



Pharmacy Availability of Buprenorphine for Opioid Use Disorder Treatment in the US

Scott G. Weiner, MD, MPH; Dima M. Qato, PharmD, MPH, PhD; Jeremy Samuel Faust, MD, MS; Brian Clear, MD

Introduction

Deaths from opioid-related overdose have remained at epidemic levels for more than a decade without a clear solution in reach. Buprenorphine is a US Food and Drug Administration–approved medication for opioid use disorder (OUD) that can be prescribed in an outpatient setting, including telehealth, and dispensed at retail pharmacies.¹ Despite this, there are some reports that patients may encounter barriers in filling this medication at their local pharmacy.²

In this cross-sectional study, we analyzed data from a telehealth OUD treatment provider group currently operating in 32 states to assess the extent of buprenorphine availability at local pharmacies. We also sought to identify states and specific pharmacy chains where patients with OUD might have difficulty filling buprenorphine prescriptions.

Methods

This study was deemed exempt from review, with a waiver of informed consent, by WCG IRB because it was not human participant research. The study followed the [STROBE](#) reporting guideline. We performed a retrospective analysis of an internally maintained administrative log of pharmacy calls between January 1 and December 31, 2022. Patients who were newly enrolled in the telehealth program were asked their preferred pharmacy by clinical support staff, who then used a standardized script (eMethods in [Supplement 1](#)) in which that pharmacy's staff was asked about the current availability of different strengths and forms (tablet or film) of buprenorphine/naloxone at their store. For analysis, this was operationalized to a binary yes or no if at least 1 formulation was available. Because staff do not routinely call back pharmacies that previously reported no stock, to reduce bias, only the first call in 2022 was included and no pharmacy that was called in 2021 was included. Pharmacy names, addresses, and chain vs independent classification were based on the National Council for Prescription Drug Programs database. States with more than 100 calls and pharmacy chains in the 5 states with the most pharmacies called were reported separately. Data were analyzed with JMP, version 16. Two-sided $P < .05$ was considered significant.

Results

There were 5283 unique pharmacies called on behalf of 3779 patients, of which 3058 (57.9%) reported stock. **Table 1** shows availability by state and subdivided into chain and independent pharmacy types. Chains were more likely to report stock compared with independent pharmacies (2631 of 4270 [61.6%] vs 415 of 917 [45.3%]; $P < .001$), and there was variation between states, ranging from 37.1% (281 of 757; Florida) to 83.9% (146 of 174; Washington). **Table 2** shows stock by pharmacy brand and in selected states, with rates ranging from 31.2% (57 of 183; Publix) to 82.5% (33 of 40; H-E-B).

+ Supplemental content

Author affiliations and article information are listed at the end of this article.

Discussion

This large-scale study demonstrated limitations in buprenorphine availability at retail pharmacies at the time of a patient’s need. Only 57.9% of pharmacies reported buprenorphine/naloxone in stock at the time of request, with substantial differences observed among states and pharmacy chains in the US. Limitations include restriction to a limited number of states and the inability to ascertain whether the pharmacy could order the medication in a timely manner, whether the pharmacy had enough stock to cover the patient’s entire prescription, the reason why the pharmacy reported no stock, or whether the pharmacy subsequently stocked buprenorphine after the first call.

Table 1. Availability of Buprenorphine at Retail Pharmacies by State and Pharmacy Type, 2022

State	Pharmacies reporting stock, No./total No. called (%)			P value ^a
	Overall	Chain	Independent	
Overall	3058/5283 (57.9)	2631/4270 (61.6)	415/917 (45.3)	<.001
Florida	281/757 (37.1)	228/602 (37.9)	50/136 (36.8)	.81
California	330/705 (46.8)	283/567 (49.9)	45/126 (35.7)	.004
Michigan	283/536 (52.8)	222/420 (52.9)	59/105 (56.2)	.54
Texas	351/524 (67.0)	322/468 (68.8)	28/53 (52.8)	.02
North Carolina	312/461 (67.7)	261/350 (74.6)	50/101 (49.5)	<.001
Pennsylvania	167/276 (60.5)	156/245 (63.7)	10/29 (34.5)	.002
Virginia	130/212 (61.3)	118/168 (70.2)	11/38 (29.0)	<.001
Illinois	145/196 (74.0)	135/176 (76.7)	10/18 (55.6)	.049
Mississippi	84/190 (44.2)	54/97 (55.7)	30/82 (36.6)	.01
Washington	146/174 (83.9)	127/152 (83.6)	19/22 (86.4)	.74
Arizona	127/168 (75.6)	121/154 (78.6)	6/13 (46.2)	.01
Maryland	64/150 (42.7)	57/126 (45.2)	7/20 (35.0)	.39
Colorado	93/137 (67.9)	86/122 (70.5)	7/14 (50.0)	.12
Alabama	62/131 (47.3)	41/74 (55.4)	21/50 (42.0)	.14
Oregon	90/117 (76.9)	84/108 (77.8)	6/9 (66.7)	.44
Wisconsin	87/109 (79.8)	78/98 (79.6)	9/11 (81.8)	.86
Other ^b	306/440 (69.6)	258/343 (75.2)	47/90 (52.2)	<.001

^a P values are from χ^2 analysis comparing availability at chain vs independent pharmacies; 96 pharmacies that did not have a chain code indicating 1 of these 2 categories were excluded.

^b Other indicates those with fewer than 100 pharmacies called: Iowa, 55; Maine, 43; New Mexico, 42; Nebraska, 41; Connecticut, 38; Delaware, 33; Montana, 29; Minnesota, 22; North Dakota, 18; Wyoming, 18; Nevada, 12; South Carolina, 12; Vermont, 11; Massachusetts, 10; New York, 10; Tennessee, 10; Idaho, 6; West Virginia, 6; Georgia, 5; Indiana, 4; Kentucky, 4; Oklahoma, 4; Louisiana, 3; Missouri, 2; New Hampshire, 1; and Ohio, 1.

Table 2. Availability of Buprenorphine at Retail Pharmacies by Parent Organization and Select States, 2022

Parent organization	Pharmacies reporting stock, No./total No. called (%)					
	Overall	California	Florida	Michigan	North Carolina	Texas
CVS	750/1256 (59.7)	119/230 (51.7)	74/196 (37.8)	34/102 (33.3)	109/136 (80.2)	108/153 (70.6)
Walgreens	820/1167 (70.3)	63/108 (58.3)	82/160 (51.3)	65/96 (67.7)	91/113 (80.5)	94/130 (72.3)
Walmart	206/354 (58.2)	12/37 (32.4)	19/52 (36.5)	10/15 (66.7)	33/45 (73.3)	27/48 (56.3)
Rite-Aid	197/337 (58.5)	43/92 (46.7)	NA	51/91 (56.0)	NA	NA
Publix	57/183 (31.2)	NA	41/157 (26.1)	NA	7/13 (53.9)	NA
Safeway	92/132 (69.7)	12/22 (54.6)	NA	NA	NA	NA
Kroger	50/90 (55.6)	NA	NA	10/30 (33.3)	NA	25/36 (69.4)
Meijer	33/50 (66.0)	NA	NA	29/43 (67.4)	NA	NA
Costco	31/47 (66.0)	8/12 (66.7)	NA	NA	NA	NA
H-E-B	33/40 (82.5)	NA	NA	NA	NA	33/40 (82.5)
Harris	19/34 (55.9)	NA	NA	NA	12/22 (54.6)	NA
Sav-On	18/31 (58.1)	3/10 (30)	NA	NA	NA	NA
Brookshires	16/29 (55.2)	NA	NA	NA	NA	16/28 (57.1)
Ralphs	4/14 (28.6)	3/13 (23.1)	NA	NA	NA	NA
Vons	3/13 (23.1)	3/13 (23.1)	NA	NA	NA	NA
Other	729/1506 (48.1)	64/168 (38.1)	65/192 (33.9)	84/159 (52.8)	60/132 (45.5)	48/89 (53.9)

Abbreviation: NA, not applicable.

These findings from many states and pharmacies supplement prior secret shopper studies that suggest pharmacy-level barriers in accessing buprenorphine.² Dispensing regulations imposed by federal and state governments may be contributing to lack of access at retail pharmacies.³ Although the number of prescribers willing to provide buprenorphine was identified as a barrier to this evidence-based OUD treatment in the past,⁴ pharmacy availability of buprenorphine may be an additional barrier, particularly in the post-COVID era in which telehealth can be used for patients in areas with few or no prescribers.⁵ The government's recent elimination of a special waiver needed to prescribe buprenorphine to increase access⁶ also highlights the importance of pharmacy availability.

ARTICLE INFORMATION

Accepted for Publication: April 18, 2023.

Published: May 26, 2023. doi:10.1001/jamanetworkopen.2023.16089

Open Access: This is an open access article distributed under the terms of the [CC-BY-NC-ND License](#). © 2023 Weiner SG et al. *JAMA Network Open*.

Corresponding Author: Scott G. Weiner, MD, MPH, Bicycle Health Medical Group, 68 Harrison Ave, Ste 600, Boston, MA 02111 (scott.weiner@bicyclehealth.com).

Author Affiliations: Bicycle Health Inc, Boston, Massachusetts (Weiner, Clear); Program on Medicines and Public Health, USC Alfred E. Mann School of Pharmacy and Pharmaceutical Sciences, University of Southern California, Los Angeles (Qato); Department of Emergency Medicine, Brigham and Women's Hospital, Boston, Massachusetts (Faust).

Author Contributions: Dr Weiner had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: All authors.

Acquisition, analysis, or interpretation of data: Weiner, Qato, Faust.

Drafting of the manuscript: Weiner, Qato, Faust.

Critical revision of the manuscript for important intellectual content: Qato, Faust, Clear.

Statistical analysis: Weiner.

Obtained funding: Clear.

Administrative, technical, or material support: Clear.

Supervision: Weiner, Clear.

Conflict of Interest Disclosures: Dr Weiner reported receiving personal fees from Vertex Pharmaceuticals, Inc and Cessation Therapeutics, Inc and receiving grants from the National Institute on Drug Abuse, the Foundation for Opioid Response Efforts, and the Elevance Health Foundation outside the submitted work. Dr Qato reported receiving personal fees from Public Citizen's Health Research Group and receiving grants from the National Institute on Aging, the National Community Pharmacists Association, and the Robert Wood Johnson Foundation outside the submitted work. No other disclosures were reported.

Data Sharing Statement: See [Supplement 2](#).

REFERENCES

1. Department of Health and Human Services. Practice guidelines for the administration of buprenorphine for treating opioid use disorder. 2021. Accessed April 15, 2023. <https://www.govinfo.gov/content/pkg/FR-2021-04-28/pdf/2021-08961.pdf>
2. Kazerouni NJ, Irwin AN, Levander XA, et al. Pharmacy-related buprenorphine access barriers: an audit of pharmacies in counties with a high opioid overdose burden. *Drug Alcohol Depend*. 2021;224:108729. doi:10.1016/j.drugalcdep.2021.108729
3. Qato DM, Watanabe JH, Clark KJ. Federal and state pharmacy regulations and dispensing barriers to buprenorphine access at retail pharmacies in the US. *JAMA Health Forum*. 2022;3(8):e222839. doi:10.1001/jamahealthforum.2022.2839
4. Beetham T, Saloner B, Wakeman SE, Gaye M, Barnett ML. Access to office-based buprenorphine treatment in areas with high rates of opioid-related mortality: an audit study. *Ann Intern Med*. 2019;171(1):1-9. doi:10.7326/M18-3457

5. Frost MC, Zhang L, Kim HM, Lin LA. Use of and retention on video, telephone, and in-person buprenorphine treatment for opioid use disorder during the COVID-19 pandemic. *JAMA Netw Open*. 2022;5(10):e2236298. doi:10.1001/jamanetworkopen.2022.36298

6. Milgram A. Letter from US Department of Justice Drug Enforcement Administration. January 12, 2023. Accessed April 15, 2023. <https://www.deadiversion.usdoj.gov/pubs/docs/A-23-0020-Dear-Registrant-Letter-Signed.pdf>

SUPPLEMENT 1.

eMethods

SUPPLEMENT 2.

Data Sharing Statement