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ABSTRACT

Prior to the Affordable Care Act, many state Medicaid eligibility rules had maximum asset levels. This was a problem when one member of a couple was diagnosed with a degenerative disease requiring expensive care. Draining the couple's assets so that the sick individual could qualify for Medicaid would leave no resources for the retirement of the other member; thus divorce and separating assets was often the only option. The ACA's Medicaid expansion removed all asset tests. Using a difference-in-differences approach on states that did and did not expand Medicaid, we find that the expansion decreased the prevalence of divorce by 5.6% among those 50-64, strongly suggesting that it reduced medical divorce.

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Introduction

During the debate over the Affordable Care Act, the New York Time's Nicholas Kristof opened a column with the headline, "Until Medical Bills Do Us Part." He told the story of a friend whose husband was diagnosed with early-onset dementia. She faced the prospect of his care draining their entire retirement savings and then winding up a destitute but healthy widow with many years ahead. Given this, she considered legally divorcing her husband to shield her assets. He would eventually be poor enough to qualify for Medicaid, and she would be able to provide her herself in retirement.[1]

The 2010 Affordable Care Act's Medicaid expansion ostensibly fixed the underlying problem, as it expanded Medicaid to cover all adults under 65 with incomes up to 138% of the poverty line, regardless of assets (Sung, Skopec, and Waidmann 2015). Therefore, as long as the sick spouse had a low income, the healthy spouse could keep his or her retirement assets intact. However, this fix would only take effect if the couple's state implemented the Medicaid expansion, which the Supreme Court's made optional in National Federation of Independent Business v. Sebelius. Those in non-expansion states would still have incentive to divorce for medical reasons. One couple in Tennessee (a non-expansion state), even used their situation to lobby their governor to expand Medicaid.[2]

This paper will use the partial Medicaid expansion as plausibly exogenous variation in access to public health insurance that does not require asset drawdown. It will then compare the changes in prevalence of divorce in states that expanded to Medicaid to states that did not expand, before and after implementation.

[1] Kristof, Nicholas. "Until Medical Bills Do Us Part," *The New York Times,* Aug 29, 2009.

[2] Wilemon, Tom. "Couple married 33 years separate so wife can keep insurance," *The Tennessean*, Jul 5, 2014.

Many recent papers use this strategy to examine the Medicaid expansion's impact on health outcomes (e.g., Wherry and Miller 2016, Na and Slusky 2016) and other outcomes, such as labor, disability, and financial status (Kaestner et al. 2015; Leung and Mas 2016; Gooptu et al. 2016, Moriya et al. 2016, Hu et al. 2016, Chatterji and Li 2016). Others look at the impact of divorce on health insurance (e.g., Lavelle and Smock 2012). No literature has examined the impact of coverage expansions on medical divorce.

Data and methods

This paper's primary data is the Current Population Survey's Merged Outgoing Rotation Group for 2000-2015, a consistently estimated survey over the past several decades with a large sample size. [3] Data on Medicaid expansion status comes from Kaestner et al. (2015) and the Kaiser Family Foundation.[4] Finally, monthly state unemployment rates come from the Bureau of Labor Statistics' Local Area Unemployment estimates.[5] We limit the sample to those 50-64 since they likely have been married for a number of years, have substantial assets, are at greater risk of a degenerative medical condition, and are eligible for the Medicaid expansion.

The empirical method is a straightforward state-month-year difference-in-differences estimation:

$$y_{smy} = \alpha + \gamma Treated_s + \delta Implemented_{my} + \sigma(Treated_s * Implemented_{my}) + \mathbf{state}_s + \mathbf{year}_y + \mathbf{month}_m + \beta UR_{smy} + \varepsilon_{smy}$$

[3] http://www.nber.org/morg/annual/

[4] http://kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act

[5] https://www.bls.gov/lau/

y is the prevalence of divorce (i.e., the weighted averaged of a dummy for whether an individual 50-64 was divorced) for state *s* in month *m* and year *y*.

Treated equals 1 if a state expanded Medicaid in 2014 and 0 if it did not. However, given the anticipatory nature of medical divorce, we drop a handful of states from our sample: those that had a prior full expansion of Medicaid and those that expanded Medicaid but after the original launch in January 2014. [6] This leaves us with 40 states:

- Original expansion states without a full prior expansion: AZ, AR, CA, CO, CT, HI, IL, IA, KY, MD, MN, NV, NJ,NM ,ND OH, OR, RI, WA, WV
- Non expansion states: AL, FL, GA, ,ID, KS, LA, ME, MS, MO, NE, NC, OK, SC, SD, TN, TX, UT, VA, WI, WY

The coefficient on *Treated *Implemented* (σ) is our primary difference-in-differences estimate.

Other specifications include additional controls, including **state**, **year**, and **month** fixed effects and the state-month-year level unemployment rate. Robust standard errors are clustered at the state level.

Given that medical divorce often happens in anticipation, we do not restrict the sample by income (as individuals may still have reasonable earnings) nor education (as Kaestner et al. 2015 and Slusky and Na 2016 do) as this particular issue affects a wider section of the population.

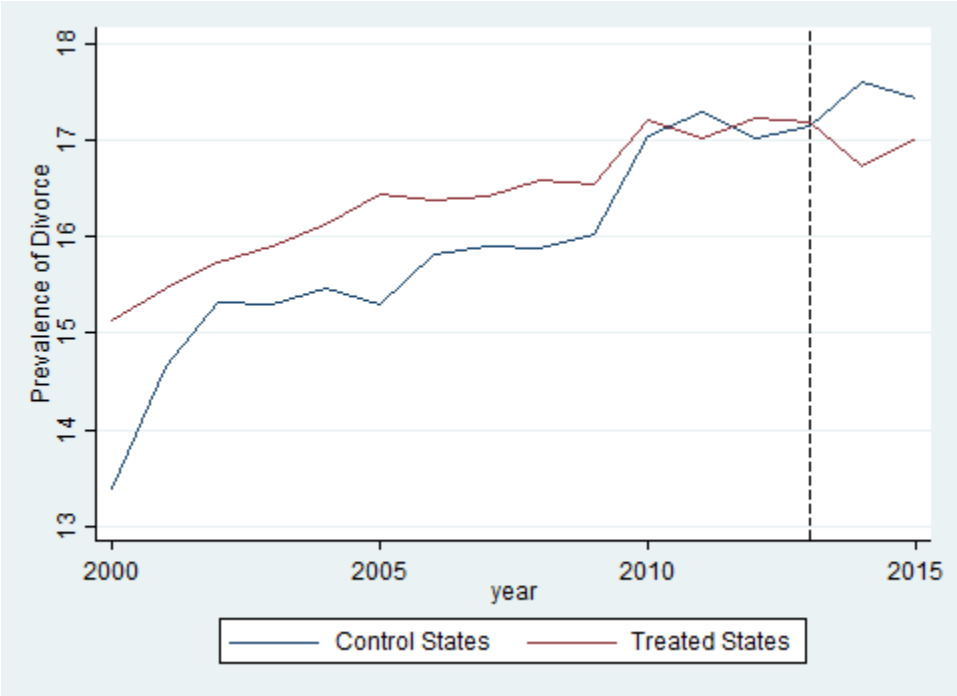
Finally, we drop the years 2012 and 2013 from our analysis, as it is ambiguous whether these years are treated or not. Individuals knew about the partial Medicaid expansion and whether their states would or would not expand, but it had not yet been implemented.

[6] Full prior expansion: DE, DC, MA, NY, and VT. Late expanders: AK, IN, MI, MT, NH, and PA.

Results

We first look at how the annual average prevalence of divorce for the treated and control states has changed over time.

Figure 1: Prevalence of Divorce



Notes: We calculated weighted average divorce rate for 50-64 each state in each month/year, and then unweighted average for treated and control states in each year. The vertical dashed line is at 2013, the last pre-expansion year.

Figure 1 shows that until 2011 the prevalence of divorce followed roughly parallel trends for the control states and treatment states, with both seeing an increase between two to four percentage points. The 2012-2013 period shows a lot of volatility. Finally, 2014-2015 (after the dashed line at 2013) shows the two lines diverging, with an increase in the prevalence of divorce for the control states but no increase for the treated ones.

Table 1 then shows the raw difference-in-difference estimates for our outcome of interest as well as the unemployment rate (UR) and the average age.

Table 1: Means for Control and Treated States Before and After Medicaid Expansion

		2008-2011	2014-2015	Difference in Divorce Rates Over Time
Control states	Age	56.49	56.73	
	Unemployment Rate	7.44	5.16	
	Prevalence of Divorce	16.55	17.52	0.97
Treated States	Age	56.47	56.73	
	Unemployment Rate	8	5.66	
	Prevalence of Divorce	16.84	16.87	0.03
	Difference in Divorce Rates Across Groups	0.29	-0.65	Difference-in-Differences: -0.94

Notes: Calculated weighted average divorce rate for 50-64 each state in each month/year, then unweighted average for treated and control states pre (2008-2011) and post (2014-2015).

Both sets of states saw a similar slight increase in the average age and sharp decrease in the unemployment rate. The prevalence of divorce, however, substantially increased in the control states, with no corresponding increase in the treated states, yielding a difference-in-differences estimate of -0.94 percentage points. Table 2 shows a regression version of the same estimate.

Table 2: Regression Results

	(1)	(2)	(3)	(4)	(5)
Treated*Implemented	-0.933**	-0.933**	-0.933**	-0.933**	-0.939**
	(0.363)	(0.365)	(0.366)	(0.366)	(0.368)
Treated State Control	X				
Year >= 2014 Control	X	X			
State Fixed Effects		X	X	X	X
Year Fixed Effects			X	X	X
Month Fixed Effects				X	X
Unemployment Controls					X
Observations	2,880	2,880	2,880	2,880	2,880
States	40	40	40	40	40
R-squared	0.005	0.174	0.180	0.191	0.191

Note: Weighted average divorce rate for 50-64 each state in each month/year, 2008-2011 and 2014-2015. Robust standard errors in parenthesis clustered at state level. *** p<0.01, ** p<0.05, * p<0.1.

The estimate found above is extremely robust across difference specifications, including adding state, year, and month fixed effects, and also controlling for the unemployment rate. The p-value for the coefficient in column (5) is 0.015.

Robustness Checks

While Figure 1 suggests that the prevalence of divorce followed parallel trends until the passage of the ACA, we will run placebo regression following Slusky (2015) to check this assumption. This test uses the same grouping of states as above but compares them using different years of data before and after a "placebo" Medicaid expansion. For example, instead of

comparing 2013-2014 to 2008-2011, compare 2010-2011 to 2004-2007. Table 3 shows the results of these regressions.

Table 3: Placebo Regression on Prevalence of Divorce

	(1)	(2)	(3)	(4)	(5)	(6)
Control Years	2008-2011	2004-2007	2003-2006	2002-2005	2001-2004	2000-2003
Treated Years	2014-2015	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Treated*	-0.933**	-0.770	-0.403	-0.088	0.004	-0.346
Implemented	(0.366)	(0.484)	(0.479)	(0.482)	(0.431)	(0.486)
Observations	2,880	2,880	2,880	2,880	2,880	2,880
States	40	40	40	40	40	40
R-squared	0.191	0.189	0.191	0.178	0.178	0.182

Note: Weighted average divorce rate for 50-64 each state in each month/year. All regressions include state, year, and month fixed effects. Robust standard errors in parenthesis clustered at state level. *** p<0.01, ** p<0.05, * p<0.1.

Column (1) has the main result as show from column (4) of Table 2. Columns (2)-(6) then compare the prevalence of divorce for earlier in time sets of 3 control years, 2 dropped years ambiguous years, and 2 treated years. None of the other coefficients are statistically significant at even the 10% level nor are the point estimates larger in magnitude than our result.

Conclusion

The ACA's Medicaid expansion reduced the prevalence of divorce among those ages 50-64 by 0.9 pp, which is 5.6% decrease on the pre-expansion mean for the treated states. This suggests that Medicaid without asset limits for low-income individuals significantly reduced the incidence of divorce, strongly suggesting that medical divorce was reduced in the first year of the Affordable Care Act.

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