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Addressing the Opioid Crisis: Community Partnerships in Primary Care

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Abstract

Introduction: New Mexico is currently ranked 17th in the United States for drug overdose death rates. Our project seeks to decrease opioid overdose deaths in a community by increasing the number of patients with naloxone in a local family medicine residency clinic.

Methods: We developed a protocol wherein providers asked patients at risk of opioid overdose about naloxone access. Free naloxone was distributed in partner with the county health department, accompanied by teaching of use. We reviewed patient encounters during a 45-day control and study period to measure naloxone possession among patients at risk.

Results: Nearly two-thirds of patients at risk of opioid overdose had no naloxone. A standardized protocol implemented to distribute an opioid reversal agent doubled naloxone prescribed by providers at visits (10.3%) compared to a control period (4.3%), but lacked statistical significance.

Conclusion: Patients in a family medicine residency clinic who were at risk of opioid overdose overwhelmingly did not have naloxone, and a standardized protocol with a community-based partnership increased access to naloxone. Further project data will have implications for ongoing naloxone distribution programs in primary care.

Introduction

Drug overdose is now the leading cause of death for Americans under age 50 years.[1] New Mexico is ranked 17th nationwide for overdose deaths, and New Mexico overdose deaths tripled between 1990 and 2015 (Figure 1).[2]

Current evidence shows that naloxone distribution reduces opioid-related overdose deaths and is cost effective.[3-7] The American Academy of Family Physicians recommends family physicians prescribe naloxone, an opioid reversal agent, to patients at high risk of overdose and support community naloxone distribution programs.[8]

This project seeks to decrease opioid overdose deaths in a community by increasing the number of people with naloxone, and assesses effectiveness of a brief intervention that can be performed in a typical primary care clinic with implications for harm reduction at the community level.

Methods

A group of family medicine residents located in New Mexico created a quality improvement project to address the opioid overdose crisis within their clinic in August 2018. They developed a standardized protocol (Appendix 1) wherein providers asked patients about access to personal naloxone if identified to be at risk of opioid overdose (defined as the self-reported use of illicit opioids during that visit, or presence of a prescription opioid in the visit's medication reconciliation). This project was implemented prior to the June 2019 New Mexico mandate of coprescription of naloxone with opioid prescriptions for 5 days or more.[9] The clinic partnered with the local health department to distribute free naloxone to patients at risk of opioid overdose. Intranasal naloxone was given to the patients during their clinic appointments with instruction regarding its use from the provider. Patients who received naloxone were given a unique identifier to identify receipt of naloxone for the first or second time, thereby identifying possible overdose. Patients were able to return to the clinic outside of appointments to refill naloxone if used. The total morphine milligram equivalent (MME) dose of the patient and the presence or absence of naloxone was flagged in the chart during data analysis to inform providers in subsequent visits. Naloxone kits were provided to patients regardless of MME. In addition to providing naloxone to at-risk patients, it was also available by request. Prior to this community partnership, patients were prescribed naloxone electronically to their pharmacy, with cost varying up to $150.[10] We reviewed all patient encounters during a 45-day control and investigational period. All charts of patients seen in the time frame were included, excluding pediatric patients. χ^2 analyses examined the association between the periods of chart review and naloxone receipt. Our institution's institutional review board exempted the study.

Results

Patient encounters in the control and investigational periods totaled 1,852 and 1,814, respectively (Figure 2). During the control period, 8.1% of patient encounters identified a patient at elevated risk of opioid overdose. In the investigational period, 10.4% of encounters identified a patient at risk.

Among patients at risk for opioid overdose, 61.7% of control group and 61.9% of investigational group patients did not have naloxone in their possession as they arrived for that visit; 4.3% of control group and 10.3% of investigational group patients were given naloxone at the visit. No patients declined naloxone, and kits were consistently available.

Independence of associations were tested by performing a series of χ^2 analyses. Among the experimental and control groups, 129 patients previously possessed naloxone and 209 patients did not (Table 1). These frequencies were not significantly different, χ^2 (1, N=338) =.001, *P*=.976. Of 209 patients who did not possess naloxone, 193 did not receive naloxone and 16 received naloxone at the visit. These frequencies were not significantly different, χ^2 (1, N=209) =2.54, *P*=.111, Cramer V=.11, *ns*. The odds ratio for patients receiving naloxone at the visit during investigational compared to control period was 2.51 (95% CI 0.78-8.07).

During the investigational period, one patient required a refill of their naloxone outside of an appointment. Because this project implemented both chart review of scheduled appointments and a protocol to distribute naloxone available to patients outside of appointments, this refill was not captured by chart review but was identified by nursing staff who provided the refill.

Conclusions

Patients in a family medicine residency clinic who were at risk of opioid overdose overwhelmingly did not have naloxone, and a standardized protocol with a community-based partnership increased access to naloxone. Although not significant, patients during the investigative review period were 2.5 times more likely to receive a new naloxone kit. Within both the control and investigational periods, the majority of patients did not receive naloxone; the provider either forgot to offer the naloxone kit or did not follow the protocol. The project also identified a relatively high rate of naloxone possession prior to the intervention. New Mexico has distributed naloxone in the community since 2001

with a saturation model, and a mandate to distribute to medication-assisted treatment patients for those with buprenorphine or methadone prescriptions.[11-12]

Important barriers to distributing naloxone were encountered. First, providers identified that naloxone distribution is still not routine in their workflow when the visit is not for pain management. Secondly, some patients were reluctant to accept naloxone due to stigma, an ongoing challenge to overcome. Clinic providers aimed to actively listen to patients while withholding judgement. For this reason, patients requesting a naloxone refill were given them without questions regarding the event, in order not to deter reporting due to shame surrounding an overdose.

This study had several limitations. First, we identified at-risk patients by self-reported use of illicit opioids, which may have missed patients due to potential underreporting secondary to stigma. Second, while the quality improvement project showed a trend toward increase in naloxone prescription, this difference was not statistically significant, likely due to small sample size. This trend may be significant if the duration of the investigation and the number of visits were increased.

Further study of this intervention will identify more ways to increase naloxone distribution. One area identified for improvement is utilizing the electronic medical record to integrate naloxone distribution into workflows. Action in these areas may further increase naloxone distribution throughout the community.

Tables and Figures

Figure 1: Deaths Due to Drug Overdose by Year, New Mexico and United States, 1990-2016[2]

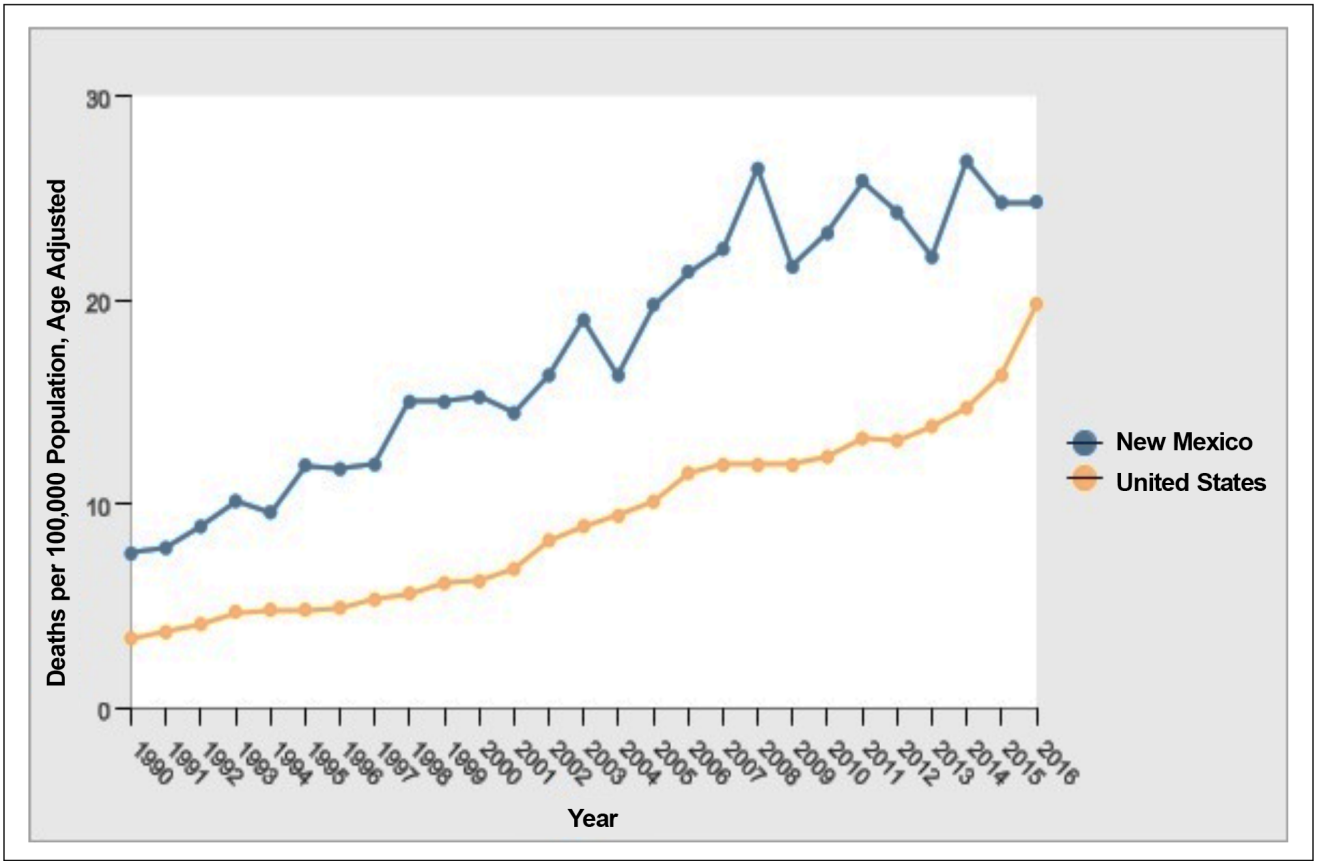

Figure 2: Results: Patient Encounters of the Control and Investigational Periods

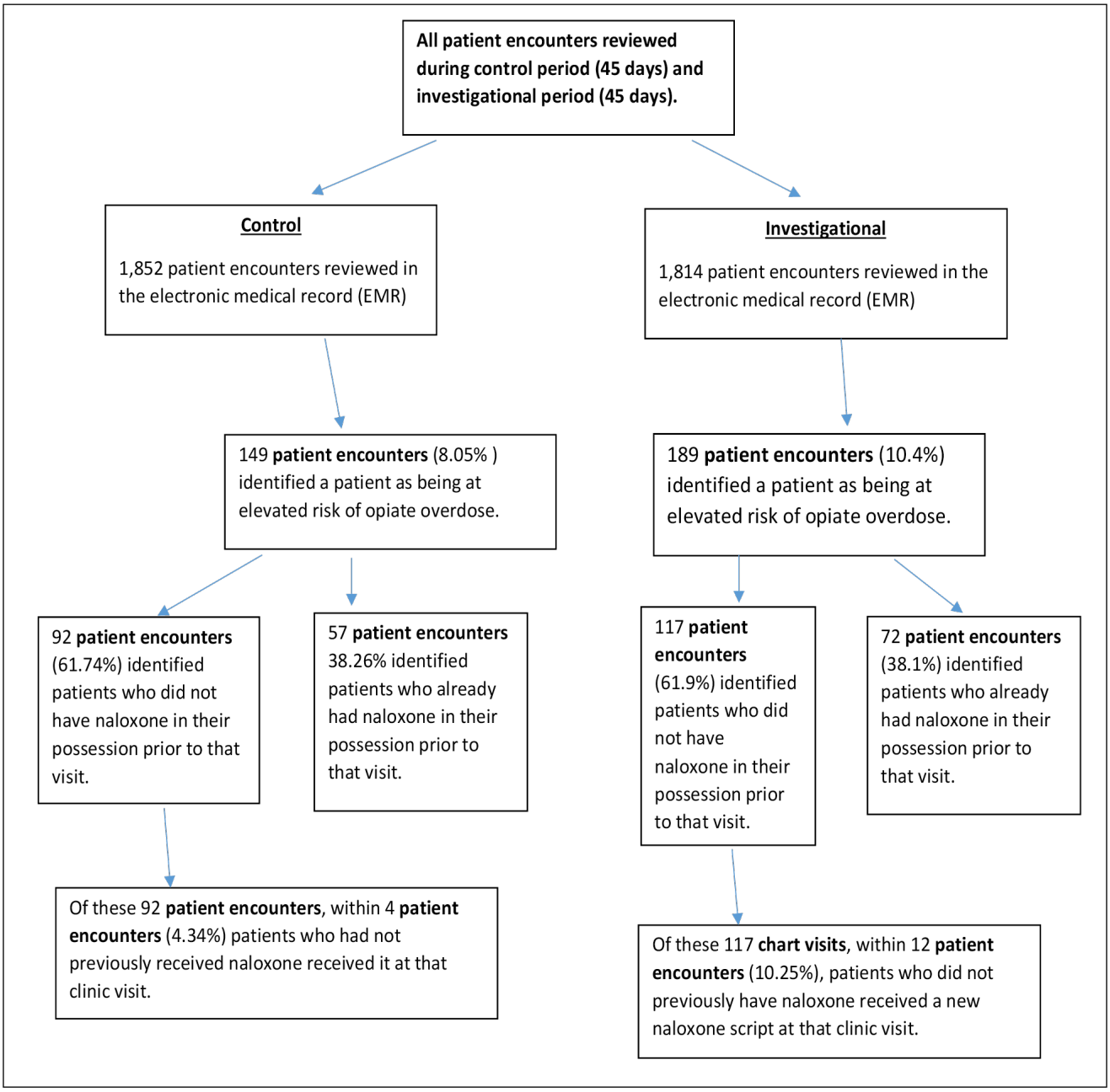

Table 1: Receipt of New Naloxone Script and Period of Chart Review for 209 Patients

	Control Period (n=92)			Investigative Period (n=117)			
Received New Naloxone Script	No.	%		No.	%	χ^2 (*df*)	*P*
Yes (n=16)	4	4.5		12	10.3	2.54 (1)	.111
No (n=193)	88	95.7		105	89.7		

Cramer V=.110; OR=2.51 (95% CI=.78-8.07).
Note: Column percentage reported.

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Presentations: This study was presented as a "Work in Progress" at the 2019 Society of Teachers of Family Medicine Annual Spring Conference, April 27, 2019, Toronto, ON, Canada.

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