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Experiences in Teaching and Learning

A naloxone and harm reduction educational program across four years of a doctor of pharmacy program

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ABSTRACT

Background and purpose: Naloxone distribution is an increasing service provided by pharmacists as more states enact laws enabling pharmacists to dispense naloxone without a prescription or per protocol to individuals in the wake of an opioid overdose epidemic. Education and training programs are necessary to ensure students and practicing pharmacists are able to effectively provide the service.

Educational activity and setting: All first, second, and third year students in the doctor of pharmacy (PharmD) program at The Ohio State University College of Pharmacy (OSUCOP) participated in a pilot naloxone and harm reduction educational program. The program consisted of a three-part recorded lecture and a hands-on interactive workshop. Fourth-year students had the opportunity to participate. Students completed a ten-question assessment based on the content of the recorded lecture. Following the workshop, self-reflection and feedback were solicited.

Findings: Qualitative data indicated students felt the naloxone educational program was beneficial. Inclusion of harm reduction strategies, a mock counseling session, hands-on practice with naloxone delivery devices, and patient case discussions were valued.

Discussion and summary: OSUCOP was able to develop and deliver a naloxone and harm reduction educational program across all four years of the PharmD curriculum within one year of passage of laws increasing pharmacist dispensing of naloxone.

Background and purpose

Opioid misuse and overdose have become a major public health crisis in the United States. In fact, unintentional drug overdose, often including opioids, has become the leading cause of accidental death in the United States, overtaking motor vehicle accidents in 2007.¹ Every day, 44 people in the United States die from an opioid overdose.² While many opioid overdoses involve the misuse of prescription opioid medications, such as hydrocodone and oxycodone, a national increase in heroin abuse is also a major contributor.³

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Naloxone is a mu-opioid receptor antagonist that is approved to treat opioid overdose. Historically used by first responders, emergency departments, and inpatient facilities, many states have passed legislation allowing pharmacists to dispense naloxone under protocol or a collaborative practice agreement to combat the growing problem. By increasing access to naloxone, family members and loved ones can be counseled on signs and symptoms of a potential overdose and appropriate use of the medication to reverse an opioid overdose. A survey of 188 overdose education and naloxone distribution centers report distributing 53,032 doses of naloxone to persons and received reports of 10,171 overdose reversals, signifying the impact of these programs.⁴ Of note, the impact of naloxone distribution and overdose education is likely underestimated, as reversals often go unreported.

Naloxone distribution and education is one component of an overall approach to services for persons who misuse opioids known as “harm reduction.” Harm reduction is a set of practical, evidence-based strategies aimed to reduce negative consequences from drug use.⁵ It emphasizes open, non-judgmental care, and attempts to meet users “where they are” in the stages towards recovery. It recognizes addiction as a chronic disease of the brain, rather than a personal weakness or a behavior of criminals. Examples of other evidence-based strategies targeting those living with opioid addiction include syringe access programs; hepatitis C and human immunodeficiency virus (HIV) prevention and treatment; medication-assisted treatment (MAT) with buprenorphine, methadone or naltrexone; and overdose prevention education and naloxone.

The positive results of naloxone distribution centers and the growing public health epidemic of opioid overdose has led to pharmacists being at the forefront of efforts to combat opioid misuse. As a result, there is a need to educate student pharmacists and practicing pharmacists on appropriate use of naloxone and harm reduction principles. The American Association of Colleges of Pharmacy (AACCP) adapted a policy statement urging colleges and schools of pharmacy commit to training programs for pharmacists to gain the knowledge and skills regarding life-saving interventions, including naloxone.⁶ AACCP has also pledged support to the federal government's \$1.1 billion allocation to combat the opioid epidemic by expanding harm reduction interventions against drug use and overdose.⁷ The majority of states have some form of expanded pharmacist naloxone distribution, such as dispensing under prescription, pharmacist prescribing, dispensing under a physician-approved protocol, and “third party prescribing,” allowing any individual who may or may not be the opioid user to obtain the medication.

In 2015, Ohio passed legislation allowing pharmacists and pharmacy interns to dispense naloxone to any individual without a prescription under a physician-approved protocol.⁸ After passage of the legislation, faculty and key preceptors at The Ohio State University College of Pharmacy (OSUCOP) met to discuss how best to train students and practicing pharmacists in Ohio on naloxone and overdose prevention education. The workgroup recognized that naloxone was only mentioned in the curriculum in the acute care lecture series, and harm reduction was not a component of the existing curriculum. This paper describes the approach of OSUCOP on education of all enrolled student pharmacists on naloxone and harm reduction, as well as future plans to teach subsequent classes and preceptors. This study was ruled exempt by The Ohio State University Institutional Review Board.

Educational activity and setting

A naloxone training program was developed and provided to student pharmacists across all four years of the OSU doctor of pharmacy (PharmD) program. Instructors involved in the development and implementation of this course included two pharmacists and a student pharmacist with background experience dispensing naloxone to individuals within Ohio and other states. Since the passage of the law in Ohio had been less than one year, faculty felt it was important to expose all students across the curriculum to the training program prior to end of the academic year to allow students to potentially develop naloxone distribution centers and educate practicing pharmacists during summer internships and experiential rotations.

To ensure all students were exposed, the naloxone training program was placed into required courses in the first (P1), second (P2), and third (P3) years in the spring semester 2016. While formative assessment did not take place, attendance and self-reflection were required for all three courses. Since there was no scheduled course for fourth year (P4) students on advanced pharmacy practice experiences (APPE), they were given the opportunity to attend the session with the P3 students or through a continuing education program at the Ohio Pharmacists Association Annual Meeting presented by the same instructors.

The training program consisted of a seventy-minute recorded lecture with post-assessment questions and a two-hour hands-on workshop. During the session for P1 students, a patient in recovery from opioid addiction was brought into the class to share personal experiences with opioid addiction. Due to scheduling conflicts, this individual was not able to attend sessions for the P2 or P3 students. Self-reflection and feedback on the workshop and the overall educational program were solicited. [Table 1](#) outlines the content of the educational program.

Recorded lecture

The seventy-minute recorded lecture was prepared to align with continuing education standards, with a target audience of both student pharmacists and practicing pharmacists. The lecture was prepared in three modules as outlined in [Table 1](#), followed by ten self-assessment questions. The instructors also incorporated introduction of the principles of harm reduction into the naloxone educational program adapted from the Harm Reduction Coalition.⁵ Naloxone and overdose risk reduction education were presented as two of the many harm reduction interventions listed in [Table 2](#).

Students were instructed to listen to the recorded lecture and complete the self-assessment questions prior to the hands-on workshop. The self-assessment questions were not collected for a grade; rather, students were given credit for completion of the questions and were able to repeat the quiz until they could earn a satisfactory score of at least 70%.

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