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Characteristics and health service use of Medicaid-insured individuals filling naloxone under a standing order in Louisiana

Olivia K. Sugarman* [Postdoctoral Fellow],

Johns Hopkins Bloomberg School of Public Health, Department of Health Policy and Management, Baltimore, MD; Program Manager, Louisiana State University Health Sciences Center - New Orleans, School of Medicine, Section of Community and Population Medicine, New Orleans, LA

Jarrod Breithaupt [Health Data Analyst],

University of Louisiana, Monroe, College of Pharmacy, Office of Outcomes Research and Evaluation, Monroe, LA

Xiaojun Wang [Senior Analyst],

University of Louisiana, Monroe, College of Pharmacy, Office of Outcomes Research and Evaluation, Monroe, LA

Marcus A. Bachhuber [Associate Professor of Clinical Medicine]

Louisiana State University Health Sciences Center - New Orleans, School of Medicine, Section of Community and Population Medicine, New Orleans, LA

Abstract

Background: Naloxone distribution is a key intervention to reduce opioid overdose deaths. On January 23, 2017, Louisiana implemented a standing order that permits pharmacies to dispense naloxone to patients without a patient-specific prescription.

Objectives: To examine the characteristics and health service use of Louisiana Medicaid members filling naloxone under the standing order.

Methods: We conducted a retrospective cohort study of Louisiana Medicaid members from January 23, 2017 to December 31, 2019. We extracted fee-for-service claims and managed care encounters for naloxone dispensed under the standing order.

Results: Overall, there were 2053 naloxone fills by 1912 unique individuals. The total number of naloxone fills increased from 22 in 2017 to 1218 in 2019. Most members ($n = 1,586$, 83.0%) received any type of health service and 20.4% ($n = 391$) received an opioid-related health service in the 30 days prior to filling naloxone. Additionally, 12.7% ($n = 242$) of members had received medication for opioid use disorder (MOUD), and 42.6% ($n = 815$) filled a prescription opioid analgesic within the 60 days prior to filling naloxone. Nineteen members (1.0%) had an emergency department visit for overdose within 90 days after filling naloxone.

*Correspondence: Olivia K. Sugarman, PhD, MPH, 624 N Broadway, 3rd floor. okacsits@gmail.com (O.K. Sugarman).

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Conclusion: Standing orders play an important role in providing access to naloxone, even among Medicaid members who had recent encounters with health care providers. We identified multiple opportunities to improve naloxone prescribing among providers caring for Medicaid-insured people who use opioids, including prescribers of opioid analgesics or MOUD.

In 2019, Louisiana ranked 16th in the United States for drug overdose deaths, at 28.3 per 100,000 people compared with the U.S. average of 21.6 per 100,000.¹ Access to naloxone, an opioid antagonist that reverses the effects of opioids, is a crucial and recommended intervention to reduce mortality from drug overdoses involving opioids.²⁻⁵ Previous studies show that state policies enhancing naloxone access, particularly standing orders and policies that allow pharmacists to directly dispense naloxone, are associated with increases in access,⁶⁻⁹ uptake,⁶⁻⁸ and reduced drug overdose deaths involving opioids.⁹

One policy to increase access to naloxone is standing orders, which are blanket physician orders that permit pharmacies to dispense naloxone to patients without a patient-specific prescription.¹⁰ As of 2019, 35 states had at least some legislation in place for naloxone dispensing without a patient-specific prescription.¹⁰ Louisiana's standing order for naloxone was issued on January 23, 2017.^{11,12}

While previous research has focused on the broad impacts of policies designed to increase access to naloxone, most often at the pharmacy level, existing studies have not assessed both the characteristics and recent health service use of Medicaid members who fill naloxone under a standing order.^{6,8,9} Because filling naloxone under a standing order implies that individuals did not receive a naloxone prescription from any provider, an analysis of naloxone fills under a standing order can reveal important gaps in naloxone prescribing. Further, there are also no similar studies or evaluations of Medicaid member naloxone uptake in Deep South states. Given Medicaid's central role in providing coverage for people at risk for opioid overdose,¹³⁻¹⁷ analyses of Medicaid-insured individuals who fill naloxone under a standing order can inform existing and future state policies to enhance naloxone access and uptake among Medicaid members.

In this study, we examined naloxone dispensed under the standing order to Louisiana Medicaid members. Our objectives were to a) determine the overall number of naloxone fills among Medicaid members under the standing order, b) assess characteristics of Louisiana Medicaid members who filled standing order naloxone, and c) analyze whether members received certain health services prior to and after filling naloxone under the standing order.

Methods

We conducted a retrospective cohort study of Louisiana Medicaid members from January 23, 2017 to December 31, 2019. We extracted members who had filled naloxone under the standing order, defined as the presence of a paid fee-for-service claim or managed care encounter for naloxone where the prescriber was the physician who authorized the standing order. The physician authorizing the standing order did not directly prescribe naloxone in any other context during the study period. Thus, naloxone filled with this physician as the prescriber was, by definition, under the standing order. Each member was represented in the

dataset once. If a member filled naloxone under the standing order more than once, we only included the first fill.

We did not evaluate copays or out-of-pocket costs for members as we did not consider price as a limiting factor for standing naloxone fills. Naloxone copays for Medicaid members were no more than 3 dollars and it is estimated that more than half of members are exempt from paying copays as specified in federal regulations.¹⁸

For member characteristics, we extracted demographic information (age, sex, and race/ethnicity), residence area type (rural/urban), and the number of naloxone fills within the study period.

For health care use, we extracted information on health services within 30 days prior to filling naloxone because it reflects a reasonable proximity to service use. We identified whether there was any health care service (i.e., inpatient, outpatient, emergency department (ED), behavioral health, etc.), any primary care visit, any behavioral health service, any ED visit (treat and release), and any inpatient hospitalization. All health care service interactions were coded dichotomously (yes, no). Further, we identified whether these services were opioid-related using established diagnosis codes.¹⁹

Next, we extracted information on medication for opioid use disorder (MOUD) treatment and prescription opioid analgesics, including the maximum daily morphine milligram equivalents (MME), within the 60 days prior to filling naloxone. For MOUD and prescription opioid analgesics, we chose a 60-day period because that definition is often used when analyzing retention in treatment.^{20,21} Therefore, these members could be considered active in MOUD treatment. Of note, methadone treatment for opioid use disorder was not a Medicaid-covered service until January 2020 (after the study period) and so no data were available on its utilization.

Finally, we extracted whether members went to an ED for an opioid-related adverse event or poisoning (overdose) within 90 days after filling naloxone using established diagnosis codes.²² For opioid-related ED visits, we chose a 90-day period to reflect a more extended window when naloxone may be used relative to an opioid-related ED visit. The 90-day time period is consistent with a previous study that assessed ED readmissions after an index opioid-related ED visit.²³

Analysis

First, we tabulated the number of naloxone fills by month during the study period. Next, we conducted descriptive statistics of member characteristics and health service utilization before and after the naloxone fill. All analyses were completed using SAS 9.4 (SAS Institute, Cary NC).

Institutional review boards at Louisiana State University Health Sciences Center - New Orleans and the Louisiana Department of Health determined this evaluation to be nonhuman subject research.

Results

Overall, there were 2053 naloxone fills among 1912 individuals under the standing order from January 2017 through December 2019. Although the standing order was authorized in January 2017, April 2017 was the first month that naloxone was filled under the standing order. The total number of naloxone fills from the second to fourth quarters of 2017 was low (n = 22 total) and increased in 2018 (n = 813 total) and in 2019 (n = 1218 total; Supplemental Figure).

Of members filling naloxone, most (n = 1,800, 94.1%) members filled only once, were female (n = 1,204, 63.0%), of Unknown Non-Latinx race and ethnicity (n = 831, 43.5%), and filled the naloxone in an urban pharmacy (n = 1,213, 63.4%; Table 1). Median member age was 41.3 years (interquartile range [IQR] = 32.5–52.4 years).

Of all members filling naloxone, 83.0% (n = 1586 members) had any type of health service use in the 30 days prior to filling the naloxone. Over half (n = 1045, 54.7%) had a primary care visit and 23.5% (n = 449) had a behavioral health service. For opioid-related health services, 20.5% (n = 391) had any health system contact and 10.7% (n = 204) had a behavioral health service (Table 2).

In the 60 days prior to filling naloxone, 242 members (12.7%) received MOUD (buprenorphine or extended-release injectable naltrexone) and 815 members (42.6%) filled a prescription opioid analgesic, with a median maximum daily MME of 37.5 (IQR = 20.0–67.5 MME). Nineteen members (1.0% of 1912) had an ED visit for an overdose within the 90 days after filling naloxone (Table 2).

Discussion

In this analysis of naloxone filled by Medicaid members under a standing order, we found that filling of naloxone increased slowly. Most standing order naloxone fills to Medicaid members were completed in urban pharmacies. This finding may reflect previously reported urban-rural disparities in which rural communities observe higher proportions of fatal and nonfatal opioid overdoses, yet lack access to health services including naloxone and MOUD.^{24–26} Our finding may also present an opportunity to further engage patients, pharmacists, and other health care providers in rural Louisiana settings about naloxone and the standing order, especially among Medicaid members. Additional analyses of pharmacy-level trends, specifically standing order naloxone dispensation frequency and the number of repeated visits by individual members to each pharmacy, are needed to determine geographical gaps in pharmacy naloxone dispensation.

Women were most likely to complete a standing order through Medicaid compared to men. This might be explained by previous trends that women are more likely to be prescribed, fill prescriptions, or use opioids for chronic pain²⁷ and thus might be more likely to fill naloxone as a safety measure. Given the limited scope of data available for this study, we could not conduct meaningful analyses of gender differences in Medicaid standing order naloxone fills. However, this finding merits further qualitative analyses of why gender differences in naloxone fills occurred in this population.

In addition, we found that a majority of Medicaid members who filled naloxone under Louisiana's standing order had recent contact with the health care system. We also found that approximately half of members filling naloxone under Louisiana's standing order had also been prescribed MOUD or prescription opioid analgesics. Altogether, our findings demonstrate that while increases in filling may be slow, a naloxone standing order plays an important role in facilitating naloxone access even for people who had recent contacts with the health care system outside of community pharmacies or are taking opioids.

We also found that there were few ED visits for opioid overdose within the 90 days after filling naloxone under the standing order. This result could indicate that members never used the naloxone, used naloxone and did not go to the ED, or that naloxone was filled or used for members' friends or family. Supplying naloxone to bystanders like friends and family members of high-risk members equips more community members with the means to reverse an opioid quickly, thus preventing overdose death. Further, while people at high risk of opioid overdose may have their own supply of naloxone from nonhealth care sources (e.g., community-based organizations), naloxone given to friends and family members can serve as a backup should the member exhaust their supply of naloxone.

Our study provides key insights for future efforts to improve naloxone availability and distribution. The majority of people in the study population had contact with the health care system and approximately 1 in 5 had received an opioid-related health care service prior to filling naloxone, which suggests that provider education is warranted. System-level interventions to increase naloxone prescribing could include establishing naloxone prescribing guidelines in all health care settings^{5,28} and electronic health record (EHR) alerts.^{28,29} Similarly, a substantial proportion of people had received prescriptions for MOUD or opioid analgesics suggesting that future interventions are needed to improve coprescribing naloxone with prescribed opioids such as preset naloxone orders within EHRs.^{28,30–32} Broadly, medical and behavioral health providers as well as pharmacists should be educated about naloxone use, dispensation policy, and availability.^{28,30,33} Pharmacists specifically may benefit from additional interventions³⁴ about offering or dispensing naloxone to patients at risk of overdose for the purpose of combatting barriers like stigma and negative attitudes, and negative perceptions of people at risk of overdose.^{35,36}

Limitations

This study has several limitations. First, while we identified paid claims and encounters for naloxone, we do not know if the member picked up the naloxone, as opposed to a family member or caregiver, for example. Second, we do not know if the naloxone was intended for use by the member or someone else. Third, we conducted no inferential analyses, thus results are specific to naloxone uptake among Louisiana Medicaid members and may not be generalizable to other populations or states. Finally, many records were missing race/ethnicity data, which limited analyses on study population characteristics.

Conclusion

Our findings from this statewide analysis suggest that pharmacists and standing orders play an important role in providing access to naloxone, even among Louisiana Medicaid members who already accessed the health care system. Further, we found that analyses of standing order naloxone fills among Medicaid members can reveal important gaps in naloxone prescribing in other settings. Overall, while naloxone filling rose among Louisiana Medicaid members, additional efforts to encourage naloxone prescribing, including coprescribing with MOUD and prescription opioid analgesics, are needed to further increase uptake and prevent opioid-related overdose deaths.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Biographies

Olivia K. Sugarman, PhD, MPH, Postdoctoral Fellow, Johns Hopkins Bloomberg School of Public Health, Department of Health Policy and Management, Baltimore, MD; Program Manager, Louisiana State University Health Sciences Center - New Orleans, School of Medicine, Section of Community and Population Medicine, New Orleans, LA

Jarrod Breithaupt, BBA, Health Data Analyst, University of Louisiana, Monroe, College of Pharmacy, Office of Outcomes Research and Evaluation, Monroe, LA

Xiaojun Wang, BA, BS, Senior Analyst, University of Louisiana, Monroe, College of Pharmacy, Office of Outcomes Research and Evaluation, Monroe, LA

Marcus A. Bachhuber, MD, MSHP, Associate Professor of Clinical Medicine, Louisiana State University Health Sciences Center - New Orleans, School of Medicine, Section of Community and Population Medicine, New Orleans, LA

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Key Points

Background:

- State policies enhancing naloxone access, such as standing orders, increase uptake of naloxone and are associated with significant reductions in fatal opioid overdoses.
- Standing orders are a key policy so that at-risk individuals can obtain naloxone when not prescribed by another provider.

Findings:

- The standing order was an important source of naloxone among people without naloxone prescriptions despite recent engagements with health care providers and revealed important intervention opportunities for pharmacists and provider education about coprescribing.
- Of Medicaid-insured individuals filling naloxone under the standing order in Louisiana, 80.3% received any type of health service and 20.4% received an opioid-related health service in the prior 30 days to filling naloxone.
- In addition, 12.7% filled a prescription for medication for opioid use disorder and 42.6% filled a prescription for an opioid analgesic in the prior 60 days

Table 1

Characteristics of Louisiana Medicaid members filling naloxone under the standing order, 2017 to 2019 (n = 1912)

Variable	n	%	Median (IQR)
Number of doses filled, per person	-	-	-
1	1800	94.1	-
2	95	5.0	-
3+	17	0.9	-
Age, years	-	-	41.3 (32.5–52.4)
Sex	-	-	-
Female	1204	63.0	-
Male	708	37.0	-
Race/Ethnicity	-	-	-
American Indian/Alaskan Native or Asian	10	0.52	-
Hispanic/Latinx, of any race	69	3.6	-
Black	231	12.1	-
Unknown/missing	831	43.5	-
White	757	39.6	-
Pharmacy location	-	-	-
Urban	1213	63.4	-
Rural	699	36.6	-

Abbreviation used: IQR, interquartile range.

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Use of health services among Louisiana Medicaid members filling naloxone under the standing order, by encounter type, 2017 to 2019 (n = 1912)

Table 2

Variable	Any n (%)	Opioid-related n (%)	Median (IQR)
Within 30 d prior to filling naloxone prescription			
Any health service contact	1586 (83.0)	391 (20.4)	-
Primary care	1045 (54.7)	132 (6.9)	-
Behavioral health services	449 (23.5)	204 (10.7)	-
Emergency department	436 (22.8)	25 (1.3)	-
Inpatient hospitalization	290 (15.2)	99 (5.2)	-
Within 60 d prior to filling naloxone prescription			
Medication for opioid use disorder ^a	-	242 (12.7)	-
Prescription opioid analgesic	-	815 (42.6)	-
Maximum daily morphine milligram equivalent	-		37.5 (20.0–67.5 mg)
Within 90 d after filling a naloxone prescription			
Emergency department visit for overdose	-	19 (1.0)	-

Notes. Some patients may have had multiple visits of different kinds within the 30 d prior to filling naloxone prescription. For members filling naloxone multiple times, the first prescription was used as the index prescription for this analysis.

^aIncludes buprenorphine or extended-release injectable naltrexone. Methadone was not covered by Louisiana Medicaid for substance use disorder treatment during the study period.