

# Determinants of Increased Travel Burden for Patients treated with Buprenorphine

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## Introduction & Background

### Geographic Disparities in Prescriber Access

The concentration of buprenorphine prescribers in urban and affluent areas imposes significant travel burden on patients from rural and socioeconomically disadvantaged backgrounds. Patients in Pennsylvania averaged a **median travel distance of 48.4 miles to see a prescriber**, and those traveling further were **29% less likely to complete a 6-month treatment course**.<sup>1</sup>

### Impact of Pharmacy Access to Treatment

Only a small percentage of pharmacies maintain a supply of buprenorphine. In Texas, only **42.2% of pharmacies** stocked a 1-week supply of buprenorphine in 2018<sup>2</sup>, and only **49% of pharmacies** dispensed it.<sup>3</sup>

### Purpose

This study sought to analyze changes in pharmacy travel distances after initiating buprenorphine for the treatment of opioid use disorder (OUD), and to identify demographic and geographic corollaries of increased travel distance.

### Method

### Study Design

This retrospective cohort study assesses changes in travel burden for patients accessing buprenorphine for OUD, using data from the **2021-2023 Integrated Humana Medical and Pharmacy dataset**.

### Sample

**Eligibility criteria:** confirmed OUD diagnosis, at least one buprenorphine prescription, and continuous insurance enrollment for 180-days prior to treatment.

**Exclusion criteria:** patients who received mail order prescriptions or traveled more than 150 miles to their pharmacy.

### Change in Travel Burden

**Operational Definition:** the average change in pharmacy travel distance in the 180 days before and 180 days after buprenorphine initiation

Nearly a quarter (24.5%) of patients switched pharmacies after starting buprenorphine, often leading to increased travel distances.



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Table 1. Demographics

	Change in Travel Distance			Total (N=5803)	P-value
	Decrease (N=2130)	Increase (N=2258)	No Change (N=1415)		
<b>SEX, n (%)</b>					0.1012
F	1054 (49.48%)	1082 (47.92%)	640 (45.23%)	2776 (47.84%)	
M	1076 (50.52%)	1175 (52.04%)	775 (54.77%)	3027 (52.16%)	
<b>Region, n (%)</b>					<.0001 <sup>1</sup>
Midwest	335 (15.73%)	290 (12.84%)	219 (15.48%)	844 (14.54%)	
Northeast	114 (5.35%)	114 (5.05%)	97 (6.86%)	325 (5.60%)	
South	1431 (67.18%)	1635 (72.41%)	889 (62.83%)	3955 (68.15%)	
West	250 (11.74%)	219 (9.70%)	210 (14.84%)	679 (11.70%)	
<b>Population Density, n (%)</b>					<.0001 <sup>1</sup>
Rural	384 (18.03%)	492 (21.79%)	252 (17.81%)	1128 (19.44%)	
Suburban	588 (27.61%)	683 (30.25%)	465 (32.86%)	1736 (29.92%)	
Urban	1158 (54.37%)	1083 (47.96%)	698 (49.33%)	2939 (50.65%)	
<b>Race, n (%)</b>					<.0001 <sup>1</sup>
Black	177 (8.31%)	176 (7.79%)	80 (5.65%)	433 (7.46%)	
Other	453 (21.27%)	519 (22.98%)	233 (16.47%)	1205 (20.77%)	
White	1500 (70.42%)	1563 (69.22%)	1102 (77.88%)	4165 (71.77%)	

<sup>1</sup>Chi-Square p-value;

## Demographic Factors Influencing Increased Travel Burden

- Among these patients who filled buprenorphine prescriptions at a different set of pharmacies, 59.7% experienced an increase in travel distance while 39.8% saw a decrease. Patients who switched pharmacies and experienced an increase in travel distance had a mean increase of 13.0 miles (SD: 20.3) with a median of 5.1 miles and a 90th percentile increase of 33.5 miles.
- Black and rural patients were more likely to travel further to access buprenorphine than other patients.

## Consequences of Increased Travel Burden on Adherence

The study demonstrates that the increased travel burden disrupts pharmacy relationships and threatens treatment adherence, as prolonged travel can deter patients from fulfilling their prescriptions. The variability in travel distance shows an urgent need to address these systematic barriers to improved outcomes for patients with OUD.

## Importance of Addressing Social Determinants for Health Equity

This research underscores the need for further investigation into how social determinants of health influence access to necessary treatments like buprenorphine. It advocates for policy changes that ensure equitable access to medication for all individuals with OUD, particularly historically disadvantaged populations.

## Citations

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