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An Initial evaluation of law enforcement overdose training in Rhode Island

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ABSTRACT

Objectives: To assess initial change in knowledge, self-efficacy, and anticipated behaviors among Rhode Island law enforcement officers on drug overdose response and prevention.
Methods: Law enforcement officers (N = 316) voluntarily completed a pre-post evaluation immediately before and after taking part in overdose prevention and response trainings. Assessment items included measures of knowledge (Brief Overdose Recognition and Response Assessment (BORRA)), self-efficacy, attitudes toward drugs and overdose prevention, awareness of the Good Samaritan Law, and open-ended items pertaining to overdose knowledge and response behaviors. Non-parametric tests measured within-group and between-group differences. Wilcoxon Signed Rank tests and Kruskal-Wallis tests evaluated changes in BORRA scores and self-efficacy items. McNemar's tests assessed changes regarding the Good Samaritan law and open-ended items. Wilcoxon Signed Rank tests measured post-training change in attitudes.
Results: Law enforcement officers demonstrated statistically significant improvements in self-efficacy (identifying signs of opioid overdose, naloxone indication, counseling witnesses in overdose prevention, and referring witnesses for more information), overdose identification knowledge (BORRA mean increased from 7.00 to 10.39), naloxone administration knowledge (BORRA mean increased from 10.15 to 12.59), Good Samaritan Law awareness (17.9% increase after training), and anticipated behaviors in response to future observed overdose (65.7% changed from passive to active response post training).
Conclusions: Harm reduction programs can provide law enforcement officers with the knowledge and skills necessary to intervene and reduce overdose mortality. Given the statistically significant improvements in self-efficacy, attitudinal changes, and Good Samaritan law awareness, law enforcement officers are more prepared to actively interact with drug users during a drug-involved emergency.

1. Introduction

Drug overdose deaths from prescription opioid medications and heroin, both unintentional and intentional, have increased dramatically in recent decades (Rudd et al., 2016). Since 2000, the rate of overdose deaths involving opioids has increased by 200% (Rudd et al., 2016), making drug overdose the leading cause of injury death in the United States (U.S.) (Johnson et al., 2014). To combat the increasing mortality associated with opioid use, a growing number of community-based initiatives provide opioid overdose prevention services to individuals who might witness an overdose, including people who use drugs and members of their social networks (Wheeler et al., 2015). These programs have demonstrated success in safely (Doyon et al., 2014) and cost-effectively (Coffin and Sullivan, 2013) reversing opioid overdose in the community (Walley et al., 2013).

More recently, initiatives have been developed to expand opioid overdose prevention services to first responders, including firefighters, emergency medical technicians, and law enforcement officers (Davis et al., 2014). Because law enforcement officers routinely conduct neighborhood patrols, these community officials are frequently among the first to arrive on scene to medical emergencies (Rando et al., 2015). Law enforcement officers who are equipped with naloxone and trained in its use may reduce the time

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to administration of naloxone to the victim (Davis et al., 2014), and thereby reduce overdose morbidity and mortality (Rando et al., 2015).

Previous research has documented successful public health interventions with law enforcement officers. Beletsky et al. (2011) evaluated the effectiveness of a 30-minute training module for law enforcement officers aimed to increase legal and occupational safety knowledge related to needle stick injuries. Although this study evaluated an independent cross-sectional sample (94 participants at baseline; 78 participants immediate post-training), it provides evidence that law enforcement officers can be successfully engaged in public health initiatives (Beletsky et al., 2011).

The current study had two aims: (1) to measure the prevalence and pre-training range of behaviors of law enforcement officers at the scene of a suspected overdose and (2) to investigate changes in knowledge, self-efficacy, and anticipated overdose response behaviors of Rhode Island (RI) law enforcement officers on issues relating to opioid use and overdose after attending a naloxone and overdose prevention education program of Rhode Island (NOPE-RI) Training.

2. Materials and methods

2.1. Overdose prevention and response training

A pre-post evaluation of law enforcement officers taking part in the overdose prevention and response trainings was undertaken from April 14, 2014 to January 8, 2015. Central to RI's naloxone training efforts is the NOPE-RI program of the RI Disaster Medical Assistance Team and Medical Reserve Corps. (RI DMAT/MRC), whose mission is to leverage the RIDMAT/MRC volunteer base to provide medical and emergency resources to the greater RI community on overdose prevention (NOPE-RI, 2014). The RI MRC consists of more than 1600 volunteer doctors, physician assistants, nurse practitioners, pharmacists, and other healthcare professionals. NOPE-RI recruits, trains, and deploys registered volunteers to educate Rhode Islanders about addiction, overdose prevention, and the use of naloxone. Of the 1600 RI MRC volunteers able to respond to a variety of public health emergencies, 5.9% are trained NOPE-RI volunteers (n = 95). All volunteers must complete a one-hour orientation in order to be considered active in the DMAT/MRC and additional training is needed to become a NOPE-RI trainer.

NOPE-RI programming includes overdose prevention, recognition, and response training that is specifically targeted towards public safety professionals and healthcare providers. In addition to in-person education, NOPE-RI serves as a clearinghouse for naloxone and overdose prevention training resources; NOPE-RI also encourages and supports efforts to expand access to naloxone (NOPE-RI, 2014). Approximately 2000 individuals have been trained by NOPE-RI, of whom 824 were RI law enforcement officers representing 25.2% of all such officials in the state, with the remainder being behavioral health professionals, primary care providers, corrections professionals, or from related professions. Thus, unlike the community-based Preventing Overdose and Naloxone Intervention (PONI) program that has trained and dispensed naloxone to RI citizens since 2006 (Yokell et al., 2011), NOPE-RI trainings aim to reach first responders and professionals who are likely to come into contact with an overdose victim, such as school nurses, correctional officers, and law enforcement officers.

NOPE-RI trainings of law enforcement officers occurred at the RI State Police Barracks, the RI Traffic Tribunal, the Community College of RI, the Warwick Police Department, and the Charlestown Rescue Headquarters. The training session consisted of a one-hour lecture and hands-on practice to prepare for responding to an opioid-specific overdose in the field. Content consisted of: (1) opioid use and overdose prevalence in RI; (2) addiction, overdose, and associated risk factors; (3) opioid overdose recognition and response; (4) law enforcement officers' concerns about responding to an overdose event; and (5) hands-on practice assembling the nasal naloxone kit and rescue breathing on a CPR manikin. In some cases, Municipal officers were provided a toolkit designed to prepare law enforcement officers and other non-medical public safety professionals to implement a training program in their own department. The toolkit provides educational materials for implementing a naloxone program in a police department, including presentation slides and talking points, a model naloxone policy for departments, frequently asked questions, and a law enforcement fact sheet.

Each training session was conducted by DMAT/MRC volunteers involved with NOPE-RI. Over the period of data collection, five trainers led the training for either all or part of the session; however, not all five trainers were present for every training session due to trainers operating on a volunteer basis. The format was typically one trainer leading the training session with the assistance of a second trainer when necessary. Additional trainers were present at times strictly to observe the primary trainer, in preparation for future similar volunteer opportunities. The primary trainers consisted of two registered nurses, one EMT, one law enforcement officer, and the director of NOPE-RI.

2.2. Evaluation design and measures

Evaluations were conducted both immediately before and after each training session, using a convenience sample of 316 law enforcement officers, representing 38.3% of all law enforcement officers trained by NOPE-RI. Due to the urgency of training and equipping law enforcement officers with naloxone, 168 State officers were trained prior to obtaining IRB approval and did not have the option of participating in the evaluation (72.1% of all State officers trained by NOPE-RI). Researchers attended subsequent training sessions held after IRB approval was obtained, and officers were given the option of participating in the evaluation. Participation in the study was voluntary and law enforcement officers were not compensated for completing the assessments. All evaluation items needed to be approved by senior ranking officials prior to administration. Since the Capitol officers and Sheriffs fall under the same jurisdiction, they were trained together at the same time and location. Law enforcement officers from various municipalities were trained simultaneously.

2.2.1. Demographics. Participants were asked to provide sociodemographic data, including age, sex, race, highest level of education completed, years with department, and number of drug overdoses witnessed or responded to in the past year.

2.2.2. Brief overdose recognition & response assessment (BORRA). To assess law enforcement officers' knowledge of opioid overdose response and prevention methods, the *Brief Overdose Recognition & Response Assessment*, a 16-item instrument was administered (Green et al., 2008). This instrument reliably measures the law enforcement officers' ability to identify whether the descriptions of symptoms of an individual are that of an opioid overdose and whether naloxone should be administered.

2.2.3. Self-Efficacy. Four items originally used in Green et al. (2008) were adapted for law enforcement officers and used to assess self-efficacy across the following tasks: identifying warning signs of an opioid overdose, recognizing when to administer naloxone, counseling witnesses on the scene of an overdose on overdose prevention, and referring witnesses on the scene of an overdose to get more information on how to identify and respond to a future overdose (Green et al., 2008). Each of the four items consisted of