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Medicare Payments: How Much Do Chronic Conditions Matter?

Erkan Erdem,[1] Sergio I. Prada,[2,3] Samuel C. Haffer[4]
[1]IMPAQ International LLC
[2]PROESA-Research Center for Social Protection and Health Economics
[3]Universidad Icesi
[4]Centers for Medicare & Medicaid Services

Objective: Analyze differences in Medicare Fee-for-Service utilization (i.e., program payments) by beneficiary characteristics, such as gender, age, and prevalence of chronic conditions.
Methods: Using the 2008 and 2010 Chronic Conditions Public Use Files, we conduct a descriptive analysis of enrollment and program payments by gender, age categories, and eleven chronic conditions.
Results: We find that the effect of chronic conditions on Medicare payments is dramatic. Average Medicare payments increase significantly with the number of chronic conditions. Finally, we quantify the effect of individual conditions and find that "Stroke / Transient Ischemic Attack" and "Chronic Kidney Disease" are the costliest chronic conditions for Part A, and "Cancer" and "Chronic Kidney Disease" are the costliest for Part B.

Keywords: Medicare, Chronic Disease, Gender/Sex Differences in Health and Health Care, Health Care Costs, Health Promotion / Prevention / Screening, Chronic Conditions, Dual-Eligibility, Public Use Files, Medicare Part A, Medicare Part B

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Introduction

There has been a growing interest in understanding the utilization patterns of patients with chronic conditions (DHHS, 2010). Even though there is a lack of standard definition and identification of a chronic condition (Gorina & Kramarow, 2011), these conditions, such as heart disease, cancer, obesity, and diabetes, are long-lasting and persistent health problems that require continuous care. Recent research has emphasized the disproportionate share of beneficiaries with chronic conditions in healthcare expenditures (Anderson, 2010). For example, patients with multiple chronic conditions can cost up to seven times as much as patients with only one chronic condition (AHRQ, 2006). According to Centers for Disease Control and Prevention (CDC), chronic diseases are responsible for more than 75 percent of the $2.5 trillion spent annually on health care (CDC, 2009). Examples of efforts to estimate the spending or costs by individual conditions are shown in Exhibit 1.

Exhibit 1. Summary of Studies on Chronic Conditions

Chronic Condition	Estimate	Year of Estimate	Organization/Author
Cardiovascular diseases	$442 billion	2011	American Heart Association/ Heidenreich et al., 2011
Diabetes	$245 billion	2012	American Diabetes Association, 2011
Lung disease	$174 billion	2010	National Heart, Lung, and Blood Institute (NHLBI), 2009
Obesity	$147 billion	2008	Finkelstein, Trogdon, Cohen, & Dietz, 2009
Arthritis/rheumatic cond.	$128 billion	2003	Yelin et al., 2007
Alzheimer's	$183 billion	2011	Alzheimer's Association, 2011
All/General	$2.5 trillion	2005	Centers for Disease Control and Prevention (CDC)

SOURCE: Authors' analysis.

Chronic conditions affect the elderly disproportionally. Lehnert et al. (2011) summarizes the empirical evidence on health care utilization and costs of elderly persons with multiple chronic conditions in the last two decades. The evidence suggests that elders with more chronic conditions had significantly more physician visits, hospital admissions or days/nights spent at a hospital, and more use and/or cost of prescription medications. Studies cited in Lehnert et al. (2011) also suggest that healthcare costs and out-of-pocket payments increase significantly with chronic conditions and that each additional chronic condition almost double healthcare costs.

Medicare is the biggest health insurance program covering the elderly (65 years of age and older) in the U.S.; the prevalence of chronic conditions has been identified as a critical driver of total Medicare spending (Schneider, O'Donnell, & Dean, 2009). Thorpe, Ogden, and Galactionova (2010) argue that much of the recent growth in Medicare spending (1987–2006) is attributable to chronic conditions, such as diabetes, arthritis, hypertension, and kidney disease, and that this represents a shift of spending from inpatient to outpatient services combined with prescription drug use.

This data brief summarizes differences in Medicare Part A and B payments by chronic conditions and estimates the effect of chronic conditions on average Medicare payments by age and gender on both programs. Our analyses take advantage of the newly released 2008 and 2010 Chronic Conditions Public Use Files (PUFs; CMS, 2013). These PUFs are based on claims collected for all Fee-for-Service (FFS) Medicare beneficiaries, thus overcoming some of the limitations in figures available elsewhere, in particular the accuracy due to sampling error, survey design, and/or recollection of past events by interviewees. An equally important goal of this data brief is to describe advantages and limitations of these datasets for analysts who would like to use them for future work.

Advantages of CMS Chronic Conditions PUFs

In this section we describe our data source and highlight its main advantages and disadvantages by comparing it with other sources. The first and most evident advantage is that these PUFs offer a multidimensional view (by all combinations of age categories, gender, Medicaid eligibility, and eleven chronic conditions) of several payment and utilization variables for Medicare beneficiaries by program, previously unavailable to analysts. It is well known that access to Medicare claims data besides these PUFs is restricted to the public due to privacy and confidentiality concerns.

Second, the CMS Chronic Conditions PUF represents 100% of the Medicare beneficiaries provided in the 100% Beneficiary Summary File for each reference year. The 100% Beneficiary Summary File is created annually and contains demographic, entitlement, and enrollment data for beneficiaries who were documented as being alive for some part of the reference year of the Beneficiary Summary File, are entitled to Medicare benefits during the reference year, and enrolled in Medicare Part A and/or Part B for at least one month in the reference year.

Third, the CMS Chronic Conditions PUF provides various measures of utilization as averages for different groups of Medicare beneficiaries, or profiles separated by program and enrollment type. Beneficiaries with 12 months of enrollment in FFS Part A or Part B are separated from beneficiaries with less than 12 months of enrollment. Such figures were not available to the public in a PUF before.

Fourth, chronic conditions included in these PUFs are taken directly from CMS Chronic Condition Data Warehouse Condition Categories, which in turn, are identified using peer reviewed clinical algorithms that look for valid ICD-9/CPT4/HCPCS codes in claims files for chronic-disease-specific reference time periods.

Other PUFs, for instance, the National Health Interview Survey (NHIS) includes over 30 chronic condition indicators, but respondents are asked about their conditions (and information is later processed at NCHS) only if certain limitations (e.g., difficulties walking, eating, bathing, etcetera) are present (CDC, 2011). Similarly, while the CDC's Behavioral Risk Factor Surveillance System (BRFSS) includes questions related to chronic conditions (e.g., "Ever told

you had a stroke?"), these are for a limited number of conditions (e.g., asthma, diabetes, arthritis, cardiovascular disease, diabetes) and are subject to accuracy bias due to self-reporting.

Fifth, the CMS Chronic Conditions PUFs include payments and utilization for each profile. Neither NHIS nor BRFSS include such information. While the Medical Expenditure Panel Survey (MEPS) collects information on expenditures by source of payment (i.e. Private, Medicaid, and Medicare) on a handful of medical conditions, these conditions are self-reported and rely on accurate recollection by respondents (AHRQ, 2011). Another drawback in MEPS is that priority conditions are included in the file only if the condition is current. Even though MEPS collects information directly from providers, such information is not used to supplement or verify reported conditions by respondents.

Although these CMS PUFs contain valuable information on FFS Medicare beneficiaries, they have a few shortcomings. For example, they do not allow for analyzing different types of Medicare enrollees, such as the people with disabilities or End Stage Renal Disease who are also eligible for free Medicare hospital (Part A) insurance (SSA, 2012). Second, the dual-eligibility indicator groups all Medicare beneficiaries who are eligible for any form of Medicaid benefit in any month in 2008/2010, and does not allow for investigation of different types of dual-eligibles (CMS, 2012). Third, the data only contains Medicare payments and does not allow for analysis of other healthcare expenses or payments (e.g., Medicaid costs for dual-eligibles, out-of-pocket expenses). Finally, the data is restricted to a total of eleven chronic conditions. Hence, analyses based on these data might be underestimating the condition of the beneficiaries who may have other conditions that are not included in the data source.

The effect of chronic conditions on Medicare payments

We start by looking at changes between 2008 and 2010 for beneficiaries enrolled in Part A and B (Exhibit 2 and Exhibit 3) for the entire year who were not eligible for Medicaid.[1] We restrict our analyses to this subpopulation of a relatively homogeneous group of beneficiaries for two reasons: (1) by excluding those who were not enrolled for the full year, we control for changes due to deaths and for those just aging into the program; and (2) by excluding those eligible for Medicaid we focus on determinants of cost only for Medicare beneficiaries whose characteristics (e.g., health, socioeconomic status) might differ from dual eligible beneficiaries. Exhibit 2 summarizes enrollment and Medicare spending for Medicare Part A by number of chronic conditions in 2008 and 2010.

The findings in Exhibit 2 can be summarized in the following bullet points:

- Beneficiaries with chronic conditions account for a disproportionate share of program payments for Part A. While 36% of Part A beneficiaries have two or

[1]Note that these are not two disjoint populations. Most traditional Medicare (Part A) beneficiaries also have Part B coverage (about 90 percent). Medicare beneficiaries who also qualify for Medicaid benefits are known as dual-eligibles.

more chronic conditions, these beneficiaries account for 86% of total Part A payments in both years.

- Total Medicare payments for Part A benefits increased by 5.2% between 2008 and 2010. 98% of the increase (about $4.1 billion) was for the care of those with 2 or more chronic conditions.
- The average Part A payment per beneficiary was higher by a factor of 5.3 in 2008 and 5.4 in 2010 for beneficiaries with exactly one chronic condition compared to beneficiaries without any chronic conditions.
- Overall, the increase in total payments (5.2%) is explained mainly by the increase in average payment (4.3%), which increases from $2,945 per enrollee in 2008 to $3,070 in 2010. The rest of the increase in total Medicare Part A payments is due to the increase in enrollment (0.9%).

Exhibit 3 summarizes enrollment and Medicare spending for Medicare Part B by the number of chronic conditions in 2008 and 2010.

The findings in Exhibit 3 can be summarized in the following bullet points:

- Beneficiaries with chronic conditions account for a disproportionate share of program payments for Part B. However, their share in Part B is lower than their share in Part A. About 41% of Part B beneficiaries have two or more chronic conditions and these beneficiaries account for approximately 70% of total Part B payments in both years.
- Total Medicare payments for Part B benefits increased by 10.7% between 2008 and 2010. 76% of the increase ($9.2 billion) was for the care of those with 2 or more chronic conditions.
- The average Part B payment per beneficiary was higher by a factor of approximately 2.35 in both years for beneficiaries with exactly one chronic condition compared to beneficiaries without any chronic conditions.
- Overall, the increase in total payments (10.7%) is explained mainly by the increase in average payment (10.3%), which increases from $3,640 per enrollee in 2008 to $4,015 in 2010. The rest of the increase in total Medicare Part B payments is due to the increase in enrollment (0.4%). Interestingly, the increase in average Part B payments between 2008 and 2010 is consistently high—in the 8.3% to 9.8% range—even for those without any chronic conditions.

Next, we quantify the effect of each chronic condition *individually* on average Medicare payments.[2] Exhibits 4 (Part A) and 5 (Part B) show these effects by gender and age categories for the same population depicted in Exhibit 2 and Exhibit 3. The values in the tables provide the

[2]The PUFs are also useful to analyze the effect of multiple chronic conditions, which we do not consider in this study.

ratio of average payment with exactly one chronic condition and average payment without any chronic conditions. For example, having "Alzheimer's/Senile Dementia" increases the average Medicare payment for Part A by a factor of 7.3 for male enrollees who are in the under 65 age category in 2008.

The findings in Exhibit 4 and Exhibit 5 can be summarized in the following bullet points:

- Exhibit 4 shows that "Stroke / Transient Ischemic Attack" is the costliest chronic condition for Part A payments for every combination of gender and age category both in 2008 and 2010, except for a few gender and age category combinations where "Chronic Kidney Disease" has a larger factor. For example, male enrollees in the 65–69 age category with "Stroke/Transient Ischemic Attack" had average Part A payments 21.5 times higher in 2008 and 24 times higher in 2010 than enrollees without this chronic condition. Average Part A payments for enrollees with "Stroke/Transient Ischemic Attack" were about 12 times higher than enrollees without this chronic condition in 2008 and 12.8 times for 2010.
- The chronic condition with the lowest factor for Part A payments, on average, is "Diabetes" with a range of 1.6–3.3 in 2008 and 1.6–3.2 in 2010 (depending on the gender and age category combination). Also, "Cancer" and "Osteoporosis" were two other chronic conditions with relatively smaller effects on average Medicare Part A payments in both years.
- The factors were higher for males compared to females in the same age category for most chronic conditions (except for a few age categories with "Alzheimer's Disease" and "Cancer" and one age category with "Congestive Heart Failure") in 2008. The findings were similar in 2010.
- The effect of each chronic condition in both years is considerably lower for average Part B payments (Exhibit 5) compared to Part A payments. "Cancer" is the costliest condition in both years, with factors of 4.9 for males and 5.5 for females in 2008, and 4.7 and 5.3 in 2010, respectively. Similar to the finding in the analysis of Part A payments, "Chronic Kidney Disease" ranks second in both years. The factors for this condition for beneficiaries under 65 years of age were significantly higher than other age categories: 13.7 and 9.8 in 2008 for males and females, respectively, and 12.0 and 8.3 in 2010.
- Note that average Part B payments for enrollees with "Cancer" are approximately 3–9 times higher than enrollees without any chronic conditions in both years. Also, "Alzheimer's," "Diabetes," and "Osteoporosis" turn out to be the chronic conditions with the smallest effect on average Medicare Part A payments in both years.

Exhibit 2. Changes in Enrollment, Total Payments and Average Payment per Enrollee for Medicare Part A full year beneficiaries by number of chronic conditions

Number of Chronic Conditions	Number of Enrollees Part A				Total Payment Part A (Millions)				Average Payment per beneficiary		
	2008	2010	Difference	% Change	2008	2010	Difference	% Change	2008	2010	% Change
0	10,138,926	10,245,731	106,805	1.1%	$2,511	2,512	1	0.0%	$248	$245	-1.0%
1	6,663,517	6,609,818	(53,699)	-0.8%	$8,754	8,833	79	0.9%	$1,314	$1,336	1.7%
2	4,583,587	4,605,347	21,760	0.5%	$13,740	13,936	196	1.4%	$2,998	$3,026	0.9%
3	2,632,736	2,680,459	47,723	1.8%	$15,714	16,203	489	3.1%	$5,969	$6,045	1.3%
4	1,399,364	1,445,912	46,548	3.3%	$15,097	15,890	792	5.2%	$10,789	$10,989	1.9%
5	649,251	686,250	36,999	5.7%	$11,391	12,292	901	7.9%	$17,545	$17,912	2.1%
6	251,404	276,226	24,822	9.9%	$6,575	7,418	843	12.8%	$26,153	$26,854	2.7%
7	80,674	91,023	10,349	12.8%	$2,924	3,442	518	17.7%	$36,243	$37,813	4.3%
8	19,532	23,089	3,557	18.2%	$913	1,114	200	21.9%	$46,766	$48,243	3.2%
9	2,991	3,910	919	30.7%	$168	226	58	34.9%	$56,014	$57,806	3.2%
10	225	269	44	19.6%	$15	18	3	19.8%	$68,333	$68,495	0.2%
Total	26,422,207	26,668,034	245,827	0.9%	$77,803	$81,884	$4,081	5.2%	$2,945	$3,070	4.3%

NOTE. Excludes 384 profiles that do not have information on all chronic conditions.
SOURCE: Chronic Conditions Public Use Files, 2008 and 2010

Exhibit 3. Changes in Enrollment, Total Payments and Average Payment per Enrollee for Medicare Part B full year beneficiaries by number of chronic conditions

Number of Chronic Conditions	Number of Enrollees Part B				Total Payment Part B (Millions)				Average Payment per beneficiary		
	2008	2010	Difference	% Change	2008	2010	Difference	% Change	2008	2010	% Change
0	7,497,739	7,468,750	(28,989)	-0.4%	$8,665	9,455	790	9.1%	$1,156	$1,266	9.5%
1	6,498,765	6,434,014	(64,751)	-1.0%	$17,690	19,108	1,419	8.0%	$2,722	$2,970	9.1%
2	4,514,823	4,529,488	14,665	0.3%	$19,222	20,975	1,753	9.1%	$4,258	$4,631	8.8%
3	2,606,318	2,651,090	44,772	1.7%	$15,972	17,643	1,671	10.5%	$6,128	$6,655	8.6%
4	1,389,361	1,434,539	45,178	3.3%	$11,770	13,181	1,411	12.0%	$8,472	$9,189	8.5%
5	646,544	682,883	36,339	5.6%	$7,095	8,131	1,035	14.6%	$10,974	$11,906	8.5%
6	250,820	275,493	24,673	9.8%	$3,410	4,058	648	19.0%	$13,597	$14,730	8.3%
7	80,613	90,968	10,355	12.8%	$1,313	1,617	304	23.2%	$16,283	$17,771	9.1%
8	19,543	23,093	3,550	18.2%	$366	475	109	29.7%	$18,729	$20,557	9.8%
9	2,996	3,944	948	31.6%	$62	88	27	42.9%	$20,638	$22,404	8.6%
10	225	269	44	19.6%	$5	7	2	37.5%	$22,367	$25,717	15.0%
Total	23,507,747	23,594,531	86,784	0.4%	$85,571	$94,739	$9,168	10.7%	$3,640	$4,015	10.3%

NOTE. Excludes 384 profiles that do not have information on all chronic conditions.

SOURCE: Chronic Conditions Public Use Files, 2008 and 2010

Exhibit 4. Effect of Chronic Conditions on Average Medicare Part A Payment per Enrollee for FY Enrollee Non Dual Eligibles

			ALZ	CANCER	CHF	CHRKID	COPD	DEPR	DIAB	ISCHE	OSTEO	RA/OA	STRK
2008	All Male		9.1	5.2	7.5	11.7	8.7	7.8	2.4	5.9	4.7	7.9	15.2
	Male	Under 65	7.3	8.6	6.9	14.4	10.2	7.6	3.3	5.4	6.9	5.0	13.1
		65–69	9.7	9.1	9.9	16.2	10.9	7.8	2.8	8.4	5.1	11.4	21.5
		70–74	7.5	5.4	7.2	10.8	8.6	6.8	2.2	6.4	3.9	8.9	15.8
		75–79	6.7	3.9	6.0	9.0	7.3	6.1	2.1	5.3	3.5	7.5	12.8
		80–84	6.7	3.2	5.2	6.9	6.4	5.2	1.8	4.2	3.4	5.9	11.1
		85 & Older	7.4	3.4	5.9	7.1	6.6	6.2	2.1	3.6	4.7	4.9	11.1
	All Female		10.1	5.8	7.3	9.1	6.7	5.2	2.0	4.8	2.5	6.4	12.8
	Female	Under 65	8.3	6.5	7.7	14.0	7.9	6.0	3.0	4.8	3.7	4.4	10.0
		65–69	8.8	7.3	9.5	12.9	8.4	5.7	2.5	6.3	2.3	9.1	18.0
		70–74	6.6	6.0	7.1	8.9	6.6	4.7	2.0	5.1	2.1	7.3	13.1
		75–79	7.1	5.3	5.7	7.0	5.9	4.3	1.8	4.5	2.1	6.4	11.4
		80–84	6.8	4.7	5.2	5.8	5.6	4.1	1.6	3.8	2.3	5.1	10.0
		85 & Older	7.7	5.0	5.2	5.6	5.6	4.3	1.7	3.2	2.9	3.8	9.3
2010	All Male		10.0	5.1	8.0	12.1	9.0	8.0	2.4	5.4	4.6	8.7	16.5
	Male	Under 65	9.0	7.7	7.2	14.7	10.3	7.6	3.2	5.0	6.7	5.1	12.2
		65–69	11.6	8.5	11.3	17.2	11.6	8.7	2.8	7.8	5.3	12.8	24.0
		70–74	8.7	5.4	7.6	11.7	8.8	6.6	2.2	5.8	4.0	9.9	18.0
		75–79	7.3	3.7	6.5	8.5	7.4	6.6	1.9	4.9	3.4	8.4	13.9
		80–84	6.9	3.2	5.9	7.2	6.2	5.6	1.9	3.8	3.3	6.4	12.0
		85 & Older	8.0	3.2	5.7	7.5	6.8	5.7	2.1	3.4	4.3	4.8	11.7
	All Female		11.4	5.5	7.9	8.8	6.7	5.3	2.0	4.6	2.5	7.1	13.4
	Female	Under 65	8.6	6.7	7.3	14.2	8.2	6.2	2.8	5.0	3.4	4.7	10.4
		65–69	9.7	7.1	10.1	13.2	8.2	5.8	2.6	5.9	2.5	10.4	18.2
		70–74	7.6	5.5	7.1	8.3	6.8	4.9	1.9	4.6	2.1	8.1	13.9
		75–79	7.5	5.0	6.4	6.8	5.7	4.4	1.8	4.2	2.2	7.1	11.7
		80–84	7.3	4.4	5.4	5.4	5.5	4.0	1.6	3.5	2.3	5.5	10.3
		85 & Older	8.5	4.6	5.6	5.1	5.3	4.1	1.6	3.1	2.8	3.8	9.4

NOTE. Excludes 384 profiles that do not have information on all chronic conditions. ALZ: Alzheimer's Disease and Related Disorders or Senile Dementia; CANCER: Cancer; CHF: Chronic Heart Failure; CHRKID: Chronic Kidney Disease; COPD: Chronic Obstructive Pulmonary Disease; DEPR: Depression; DIAB: Diabetes; ISCHE: Ischemic Heart Disease; OSTEO: Osteoporosis; RA/OA: Rheumatoid Arthritis/Osteoarthritis Arthritis; STRK: Stroke / Transient Ischemic Attack

SOURCE: Chronic Conditions Public Use Files, 2008 and 2010

Exhibit 5. Effect of Chronic Conditions on Average Medicare Part B Payment per Enrollee for FY Enrollees

			ALZ	CANCER	CHF	CHRKID	COPD	DEPR	DIAB	ISCHE	OSTEO	RA/OA	STRK
2008	All Male		2.1	4.9	2.6	4.9	2.9	2.5	1.8	2.5	2.7	2.7	3.1
	Male	Under 65	2.6	8.9	3.2	13.7	3.7	3.0	2.6	2.7	5.0	3.4	3.4
		65–69	2.3	6.1	2.8	4.5	3.1	2.8	1.9	2.6	2.8	3.0	3.5
		70–74	1.9	4.8	2.4	3.5	2.7	2.5	1.7	2.3	2.4	2.5	2.9
		75–79	1.8	4.1	2.3	3.1	2.6	2.4	1.6	2.2	2.2	2.3	2.6
		80–84	1.6	3.4	2.1	3.0	2.5	2.2	1.6	2.1	2.2	2.2	2.6
		85 & Older	1.7	3.1	2.1	2.8	2.6	2.4	1.7	2.1	2.3	2.2	2.6
	All Female		1.5	5.5	2.2	3.7	2.5	2.1	1.6	2.2	1.7	2.3	2.6
	Female	Under 65	2.3	9.4	3.3	9.8	2.8	2.4	2.0	2.4	2.7	2.8	2.9
		65–69	1.8	6.7	2.5	3.9	2.6	2.2	1.7	2.3	1.7	2.6	3.0
		70–74	1.5	5.6	2.3	3.1	2.4	2.0	1.6	2.1	1.6	2.3	2.6
		75–79	1.4	4.7	2.1	2.7	2.3	1.9	1.5	2.0	1.5	2.1	2.4
		80–84	1.3	4.1	1.9	2.5	2.3	1.9	1.5	1.9	1.6	1.9	2.4
		85 & Older	1.5	3.7	2.0	2.5	2.6	2.2	1.6	2.0	1.8	2.1	2.5
2010	All Male		2.1	4.7	2.7	4.4	2.8	2.5	1.8	2.5	2.8	2.8	3.1
	Male	Under 65	2.5	8.1	3.4	12.0	3.5	3.1	2.6	2.7	4.8	3.5	3.4
		65–69	2.4	6.0	3.0	4.4	3.0	2.9	2.0	2.7	3.1	3.2	3.7
		70–74	1.9	4.4	2.5	3.3	2.6	2.4	1.6	2.3	2.3	2.5	2.9
		75–79	1.7	3.8	2.4	2.9	2.4	2.3	1.6	2.2	2.2	2.3	2.6
		80–84	1.6	3.2	2.2	2.8	2.3	2.3	1.6	2.1	2.2	2.2	2.5
		85 & Older	1.7	2.9	2.1	2.7	2.4	2.4	1.7	2.1	2.2	2.2	2.5
	All Female		1.5	5.3	2.3	3.2	2.4	2.1	1.6	2.1	1.7	2.3	2.7
	Female	Under 65	2.3	8.5	3.5	8.3	2.7	2.4	1.9	2.4	2.8	2.8	3.0
		65–69	1.8	6.7	2.7	3.5	2.5	2.2	1.7	2.3	1.7	2.7	3.1
		70–74	1.5	5.2	2.2	2.8	2.3	2.0	1.5	2.1	1.6	2.2	2.7
		75–79	1.3	4.5	2.1	2.5	2.2	1.9	1.5	2.0	1.5	2.1	2.4
		80–84	1.3	3.8	1.9	2.2	2.1	1.8	1.4	1.9	1.6	1.9	2.3
		85 & Older	1.4	3.5	2.0	2.3	2.4	2.1	1.6	1.9	1.8	2.1	2.4

NOTE. Excludes 384 profiles that do not have information on all chronic conditions. ALZ: Alzheimer's Disease and Related Disorders or Senile Dementia; CANCER: Cancer; CHF: Chronic Heart Failure; CHRKID: Chronic Kidney Disease; COPD: Chronic Obstructive Pulmonary Disease; DEPR: Depression; DIAB: Diabetes; ISCHE: Ischemic Heart Disease; OSTEO: Osteoporosis; RA/OA: Rheumatoid Arthritis/Osteoarthritis Arthritis; STRK: Stroke / Transient Ischemic Attack

SOURCE: Chronic Conditions Public Use Files, 2008 and 2010

Conclusion

The influence of chronic conditions on healthcare costs has been widely discussed in the literature. In this brief, we provided detailed analysis of changes in Medicare Part A and B payments, enrollment, and average payment per beneficiary stratifying the data by prevalence of chronic conditions. In addition, we estimated the effect of each chronic condition on average Medicare Part A and B payments, individually controlling for age and gender. Our analyses were restricted to beneficiaries who were enrolled for the entire year and who were not eligible for Medicaid.

To conclude, we show that people with chronic conditions account for a disproportionate share of program payments for both Part A and B in both years. Likewise, we show that average payments increase significantly with the number of chronic conditions. For example, the existence of one chronic condition increased average Part A payments by a factor of 5.3 and 5.4 in 2008 and 2010, respectively. We also show that the number of chronic conditions has a larger effect on average payments for Part A than on Part B for both years. Furthermore, our results show that the overall increase in both Medicare Part A and Part B payments is due to rising average payments rather than growth in enrollment.

Lastly, we show that (1) "Stroke / Transient Ischemic Attack" and "Chronic Kidney Disease" are the costliest chronic conditions for Part A program payments in both years; (2) "Cancer" and "Chronic Kidney Disease" are the costliest chronic conditions for Part B program payments in both years; (3) the effect of each chronic condition on average payments is lower for Part B than for Part A in both years; and (4) the effect of a chronic condition on the average Part A and Part B payments is generally larger for male beneficiaries compared to female beneficiaries.

The impact of chronic conditions in the growth of health care costs has been widely recognized. This study does not offer a solution to the problem, but it quantifies how much each of the eleven chronic conditions (available in our source data) increase average Medicare payments. It draws attention to conditions that have the largest effect on costs in Medicare Part A and Part B (e.g., Stroke / Transient Ischemic Attack, Chronic Kidney Disease, Depression), which may be targeted by policy makers. These findings can help policymakers prioritize the efforts to reduce health care costs by focusing on the health conditions that matter the most.

Disclaimers

The views expressed in this article are those of the authors and do not necessarily reflect the views of the U.S. Department of Health and Human Services, the Centers for Medicare & Medicaid Services, or IMPAQ International.

Correspondence

Erkan Erdem, Ph.D., IMPAQ International LLC, 1101 Vermont Ave NW, Washington, DC 20005, eerdem@impaqint.com, Tel.: (202) 696-1037, Fax: (202) 289-0024

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