Responding to Opioid Overdose in Rhode Island: Where the Medical Community Has Gone and Where We Need to Go

TRACI C. GREEN, PhD, MSc; JEF BRATBERG, PharmD; EMILY F. Dauria, PhD, MPH; JOSIAH D. RICH, MD, MPH

ABSTRACT
The number of opioid overdose events in Rhode Island has increased dramatically/catastrophically in the last decade; Rhode Island now has one of the highest per capita overdose death rates in the country. Healthcare professionals have an important role to play in the reduction of unintentional opioid overdose events. This article explores the medical community’s response to the local opioid overdose epidemic and proposes strategies to create a more collaborative and comprehensive response. We emphasize the need for improvements in preventing, identifying and treating opioid addiction, providing overdose education and ensuring access to the rescue medicine naloxone.

KEYWORDS: Opiate addiction, overdose, opioid, healthcare professionals

INTRODUCTION
Opioid Overdose
Over the last two decades, drug overdose has emerged as the leading cause of adult injury death in the United States [US].1 In 2011, there were 41,340 deaths nation-wide resulting from drug overdose, up from 4,030 in 1999.2,3 Prescription drugs were the most common drugs involved in overdose fatalities [22,810] and nearly three-quarters of these fatalities involved opioids [16,917].1

In Rhode Island drug overdose deaths outrank deaths caused by motor vehicle crashes.4 With roughly four drug overdose deaths weekly, Rhode Island has the 13th highest overdose mortality rate nationally, and the highest overdose mortality rate in New England.5 From 2010 to 2012, nearly all cities and towns [36/39] in the state experienced an accidental overdose death.6 Although Providence reported the largest number of overdose deaths in the state [72], two towns, Central Falls and Woonsocket, reported the highest per capita rate with 77 and 73 overdose deaths per 100,000, respectively.6

From 1999 to 2010, Rhode Island mirrored national trends in overdose deaths, reporting a 182% increase in drug overdose mortality;4 however, more recent trends indicate a disturbing pattern. During the spring of 2013, acetyl-fentanyl tainted heroin was linked to over a dozen unintentional overdoses. This was followed by a doubling of the overdose mortality from November 2013 to March 2014,7 this time traced to fentanyl-laced heroin and cocaine. These two “outbreaks,” investigated by the Centers for Disease Control and Prevention (CDC) and other partners, suggest an increasing overlap in populations misusing prescription opioids and using illicit drugs. Whereas from 2009 to 2012, 53% of Rhode Island’s 646 drug overdoses were attributed to prescription drugs and only 21% resulted from illicit drugs, an uptick in illicit drug overdoses that began in 2013 indicates a complete reversal in prior trends: overdoses attributed to illicit drugs now comprise 56% of these deaths.3,8 Regardless of the cause, the death toll stands as a call to arms to the medical community to slow the death rate through prevention, treatment, reducing the stigma of addiction, and harm reduction.

Opioid Prescribing Practices, Non-medical Use, and Treatment
Increases in both the prescribing of opioids and self-reported non-medical use of opioids are two key drivers of the rise in drug overdose fatalities nationally and at the state-level.9 In 2010, there were enough pain relievers prescribed nationally to medicate every American continuously for one month.10 In 2012, Rhode Island had the 19th highest number of pain-reliever prescriptions; there were 90 pain-reliever prescriptions per every 100 people in the state.9 Availability and accessibility of pain relievers are associated with their increased non-medical use.4 In 2010, more than 12 million people in the US reported using prescription pain relievers non-medically.10 In that same year in Rhode Island, 5.2% of adults (≥ 12 years) reported nonmedical use of prescription pain relievers, amongst the highest state rates in the country.4

Despite the growing need, the availability of addiction treatment has not expanded rapidly enough. There is a shortage of healthcare professionals trained to provide substance abuse treatment services.4 Notably, in Rhode Island, there were only eight medical professionals per every 100,000 people approved to treat opioid-addicted patients with buprenorphine.4 While Rhode Island fares better than two-thirds of all states [who have fewer than six prescribers per every 100,000 people], the high prevalence of opioid misuse and the alarming increase in overdose events necessitate a broader treatment response, accessible throughout the state.
ADDRESSING OPIOID OVERDOSE IN RHODE ISLAND

In response to the growing overdose epidemic, Rhode Island has instated several laws, programs, and policies designed to prevent the misuse of opioids and reduce the number of overdose events. Below we focus on interventions that directly have an impact on healthcare professionals including: the Prescription Monitoring Program, access to naloxone, an opioid overdose antidote; “Good Samaritan” laws, and the Collaborative Practice Agreement for Naloxone.

The Prescription Monitoring Program

In 2012, Rhode Island launched an electronic Prescription Monitoring Program (PMP), a database used to track the dispensing of controlled prescription drugs to patients. Information obtained from PMPs can be used to identify high-risk patients, problem prescribers and identify trends in opioid use and misuse; their utility in helping to reduce overdose deaths is yet unproven. Research examining the effectiveness of PMPs remains a relatively new area of inquiry; however, preliminary evidence suggests that PMPs are effective at changing prescribing practices and reducing “doctor shopping” (i.e., seeking out multiple providers to acquire controlled substances), and prescription drug abuse. PMPs may also be effective for overdose prevention by facilitating a discussion about prescribing naloxone, medication-assisted therapies, and other drug treatment options.

There are limitations to Rhode Island’s PMP program. As of January 2014, only 18% of all prescribers were registered to use the PMP. Furthermore, the database has been consulted for less than 10% of all controlled-substance prescriptions written statewide. Legislation signed in May 2014 requires healthcare providers to register for the PMP when they obtain or renew their controlled substance license. Though this legislation targets increasing prescriber registration, it does not require that prescribers consult the PMP prior to prescribing a controlled substance. The CDC and other organizations have identified PMPs as a key strategy for improving patient safety and reducing prescription drug misuse and diversion when they are universal (i.e., used by all healthcare providers for all controlled substances) and are actively managed.

To improve our response to the increasing number of opioid overdose events, licensed prescribers in Rhode Island should register with the PMP and routinely consult it prior to prescribing controlled substances. Figure 1 presents screenshots of Rhode Island’s PMP registration page which can be found at ripmp.com and a sample patient prescription history report. Detailed instructions of how to register and use Rhode Island’s PMP can be found on the Department of Health’s website (www.health.ri.gov/programs/prescriptionmonitoring/). Another novel Rhode Island resource specifically designed for prescribers is the Physician Consult program, which provides primary care physicians with immediate assistance to assess (within 1 hour of call) and facilitate drug treatment entry for patients who are using illicit drugs or misusing prescription drugs and seek help (see links on health.ri.gov or call 401-781-2700/TTY 401-354-7640).

Naloxone Access and Good Samaritan Laws

Naloxone is an opioid antagonist used to counter the effects of opioid-induced respiratory depression. Once administered intramuscularly, intranasally, intravenously, or subcutaneously, its effects occur within minutes and can last anywhere between 20 to 90 minutes. Though naloxone is a prescription drug, it is not a controlled substance and has no abuse potential. Naloxone has been routinely used in healthcare settings to reverse opiate overdose; however, naloxone prescriptions can also be provided to at-risk patients or their caregivers (a practice known as “third-party prescribing”).

Although opioid antagonists are legal, there are barriers that may prevent healthcare professionals from prescribing naloxone to at-risk patients or their caregivers [i.e., fear of criminal liability]. State laws, known as “Good Samaritan” laws, have been implemented to encourage increased prescribing of naloxone and to protect those who call 911 or administer the drug to an individual who is overdosing. Rhode Island’s Good Samaritan law provides partial immunity for individuals who summon medical help during an overdose event.

Given that most overdose victims typically are unable to self-administer naloxone, providing overdose education and a prescription for naloxone to caregivers is an essential component of overdose prevention efforts. Community-based overdose education and naloxone distribution (OEND) programs for lay individuals have proven successful at reducing community-level overdose mortality. Since 1996, US OEND programs have distributed naloxone to 53,032 persons nationwide; resulting in the reversal of 10,171 opioid overdoses. Good candidates for naloxone prescriptions include individuals who are taking opioids for long-term pain management or who have a suspected or confirmed history of substance abuse, or their caregivers.

The Substance Abuse and Mental Health Services Administration’s “Opioid Overdose Toolkit,” provides additional guidance on who may be best suited to receive overdose education and naloxone prescriptions (http://store.samhsa.gov/product/Opioid-Overdose-Prevention-Toolkit/SMA13-4742). An additional resource is the website prescribetoprevent.org which demystifies the prescribing and dispensing of naloxone for healthcare professionals. Prescribers are encouraged to work with community-based OEND programs to improve naloxone access in their state. A more detailed description of Rhode Island’s community-based OEND programs can be found elsewhere in this issue.

Pharmacists and Collaborative Practice Agreement

Pharmacists are the most accessible healthcare provider in the community, working in highly visible and convenient...
Figure 1.

**New Registration**

**Registration Instructions**
Welcome to the PMP registration process. To begin the registration process, please select your job type that best describes your profession.
1. Enter the form of identification requested:
   a. DEA Number, if you’re a Pharmacist or Practitioner
2. Click the Next button. The system will display your information if found. Please make necessary corrections and fill in any missing information. If no information is returned, please fill out the information requested.
3. Click the Register button and follow the on-screen instructions. If you have any questions, please contact the PMP help desk at (866)-683-2476.

- Please enter DEA Number for practitioner

<table>
<thead>
<tr>
<th>Job:</th>
<th>DEA Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescriber</td>
<td></td>
</tr>
</tbody>
</table>

Next Go Back

**RI Dept of Health: Prescription Monitoring Program**

3 Capitol Hill, Room 205, Providence, RI 02908
Phone: 866-683-2476 Fax: (401) 541-0063 Email: sreport@otech.com

**Patient RX History Report**

Date: 04-01-2014

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Date</th>
<th>Rx #</th>
<th>Pham</th>
<th>Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary Smith</td>
<td>Smith, Mary</td>
<td>04/01/2011</td>
<td>1443926</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

**Prescriptions**

<table>
<thead>
<tr>
<th>Prescriber</th>
<th>Written</th>
<th>Total Prescriptions</th>
<th>1</th>
</tr>
</thead>
</table>
locations. Nationally, pharmacists already participate in harm-reduction activities for people at risk of opioid overdose, including over-the-counter needle sales, prescription monitoring program review, and counseling patients on buprenorphine. Evidence shows that pharmacists who participate in these activities are more likely to accept the notion of providing naloxone to caregivers of potential overdose victims. Since pharmacists dispense the prescription opioids that result in 60% of all reported opioid overdose deaths, they are key stakeholders in harm-reduction activities, including stocking naloxone, promoting naloxone co-prescription by prescriber, and initiation of naloxone through collaborative practice agreements. Collaborative practice agreements (CPA) are formal agreements in which a licensed provider makes a diagnosis, supervises patient care, and refers patients to a pharmacist under a protocol that allows the pharmacist to perform specific patient-care functions.

Rhode Island has implemented a CPA, where pharmacists can furnish naloxone without an individual prescription, alongside overdose prevention, identification, and response training, a practice supported by the American Pharmacists Association. As of August 2014, approximately 300 people accessed naloxone using the CPA, nearly doubling community-based naloxone efforts for the year. Healthcare professionals should educate and refer their at-risk patients to Walgreens, CVS, or other CPA-participating pharmacies, to realize maximum public health impact.

FUTURE DIRECTIONS

The strategies outlined above represent an important step forward, but, as noted, the current approaches can be better utilized and interconnected. Below we suggest two promising strategies that can be adopted to enable a more comprehensive healthcare response to opioid overdose prevention efforts in Rhode Island: improving prescriber education and adequately treating opioid addiction.

Prescriber Education

Prescriber education is critical to reduce the incidence of prescription drug abuse and misuse, however, most health professional schools do not provide comprehensive training on substance abuse or provide limited training on treating pain. On average, medical students receive only 11 hours of training in pain management. Rhode Island does not currently require or recommend education for pain medication prescribers.

To address this gap in prescriber education, the Food and Drug Administration approved the Risk Evaluation and Mitigation Strategy, requiring drug manufacturers to offer free or low-cost training programs to licensed prescribers in the US. Recommended training components include: knowledge and awareness of holistic approaches to pain treatment, appropriate opioid prescribing practices, use of PMPs, addiction identification, and referral to treatment. To these national recommendations, we urge the explicit addition of overdose prevention and prescribing of naloxone as critical topics in prescriber education.

Addiction Treatment

Treatment for opioid addiction typically combines counseling and behavioral therapies with the provision of medications (e.g., methadone, buprenorphine, and naltrexone) designed to ease/eliminate withdrawal symptoms or block the effect of opioid drugs; an approach known as Medication-Assisted Treatment.

Special authorization is needed for healthcare professionals seeking to treat addiction using controlled substances [i.e., methadone and buprenorphine]. Therefore, in addition to ensuring that individuals in need of treatment are identified and referred to treatment, an adequate number of healthcare providers trained and licensed to provide addiction treatment is also needed. Given local trends in opioid addiction and overdose events, more medical professionals approved to treat patients for addiction are needed.

CONCLUSION

Opioid overdose casualties in Rhode Island continue to increase at an alarming rate. Healthcare providers are in a unique position to significantly reduce the number of opioid overdose events. In order to affect long-lasting change in this epidemic, the response from Rhode Island’s healthcare professionals needs to be collaborative, comprehensive, and consistent, with a focus on preventing, identifying and treating opioid addiction, providing overdose education, and ensuring timely access to rescue medications.

References


Authors
Traci C. Green, PhD, MSc, Assistant Professor of Emergency Medicine and Epidemiology at the Warren Alpert Medical School of Brown University. She is an affiliated researcher at The Center for Prisoner Health and Human Rights at the Miriam Hospital and the Injury Prevention Center at Rhode Island Hospital.

Jef Bratberg, PharmD, Clinical Professor of Pharmacy Practice, University of Rhode Island College of Pharmacy.

Emily F. Dauria, PhD, MPH, Postdoctoral Fellow in the Department of Psychiatry and Human Behavior at the Warren Alpert Medical School of Brown University.

Josiah D. Rich, MD, MPH, Attending Physician in the Division of Infectious Diseases, The Miriam Hospital, co-director of The Center for Health and Human Rights, and Professor of Medicine and Community Health at the Warren Alpert Medical School of Brown University.

Disclaimer
The authors have no financial disclosures to report.

Correspondence
Josiah D. Rich, MD, MPH
The Miriam Hospital
164 Summit Avenue
Providence, RI 02906
401-793-4770
Fax 401-793-4779
jrich@lifespan.org