University of Nevada, Reno

Does Universal Licensing Recognition Improve Patient Access? Evidence from Healthcare Utilization

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LERA
ADVANCING WORKPLACE RELATIONS

Introduction

- Optimizing physician labor supply by state is an important policy agenda in healthcare (Kirch and Petelle, 2017; Zhang et al., 2020)
  - Regional labor market equilibrium of physicians can improve consumer welfare
- Relaxing occupational licensing requirements can improve local labor market efficiency for specific occupations
  - Contribute to increasing the mobility of licensed workers (Deyo and Plemmons, 2022; Johnson and Kleiner, 2020)
    - E.g. Interstate Medical Licensing Compact (IMLC): Interstate reciprocity of physician licenses issued in the member states

Universal Licensing Recognition (ULR)

- Relaxing occupational licensing requirements waives a time-consuming re-licensure processes for out-of-state licensed workers
- A recent studies provided its positive impact on local labor supply
  - E.g. Bae and Timmons, 2023
- Increasing labor supply → Improving consumer benefits
  - Reduction in the cost of labor
  - Improved quality of services

} Has not been studied

Research Question

- Does universal licensing recognition increase the healthcare utilization?
  - Specifically, does this policy (universal reciprocity of physician licenses) improve the healthcare utilization amid the adoption of the IMLC?

Interstate Licensure Compact

- Interstate Licensure Compact (ILC)
  - Interstate reciprocity of occupational licenses
- Interstate Medical Licensure Compact (IMLC)
  - Interstate reciprocity of physician licenses
  - However, this reciprocity is for member states only

ILC vs ULR

Interstate Licensure Compact	Universal Licensing Recognition
• Reciprocity of licenses for certain occupations • Reciprocity eligible for the **licenses from the member states only**	• Reciprocity of licenses for selected occupations • Reciprocity eligible for the **licenses from any US states**

- Both ILC and ULR are about the reciprocity of out-of-state licenses
  - Previous studies showed the effect of IMLC on increased interstate mobility of healthcare practitioners and improved the quality of services (Deyo and Hughes, 2019; Shakya, Ghosh, and Norris, 2022)
- ULR might also have the same effect, but the IMLC had been adopted already
  - E.g. ID, MT, and SD adopted the IMLC in 2015, and then adopted the ULR later

ULR for Physician Licenses

- Adopting the ULR does not mean that physician licenses are also accepted
  - Reciprocity of licenses for "selected occupations"
- Some states that passed the ULR did not include physician licenses in the list of occupations for the ULR
  - E.g. IA, UT, and WY adopted the ULR but did not include physician licenses (MD and DO)

Data

- Behavioral Risk Factor Surveillance System (BRFSS) 2018-2023
  - Respondents aged between 25 and 64
    - Analysis by age group: 25-44 (younger population) and 45-64 (older population)
  - Outcome Measures:
    1. **Having one or more personal doctors or healthcare providers (Personal Doctor)**
    2. **Could not see a doctor because of cost (Cost Issue)**
    3. **Received routine health checkups within a year (Routine Check)**
  - Respondent-level healthcare utilization measure shrunk into state-half-year cells
    - Each cell provides the proportion of respondents in each state who utilized corresponding healthcare services during the given 6-month period

Estimation

- Callaway-Sant'Ana (2021) Event Study Analysis:

$$Y_{st} = \alpha + \mathbf{ULR}_{st}\boldsymbol{\beta} + s + t + \varepsilon_{st}$$

s = State, t = Time

Y_{st} = Proportion of respondents who received corresponding healthcare service

$\mathbf{ULR}_{st}$ =Vector of event study indicators capturing the times before and after the ULR was adopted (pre- and post-treatment)

Parallel Trend Assumption: Using subgroup of states that adopted the IMLC in the same year

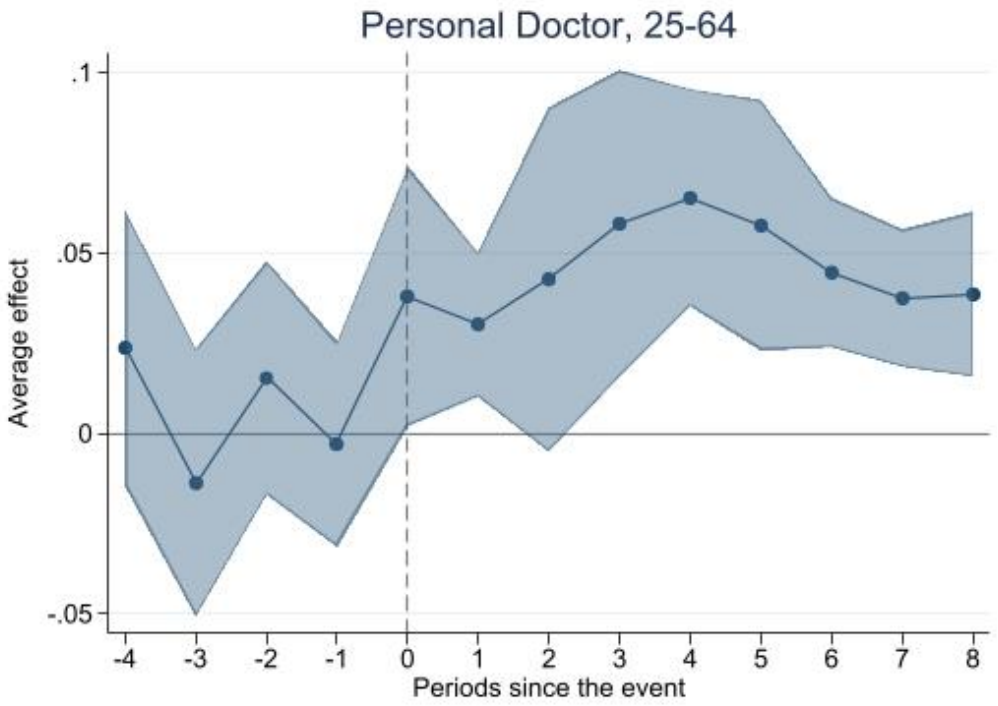
Analysis 1 – Baseline Analysis

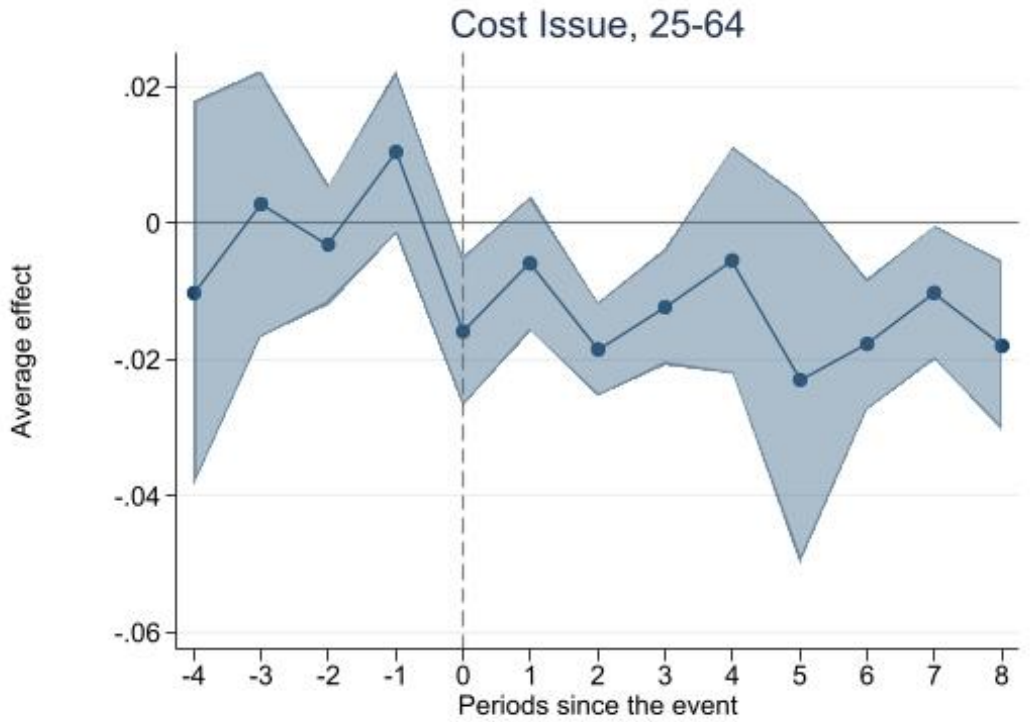
State			IMLC		ULR					
Name		FIPS	Year	Month	ULR Adopted	Bill Number	Year	Month	Residency Required	Physician License Excluded
Idaho	ID	16	2015	3	**O**	SB 1351	2020	7		
Montana	MT	30	2015	4	**O**	HB 105	2019	3		
South Dakota	SD	46	2015	3	**O**	HB 1077	2021	2		
Iowa	IA	19	2015	7	**O**	HF 2627	2020	6		**Yes**
Utah	UT	49	2015	3	**O**	SB 23	2020	5		**Yes**
Wyoming	WY	56	2015	2	**O**	SF 18	2021	7		**Yes**
Alabama	AL	1	2015	5	X					
Illinois	IL	17	2015	7	X					
Minnesota	MN	27	2015	5	X					
Wisconsin	WI	55	2015	12	X					
West Virginia	WV	54	2015	3	X					
Arizona	AZ	4	2016	5	O	HB 2569	2019	4	Yes	
Kansas	KS	20	2016	5	O	HB 2066	2021	7	Yes	
Mississippi	MS	28	2016	5	O	HB 1263	2021	7	Yes	
New Hampshire	NH	33	2016	5	O	SB 382	2022	8		
Connecticut	CT	9	2016	5	X					
Colorado	CO	8	2016	6	O	HB 1326	2021	1		Yes

Treatment Group

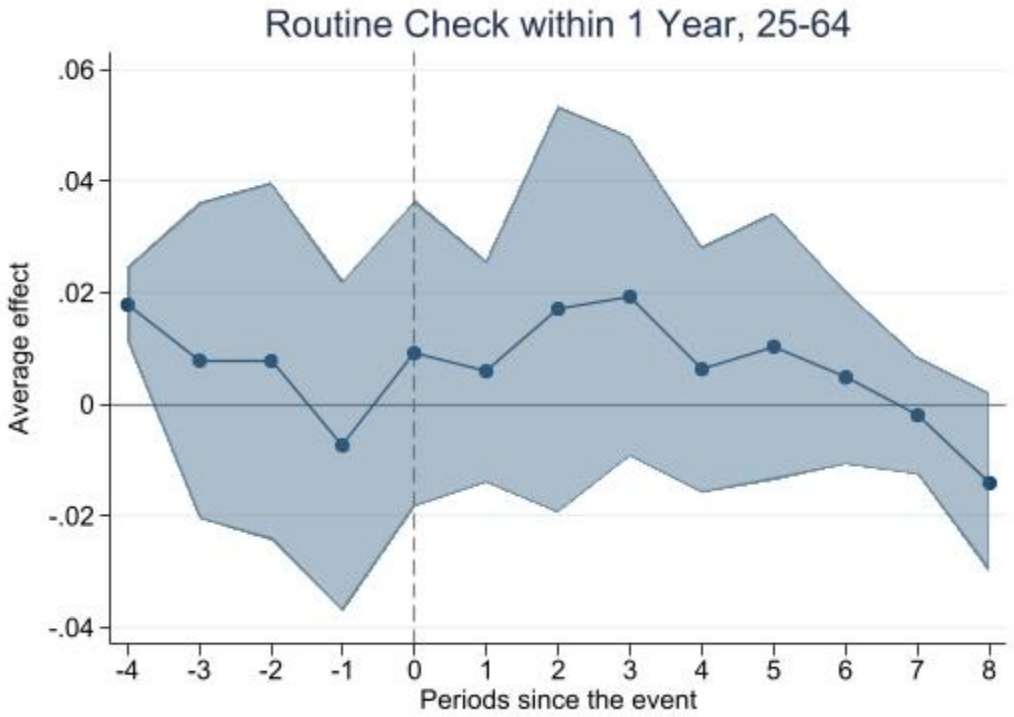
Control Group

Result – Baseline Analysis, All Ages

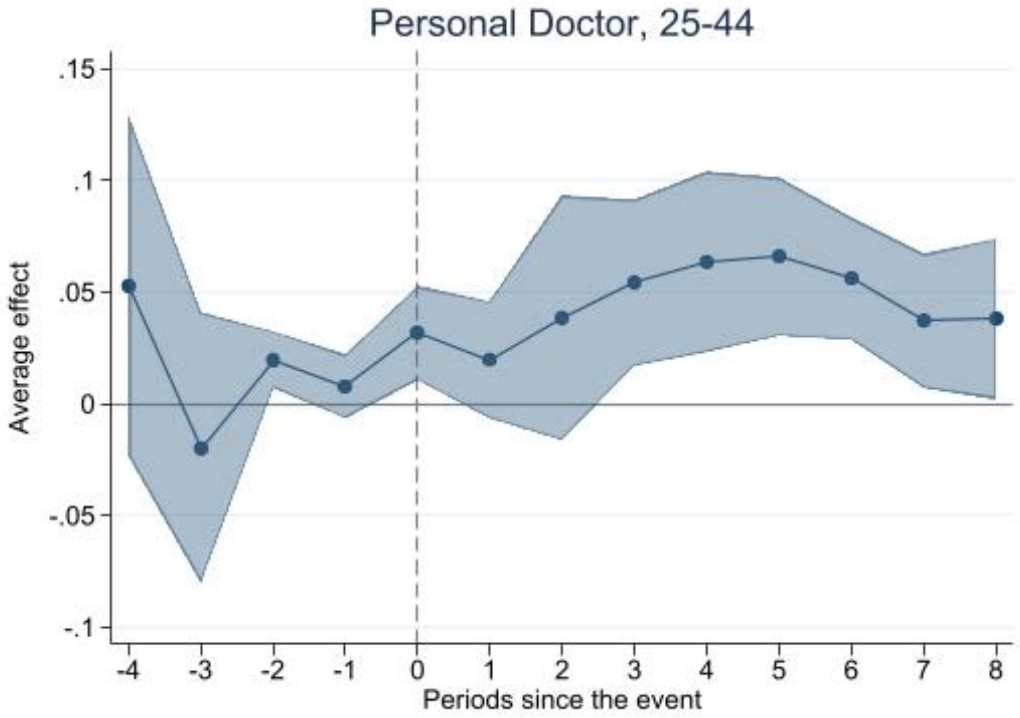


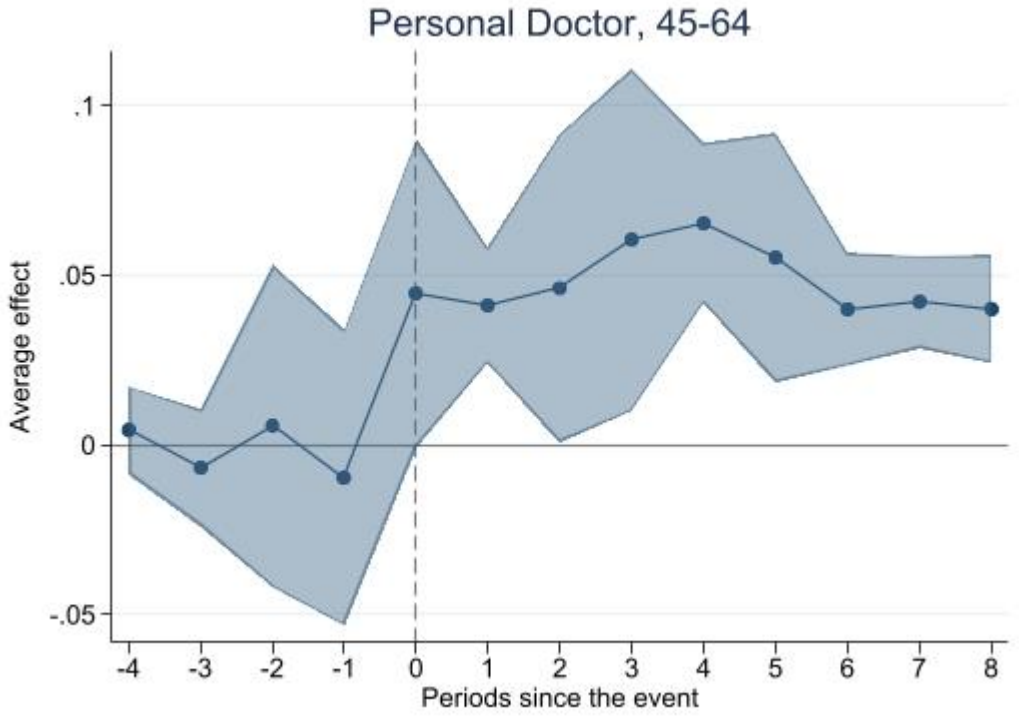


Result – Baseline Analysis, All Ages



Results – Baseline, By Age Group





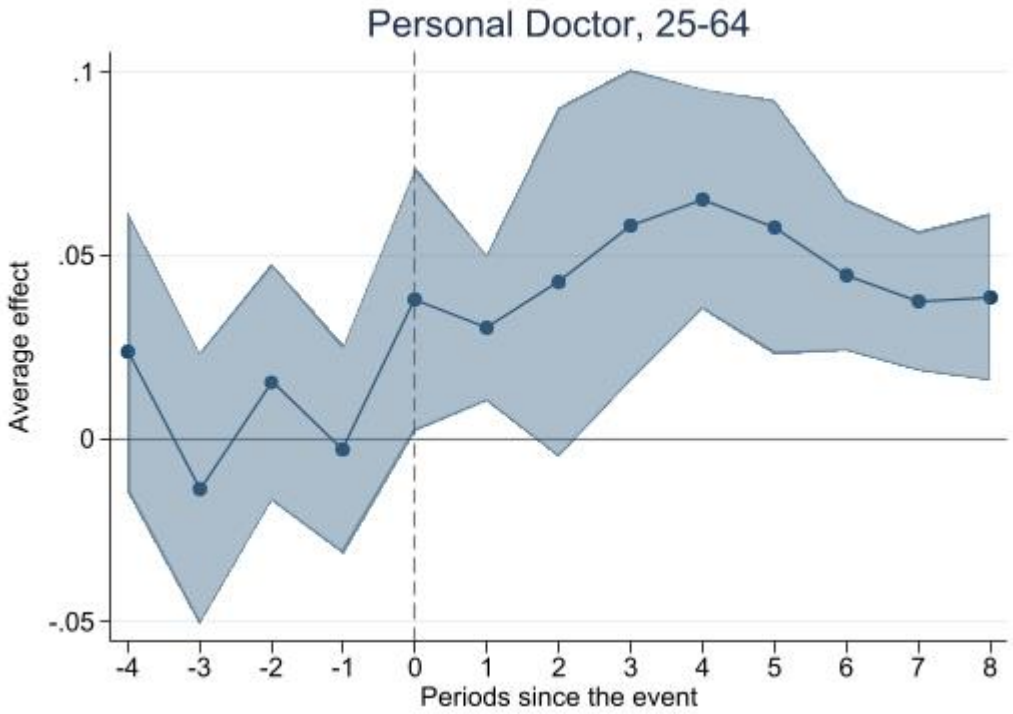
Analysis 2 – Counterfactual Analysis

State			IMLC		ULR					
Name		FIPS	Year	Month	ULR Adopted	Bill Number	Year	Month	Residency Required	Physician License Excluded
Idaho	ID	16	2015	3	**O**	SB 1351	2020	7		
Montana	MT	30	2015	4	**O**	HB 105	2019	3		
South Dakota	SD	46	2015	3	**O**	HB 1077	2021	2		
Iowa	IA	19	2015	7	**O**	HF 2627	2020	6		**Yes**
Utah	UT	49	2015	3	**O**	SB 23	2020	5		**Yes**
Wyoming	WY	56	2015	2	**O**	SF 18	2021	7		**Yes**
Alabama	AL	1	2015	5	X					
Illinois	IL	17	2015	7	X					
Minnesota	MN	27	2015	5	X					
Wisconsin	WI	55	2015	12	X					
West Virginia	WV	54	2015	3	X					
Arizona	AZ	4	2016	5	O	HB 2569	2019	4	Yes	
Kansas	KS	20	2016	5	O	HB 2066	2021	7	Yes	
Mississippi	MS	28	2016	5	O	HB 1263	2021	7	Yes	
New Hampshire	NH	33	2016	5	O	SB 382	2022	8		
Connecticut	CT	9	2016	5	X					
Colorado	CO	8	2016	6	O	HB 1326	2021	1		Yes

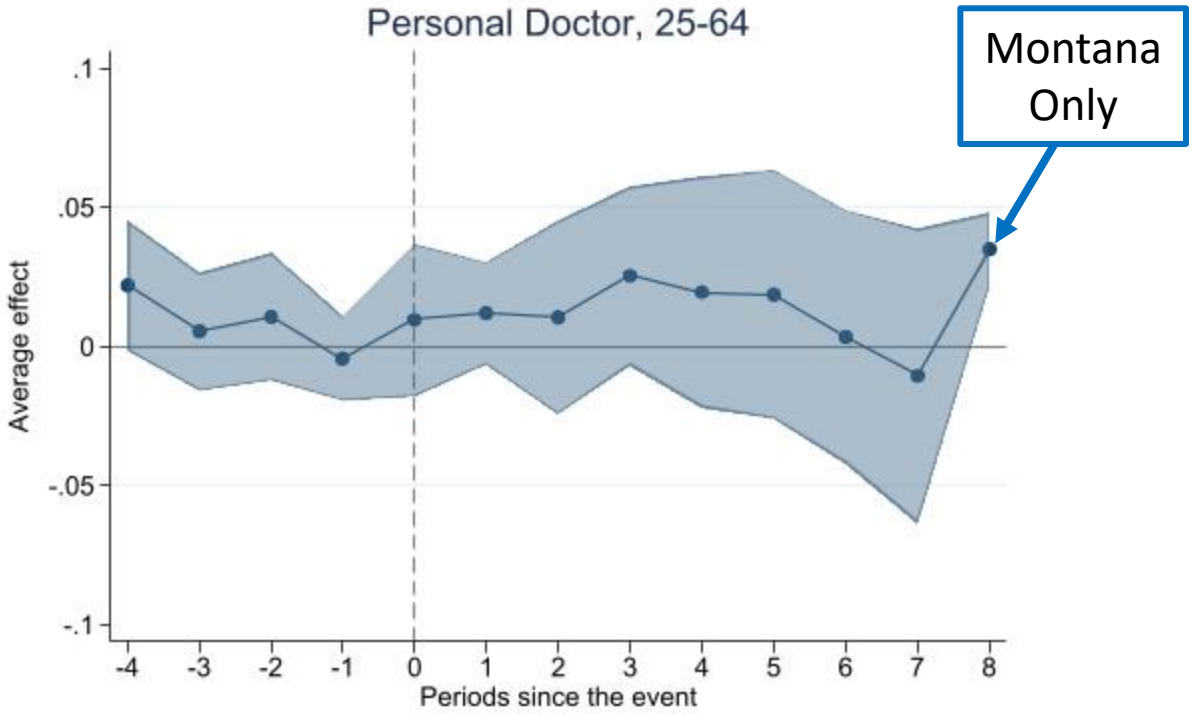
Treatment Group

Control Group

Results – Counterfactual Analysis

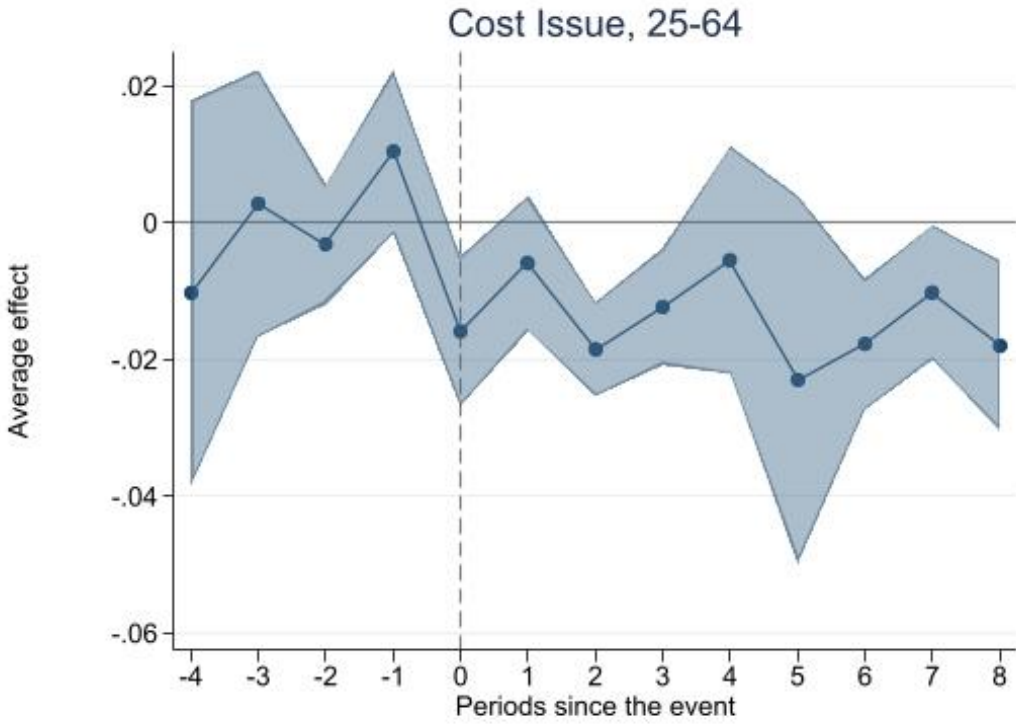


Baseline Model

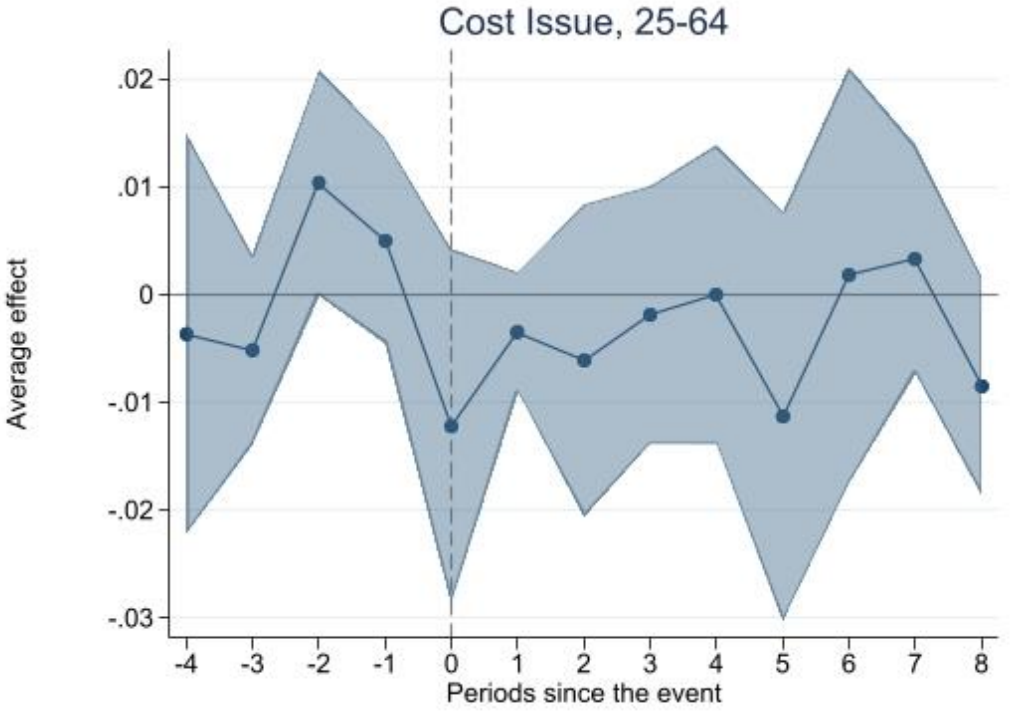


Counterfactual Model

Results – Counterfactual Analysis



Baseline Model



Counterfactual Model

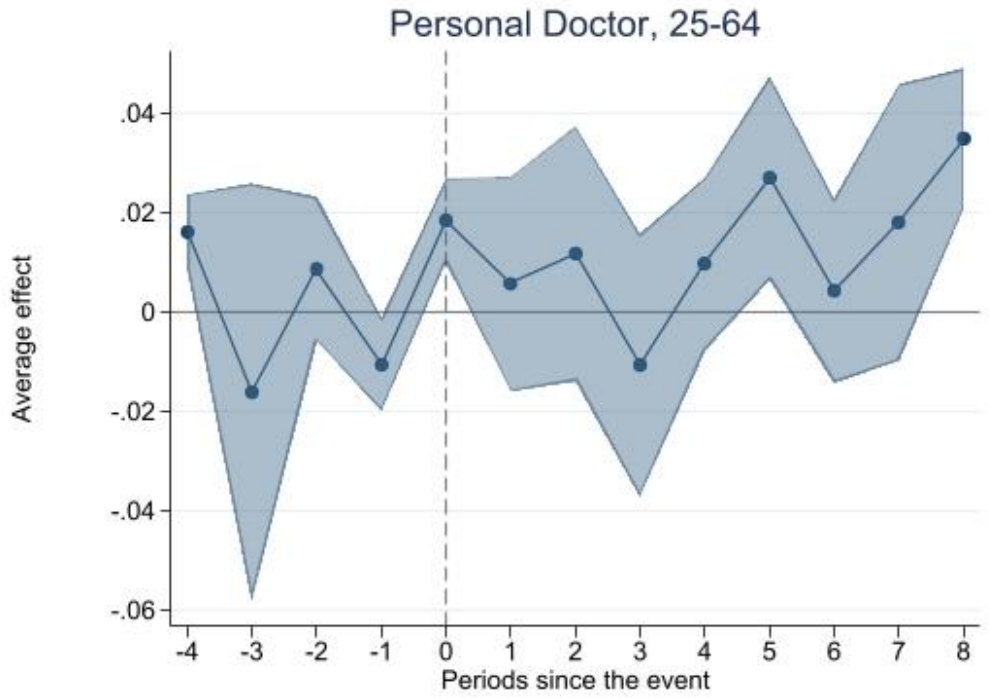
Analysis 3 – Residency Requirements

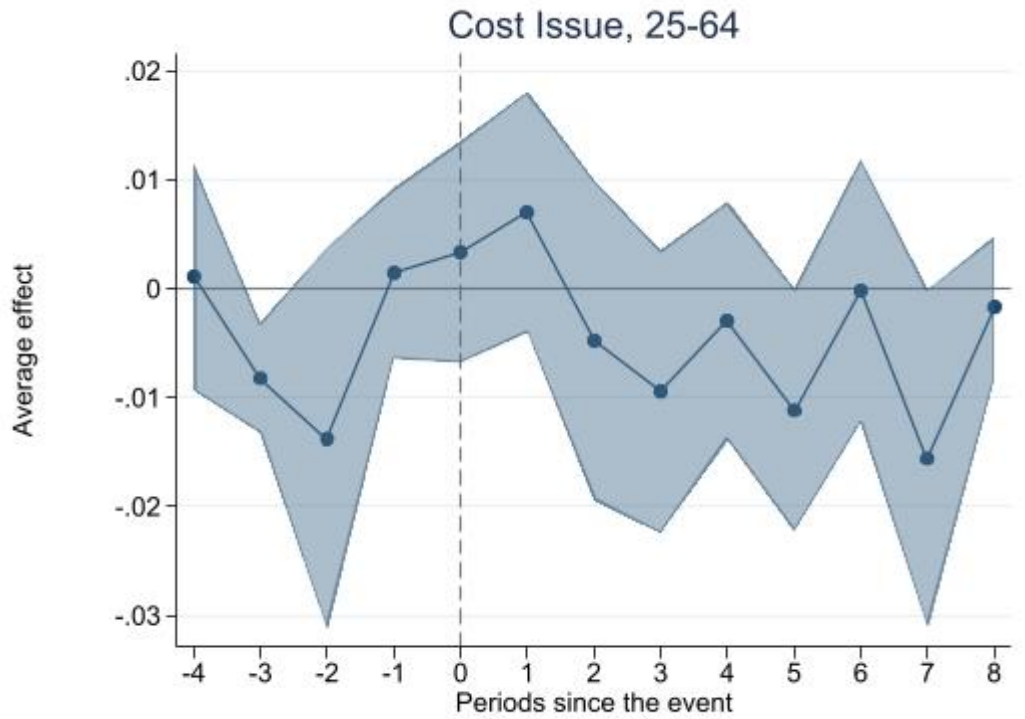
State			IMLC		ULR					
Name		FIPS	Year	Month	ULR Adopted	Bill Number	Year	Month	Residency Required	Physician License Excluded
Idaho	ID	16	2015	3	O	SB 1351	2020	7		
Montana	MT	30	2015	4	O	HB 105	2019	3		
South Dakota	SD	46	2015	3	O	HB 1077	2021	2		
Iowa	IA	19	2015	7	O	HF 2627	2020	6		Yes
Utah	UT	49	2015	3	O	SB 23	2020	5		Yes
Wyoming	WY	56	2015	2	O	SF 18	2021	7		Yes
Alabama	AL	1	2015	5	X					
Illinois	IL	17	2015	7	X					
Minnesota	MN	27	2015	5	X					
Wisconsin	WI	55	2015	12	X					
West Virginia	WV	54	2015	3	X					
Arizona	AZ	4	2016	5	**O**	HB 2569	2019	4	**Yes**	
Kansas	KS	20	2016	5	**O**	HB 2066	2021	7	**Yes**	
Mississippi	MS	28	2016	5	**O**	HB 1263	2021	7	**Yes**	
New Hampshire	NH	33	2016	5	**O**	SB 382	2022	8		
Connecticut	CT	9	2016	5	X					
Colorado	CO	8	2016	6	**O**	HB 1326	2021	1		**Yes**

Treatment Group

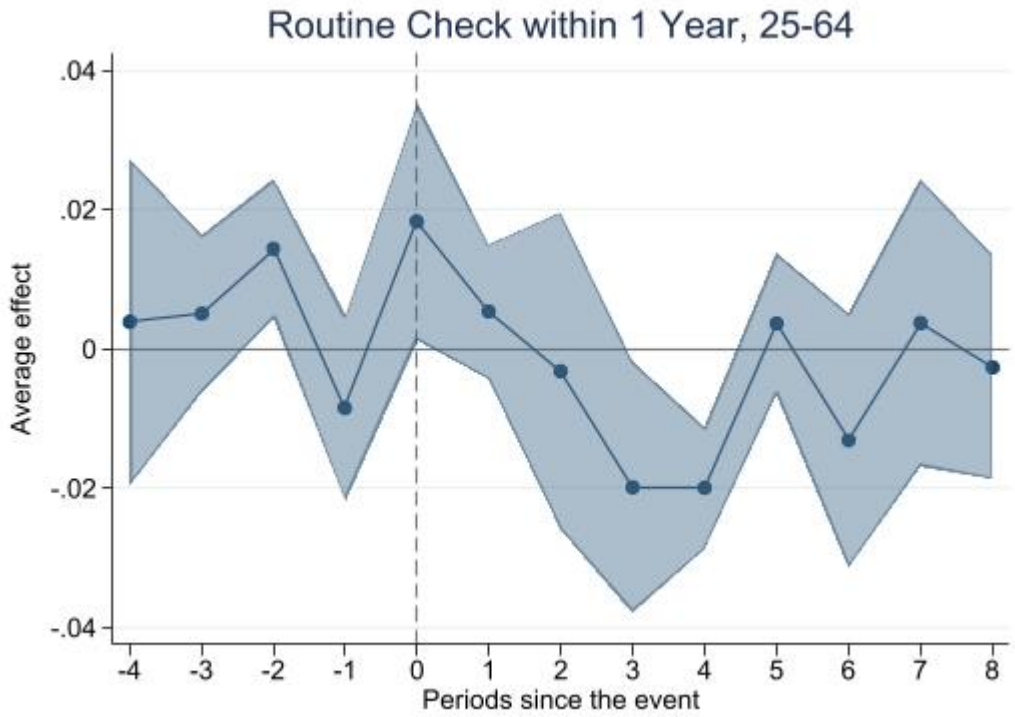
Control Group

Results – Residency Requirements





Results – Residency Requirements



Summary of Findings

- ULR improved the healthcare utilization (Analysis 1)
  - Increased proportion of respondents with personal doctor
  - Reduced proportion of respondents seeing a physician due to a cost issue
  - Heterogeneity across demographic – results particularly robust for older individuals (aged 45-64)
- "Universal reciprocity of physician licenses" is the main reason (Analysis 2)
- ULR's positive effect may be due to the increased mobile doctors (Analysis 3)
  - Additional analysis will be focused using methods of previous empirical strategies (e.g. Bae and Timmons, 2023)

Discussion & Limitation

- ULR improved consumer benefits
  - At least in the field of healthcare utilization
- Compared to the IMLC, ULR has a stronger empirical impact
  - In the midst of the IMLC, ULR still increased the healthcare utilization
- Yet, this study is limited in accounting for some factors related to healthcare
  - “Routine care within 1 year” is somewhat limited in reflecting the changes in the short term
  - Recommendations for healthcare services vary by age and sex
  - Actual cost of routine procedures (Kleiner et al., 2016)

Future Directions

- Using forthcoming data sets to examine the long-term effects of the ULR
- Examining the changes in consumer benefits from different licensed occupations

Thank You

Please reach out to **Yun taek Oh**

for more information and/or suggestions.

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Descriptive Statistics

	IMLC in 2015				IMLC in 2016			
Passed ULR	No		Yes		No		Yes	
	Prop/Mean	SD	Prop/Mean	SD	Prop/Mean	SD	Prop/Mean	SD
Healthcare Utilization Measures								
Has Personal Doctor	.792	.406	.752	.432	.884	.320	.784	.411
Cost Issue	.126	.331	.121	.326	.096	.294	.143	.351
Routine Check within 1 Year	.749	.433	.705	.456	.793	.405	.732	.443
Sociodemographic Characteristics								
Women	.522	.500	.510	.500	.537	.499	.539	.499
Age	47.5	11.5	47.0	11.6	49.4	10.6	47.8	11.5
Race and Ethnicity								
NH White	.806	.396	.841	.366	.744	.437	.743	.437
NH Black	.091	.288	.011	.104	.093	.290	.096	.294
NH Others	.055	.229	.082	.274	.074	.262	.064	.244
Hispanic	.048	.214	.066	.249	.090	.286	.098	.298
Level of Education								
Less than HS, HS Grad	.300	.458	.315	.465	.266	.442	.312	.463
Some College or Higher	.698	.459	.682	.466	.729	.444	.685	.464
MSA	.658	.474	.395	.489	.944	.231	.618	.486
Has Health Insurance	.911	.285	.889	.314	.942	.233	.879	.326