Governor Dan McKee’s Overdose Task Force
September 13, 2023

Louis Cerbo, EdD; Acting Director, Rhode Island Department of Behavioral Healthcare, Developmental Disabilities & Hospitals
Philip Chan, MD, MPH; Consultant Medical Director, Rhode Island Department of Health
Ana Novais, MA; Assistant Secretary, Rhode Island Executive Office of Health and Human Services
Richard Charest, MBA; Secretary, Rhode Island Executive Office of Health and Human Services
Thomas Joyce, LCDP, CPRS; Task Force Community Co-Chair
Cathy Schultz, MPH; Task Force Director, Rhode Island Executive Office of Health and Human Services
Welcome and Announcements
The PROFOUND Project: A state, academic, and community partnership to maximize the positive impact of naloxone access in Rhode Island

Brandon DL Marshall, PhD
Professor, Department Epidemiology
Director, People, Place & Health Collective
Brown University School of Public Health
09/13/2023
Who are we?

Bruce Schackman, PhD
Czarina Behrends, PhD, MPH
Sean Murphy, PhD
Ali Jalali, PhD
Thanh Lu, PhD
Philip Jeng, MS
Cristina Chin, LMSW, MPH
Brandon DL Marshall, PhD
Maxwell Krieger, BS
Shayla Nolen, PhD Candidate
Sam Bessey, MS
Jesse Yedinak, MPA
Alexander Walley, MD, MSc
Benjamin Linas, MD, MPH
Jake Morgan, PhD
Avik Chatterjee, MD
Christina Freibott, PhD Candidate
Xiao Zang, PhD
Zongbo Li, MPH
Traci Green, PhD, MSc
Alexandra Kingsepp, MPH
Andrew Trinidad, MPH
Jennifer Koziol, MPH
Benjamin Hallowell, PhD
Naloxone distribution in Rhode Island

2012 through Q2 2023

Source: https://preventoverdoseri.org/naloxone-data/
Bystanders are present in only ~50% of overdose deaths

51% n=1,204

Bystanders Present

49% n=1,163

No Bystanders Present

Our research questions

1. How might we distribute naloxone to communities in ways that lower opioid overdose deaths and makes the best use of our resources?

2. Could interventions to reduce solitary drug use further increase the positive impact of naloxone in Rhode Island communities?
PROFOUND is a microsimulation that models...

1. Rhode Islanders at risk for opioid overdose, breaking down by:
   - Size of at-risk population in each city/town and Rhode Island Overdose Action Area Response (ROARR) region
   - Drug use patterns/health states
   - Other characteristics that may be associated with overdose risk and naloxone access (e.g., age, sex)
PROFOUND is a microsimulation that models...

1. Rhode Islanders at risk for opioid overdose, breaking down by:
   - Size of at-risk population in each city/town and ROARR region
   - Drug use patterns/health states
   - Other characteristics that may affect overdose risk and naloxone access (e.g., age, sex)

2. In each ‘month’, a simulated person can experience an overdose
PROFOUND is a microsimulation that models...

1. Rhode Islanders at risk for opioid overdose, breaking down by:
   - Size of at-risk population in each city/town and ROARR region
   - Drug use patterns/health states
   - Other characteristics that may affect overdose risk and naloxone access (e.g., age, sex)

2. In each ‘month’, a simulated person can experience can overdose

3. What may happen during and after the overdose is determined by:
   - Was the overdose in public?
   - Was the overdose witnessed?
   - Was naloxone administered?
   - Was EMS called?
   - Did the simulated person go to the ED?
   - Did the simulated person survive?
Next, we ask ‘what if’ questions and run the model

1. What is the potential impact of the Teva settlement (50,000 kits per year for 10 years) on the overdose crisis in Rhode Island?

2. What if we could increase the percentage of overdoses that are witnessed by 60%?
How would opioid overdose deaths be impacted by an additional opioid settlement naloxone kits and an increase in witnessed overdoses in 2025?

No increase in witnessed overdoses

60% increase in witnessed overdoses

9%
How would opioid overdose deaths be impacted by an additional opioid settlement, naloxone kits, and an increase in witnessed overdoses in 2025?

- **Without Teva settlement**: 400
- **Teva settlement with optimized distribution**: 350
  - No increase in witnessed overdoses: 9%
  - 60% increase in witnessed overdoses: 24%
How would opioid overdose deaths be impacted by an additional opioid settlement, naloxone kits, and an increase in witnessed overdoses in 2025?

- No increase in witnessed overdoses
- 60% increase in witnessed overdoses

**Without Teva settlement**
- No increase in witnessed overdoses: Opioid overdose deaths
- 60% increase in witnessed overdoses: Opioid overdose deaths

**Teva settlement with optimized distribution**
- No increase in witnessed overdoses: Opioid overdose deaths
- 60% increase in witnessed overdoses: Opioid overdose deaths

**Without Teva settlement**
- No increase in witnessed overdoses: Opioid overdose deaths
- 60% increase in witnessed overdoses: Opioid overdose deaths

**Teva settlement with optimized distribution**
- No increase in witnessed overdoses: Opioid overdose deaths
- 60% increase in witnessed overdoses: Opioid overdose deaths
## Optimized naloxone distribution strategy by ROAAR region

**Figure:** Number of recommended naloxone kits distributed to each ROAAR and the number of potential averted deaths.

<table>
<thead>
<tr>
<th>ROAAR Region</th>
<th>Recommended number of kits</th>
<th>Opioid overdose deaths averted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1: Burrlville, Foster, Glocester, Scituate</td>
<td>1,000</td>
<td>2</td>
</tr>
<tr>
<td>Region 2: Woonsocket</td>
<td>3,500</td>
<td>1</td>
</tr>
<tr>
<td>Region 3: Cumberland, Lincoln, North Smithfield, Smithfield</td>
<td>2,500</td>
<td>4</td>
</tr>
<tr>
<td>Region 4: Johnston, North Providence</td>
<td>2,400</td>
<td>2</td>
</tr>
<tr>
<td>Region 5: Central Falls, East Providence, Pawtucket</td>
<td>7,300</td>
<td>3</td>
</tr>
<tr>
<td>Region 6: Providence</td>
<td>16,200</td>
<td>3</td>
</tr>
<tr>
<td>Region 7: Coventry, Cranston, Warwick, West Warwick</td>
<td>9,300</td>
<td>8</td>
</tr>
<tr>
<td>Region 8: Barrington, Bristol, Little Compton, Middletown, Newport, Portsmouth, Tiverton, Warren</td>
<td>4,800</td>
<td>6</td>
</tr>
<tr>
<td>Region 9: East Greenwich, Exeter, Hopkinton, Richmond, West Greenwich</td>
<td>1,400</td>
<td>2</td>
</tr>
<tr>
<td>Region 10: Charlestown, Jamestown, Narragansett, New Shoreham, North Kingstown, South Kingstown</td>
<td>4,600</td>
<td>4</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>53,000</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>
Increased naloxone distribution and addressing solitary drug use reduces the proportion of overdose deaths that are fatal from about 1 in 37 to about 1 in 61.

Teva settlement with optimized distribution

- No increase in witnessed overdoses
- 60% increase in witnessed overdoses
Growing racial/ethnic inequities in naloxone access during the COVID-19 pandemic in Massachusetts

Source: Zang et al. *Addiction*, 2023
Conclusions

1. Rhode Island is a national leader in naloxone distribution.

2. Community-based efforts are making an enormous impact on the overdose crisis in our state.

3. Ongoing efforts to increase naloxone distribution will have greater effect if interventions are undertaken to address solitary drug use.
Co-Principal investigator Bruce Schackman and other members of the PROFOUND team

Members of the Rhode Island naloxone workgroup for their insights, contributions, and partnership

Staff and partners at the Rhode Island Department of Health

Partners, staff, and advocates at our local harm reduction & recovery organizations

The wonderful staff, faculty, and students at the People, Place & Health Collective (PPHC), particularly Jackie Goldman, Alex Collins, Jesse Yedinak, and Alex Macmadu

Particular thanks to Max Krieger, Abdullah Shihipar, and Xiao Zang for their assistant with this presentation

Our students at Brown School of Public Health

appreciations & gratitude
● This project is supported by the National Institute on Drug Abuse (U01-DA047408)

● We are grateful for additional funding and support from the COBRE on Opioids & Overdose (P20-GM125507)
Contact us!

@pph_collective

@pph_collective

brandon_marshall@brown.edu

www.pphcollective.org

66 Pavillion Ave
Providence, RI 02905

Illustrations by Esther Moon
2023 International Overdose Awareness Day

A TIME TO REMEMBER - A TIME TO ACT
We See You
Award Recipients
WE HANDED OUT 5,438 BOXES OF NARCAN ACROSS RI ON INTL. OVERDOSE AWARENESS DAY!

NO SHAME NO SHAME NO SHAME NO SHAME
2,980
Providence, Pawtucket, & Central Falls

1,012
Warwick, West Warwick, & Coventry

576
East Providence, Burrillville, & Tiverton

502
Woonsocket, Smithfield, & Lincoln
Happy Recovery Month!
Public Comment