Table 4: Descriptive Statistics by Age Range

VARIABLES	All Ages Mean	Standard Deviation	Ages 27-64 Mean	Standard Deviation
Demographic Variables				
U.S. Citizen	.932	.252	.904	.294
Foreign Born	.129	.346	.191	.393
Hispanic	.168	.374	.153	.360
Age	38.383	23.034	45.509	10.806
Unemployed	.047	.211	.046	.210
Disabled	.002	.049	.001	.034
Student	.260	.438	.050	.219
Veteran	.082	.275	.064	.244
Female	.512	.500	.513	.500
Individual Income	36,307.84	53,368.89	44,952.29	58,866.01
State Unemployment Rate	6.785	1.887	6.796	1.887
Married	.419	.493	.636	.481
Number of Children	.531	.986	.951	1.191
Native American	.016	.127	.016	.124
Asian	.061	.239	.063	.242
Black	.134	.341	.127	.332
Pacific Islander	.004	.062	.003	.058
White	.765	.424	.765	.424
Other Race	.052	.221	.048	.215
Insurance Variables				
Medicare	.167	.373	.045	.206
Medicaid	.189	.392	.119	.324
Employer Provided	.545	.498	.621	.485
Private Purchase	.129	.335	.104	.305
Veterans Affairs	.022	.148	.019	.138
Indian Services	.005	.069	.004	.065
Tricare	.030	.171	.024	.152
Public Insurance	.331	.470	.158	.365
Private Insurance	.665	.472	.717	.450
Any Coverage	.880	.345	.841	.366
Expansion	.592	.492	.595	.491
Education Variables				
College Graduate	.213	.410	.321	.467
At least some college	.401	.490	.563	.496
At least HS graduate	.680	.466	.901	.299

Note: All variables from ACS Data, except State Unemployment Rate (BLS LAUS), and Expansion (KFF) For the all ages group, the number of observations is 18,779,946 for all variables except unemployed (15,280,139), veteran (15,035,737), and income (15,520,873). For the 27-64 age group, the number of observations is 9,307,611. All variables are dummies except age, income, state unemployment rate, and number of children. Observations weighted by ACS household weights.

Table 5: Descriptive Statistics by Time Period (Pre vs. Post)

	Pre-ACA		**Post-ACA**	
VARIABLES	Mean	Standard Deviation	Mean	Standard Deviation
Demographic Variables				
U.S. Citizen	.905	.293	.903	.296
Foreign Born	.186	.389	.196	.397
Hispanic	.149	.356	.158	.365
Age	45.473	20.734	45.545	10.878
Unemployed	.056	.229	.037	.189
Disabled	.001	.034	.001	.034
Student	.053	.224	.048	.213
Veteran	.070	.255	.058	.233
Female	.513	.500	.513	.500
Individual Income	43,041.45	55,459.61	46,844.71	61,997.54
State Unemployment Rate	8.149	1.589	5.456	.988
Married	.641	.480	.632	.482
Number of Children	.955	1.192	.947	1.190
Native American	.015	.123	.016	.125
Asian	.060	.237	.065	.247
Black	.126	.332	.128	.334
Pacific Islander	.003	.057	.004	.060
White	.770	.421	.760	.427
Other Race	.047	.211	.050	.218
Insurance Variables				
Medicare	.043	.204	.046	.209
Medicaid	.102	.304	.135	.341
Employer Provided	.619	.486	.623	.485
Private Purchase	.093	.291	.114	.318
Veterans Affairs	.020	.139	.019	.137
Indian Services	.004	.064	.004	.065
Tricare	.024	.153	.024	.152
Public Insurance	.142	.349	.174	.379
Private Insurance	.703	.457	.732	.442
Any Coverage	.811	.391	.870	.337
Expansion	.596	.491	.594	.491
Education Variables				
College Graduate	.313	.464	.328	.469
At least some college	.557	.497	.568	.495
At least HS graduate	.899	.302	.903	.297

Note: See note on Table 4. In Pre-ACA period, the number of observations for all variables is 4,656,123. In Post-ACA period, the number of observations for all variables is 4,651,488. Observations weighted by ACS household weights.

Table 6: Full Difference-in-Difference and Difference-in-Difference-in-Differences Estimates

VARIABLES	(1) Any Health Insurance Coverage	(2) Any Health Insurance Coverage
Post-ACA (2014)	-0.00263**	0.00130
	(0.00128)	(0.00133)
Expansion	0.0120***	-0.0359***
	(0.00229)	(0.00236)
Not College Grad	-0.105***	-0.137***
	(0.000424)	(0.000692)
Post*Expansion		-0.00256***
		(0.000776)
Post*Not College Grad	0.0436***	0.0345***
	(0.000533)	(0.000904)
Expansion * Not College Grad		0.0571***
		(0.000848)
Post * Expansion * Not College Grad		0.0154***
		(0.00112)
US Citizen	0.203***	0.204***
	(0.000843)	(0.000853)
Foreign Born	-0.0441***	-0.0444***
	(0.000604)	(0.000608)
Hispanic	-0.0753***	-0.0754***
	(0.000638)	(0.000645)
Age	0.00218***	0.00216***
	(1.49e-05)	(1.54e-05)
Unemployed	-0.196***	-0.197***
	(0.000941)	(0.000955)
Disabled	0.0626***	0.0624***
	(0.00455)	(0.00457)
Student	0.0258***	0.0241***
	(0.000694)	(0.000713)
Veteran	0.0745***	0.0731***
	(0.000504)	(0.000505)
Female	0.0506***	0.0500***

	(0.000312)	(0.000314)
Income	5.92e-07***	5.91e-07***
	(2.20e-09)	(2.19e-09)
Unemployment Rate	-0.0102***	-0.00935***
	(0.000286)	(0.000294)
Married	0.0851***	0.0851***
	(0.000350)	(0.000353)
Number of Children	0.00541***	0.00527***
	(0.000145)	(0.000147)
Native American	-0.0521***	-0.0524***
	(0.00142)	(0.00144)
Asian	0.0677***	0.0692***
	(0.00124)	(0.00125)
Black	0.0130***	0.0143***
	(0.00122)	(0.00124)
Pacific Islander	0.0169***	0.0155***
	(0.00265)	(0.00266)
White	0.0219***	0.0223***
	(0.00117)	(0.00119)
Other Race	0.00420***	0.00234
	(0.00145)	(0.00147)
Constant	0.560***	0.581***
	(0.00340)	(0.00346)
R-squared	0.169	0.170
Model	DD	DDD

Note: Column 1 shows a Difference-in-Differences regression with a dummy variable for any health insurance coverage as the dependent variable, and the variable of interest as Post* Not College Grad. Column 2 shows a Difference-in-Difference-in-Differences regression with a dummy variable for any health insurance coverage as the dependent variable, and the variable of interest being Post * Expansion * Not College Grad. Each coefficient * 100 signifies a percentage point increase. All variables are dummy variables with the exception of age, income, unemployment rate, and the number of children. The model also includes state and year fixed effects. All regressions are weighted by ACS household weights. The DD regression has n=9,307,611. The DDD regression has n=9,091,824. The age range for both models is restricted to ages 27 to 64, and the years of data span from 2011to 2016. For information on data, see tables 4 and 5. Robust standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Simplified Difference-in-Differences Model

VARIABLES	(1) Any Health Insurance Coverage	(2) Any Health Insurance Coverage
Medicaid Expansion State	0.00523***	0.0120***
	(0.00168)	(0.00229)
Post* Not College Grad	0.0366***	0.0436***
	(0.000409)	(0.000533)
Constant	0.542***	0.560***
	(0.00257)	(0.00340)
Observations	15,035,737	9,307,611
R-squared	0.167	0.169
Ages	All	27 to 64
Mean Coverage Rate	.880	.841

Note: Both regressions show a difference-in-differences model estimated using equation 1.1. See the full output for column 2 on Table 6, as well as the note on Table 6. Table 6 also references the variables included in the regression in column one, just with the inclusion of all ages. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 8: Simplified Difference-in-Difference-in-Differences Estimates

VARIABLES	(1) Any Health Insurance Coverage	(2) Any Health Insurance Coverage	(3) Any Health Insurance Coverage	(4) Any Health Insurance Coverage	(5) Any Health Insurance Coverage	(6) Any Health Insurance Coverage
Post * Expansion * Not College Grad	0.0108***	0.0154***	0.0155***	0.0154***	0.000443	0.0105***
	(0.000854)	(0.00112)	(0.00112)	(0.00112)	(0.000543)	(0.00321)
Constant	0.561***	0.524***	0.581***	0.581***	0.830***	1.104***
	(0.00259)	(0.00208)	(0.00267)	(0.00346)	(0.00244)	(0.00827)
R-squared	0.168	0.165	0.169	0.170	0.081	0.154
Year FE	Yes	Yes	No	Yes	Yes	Yes
State FE	Yes	No	Yes	Yes	Yes	Yes
Ages	All	27 to 64	27 to 64	27 to 64	65+	0 to 26
Mean Coverage Rate	.880	.841	.841	.841	.992	.889

Note: Each column represents a regression utilizing a difference-in-difference-in-differences regression where the dependent variable is a dummy variable for having any health insurance coverage. The reported variable is the DDD estimator. All demographic and economic variables are controlled for. Observations are weighted by ACS household weights. Coefficients show the effect size of the individual mandate and potentially other insurance-related changes as it accounts for the change in health insurance coverage rates for an observation in the Post-ACA implementation period (after January 1, 2014), who is located in a state that expanded Medicaid and does not hold a college degree. Robust standard errors are reported in parentheses. For column one (all observations), n=15,035,737. For columns 2-4 (ages 27 to 64), n=9,091,824. For column 5 (ages 65+), n=3,355,345. For column 6 (ages 0-26), n=2,472,781. *** p<0.01, ** p<0.05, * p<0.1

Table 9: Public vs. Private Insurance Coverage Estimates

VARIABLES	(1) Public Insurance	(2) Private Insurance	(3) Public Insurance	(4) Private Insurance
Post * Expansion * Not College Grad	0.0208*** (0.000984)	-0.00994*** (0.00111)	0.0294*** (0.00103)	-0.0123*** (0.00129)
Constant	-0.331*** (0.00287)	0.602*** (0.00324)	0.0741*** (0.00333)	0.491*** (0.00394)
Observations	15,035,737	15,035,737	9,307,611	9,307,611
R-squared	0.342	0.184	0.121	0.238
Ages	All	All	27 to 64	27 to 64
Mean Coverage Rate	.331	.665	.158	.717

Note: Each column shows a regression using a dummy variable for insurance type (public or private) as the defendant variable regressed using the DDD model in equation 1.3 and the variables included in column 2 of table 6. All regressions in the table include state and year fixed effects. Interpretation is that not being a college graduate under the impact of the individual mandate in a Medicaid expansion state changes the rate of insurance by (estimated coefficient * 100) percentage points. Mean coverage rate looks over the entire time period (2011-2016), not just pre-ACA. All observations weighted by ACS household weights. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table 10: Health Insurance Coverage Change by Type of Insurance

VARIABLE	(1) Direct Purchase	(2) Employer Provided Insurance	(3) TRICARE Insurance	(4) Medicare	(5) Medicaid	(6) Veterans Affairs Insurance	(7) Indian Health
Post* Expansion * Not College Grad	-0.00564*** (0.00112)	-0.00876*** (0.00154)	0.000672 (0.000585)	0.000861 (0.000586)	0.0290*** (0.000884)	0.000818* (0.000424)	0.000126 (0.000177)
Constant	0.0491*** (0.00286)	0.458*** (0.00433)	0.00578*** (0.00155)	-0.0512*** (0.00188)	0.118*** (0.00298)	-0.0109*** (0.00120)	0.0723*** (0.000916)
R-squared	0.017	0.185	0.071	0.055	0.107	0.230	0.239
Mean Coverage Rate	.103	.621	.024	.045	.119	.019	.004

Note: Each column represents a DDD regression with a dummy variable for each type of insurance coverage as the dependent variable. The reported variable is the DDD estimator. All demographic and economic variables are controlled for. Includes state and year fixed effects. Observations were restricted to ages 27-64 and are weighted by ACS household weights. Coefficients show the effect size of the individual mandate and potentially other insurance-related changes as it accounts for the change in health insurance coverage rates for an observation in the Post-ACA implementation period (after January 1, 2014), who is located in a state that expanded Medicaid and does not hold a college degree. Mean coverage rates are reported over the entire time period (2011-2016). N=9,307,611. Robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 11: Health Insurance by Race

VARIABLES	(1) Any Insurance Coverage	(2) Any Insurance Coverage	(3) Any Insurance Coverage	(4) Any Insurance Coverage	(5) Any Insurance Coverage	(6) Any Insurance Coverage
Post * Expansion * Not College Graduate	0.0357***	-0.0101*	0.00653*	0.0725***	0.0134***	0.0206*
	(0.0119)	(0.00602)	(0.00386)	(0.0275)	(0.00119)	(0.0112)
Constant	0.365***	0.859***	0.526***	0.714***	0.563***	0.413***
	(0.0273)	(0.0153)	(0.0106)	(0.0763)	(0.00363)	(0.0251)
Observations	176,836	552,964	1,040,213	31,665	7,338,361	368,276
R-squared	0.144	0.110	0.130	0.128	0.169	0.226
Race	Native American	Asian	Black	Pacific Islander	White	Other race

Note: See note on Table 8. This represents the same type of regression, just repeated with observations restricted to each race throughout. Includes state and year fixed effects, age rage restricted to 27-64. Robust standard errors in parentheses. Interpretation of coefficients is the same. *** p<0.01, ** p<0.05, * p<0.1

Table 12: Health Insurance by Education Levels

VARIABLES	(1) Any Health Insurance Coverage	(2) Any Health Insurance Coverage	(3) Any Health Insurance Coverage
Post * Expansion * Not College Graduate	0.0154***		
	(0.00112)		
Post * Expansion * Never Attended College		0.0204***	
		(0.00127)	
Post * Expansion * Not High School Graduate			0.0370***
			(0.00262)
Constant	0.581***	0.552***	0.510***
	(0.00346)	(0.00346)	(0.00346)
Observations	9,091,824	9,091,824	9,091,824
R-squared	0.170	0.172	0.169

Note: See note on Table 8. This constitutes the same type of regression, simply using different educational cutoffs. Column 1 is exactly the same as column 4 of table 8, using a college degree as a cutoff. Column 2 uses college attendance as a cutoff. Column 3 uses high school graduation as a cutoff. Each model includes state and year fixed effects. Observations are weighted by ACS household weight and are restricted to ages 27-64. N=9,091,824. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

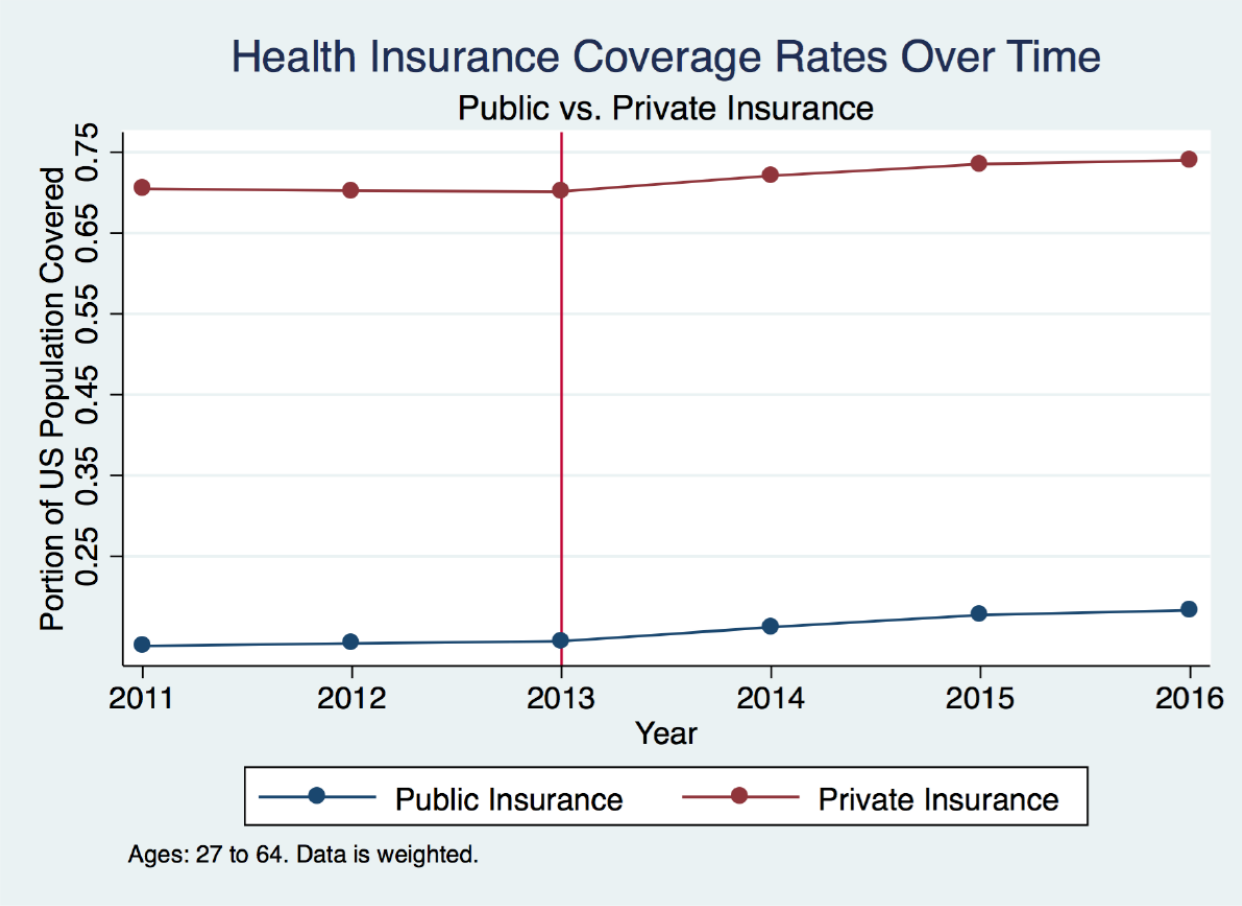
Table 13: Unweighted Difference-in-Difference and Difference-in-Difference-in-Differences Estimates

VARIABLES	(1) Any Health Insurance Coverage	(2) Any Health Insurance Coverage
Post-ACA (2014)	-0.00419***	-0.000840
	(0.000940)	(0.000975)
Expansion	0.0112***	-0.0346***
	(0.00167)	(0.00173)
Not College Grad	-0.101***	-0.133***
	(0.000311)	(0.000505)
Post*Expansion		-0.00247***
		(0.000565)
Post*Not College Grad	0.0434***	0.0354***
	(0.000391)	(0.000661)
Expansion * Not College Grad		0.0557***
		(0.000620)
Post * Expansion * Not College Grad		0.0138***
		(0.000819)
US Citizen	0.189***	0.189***
	(0.000655)	(0.000662)
Foreign Born	-0.0359***	-0.0361***
	(0.000452)	(0.000454)
Hispanic	-0.0715***	-0.0717***
	(0.000486)	(0.000491)
Age	0.00229***	0.00227***
	(1.12e-05)	(1.16e-05)
Unemployed	-0.191***	-0.191***
	(0.000720)	(0.000730)
Disabled	0.0825***	0.0818***
	(0.00315)	(0.00317)
Student	0.0219***	0.0202***
	(0.000531)	(0.000545)
Veteran	0.0730***	0.0717***
	(0.000374)	(0.000375)

Female	0.0514***	0.0507***
	(0.000230)	(0.000232)
Income	5.70e-07***	5.68e-07***
	(1.69e-09)	(1.68e-09)
Unemployment Rate	-0.0102***	-0.00939***
	(0.000211)	(0.000216)
Married	0.0845***	0.0845***
	(0.000261)	(0.000263)
Number of Children	0.00605***	0.00593***
	(0.000108)	(0.000110)
Native American	-0.0647***	-0.0654***
	(0.00107)	(0.00108)
Asian	0.0656***	0.0675***
	(0.000953)	(0.000965)
Black	0.00819***	0.0103***
	(0.000945)	(0.000957)
Pacific Islander	0.0151***	0.0131***
	(0.00198)	(0.00200)
White	0.0309***	0.0315***
	(0.000907)	(0.000919)
Other Race	0.00956***	0.00825***
	(0.00114)	(0.00115)
Constant	0.565***	0.585***
	(0.00252)	(0.00256)
R-squared	0.157	0.158
Model	DD	DDD

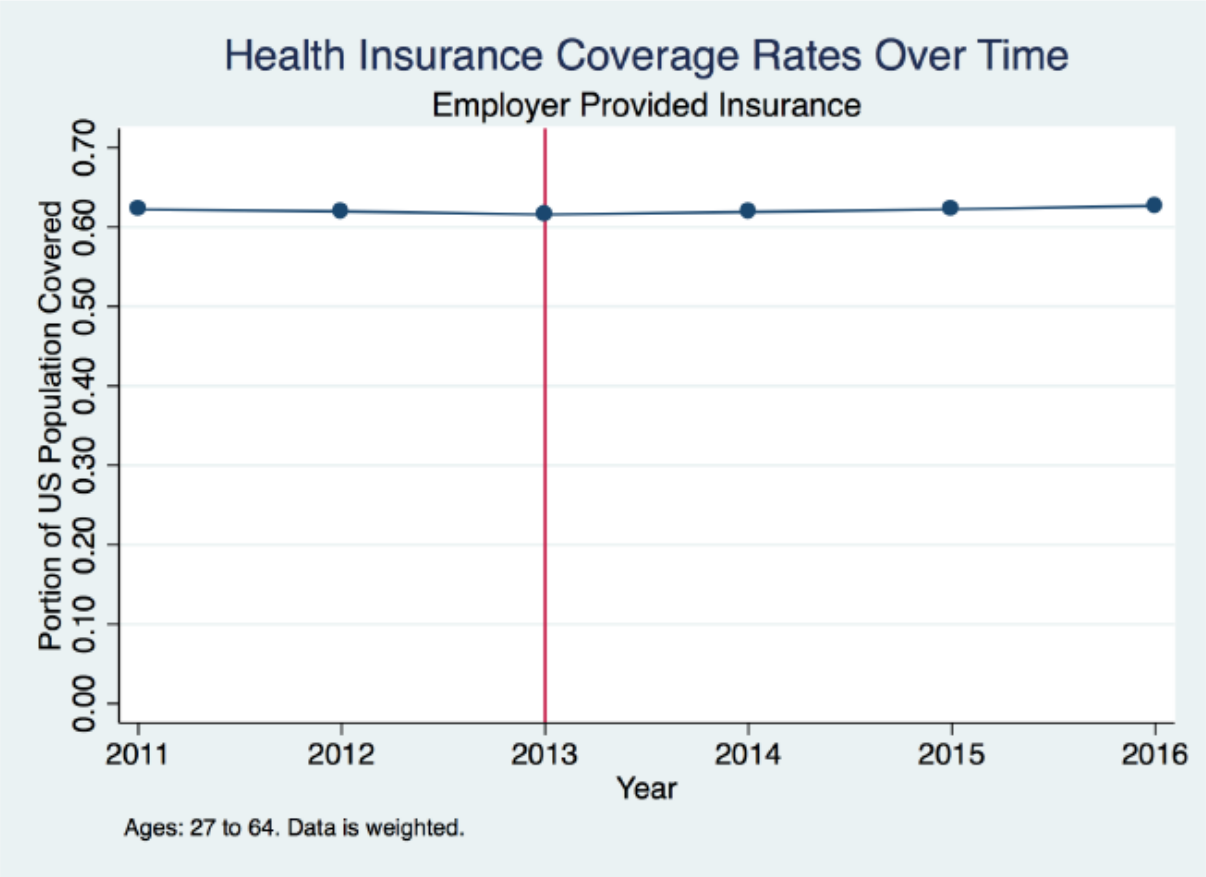
Note: Column 1 shows a Difference-in-Differences regression with a dummy variable for any health insurance coverage as the dependent variable, and the variable of interest as Post* Not College Grad. Column 2 shows a Difference-in-Difference-in-Differences regression with a dummy variable for any health insurance coverage as the dependent variable, and the variable of interest being Post * Expansion * Not College Grad. Each coefficient * 100 signifies a percentage point increase. All variables are dummy variables with the exception of age, income, unemployment rate, and the number of children. The model also includes state and year fixed effects. The regressions are left unweighted. The DD regression has n=9,307,611. The DDD regression has n=9,091,824. The age range for both models is restricted to ages 27 to 64, and the years of data span from 2011to 2016. For information on data, see Tables 4 and 5. Robust standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

Figure 2: Public vs. Private Health Insurance Coverage Rates



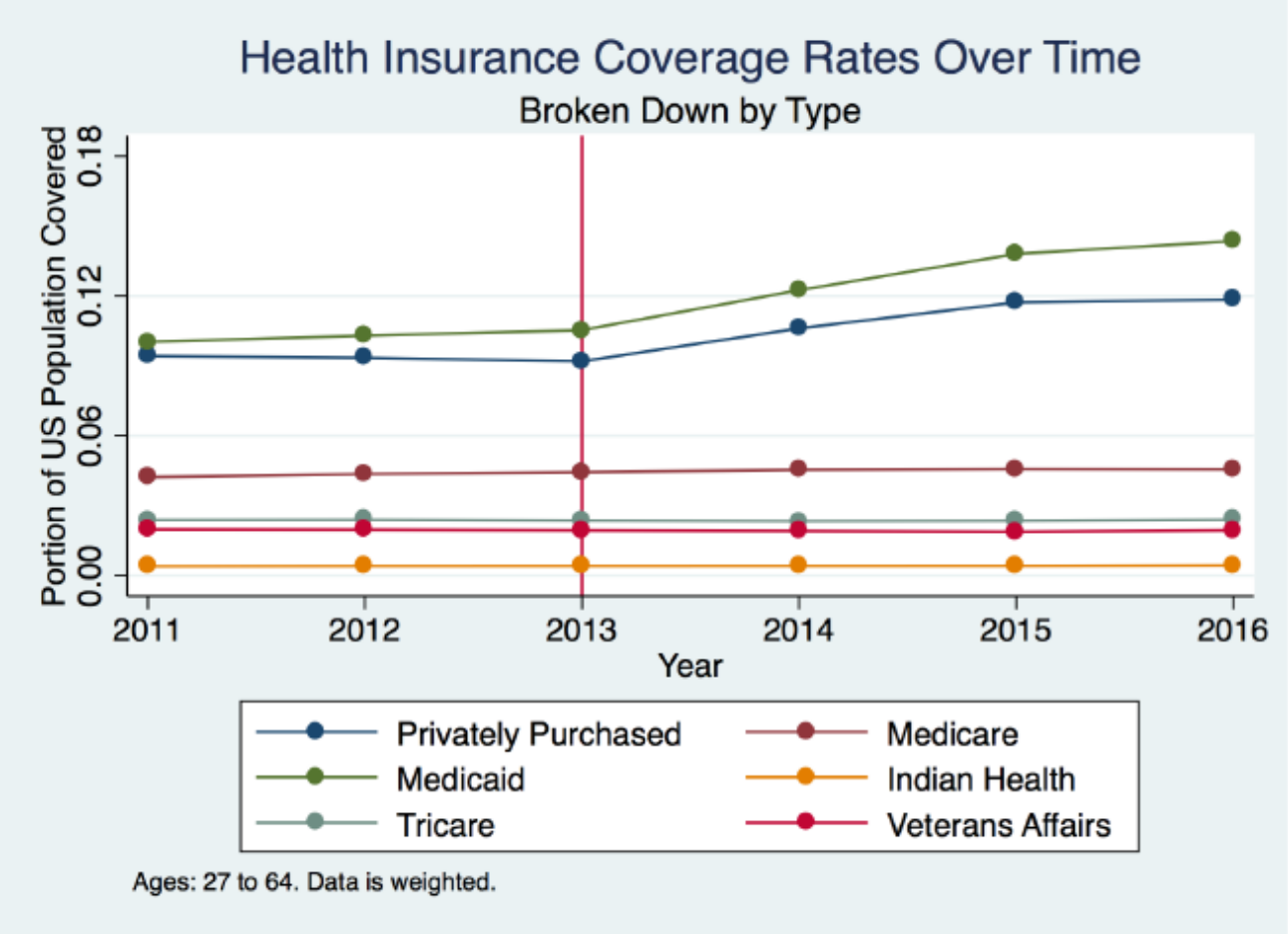
Note: Figure shows health insurance coverage rates over time for both public and private health insurance. Observations restricted to ages 27-64 and weighted by ACS household weights. The line at 2013 to represent that insurance was required beginning Jan 1, 2014.

Figure 3: Health Insurance Coverage Rates for Employer Provided Insurance



Note: Figure shows health insurance coverage rates over time for insurance provided by an employer. Observations restricted to ages 27-64 and weighted by ACS household weights. The line at 2013 to represent that insurance was required beginning Jan 1, 2014.

Figure 4: Health Insurance Rates by Type of Insurance



Note: Figure shows health insurance coverage rates over time for types of insurance (privately purchased (not from employer), Medicare, Medicaid, TRICARE, Veterans Affairs, and Indian Health Services). Observations restricted to ages 27-64 and weighted by ACS household weights. The line at 2013 to represent that insurance was required beginning Jan 1, 2014.