Outpatient Hospital Stay Trends Between 2007 and 2011 Among Medicare Beneficiaries

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INTRODUCTION

We aimed to describe recent trends in outpatient hospital stays, differentiate types of outpatient stays that included (1) observation stays (2) multiday stays following a major outpatient procedure, and also describe outpatient stays lasting more than 3 days.

METHODS

Data Source: We conducted a cross-sectional study of 100% Medicare claims from the Centers for Medicare & Medicaid Services' (CMS) Chronic Condition Data Warehouse (CCW) between 2007 and 2011.

Population: We included Medicare fee-for-service beneficiaries who had Part B and no Medicare Advantage (i.e., HMO) coverage in a given calendar year.

Stay Construction: We derived outpatient stays from outpatient claims with (1) an observation procedure code (i.e., G0378 – hospital observation {per hour} and/or G0379 – direct admission for hospital observation) and/or (2) one of 131 select ambulatory payment classification (APC) codes when a service was also billed on the day following the APC procedure (i.e., a multiday stay). We used these criteria to describe three types of outpatient stays: observation stays had an observation code and not the select APCs, procedure stays had a select APC and no observation code, and mixed stays had both an observation code and a select APC. Lastly, we described long stays which encompassed procedure and mixed stays that were at least 4 days and observation stays that exceeded 72 hours under observation.

Stay Length: The length of observation stays was determined by (1) observation codes occurring on consecutive days and (2) sufficient hours to cover gaps when observation codes occurred on nonconsecutive days on a claim; observation hours were summed within the stay. The length of procedure stays was determined by services on consecutive days on a claim. The length of mixed stays combined the observation and procedure stays' methods.

Exclusions: We excluded observation stays with less than 8 hours of observation (i.e., where CMS does not reimburse observation services) and procedure stays and mixed stays longer than 5 days (e.g., potential for bulk billing).

RESULTS

The rate of outpatient hospital stays (i.e., number of stays per 1,000 Medicare beneficiaries) increased from 36.2 in 2007 (n=1,233,467) to 52.6 in 2011 (n=1,832,421), a compound annual growth rate (CAGR) of 9.8%. Observation stays were most common with rates of 24.4 in 2007 and 35.9 in 2011 (CAGR 10.1%). Procedure stays had a larger growth rate increasing from 6.5 in 2007 to 10.4 in 2011 (CAGR 12.8%). Mixed stays increased from 5.4 in 2007 to 6.3 in 2011 (CAGR 3.8%).

Stays that lasted more than 3 days increased from a rate of 0.5 in 2007 (n=16,886) to 1.4 in 2011 (n=47,739; CAGR 28.9%). Observation stays were the most common type of stay lasting more than 3 days and also had the largest growth (CAGR 31.0%). Mixed stays lasting more than 3 days also had marked growth increasing from a rate of 0.13 to 0.37 (CAGR: 28.7%).

The most common diagnoses among recent observations stays were somewhat broad, general categories (e.g., Chest pain NOS, Chest pain NEC, etc.). The top ten diagnoses accounted for more than 2 out of 5 observations stays and almost half the growth.

Over half of the major procedures among recent procedure stays and mixed stays were cardiac-related. The most common was "Transcatheter placement of intracoronary drug-eluting stents", which alone accounted for over a quarter of the growth in procedure stays and mixed stays. The top ten major procedures combined accounted for almost 80% of the growth.

Figure 1: *Monthly trends in outpatient hospital stays by type of stay (2007 to 2011).*

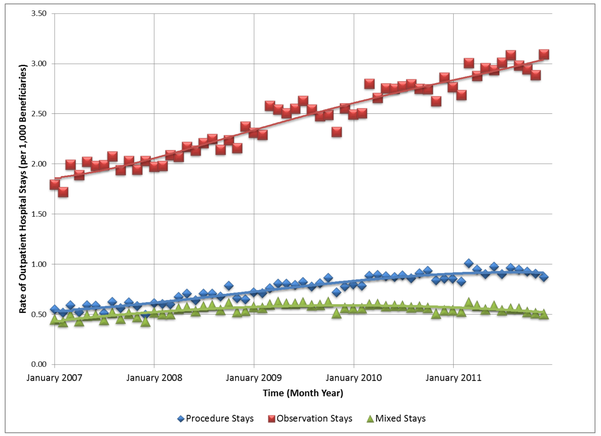

Figure 2: *Monthly trends in outpatient hospital stays lasting more than 3 days by type of stay (2007 to 2011).*

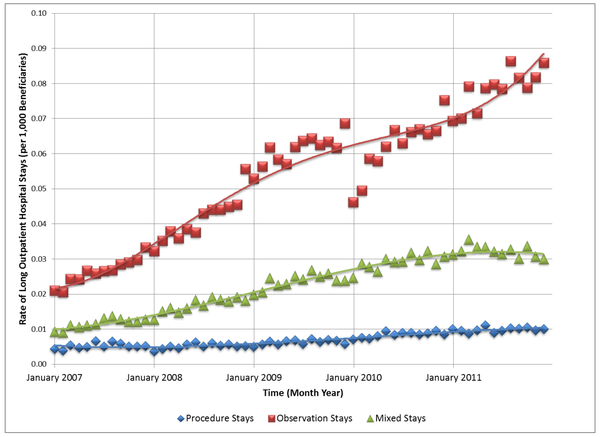

Table 1: *Annual trends and growth rates among all stays and stays lasting more than 3 days, by type of stay (2007 to 2011).*

		All Stays			Stays Lasting > 3 Days		
		Count	Rate*	CAGR**	Count	Rate*	CAGR**
Observation Stays							
	2007	830,583	24.40	10.1%	10,313	0.30	31.0%
	2008	895,592	26.61		15,921	0.47	
	2009	1,026,429	30.54		23,509	0.70	
	2010	1,136,746	33.33		24,243	0.71	
	2011	1,250,536	35.89		31,097	0.89	
Procedure Stays							
	2007	219,894	6.46	12.8%	2,037	0.06	16.9%
	2008	257,928	7.66		1,984	0.06	
	2009	300,305	8.93		2,406	0.07	
	2010	338,195	9.92		3,291	0.10	
	2011	363,968	10.45		3,890	0.11	
Mixed Stays							
	2007	182,990	5.38	3.9%	4,536	0.13	28.7%
	2008	211,490	6.28		6,506	0.19	
	2009	227,137	6.76		9,154	0.27	
	2010	222,782	6.53		11,358	0.33	
	2011	217,917	6.25		12,752	0.37	

** Stays per 1,000 beneficiaries (2007: n=34,035,550, 2008: n=33,650,722, 2009: n=33,611,390, 2010: n=34,106,058, 2011: n=34,843,561); ** CAGR: Compound annual growth rate*

Table 2: *Top diagnoses for observation stays (2011).*

Rank	Primary Diagnosis (ICD-9)		Count	Percent	Increase (2011 v. 2007)	
					Count	Percent of Total
1	786.59	Chest pain NEC	190,219	15.2%	74,976	17.9%
2	786.50	Chest pain NOS	127,692	10.2%	42,856	10.2%
3	780.20	Syncope and collapse	68,839	5.5%	25,773	6.1%
4	780.40	Dizziness and giddiness	24,882	2.0%	11,404	2.7%
5	276.51	Dehydration	22,723	1.8%	4,449	1.1%
6	435.90	Transient cerebral ischemia NOS	21,526	1.7%	6,625	1.6%
7	780.97	Altered mental status	20,190	1.6%	11,608	2.8%
8	427.31	Atrial fibrillation	18,834	1.5%	5,577	1.3%
9	599.00	Urinary tract infection NOS	17,381	1.4%	6,625	1.6%
10	780.79	Malaise and fatigue NEC	16,731	1.3%	8,573	2.0%
	All other diagnoses		721,519	57.7%	221,487	52.7%
	Total		**1,250,536**	**100.0%**	**419,953**	**100.0%**

NEC: Not elsewhere classified; NOS: Not otherwise specified

Table 3: *Top APCs for procedure stays and mixed stays (2011).*

Rank	Primary Ambulatory Payment Classification (APC) *		Count	Percent	Increase (2011 v. 2007)	
					Count	Percent of Total
1	0656	Transcatheter placement of intracoronary drug-eluting stents	65,292	11.2%	49,170	27.5%
2	0080	Diagnostic cardiac catheterization	59,933	10.3%	14,441	8.1%
3	0131	Level II laparoscopy	39,602	6.8%	5,276	2.9%
4	0655	Insertion / replacement / conversion of a permanent dual chamber pacemaker	29,558	5.1%	16,319	9.1%
5	0162	Level III cystourethroscopy and other genitourinary procedures	21,639	3.7%	4,349	2.4%
6	0083	Coronary angioplasty, valvuloplasty, and level I endovascular revascularization	20,983	3.6%	18,974	10.6%
7	0229	Level II endovascular revascularization of the lower extremity	20,213	3.5%	4,550	2.5%
8	0104	Transcatheter placement of intracoronary stents	18,643	3.2%	11,077	6.2%
9	0163	Level IV cystourethroscopy and other genitourinary procedures	18,283	3.1%	8,052	4.5%
10	0108	Insertion / replacement / repair of cardioverter-defibrillator system	17,047	2.9%	8,120	4.5%
	All other procedures		270,692	46.5%	38,673	21.6%
	Total		**581,885**	**100.0%**	**179,001**	**100.0%**

**The earliest study APC on the claim was the primary APC; the APC with the largest dollar amount was selected when there was more than one. APCs are groupings of HCPCs codes that have similar clinical characteristics and costs. Medicare uses APCs to pay for many outpatient hospital services, making a single payment for all codes within an APC instead of paying for each one separately.*

LIMITATIONS

We were limited to information on the health care claim. For procedure and mixed stays, a beneficiary could conceivably leave and return between services provided on separate days that were combined on a single claim; we cannot determine the extent this occurs from claims data.

CONCLUSIONS

Medicare beneficiaries increasingly received hospital care on an outpatient basis. Outpatient hospital care extended over multiple days and in a small but growing number of cases, lasted longer than 3 days.

IMPLICATIONS FOR POLICY, DELIVERY OR PRACTICE

Outpatient hospital stays do not apply toward the 3-day inpatient hospitalization requirement for Medicare Part A coverage of postacute care in a skilled nursing facility (SNF). Therefore, more care provided on an outpatient basis raises the possibility that some beneficiaries, who would qualify for SNF care under Medicare Part A if admitted on an inpatient basis, will not qualify. Medicare's benefit structure, which dates back to the start of the program, should be reviewed so that beneficiaries are not disadvantaged by this shift in how hospital services are provided and billed.