

Naloxone Availability in Community Pharmacies, 2019

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Abstract

Background: Increasing the availability of naloxone among friends and family of past and present opioid users is a vitally important mission to reduce the occurrence of opioid-related overdose deaths. The purpose of this study was to determine the availability of naloxone in independent pharmacies in Georgia. Secondary objectives include determining pharmacists' knowledge regarding the standing order and ability to counsel regarding naloxone.

Methods: A cross-sectional study was conducted over a period of ten months. The study was population based and was conducted at all independent pharmacies in the state of Georgia. All independent pharmacies in the state of Georgia were contacted and asked the below questions with a 96% response rate (n=520).

Results: 558 independent, retail pharmacies were called, with a 96% response rate (n=520 pharmacies). Two hundred-twenty pharmacies reported having naloxone in stock. Of the 335 pharmacists asked, 174 (51.9%) incorrectly said that a prescription was required. The mean (SD) cash price was \$148.02 (27.40), with a range of \$0 to \$300. Of 237 pharmacists asked who had naloxone in stock or who stated they could get naloxone in stock, 212 stated that they could, 8 stated they could not, and 17 said that they possibly could or were unsure how to do it.

Conclusions: This study provided insight into the limited availability of naloxone at independent retail pharmacies in Georgia after the standing order was issued. The majority of pharmacist's at independent pharmacies in Georgia were incorrectly under the impression a prescription was needed to obtain naloxone. This is an even greater barrier to access and may also contribute to the infrequency of independent pharmacies stocking naloxone. The low availability of naloxone, its high cost for uninsured individuals, and the lack of pharmacists' knowledge of the laws surrounding its dispensing are significant structural barriers to access for a drug that can help offset opioid-related mortality.

Background

The opioid crisis claims more lives in the United States (US) each year.¹ Since 1999, over 750,000 people have died due to a drug overdose,² with approximately 32% of these deaths being attributed to prescription opioid medications. The availability of naloxone, an opioid antagonist which rapidly reverses the effects of an opioid medication, is a first line of defense in countering the incidence of opioid-related overdose deaths.³ A single administration of a nasal spray or intramuscular injection of naloxone quickly competes for binding sites on opioid receptors within the nervous system, potentially saving an overdose victim's life. Some patients require a second dose of naloxone to reverse an overdose event.⁴ Intranasal administration is an ideal alternative to the intramuscular injection route because it takes less skill for a layperson and there is no risk of a needlestick injury.³ Having naloxone on hand is useful for people who take high doses of opioid pain medications, people who use opioid medications along with benzodiazepines, and people who misuse prescription or illicit opioid medications or substances alike in order to reduce the risk of overdose mortality.⁵

Increasing the availability of naloxone among friends and family of past and present opioid users is a vitally important mission to reduce the occurrence of opioid-related overdose deaths.⁵ However, barriers to naloxone access are common due to issues such as expense,⁶ lack of awareness, lack of education,⁷ and stigma.^{8,9} Many studies have found that increased public awareness and increased pharmacist knowledge and training would be beneficial for increasing access to naloxone and potentially reducing opioid-related deaths.^{10-13,13-18} Pharmacists are well positioned to identify patients on high opioid dosages who would benefit from having naloxone on hand, to dispense naloxone, and to counsel patients accurately on its usage and overdose signs and symptoms.^{9,13,14,17,19}

All 50 states have passed laws increasing access to naloxone, although specific access conditions vary by state.²⁰ Forty-two states as well as the District of Columbia allow the over-the-counter purchase of naloxone without the requirement of a prescription from a primary healthcare provider.^{5,19} A 2020 study found that adequate funding and staffing of local health departments and pharmacies, especially those in US counties with high rates of opioid overdose deaths, would be beneficial in supporting implementation of naloxone kit distribution and other opioid-related initiatives.⁷ Studies in states that currently have standing orders, or orders in place that allow pharmacist to dispense naloxone to persons without prescriptions, have found a variety of availability of naloxone in chain retail community pharmacies. Some studies have shown that all pharmacies in the state stated they have naloxone in stock whereas other studies have shown only half of the pharmacies in the state stated they have naloxone in stock.^{12,13,21-23}

Naloxone is available for purchase without a prescription in the state of Georgia under a standing order.²⁴ This standing order's purpose is to "facilitate the widest possible availability of naloxone to ensure that family members, friends, co-workers, first responders, schools, harm reduction organizations and any other person or entities are in a position to provide assistance to a person experiencing an opioid related overdose through the timely administration of the opioid antagonist naloxone".²⁵ However, naloxone's current availability in independent community pharmacies in Georgia is thus far unknown.^{12,26} This project aimed to assess the absolute and relative availability of naloxone in independent community pharmacies as well as pharmacists' knowledge regarding the standing order and their ability to provide counsel on the medication.

Methods

Mercer University's Institutional Review Board deemed the study to be exempt for the need for informed consent because no patient data were used. Researchers obtained a list of licensed, retail pharmacies from the Georgia State Board of Pharmacy and verified it for accuracy (i.e., to ensure no pharmacies were excluded, pharmacies were still in business, and verification of contact information) by conducting an internet and directory search of each zip code in the state. The list was used to contact all independent retail pharmacies. Independent pharmacies were defined as having fewer than four total locations.²⁷ Researchers used novel "secret shopper" methodology to call all independent pharmacies in Georgia posing as unidentified customers inquiring about the availability of naloxone at that pharmacy. The brand name for naloxone nasal spray, Narcan, was used to ask for the product as public recognition of the brand name is

higher than the generic. Posing as patients (i.e. “secret shoppers”), researchers followed a script as they spoke to pharmacists to inquire about the availability of naloxone nasal spray at that location on the day the call was placed (Table 1). If the pharmacist told the researcher that it was not in stock, the researcher asked where else it might be available. If the pharmacist stated that it was in stock, the researcher then asked for the retail price without insurance or any coupons applied, whether there was a less expensive alternative to the medication, and what the alternative’s price would be. Finally, researchers asked pharmacists if a prescription was required to obtain the medication. Data were collected and documented using Excel spreadsheet software version 2016 (Microsoft Corp) and SPSS statistical software version 25 (IBM Corp). Calls were placed between May 2019 and February 2020. Data analysis was performed June to July 2020.

Results

All 558 independent, retail pharmacies were called, with a 96% response rate (n = 520 pharmacies; Fig. 1). Nonresponsive pharmacies included pharmacies that were going out of business (e.g. closing soon) or pharmacies that did not answer the call. Two hundred-twenty pharmacies (42.3%; 95% CI, 38.0%-46.7%) reported having naloxone in stock (Table 1). Those pharmacists were then asked whether a prescription was necessary for purchase. While 220 pharmacists endorsed having naloxone in stock, some pharmacists stayed on the phone so that further questions were able to be answered despite not having naloxone in stock. Of the 335 pharmacists asked, 135 (40.3%; 95% CI, 35.0%-45.8%) correctly responded in stating that a prescription was not necessary, 174 (51.9%; 95% CI, 46.4%-57.4%) incorrectly said that a prescription was required, 15 (4.5%; 95% CI, 2.5%-7.3%) were unsure, and 11 (3.3%; 95% CI, 1.7%-5.8%) said that a prescription was required in some situations.

Table 1

describes the response rates and pharmacists' responses during the secret shopper called.

Table. Telephone Responses - Accessibility of Narcan Under the Standing Order by Independent, Community Pharmacists in Georgia (N = 520)^a	
Questions	Responses, No./Total No. (%) [95% CI]
1. Do you have Narcan?	
a. Yes	220/520 (42.3)[38.0-46.7]
b. No	300/520 (57.7) [53.3– 62.0]
2. If Narcan was not available...Can you tell me where I can find it? ⁺	
a. Chain Store	130/283 (45.9) [40.0-51.9]
b. Vague Answer	77/283 (27.2) [22.1– 32.8]
c. Unware of another pharmacy	52/283 (18.4) [14.0-23.4]
d. Other specific Store	20/283 (7.1) [4.4– 10.7]
e. Offered to order product to the store	4/283 (1.4) [0.4– 3.6]
3. Can you show me how to use Narcan? ⁺	
a. Yes	212/237 (89.5) [84.8– 93.1]
b. No	8/237 (3.4) [1.5– 6.5]
c. Possibly could/unsure	17/237 (7.2) [4.2– 11.2]
4. Do I need a prescription to get it? ⁺⁺	
a. Yes	174/335(51.9) [46.4– 57.4]
B. No	135/335(40.3) [35.0-45.8]
c. Sometimes	11/335(3.3) [1.7– 5.8]
d. Unsure	15/335(4.5) [2.5– 7.3]
^a Specific questions asked to obtain answers 1–4: (1) “Do you guys have Narcan?” (2) If Narcan was not available, “Do you know where else I could find it?” (3) If pharmacist could demonstrate how to use Narcan, “Can you show me how to use it ?” (4) “Do I need a prescription for that?”	
⁺ Not all pharmacists answered questions after reporting no Narcan in stock.	
⁺⁺ All pharmacists were asked this question, if possible.	

Pharmacists were also asked to give a cash quote for naloxone, meaning the cost without any discounts or insurance applied. The mean (standard deviation) cash price was \$148.02 (27.40), with a range of \$0 to \$300. One pharmacist stated that their pharmacy does not charge for naloxone and will give it to anyone

that requires the medication. Pharmacists were also asked if they could show the caller how to use the medication. Of 237 pharmacists asked who had naloxone in stock or who stated they could get naloxone in stock, 212 (89.5%; 95% CI, 84.8%-93.1%) stated that they could, 8 (3.4%; 95% CI, 1.5%-6.5%) stated they could not, and 17 (7.2%; 95% CI, 4.2%-11.2%) said that they possibly could or were unsure how to do it. For pharmacists that reported that they did not have the medication in stock (n = 283, 54%), callers asked to be referred elsewhere to purchase the product. Of these, 130 (45.9%; 95% CI, 40.0%-51.9%) specifically named a chain store, 77 (27.2%; 95% CI, 22.1%-32.8%) gave a vague response such as “another nearby pharmacy should have it” or suggesting that the caller “call around”, 52 (18.4%; 95% CI, 14.0%-23.4%) stated that they were unaware of another pharmacy that would have the medication in stock, 20 (7.1%; 95% CI, 4.4%-10.7%) referred callers to another specific independent retail pharmacy, and 4 (1.4%; 95% CI, 0.4%-3.6%) pharmacists offered to order the product to their store.

Discussion

The results of the secret shopper study confirm that structural factors at the provider level are a major barrier to increasing naloxone access and thus reducing mortality from the opioid epidemic in Georgia. The researchers found that, despite the standing order, less than half of independent retail pharmacies in Georgia stock naloxone. Further, the results show that there is a considerable knowledge gap in regards to the naloxone standing order in Georgia with 50.7% of pharmacists incorrectly answering the question regarding obtaining naloxone without a prescription, that 10.5% of pharmacists in independent pharmacies in Georgia do not feel comfortable providing counseling regarding naloxone’s use, and that 45.6% of pharmacists cannot adequately inform a patient where to obtain naloxone should they not have it in stock. This underscores that provider education continues to be a barrier for adequate access to naloxone. Because of naloxone’s ability to save lives, it is imperative that pharmacists are made aware of its benefits and the laws surrounding its dispensing.⁵

The richness of the data is brought on by the fact that independent pharmacies are not necessarily connected to one another; i.e., it is not likely to have multiple pharmacies respond in an extremely similar way. While a large chain may adhere to a corporate policy regarding the stocking and dispensing of Narcan, there is generally no such widespread policy among independent pharmacies. Thus, calls to independent pharmacies are better described as evaluations of pharmacists’ knowledge than of large corporations’ policies. Data are made still more robust by the variety in geographic location of the pharmacies.

Pharmacists who work in retail or community settings are in an especially useful position in helping patients access naloxone as they are one of the most accessible healthcare professionals and may be able to identify patients using high dose equivalents of opioids who are good candidates for naloxone.²⁸ However, some retail pharmacists display a lack of understanding of the proper counseling points associated with dispensing naloxone to patients.²⁸

Pharmacists dispensing naloxone, with or without a prescription, should not assume that the patients have been given any proper training or counseling about its use.¹⁹ Our study shows findings that having a

naloxone standing order in place may not be as beneficial as intended given the lack of knowledge by the people who distribute the medication.

Additionally, cost may be a prohibitive factor for uninsured patients. The average cash price at the interviewed Georgia pharmacies currently stocking naloxone was \$148.02, which is comparable to the national average of \$150.²⁹ As the average median annual household income in Georgia in 2018 is \$55,679³⁰, this may be viewed as a nonessential item for uninsured individuals in lower income brackets. This is particularly relevant, given that individuals who die by opioid overdose tend to be uninsured and of a lower socioeconomic status.³¹ Therefore, future studies should further investigate cost as a structural barrier to naloxone use as well as the impact of state-level policies to reduce its cost for uninsured individuals, as providing naloxone to patients has been shown to be a cost-effective practice.³²

Limitations of this study include the lack of information gathered from each pharmacy. Callers did not collect information about the pharmacists themselves in terms of their age, gender, or experience working as a pharmacist in a retail environment. Age or time since graduation may affect the results, as recently graduated pharmacists are more likely to have had naloxone training as a part of their didactic curriculum. Callers also did not ask whether naloxone is generally stocked; it is possible that some stores normally stock it but were sold out on the day the call was placed. However, this is more than likely a minimal number of stores unlikely to affect the overall study results. There are other factors impacting naloxone acquisition and distribution that are not considered in this study. In particular, the social stigma surrounding naloxone usage and opioid use disorder may prevent someone from trying to obtain naloxone for themselves or for emergencies for others.^{8,9} Additionally, media coverage influences the public opinion of naloxone.³³ This may mean that pharmacists' perceptions of naloxone distribution are skewed, and would therefore directly impact the potential availability of naloxone at independent pharmacies as well as the depth and breadth of counseling provided by those respective pharmacists. Future studies should address these limitations to provide a more complete picture of the barriers to naloxone access. Future studies should also analyze how pharmacist education regarding naloxone use and distribution affects overall use and distribution in the state.

Conclusions

Despite its limitations, this study provided the first insight into the availability of naloxone at independent retail pharmacies in Georgia after the standing order was issued. It is clear that the availability of naloxone in Georgia's independent pharmacies is limited. The finding that a majority of pharmacist's at independent pharmacies in Georgia were incorrectly under the impression a prescription was needed to obtain naloxone makes for an even greater barrier to access and may also contribute to the infrequency of independent pharmacies stocking naloxone in the first place. The low availability of naloxone, its high cost for uninsured individuals, and the lack of pharmacists' knowledge of the laws surrounding its dispensing are significant structural barriers to access for a drug that can help offset opioid-related mortality. These findings should motivate policymakers and healthcare professionals to increase education regarding naloxone prescribing laws and practices at the provider level in order to make it more readily available to the general public.

Abbreviations

US – United States

Declarations

Ethics approval and consent to participate: Mercer University’s Institutional Review Board deemed the study to be exempt for the need for informed consent because no patient data were used.

Consent for publication: Not applicable

Availability of data and materials: The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Author’s contributions: Jennifer Elliott: Conceptualization, Methodology, Writing- Original draft preparation, Writing – Reviewing and editing, Supervision; Lauren Beasley – Investigation; Ekene Oranu – Investigation; Lauren Gilbert – Writing – Reviewing and editing; Kimberly Roth – Writing – Reviewing and editing; Jennifer Nguyễn – Conceptualization, Methodology, Data curation, Formal analysis, Writing – Reviewing and editing, Supervision

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Author Contributions: Drs. Nguyễn and Elliott had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. The data is available to ensure transparency.

Olubukunola Onajin and John J. Brooks, Jr. (both PharmD candidates from Mercer University College of Pharmacy) assisted with data collection. Thomas K. Nguyễn (also a PharmD candidate from Mercer University) assisted with data analysis. They were not compensated for this work.

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Figures

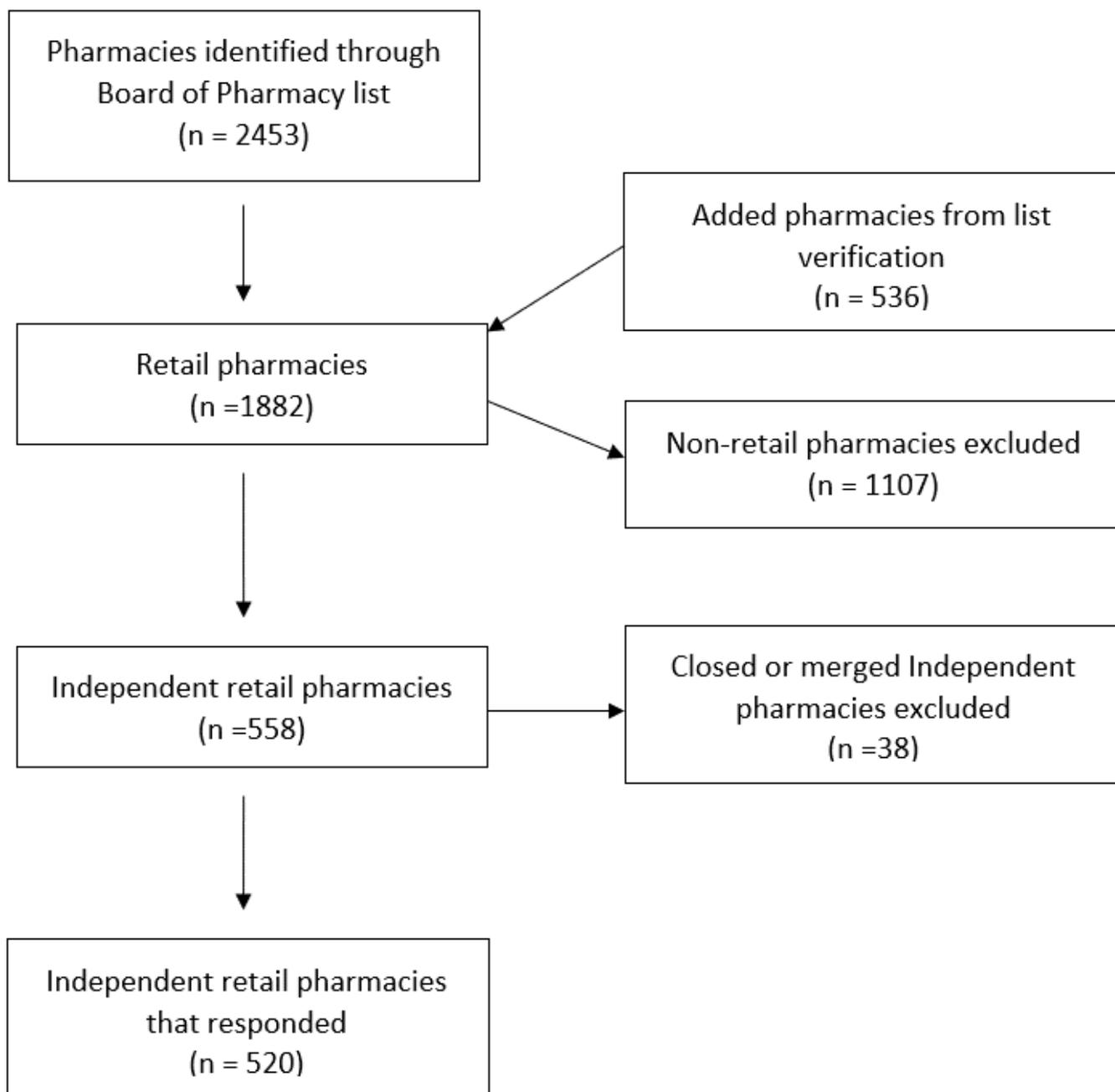


Figure 1

Shows the flow of recruitment and inclusion and exclusion criteria