Citizen Science: Naloxone Availability in Allegheny County Pharmacies

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University of Pittsburgh
Panthercare
What is Panthercare?

- Undergraduate public health student organization;
- Founded in 2016;
- Advisor: Dr. Daniel Jiang
- Mission: Panthercare aims to remedy the health issues of Pittsburgh’s most vulnerable populations through interdisciplinary collaboration between students and healthcare professionals.
Panthercare
Integrated Public Health Projects

Current Projects

**Project Overdose**
- Naloxone distribution data collection analysis
- Collaborate with local needle exchanges, research groups, first responders, and medical personnel

**Healthy Oakland Food Pantry**
- Recruit local grocers to donate unsold healthy food items
- Coordinate deliveries of donated food to local pantries

**Mental Health Initiative**
- Identify problems with approach to mental health care
- Work alongside leadership to improve quality of care

**Birmingham Clinic Fundraiser**
- Fundraise for community clinic that offers free health services to the uninsured
- Funding will be used to provide medication and medical supplies

Our Mission

Panthercare aims to remedy the health issues of Pittsburgh's most vulnerable populations through interdisciplinary collaboration between students and healthcare professionals.

Why Join?

**Help Your Community**
- Participate in community outreach and public health projects.

**Kickstart Your Health Career**
- Network with healthcare professionals

**Boost Your Resume**
- Gain valuable leadership experience

Our Members

**Various Pre-Health Tracks**
Pre-Medical
Pre-Pharmacy
Pre-PA
and more!

**All Majors Welcome**
Neuroscience
Biochemistry
Exercise Science
Industrial Engineering
Marketing
Communication
Global Management
and more!

What We Do

- Community Outreach
- Fundraising
- Project Management
- Collaboration with Local Healthcare Professionals
- Resume Building
- Networking
- Health Procedural Training
- Mentoring
- Coalition Building
- Professional Development
- Quantitative and Qualitative Research
- Academic Curricular Enhancement
- Recruitment and Expansion
- Data Analysis
Opioids: A Student Perspective

• Few overdoses on campus;

• Knowledge of the opioid epidemic;

• Pre-health student want to help in an appropriate capacity;

• Many don’t know how to get involved;

• Future healthcare professionals
  • Combat problem now or allow it to worsen over the span of our careers
Scope of the Opioid Crisis in Pennsylvania and Allegheny County

2016 PA Fatal OD Rate = 26 per 100,000

2016 PA Fatal OD Rate = 36.5 per 100,000

2015 Allegheny County Fatal OD Rate = 34.30 per 100,000

2016 Allegheny County Fatal OD Rate = 52.97 per 100,000

Figure 1: Rate of Drug-Related Overdose Deaths per 100,000 people in Pennsylvania Counties, 2015

Source: Pennsylvania Coroner Data and www.census.gov
Act 139 and Standing Orders

• Goal: Expand access to naloxone and protect individuals who assist in overdose prevention/reversal from legal ramifications;

• Allows administration of naloxone via first responders, bystanders, and healthcare professionals without legal ramifications;

• Laypersons can purchase naloxone at a pharmacy without a prescription.
Pharmacies that carried naloxone in 2015
Addressing the Opioid Crisis in Allegheny County

- Expand use of naloxone in high-risk communities by all first responders, and increase availability of naloxone in pharmacies in those same communities.
- Expand the number of pharmacies stocking naloxone and using the available standing orders.
- Improve public education regarding naloxone.
- Provide drug take-back opportunities in communities of high risk.
- Increase SUD treatment providers’ capacity to deliver MAT.
- Improve coordination between mental health, SUD treatment and other healthcare providers, especially with regard to safe prescribing practice.
- Universally assess ACJ inmates for opioid use and overdose risk.

Citizen Science Naloxone Reporting Project

- 7 Panthercare members
- Program Evaluation and Research Unit (PERU)
  - Sponsored Panthercare
  - Provided administrative and technical support
- Created survey to gauge naloxone accessibility and compliance to Act 139 and standing orders across Allegheny County pharmacies
Citizen Science Naloxone Reporting Project

- **Quantify** Allegheny County pharmacies’ participation in Pennsylvania and Allegheny County’s 2015 standing orders for naloxone.

- **Understand barriers** that preclude pharmacies from actively stocking and distributing naloxone.

- **Identify intervention opportunities** to increase the availability of naloxone in Allegheny County.
Citizen Science Naloxone Reporting Project: Pharmacy Selection

• All 342 operational pharmacies in Allegheny County surveyed
  • Chain, independent, hospital-based, and specialty

• Pharmacies were nonrandomized
  • Pharmacies located in close proximity to public transportation lines were surveyed in person.
  • Pharmacies outside of public transportation were contacted via phone
Citizen Science Naloxone Reporting Project: Survey Design

• Panthercare representatives spoke with pharmacies, asking a series of questions.

• Simulation of actual customer experience
  • Representatives not provided a script
  • Interactions encouraged to be natural, with fluid conversation

• Noted pharmacists’ body language, tone of voice, and overall positivity/negativity related to the conversations
1) Are you **aware** of the standing order for naloxone and will you **honor** it?

2) Do you currently have the naloxone products covered by the standing order **in stock and available today**?

3) Will you **accept insurance** for the naloxone standing order?
Citizen Science Naloxone Reporting Project: Results

Are you aware of the standing order for naloxone and will you honor it?

Yes: 234/342 (69%)

No: 55/342 (16%)

Not Applicable: 52/342 (15%)
Do you currently have the naloxone products covered by the standing order in stock and available today?

Yes: 168/342 (49%)

No: 117/342 (34%)

Not Applicable: 56/342 (16%)
Will you accept insurance for the naloxone standing order?

Yes: 108/342 (32%)  
No: 41/342 (12%)  
Some: 119/342 (35%)  
Not Applicable: 73/342 (16%)
Citizen Science Naloxone Reporting Project: Results

Aggregate Survey Responses

Number of Pharmacies

<table>
<thead>
<tr>
<th>Survey Questions and Responses</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware and Honor Standing Order?</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Naloxone in Stock?</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Accept Insurance?</td>
<td>Yes</td>
<td>No</td>
<td>Some</td>
</tr>
</tbody>
</table>
## Breakdown of Allegheny County pharmacy survey responses by independent and chain pharmacies.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes (Ind.)</th>
<th>No (Ind)</th>
<th>Yes (Chain)</th>
<th>No (Chain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you aware of the standing order for naloxone and will you honor it?</td>
<td>54/128</td>
<td>26/128</td>
<td>180/213</td>
<td>29/213</td>
</tr>
<tr>
<td></td>
<td>(42%)</td>
<td>(20%)</td>
<td>(85%)</td>
<td>(19%)</td>
</tr>
<tr>
<td>Do you currently have the naloxone products covered by the standing</td>
<td>38/128</td>
<td>42/128</td>
<td>130/213</td>
<td>75/213</td>
</tr>
<tr>
<td>order in stock and available today?</td>
<td>(30%)</td>
<td>(33%)</td>
<td>(61%)</td>
<td>(35%)</td>
</tr>
<tr>
<td>Will you accept insurance for the naloxone standing order?</td>
<td>39/128</td>
<td>32/128</td>
<td>126/213</td>
<td>65/213</td>
</tr>
<tr>
<td></td>
<td>(30%)</td>
<td>(25%)</td>
<td>(59%)</td>
<td>(31%)</td>
</tr>
</tbody>
</table>
Naloxone-carrying Pharmacies and Fatal Overdose Rates per 10,000 Persons
### Barriers and complications to pharmacy-based naloxone distribution: 189 pharmacies

<table>
<thead>
<tr>
<th>Barrier/Complication</th>
<th>Instances</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company policy and/or business model prohibits naloxone distribution to laypersons.</td>
<td>53</td>
<td>28.04%</td>
</tr>
<tr>
<td>The pharmacist communicated a lack of education regarding the standing order and/or naloxone distribution.</td>
<td>40</td>
<td>21.16%</td>
</tr>
<tr>
<td>The pharmacy normally stocks naloxone, but experienced a stockout on the day in question.</td>
<td>19</td>
<td>10.05%</td>
</tr>
<tr>
<td>A belief that other parties/institutions/programs also carry naloxone, thereby relieving the pharmacy of stocking naloxone.</td>
<td>14</td>
<td>7.41%</td>
</tr>
<tr>
<td>Low consumer demand disallows the pharmacy to profitably stock batch quantities of naloxone, or procuring batch quantities of naloxone is too expensive to justify stocking it.</td>
<td>14</td>
<td>7.41%</td>
</tr>
</tbody>
</table>
Barrier 1: Pharmacy Education

- The pharmacist communicated a lack of education regarding the standing order and/or naloxone distribution
  - 40/189 pharmacies (21.16%)
  - “The patient needs a prescription to fill for naloxone”
  - “I am unsure of the insurance policies regarding naloxone purchasing.”
Barrier 2: Supply Chain Management

- The pharmacy normally stocks naloxone, but experienced a stockout on the day in question.

- 19/189 pharmacies (10.05%)

- “Our stock has been bought out and we’re expecting a shipment at the end of the week”
Barrier 3: “Not my responsibility”

- A belief that other parties/institutions/programs also carry naloxone, thereby relieving the pharmacy of stocking naloxone.
- 14/189 pharmacies (7.41%)
- “The local police carry naloxone, and there’s a place you can get it in the North Hills”
- “Why come to us when there’s a Rite Aid next door?”
Barrier 4: Low consumer demand/too expensive

- Low consumer demand disallows the pharmacy to profitably stock batch quantities of naloxone, or procuring batch quantities of naloxone is too expensive to justify stocking it.

- **14/189 pharmacies (7.41%)**
  
  - “It is hundreds of dollars to order an entire package that will only be used for a couple of customers”
  
  - “We would probably carry it if there was more demand for it.”
Barriers and complications to pharmacy-based naloxone distribution

Barrier 5: Stigma

• The pharmacy was not interested in distributing naloxone because of the stigma towards substance use.

• 6/189 pharmacies (3.17%)

• “If you’re local we’ll help you out, but people from out of town are sketchy and will need a prescription”

• “The owner doesn’t want to” or “We’re in a better part of town.”
Barriers and complications to pharmacy-based naloxone distribution

Common Barriers to Stocking Naloxone

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Number of Pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Model</td>
<td>55</td>
</tr>
<tr>
<td>Pharmacy Education</td>
<td>36</td>
</tr>
<tr>
<td>Stockout</td>
<td>16</td>
</tr>
<tr>
<td>&quot;Not my responsibility&quot;</td>
<td>8</td>
</tr>
<tr>
<td>Low Demand/Too Expensive</td>
<td>11</td>
</tr>
<tr>
<td>Logistics</td>
<td>7</td>
</tr>
<tr>
<td>Stigma</td>
<td>4</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>30</td>
</tr>
</tbody>
</table>
### Naloxone Formulations stocked by Allegheny County pharmacies

<table>
<thead>
<tr>
<th>Naloxone Formulations</th>
<th>Independent Pharmacy</th>
<th>Chain Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narcan® Intranasal Spray</td>
<td>11/38 (29%)</td>
<td>53/130 (41%)</td>
</tr>
<tr>
<td>Intramuscular Injection Vial</td>
<td>3/38 (8%)</td>
<td>22/130 (17%)</td>
</tr>
<tr>
<td>Both</td>
<td>2/38 (5%)</td>
<td>11/130 (8%)</td>
</tr>
</tbody>
</table>

Note: Not all pharmacies that stocked naloxone disclosed which formulations were stocked, hence the incomplete survey sample (42% and 66% responsiveness for independent and chain pharmacies, respectively).
There were certain characteristics of pharmacies that excelled at naloxone distribution

- Prepared naloxone kits with educational materials.
- Approachable and “stigma free”.
- Knowledgeable of Act 139, standing orders, and pharmacy policies.
- Encouraged revisit or call with questions.
- Advertise naloxone availability
Recommendations and Next Steps: Independent Pharmacies

• Pharmacist Education
  • Discuss benefits of stocking naloxone.
  • How to implement cost-effective distribution programs

• Community Education
  • Increasing public awareness of naloxone availability in their community (*OverdoseFreePA.pitt.edu*)
  • Prepare naloxone kits

• Naloxone Training
  • Ensure that naloxone can be administered properly
Recommendations and Next Steps: Chain Pharmacies

• **Pharmacist Education**
  • Discuss demand for naloxone in their area.
  • Cohesive responses and information provided to customers regarding naloxone.

• **Community Education**
  • Advertise standing order and naloxone availability
  • Stigma reduction

• **Naloxone Training**
  • Ensure that naloxone can be administered properly
OverdoseFreePA

• Online tool with all naloxone-carrying pharmacies in PA
• Helps customers find naloxone near their ZIP code
• Finder populated with results from this project
Community-based pharmacist project that aims to improve patient health through the adoptions of practices and education that will lead to safe and more effective use of opioid prescriptions.

Pharmacists will be educated and provided materials on:

- Safe use of opioids (e.g. medication use, storage, and disposal);
- Risks for overdose and naloxone administration;
- Stocking and billing for naloxone under the standing order(s).
Thank You!

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Dr. Lynn Mirigian
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Allison Burrell, MPH, CPH
Dr. Bryan Norman
Dr. Daniel Jiang

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Allegheny County Overdose Prevention Coalition

The full report and all pharmacies carrying naloxone in Allegheny County can be found on OverdoseFreePA.