Public Health Expenditures on the Working Age Disabled: Assessing Medicare and Medicaid Utilization of SSDI and SSI Recipients*

David Autor
M.I.T. Department of Economics and NBER

Amitabh Chandra
Harvard Kennedy School of Government and NBER

Mark Duggan
University of Pennsylvania Wharton School and NBER

September 2011

Currently more than 12 million non-elderly adults in the U.S. are receiving disability benefits from the federal SSDI and/or SSI programs. Recipients of these two programs receive health insurance through the Medicare and Medicaid programs, respectively. Despite the large amount spent on health care for the disabled, very little previous research has explored the drivers of this spending. In this study, we partially fill this gap by exploring the determinants of Medicaid and Medicare spending on the disabled using large-scale claims data sets for a 10 percent random sample of beneficiaries from both programs residing in one of our eleven sample states. Our findings demonstrate that there is substantial variation across geographic areas in spending for these two programs, with this variation especially large for Medicaid spending. Additionally, our results strongly suggest that Medicare and Medicaid expenditure variation are not positively related – if anything the opposite appears to be true – with areas that have high Medicaid spending tending to have lower Medicare spending. And finally, we find that Medicaid spending variation is to a large extent, though by no means fully, driven by variation in the intensity of care. Given the large amount spent on health care for the disabled through Medicaid and Medicare, more research that explores the determinants and impact of this spending is warranted.

Keywords: Medicare, Medicaid, SSDI, SSI, disability programs

* We are grateful to Abby Alpert, Sarena Goodman, and David Ruiz for outstanding research assistance. This research was supported by the U.S. Social Security Administration through grant #10-M-98363-1-01 to the National Bureau of Economic Research as part of the SSA Retirement Research Consortium. The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, any agency of the Federal Government, or the NBER.

Public Health Expenditures on the Working Age Disabled:

Assessing Medicare and Medicaid Utilization of SSDI and SSI Recipients

David Autor, Amitabh Chandra, Mark Duggan

Currently more than 12 million non-elderly adults in the U.S. receive federal disability benefits through the Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) programs. Beneficiaries of these two programs receive health insurance through the Medicare and Medicaid programs, respectively. Motivated by the rapid increase in annual cash benefits paid to non-elderly adults through the two programs, now exceeding $150 billion, a large body of research investigates the causes and the consequences of the level and growth in federal disability enrollment (Bound and Burkhauser, 1999; Autor and Duggan, 2003; Maestas, Mullen and Strand, 2010; von Wachter, Song, and Manchester, 2011). Less studied, however, are drivers of federal spending on the disabled through the Medicare and Medicaid programs—this despite the fact that Medicare and Medicaid expenditure on non-elderly adults with disabilities modestly exceeds their cash benefits paid through SSDI and SSI.[1]

The current study addresses this gap in the literature by investigating the determinants of Medicaid and Medicare spending on the disabled using large-scale administrative enrollment and claims data from both programs. We explore four descriptive questions that should inform and motivate subsequent work analyzing the causes and consequences of the substantial regional variation in Medicare and Medicaid spending on the disabled: (1) what is the distribution of Medicare and Medicaid spending on non-elderly adults in the U.S.; (2) how does this differ across states; (3) how much of this variation is attributable to Medicare versus Medicaid

[1] Similarly, while a large body of research has examined the determinants of and effect of Medicare spending for elderly recipients (e.g. Fisher et.al 2003a,b), very little has investigated this same issue for the disabled.

spending and their covariance (that is, their tendency to move in the same or opposite directions); and (4) what are the correlates of this observed variation, including patient characteristics, cross-state differences in treatment intensities, and cross-state differences in the costs of care. The next section describes our sample construction and data processing. Section 2 presents key descriptive statistics. Section 3 provides a regression analysis that explores candidate explanations for cross-state variation in Medicare and Medicaid spending, and Section 4 concludes.

I. Sample construction and data processing

We obtained Medicaid claims and enrollment data for non-elderly adults with disabilities from the Center for Medicare and Medicaid Services (CMS) for a sample of 14 states: Alabama, California, Florida, Georgia, Illinois, Michigan, Nevada, New Jersey, New York, Ohio, Pennsylvania, Texas, Wisconsin, and West Virginia. Three states (Alabama, Michigan, and Pennsylvania) were dropped from the analysis because the majority of SSI and SSDI recipients in these states are enrolled in managed care plans for which detailed treatment data are not available. The remaining 11 states account for more than 45 percent of the non-elderly adult population in the U.S. We obtained comparable data for the entire U.S. for non-elderly adult recipients of Medicare benefits but limit to the analysis to the 11 states for which comparable Medicaid data are available.

To form a research database, we extracted 10 percent random samples of non-elderly adult Medicaid and Medicare recipients who qualified for the program in 2005 because of a disability.[2] Given our sampling methodology, if an individual was enrolled in both programs and appeared in one of the two data sets, they would appear in the other one as well. This allows us to link

[2] The vast majority of Medicaid recipients in our sample qualify through the SSI program but some do not. For example, a large number are also enrolled in Medicare through SSDI and additionally qualify for Medicaid due to being "medically needy."

Medicaid and Medicare claims and enrollment data for non-elderly adults who were dually eligible for these two programs.

Our final sample includes 184,028 individuals eligible only for Medicaid during 2005, 143,704 individuals eligible only for Medicare during 2005, and 139,695 individuals eligible for both Medicaid and Medicare during this year.[3] Accounting for the fact that our data represent just a ten percent sample, we estimate using 2005 age-specific population data from the Census Bureau that 5.3 percent of non-elderly adults in our eleven states are in one of our three groups.

II. Demographics of non-elderly disabled receiving Medicare and Medicaid

Tables 1A, 1B, and 1C provide a variety of statistics on the age and geographic distribution of our sample. The fraction of non-elderly adults in each of the three groups varies substantially by age and by state. For all three recipient groups—Medicare, Medicaid, and dual eligibles—the state with the highest enrollment is West Virginia. This is consistent with SSA data on SSDI and SSI enrollment, as West Virginia is among the two or three highest states in the U.S. in terms of enrollment in these two programs. Older adults are significantly more likely to be receiving Medicaid and/or Medicare coverage due to a disability. The relationship is especially strong for Medicare, with enrollment among those 45 to 64 more than ten times as high as among those 18 to 24.

Table 2 provides statistics on the geographic, age, race and sex distribution of members of each of the three mutually exclusive beneficiary subpopulations. California contains the largest number of beneficiaries in all three groups while Nevada contains the fewest. The average number of months enrolled in Medicaid in the Medicaid-only group and in Medicare in the

[3] We excluded approximately 15,000 "Medicare-only" individuals who were enrolled in Medicare managed care plans given that our Medicare data does not contain premium payments to these plans. Our Medicaid data does include this information.

Medicare-only group is approximately 11. Dual eligibles are also eligible for both Medicaid and Medicare for 11 months on average in each year. These averages are somewhat lower than 12 months because some recipients enter or exit the programs part way through the year. However, the mean receipt of 11 months indicates that the vast majority of beneficiaries are on the program for the entire year and suggests that most recipients are multi-year beneficiaries.

More than one-in-four individuals (27 percent) in the Medicaid-only sample is black and more than one-in-seven (15 percent) is of Hispanic origin. These fractions likely understate the actual fractions because the data on race and ethnicity are missing for 11 percent of the sample. The fraction of individuals in each of these two demographic groups is somewhat lower among dual-eligibles (22 percent and 12 percent, respectively) and substantially lower among those only eligible for Medicare (16 percent and 3 percent). These differences in the beneficiary population in part reflect differences in work histories. Since individuals must have substantially participated in the labor force for five of the last ten years prior to disability onset to qualify for SSDI, populations with lower rates of participation in formal employment are more likely to receive SSI than SSDI in the event of disability.

III. Cross-state variation in expenditures

We next explore cross-state variation in Medicare and Medicaid expenditures for the non-elderly disabled. The descriptive regressions in Table 3 include 10 state dummies (Florida is the omitted category), 10 age-by-gender interactions, and variables coding race, ethnicity, and the number of months eligible for each program. As shown at the bottom of the table, there are substantial differences in expenditure levels across programs. Individuals eligible for Medicaid have average program expenditures of $13,999, while those eligible for Medicare have average expenditures that are roughly one-third as high at $4,599. The dual eligible group has by far the

highest expenditure level at $22,728. Interestingly, Medicare expenditure for this group ($10,186) is much higher than the Medicare-only group while Medicaid spending for this group ($12,543) is slightly below the Medicaid-only average.

The first column of Table 3 documents substantial variation across the eleven states in our sample in average Medicaid expenditures. Perhaps most strikingly, the coefficient estimate for the New York indicator is $12,131, which is 85 percent higher than average Medicaid spending of $13,999 (and 107% higher than the reference group, Florida, whose mean of $11,328 is captured by the intercept). Interestingly, the estimates of cross-state difference in spending are little affected by controlling for demographic characteristics and months of eligibility, both of which would be expected to explain some of the cross-state variation. This fact is most easily seen by studying the final two rows of the table, which reports the coefficient of variation for expenditure, equal to the standard deviation of the state fixed means divided by average expenditure. This coefficient of variation is 0.30 in column (1). The inclusion of demographic controls in column (2) reduces it only slightly to 0.29, implying that Medicaid programs vary in generosity in ways that are unrelated to the demographics of their recipients; variation in Medicaid spending is not primarily driven by the characteristics of the beneficiaries enrolled in the program.

The next four specifications explore this same issue for the dual eligible individuals in our Medicaid-Medicare sample. The first two specifications are similar to the two for the Medicaid-only group, while the latter two include the full model but explore Medicaid and Medicare separately. Consistent with the results for the Medicaid-only group, there is substantial variation across the states with respect to total program spending (Medicaid + Medicare). As shown in the specifications that differentiate between Medicaid and Medicare, this variation is largely driven

by Medicaid. Indeed, the cross-state coefficient of variation for Medicaid spending is almost four times as high as for Medicare spending (0.40 versus 0.11).

Notably, states with higher Medicaid spending tend to have lower Medicare spending. One possible explanation for this is that health care providers may have some scope to substitute one program for the other as a function of relative reimbursement generosity. The results for this second group suggest that geographic heterogeneity in expenditures may be much greater within the Medicaid program than in Medicare.

The last two columns summarize specifications for the Medicare-only recipients included in our sample. Once again, the state fixed effect estimates are not affected much by the inclusion of demographic and other controls. Similarly, the variance in these estimates relative to the mean is substantially lower than the corresponding ratio for Medicaid. And finally, states that tend to be high in terms of Medicaid spending (e.g. New York) do not appear to be higher in terms of Medicare expenditures.

These results are consistent with an interpretation where variation in Medicare spending largely reflects variation in utilization, but variation in Medicaid picks up local price variation in addition to variation in utilization. The Medicare Fee-For-Service (FFS) program uses administratively set prices with price adjustments for the cost of doing business in one area versus another. Medicaid prices are also set administratively, but exhibit more variation because each state will make its own (administrative) determination that reflects factors such as political priorities for Medicaid and the ability of Medicaid providers to negotiate better rates. Moreover, because a large fraction of Medicaid patients are in Medicaid managed care (a group not studied by us), it is also possible that Medicaid FFS rates reflect the market power of the managed care providers, or local providers, more generally. These market-structure explanations will not affect

Medicare pricing. If these explanations are valid, we would find that Medicare and Medicaid are positively correlated on measures of utilization such as hospitalizations, but negatively correlated in terms of price. Price adjustments have been shown to play a relatively small role in explaining geographic variation in Medicare prices (Gottlieb et.al, 2010), but they have never been studied for the Medicaid population.

IV. Cross-state variation in the prices and quantities of care received

Having documented substantial variation across states with respect to average Medicaid spending on the disabled, Table 4 summarizes results that differentiate between five different types of Medicaid spending for our Medicaid-only analysis sample. The second through fifth specifications consider inpatient, outpatient, prescription drug, and long-term care spending. States with relatively high overall spending tend to be high on each of these components, though there are some exceptions. More importantly, the final row of the table reveals that the geographic heterogeneity is largest for long-term care and inpatient care, with outpatient care and prescription drugs substantially less variable. The final column summarizes this same specification for Medicaid managed care (MMC) expenditures, and this variation is to a large extent driven by the fraction of a state's Medicaid recipients in MMC plans. Overall, approximately 15 percent of the Medicaid-only population is in an MMC plan during our study period.

The final table further explores this expenditure variation by running analogous specifications for measures of quantity. Because Medicaid is a state-administered program, states have considerable latitude to set reimbursement rates, determine services that will be covered, and so forth. Thus it is unclear whether the variation is attributable to price or quantity. Table 5 uncovers substantial variation in quantity that is comparable to the variation in expenditures.

Additionally, if one regresses the state fixed effect estimate from the expenditure regressions on each of the corresponding quantity measures, there is a strong positive relationship. For example, a regression of the state fixed effects from the inpatient care expenditures specification on the state fixed effects from the number of inpatient days yields an estimate of $1610 and an R-squared of 0.855. This suggests that 85.5 percent of the expenditure variation can be explained by a measure of the quantity of care. The corresponding shares for the other three specifications (long-term care, outpatient care, and prescription drugs) are 64.1 percent, 38.2 percent, and 33.2 percent, respectively. This suggests that, consistent with the Medicare program, the volume and intensity of treatment is an important driver of program expenditures.

V. Concluding remarks

Taken together, the results of our research so far make several contributions. First, ours is one of the first studies to link together Medicaid and Medicare claims and enrollment data for a large sample of the non-elderly adult disabled population. Second, we have shown that the geographic variation for Medicaid is substantially greater than for Medicare, at least among the 11 states in our analysis sample. Third, we have shown that Medicaid and Medicare spending variation do not move in lockstep. On the contrary, it appears that states with relatively high Medicaid spending for the disabled have, if anything, lower Medicare spending for the disabled. Fourth, we have shown that expenditures for inpatient and long-term care are much more variable across geographic areas than for prescription drugs and inpatient care. And finally, we have demonstrated that Medicaid expenditure variation is to a large extent, though by no means fully, driven by variation across states in the volume and intensity of treatment.

These results only scratch the surface of this important area of inquiry and have a number of limitations. Most notably, at present we are not controlling for the health status of the individuals

in our sample beyond simply including demographic variables. To the extent that disabled Medicaid recipients are sicker in some states than in others, this could partly be driving the variation we estimate. Moreover, variation in Medicaid prices is understudied, and may prove to be a significant determinant of cross-state variation in Medicaid spending.

Future work should focus on three challenges. First and second, are the impact of using richer measures of health status and a more systematic look at Medicaid pricing. Third, is to add richer measures of quantity—for example, the role of imaging or orthopedic procedures in the disabled. In the Medicare population, there is a rich tradition of looking at variation across regions in how they treat patients for relatively standard diagnoses such as heart-attacks and hip-fractures (see Fisher, et.al 2003a,b). Similar analysis would be immensely valuable in the Medicaid population, where variation in program generosity—some states may cover more benefits than others—may prove to be an important driver of variation in spending.

References

Autor, David and Mark Duggan. 2003. "The Rise in the Disability Rolls and the Decline in Unemployment." Quarterly Journal of Economics 118 (1): 157-205.

Bound, John and Richard Burkhauser. 2003. "Economic Analysis of Transfer Programs Targeted on People with Disabilities." Handbook of Labor Economics 3 (3) 3417-3528.

Fisher, Elliott S., David E. Wennberg, Therese A. Stukel, Daniel J. Gottlieb, F. Lee Lucas, and E.L. Pinder. 2003. The Implications of Regional Variation in Medicare Spending. Part 1: the Content, Quality and Accessibility of Care. Annals of Internal Medicine 138 (4):273-87.

———. 2003. The Implications of Regional Variation in Medicare Spending. Part 2: Health Outcomes and Satisfaction with Care. Annals of Internal Medicine 138 (4):288-98.

Gottlieb, D.J. et al. (2010). Prices don't drive regional Medicare spending variations. *Health Affairs* 29(3): 537-543. doi: 10.1377/hlthaff.2009.0609 http://content.healthaffairs.org/cgi/content/abstract/hlthaff.2009.0609

Maestas, N., K. Mullen, and A. Strand. "Does Disability Insurance Receipt Discourage Work? Using Examiner Assignment to Estimate Causal Effects of SSDI Receipt." Working paper, RAND Corporation.

Von Wachter, T, Jae Song, and Joyce Manchester. 2011. "Trends in Employment and Earnings of Allowed and Rejected Applicants to the Social Security Disability Insurance Program." forthcoming in the *American Economic Review*.

Table 1A: % of State Residents on Medicaid-only b/c of Disability

State	18-64	18-24	25-44	45-64
CA	2.2%	1.6%	1.3%	3.5%
FL	1.9%	2.0%	1.3%	2.5%
GA	1.9%	1.7%	1.2%	2.9%
IL	1.9%	1.6%	1.3%	2.7%
NV	1.1%	1.1%	0.8%	1.5%
NJ	1.3%	1.4%	0.9%	1.8%
NY	2.4%	1.8%	1.7%	3.6%
OH	2.3%	1.7%	1.8%	3.0%
TX	1.5%	1.4%	1.1%	2.3%
WV	5.2%	3.4%	4.7%	6.2%
WI	1.5%	1.6%	1.1%	1.8%
TOTAL	2.0%	1.7%	1.4%	2.9%

Table 1B: % of State Residents on Medicaid and Medicare b/c of Disability

State	18-64	18-24	25-44	45-64
CA	1.4%	0.2%	1.0%	2.5%
FL	1.7%	0.3%	1.3%	2.7%
GA	1.8%	0.3%	1.1%	3.3%
IL	1.5%	0.3%	1.1%	2.4%
NV	0.8%	0.2%	0.6%	1.3%
NJ	1.2%	0.2%	1.0%	1.9%
NY	1.5%	0.3%	1.2%	2.4%
OH	1.8%	0.4%	1.5%	2.7%
TX	1.3%	0.2%	0.9%	2.4%
WV	2.7%	0.6%	2.5%	3.5%
WI	1.6%	0.4%	1.3%	2.3%
TOTAL	1.5%	0.3%	1.1%	2.5%

Table 1C: % of State Residents on Medicare-only b/c of Disability

State	18-64	18-24	25-44	45-64
CA	1.2%	0.0%	0.4%	2.8%
FL	2.2%	0.1%	0.7%	4.6%
GA	2.0%	0.0%	0.7%	4.6%
IL	1.6%	0.1%	0.7%	3.3%
NV	2.2%	0.1%	0.8%	4.7%
NJ	1.8%	0.1%	0.7%	3.6%
NY	2.0%	0.1%	0.8%	4.2%
OH	2.0%	0.1%	0.8%	4.1%
TX	1.6%	0.1%	0.6%	3.7%
WV	5.1%	0.2%	1.6%	10.0%
WI	1.6%	0.0%	0.6%	3.3%
TOTAL	1.8%	0.1%	0.6%	3.8%

Table 2: Summary Statistics for Three Mutually Exclusive Groups of Non-Elderly Disabled Medicare and Medicaid Beneficiaries

	Medicaid-Only	Medicaid & Medicare	Medicare-Only
		A. State of Residence (Fraction in each State)	
California	0.268	0.230	0.155
Florida	0.110	0.135	0.137
Georgia	0.061	0.074	0.077
Illinois	0.081	0.084	0.084
Nevada	0.009	0.009	0.018
New Jersey	0.040	0.048	0.064
New York	0.161	0.134	0.146
Ohio	0.090	0.093	0.092
Texas	0.120	0.132	0.152
Wisconsin	0.028	0.039	0.036
West Virginia	0.032	0.022	0.039
		B. Months of Receipt in 2005	
Months on Medicaid	10.64	10.88	0.00
Months on Medicare	0.00	11.21	11.17
		C. Race and Ethnicity	
Black	0.268	0.222	0.16
Hispanic	0.154	0.124	0.033
Missing Black / Hispanic Info	0.107	0.081	0.000
		D. Age and Sex	
Male 18-24	0.076	0.016	0.004
Male 25-34	0.066	0.063	0.024
Male 35-44	0.081	0.127	0.073
Male 45-54	0.116	0.166	0.174
Male 55-64	0.116	0.130	0.305
Female 18-24	0.054	0.012	0.002
Female 25-34	0.065	0.05	0.016
Female 35-44	0.100	0.098	0.06
Female 45-54	0.155	0.156	0.133
Female 55-64	0.171	0.182	0.209

Table 3: State-Level Variation in Medicaid and/or Medicare Spending for the Disabled

	Medicaid-Only			*Dual Eligibles*			*Medicare-Only*	
	Medicaid	Medicaid	All	All	Medicaid	Medicare	Medicare	Medicare
California	-646	-1424	753	109	2384	-2275	-1472	-1363
	(175)	(176)	(352)	(351)	(168)	(287)	(150)	(149)
Georgia	-1132	-1375	-4911	-5511	-2197	-3314	201	-9
	(259)	(262)	(397)	(410)	(184)	(347)	(190)	(197)
Illinois	4003	3287	2544	1449	3426	-1977	-505	-459
	(344)	(350)	(440)	(440)	(244)	(341)	(178)	(179)
Nevada	5306	5295	-449	-437	33	-469	-163	-10
	(2219)	(2212)	(1046)	(1045)	(594)	(769)	(317)	(316)
New Jersey	4622	4144	6463	7121	8434	-1313	1041	1074
	(364)	(360)	(630)	(630)	(453)	(390)	(221)	(221)
New York	12131	11112	12375	11805	13387	-1582	-413	-346
	(397)	(404)	(672)	(668)	(575)	(313)	(165)	(166)
Ohio	4873	4372	6659	6196	8055	-1858	-537	-469
	(269)	(272)	(584)	(576)	(271)	(454)	(177)	(177)
Texas	-174	-142	-512	-994	270	-1264	1149	1233
	(197)	(198)	(373)	(378)	(180)	(318)	(172)	(173)
Wisconsin	2040	2864	1222	4186	7056	-2871	-1079	-1001
	(418)	(489)	(515)	(536)	(357)	(367)	(208)	(206)
West Virginia	-2275	-3180	-4384	-4926	-1447	-3479	-1176	-1114
	(254)	(270)	(659)	(659)	(354)	(531)	(195)	(192)
Months on Medicaid		782		1160	1470	-310		
		(20)		(32)	(15)	(27)		
Months on Medicare				62	-193	255		92
				(39)	(29)	(24)		(16)
Black		133		1274	-2979	4253		1088
		(211)		(333)	(238)	(214)		(140)
Hispanic		-1175		-1287	-3890	2603		-374
		(240)		(406)	(309)	(235)		(217)
Missing Black / Hispanic Info		-1673		-8145	-7308	-837		
		(323)		(357)	(249)	(228)		
Constant	11328	5133	20235	12579	-2257	14836	4810	4255
	(145)	(312)	(293)	(673)	(406)	(505)	(124)	(220)
# Observations	184,028	184,028	139,695	139,695	139,695	139,695	143,704	143,704
Mean of Dep Var	13,999	13,999	22,728	22,728	12,543	10,186	4,599	4,599
10 Age * Gender Interactions?	No	Yes	No	Yes	Yes	Yes	No	Yes
Florida Omitted Category	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exclude if in managed care?	No	No	No	No	No	No	Yes	Yes
State Effect Std Dev	4152	4053	5061	5207	4983	1099	843	823
Std Dev / Mean	0.30	0.29	0.22	0.23	0.40	0.11	0.18	0.18

Table 4: Variation Across Spending Categories for the Medicaid-Only Disabled

	All	Inpatient	Outpatient	Prescription Drugs	Long Term Care	Managed Care
California	-1424	-521	772	-306	-149	-1220
	(176)	(102)	(70)	(48)	(89)	(22)
Georgia	-1375	154	905	122	-714	-1843
	(262)	(173)	(93)	(81)	(98)	(22)
Illinois	3287	2986	598	72	1597	-1967
	(350)	(282)	(79)	(64)	(133)	(22)
Nevada	5295	2589	3191	371	961	-1817
	(2212)	(2036)	(589)	(127)	(430)	(23)
New Jersey	4144	-192	1091	1559	1741	-55
	(360)	(154)	(125)	(89)	(254)	(35)
New York	11112	4035	1370	1610	4530	-433
	(404)	(173)	(86)	(61)	(338)	(31)
Ohio	4372	1398	2901	842	1124	-1892
	(272)	(154)	(118)	(57)	(132)	(22)
Texas	-142	-683	1090	-188	728	-1089
	(198)	(108)	(87)	(57)	(102)	(28)
Wisconsin	2864	797	2076	-12	-424	427
	(489)	(262)	(174)	(104)	(273)	(84)
West Virginia	-3180	-737	630	76	-1276	-1873
	(270)	(133)	(123)	(69)	(135)	(22)
# Observations	184,028	184,028	184,028	184,028	184,028	184,028
Mean of Dep Var	13,999	3,712	3,883	3,025	2,490	887
10 Age * Gender Interactions?	Yes	Yes	Yes	Yes	Yes	Yes
Florida Omitted Category	Yes	Yes	Yes	Yes	Yes	Yes
Exclude if in managed care?	No	No	No	No	No	No
State Effect Std Dev	4053	1645	995	668	1586	901
Std Dev / Average	0.29	0.44	0.26	0.22	0.64	1.02

Table 5: Variation in Utilization across Categories and in MMC for the Medicaid-Only Disabled

	Inpatient Days	LTC Days	Outpatient Claims	RX Claims	% Months in MMC
California	-0.205	-1.835	-4.113	-8.418	-0.051
	(.082)	(.383)	(.695)	(.328)	(.003)
Georgia	-0.277	-1.629	0.692	6.425	-0.268
	(.120)	(.520)	(.825)	(.463)	(.003)
Illinois	1.993	15.388	-7.203	10.282	-0.270
	(.160)	(.738)	(.768)	(.516)	(.003)
Nevada	0.658	2.569	1.763	8.332	-0.256
	(.317)	(1.341)	(1.658)	(1.070)	(.003)
New Jersey	0.378	2.804	13.729	12.519	0.098
	(.164)	(.753)	(1.571)	(.654)	(.006)
New York	2.363	11.700	3.241	11.243	-0.047
	(.140)	(.754)	(.817)	(.389)	(.004)
Ohio	0.322	4.805	55.795	23.266	-0.256
	(.103)	(.558)	(1.482)	(.540)	(.003)
Texas	-0.551	6.831	7.391	-7.045	-0.099
	(.081)	(.538)	(.889)	(.344)	(.004)
Wisconsin	0.192	-4.782	16.272	5.251	-0.228
	(.168)	(.973)	(1.761)	(.849)	(.004)
West Virginia	-0.385	-5.992	10.433	13.679	-0.244
	(.119)	(.554)	(1.141)	(.672)	(.003)
# Observations	184,028	184,028	184,028	184,028	184,028
Mean of Dep Var	2.902	11.339	48.702	34.820	0.158
10 Age * Gender Interactions?	Yes	Yes	Yes	Yes	Yes
Florida Omitted Category	Yes	Yes	Yes	Yes	Yes
Exclude if in managed care?	No	No	No	No	No
State Effect Std Dev	0.949	6.646	17.145	9.259	0.131
Std Dev / Average	0.33	0.59	0.35	0.27	0.83