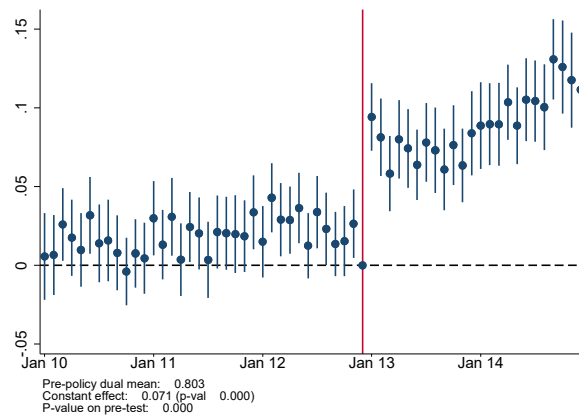


Appendix

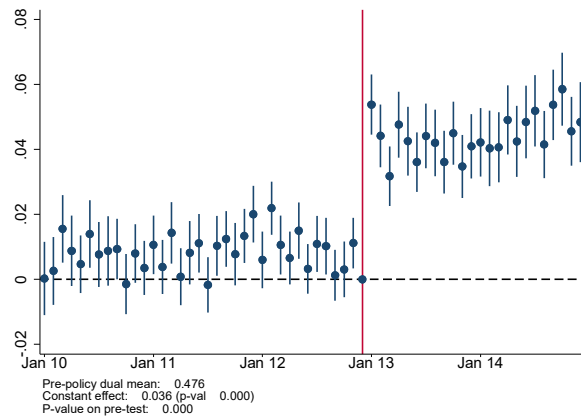
The Impact of Provider Payments on Health Care Utilization of Low-Income Individuals: Evidence from Medicare and Medicaid

Marika Cabral, Colleen Carey, & Sarah Miller

Figure A.1: Impact on Monthly E&M Services and Visits: Triple Differences Specification



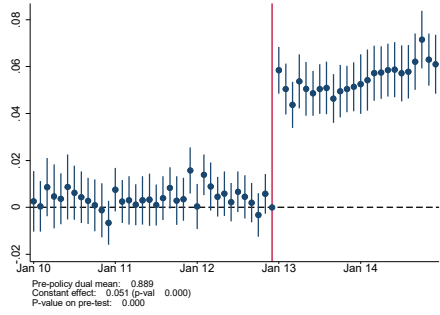
(a) E&M Services



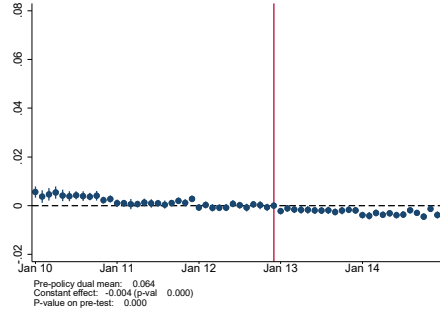
(b) E&M Visits

Notes: These figures report coefficient estimates and 95 percent confidence intervals from the monthly analog to Equation (3) of the interaction between month fixed effects, the indicator $Dual_i$ equals 1, and the indicator that the provider is qualifying. The dependent variable is E&M services in Panel (a) and E&M visits in panel (b). See text for further details.

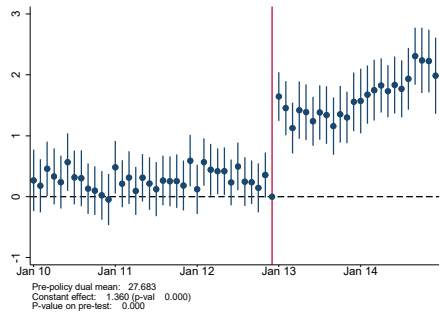
Figure A.2: Mechanisms: Impact on Types of Services Provided, Monthly Level



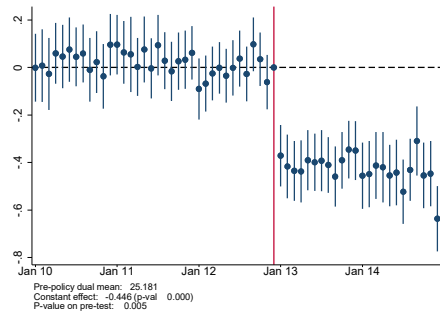
(a) Established Patient E&M Visits



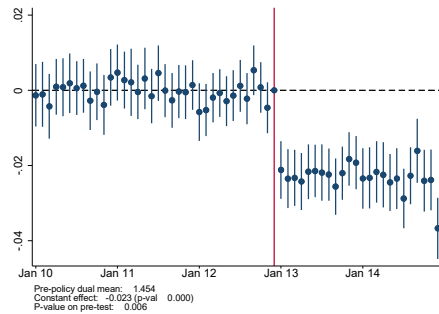
(b) New Patient E&M Visits



(c) Billed E&M Time



(d) Billed Time per E&M Visit



(e) RVUs per E&M Visit

Notes: These figures report coefficient estimates and 95 percent confidence intervals from Equation (1) of the interaction between month fixed effects and the indicator $Dual_i$ equals 1. Each panel is a different dependent variable. Note the time per E&M visit and RVUs per E&M visit exist only in months when the individual has a visit. See text for further details.

Table A.1: First Stage: Submissions and Payment of Cost-Sharing Claims, Confidence Intervals from Wild Bootstrap with State Clusters

	(1)	(2)	(3)
<i>Panel A: no controls</i>			
	Cost-Sharing Payment Rate Submission	Submissions	Cost-Sharing Payment Rate
2011*Qualifying Provider	0.0249 (-0.137, 0.234) [0.654]	-0.0086 (-0.015, -0.003) [0.026]	0.0014 (-0.028, 0.024) [0.960]
2013*Qualifying Provider	0.1982 (0.012, 0.362) [0.035]	0.1256 (0.039, 0.203) [0.005]	0.1463 (0.077, 0.224) [0.007]
<i>Panel B: baseline controls</i>			
2011*Qualifying Provider	0.0251 (-0.093, 0.237) [0.830]	-0.0029 (-0.008, 0.001) [0.129]	0.0041 (-0.019, 0.026) [0.915]
2013*Qualifying Provider	0.1351 (0.028, 0.296) [0.016]	0.1176 (0.041, .0.200) [0.004]	0.1458 (0.079, 0.228) [0.008]
Dual Pre-Policy Mean at Qualifying Providers	0.4921	0.3633	0.1824

Notes: This table displays estimates of regression coefficients from Equation (2) for the sample of Medicare E&M claims for dual-eligible beneficiaries in Medicaid-reporting states, with each person-year observation weighted by the number of E&M claims represented. Confidence intervals (parentheses) and p-values (brackets) are derived from a wild bootstrap with state clusters. Outcome variables are listed in the top row. Panel A includes no controls, while Panel B includes the “baseline” controls as in Table 3: age bin, sex, and county.

Table A.2: Alternative Specifications and Samples

	State-level Clustering		County x Year Fixed Effects		Medicaid-Reporting States				
	E&M Services	E&M Visits	Any E&M	Any E&M Visits	E&M Services	E&M Visits	Any E&M		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2010*Dual	-0.095 (0.073) [0.203]	0.035 (0.034) [0.313]	-0.003 (0.001) [0.029]	-0.164 (0.078) [0.036]	0.010 (0.039) [0.794]	-0.002 (0.001) [0.015]	0.110 (0.138) [0.422]	0.157 (0.101) [0.121]	-0.002 (0.001) [0.115]
2011* Dual	-0.050 (0.057) [0.382]	0.020 (0.023) [0.399]	0.000 (0.001) [0.988]	-0.106 (0.061) [0.082]	-0.006 (0.024) [0.795]	0.000 (0.001) [0.847]	-0.026 (0.105) [0.803]	0.058 (0.053) [0.275]	-0.000 (0.001) [0.651]
2012*Dual	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)
2013* Dual	0.787 (0.120) [0.000]	0.533 (0.080) [0.000]	0.009 (0.001) [0.000]	0.826 (0.068) [0.000]	0.566 (0.034) [0.000]	0.009 (0.001) [0.000]	0.889 (0.133) [0.000]	0.672 (0.085) [0.000]	0.011 (0.002) [0.000]
2014* Dual	1.213 (0.150) [0.000]	0.623 (0.102) [0.000]	0.009 (0.001) [0.000]	1.302 (0.091) [0.000]	0.698 (0.044) [0.000]	0.009 (0.001) [0.000]	1.275 (0.145) [0.000]	0.739 (0.106) [0.000]	0.011 (0.002) [0.000]
Dual Pre-Policy Mean	19.28	11.43	0.896	19.28	11.43	0.896	18.90	11.67	0.885
Dual Mean at Qualifying Providers	16.78	9.50		16.78	9.50		16.46	9.68	
N	17,705,282	17,705,282	17,705,282	17,704,175	17,704,175	17,704,175	4,811,629	4,811,629	4,811,629

Note: This table displays estimates of regression coefficients from Equation (1) across alternative specifications and samples. Standard errors (clustered at the state level in columns (1)-(3) and at the county level for other columns) are reported in parentheses and p-values are reported in brackets. Outcome variables are listed in the top row. See text for further details.

Table A.3: Impact of the Payment Increase on E&M, Using “Near Poor” Beneficiaries as Comparison Group

	E&M Services	E&M Visits	Any E& M
	(1)	(2)	(3)
2010*Dual	-0.421 (0.115) [0.000]	-0.203 (0.054) [0.000]	-0.004 (0.001) [0.004]
2011*Dual	-0.084 (0.107) [0.433]	-0.020 (0.042) [0.636]	-0.003 (0.001) [0.025]
2012*Dual	(omitted)	(omitted)	(omitted)
2013*Dual	0.784 (0.119) [0.000]	0.473 (0.047) [0.000]	0.003 (0.001) [0.016]
2014*Dual	1.085 (0.169) [0.000]	0.547 (0.063) [0.000]	0.001 (0.002) [0.405]
Dual Pre-Policy Mean	19.28	11.43	0.896
Dual Mean at Qualifying Providers	16.78	9.50	
N	2,186,806	2,186,806	2,186,806

Notes: This table displays estimates of regression coefficients from Equation (1), where the control group is defined to be “near poor” Medicare beneficiaries (Low-Income Subsidy recipients and partial duals) instead of all nonduals. Standard errors are reported in parentheses and p-values are reported in brackets. See text for further details.

Table A.4: Mechanisms

	Established E&M Visits	New Patient E&M Visits	Billed Provider Time	Billed Provider Time per Visit	RVUs per Visit
	(1)	(2)	(3)	(4)	(5)
2010*Dual	-0.016 (0.041) [0.695]	0.051 (0.007) [0.000]	-0.802 (1.393) [0.565]	-0.025 (0.035) [0.469]	-0.002 (0.002) [0.256]
2011* Dual	0.003 (0.024) [0.887]	0.017 (0.003) [0.000]	-0.434 (1.009) [0.667]	0.030 (0.027) [0.279]	0.001 (0.002) [0.530]
2012*Dual	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)
2013* Dual	0.553 (0.034) [0.000]	-0.020 (0.003) [0.000]	12.616 (1.177) [0.000]	-0.327 (0.032) [0.000]	-0.017 (0.002) [0.000]
2014* Dual	0.660 (0.045) [0.000]	-0.037 (0.005) [0.000]	19.130 (1.726) [0.000]	-0.394 (0.045) [0.000]	-0.020 (0.003) [0.000]
Mean	10.67	0.767	332.2	27.03	1.554

Notes: This table displays estimates of regression coefficients from Equation (1) for outcomes listed in the first row. Standard errors (clustered at the county level) are reported in parentheses and p-values are reported in brackets. See text for further details.

Table A.5: Heterogeneity: E&M Services

	Female (1)	Male (2)	Age \geq 75 (3)	Age $<$ 75 (4)	White (5)	Non-white (6)
2013* Dual	0.748 (0.079) [0.000]	0.922 (0.125) [0.000]	0.407 (0.102) [0.000]	1.155 ††† (0.095) [0.000]	0.929 (0.078) [0.000]	0.603 †† (0.133) [0.000]
2014* Dual	1.382 (0.104) [0.000]	1.132 (0.181) [0.000]	1.039 (0.148) [0.000]	1.919 ††† (0.118) [0.000]	1.298 (0.111) [0.000]	0.958 (0.187) [0.000]
Dual Pre-Policy Mean	20.65	17.05	20.76	18.72	19.16	19.48

	HPSA (7)	Non-HPSA (8)	Worse Health (9)	Better Health (10)	Preventable ED (11)	No Preventable ED (12)
2013* Dual	0.554 (0.103) [0.000]	1.001 ††† (0.094) [0.000]	0.909 (0.104) [0.000]	0.944 (0.068) [0.000]	2.318 (0.355) [0.000]	1.017 ††† (0.071) [0.000]
2014* Dual	0.988 (0.179) [0.000]	1.419 †† (0.122) [0.000]	1.495 (0.140) [0.000]	0.935 ††† (0.090) [0.000]	2.926 (0.424) [0.000]	1.308 ††† (0.102) [0.000]
Dual Pre-Policy Mean	18.99	19.54	26.31	8.293	42.45	16.62

Notes: This table displays estimates of regression coefficients from Equation (1) for subgroups defined in the top row. The outcome variable is E&M services. Standard errors (clustered at the county level) are reported in parentheses and p-values are reported in brackets. The symbol † indicates the significance level of a test that the coefficients are the same across each paired group. The significance levels denoted are: †=0.10, ††=0.05, †††=0.01. See text for further details.

Table A.6: Heterogeneity: E&M Visits

	Female (1)	Male (2)	Age >= 75 (3)	Age < 75 (4)	White (5)	Non-white (6)
2013* Dual	0.004 (0.001) [0.000]	0.018 ††† (0.001) [0.000]	0.000 (0.001) [0.936]	0.017 ††† (0.001) [0.000]	0.010 (0.001) [0.000]	0.005 ††† (0.001) [0.000]
2014* Dual	0.004 (0.001)	0.018 (0.002) †††	-0.002 (0.001)	0.025 ††† (0.001)	0.010 (0.001)	0.004 ††† (0.002)
Dual Pre-Policy Mean	[0.000] 0.923	[0.000] 0.853	[0.015] 0.927	[0.000] 0.885	[0.000] 0.899	[0.025] 0.891
	HPSA (7)	Non-HPSA (8)	Worse Health (9)	Better Health (10)	Preventable ED (11)	No Preventable ED (12)
2013* Dual	0.007 (0.001) [0.000]	0.010 † (0.001) [0.000]	0.003 (0.000) [0.000]	0.022 ††† (0.001) [0.000]	0.005 (0.001) [0.000]	0.010 ††† (0.001) [0.000]
2014* Dual	0.007 (0.002)	0.010 (0.001)	0.002 (0.001)	0.024 ††† (0.001)	0.006 (0.001)	0.010 ††† (0.001)
Dual Pre-Policy Mean	[0.000] 0.887	[0.000] 0.904	[0.000] 0.964	[0.000] 0.791	[0.000] 0.975	[0.000] 0.887

Notes: This table displays estimates of regression coefficients from Equation (1) for subgroups defined in the top row. The outcome variable is E&M visits. Standard errors (clustered at the county level) are reported in parentheses and p-values are reported in brackets. The symbol † indicates the significance level of a test that the coefficients are the same across each paired group. The significance levels denoted are: †=0.10, ††=0.05, †††=0.01. See text for further details.

Table A.7: Heterogeneity: Any E&M

	Female (1)	Male (2)	Age >= 75 (3)	Age < 75 (4)	White (5)	Non-white (6)
2013* Dual	0.004 (0.001) [0.000]	0.018 ††† (0.001) [0.000]	-0.001 (0.001) [0.253]	0.018 ††† (0.001) [0.000]	0.010 (0.001) [0.000]	0.005 ††† (0.001) [0.000]
2014* Dual	0.004 (0.001) [0.000]	0.018 (0.002) ††† [0.000]	-0.003 (0.001) [0.018]	0.024 ††† (0.001) [0.000]	0.010 (0.001) [0.000]	0.004 ††† (0.002) [0.025]
Dual Pre-Policy Mean	0.910	0.838	0.915	0.870	0.899	0.891

	HPSA (7)	Non-HPSA (8)	Worse Health (9)	Better Health (10)	Preventable ED (11)	No Preventable ED (12)
2013* Dual	0.007 (0.001) [0.000]	0.010 † (0.001) [0.000]	0.003 (0.000) [0.000]	0.022 ††† (0.001) [0.000]	0.005 (0.001) [0.000]	0.010 ††† (0.001) [0.000]
2014* Dual	0.007 (0.002) [0.000]	0.010 (0.001) [0.000]	0.002 (0.001) [0.000]	0.024 ††† (0.001) [0.000]	0.006 (0.001) [0.000]	0.010 ††† (0.001) [0.000]
Dual Pre-Policy Mean	0.871	0.892	0.964	0.791	0.975	0.887

Notes: This table displays estimates of regression coefficients from Equation (1) for subgroups defined in the top row. The outcome variable is the fraction of beneficiaries with any E&M claim. Standard errors (clustered at the county level) are reported in parentheses and p-values are reported in brackets. The symbol † indicates the significance level of a test that the coefficients are the same across each paired group. The significance levels denoted are: †=0.10, ††=0.05, †††=0.01. See text for further details.