provided a practice's service volumes by CPT code, the RUPRI Center can calculate the impact of Medicare Physician Fee Schedule change on an individual practice or physician income. Please contact the authors for further information (healthpolicy@unmc.edu, 402-559-5260).

References and Notes

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[6] Thomson-Reuters (previously Solucient) data.
[7] Medical Group Management Association. *Physician Compensation and Production Survey Report.* 2007.
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