Women in an Opioid Addiction Treatment Program Do Not Know How to Obtain Naloxone

David C. Jude, MD, FACOG
Professor and Chairman, Department of Obstetrics and Gynecology, Marshall University Joan C. Edwards School of Medicine

Louis Nieuwenhuizen, PsyD
Department of Psychiatry, Marshall University Joan C. Edwards School of Medicine

Benjamin D. Jude, BS
Medical Student, Marshall University Joan C. Edwards School of Medicine

Brenda Mitchell, MD, FACOG
Professor, Department of Obstetrics and Gynecology, Marshall University Joan C. Edwards School of Medicine

Corresponding Author: David C. Jude, MD, FACOG, 1600 Medical Center Drive, Suite 4500, Huntington, West Virginia 25701. Email: jude@marshall.edu.

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Abstract
West Virginia leads the nation in death rates due to opioid abuse. Providing naloxone to people who use drugs, their friends, and families has been shown to decrease the number of deaths from overdose. In 2016, West Virginia passed legislation allowing access to naloxone (Narcan®) without a prescription. We report on the knowledge and availability of naloxone in a cohort of pregnant women in a medication-assisted treatment program. Twenty-six consecutive opioid addicted gravidas enrolling in a medication-assisted treatment program were queried regarding their knowledge about and access to naloxone. They were also asked if they lived with or were frequently around people who use drugs without a prescription. Of the twenty-six respondents, twenty-four (92.3%) either lived in a home or had regular contact with someone who used drugs obtained illegally. Twenty-three (88.5%) had knowledge of naloxone. Only two (7.7%) reported knowing how to access naloxone. In our small sample size, people at the highest risk of needing naloxone to prevent overdose in themselves or close contacts did not know how to obtain naloxone.

Introduction
Opiate addiction and overdose are higher in West Virginia than in any other state.¹ Identified by some as the epicenter of the opiate epidemic, Cabell County in West Virginia has seen an alarming increase in overdoses. From January 1, 2017, through April 6, 2017, Cabell County 911 responded to over 200 overdoses in this county of just over 95,000 people. Twenty-four of these overdoses resulted in death giving this one county an overdose death rate of 90/100,000 population per year for the first three months of 2017. If this trend continues, the overdose death rate in this county will be more than 6 times the national average.²

Several initiatives have emerged as the community, county, and state mobilizes in response to this crisis. One of the community responses includes the Healthy Connections Coalition consisting of multiple local organizations working with those experiencing addiction. Cabell County has responded with harm reduction strategies like needle exchange and a quick response team. These programs offer education on first signs of overdose, proper response, and information of rehabilitation programs. The State of West Virginia has responded by passing legislation that approved the dispensing of naloxone, a potentially lifesaving medicine, without a prescription. The prompt use of this medication is critical in response to the unprecedented escalation of overdoses.

Opiate overdose symptoms include altered consciousness, pinpoint pupils, and respiratory depression. This respiratory depression may lead to hypoxia and resultant irreversible cell death and can result in fatalities if not treated urgently.³ Naloxone is an opiate antagonist that can reverse opiate overdose and improve respiratory function by displacing opioids from the receptors in the brain, thus reinstating normal respiratory drive.⁴ Naloxone is available as an injectable with numerous generic brands, as well as an auto-injectable preparation (EVZIO®) that makes it easy for families or emergency personnel to inject naloxone quickly into the outer thigh. Another preparation is a prepackaged nasal spray (Narcan®) consisting of a prefilled, needle-free device that requires no assembly and is sprayed into one nostril.⁵ Equipping those who use drugs as well as their immediate contacts is an effective strategy to reduce the potentially fatal effects of an overdose. The expediency of treatment is critical. Therefore bystanders are in the position to save a life.⁶ Distribution of naloxone to heroin users in some European locations has been ongoing since the mid-1990’s.⁷ Opioid overdose prevention programs providing naloxone to laypersons has been shown to reduce the likelihood of death from an overdose.⁸ Naloxone distribution to populations at risk has been recommended by the American Medical Association and
the World Health Organization.\textsuperscript{9,10} On March 12, 2016, the West Virginia Legislature passed House Bill 4035, Code 16-46-7, permitting pharmacists to furnish naloxone hydrochloride without a prescription.\textsuperscript{11} The cost-effectiveness of distribution of naloxone to heroin users has been demonstrated by decreasing calls to activate emergency medical services and overdose deaths.\textsuperscript{12}

Materials and Methods

Current gravidas newly enrolled into the Marshall Obstetrics and Gynecology Maternal Addiction and Recovery Center (MARC) medication assisted treatment program are asked to complete an anonymous survey regarding drug use of people either living in their home or with whom they have close contact. We asked about knowledge of and access to naloxone, as well as their drug of choice. The questionnaire was by intent kept very simple, and no identifying information is asked. The purpose of the questionnaire is to determine basic characteristics of participants in the MARC program. From September 2016 through February 2017, twenty-six women with ongoing pregnancies were enrolled in the program. We retrospectively reviewed the results of these surveys and report on the accessibility of naloxone in this high-risk group. The Marshall University Institutional Review Board approved the study.

Results

Twenty-six gravidas completed the survey. Twenty-five of these women reported either “opioids”, oxycodone, heroin, or “pain pills” as their drug of choice. One listed their drug of choice as buprenorphine. In addition to an opioid, five women reported a second drug of choice with marijuana (3), “speed” (2), and “benzos” (1) listed. One survey included opioids and two other drugs of choice (“speed” and marijuana). Twenty-four of the twenty-six (92.3\%) reported that someone in their home other than themselves used narcotics or street drugs without a prescription. Eighteen (69.2\%) reported that they were in regular contact with other people who used narcotics or street drugs. All eighteen of these women are included in the twenty-four who reported someone in their home used drugs. Only two of the twenty-six women denied either living with or having regular contact with someone who uses narcotics or street drugs without a prescription. Twenty-three (88.5\%) reported some knowledge of naloxone, yet only two women (7.7\%) in this study know how to access naloxone. Both of these women live in a home where someone else is using drugs obtained without a prescription.

Discussion

Nonmedical prescription opioid misuse is concentrated in areas of the United States with large rural populations including West Virginia, and its bordering state of Kentucky.\textsuperscript{13} Higher rates of overdose deaths are also noted in these rural areas.\textsuperscript{14} The city of Huntington, West Virginia, has been particularly affected. Within four hours during August 2016, this city with a population of about 50,000 people had 27 calls to emergency services for heroin and other opiate overdoses resulting in one death.\textsuperscript{15} Attempts to curb the rise in deaths from overdose include equipping law enforcement with naloxone and allowing widespread access to naloxone to the public. Like many states, West Virginia has enacted legislation to allow the purchase of naloxone without a prescription. Naloxone is also available free of charge at several health departments within the state. Increasing the availability of naloxone should result in fewer overdose deaths,\textsuperscript{16} however, this increased access is of very little value if the population at highest risk does not have the knowledge or ability to access this resource.

In our small cohort of women who have a current history of opioid abuse, there is awareness of naloxone. Women in our treatment program represent the group that should receive targeted instruction on the use of and how to acquire naloxone. Viewed as a chronic medical illness, patients with drug dependence in medication assisted treatment programs may potentially relapse from the treatment and use opioids acquired illegally.\textsuperscript{17} Therefore, patients who are in a medical maintenance program utilizing buprenorphine or methadone may still be at risk for overdose and need access to naloxone. We have demonstrated that a significant number of the patients in our program are in regular contact with people who are at risk for overdose.

Our study is limited by the small number of women enrolled in the program. Although the sample size is small, all new enrollees into the MARC were included. Further limitations are the inclusion of only women who are currently pregnant and in only one medication assisted treatment program. It may be beneficial to repeat this study in larger treatment programs with a more diverse population.

Rather than expand our study, our results are dramatic enough that after our initial review of the first twenty-six patient questionnaires we feel that the data potentially indicates a significant public health problem that must be immediately addressed.

Based on our results, our local health department is providing two doses of naloxone as well as...
training on the benefits of and how to use this life-saving drug to all new patients in our treatment program. We recommend that this service is included as an integral portion of all treatment programs. In addition, we feel that needle exchange programs should provide naloxone to each participant and enforce how and when to administer this agent.

Local and state health departments, as well as law enforcement, emergency medical services, and other agencies, must increase awareness of the availability of naloxone to the public and focus on those areas with high rates of opioid abuse. We recommend that all health insurance plans, including Medicaid and Medicare, be required to cover the costs of naloxone to their beneficiaries without a copay.

Making naloxone available at local health departments and pharmacies without a prescription should be beneficial to prevent opioid overdose deaths. Unfortunately, this is of little benefit if those most at risk do not have the ability to access this lifesaving drug. As part of public health policy, we advocate for a widespread distribution of naloxone.

Conclusions

We demonstrate that pregnant women in an opioid addiction medication assisted treatment program have regular contact with people who abuse drugs. Women in this program have knowledge of naloxone, but only 7.7% of women in this cohort know how to acquire this potentially lifesaving agent. Public health officials must review their policies on making naloxone available to the most at-risk people.

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