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Research Paper

Post opioid overdose outreach by public health and public safety agencies: Exploration of emerging programs in Massachusetts

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ABSTRACT

Background: Opioid overdose is a significant public health problem. Collaborative programs between local public health and public safety agencies have emerged to connect overdose survivors and their personal networks with harm reduction and addiction treatment services following a non-fatal overdose event. This study explored the prevalence of these programs in Massachusetts and the different ways they have been structured and function.

Methods: We sent an online screening questionnaire to police and fire departments in all 351 communities in Massachusetts to find instances in which they collaborated with a community-based public health agency to implement a post-overdose outreach and support program. We conducted telephone interviews with communities that implemented this type of program and categorized programs based on their structure, outreach approach, and other key characteristics.

Results: Police and fire personnel from 110 of the 351 communities in Massachusetts (31% response rate) completed the screening survey. Among respondents, 21% (23/110) had implemented a collaborative, community-based, post-overdose program with a well-defined process to connect overdose survivors and their personal networks with support services or addiction treatment services. Using data from the interviews, we identified four types of programs: (1) *Multi-Disciplinary Team Visit*, (2) *Police Visit with Referrals*, (3) *Clinician Outreach*, and (4) *Location-Based Outreach*.

Conclusions: This study represents the first attempt to systematically document an emerging approach intended to connect opioid overdose survivors and their personal networks with harm reduction and addiction treatment services soon after a non-fatal overdose event. These programs have the potential to increase engagement with the social service and addiction treatment systems by those who are at elevated risk for experiencing a fatal opioid overdose.

Introduction

The United States is in the midst of an opioid overdose epidemic, involving both heroin and synthetic opioids (O'Donnell, Gladden, & Seth, 2017). Opioid-related overdose deaths increased three-fold in the U.S. between 2000 and 2015–with 33,091 cases in 2015 alone (Rudd, Seth, David, & Scholl, 2016). Individuals who experience a non-fatal overdose event are at elevated risk for overdose in the future (Darke, Mills, Ross, & Teesson, 2011; Stoove, Dietze, & Jolley, 2009). From a public health perspective, non-fatal overdose survivors constitute a high priority group and a logical point of intervention to reduce overdose mortality rates.

Emergency departments (EDs) are a common setting for programs designed to reach and engage people who have an opioid use disorder and those who have experienced a non-fatal overdose (e.g., D'Onofrio & Degutis, 2010; D'Onofrio et al., 2017; Dwyer et al., 2015; Trowbridge et al., 2017). Examples in this area have included interventions to provide overdose education and naloxone rescue kits to patients (Dwyer et al., 2015; Samuels, 2014), connect patients to peer-recovery coaches (Samuels, 2014), link individuals with office-based addiction clinics and methadone maintenance programs (Trowbridge et al., 2017), and initiate

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buprenorphine treatment directly in the ED (D'Onofrio et al., 2017). Despite advances in this area and wider diffusion of ED-based interventions, many overdose survivors do not receive this type of support prior to discharge from a medical facility (Naeger, Mutter, Ali, Mark, & Hughey, 2016; Rosenthal, Karchmer, Theisen-Toupal, Castillo, & Rowley, 2016).

Recently, a new group of programs has emerged that attempts to reach and engage non-fatal opioid overdose survivors in community-based settings using collaborations between local public health and public safety agencies. These programs are not intended to replace ED-based interventions; rather, they are intended to reach individuals who leave ED settings without being connected to addiction treatment services, those who are not ready to accept services that have been offered in the ED (Pollini, McCall, Mehta, Vlahov, & Strathdee, 2006), those who refuse transport to a medical facility after an overdose (Vilke, Sloane, Smith, & Chan, 2003; Wampler, Molina, McManus, Laws, & Manifold, 2011), and those who don't come to the attention of the medical system. These programs also offer the opportunity to engage the personal networks of overdose survivors; a group that may not always be present during an ED-based interaction, yet one that is known to play an important role in the lives of many individuals with a substance use disorder (Kerensky & Walley, 2017; Ventura & Bagley, 2017).

To date, there are few descriptions of public health and public safety post-overdose programs in the peer reviewed literature. Wagner, Bovet, Haynes, Joshua, and Davidson (2016) described a variation of this approach in which sheriff's deputies at overdose scenes provided overdose prevention information, lists of local support services, and contact information for an addiction treatment agency. When deputies obtained contact information for an overdose survivor, a case manager contacted them within 24-h to assess their interest in treatment and to schedule an intake visit (Wagner et al., 2016). In another example, police officers provided voluntary screening and referral to addiction treatment to people with opioid use disorder who presented at the police station (Schiff, Drainoni, Bair-Merritt, Weinstein, & Rosenbloom, 2016; Schiff et al., 2017). Outside of the peer reviewed literature, multiple press reports from across the U.S. have documented the deployment of post-overdose outreach teams in which public health and public safety personnel conducted home-based outreach visits in the days following a non-fatal overdose event (e.g., Barnes, 2017; Mayhew, 2017; Zezima, 2017). The prevalence of these programs and their characteristics are largely unknown.

To address this gap, we conducted a study in Massachusetts to: (1) assess the prevalence of collaborative, community-based, post-overdose programs that connect overdose survivors and their personal networks with support or addiction treatment services and (2) describe the structure and function of these programs. First, we present findings from a screening survey sent to all police and fire chiefs in Massachusetts. Second, we report findings from telephone interviews conducted with selected programs on key program characteristics.

Data and methods

Setting and participants

The study occurred in Massachusetts between December 2015 and December 2016. For the purposes of the study, the term "public safety agency" was used to refer to emergency first responder agencies in the community (e.g., police, firefighters, emergency medical technicians). The term "public health agency" was used to refer to agencies in the community that provide a broad range of social and addiction treatment services (e.g., drug counselors, social workers, addiction treatment counselors, outreach workers). In the first phase of the study, we sent a screening questionnaire to police and fire departments in all 351 communities in Massachusetts. In the second phase of the study, we conducted interviews with spokespersons from 20 communities that had implemented a collaborative, community-based, post-overdose program that employed a protocol to connect overdose survivors and their personal networks with support services or addiction treatment services. The Massachusetts Department of Public Health IRB reviewed and approved all study procedures.

Measures

The online screening questionnaire consisted of six questions designed to identify programs of interest. Respondents were first asked whether they provided outreach or referral services to people who use opioids or their personal networks. Those who responded affirmatively were asked whether any of these services were delivered in collaboration with other agencies. If so, they were asked to identify all agencies collaborating on the program. Those who were implementing a collaborative program were asked whether the program specifically targeted individuals who had recently experienced an overdose and their personal networks. Those who responded affirmatively were asked to describe the program and indicate whether we could contact them for a follow-up interview.

The telephone interview protocol consisted of 18 questions organized into six sections: (1) program description (what led to the development of the program; what were the program's goals; how was the program organized; what did program staff do); (2) how individuals were identified (how did they find and select people to contact; how did they locate and make contact with people); (3) interaction with contacts (what did they do after they made contact); (4) follow-up (did they try to follow up with people after the initial contact); (5) evaluation (did they do anything to document or evaluate the program); and (6) what did they learn (what were the best ways to contact people; what were the most helpful services for the people they contacted; how did contacts respond to the program; what characteristics made for an effective staff member; what collaboration among organizations worked best; what would they tell others interested in developing programs like this). Interviewers used probes to elicit more detail and pursued interesting lines of inquiry that emerged during the interviews.

Procedure and analysis

Screening survey data were collected using SurveyGizmo (secure online software suite). We worked with the Massachusetts Chiefs of Police Association and the Massachusetts Department of Fire Services to distribute the survey link to their contact lists. Data collection occurred between December 2015 and January 2016. All data were exported into IBM SPSS Statistics Version 24 to generate descriptive statistics. We used the results from the screening survey to identify communities with a collaborative, community-based, post-overdose program. We examined the narrative description of each program and selected those that: (1) were operational at the time of the assessment, (2) included an active outreach component, and (3) had a well-defined protocol to connect overdose survivors and their personal networks with support or addiction treatment services. We excluded programs that: (1) only provided passive services (e.g., left behind a pamphlet without further follow-up); (2) were not specifically targeting individuals who had recently experienced an overdose and/or their personal networks; (3) were not operational; and (4) did not provide sufficient detail to determine the services they provided.