Changes in Medical Out-of-Pocket Expenditures over 2013-2014

Joelle Abramowitz

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Abstract: This paper uses the 2014-2015 Current Population Survey Annual Social and

Economic Supplement to consider changes in medical out-of-pocket expenditures over 2013-

2014. This period covers the implementation of several provisions of the Patient Protection and

Affordable Care Act (ACA), which aims to make healthcare services more affordable through

improved access to health insurance, an increase in covered services, and limits on out-of-pocket

spending. The paper estimates changes in out-of-pocket spending on health insurance premiums

and non-premium medical expenditures for individuals younger than age 65 and not reporting

Medicare coverage over the 2013 and 2014 calendar years. Results across all insurance types

suggest that average premium expenditures remained stable and average non-premium

expenditures decreased by \$48. Results vary by insurance type with the most pronounced effects

for individuals with direct purchase coverage, including decreases in average premium

expenditures of \$592 and in average non-premium medical expenditures of \$236.

Key words: Medical Out-of-Pocket Expenditures, Health Insurance Premiums, Patient Protection

and Affordable Care Act, Health Insurance

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1 Introduction

It is important for individuals and families to be able to seek needed medical care. However, the high cost of medical care can cause significant financial strain as well as impede seeking any care: in 2013, 19.4 percent of persons under age 65 reported being in families that had trouble paying their medical bills in the prior 12 months (Cohen & Schiller, 2015), and 5.9 percent of all persons reported not seeking needed medical care because of cost in the prior 12 months (National Center for Health Statistics, 2015).

The Patient Protection and Affordable Care Act (ACA) aims to make healthcare services more affordable through improved access to health insurance, an increase in covered services, and limits on out-of-pocket spending. The 2014 calendar year saw the implementation of several ACA provisions. In particular, these include the individual mandate, availability of insurance coverage through Federal and State-based Marketplaces, expansion of Medicaid eligibility in some states, implementation of premium subsidies for individuals with qualifying incomes, and barring denial of coverage related to pre-existing conditions.

The provisions may increase or decrease amounts paid for insurance premiums through several channels. As a result of the individual mandate, some previously uninsured individuals may purchase insurance and pay for associated premiums, contributing to an increase in average premium expenses across all individuals. However, individuals already covered by private insurance may see lower premiums expenditures with the introduction of health insurance Marketplaces, premium subsidies, and state Medicaid expansions.

The provisions also have the potential to increase or decrease amounts paid for non-premium medical expenditures through several mechanisms. As individuals change their type of

coverage, their out-of-pocket costs for a given level of care may rise or fall, directly affecting expenditures. However, the change in costs may lead them to decrease or increase their utilization of care, respectively. In addition, the greater access to insurance may lead to pent up demand in the short run, but better health in long run, which would also be reflected in changes in utilization and, in turn, expenditures.

This paper uses the 2014-2015 Current Population Survey's Annual Social and Economic Supplement (CPS ASEC) to compare out-of-pocket spending for health insurance premiums and for non-premium medical care for individuals younger than age 65 before and after the 2014 implementation of ACA provisions. In particular, the paper considers expenditures by health insurance type: both year-over-year and over time for individuals with changes in coverage types.

2 Data

The data for this analysis come from the CPS ASEC, a nationally representative survey of the civilian non-institutionalized population living in the United States. The 2014 Income Consistent CPS ASEC¹ and the 2015 CPS ASEC, which cover the 2013 and 2014 calendar years, respectively, are used. Both years of data utilized in this analysis make use of revisions to the questions on medical expenditures and new and improved editing procedures for these questions (Janicki, 2014).² The analysis sample is restricted to exclude individuals reporting or eligible for Medicare coverage, who are less likely to be affected by the ACA provisions implemented in the 2014 calendar year. Accordingly, the sample includes individuals younger than age 65 not reporting Medicare coverage. The 2014 and 2015 analysis samples consist of 171,160 and 169,771 individuals, respectively.

In this analysis, I examine amounts paid for out-of-pocket for health insurance premiums and amounts paid for non-premium medical care. Amounts paid for health insurance premiums reflect only the amount paid out of pocket by that individual on their own behalf or on behalf of others in the household. Non-premium medical expenditures include expenses such as payments and co-payments for hospital visits, medical providers, dental service, prescription medications, vision aids, medical supplies, and over-the-counter health-related items. I impute out-of-pocket premium expenses for persons who did not report paying for any premium expenses but did report that their employer paid for some or none of their employer-sponsored insurance per Janicki, O'Hara, and Zawacki (2013).³ All monetary values reported have been converted to constant 2013 U.S. dollars. For the purposes of this analysis, the family is defined as the health insurance unit (State Health Access Data Assistance Center, 2012). In all analyses, the data are weighted to be population-representative using Fay's replicate weights.

It is important to note that the distribution of expenditures values is very skewed, with many individuals reporting zero expenditures, while a small number of individuals report extremely large expenditures. Accordingly, while the main results show only mean estimates for the sake of brevity, subsequent results also show the 90th, 95th, and 99th percentiles of the expenditures distributions.

There are several advantages to using the CPS ASEC for this analysis. The CPS ASEC is conducted annually, is released in a timely manner, and has a large sample size. In addition, previous work has shown the comparability of CPS ASEC medical expenditures data to the Medical Expenditure Panel Survey (Caswell & O'Hara, 2010).

3 Results

I first consider overall changes in average premium and non-premium expenditures at the individual and family levels. Results, presented in Table 1, suggest a statistically insignificant change in average premiums and a small but statistically significant decrease in average non-premium expenditures of \$48 at the individual level and \$116 at the family level. Given the number of changes implemented as part of ACA provisions, it is somewhat surprising to see such small differences in average premium and non-premium expenditures amounts.

While considering results for the full sample is important for examining overall changes in expenditures, such results mask differential changes in expenditures by insurance type. Considering expenditures by insurance type is particularly important because ACA provisions effective in 2014 are implemented through insurance markets. In particular, over 2013-2014 the implementation of the ACA provisions has been associated with decreases in the proportion uninsured and increases in the proportion with Medicaid and with direct purchase coverage (Smith & Medalia, 2015). Accordingly, comparing average premium and non-premium expenditures by insurance type adds to the full sample analysis by permitting the identification of changes in expenditures within insurance types separately from the movement of individuals across insurance types. Indeed, Table 2 and Table 3 reveal considerable differences in changes in expenditures across insurance types from 2013 to 2014. For brevity, I present these and subsequent results at the individual level only; results at the family level are qualitatively similar.

Results comparing average premium expenditures by insurance type are presented in Table 2, first for all covered individuals and then for policyholders of direct purchase and employer-sponsored plans.⁵ Average premiums decreased dramatically, by \$592, for individuals with only

direct purchase coverage, but we see no significant difference in average premiums associated with any other insurance coverage type. Results for policyholders are consistent with those for all individuals. For direct purchase plan policyholders, we see a dramatic decrease in average premium expenditures of \$1,021. Average premium expenditures for policyholders of employer-sponsored plans, policyholders of private plans with multiple types of private coverage, and policyholders of private plans with public coverage did not change significantly.

Results comparing average non-premium expenditures by insurance type are presented in Table 3. Average non-premium expenditures did not increase for any insurance type. Average non-premium expenditures decreased by \$51 for individuals with only employer-sponsored coverage, by \$79 for the uninsured, by \$114 for those with a combination of private coverage, and, most dramatically, by \$236 for those with only direct purchase coverage. We see no significant difference in average non-premium expenditures for those with only Medicaid, only military coverage, or a combination of private and public coverage.

Looking at the 90th, 95th, and 99th percentiles of the premiums and non-premium medical expenditures distributions, in Appendix 1 and Appendix 2, shows similar findings to the mean results. In particular, in Appendix 1, we see a large decrease in premium expenditures associated with direct purchase coverage, while the change across all coverage types is small. In addition, in Appendix 2 we see decreases in non-premium medical expenditures across all coverage types.

While comparing expenditures by insurance type does shed light on differential effects of the provision, such a cross-sectional analysis cannot identify changes in expenditures for individuals who maintained a particular coverage type as compared to those who newly took up that type of coverage. To consider the effect of changes in insurance type on expenditures, I longitudinally

link the data over the two survey years to compare changes in average expenditures for those who maintained certain coverage types and for those who changed their coverage type over the analysis period. For this analysis, I include all individuals present in both 2014 and 2015 survey data for whom responses to health insurance and medical expenditures questions were not imputed and for whom reports of age were consistent. While this analysis is limited by a smaller sample size, the analysis is still useful for better understanding the channels through which changes in insurance type affect expenditures.

The longitudinal results, ⁷ presented in Table 4, show increases in average premium expenditures for individuals switching to direct purchase plans from uninsurance or employer-sponsored plans, as well as an insignificant decrease in premium expenditures for individuals maintaining direct purchase coverage over the period. However, the results also show that average direct purchase premium expenditures for the newly insured are significantly lower than those for individuals maintaining direct purchase coverage over the period and for individuals switching to direct purchase coverage from employer plans. In addition, we see decreases in average premium expenditures for individuals switching to Medicaid from direct purchase or employer-sponsored plans and an insignificant decrease in average premium expenditures for uninsured individuals obtaining Medicaid over the period. We also see increases in average premium expenditures for those maintaining employer-sponsored coverage. For average non-premium expenditures, we see decreases for individuals switching to Medicaid from uninsurance or employer-sponsored plans and insignificant decreases for all other examined categories.

These longitudinal results, together with the cross-sectional results, provide a compelling picture. With 2014 ACA provisions implementation, many individuals obtained Medicaid and saw stable or decreased premium expenditures. Some uninsured individuals gained coverage on health

insurance Marketplaces, and while they had higher premium expenditures, their premium expenditures were still significantly lower than for individuals who were previously insured with private coverage. While the longitudinal results suggest significant decreases in non-premium expenditures associated with new Medicaid coverage only, we also see large but insignificant magnitude decreases in non-premium expenditures for individuals maintaining or switching to direct purchase plans.

4 Conclusion

At first glance, changes in average premium and non-premium expenditures over the 2013 and 2014 calendar years appear to be quite small. However, considering results by insurance type suggests larger effects of the ACA on medical expenditures.

Considering these changes in expenditures in light of changes in types of insurance coverage puts these results in context. Over 2013 to 2014, the proportion of uninsured individuals decreased and the proportion with direct purchase coverage increased, suggesting that some previously uninsured individuals opted to obtain direct purchase coverage through health insurance Marketplaces. On its own, this switch in coverage would be associated with a higher average premium across all expenditures types since direct purchase coverage is associated with higher premiums and non-premium medical spending than uninsurance. However, we also see decreases in average spending for direct purchase premiums and non-premium medical expenditures, resulting in a smaller increase in average premiums across insurance types. The decrease in average spending for direct purchase premiums and non-premium medical expenditures could reflect the newly implemented ACA premium subsidies. In addition, the decrease in average premium expenditures associated with direct purchase coverage could reflect

that overall, the uninsured individuals obtaining direct purchase coverage may be relatively low-risk and accordingly have lower premiums and spending than the average for those who previously had direct purchase coverage. Further, non-premium medical expenditures may also fall if the new provisions also provide for better coverage through insurance. The increase in Medicaid coverage, which is associated with lower premiums and non-premium medical spending, further contributes to the decreases in overall average premiums and non-premium medical spending.

There are several limitations to this analysis. As a household survey, the data relies on selfreported information on coverage type and out-of-pocket medical expenditures. In addition, the data on health insurance premiums only includes the portion paid directly by the individual, excluding any employer contributions, and may include amounts paid on behalf of others in the household. Further, while the classification of insurance type reflects coverage by that type of insurance at any time over the calendar year, since expenditure amounts cover any expenditures over the calendar year, some or all of the expenditure amount may have been incurred during a time when the individual was not covered by any or all of their reported insurance types. It is also important to note that changes in non-premium medical expenditures reflect both utilization of services and insurance coverage of services, both of which may have changed with the 2014 implementation of ACA provisions. While it is only possible to observe expenditures in the CPS ASEC, future work using data on utilization could consider changes in expenditures in light of utilization. In addition, while this paper's estimates compare expenditures only across the 2013 and 2014 calendar years and do not take into account pre-existing trends that may lead to differences in expenditures.

It remains to be seen whether the results found for the first year of implementation of the 2014 ACA provisions persist. As individuals respond to changes in coverage, their out-of-pocket cost of care, and in the longer term, their health status, we would expect to see further changes in utilization and resulting expenditures over the longer term. Future work can examine the enduring effects of the ACA on medical expenditures.

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¹ The 2014 Income-Consistent data and related documentation are available at http://www.census.gov/housing/extract_files/toc/data/index.html#asec14ic.

² The initial release of the 2014 survey data used the old editing procedures, but the 2014 Income Consistent data, now available, use the new editing procedures.

³ Janicki et al. (2013) also imputes out-of-pocket premium expenses for persons who did not report paying for any premium expenses but did report directly purchasing their insurance on the market. Since the ACA provides for some individuals to purchase insurance directly at a subsidized cost that may result in an out-of-pocket premium equal to zero, such an imputation is not applied in this analysis spanning the health insurance Marketplace implementation period.

⁴ Insurance type categories are mutually exclusive. Plans purchased on health insurance Marketplaces are classified in the direct purchase category along with plans purchased directly but not on Marketplaces since information on whether the plan was purchased on a Marketplace is not currently available. The classification of insurance type reflects coverage by that type of insurance at any time over the calendar year. It is important to note that since expenditure amount cover any expenditures over the calendar year, some or all of the expenditure amount may have been incurred during a time when the individual was not covered by any or all of their reported insurance types.

⁵ Uninsured individuals may report paying for premiums on behalf of others in their households.

⁶ Individuals with reported ages that differed by more than five years over the two years were dropped from the analysis. I use the cutoff of a five-year age difference to exclude individuals who are likely erroneously linked, but allow for some reporting error in age.

5 References

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⁷ I limit my premium expenditures analyses related to private plans to only those identified as the plan policyholder.

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Table 1: Changes in Average Medical Expenditures 2013 to 2014

Tables

	2013 CY		2014 CY		=
	n	Mean	n	Mean	Change
Premiums					
Individuals	171,160	863	169,771	878	15
Families	84,360	2,086	84,052	2,118	32
Non-Premium Medical Expenditures					
Individuals	171,160	663	169,771	615	-48***
Families	84,360	1,591	84,052	1,475	-116***

Source: 2014 and 2015 CPS ASEC.

^{***} p<0.01, ** p<0.05, * p<0.1 for t-test of difference in means between 2013 and 2014 calendar years.

Table 2: Changes in Average Premiums 2013 to 2014 by Insurance Type

	2013 CY		2014 CY			
	n	Mean	n	Mean	Change	
All Individuals						
Direct Purchase Only	8,764	2,235	11,792	1,643	-592***	
Employer-Sponsored Only	92,980	1,207	88,394	1,216	9	
Medicaid Only	26,238	35	27,512	35	0	
Military Only	3,826	141	3,837	131	-10	
Combination of Private, No Public	4,625	1,714	6,421	1,741	27	
Combination of Private and Public	10,015	677	12,164	715	38	
Uninsured	24,712	41	19,651	34	-7	
Policyholders Only						
Direct Purchase Only	4,596	3,687	6,340	2,666	-1021***	
Employer-Sponsored Only	43,096	2,307	41,399	2,306	-1	
Combination of Private, No Public	2,945	2,462	3,984	2,531	69	
Combination of Private and Public	2,956	2,043	3,715	2,063	20	

Source: 2014 and 2015 CPS ASEC.

*** p<0.01, ** p<0.05, * p<0.1 for t-test of difference in means between 2013 and 2014 calendar years.

Table 3: Changes in Average Non-premium Medical Expenditures 2013 to 2014 by Insurance Type

	2013 CY		2014 CY		
	n	Mean	n	Mean	Change
Direct Purchase Only	8,764	1,095	11,792	859	-236***
Employer-Sponsored Only	92,980	828	88,394	777	-51***
Medicaid Only	26,238	175	27,512	169	-6
Military Only	3,826	404	3,837	498	94
Combination of Private, No Public	4,625	983	6,421	869	-114**
Combination of Private and Public	10,015	456	12,164	450	-6
Uninsured	24,712	474	19,651	395	-79***

Source: 2014 and 2015 CPS ASEC.

^{***} p<0.01, ** p<0.05, * p<0.1 for t-test of difference in means between 2013 and 2014 calendar years.

Table 4: Changes in Expenditures 2013 to 2014 by Insurance Type – Longitudinally Linked

2013 CY Health Insurance Coverage	2014 CY Health Insurance Coverage	n	2013 CY Mean	2014 CY Mean	Change
Premiums					
All Types	All Types	14,399	978	1,028	50**
Uninsured	Direct Purchase Only (Policyholder)	70	30	853	823***
Uninsured	Medicaid Only	220	27	66	39
Uninsured	Uninsured	352	30	29	-1
Employer-Sponsored Only (Policyholder)	Medicaid Only	44	1,323	287	-1036***
Employer-Sponsored Only (Policyholder)	Direct Purchase Only (Policyholder)	127	2,510	4,413	1903***
Employer-Sponsored Only (Policyholder)	Employer-Sponsored Only (Policyholder)	4,001	2,214	2,382	168***
Direct Purchase Only (Policyholder)	Medicaid Only	19	1,046	440	-606*
Direct Purchase Only (Policyholder)	Direct Purchase Only (Policyholder)	257	4,505	4,400	-105
Medicaid Only	Medicaid Only	1,810	8	9	1
Non-Premium Expenditures					
All Types	All Types	14,399	759	719	-40*
Uninsured	Direct Purchase Only	116	678	460	-218
Uninsured	Medicaid Only	220	344	133	-211**
Uninsured	Uninsured	352	366	320	-46
Employer-Sponsored Only	Medicaid Only	143	292	147	-145**
Employer-Sponsored Only	Direct Purchase Only	238	1,133	1,018	-115
Employer-Sponsored Only	Employer-Sponsored Only	8,875	881	848	-33
Direct Purchase Only	Medicaid Only	41	607	325	-282
Direct Purchase Only	Direct Purchase Only	473	1,923	1,606	-317
Medicaid Only	Medicaid Only	1,810	174	95	-79

Source: 2014 and 2015 CPS ASEC.

*** p<0.01, ** p<0.05, * p<0.1 for t-test of difference in means between 2013 and 2014 calendar years.

Appendix

Appendix 1: Changes in the Distribution of Premiums 2013 to 2014

	2013 CY	2014 CY	Change
90th Percentile			
All	3,000	3,047	47
Direct Purchase Only	7,044	5,273	-1771***
Employer-Sponsored Only	3,952	3,906	-46
Medicaid Only	0	0	0
Military Only	408	273	-135**
Combination of Private, No Government	4,900	4,883	-17
Combination of Private and Government	2,400	2,441	41
Uninsured	0	0	0
95th Percentile			
All	4,800	4,883	83***
Direct Purchase Only	10,000	7,813	-2188***
Employer-Sponsored Only	5,400	5,859	459***
Medicaid Only	0	0	0
Military Only	800	586	-214
Combination of Private, No Government	7,000	7,031	31
Combination of Private and Government	4,000	4,395	395
Uninsured	0	0	0
99th Percentile			
All	10,000	9,766	-234
Direct Purchase Only	18,000	14,648	-3352***
Employer-Sponsored Only	10,000	9,961	-39
Medicaid Only	1,000	1,172	172
Military Only	3,000	2,441	-559
Combination of Private, No Government	12,372	11,953	-419
Combination of Private and Government	8,400	8,789	389
Uninsured	1,000	820	-180

Source: 2014 and 2015 CPS ASEC.

^{***} p<0.01, ** p<0.05, * p<0.1 for t-test of difference in means between 2013 and 2014 calendar years.

Appendix 2: Changes in the Distribution of Non-premium Medical Expenditures 2013 to 2014

	2013 CY	2014 CY	Change
90th Percentile			
All	1,650	1,514	-136**
Direct Purchase Only	2,600	2,148	-452***
Employer-Sponsored Only	2,100	2,002	-98***
Medicaid Only	345	342	-3
Military Only	1,020	879	-141
Combination of Private, No Government	2,550	2,148	-402***
Combination of Private and Government	1,100	977	-123**
Uninsured	1,050	850	-200***
95th Percentile			
All	2,941	2,637	-304***
Direct Purchase Only	4,250	3,906	-344
Employer-Sponsored Only	3,200	3,052	-148**
Medicaid Only	620	635	15
Military Only	1,835	1,563	-273
Combination of Private, No Government	4,000	3,223	-777**
Combination of Private and Government	2,000	1,758	-242*
Uninsured	2,100	1,563	-538***
99th Percentile			
All	6,500	6,055	-445***
Direct Purchase Only	10,200	9,766	-434
Employer-Sponsored Only	7,050	6,836	-214**
Medicaid Only	2,200	2,588	388***
Military Only	4,050	4,102	52
Combination of Private, No Government	7,400	7,813	413
Combination of Private and Government	5,500	5,078	-422
Uninsured	6,045	5,078	-967***

Source: 2014 and 2015 CPS ASEC.

*** p<0.01, ** p<0.05, * p<0.1 for t-test of difference in means between 2013 and 2014 calendar years.