

Investigating the Characteristics Associated with Prescribed Opioid Use in U.S. Adults with Long COVID.

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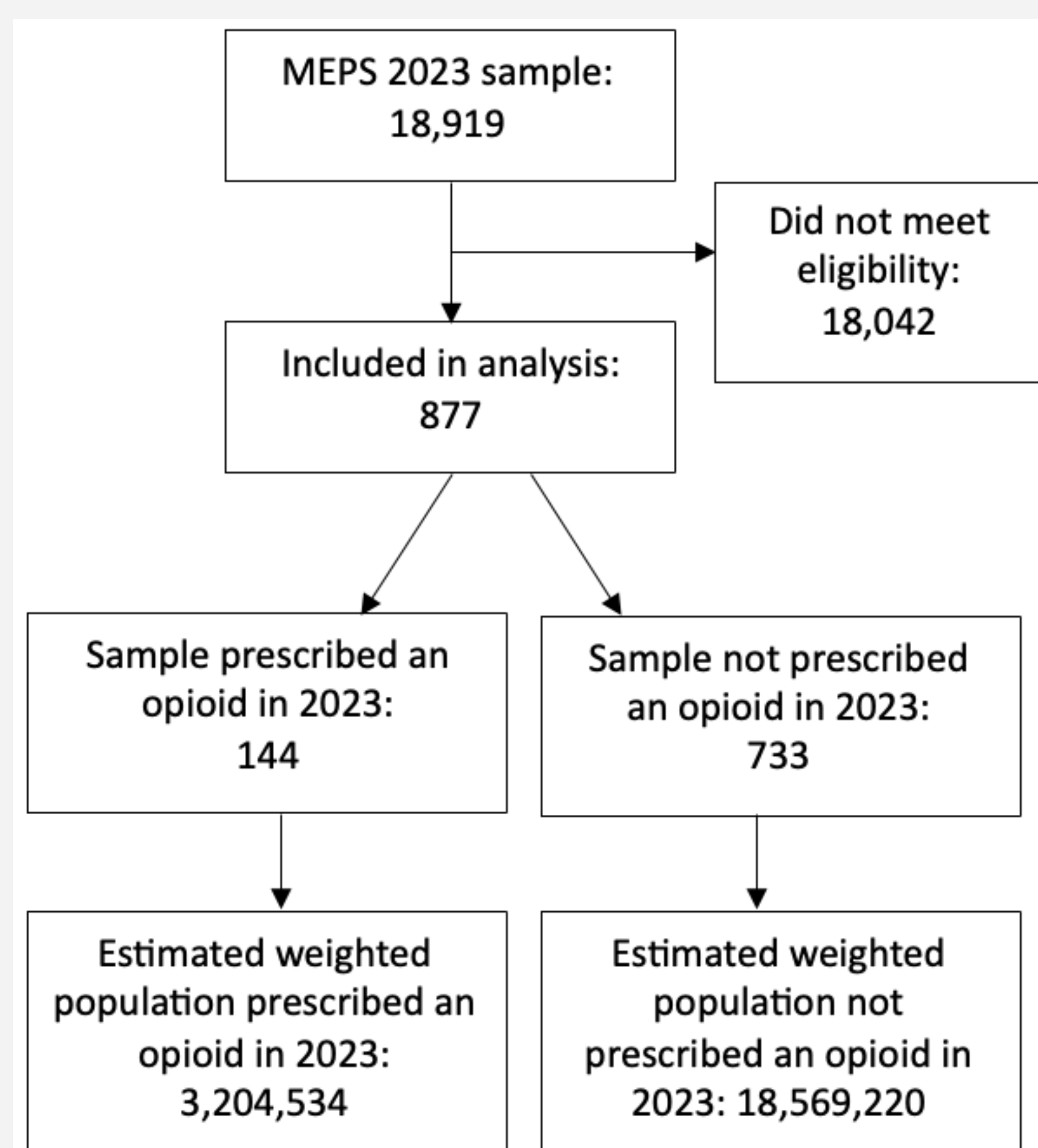
INTRODUCTION

- There is currently no consensus on how to best manage pain in individuals with Long COVID. Early evidence suggests that some patients are being treated with opioids. Yet the characteristics associated with prescribed opioid use in United States (U.S.) adults with Long COVID are unknown.
- The objective of this study was to investigate the characteristics associated with prescribed opioid use in this population.

METHODS

- This cross-sectional analysis included U.S. adults with Long COVID in 2023, using data from the 2023 Medical Expenditure Panel Survey and its prescribed medication records.
- Associations between various independent variables (Table 1) and the dependent variable (prescribed opioid use versus no opioid use) were examined using a multivariable logistic regression model developed in SAS.
- The data structure was preserved, weighting was conducted for national representativeness, and a significance threshold of 0.05 was used.

FLOWCHART



RESULTS

Table 1. Demographics of US adults with Long Covid prescribed versus not prescribed opioids.

Characteristic		Prescribed Opioid		No Prescribed Opioid		p
		%	95% CI	%	95% CI	
Age	65+	22.8	15.1 30.4	23.3	19.4 27.2	0.08
	40-64	59.4	48.8 70.0	48.1	43.2 53.0	
	18-39	17.8	9.1 26.5	28.6	24.1 33.2	
Sex	Male	40.0	29.6 50.4	38.6	34.7 42.5	0.79
	Female	60.0	49.6 70.4	61.4	57.5 65.3	
Race	White	81.6	72.3 91.0	82.2	78.7 85.8	0.12
	Black	7.6	2.7 12.4	8.6	6.3 10.9	
	Asian	1.2	0.0 3.0	4.4	2.1 6.8	
	Other/multiple	9.6	1.2 18.1	4.7	2.5 6.9	
Ethnicity	Hispanic	14.5	6.2 22.8	15.1	11.6 18.7	0.88
	Not Hispanic	85.5	77.2 93.8	84.9	81.3 88.4	
Marital	Married	46.2	35.5 56.8	55.3	50.5 60.0	0.14
	Not married	53.8	43.2 64.5	44.7	40.0 49.5	
Education	≤ high school	46.3	35.3 57.4	39.2	35.1 43.4	0.21
	> high school	53.7	42.6 64.7	60.8	56.6 64.9	
Employment	Employed	49.7	37.8 61.6	64.3	59.4 69.2	0.01
	Unemployed	50.3	38.4 62.2	35.7	30.8 40.6	
Income	Poor/low	37.7	28.6 46.8	25.6	21.8 29.4	0.01
	Middle/high	62.3	53.2 71.4	74.4	70.6 78.2	
Insurance	Any private	67.8	58.3 77.3	68.1	63.6 72.7	0.75
	Public only	30.4	21.2 39.7	28.6	24.3 32.8	
	Uninsured	1.7	0.0 5.1	3.3	1.5 5.2	
Chronic conditions	2+	80.5	71.3 89.7	66.0	61.7 70.3	0.02
	<2	19.5	10.3 28.7	34.0	29.7 38.3	
Health	Excellent/good	68.6	58.9 78.4	76.9	72.3 81.4	0.11
	Fair/poor	31.4	21.6 41.1	23.1	18.6 27.7	
Mental health	Excellent/good	81.2	72.1 90.2	81.8	78.3 85.3	0.90
	Fair/poor	18.8	9.8 27.9	18.2	14.7 21.7	
Functional limitation	Yes	44.2	32.8 55.6	22.3	18.4 26.1	<0.01
	No	55.8	44.4 67.2	77.7	73.9 81.6	
Pain interference	Quite/extreme	39.8	28.7 51.0	12.5	9.8 15.2	<0.01
	Little/moderate	36.2	25.7 46.7	44.9	40.5 49.4	
	None	24.0	13.2 34.7	42.5	37.7 47.3	
Exercise	Yes	43.3	32.8 53.8	49.5	45.1 54.0	0.28
	No	56.7	46.2 67.2	50.5	46.0 54.9	
Smoking	Nonsmoker	93.0	87.9 98.1	90.5	88.0 93.1	0.40
	Smoker	7.0	1.9 12.1	9.5	6.9 12.0	
Covid-19 vaccine	Yes	78.7	70.7 86.6	82.0	77.8 86.3	0.37
	No	21.3	13.4 29.3	18.0	13.7 22.2	

RESULTS

Table 2. Characteristics associated with prescribed opioid use (versus no opioid use) among US adults with Long Covid.

Characteristic	Odds Ratio	95% CI	
Age 65+ vs. 18-39	0.874	0.369	2.071
Age 40-64 vs. 18-39	1.523	0.766	3.031
Sex male vs. female	1.013	0.651	1.575
Race White vs. other/multiple	0.786	0.307	2.011
Race Black vs. other/multiple	0.532	0.161	1.755
Race Asian vs. other/multiple	0.421	0.057	3.095
Hispanic vs. not Hispanic	0.630	0.260	1.529
Married vs. not married	0.889	0.522	1.513
≤ high school vs. > high school education	1.140	0.688	1.887
Employed vs. unemployed	0.790	0.446	1.400
Poor/low vs. middle/high income	1.771	1.039	3.019
Any private insurance vs. uninsured	2.208	0.315	15.452
Public only insurance vs. uninsured	1.556	0.207	11.693
2+ vs. <2 chronic conditions	1.669	0.779	3.574
Excellent/good vs. fair/poor health	1.041	0.616	1.758
Excellent/good vs. fair/poor mental health	1.766	0.799	3.903
Functional limitations yes vs. no	1.484	0.770	2.858
Quite/extreme vs. no pain interference	4.251	2.068	8.738
Moderate/little vs. no pain interference	1.186	0.627	2.243
Exercise yes vs. no	1.154	0.650	2.050
Non-smoker vs. smoker	2.674	1.155	6.211
Covid-19 vaccine vs. no vaccine	0.901	0.497	1.631

CONCLUSION

- The characteristics associated with prescribed opioid use among U.S. adults with Long COVID in this study contribute to our understanding of managing and treating Long COVID.
- Further work is needed to establish if opioids are being used for Long COVID or another condition, to determine the type(s) and dose(s) of opioid(s) used, and to investigate if opioids are the most appropriate option for Long COVID.