



## Introduction

- Opioid use disorder (OUD) and infectious diseases (ID) are closely linked, largely by injection drug use.
- Persons who inject drugs have higher risk of HIV and hepatitis C acquisition, as well as cellulitis, osteomyelitis, and endocarditis.
- ID physicians are uniquely positioned to treat OUD, but prevalence and geographic distribution of ID physicians who are trained to prescribe buprenorphine are unknown.
- **Our aims** were to 1) estimate the proportion of ID physicians with buprenorphine waivers, 2) identify factors associated with waiver possession, and 3) show the geographic distribution of waived ID physicians.

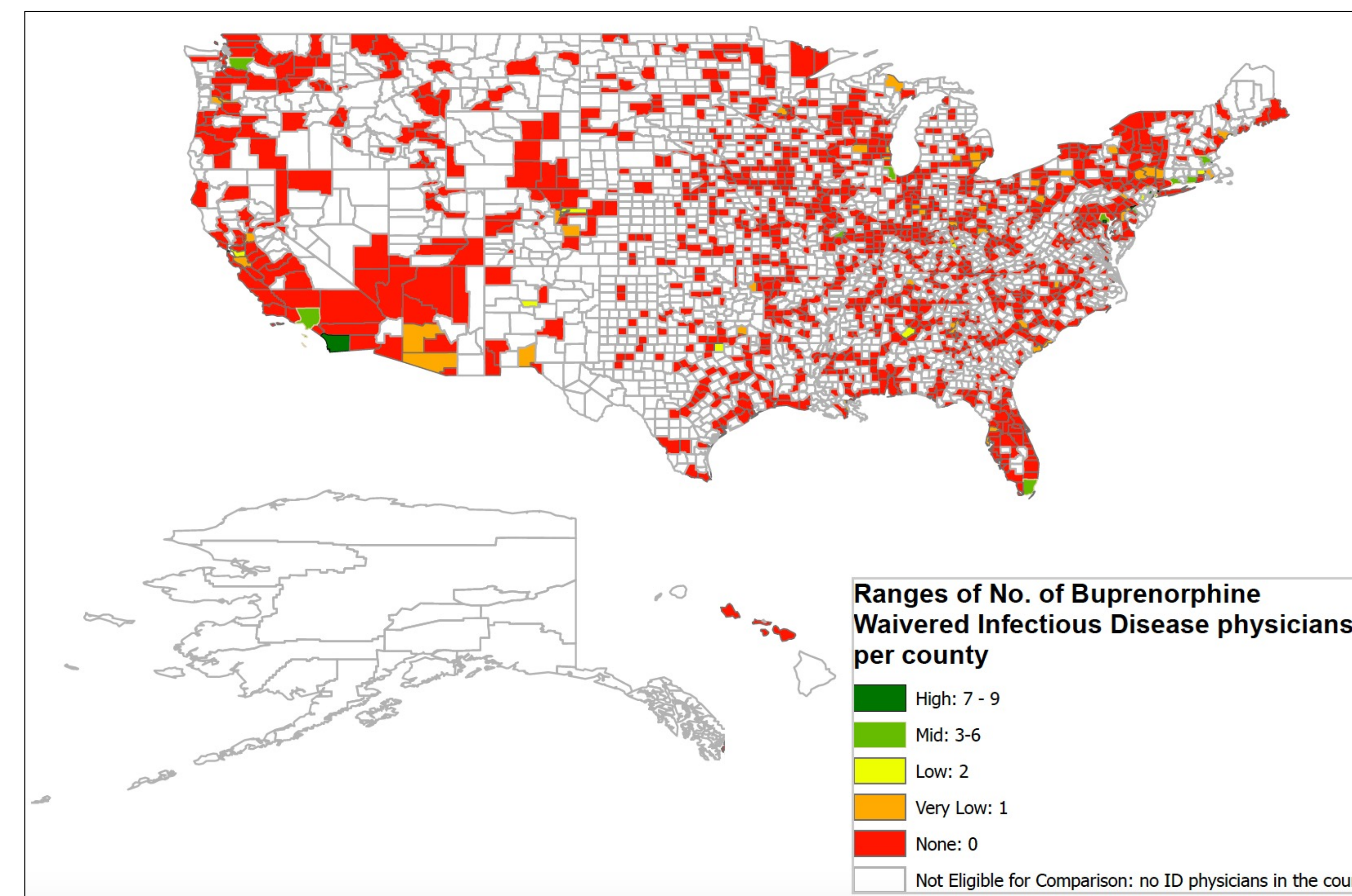
## Methods

- Cross-sectional study Nov 2021 – Jan 2022
- Several publicly available data sets were used to identify ID physicians with waivers and associated county-level characteristics
- Multivariable regression models used to identify individual and county-level characteristics associated with buprenorphine waiver possession
- Geospatial analysis conducted using R to determine geographic distribution of waived ID physicians

## Results

- 6,439 ID physicians identified in the US; 57.2% were male
- **Only 2.6% (n=170) of US ID physicians possessed waivers.**
- Of these, 163 practiced in metropolitan counties, and 6 practiced in non-metropolitan counties.
- Among US counties, 18.5% (581/3143) had at least one ID physician and 2.5% (79/3143) had at least one ID physician with a waiver.
- Characteristics associated with **reduced odds of waiver possession** included 1) **increasing number of years since medical school graduation** and 2) **counties with higher proportions of uninsured residents** (Table).
- Practicing in counties with the highest quartile of overdose death burden had higher odds of having a waiver, however >75% of those counties had no waived ID physician

### Geographic distribution of ID physicians with buprenorphine waivers by US counties with at least one ID physician



## Results

**Table. Association between characteristics of ID physicians and buprenorphine waiver possession in crude and adjusted regression models**

Characteristics	Odds of buprenorphine waiver possession (n=6,439)			
	Unadjusted OR (95% CI)	P value <sup>1</sup>	Adjusted OR (95% CI)	P value <sup>1</sup>
<b>Individual level</b>				
<b>Sex</b>				
Female	REF	0.32	--	--
Male	0.86 (0.63-1.16)			
Years since graduating med school, median (IQR) <sup>2</sup>	<b>0.79 (0.68-0.91)</b>	<b>0.001</b>	<b>0.80 (0.69-0.92)</b>	<b>0.002</b>
<b>County Level</b>				
Median household income, \$ <sup>3</sup>	1.03 (0.95-1.11)	0.43	--	--
% Unemployed <sup>4</sup>	1.12 (0.96-1.30)	0.20	--	--
% Uninsured residents <sup>5</sup>	<b>0.75 (0.62-0.90)</b>	<b>0.003</b>	<b>0.67 (0.54-0.83)</b>	<b>&lt;0.001</b>
<b>Rural -Urban continuum</b>				
Metropolitan	0.76 (0.33-1.74)	0.52	--	--
Non-metropolitan	REF			

OR: odds ratio, CI: confidence interval, IQR: interquartile range  
<sup>1</sup> p-value calculated from Chi-square test unless otherwise noted; <sup>2</sup> For every 10-year increase; <sup>3</sup> For every \$10,000 increase; <sup>4</sup> For every 1% increase; <sup>5</sup> For every 5% increase; <sup>6</sup> For every 10% increase

## Conclusions

- Fewer than 3% of ID physicians in the US possess buprenorphine waivers, highlighting an urgent need to increase the workforce of ID physicians trained to prescribe buprenorphine.
- Education on OUD management should be integrated into ID training and continuing medical education
- Future studies should include qualitative research to better understand barriers to buprenorphine prescription among ID physicians and to inform interventions to close implementation gaps in OUD treatment

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