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Pharmacists' knowledge, support, and perceived roles associated with providing naloxone in the community

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ABSTRACT

Introduction: Prior to the Michigan naloxone standing order legislation, a sample of Michigan pharmacists was surveyed to (1) identify gaps in knowledge regarding naloxone: (2) assess supportive attitudes towards the standing order and; (3) determine perceived pharmacist roles when providing naloxone.

Methods: A 37-item survey was emailed to Michigan Pharmacist Association members (n = 2757), July to August 2016. Responses to knowledge, supportive attitude, and perceived roles items were analyzed using descriptive statistics and logistic regression. Significance set at $p < 0.05$.

Results: The useable response was 8% (n = 211), 92% white, 54% female, aged 46.5 ± 14.6 years. *Knowledge:* Eighty-five percent (179/211) agreed laypersons can administer naloxone. Sixty-four percent could identify an opioid overdose and 74% agreed with required pharmacist naloxone education; yet 20% had education. *Supportive attitude:* Eighty-seven percent (184/211) supported the standing order. *Perceived role:* Fifty-six percent agreed with responsibility for following patients after providing naloxone. Predictors of agreement were rural practice location (OR = 2.5; 95% CI 1.2–5.0, p = 0.01), and requiring naloxone education (OR = 3.0; 95% CI 1.3–6.8, p = 0.007). Having a Doctor of Pharmacy versus a Bachelor of Science Pharmacy degree decreased odds of agreement by 43.5% (OR = 0.435; 95% CI 0.221–0.857, p = 0.016).

Discussion: Timing of survey may explain the low number of trained respondents. The increased willingness of BS Pharmacists to follow patients may reflect longer practice and closer community ties. Limitations include low generalizability and small sample.

Conclusion: A small representative sample of Michigan pharmacists is knowledgeable regarding naloxone and has supportive attitudes towards the standing order.

Introduction

Opioid overdose deaths continue to increase throughout the United States with Michigan ranking 15th.[1–2] In response to ongoing restricted access to prescription opioids, heroin use has escalated because of accessibility and low cost.[3] Appropriate naloxone administration can prevent overdose deaths from opioids,[4] yet the challenge is to improve individual access.[5]

Pharmacists as primary dispensers of opioids in the community[6]; are well positioned to provide access to naloxone. Using their pharmacotherapy training and practice skills, pharmacists can identify at-risk individuals and provide naloxone and education.[4,7] A

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survey of West Virginia community pharmacists (n = 266) reported that only 20% of respondent pharmacists were comfortable providing naloxone without a prescription.[8] To our knowledge, there are no published data assessing Michigan pharmacists' knowledge or supportive attitudes towards providing naloxone.

Currently, 39 states have at least one law permitting any individual to obtain naloxone at the pharmacy without a prescription.[9] Michigan Public Act 383 (PA 383) allows pharmacists to dispense an opioid antagonist to eligible individuals under a standing order by the Chief Medical Executive.[10] The standing order was signed into law on December 28, 2016 and operationalized by an interprofessional task force that assisted with practice, education, communication and legal considerations. The Naloxone Prescription for Opioid Overdose Prevention standing order was finalized on May 25, 2017.[11] Pharmacist participation in the standing order is voluntary. To dispense naloxone under the standing order, pharmacies must register with Michigan Department of Health and Human Services (MDHHS) online. Pharmacists are required to be appropriately trained in naloxone administration and educate individual recipients receiving naloxone prescriptions, although specific programs or hours of training are not mandated. When obtaining naloxone from a pharmacy, individuals will be provided with steps for responding to an opioid overdose as explained by the standing order and information about where to obtain treatment services. Pharmacies are required to report the amount of naloxone dispensed to MDHHS quarterly. This report must contain the number of naloxone doses dispensed under the delegating provider's national provider identifier (NPI), the number of naloxone doses dispensed in total by the pharmacy for that quarter, the number of each type of formulation dispensed and the pharmacy name and license number. Pharmacists are not required to follow or monitor patients after dispensing naloxone products.

Consistent training for pharmacists is required to optimize effective and safe naloxone use across the state as wide variation exists in experience, practice, and knowledge. In anticipation of the standing order legislation, we surveyed a representative sample of Michigan pharmacists aiming to (1) identify gaps in pharmacist knowledge regarding naloxone; (2) assess pharmacist supportive attitudes towards the standing order and (3) to determine the perceived roles of pharmacists when providing naloxone.

Methods

Study design and data collection

This was a survey of a convenience pilot sample of licensed pharmacists from the Michigan Pharmacists Association (MPA). The membership represents approximately 22% of actively practicing licensed pharmacists in Michigan. The Wayne State University Institutional Review Board approved the study.

A survey (Qualtrics, Provo, Utah, USA) was distributed electronically to 2757 active MPA members on July 1, 2016 from the association communications manager. An email reminder to complete the survey followed two weeks later. Pharmacists did not receive an incentive to complete the survey. The survey closed to responses on August 1, 2016. To obtain timely data, we gave a 1-month time for data collection because the Michigan Naloxone Standing Order bill was under active consideration in the legislature.

Survey instrument

The study authors developed the 37-item survey in collaboration with a research design specialist. Questions were designed to collect data on demographics and training characteristics, identify gaps in knowledge regarding naloxone (knowledge domain), assess supportive attitudes towards the naloxone standing order (supportive attitude domain), and to determine perceived roles of pharmacists when providing naloxone (perceived role domain). Responses to questions were yes/no/undecided yes/no/unsure, true/false, or open-ended format. As the study was pilot, the survey instrument did not undergo testing in a sample of pharmacists prior to administration. The survey instrument is in Appendix A.

The survey had 16 questions regarding pharmacist demographic and training in yes/no, select a response, and open-ended answer format. Demographic data included age, gender; race, whether the pharmacist had children, type and practice location, and years as a pharmacist. The purpose was to characterize the survey sample for comparison with the national pharmacist workforce. We asked about parental status because more than 5% of adolescents in both Michigan and the U.S. misuse prescription opioids.[1] Parents may have an increased knowledge of naloxone or opioid overdose prevention. Information about pharmacist training included pharmacy degree (Bachelor of Science Pharmacy; BS Pharm), or (Doctor of Pharmacy; PharmD), or both, post-graduate training (residency, fellowship), and specialty certification, and pharmacist licensure in other states.

The pharmacists' knowledge domain consisted of nine items related to safe and effective administration of naloxone by patients and support persons, requirements for post naloxone administration monitoring, pharmacist naloxone education and training, identification of opioid overdose risks, signs of overdose, naloxone adverse effects, and knowledge of reimbursement for naloxone. Pharmacists were asked if they had a friend, relative, or knew someone with a substance use disorder to demonstrate the scope of the opioid epidemic within the state.

The supportive attitudes domain had eight items to assess a positive or supportive attitude towards providing naloxone to persons at risk for overdose, decreasing opioid overdose, time for naloxone dispensing and counseling, and current formulary status of naloxone in their practice. The *perceived role domain* had two questions developed to determine pharmacist responsibilities associated with providing naloxone beyond dispensing the product. Our goal was to determine whether the pharmacist was agreeable to providing the associated naloxone education and counseling to individuals and support persons. We were also interested if, after providing naloxone, pharmacists would assume responsibility to follow outcomes such as overdose, refills, further instruction or referrals for treatment or self-care.