

Naloxone Use and Knowledge from Patients Treated for Opioid Use Disorder by Telehealth

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Research Objective

- Guidelines recommend that individuals who are at risk for overdose, including those who are in treatment for opioid use disorder (OUD), have naloxone available.
- In our practice, a large telehealth-only OUD treatment group, it is routine to co-prescribe a nasal naloxone rescue kit along with the first prescription for buprenorphine.
- It is not known the rate at which patients fill their naloxone prescription, their knowledge about naloxone, their use of naloxone, and – if not filled – why not.
- Understanding why a patient with OUD does not fill their naloxone prescription can inform providers of strategies to increase patient understanding and motivation in having access.



Study Design

- Anonymous survey to ascertain patient experiences with naloxone.
- Survey was open for a one-month period.
- All patients who had access to the program's phone app (n=17,899 individuals, of whom 12,887 were in active treatment) during the study period were invited to complete the anonymous online survey.



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Survey respondents' impressions and experiences with naloxone

	n	%
Do you know what naloxone is?		
Yes	693	98.9%
No	8	1.1%
Do you know how to administer naloxone?		
Yes	601	85.9%
No	99	14.1%
Have you ever used naloxone?		
Yes, on myself	23	3.3%
Yes, on someone else	125	17.9%
Yes, on both myself and someone else	29	4.1%
No	523	74.7%
Have you taken a naloxone training course?		
Yes	161	23.0%
No	540	77.0%
Did you receive a prescription for naloxone upon enrollment?		
Yes	533	76.3%
No	166	23.7%
Did you fill the prescription for naloxone?		
Yes	382	71.7%
No	151	28.3%
If not filled, why not?		
Too expensive	36	23.3%
Patient didn't think it was needed	54	36.5%
Already have it	55	37.2%
No pharmacy availability	3	2.0%
If filled, did insurance pay for part of it?		
Yes	321	84.9%
No	57	15.1%
If filled, was the naloxone used?		
Yes	30	7.9%
No	352	92.1%
Was the naloxone used for the patient or someone else?		
Patient	11	35.5%
Someone else	20	64.5%

Multivariate logistic regression to determine the odds of filling naloxone prescription by patient knowledge of how to use it, adjusted for demographics, excluding patients who reported that already had it.

	Odds Ratio	Odds Ratio Confidence Interval	p-value
Know How to Administer Naloxone			
No	reference		
Yes	2.63	1.35 - 5.00	0.004
Age			
18 - 49 years old	reference		
50 years old or older	1.25	0.71 - 2.29	0.457
Ethnicity			
Not Hispanic or Latino	reference		
Hispanic or Latino	1.39	0.65 - 3.36	0.428
Gender			
Male	reference		
Female	1.56	0.98 - 2.51	0.064
Race			
White	reference		
Not White	1.82	0.83 - 4.61	0.167



Principal Findings

- 701 surveys were completed (4% of all patients, 5% of active patients).
- 386 (55%) female.
- 617 (89%) White, 43 (6%) Black, 35 (5%) other; 75 (11%) Hispanic or Latino.
- Primary opioid used prior to treatment:
 - Prescription opioids: 478 (69%)
 - Fentanyl or heroin: 203 (29%)
- Nearly all patients (99%) know what naloxone is, and the majority (86%) know how to administer it. 72% of patients who remembered receiving a prescription filled it. The largest barriers to filling naloxone were:
 - They already had it (37%)
 - Did not think it was needed (37%)
 - Too expensive (23%)
- When filled, the naloxone was used by 30 patients (8%).
- Multivariable analysis: Adjusting for demographics, patients who know how to use naloxone are more likely to fill the prescription (OR 2.6).

Key Limitations: Low response rate; respondents may not be representative of the overall patient population.



Conclusions

- When prescribed naloxone, patients treated in a telehealth treatment program fill the prescription 72% of the time, and when it is filled, 8% use the naloxone.
- About 14% reported that they did not know how to use it and only about a quarter of patients had taken a naloxone training course.
- Education is needed to teach patients how to administer naloxone and inform those at risk of the benefits of having naloxone on-hand.
- Cost remains a barrier to obtaining naloxone.

1. U.S. Department of Health and Human Services. U.S. Surgeon General's Advisory on Naloxone and Opioid Overdose. Available at <https://www.hhs.gov/surgeongeneral/reports-and-publications/addiction-and-substance-misuse/advisory-on-naloxone/index.html>.

2. O'Donnell J, Gladden RM, Mattson CL, Hunter CT, Davis NL. Vital Signs: Characteristics of Drug Overdose Deaths Involving Opioids and Stimulants - 24 States and the District of Columbia, January-June 2019. MMWR Morb Mortal Wkly Rep. 2020;69(35):1189-1197. Published 2020 Sep 4. doi:10.15585/mmwr.mm6935a1

3. Butelman ER, Huang Y, Epstein DH, et al. Overdose mortality rates for opioids and stimulant drugs are substantially higher in men than in women: state-level analysis. Neuropsychopharmacology. 2023;48(11):1639-1647. doi:10.1038/s41386-023-01601-8