

**Online Supplement****A. Summary Statistics by State Expansion Status, Pre- and Post-Expansion**

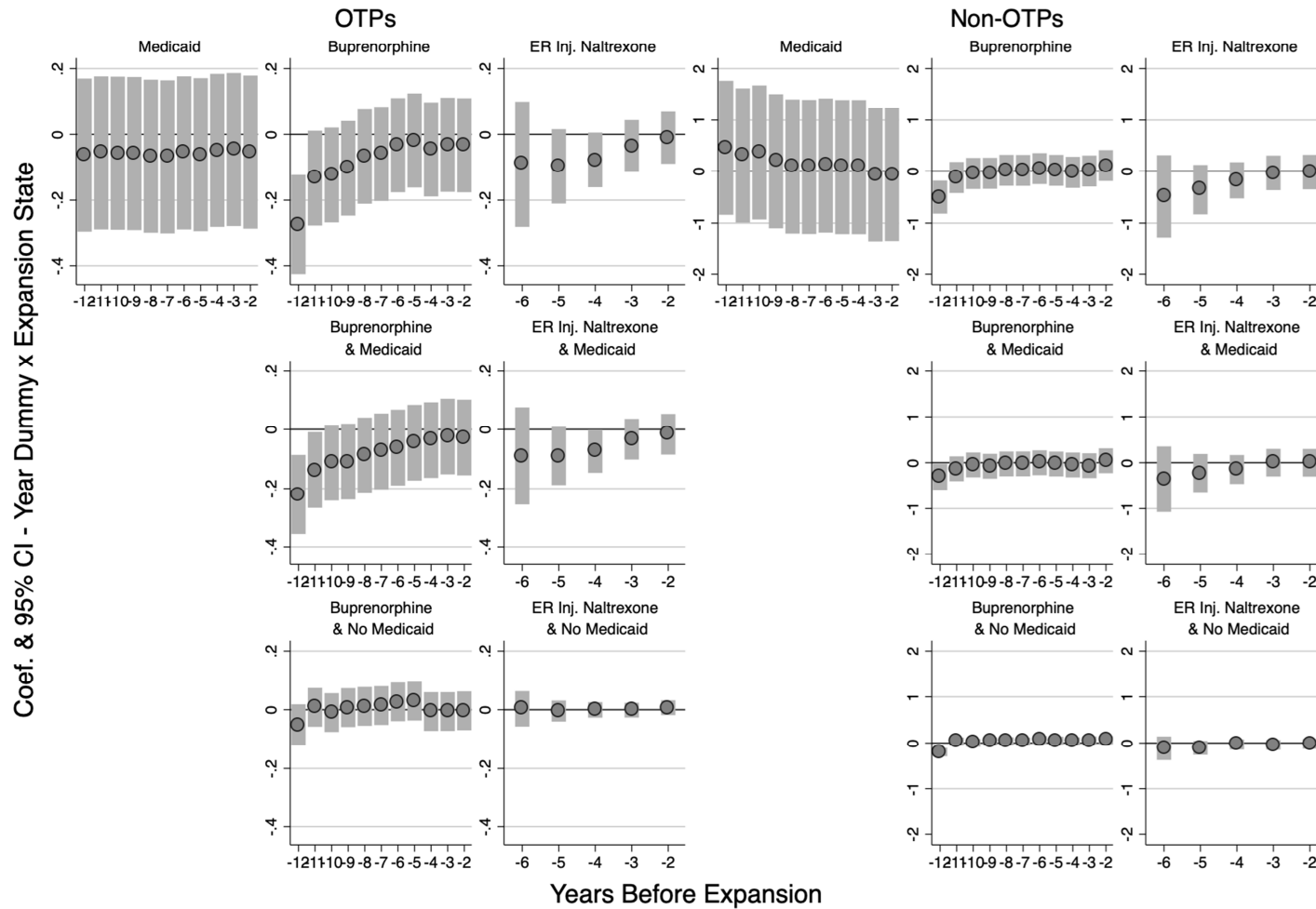
	<u>Non-Expansion States</u>				<u>Expansion States</u>			
	<u>Pre-2014</u>		<u>2014-2017</u>		<u>Pre-Expansion</u>		<u>Post-Expansion</u>	
	N=204		N=68		N=408		N=136	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Dependent Variables:</b>								
<i>Treatment Programs per 100,000 State Pop.</i>								
<i>Accepting Medicaid:</i>								
OTP	0.07	0.08	0.10	0.11	0.33	0.33	0.42	0.41
Non-OTP	2.75	1.74	3.29	2.06	3.03	2.07	3.50	2.17
<i>Offering Buprenorphine:</i>								
OTP	0.10	0.10	0.16	0.13	0.21	0.21	0.35	0.31
Non-OTP	0.42	0.41	0.82	0.59	0.62	0.52	1.09	0.61
<i>Offering ER Inj. Naltrexone:</i>								
OTP	0.03	0.04	0.05	0.05	0.09	0.11	0.17	0.21
Non-OTP	0.54	0.50	0.84	0.78	0.52	0.36	0.90	0.50
<i>Nonprofit:</i>								
OTP	0.03	0.04	0.03	0.04	0.19	0.22	0.21	0.26
Non-OTP	2.43	1.45	2.27	1.40	3.23	1.50	3.16	1.81
<i>For-profit:</i>								
OTP	0.15	0.11	0.22	0.14	0.22	0.19	0.29	0.21
Non-OTP	1.16	0.80	1.51	1.36	1.24	1.24	1.51	1.46
<i>Public:</i>								
OTP	0.01	0.02	0.01	0.02	0.05	0.11	0.04	0.04
Non-OTP	0.89	0.60	0.85	0.67	0.70	0.71	0.61	0.67
<b>Independent Variables:</b>								
Expanded Medicaid	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.34
Optional PDMP	0.31	0.45	0.90	0.31	0.35	0.47	0.96	0.18
Mandatory PDMP	0.00	0.05	0.11	0.30	0.01	0.09	0.21	0.38
Pain Clinic Law	0.04	0.18	0.31	0.46	0.02	0.15	0.08	0.28
Med. Inc. (in 10,000 2017\$)	5.24	0.52	5.33	0.58	5.97	0.95	6.12	1.04
Poverty Rate	14.55	3.09	14.80	2.82	12.98	3.28	13.51	3.10
Unemployment Rate	6.07	2.10	4.68	1.12	6.32	2.08	5.04	1.25
Percent Aged 19 and Younger	28.16	2.27	26.76	2.29	26.50	1.75	24.70	1.54
Percent Aged 20-34	20.57	1.29	20.58	0.90	20.24	2.06	20.83	2.30
Percent Aged 35-49	20.57	1.52	18.52	0.81	21.36	1.65	18.73	0.85
Percent Aged 50-64	17.85	1.81	19.18	1.45	18.74	1.78	20.18	1.46
Percent Aged 65 and Older	12.84	1.87	14.96	1.97	13.16	1.75	15.55	1.82
Percent NH White	72.81	11.90	69.89	12.23	71.35	17.76	68.26	17.64
Percent NH Black	13.16	11.23	13.42	11.31	9.79	10.84	9.95	10.03
Percent Hispanic	9.06	8.21	10.77	8.78	10.33	10.19	12.08	10.74
Percent NH Asian	1.72	0.79	2.23	0.99	4.42	6.49	5.14	6.22
Percent NH Other Race	3.25	3.13	3.69	3.24	4.12	5.61	4.57	5.70

*Source: Authors' analysis of all substance use disorder treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. Data are aggregated to the state-year level.*

*Notes: OTP = Opioid Treatment Program; Pop. = Population; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic.*

*States that ever expand Medicaid during the study period appear in the Expansion States category in all years. Non-expansion states are Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wisconsin, and Wyoming. Expansion states are Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and West Virginia.*

## B: Event Study Results



Source: Authors' analyses of all substance use disorder treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017.

Notes: Regression coefficients and 95% confidence intervals from event study models. 2013 ( $t=-1$ ) is the omitted reference category. All models regress the pre-Medicaid expansion outcome measures on interactions between treatment status (i.e., expansion vs. non-expansion state) and dichotomous indicator variables representing the number of years pre-Medicaid expansion. (Years pre-expansion is set in relation to 2014 for non-expansion states). All event study models use the regress command in Stata 15.

OTP = Opioid Treatment Program; ER Inj. Naltrexone = extended-release injectable naltrexone

### C. Full OLS Regression Results Estimating the Effect of Medicaid Expansion on the Number of OTPs and Non-OTPs in a State per 10,000 Population

#### Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of OTPs in a State per 100,000 Population

	<u>Accept Medicaid</u>						<u>Do Not Accept Medicaid</u>							
	Accept Medicaid N=816		Bup. N=765		ER Inj. Naltrexone N=357		Bup. N=765		ER Inj. Naltrexone N=357		Bup. N=765		ER Inj. Naltrexone N=357	
	b	t	b	t	b	t	b	t	b	t	b	t	b	t
<b>State Policies:</b>														
Expanded Medicaid	0.07*	2.36	0.04	1.46	0.07**	3.51	0.08*	2.62	0.05*	2.49	-0.04*	-2.27	0.02	2.00
Optional PDMP	-0.02	-0.84	0.03	1.67	-0.06*	-2.41	0.00	0.06	-0.06*	-2.37	0.02	1.64	0.00	0.07
Mandatory PDMP	-0.04	-0.86	0.04	1.07	-0.03	-1.40	0.04	0.98	-0.01	-0.69	0.00	0.26	-0.02	-1.77
Pain Clinic Law	0.02	0.47	-0.03	-1.14	0.01	0.36	-0.02	-0.53	0.01	0.45	-0.01	-0.39	-0.00	-0.08
<b>State Economic Factors:</b>														
Med. Inc. (in 10,000 2017\$)	0.11	1.42	0.04	0.55	-0.12	-1.41	0.12	1.77	-0.08	-0.98	-0.08*	-2.09	-0.04	-1.36
Poverty Rate	0.01	0.51	-0.01	-0.70	-0.02	-1.41	0.00	0.32	-0.02	-1.24	-0.01	-1.30	-0.00	-0.22
Unemployment Rate	0.02*	2.28	0.00	0.84	0.03	1.93	0.01*	2.22	0.03	1.86	-0.01	-1.54	0.00	0.28
<b>Age Distribution:</b>														
Aged 19 and Younger	0.02	0.63	-0.03	-0.71	-0.01	-0.16	-0.03	-0.91	-0.01	-0.10	0.01	0.26	-0.01	-0.32
Aged 20-34	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Aged 35-49	-0.01	-0.17	-0.01	-0.42	-0.06	-0.82	-0.00	-0.07	-0.05	-0.74	-0.01	-1.41	-0.01	-0.88
Aged 50-64	0.05	1.87	-0.01	-0.24	-0.06	-0.87	0.02	0.70	-0.06	-0.74	-0.03	-1.36	-0.01	-0.34
Aged 65 and Older	0.08	1.72	0.07	1.49	0.07	1.43	0.06	1.10	0.07	1.54	0.01	0.57	-0.00	-0.10
<b>Race/Ethnicity Distribution:</b>														
NH White	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
NH Black	0.01	0.92	0.04**	3.68	-0.02	-0.85	0.02*	2.13	-0.02	-0.96	0.01*	2.38	0.00	0.13
Hispanic	-0.01	-0.33	-0.01	-0.50	0.01	0.33	-0.00	-0.04	0.01	0.17	-0.01	-1.19	0.01	0.48
NH Asian	-0.03	-0.85	0.02	0.79	0.14	1.87	0.00	0.06	0.13	1.81	0.02	1.59	-0.00	-0.25
NH Other Race	-0.10	-0.85	-0.08	-0.79	-0.41	-1.42	-0.10	-0.92	-0.45	-1.43	0.02	0.67	0.05	0.50
Constant	-2.51	-1.35	0.11	0.05	3.80	0.70	-0.64	-0.34	3.44	0.63	0.93	0.71	0.52	0.38
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
R-Squared	0.27		0.44		0.37		0.36		0.29		0.21		0.16	
Degrees of Freedom	29		28		20		28		20		28		20	

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01

**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of Nonprofit OTPs in a State per 100,000 Population**

	<b>Accept Medicaid</b>				<b>Accept Medicaid</b>				<b>Do Not Accept Medicaid</b>						
	<b>Accept Medicaid</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		
	N=816		N=765		N=357		N=765		N=357		N=765		N=357		
	b	t	b	t	b	t	b	t	b	t	b	t	b	t	
<b>State Policies:</b>															
Expanded Medicaid	0.03	1.81	0.04	1.97	0.04*	2.54	0.04*	2.02	0.04*	2.44	-0.00	-0.40	0.00	1.53	
Optional PDMP	0.00	0.47	0.01	1.65	-0.03	-1.33	0.01	1.76	-0.02	-1.23	0.00	0.21	-0.00	-1.34	
Mandatory PDMP	-0.04	-1.58	0.02	0.63	-0.02	-1.43	0.01	0.56	-0.02	-1.59	0.00	0.90	-0.00	-0.01	
Pain Clinic Law	0.01	0.55	-0.03	-1.46	-0.01	-0.49	-0.02	-1.45	-0.01	-0.53	-0.00	-1.16	0.00	0.09	
<b>State Economic Factors:</b>															
Med. Inc. (in 10,000 2017\$)	0.01	0.26	0.00	0.09	-0.08	-1.34	0.01	0.47	-0.07	-1.25	-0.01	-1.14	-0.01	-1.00	
Poverty Rate	0.00	0.73	-0.01	-0.87	-0.00	-0.22	-0.00	-0.80	-0.00	-0.43	-0.00	-0.69	0.00	1.15	
Unemployment Rate	0.00	0.37	-0.00	-0.18	0.01	1.25	0.00	0.77	0.02	1.34	-0.00*	-2.08	-0.00	-0.81	
<b>Age Distribution:</b>															
Aged 19 and Younger	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		
Aged 20-34	0.00	0.02	-0.03	-1.29	-0.04	-0.86	-0.02	-1.02	-0.04	-0.74	-0.01	-1.06	-0.00	-0.94	
Aged 35-49	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		
Aged 50-64	-0.02	-1.14	-0.02	-0.97	-0.04	-0.90	-0.02	-0.87	-0.04	-0.90	-0.00	-1.34	-0.00	-0.08	
Aged 65 and Older	-0.00	-0.06	-0.01	-0.58	-0.02	-0.42	-0.01	-0.27	-0.02	-0.37	-0.01	-0.92	-0.00	-0.51	
<b>Race/Ethnicity Distribution:</b>															
NH White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		
NH Black	0.00	0.11	0.01	1.69	-0.00	-0.21	0.01	1.16	-0.01	-0.28	0.00	1.36	0.00	0.56	
Hispanic	-0.01	-0.43	0.01	0.29	0.01	0.38	0.00	0.26	0.01	0.29	0.00	0.96	0.00	0.48	
NH Asian	-0.01	-0.78	-0.01	-0.31	0.06	1.29	-0.01	-0.28	0.06	1.22	-0.00	-1.44	0.00	0.46	
NH Other Race	-0.03	-0.49	-0.04	-0.59	-0.31	-1.50	-0.04	-0.55	-0.29	-1.40	-0.00	-0.59	-0.01	-1.11	
Constant	0.61	0.67	1.61	1.23	3.40	0.91	1.11	0.93	3.16	0.83	0.60	1.13	0.23	0.78	
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes		
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes		
R-Squared	0.11		0.20		0.29		0.21		0.27		0.054		0.053		
Degrees of Freedom	29		28		20		28		20		28		20		

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01

**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of For-Profit OTPs in a State per 100,000 Population**

	<b>Accept Medicaid</b>				<b>Accept Medicaid</b>				<b>Do Not Accept Medicaid</b>					
	<b>Accept Medicaid</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>	
	N=816		N=765		N=357		N=765		N=357		N=765		N=357	
	b	t	b	t	b	t	b	t	b	t	b	t	b	t
<b>State Policies:</b>														
Expanded Medicaid	0.04	1.41	-0.01	-0.54	0.02*	2.28	0.03	1.24	0.01	0.65	-0.04*	-2.21	0.02	1.79
Optional PDMP	-0.02	-1.62	0.01	0.76	-0.04**	-2.77	-0.01	-0.85	-0.04*	-2.58	0.02	1.65	0.00	0.44
Mandatory PDMP	-0.00	-0.02	0.02	0.75	0.00	0.06	0.02	0.84	0.01	1.34	-0.00	-0.24	-0.01	-1.61
Pain Clinic Law	0.01	0.33	-0.00	-0.07	0.02	1.30	0.01	0.31	0.02	1.28	-0.01	-0.31	-0.00	-0.16
<b>State Economic Factors:</b>														
Med. Inc. (in 10,000 2017\$)	0.10	1.48	0.06	1.17	-0.05	-1.24	0.10	1.81	-0.01	-0.40	-0.04	-1.85	-0.04	-1.24
Poverty Rate	0.00	0.25	0.00	0.38	-0.01	-1.65	0.01	0.92	-0.01	-1.47	-0.01	-0.89	-0.00	-0.66
Unemployment Rate	0.01*	2.17	0.00	0.70	0.01*	2.20	0.01	1.42	0.01	1.92	-0.00	-1.13	0.00	0.59
<b>Age Distribution:</b>														
Aged 19 and Younger	0.01	0.42	0.02	0.98	0.01	0.24	-0.00	-0.20	0.01	0.26	0.02	1.35	-0.00	-0.02
Aged 20-34	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Aged 35-49	0.01	0.70	0.01	0.64	-0.01	-0.45	0.02	1.25	-0.01	-0.22	-0.01	-1.12	-0.01	-0.71
Aged 50-64	0.05	1.92	0.01	0.71	-0.05	-1.76	0.03	1.74	-0.04	-1.35	-0.02	-1.00	-0.01	-0.39
Aged 65 and Older	0.07*	2.64	0.07**	3.57	0.04	1.48	0.05*	2.10	0.04	1.25	0.02	1.26	0.00	0.27
<b>Race/Ethnicity Distribution:</b>														
NH White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
NH Black	0.01	1.64	0.02**	3.72	-0.00	-0.42	0.02**	3.99	-0.00	-0.57	0.00	0.45	0.00	0.09
Hispanic	-0.00	-0.24	-0.02	-1.60	-0.01	-0.67	-0.01	-0.63	-0.02	-1.18	-0.01	-1.32	0.00	0.39
NH Asian	-0.01	-0.51	0.03*	2.12	0.07*	2.42	0.01	0.38	0.07*	2.30	0.02	2.00	0.00	0.04
NH Other Race	-0.07	-1.08	-0.04	-0.86	-0.13	-1.14	-0.05	-1.10	-0.18	-1.63	0.02	0.54	0.05	0.61
Constant	-2.69	-1.59	-2.31*	-2.01	1.31	0.60	-2.19	-1.68	1.08	0.46	-0.10	-0.11	0.25	0.19
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
R-Squared	0.31		0.48		0.37		0.32		0.26		0.23		0.17	
Degrees of Freedom	29		28		20		28		20		28		20	

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01

**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of Public OTPs in a State per 100,000 Population**

	<b>Accept Medicaid</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Accept Medicaid</b>				<b>Do Not Accept Medicaid</b>			
	N=816		N=765		N=357		N=765		N=357		N=765		N=357	
	b	t	b	t	b	t	b	t	b	t	b	t	b	t
<b>State Policies:</b>														
Expanded Medicaid	0.00	0.17	0.00	0.77	0.00	1.57	0.00	1.09	0.00	1.48	-0.00	-0.02	0.00	1.13
Optional PDMP	0.00	1.55	0.00	0.58	0.00	0.01	0.00	0.17	0.00	0.03	-0.00	-0.01	-0.00	-0.46
Mandatory PDMP	0.00	0.20	0.01	1.81	-0.00	-0.65	0.00	1.01	-0.00	-0.03	0.00	1.31	-0.00*	-2.12
Pain Clinic Law	-0.00	-0.76	-0.00	-1.06	0.00	0.65	-0.00	-1.24	0.00	0.25	0.00	0.04	0.00	1.03
<b>State Economic Factors:</b>														
Med. Inc. (in 10,000 2017\$)	0.00	0.15	-0.02	-1.29	0.01	0.46	0.00	0.29	0.00	0.25	-0.02	-1.75	0.00	0.01
Poverty Rate	-0.00	-0.16	-0.01*	-2.01	-0.00	-1.37	-0.00	-0.99	-0.00	-1.77	-0.00	-1.56	0.00	1.67
Unemployment Rate	0.00	0.97	0.00	1.36	0.00	1.04	0.00*	2.21	0.00	1.12	0.00	0.38	-0.00	-0.27
<b>Age Distribution:</b>														
Aged 19 and Younger	0.01	1.12	-0.01	-1.50	0.02	1.71	-0.01	-0.85	0.02	1.61	-0.01	-1.84	-0.00	-0.30
Aged 20-34	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Aged 35-49	0.00	0.42	-0.00	-0.50	-0.00	-0.70	-0.00	-1.02	-0.00	-0.64	0.00	0.36	-0.00	-0.86
Aged 50-64	0.01	1.04	-0.01	-0.92	0.01	1.28	-0.00	-0.53	0.00	0.74	-0.00	-1.23	0.00	1.33
Aged 65 and Older	0.00	0.36	-0.01	-0.97	0.01	1.09	-0.00	-0.75	0.01	1.11	-0.00	-1.08	-0.00	-0.78
<b>Race/Ethnicity Distribution:</b>														
NH White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
NH Black	-0.00	-1.22	0.00*	2.37	-0.01**	-3.51	-0.01**	-3.12	-0.01**	-3.36	0.01**	6.92	-0.00	-0.43
Hispanic	0.00	0.39	0.00	0.25	0.02*	2.08	0.00	1.11	0.02*	2.24	-0.00	-0.86	0.00	0.13
NH Asian	-0.00	-0.60	0.00	0.47	-0.00	-0.01	0.00	0.43	0.00	0.24	-0.00	-0.67	-0.01	-1.61
NH Other Race	0.00	0.28	-0.00	-0.36	0.03	0.94	-0.01	-1.20	0.02	1.06	0.01	1.38	0.00	0.17
Constant	-0.43	-0.90	0.80	1.37	-0.91	-1.42	0.44	1.20	-0.79	-1.26	0.42	1.39	0.04	0.20
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
R-Squared	0.028		0.11		0.15		0.20		0.16		0.092		0.10	
Degrees of Freedom	29		28		20		28		20		28		20	

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01

**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of Non-OTPs in a State per 100,000 Population**

	<b>Accept Medicaid</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Accept Medicaid</b>				<b>Do Not Accept Medicaid</b>			
	N=816		N=765		N=357		N=765		N=357		N=765		N=357	
	b	t	b	t	b	t	b	t	b	t	b	t	b	t
<b>State Policies:</b>														
Expanded Medicaid	0.02	0.09	-0.02	-0.31	0.03	0.53	0.01	0.11	0.09	1.71	-0.02	-0.91	-0.04	-1.59
Optional PDMP	-0.11	-1.21	-0.04	-0.84	0.14	1.68	-0.03	-0.84	0.13	1.88	-0.01	-0.54	0.01	0.26
Mandatory PDMP	-0.21	-1.03	0.27**	3.36	0.22*	2.49	0.18*	2.51	0.18*	2.42	0.07	1.82	0.04	1.22
Pain Clinic Law	-0.20	-0.73	-0.28**	-2.82	-0.09	-0.86	-0.24**	-3.34	-0.16*	-2.25	-0.03	-0.79	0.07	1.27
<b>State Economic Factors:</b>														
Med. Inc. (in 10,000 2017\$)	-0.08	-0.34	0.46*	2.38	0.25	0.83	0.32*	2.19	0.15	0.76	0.10	1.74	0.08	0.62
Poverty Rate	-0.07	-1.48	-0.01	-0.35	0.07	1.64	0.00	0.08	0.08*	2.42	-0.01	-1.09	-0.00	-0.17
Unemployment Rate	-0.03	-0.53	0.05*	2.01	0.04	1.01	0.05*	2.35	0.02	0.82	-0.00	-0.27	0.03	1.26
<b>Age Distribution:</b>														
Aged 19 and Younger	0.37*	2.14	-0.04	-0.35	-0.19	-0.69	0.05	0.48	0.11	0.61	-0.09*	-2.40	-0.24	-1.71
Aged 20-34	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Aged 35-49	-0.05	-0.45	0.05	0.41	0.07	0.34	-0.05	-0.65	-0.08	-0.65	0.09	1.84	0.16	1.76
Aged 50-64	0.04	0.28	0.12	1.01	-0.01	-0.07	0.04	0.39	-0.03	-0.27	0.05	1.43	0.01	0.08
Aged 65 and Older	0.35*	2.08	0.15	1.60	0.07	0.35	0.14	1.73	0.21	1.43	-0.00	-0.19	-0.09	-0.98
<b>Race/Ethnicity Distribution:</b>														
NH White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
NH Black	-0.04	-0.69	0.00	0.00	0.11	1.85	-0.02	-0.59	0.04	0.66	0.02	1.47	0.06*	2.04
Hispanic	0.20*	2.12	-0.03	-0.61	-0.05	-0.41	-0.03	-0.68	-0.14	-1.52	-0.00	-0.06	0.09	1.85
NH Asian	-0.37*	-2.32	-0.02	-0.23	0.04	0.17	0.01	0.14	0.06	0.40	-0.03	-1.40	-0.02	-0.22
NH Other Race	0.27	0.61	-0.38	-1.90	-0.48	-0.88	-0.35	-1.80	-0.32	-0.68	-0.03	-0.59	-0.10	-0.39
Constant	-11.05	-1.27	-4.71	-0.79	1.66	0.14	-2.84	-0.61	-3.20	-0.35	-0.85	-0.42	2.63	0.49
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
R-Squared	0.31		0.62		0.63		0.54		0.66		0.49		0.39	
Degrees of Freedom	29		28		20		28		20		28		20	

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01

**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of Nonprofit Non-OTPs in a State per 100,000 Population**

	<u>Accept Medicaid</u>										<u>Do Not Accept Medicaid</u>			
	<b>Accept Medicaid</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>		<b>Bup.</b>		<b>ER Inj. Naltrexone</b>	
	N=816		N=765		N=357		N=765		N=357		N=765		N=357	
	b	t	b	t	b	t	b	t	b	t	b	t	b	t
<b>State Policies:</b>														
Expanded Medicaid	0.19*	2.19	0.08	1.48	0.04	1.04	0.08	1.45	0.04	1.13	0.01	0.58	0.00	0.38
Optional PDMP	-0.17*	-2.55	-0.09*	-2.38	-0.00	-0.05	-0.07	-1.86	0.01	0.19	-0.02*	-2.15	-0.01	-0.97
Mandatory PDMP	-0.18	-1.45	0.16*	2.15	0.15*	2.29	0.16*	2.20	0.17*	2.68	0.01	0.48	-0.02	-1.38
Pain Clinic Law	0.10	1.07	-0.17*	-2.32	-0.04	-0.64	-0.16*	-2.31	-0.04	-0.80	-0.01	-1.19	0.01	0.62
<b>State Economic Factors:</b>														
Med. Inc. (in 10,000 2017\$)	-0.19	-1.22	0.14	1.12	0.02	0.13	0.15	1.30	0.04	0.33	-0.01	-0.25	-0.02	-0.60
Poverty Rate	-0.07*	-2.24	-0.02	-0.88	0.03	1.39	-0.01	-0.65	0.03	1.46	-0.00	-1.01	0.00	0.17
Unemployment Rate	-0.01	-0.26	0.02	1.21	-0.01	-0.59	0.03	1.41	-0.01	-0.60	-0.00	-0.70	-0.00	-0.03
<b>Age Distribution:</b>														
Aged 19 and Younger	0.25*	2.40	-0.01	-0.08	-0.08	-0.66	0.03	0.32	-0.04	-0.41	-0.03	-1.83	-0.04	-1.19
Aged 20-34	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Aged 35-49	-0.10	-1.62	-0.01	-0.26	-0.19	-1.90	-0.01	-0.18	-0.16	-1.66	-0.00	-0.40	-0.02	-0.97
Aged 50-64	-0.05	-0.50	0.10	1.37	-0.12	-1.28	0.09	1.21	-0.10	-1.04	0.01	0.64	-0.02	-0.94
Aged 65 and Older	0.07	0.76	0.03	0.46	-0.11	-1.02	0.06	0.87	-0.08	-0.68	-0.03*	-2.18	-0.05	-1.20
<b>Race/Ethnicity Distribution:</b>														
NH White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
NH Black	-0.03	-0.68	-0.04	-1.43	-0.03	-0.77	-0.03	-1.28	-0.04	-0.90	0.00	0.10	-0.00	-0.17
Hispanic	0.09	1.78	-0.01	-0.22	-0.02	-0.33	-0.01	-0.17	-0.05	-0.76	-0.00	-0.31	0.03*	2.49
NH Asian	-0.12	-1.92	-0.04	-0.94	-0.00	-0.02	-0.04	-0.86	-0.01	-0.11	0.00	0.08	0.00	0.02
NH Other Race	0.32	1.56	-0.29*	-2.63	-0.31	-0.93	-0.26*	-2.34	-0.34	-1.15	-0.03	-1.34	0.03	0.22
Constant	-2.01	-0.36	-0.54	-0.14	11.25	1.60	-2.02	-0.49	9.34	1.32	1.42	1.43	2.26	1.18
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
R-Squared	0.22		0.46		0.54		0.42		0.52		0.25		0.13	
Degrees of Freedom	29		28		20		28		20		28		20	

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01



**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of For-Profit Non-OTPs in a State per 100,000 Population**

	<u>Accept Medicaid</u>								<u>Do Not Accept Medicaid</u>							
	Accept Medicaid		Bup.		ER Inj. Naltrexone		Bup.		ER Inj. Naltrexone		Bup.		ER Inj. Naltrexone			
	N=816		N=765		N=357		N=765		N=357		N=765		N=357			
	b	t	b	t	b	t	b	t	b	t	b	t	b	t		
<b>State Policies:</b>																
Expanded Medicaid	-0.16	-0.87	0.00	0.06	0.04	1.13	0.01	0.46	0.06*	2.24	-0.01	-0.33	-0.01	-0.79		
Optional PDMP	0.04	0.75	0.04	1.20	0.08	1.50	0.02	1.17	0.08	2.00	0.01	0.55	-0.01	-0.31		
Mandatory PDMP	-0.06	-0.64	0.10	1.90	0.04	0.93	0.02	1.05	-0.00	-0.04	0.06	1.91	0.04	1.26		
Pain Clinic Law	-0.25	-1.23	-0.02	-0.41	0.01	0.15	-0.01	-0.48	-0.05	-1.67	-0.00	-0.09	0.06	1.92		
<b>State Economic Factors:</b>																
Med. Inc. (in 10,000 2017\$)	0.17	1.06	0.21*	2.55	0.34*	2.20	0.09*	2.33	0.17*	2.16	0.10	1.94	0.16	1.66		
Poverty Rate	0.03	0.91	0.01	1.50	0.03	1.18	0.01*	2.04	0.02	1.65	0.00	0.45	0.01	0.32		
Unemployment Rate	-0.02	-0.61	0.01	1.81	0.06*	2.39	0.01	1.74	0.03*	2.13	0.00	0.50	0.03	1.74		
<b>Age Distribution:</b>																
Aged 19 and Younger	0.11	1.02	-0.11*	-2.32	-0.22	-1.34	-0.04	-1.21	0.00	0.02	-0.07*	-2.58	-0.19	-1.71		
Aged 20-34	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>			
Aged 35-49	0.08	1.09	0.13	1.94	0.23*	2.06	0.02	0.97	0.02	0.46	0.11*	2.30	0.20*	2.60		
Aged 50-64	0.07	0.82	0.11*	2.30	0.24*	2.62	0.03	1.04	0.11*	2.08	0.08*	2.66	0.13*	2.21		
Aged 65 and Older	0.26	1.88	0.05	1.46	0.08	0.77	0.03	1.41	0.12	1.80	0.01	0.93	-0.03	-0.46		
<b>Race/Ethnicity Distribution:</b>																
NH White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>			
NH Black	0.00	0.12	0.01	0.56	0.05	1.26	0.00	0.18	0.02	0.87	0.01	0.67	0.02	1.22		
Hispanic	0.07	1.26	0.00	0.29	0.01	0.19	-0.01	-1.30	-0.07	-1.65	0.02	1.74	0.08	1.64		
NH Asian	-0.23*	-2.43	-0.03	-0.87	-0.15	-1.20	0.01	0.31	-0.05	-0.88	-0.04*	-2.22	-0.09	-1.08		
NH Other Race	-0.13	-0.49	0.04	0.61	0.11	0.45	-0.00	-0.10	0.03	0.20	0.04	1.15	0.12	0.65		
Constant	-9.59	-1.57	-3.88	-1.35	-8.12	-1.29	-0.90	-0.54	-5.33	-1.13	-2.96	-1.78	-3.49	-1.12		
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes			
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes			
R-Squared	0.27		0.48		0.50		0.36		0.46		0.45		0.48			
Degrees of Freedom	29		28		20		28		20		28		20			

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01

**Two-Way Fixed Effects Regression Results Estimating the Effect of Medicaid Expansion on the Number of Public Non-OTPs in a State per 100,000 Population**

	<u>Accept Medicaid</u>								<u>Do Not Accept Medicaid</u>						
	Accept Medicaid		Bup.		ER Inj. Naltrexone		Bup.		ER Inj. Naltrexone		Bup.		ER Inj. Naltrexone		
	N=816		N=765		N=357		N=765		N=357		N=765		N=357		
	b	t	b	t	b	t	b	t	b	t	b	t	b	t	
<b>State Policies:</b>															
Expanded Medicaid	-0.01	-0.25	-0.11*	-2.16	-0.04	-1.95	-0.08	-1.76	-0.00	-0.06	-0.02	-1.50	-0.03*	-2.05	
Optional PDMP	0.03	0.86	0.02	0.92	0.06*	2.39	0.02	0.91	0.04	1.22	0.00	0.20	0.03	1.48	
Mandatory PDMP	0.02	0.60	-0.00	-0.04	0.04	1.18	0.00	0.04	0.02	0.52	-0.00	-0.27	0.02	1.83	
Pain Clinic Law	-0.05	-0.88	-0.08	-2.00	-0.06	-1.91	-0.07	-1.73	-0.07	-1.49	-0.02	-1.02	-0.00	-0.01	
<b>State Economic Factors:</b>															
Med. Inc. (in 10,000 2017\$)	-0.06	-0.84	0.11	1.66	-0.12*	-2.02	0.08	1.50	-0.07	-1.20	0.01	0.34	-0.06	-1.35	
Poverty Rate	-0.02	-1.47	-0.00	-0.46	0.02	0.97	0.00	0.51	0.03	1.81	-0.01	-1.51	-0.01	-1.25	
Unemployment Rate	0.00	0.37	0.01	1.32	-0.00	-0.03	0.01	1.82	0.01	0.56	-0.00	-0.44	-0.00	-0.68	
<b>Age Distribution:</b>															
Aged 19 and Younger	0.00	0.04	0.08	1.41	0.10	1.01	0.06	1.26	0.15	1.52	0.02	1.02	-0.01	-0.25	
Aged 20-34	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.		Ref.		
Aged 35-49	-0.03	-0.98	-0.07	-1.87	0.03	0.56	-0.06*	-2.03	0.06	1.16	-0.02	-1.37	-0.02	-0.61	
Aged 50-64	0.02	0.38	-0.10	-1.88	-0.14*	-2.13	-0.08	-1.71	-0.04	-0.94	-0.04	-1.85	-0.10	-1.76	
Aged 65 and Older	0.03	0.53	0.07	1.51	0.10	1.18	0.05	1.45	0.17	1.64	0.01	0.58	-0.01	-0.27	
<b>Race/Ethnicity Distribution:</b>															
NH White	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.		Ref.		
NH Black	-0.01	-0.70	0.03	1.80	0.09**	2.89	0.01	1.16	0.05	1.45	0.01	1.71	0.04	1.31	
Hispanic	0.04	1.60	-0.03*	-2.15	-0.05	-1.20	-0.01	-0.92	-0.02	-0.64	-0.02*	-2.25	-0.02	-1.11	
NH Asian	-0.02	-0.44	0.05*	2.17	0.19**	3.31	0.04*	2.40	0.13*	2.12	0.01	1.04	0.06	1.38	
NH Other Race	0.08	0.50	-0.13	-0.94	-0.28	-0.89	-0.09	-0.79	-0.01	-0.03	-0.05	-1.15	-0.25	-1.26	
Constant	0.55	0.15	-0.29	-0.15	-1.47	-0.31	0.07	0.05	-7.21	-1.46	0.69	0.81	3.86	1.18	
Year F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes		
State F.E.	Yes		Yes		Yes		Yes		Yes		Yes		Yes		
R-Squared	0.072		0.38		0.44		0.29		0.43		0.24		0.16		
Degrees of Freedom	29		28		20		28		20		28		20		

Source: Authors' analysis of all SUD treatment programs listed in the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey of Substance Abuse Treatment Services (NSSATS), 2002-2017. All models conducted using the xtreg command in Stata 15 with standard errors clustered at the state level.

Notes: OTP = Opioid Treatment Program; Bup. = Buprenorphine; ER Inj. Naltrexone = Extended-Release Injectable Naltrexone; PDMP = Prescription Drug Monitoring Program; Med. Inc. = Median Household Income; NH = Non-Hispanic; F.E. = Fixed Effects; SUD = Substance Use Disorder. Ref. = Reference Category

\* p<0.05, \*\* p<0.01