NDEWS HOTSPOT REPORT

UNDERSTANDING OPIOID OVERDOSES IN NEW HAMPSHIRE

Phase II of a National Drug Early Warning System (NDEWS) HotSpot Rapid Epidemiological Study

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OVERVIEW
Rates of synthetic non-methadone opioid overdose in New Hampshire have increased by nearly 1,600% from 2010 to 2015. From 2014-2015, the latest data available for this report, the state saw an increase of 94.4%, rising from 12.4 to 24.1 opioid overdoses per 100,000 residents in that year alone. The escalation is predominately driven by increased rates of fentanyl use and overdose.

In August 2016, the National Drug Early Warning System (NDEWS) and the Center for Technology and Behavioral Health (CTBH) at Dartmouth College, with funding from the National Institute on Drug Abuse (NIDA), partnered to conduct a Rapid HotSpot study on New Hampshire’s synthetic non-methadone opioid (fentanyl) overdose crisis in two phases. During Phase I, researchers met with a diverse array of New Hampshire stakeholders to produce a report about the fentanyl outbreak, highlighting available data and information learned. Results of the Phase I study indicated that real-time data from opioid consumers and first responders was imperative to more accurately inform policy (Phase II). This report presents results from Phase II.

METHODS
Phase II of the NDEWS Rapid HotSpot study was conducted as an epidemiological investigation into the experiences and perspectives of opioid users, first responders and emergency department (R/ED) personnel surrounding the opioid overdose crisis in New Hampshire. Seventy-six opioid consumers, 18 first responders, and 18 emergency department personnel were recruited from six counties across New Hampshire. Recruitment was heavily targeted in Hillsborough County, which has seen particularly high rates of opioid overdoses. Each participant completed a semi-structured interview and a brief demographic survey. Interviews focused on questions that arose during the Phase I HotSpot study, including trajectory of opioid use, experiences with overdose, trafficking and formulation of fentanyl, fentanyl-seeking versus accidental ingestion, the value of harm reduction models, prevention strategies and treatment preferences.

Interviews were transcribed and analyzed using content analysis to condense the transcripts into content-related categories and review these for themes.

PARTICIPANTS
For this NDEWS HotSpot report, we conducted initial analyses of 20 consumers and 12 R/ED personnel (3 Emergency Department, 3 Emergency Medical Services, 3 Fire, 3 Police).
**EXECUTIVE SUMMARY**

Consumers were, on average, 34.1 (sd 7.5) years of age, 55% (11) were male, 90.% (18) were white, and all (20) were neither Hispanic nor Latino.

Responders were, on average, 47.8 (sd 7.2) years of age, 83.3% (10) were male, 91.7% (11) were white, and all who reported ethnicity (11) were neither Hispanic nor Latino.

**THEMES IDENTIFIED**
Analysis of consumer and R/ED personnel interviews resulted in 10 identified categories:

- Trajectory of opioid use
- Formulation of heroin/fentanyl
- Fentanyl-seeking behavior
- Trafficking and supply chain
- Experiences with overdoses
- Experiences with Narcan
- Harm reduction
- Experiences with treatment
- Prevention
- Laws and policies

**RESULTS**

**Trajectory of opioid use**
The initial results suggest that consumers’ path to opioid use was typically associated with:

- Early recreational substance use,
- Severe injuries warranting a prescription opioid, sometimes followed by an abrupt taper,
- Intergenerational substance use among nuclear family members, and/or
- Self-medication of mental health conditions.
EXECUTIVE SUMMARY

Formulation of Heroin and Fentanyl
Consumers report being able to distinguish between fentanyl and heroin by the substance’s color, taste, subjective effect, and cost. Responders report limited knowledge of the formulation of heroin/fentanyl.

Fentanyl-seeking behavior
Most consumers report seeking drugs that are known to have caused an overdose, but typically do not specifically seek fentanyl alone. The majority of consumers report being neutral or averse to using fentanyl but if they hear that it is present in a batch that caused an overdose, they report seeking that batch. R/ED personnel have mixed reports of this behavior among consumers.

 Trafficking and supply chain
Consumers and R/ED personnel both report fentanyl hit the supply chain in New Hampshire in 2014-2015. Consumers and R/ED personnel report fentanyl is locally manufactured in, and distributed from, Massachusetts, as there is a potential profit from selling in New Hampshire versus Massachusetts. Demand in the state is driven by lower cost, higher potency, and easier availability. Many believe fentanyl originates in China or Mexico.

Experiences with overdoses
Almost two-thirds of consumers had experienced an overdose. Both consumers and R/ED personnel agreed that fentanyl is the primary cause of overdose in New Hampshire, largely due to its potency and inconsistency in fentanyl/heroin mixes. Both groups unanimously reported that overdoses in the state occur across all demographics.

Experiences with Narcan
Neither consumers nor R/ED personnel had observed any side effects from naloxone (Narcan) administrations, aside from its intended effect of precipitated withdrawal during overdose reversal. Despite this, consumers reported many barriers to obtaining Narcan including high cost, fear of police, fear of stigmatization, lack of knowledge, and fear of withdrawal after administration. No unanticipated side effects were observed.

Harm reduction
R/ED personnel and consumers both endorsed the need for needle exchange programs in New Hampshire, in addition to increasing the availability of medication-assisted treatment, medically assisted detoxification, and other treatment services.
Experiences with treatment
Both consumers and R/ED personnel agreed that consumers cannot stop using opioids without help. Available services are lacking in New Hampshire and include lengthy waitlists, trouble navigating the system, and funding (both for consumers to afford care and for programs to provide it). Referral rates after overdose treatment are low due to staffing shortages. Recommendations for improvement include:

- Increasing access to medication assisted treatment, especially Suboxone,
- Medically-assisted detoxification, and
- More counseling options.

Prevention
Participants reported that additional prevention efforts are necessary and suggested early education about opioids (before middle school), dismantling the stigma around substance use, prudent prescribing of opioid analgesics, and more education for patients regarding pain and opioids. R/ED personnel expressed the need to mobilize communities to fight this epidemic.

Laws and policies
Consumers are not well informed about state laws and policies regarding opioid use. There is frustration and mistrust towards police and the justice system due to encounters with the criminal justice system, lack of treatment availability in jail and mistrust of the Good Samaritan Law (allowing consumers to report an overdose and be immune from prosecution at that event). Consumers and R/ED personnel reported that new prescribing crackdowns may reduce opioid prescribing but would likely mean an increase in heroin use. Prescription Drug Monitoring Programs were viewed as useful but burdensome by ED staff.

UNIQUENESS OF NEW HAMPSHIRE
New Hampshire has significantly higher rates of prescribing of long-acting/extended release opioids as well as concurrent prescribing of high-dose opioids and benzodiazepines than the national average. The shortage of treatment funding and availability, lower rates of Suboxone prescribers per capita, an absence of a needle exchange program, barriers to accessing Narcan, and the proximity of interstate access to the supply chain were identified as making New Hampshire’s opioid problem unique from other states. Some consumers and R/ED personnel also identified the rural setting of New Hampshire as a contributing factor, i.e., “Live Free or Die.”
NEXT STEPS

Based on data from this study, preliminary considerations for New Hampshire’s approach to tackling the opioid overdose crisis include:

- Increase public health funds targeting substance use;
- Expand prevention programs in elementary and middle schools;
- Strengthen treatment to include broader availability, non-prohibitive cost, and inclusion of medication-assisted options and holistic approaches;
- Incentivize physicians to become buprenorphine-waivered providers;
- Assist physicians with prudent prescribing of opioids, educating patients, and alternatives to pain management;
- Support first responder and emergency department personnel with vicarious trauma associated with responding to overdoses;
- Initiate needle exchange programs;
- Collaborate with Massachusetts on addressing the manufacturing and trafficking of fentanyl and other opioids; and
- Launch programming to dispel stigma and fear:
  - Educate consumers (e.g., Narcan and Good Samaritan Law)
  - Educate physicians and pharmacists (e.g., chronic disease management and value of Narcan)
  - Educate law enforcement (e.g., alternative approaches to punitive measures)
  - Educate the public (e.g., opioid crisis is not isolated to one demographic/area and breaking the intergenerational cycle of addiction)
PHASE 1 HOTSPOT STUDY

Since 2014, the state of New Hampshire saw a disproportionately high rate of opioid overdoses compared to other states, especially involving the use of fentanyl. From 2013 to 2014 alone, the Centers for Disease Control and Prevention (CDC) reported a 73.5% increase in opioid overdoses in the state; estimations of that number have only increased in the years since. In the 2013-2014 reporting period, New Hampshire residents died of synthetic opioid-related overdoses at a rate of 12.4 per 100,000. The second-closest state to that rate during that reporting period, Rhode Island, saw synthetic opioid-related overdose deaths at a rate of 7.9 per 100,000. In December 2016, the CDC released updated data for the 2014-2015 reporting period. Alarmingly, New Hampshire saw a doubling (an increase of 94.4%) of synthetic opioid-related overdose deaths per capita from 2014-2015; 24.1 per 100,000 in New Hampshire died from synthetic opioid-related overdoses in 2014-2015. The second-closest state reporting deaths in that period was Massachusetts, which saw 14.4 per 100,000 (Centers for Disease Control and Prevention (CDC), 2016).

In 2014, the National Institute on Drug Abuse (NIDA) initiated a Cooperative Agreement with the Center for Substance Abuse Research (CESAR) at the University of Maryland to create the Coordinating Center for the National Drug Early Warning System (NDEWS). NDEWS offers the unique ability to rapidly identify emerging drugs, including synthetic opioids such as fentanyl, and facilitate a more rapid and informed response to outbreaks and changes in substance use and misuse. One innovative component of NDEWS is the ability to launch rapid HotSpot studies of local drug outbreaks. In partnership with the NDEWS and funding by NIDA, the Center for Technology and Behavioral Health (CTBH) at Dartmouth College conducted a Phase I Rapid HotSpot study (National Drug Early Warning System (NDEWS), 2016), on New Hampshire’s non-methadone synthetic opioid (fentanyl) overdose crisis in August 2016 in two phases. During the Phase I rapid study, the CTBH and NDEWS teams met with multiple stakeholders throughout the state, including treatment providers, medical responders, law enforcement, and state authorities and policymakers, to learn more about their perspectives on the fentanyl crisis in New
Hampshire. State authorities expressed serious concern regarding the state’s apparent trend towards higher rates of alcohol and drug use compared to the rest of the country in national surveys, and were concerned that the current drug of choice is fentanyl. Furthermore, questions were raised about how much anecdotal or speculative information is driving policy; it was clear from stakeholders that policy decisions need to be based on valid data about the opioid overdose crisis.

It was apparent from the Phase I interviews with stakeholders in New Hampshire that much is unknown about the fentanyl overdose crisis in the state. Many stakeholders expressed that user-level data was imperative to answer pointed questions to more accurately inform policy, such as the trajectory of fentanyl use, the trafficking of fentanyl, fentanyl-seeking behavior versus accidental ingestion, the value of harm reduction models, and treatment preferences.

With the support of NIDA to conduct Phase II, NDEWS awarded sub-contracts to researchers at Dartmouth’s CTBH and the University of Maine to conduct two additional studies. The first study involved systematic interviews of first responders, emergency department personnel, active fentanyl users, and individuals new to treatment (the focus of this report from Dartmouth’s CTBH). The second study examined medical records and medical examiner investigations for persons who died from fentanyl-related overdoses in New Hampshire (Marcella Sorg, PhD, University of Maine, PI; not included in this report).
PHASE II RAPID EPIDEMIOLOGICAL STUDY

In the second phase of the NDEWS Rapid HotSpot Study, the research team at CTBH conducted a rapid epidemiological investigation of opioid users’, first responders’, and emergency department (ED) personnel’s perspectives on opioid overdose in New Hampshire, to provide updated data to inform policy on tackling the fentanyl overdose crisis. In addition to the funds provided by NDEWS, CTBH also receives funding from the National Drug Abuse Treatment Clinical Trials Network Northeast Node (based out of CTBH and funded by NIDA: UG1DA040309) and was able to utilize additional funds to cover infrastructure for this project.

The study team conducted 60-minute semi-structured systematic interviews with 76 active opioid consumers or those new to treatment for opioid use disorders, 18 first responders (police, fire, EMS), and 18 emergency department personnel. Interviews were completed either via phone or in-person depending on participant preference. Participant interviewees completed brief demographic and substance use history surveys. Participants were recruited using connections provided by the Northeast Node of the National Drug Abuse Treatment Clinical Trials Network, at Groups, Inc., treatment centers throughout the state, word-of-mouth, posters hung in Safe Station locations, treatment facilities, food banks, shelters, laboratories, and via ads in local newspapers and www.CraigsList.com. Participants were incentivized to participate in this study with $50 gift cards for completing the interview and survey. Sampling was purposely heavily concentrated in Hillsborough County, given that it was targeted as the “hot spot” in New Hampshire (New Hampshire Information and Analysis Center, 2017), with additional sampling in Cheshire, Grafton, Rockingham, Strafford, and Sullivan counties.

Interviews with consumers focused on questions that arose during Phase I, including the trajectory of opioid use, the supply chain, fentanyl-seeking behavior versus accidental ingestion, the value of harm reduction models, opinions about prevention strategies, and treatment preferences.

Systematic interviews were also conducted with first responders (police, fire, and emergency medical service [EMS] personnel) and emergency department (ED) personnel in counties where opioid consumer interviews were conducted. Interviews with these stakeholders concentrated on trends in opioid-related overdoses, including user characteristics and patterns, assessment and investigative protocols, Narcan administration, and referral practices. These participants also completed brief demographic and employment surveys.

A total of 76 consumers and 36 first responders and ED personnel were interviewed. Twenty opioid consumers and 12 first responders and ED staff interviews were analyzed for this NDEWS HotSpot report.
INTRODUCTION

Five research team members conducted the interviews and the majority of the interviews were transcribed by an independent contracting group; a few were transcribed by research team members to facilitate initial familiarity with the data. Given the demands of the condensed timeline for Institutional Review Board (IRB) review, recruitment, interview conduct, analyses and report production (6 months), as well as the reasonable expectation of reaching ‘saturation’—the point at which interview answers maintain consistency, usually after reviewing 12-15 interviews per group (Guest, Bunce, & Johnson, 2006)—we analyzed 20 consumer (weighted across the targeted NH counties) and 12 responder (3 ED, 3 EMS, 3 Fire, 3 Police) interviews. All additional interviews are currently being analyzed, and these data will be included in future planned publications.

The primary research team analysts used content analysis to systematically analyze and describe these different perspectives on opioid overdose by condensing voluminous pages of the transcripts into content-related categories that were then reviewed for patterns (themes). Due to the highly structured nature of the interviews, first level codes were largely predetermined by the guides themselves (e.g., trajectories of opioid use, experiences with overdose). The primary analysts independently reviewed a subsample of both consumer and responder transcripts to identify patterns and develop initial code lists. Once the initial code lists were generated, the primary analysts coded the remaining transcripts in the subsample. The larger research team met weekly once data collection was complete so that the primary analysts could share emergent themes from the analyses and so that remaining team members who conducted interviews could provide feedback on the trustworthiness of the data and the analyses. Through these regular check-ins/consensus sessions, code lists were honed and discrepancies were resolved.

Demographic data were analyzed using Stata (StataCorp, 2015) to generate descriptive statistics. Once both the qualitative and quantitative data were analyzed, we examined the evidence from the different data sources to triangulate the data, check the accuracy of the findings, and build a coherent understanding of opioid overdose in New Hampshire based on the data.

In line with the aims of this project, ten categories were identified by the research team that best represent the data collected: (1) Trajectory of opioid use, (2) Formulation of heroin and fentanyl, (3) Fentanyl-seeking behavior, (4) Trafficking and supply chain, (5) Experiences with overdoses, (6) Experiences with Narcan, (7) Harm reduction, (8) Treatment, (9) Prevention, and (10) Laws and policies. This report is organized by those categories.

RESEARCH TEAM

The Phase II rapid epidemiological HotSpot study was conducted for NDEWS by the Center for Technology and Behavioral Health (CTBH; www.c4tbh.org) with the support of the Northeast Node of the National Drug Abuse Treatment Clinical Trials Network (CTN;
www.ctnnortheastnode.org], both based at Dartmouth College. The Northeast Node maintains an extensive network of partners throughout New Hampshire, which allowed the study to rapidly coordinate recruitment sites. Additionally, the Northeast Node Administrative Team (Andrea Meier, Director of Operations; Bethany McLeman, Research Project Manager; and Samantha Auty, Research Assistant) provided infrastructure for the research team. Participating CTBH affiliates include Sarah K. Moore, PhD (qualitative research expert), Elizabeth Saunders, MS (PhD student mentee of Dr. Lisa Marsch), and Stephen A. Metcalf, MPhil (CTBH Research Project Manager). Under the leadership of Lisa Marsch, PhD (Director of CTBH and Principal Investigator of the Northeast Node), the research team secured Dartmouth Committee for the Protection of Human Subjects (CPHS) approval, coordinated protocols and recruitment procedures, conducted 112 interviews, participated in the transcription process, analyzed the data collected by this study, and contributed to this NDEWS HotSpot report from October 2016 through March 2017.

ACKNOWLEDGEMENTS
Support for this study was provided by the National Institute on Drug Abuse (NIDA) National Drug Early Warning System (NDEWS) at the University of Maryland (U01DA038360-Z0717001, PI: Eric D. Wish, PhD; Co-I: Erin Artigiani, MA; Sub-award PI: Lisa Marsch, PhD). Infrastructure and support for research team members from the Northeast Node of the National Drug Abuse Treatment Clinical Trials Network was provided by the Clinical Trials Network (UG1DA040309, PI: Lisa Marsch, PhD).

The study was conducted in accordance with all human subject protections and good clinical practices (e.g., Helsinki Declaration, Belmont Principles, and Nuremberg Code). The Trustees of Dartmouth College institutional review board (Committee for the Protection of Human Subjects (CPHS)) approved the collection, analyses, and reporting of these data.

NDEWS is funded under NIDA Cooperative Agreement DA038360, awarded to the Center for Substance Abuse Research (CESAR) at the University of Maryland, College Park. Opinions expressed by the authors of this report may not represent those of NIDA.
OPIOID CONSUMERS
Interviews were conducted with participants who were either actively using opioids or were new to treatment for opioid use disorder. In all, 76 interviews were conducted with opioid consumers from six counties in New Hampshire.

FIRST RESPONDERS
Interviews were conducted with one active police officer, firefighter, and emergency medical services (EMS) member in each of the six counties, for a total of 18 interviews.

EMERGENCY DEPARTMENT STAFF
Interviews were conducted with three clinical staff at

Figure 2. Study Participants - Full Sample
emergency departments (ED) from each of the six counties. Interviewees included nurses, physicians, and ED medical directors. In all, 18 interviews were conducted with emergency department staff across the six counties.

PARTICIPANT RECRUITMENT BY COUNTY
Participant recruitment was conducted in six counties across New Hampshire (see Figure 3). Hillsborough County, in the southern region of the state, was heavily targeted given it has been the focus of the epidemic in the state. Cheshire, Grafton, Rockingham, Strafford and Sullivan counties were also sampled to provide representation across the state and to assess regional variations.

Figure 3. Study Participants - Full Sample
STUDY PARTICIPANTS: SUBSAMPLE

OPIOID CONSUMERS

In this NDEWS HotSpot report, data were analyzed from 20 opioid consumer interviews. To maintain consistency with the study’s recruitment plan throughout the six counties, interviews were selected based on location. For this report, 10 interviews were selected from Hillsborough County and two from each of the remaining five counties (Cheshire, Grafton, Rockingham, Strafford, and Sullivan).

Consumer interviews included in the subsample were selected purposively to match the geographic distribution of the full

Figure 4. Study Participants - Subsample
STUDY PARTICIPANTS: SUBSAMPLE

consumer sample. There were no significant differences in the demographic, lifetime substance use, previous treatment history, or opioid use characteristics between consumers included in the subsample and those included only in the full sample.

FIRST RESPONDERS AND EMERGENCY DEPARTMENT STAFF

In this NDEWS HotSpot report, data were analyzed from 12 first responders/ED staff. To gain an even representation from each division interviewed, three interviews each were selected from police, fire, EMS, and ED participants.

The first responder and emergency department subsample did not differ from the full responder sample by gender, race, ethnicity, or any opioid overdose treatment characteristics. Responders selected for the subsample were significantly older and employed for more years than those only included in the full sample.
TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF NEW HAMPSHIRE OPIOID USERS

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Full Sample (n=76)</th>
<th>Subsample (n=20)</th>
<th>Male (n=37)</th>
<th>Female (n=39)</th>
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<tbody>
<tr>
<td>Age m(sd)</td>
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<td>Black/African American</td>
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<td>0 (0%)</td>
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<td>White</td>
<td>69 (90.8%)</td>
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<td>Not Hispanic or Latino</td>
<td>72 (96.0%)</td>
<td>20 (100%)</td>
<td>34 (94.4%)</td>
<td>38 (97.4%)</td>
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## SURVEY RESULTS: OPIOID CONSUMERS

**Demographics**

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Full Sample (n=76)</th>
<th>Subsample (n=20)</th>
<th>Male (n=37)</th>
<th>Female (n=39)</th>
</tr>
</thead>
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<td><strong>Education n(%)</strong></td>
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<tr>
<td>Less than High School</td>
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<td>2 (10.0%)</td>
<td>2 (5.4%)</td>
<td>3 (7.7%)</td>
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<td>High School/GED</td>
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<td>9 (45.0%)</td>
<td>25 (67.6%)</td>
<td>16 (41.0%)</td>
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<tr>
<td>Some College</td>
<td>16 (21.1%)</td>
<td>6 (25.0%)</td>
<td>4 (10.8%)</td>
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<td>Associate’s</td>
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<td>6 (15.4%)</td>
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<td>Bachelor’s</td>
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<td>Master’s</td>
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<td>2 (5.1%)</td>
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<td><strong>Employment Status n(%)</strong></td>
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<td>Working Full Time</td>
<td>20 (26.3%)</td>
<td>5 (25.0%)</td>
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<td>Working Part Time</td>
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<td>4 (10.3%)</td>
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<td>Unemployed</td>
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<td>11 (28.2%)</td>
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<td>Keeping House</td>
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<td>Student</td>
<td>2 (2.6%)</td>
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<td>1 (2.7%)</td>
<td>1 (2.6%)</td>
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<tr>
<td>Other</td>
<td>3 (4.0%)</td>
<td>1 (5.0%)</td>
<td>2 (5.4%)</td>
<td>1 (2.6%)</td>
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<td>Temporarily Laid Off</td>
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<td>2 (5.4%)</td>
<td>2 (5.1%)</td>
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<td><strong>Marital Status n(%)</strong></td>
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<tr>
<td>Married</td>
<td>10 (13.2%)</td>
<td>5 (25.0%)</td>
<td>3 (8.1%)</td>
<td>7 (18.0%)</td>
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<td>Divorced</td>
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<td>3 (15.0%)</td>
<td>5 (13.5%)</td>
<td>4 (10.3%)</td>
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<td>Separated</td>
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<td>3 (15.0%)</td>
<td>4 (10.8%)</td>
<td>4 (10.3%)</td>
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<tr>
<td>Never Married</td>
<td>31 (40.8%)</td>
<td>8 (40.0%)</td>
<td>19 (51.4%)</td>
<td>12 (30.8%)</td>
</tr>
<tr>
<td>Living with Partner</td>
<td>18 (23.7%)</td>
<td>1 (5.0%)</td>
<td>6 (16.2%)</td>
<td>12 (30.8%)</td>
</tr>
<tr>
<td><strong>Housing Status n(%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own Home</td>
<td>3 (4.0%)</td>
<td>2 (10.0%)</td>
<td>2 (5.4%)</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td>Rent</td>
<td>39 (51.3%)</td>
<td>10 (45.0%)</td>
<td>16 (43.2%)</td>
<td>23 (59.0%)</td>
</tr>
<tr>
<td>Live with Someone</td>
<td>20 (26.3%)</td>
<td>5 (25.0%)</td>
<td>10 (27.0%)</td>
<td>10 (25.6%)</td>
</tr>
<tr>
<td>Residential</td>
<td>2 (2.6%)</td>
<td>1 (5.0%)</td>
<td>1 (2.7%)</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td>Shelter</td>
<td>6 (7.9%)</td>
<td>1 (5.0%)</td>
<td>5 (13.5%)</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td>Homeless</td>
<td>6 (7.9%)</td>
<td>2 (10.0%)</td>
<td>3 (8.1%)</td>
<td>3 (7.7%)</td>
</tr>
<tr>
<td><strong>County n(%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheshire</td>
<td>7 (9.2%)</td>
<td>2 (10.0%)</td>
<td>5 (13.5%)</td>
<td>2 (5.1%)</td>
</tr>
<tr>
<td>Grafton</td>
<td>6 (7.9%)</td>
<td>2 (10.0%)</td>
<td>3 (8.1%)</td>
<td>3 (7.7%)</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>41 (54.0%)</td>
<td>10 (50.0%)</td>
<td>19 (51.4%)</td>
<td>22 (56.4%)</td>
</tr>
<tr>
<td>Rockingham</td>
<td>6 (7.9%)</td>
<td>2 (10.0%)</td>
<td>3 (8.1%)</td>
<td>3 (7.7%)</td>
</tr>
<tr>
<td>Strafford</td>
<td>8 (10.5%)</td>
<td>2 (10.0%)</td>
<td>4 (10.8%)</td>
<td>4 (10.3%)</td>
</tr>
<tr>
<td>Sullivan</td>
<td>8 (10.5%)</td>
<td>2 (10.0%)</td>
<td>3 (8.1%)</td>
<td>5 (12.8%)</td>
</tr>
</tbody>
</table>

Note: T-test conducted to compare means; Pearson’s chi-squared test conducted to compare counts; no significant differences in participant characteristics between the full and subsample, or between males and females, all p’s>0.05
SUMMARY
The majority of participants were non-Hispanic, white young adults. This demographic profile is consistent with the demographic characteristics of heroin users across the United States (Cicero, Ellis, Surratt, & Kurtz, 2014; Jones, Logan, Gladden, & Bohm, 2015). This sample was relatively educated, with 21% attending some college and 18% of the sample receiving a college degree. One third of participants reported current unemployment, while 38% had full- or part-time employment. Though half of the sample reported renting a home, other participants were homeless, living in a shelter, or residing with someone else. There were no statistically significant differences in demographic characteristics by gender, or among participants included in the qualitative subsample as compared with others from the full sample.
## TABLE 2. LIFETIME SUBSTANCE USE AND AGE OF FIRST USE

<table>
<thead>
<tr>
<th>Substance</th>
<th>Lifetime Use n(%)</th>
<th>Age at First Use m(sd)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Sample (n=76)</td>
<td>Subsample (n=20)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>74 (98.7%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Cannabis</td>
<td>75 (98.7%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Inhalants</td>
<td>75 (98.7%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>52 (68.4%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Cocaine</td>
<td>71 (93.4%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Prescription opioids</td>
<td>75 (98.7%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Stimulants</td>
<td>51 (67.1%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Sedatives</td>
<td>24 (31.6%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>53 (69.7%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Heroin</td>
<td>70 (92.1%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>64 (84.2%)</td>
<td>12.7 (3.8)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (5.3%)</td>
<td>12.7 (3.8)</td>
</tr>
</tbody>
</table>

Note: T-test conducted to compare means; Pearson’s chi-squared test conducted to compare counts; no significant differences between the full and subsamples, all p’s>0.05.

SUMMARY

Almost all study participants reported lifetime use of alcohol and cannabis, which generally preceded initiation of any other substances. While some participants reported trying alcohol or cannabis as early as ten years of age, the average age of first alcohol and/or cannabis use was around 13-14 years in the full sample. Participants’ average age of first prescription opioid use (21.1 years) predated their first use of heroin (24.1 years) or fentanyl (28.1 years). Of those participants who used prescription opioids, heroin, and fentanyl, 55 (86.0%) used prescription opioids before heroin or fentanyl. Among participants who used both heroin and fentanyl, 54 (71.1%) of participants initiated heroin before fentanyl and 14 (18.4%) initiated both heroin and fentanyl at the same age. This trend of moving from prescriptions opioids to heroin or fentanyl-laced heroin is representative of national trends in opioid use initiation (Cicero 2014, Botticelli 2015). There were no significant differences in lifetime use or age of first use between participants in the subsample and those not included in the subsample.
SURVEY RESULTS: OPIOID CONSUMERS

AGE OF INITIATION BY OPIOID TYPE

Figure 5 shows the mean age (21.1 years for prescription opioids, 24.1 years for heroin, and 28.1 years for illicit fentanyl) at which consumers in the full sample initiated different types of opioid use. As 55 (86.0%) used prescription opioids at a younger age than heroin or fentanyl, and 54 (71.1%) used heroin at a younger age than fentanyl, this figure highlights the pattern of opioid initiation starting with prescription opioids, then moving to heroin and finally fentanyl, on average.

SUMMARY

Figure 5. Turnip Plot Representing Age of Initiation by Opioid Type
### TABLE 3. RECENCY OF OPIOID USE

<table>
<thead>
<tr>
<th>Last reported use</th>
<th>Prescription Opioids</th>
<th>Heroin</th>
<th>Fentanyl</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Sample (n=75)</td>
<td>Subsample (n=20)</td>
<td>Full Sample (n=70)</td>
</tr>
<tr>
<td>Past Week</td>
<td>8 (10.7%)</td>
<td>3 (15.0%)</td>
<td>20 (28.6%)</td>
</tr>
<tr>
<td>Past Month</td>
<td>12 (16.0%)</td>
<td>4 (20.0%)</td>
<td>13 (18.6%)</td>
</tr>
<tr>
<td>Past 6 Months</td>
<td>16 (21.3%)</td>
<td>4 (20.0%)</td>
<td>18 (25.7%)</td>
</tr>
<tr>
<td>More than 6 Months</td>
<td>39 (52.0%)</td>
<td>9 (45.0%)</td>
<td>19 (27.1%)</td>
</tr>
</tbody>
</table>

Note: Pearson’s chi-squared test conducted to compare full samples and their respective subsamples; no significant differences between the full and subsamples, all p’s > 0.05

*a Among consumers reporting lifetime use

### SUMMARY

Over 26.7% of participants in the full sample reported using prescription opioids in the past week or month. Forty-seven percent of consumers reporting lifetime heroin use and 50% of those reporting lifetime fentanyl use had used during the past week or month. There were no significant differences in the recency of opioid use between the subsample and those included in the full sample only.
TABLE 4. PREVIOUS OPIOID USE AND MENTAL HEALTH TREATMENT

<table>
<thead>
<tr>
<th>Opioid Use Treatment</th>
<th>Full Sample (n=76)</th>
<th>Subsample (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime Treatment for Opioid Use n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>7 (9.2%)</td>
<td>1 (5.0%)</td>
</tr>
<tr>
<td>Yes</td>
<td>69 (90.8%)</td>
<td>19 (95.0%)</td>
</tr>
<tr>
<td>Number of Treatment Episodes m(sd)</td>
<td>6.1 (7.7)</td>
<td>7.7 (10.3)</td>
</tr>
<tr>
<td>Currently on OUD Treatment Waitlist n(%)</td>
<td>11 (14.7%)</td>
<td>1 (5.0%)</td>
</tr>
<tr>
<td>Naltrexone Prescription a n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>68 (89.5%)</td>
<td>17 (85.0%)</td>
</tr>
<tr>
<td>Previously</td>
<td>6 (7.9%)</td>
<td>2 (10.0%)</td>
</tr>
<tr>
<td>Currently</td>
<td>2 (2.6%)</td>
<td>1 (5.0%)</td>
</tr>
<tr>
<td>Buprenorphine Prescription a n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>26 (34.7%)</td>
<td>4 (20.0%)</td>
</tr>
<tr>
<td>Previously</td>
<td>14 (18.7%)</td>
<td>5 (25.0%)</td>
</tr>
<tr>
<td>Currently</td>
<td>35 (46.7%)</td>
<td>11 (55.0%)</td>
</tr>
<tr>
<td>Methadone Prescription a n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>47 (61.8%)</td>
<td>13 (65.0%)</td>
</tr>
<tr>
<td>Previously</td>
<td>16 (21.1%)</td>
<td>5 (25.0%)</td>
</tr>
<tr>
<td>Currently</td>
<td>13 (17.1%)</td>
<td>2 (10.0%)</td>
</tr>
<tr>
<td>Mental Health (MH) Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime Treatment for MH n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>31 (40.8%)</td>
<td>8 (40.0%)</td>
</tr>
<tr>
<td>Yes</td>
<td>45 (59.2%)</td>
<td>12 (60.0%)</td>
</tr>
<tr>
<td>Number Treatment Episodes for MH only m(sd)</td>
<td>2.4 (3.8)</td>
<td>1.6 (2.6)</td>
</tr>
</tbody>
</table>

MH, mental health; OUD, opioid use disorder
Note: T-test conducted to compare means; Pearson’s chi-squared test conducted to compare counts; no significant differences between the full and subsample, all p’s > 0.05
a Prescribed anywhere in the United States, not necessarily in New Hampshire

SUMMARY
Participants had high rates of past opioid and mental health treatment. Over 90% (69) of participants had received treatment for their opioid use during their lifetime. More participants had received prescriptions for buprenorphine than methadone or naltrexone. Almost 60% (45) of participants had received mental health treatment. Again, there were no significant differences in previous treatment history variables between the full and subsample.
TABLE 5. OVERDOSE HISTORY AND NARCAN USE

<table>
<thead>
<tr>
<th>Overdose History</th>
<th>Full Sample (n=76)</th>
<th>Subsample (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifetime Overdose n(%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>23 (30.3%)</td>
<td>7 (35.0%)</td>
</tr>
<tr>
<td>Yes</td>
<td>53 (69.7%)</td>
<td>13 (65.0%)</td>
</tr>
<tr>
<td><strong>Number of overdoses m(sd)</strong></td>
<td>3.0 (3.7) (Range: 0-20)</td>
<td>2.9 (2.9) (Range: 0-8)</td>
</tr>
<tr>
<td><strong>Percent of overdoses caused by n(%)</strong>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heroin only</td>
<td>78 (34.5%)</td>
<td>31 (54.4%)</td>
</tr>
<tr>
<td>Fentanyl only</td>
<td>32 (14.2%)</td>
<td>10 (17.5%)</td>
</tr>
<tr>
<td>Heroin and Fentanyl combination</td>
<td>68 (30.1%)</td>
<td>14 (24.6%)</td>
</tr>
<tr>
<td>Other</td>
<td>48 (21.2%)</td>
<td>2 (3.5%)</td>
</tr>
<tr>
<td><strong>Received Narcan² n(%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>20 (37.7%)</td>
<td>4 (30.8%)</td>
</tr>
<tr>
<td>Yes</td>
<td>33 (62.3%)</td>
<td>9 (69.2%)</td>
</tr>
<tr>
<td><strong>Number of Narcan administrations per overdose b m(sd)</strong></td>
<td>3.0 (1.6) (Range: 1-7)</td>
<td>2.2 (1.7) (Range: 1-4)</td>
</tr>
</tbody>
</table>

Note: T-test conducted to compare means; Pearson’s chi-squared test conducted to compare counts

² Of consumers who reported having an overdose, Full Sample (n=53), Subsample (n=13)
³ Of consumers who reported receiving Narcan, Full Sample (n=33), Subsample (n=9)

***χ²=21.4, p<0.001, all other p’s>0.05

SUMMARY

Seventy percent of participants in this sample had overdosed. Of those participants who had overdosed, 62% received naloxone (Narcan) to reverse their overdose. These participants reported needing an average of 3 doses of Narcan to reverse their overdose, which is higher than the average number of Narcan doses estimated by responders (Table 6). Participants in the subsample had significantly fewer overdoses caused by “Other” drugs, in comparison to participants in the full sample.
SURVEY RESULTS: RESPONDER AND ED PERSONNEL
SURVEY RESULTS: RESPONDER AND ED PERSONNEL

TABLE 6. FIRST RESPONDER AND ED PERSONNEL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Overall (n=36)</th>
<th>Subsample (n=12)</th>
<th>Police (n=6)</th>
<th>Fire (n=6)</th>
<th>EMS (n=6)</th>
<th>Emergency Department (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age years m(sd)</strong></td>
<td>42.5 (9.6)</td>
<td>47.8 (7.2)*</td>
<td>41.8 (7.0)</td>
<td>42.2 (11.2)</td>
<td>44.8 (10.8)</td>
<td>42.0 (10.1)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>29 (80.6%)</td>
<td>10 (83.3%)</td>
<td>5 (83.3%)</td>
<td>6 (100%)</td>
<td>6 (100%)</td>
<td>12 (66.7%)</td>
</tr>
<tr>
<td>Female</td>
<td>7 (19.4%)</td>
<td>2 (16.7%)</td>
<td>1 (16.7%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>6 (33.3%)</td>
</tr>
<tr>
<td><strong>Race n(%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>1 (2.8%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>1 (5.6%)</td>
</tr>
<tr>
<td>White</td>
<td>34 (94.4%)</td>
<td>11 (91.7%)</td>
<td>6 (100%)</td>
<td>6 (100%)</td>
<td>6 (100%)</td>
<td>16 (88.9%)</td>
</tr>
<tr>
<td>Multiracial</td>
<td>1 (2.8%)</td>
<td>1 (8.3%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>1 (5.6%)</td>
</tr>
<tr>
<td><strong>Ethnicity n(%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic and Latino</td>
<td>2 (5.7%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>2 (11.1%)</td>
</tr>
<tr>
<td>Not Hispanic or Latino</td>
<td>33 (94.3%)</td>
<td>11 (100%)</td>
<td>5 (100%)</td>
<td>6 (100%)</td>
<td>6 (100%)</td>
<td>16 (88.9%)</td>
</tr>
<tr>
<td><strong>Years employed m(sd)</strong></td>
<td>12.9 (8.8)</td>
<td>18.5 (8.5)**</td>
<td>17.2 (7.3)</td>
<td>18.4 (10.9)</td>
<td>18.3 (9.1)</td>
<td>7.9 (5.6)</td>
</tr>
<tr>
<td><strong>How many overdoses have you responded to? Median (range)</strong></td>
<td>78 (4-1000)</td>
<td>219 (30-1000)</td>
<td>62 (24-1000)</td>
<td>58 (40-100)</td>
<td>88 (36-1000)</td>
<td>100 (4-450)</td>
</tr>
<tr>
<td><strong>How many times have you administered Narcan? m(sd)</strong></td>
<td>52 (107)</td>
<td>89 (175)</td>
<td>0 (0)</td>
<td>33 (17)</td>
<td>157 (235)</td>
<td>30 (37)</td>
</tr>
<tr>
<td><strong>Average Narcan dose per patient</strong> m(sd)</td>
<td>1.6 (0.8)</td>
<td>1.7 (1.0)</td>
<td>N/A</td>
<td>1.9 (1.2)</td>
<td>1.6 (0.5)</td>
<td>1.7 (0.6)</td>
</tr>
</tbody>
</table>

Note: T-test conducted to compare means; Pearson’s chi-squared test conducted to compare counts; statistically significant difference between subsample and full sample, *p<0.05, **p<0.001, all other p’s>0.05

*One dose of Narcan was defined as 0.4 mg administered intravenously and 2 mg administered intranasally.

SUMMARY

Overall, responders were predominately non-Hispanic, white males. Responders had been employed for over a decade on average and had extensive experience treating overdoses. All fire, EMS, and ED personnel had administered Narcan to patients on multiple occasions, though no police officers had ever administered Narcan. EMS, ED, and fire personnel estimated that they currently needed to administer more than one dose of Narcan per patient. The responders selected for the qualitative subsample were comparable to the full sample on gender, race, ethnicity, and experience treating overdoses. The subsample was significantly older and had more years of employment than those responders included only in the full sample.
OVERVIEW
The following sections are divided by the ten categories targeted during the interviews with consumers, first responders, and ED personnel and the themes that emerged from each: (1) Trajectory of opioid use, (2) Formulation of heroin and fentanyl, (3) Fentanyl-seeking behavior, (4) Trafficking and supply chain, (5) Experiences with overdoses, (6) Experiences with Narcan, (7) Harm reduction, (8) Treatment, (9) Prevention, and (10) Laws and policies.

For the duration of the report, the following acronyms should be noted:

   FLH – Fentanyl-laced Heroin

   R/ED – First Responder and/or Emergency Department Personnel
Trajectory of Opioid Use

**OPIOID CONSUMERS**

Early experimentation with substance use (e.g., *"I smoked pot at 8"; "I drank a little bit when I was 12"*) was endorsed by the vast majority of interviewees when asked to talk about their path to opioid use. Severe injuries (e.g., brutal dog attack requiring 200 stitches to the face, 2 broken legs due to motorcycle accident, double hip replacement at 13 years of age) warranting prescription opioid therapy (chronic opioid therapy in several cases) for associated pain were cited pervasively as what, *"kind of started it," “might have triggered the beginning of it [opioid seeking behavior] ... it got my brain running."* A subset of those endorsing a legitimate prescription for opioids point to the abrupt termination and/or steep taper of their prescription by their doctors as the reason for turning to the *"street pharmacy"* (see pull quote).

Many consumers prominently featured substance use among nuclear family members, including intergenerational substance use, in their responses to questions about how it all started. That family substance use eliminated barriers to accessing drugs, and signaled a permissive environment in which to initiate drug use, is evident in the following remarks:

*"the first time I used cocaine was with my mother”*

*“my brother introduced me to heroin”*

*“when I was born, my father was a heroin addict”*

*“[at age 8] my brother thought it would be funny to get his little sister high”*

*“With our huge opiate dilemma... with doctors afraid to prescribe pain medicine to people, they were very short with me and the pain med. They weren’t really taking care of me enough, and my insurance wouldn’t cover me to get into a good pain clinic, so I was kind of flying on one wing. I was still in a lot of pain, so what they ended up making me do was look for other people that had pain meds so I could just be right... next thing I knew [heroin/fentanyl mix] was in front of me.”*
Finally, several consumers underscored the significance of unmanaged mental health issues (e.g., “it all just progressed because my depression got worse and worse”) as contributing meaningfully to a trajectory of opioid use.

Significantly, these risk factors intersect, overlap, and compound each other in all but a handful of cases (see Figure 6). For example, one young woman cites a Percocet prescription following a cesarean section as the “start of everything,” yet she also mentions “dabbling” with substances (i.e., alcohol, marijuana, cocaine, and inhalants) starting at age 15, as well as pervasive family substance use to tell her story of how her drug use started: “Both of my parents were raising heroin addicts... Me and my twin... I have cousins that have died of heroin overdoses; my aunts and uncles are alcoholics and drug addicts. It was in my family.”
FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

Though most first responder and ED personnel (R/ED) lacked first-hand knowledge of opioid use trajectories, several specifically asked consumers about their “on-ramp to the addiction highway” (ED).

R/ED personnel believed that some consumers initiated opioid use recreationally with friends during adolescence, and acknowledged an intergenerational cycle of substance use whereby “parents who are drug users tend to have kids who are drug users” (Police).

R/ED personnel also discussed the path from prescription opioid use to illicit opioid use after abrupt tapers of the prescription. As one emergency department physician stated, “I have lately been surveying all my patients about how they got started in opiate addiction… Many of them had a medical condition, trauma, an operation, and they got hooked” (ED).

R/ED personnel reported that changes in prescribing practices during the 1990s contributed to increased rates of opioid prescriptions for injuries or chronic pain, while recent crackdowns on prescribing may have pushed some consumers to seek heroin.

Although not prominent, some R/ED personnel mentioned that untreated mental health problems contributed to consumers’ initiation of opioid use. “A lot of times I’m seeing it tied to mental health reasons with people, whether it be depression or whatever, people masking something else going on” (Police).

SUMMARY

The main trajectories to opioid use reported during the study were:

(1) early recreational use of substances,
(2) injuries or surgeries resulting in opioid prescriptions for pain management, and
(3) intergenerational use of opioids.

These trajectories often intersected and overlapped.

Less prominent was the trajectory of self-medicating mental health problems (e.g., depression, anxiety, or anger), as approximately 10% of consumers and 8% of R/ED personnel mentioned this as a context for opioid use initiation.
OPIOID CONSUMERS

There is consensus across interviews that fentanyl surfaced “in the mix,” meaning mixed in or cut with heroin, between two and three years ago in New Hampshire (mid- or late 2014). Consumers overwhelmingly report being unaware or not apprised by dealers that the heroin product had been altered. However, interviewees suggest that the differences in formulation between pure heroin and fentanyl laced heroin (FLH) are manifold. The first of four primary themes highlighting how consumers discriminate between heroin, and FLH is by sight. Nearly all consumers report noticing that “heroin” started appearing lighter in color. However, one interviewee felt strongly that “you cannot tell by looking at it;” nevertheless, other clues pervasively cited by consumers enable discriminating the difference.

One long time heroin user recalled a second clue or theme regarding a difference in formulation noted by nearly all consumers. He said, “when the fentanyl came in, I [could] actually taste the difference between the two.” The taste is described in different ways, but the common denominator among those specifying the taste difference is that fentanyl “is gonna have a much sweeter taste.” A few consumers clarify that “fentanyl tends to be cut with a sugary base,” or “there’s no taste, there’s no smell to it, sometimes it’s a little sweet, but that’s only if people like cut it with like sugar or something like that. But the pure fentanyl has like no… scent, the heroin, good heroin smells like kind of like vinegar almost, it stinks. But the fentanyl… If anything, there’s no scent. It’s odorless
“It is stronger than regular heroin...”

“There’s always the potential to overdose, because the fentanyl is... just so much stronger...”

“I can always tell the difference between regular heroin and heroin laced with [fentanyl]. That’s why I don’t like regular fentanyl. It gives me too much nausea, but mixed together, it’s tolerable because the heroin’s there... taking the nausea away. It’s almost like someone dropped a ton of bricks on your chest and you almost lose your breath for a minute.”

“Quickier”, with the FLH: “I know from my experience when I did it [FLH] within minutes I was out... the last thing I remember I was reaching for my beer and I never made it, I hit the floor.” And some consumers noted that “fentanyl [FLH] creeps up on you”; “I guess how it works is the heroin will hit you first and then I guess it takes a little longer for the fentanyl to hit you but then it comes in right behind the heroin and that’s when people go out.”

There is overwhelming agreement that “the high does not last as long as heroin.”

“It doesn’t last as long as heroin, so you need to use it more and more”

“It just seems like it hits you hard, but then it seems like you’re dope sick quick. I don’t know if the half-life is as long as heroin, but for me, it seems like I would do bag of fentanyl. I’d probably be sick, start feeling first signs of withdrawals within like six, seven hours, but if I did heroin, I could probably 12 to 18 hours I’d be fine depending on the dose”

“It just makes you really sick after you shoot it, and you catch that habit almost immediately after shooting it.”

This is not surprising, as fentanyl is a short-acting opioid (Suzuki & El-Haddad, 2017).
Subjective evaluations of the effects are mixed and fall along a continuum from “The high is way better... and you get way higher... you're nodded out, you lose control,” to “I don’t agree that the high is better... I don’t think it’s much of a high if you are just instantly dead. There isn’t much to enjoy. You are just a zombie. You are gone.”

However, one thing almost all consumers agree on is that “it’s cheaper to buy fentanyl.”

**FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL**

R/ED personnel were confident that consumers were overdosing on opioids but had limited knowledge about the exact opioid types and formulations. Consumers were not consistently forthcoming with providing information to responders about their opioid use. “The bulk of patients will kind of, if they tell you anything, will kind of tell you that what they purchased was heroin or what they think was heroin” (ED).

Despite consumer reports of heroin use, responders were largely cognizant that the heroin may be mixed with fentanyl but had little knowledge of the actual formulation of the FLH. One EMS responder explained, “I don’t really have an awful lot of exposure to the illicit drug side of fentanyl, that I’m aware of. I could be dealing with it 99% of the time, but I’m just not aware of it. I’m not getting that feedback” (EMS).

Multiple responders had witnessed pills or powder at the scene when responding to overdoses, and reported that to be fentanyl. “We always go on the assumption that it’s... fentanyl” (EMS). According to several police officers, the powder formulation of fentanyl was more prevalent than pills or patches: “It’s always in the powder form up here... Some people do get fentanyl patches and buy fentanyl patches illegally... And they’ll flick them down or they’ll lick the gel off of them and do that. That’s very rare” (Police). These pills and powder drugs were usually
snorted or injected by consumers: “I think we’re seeing probably a 50/50 split on those that are injecting and those that are snorting now” (EMS).

Differentiating between heroin and fentanyl was also a theme of the R/ED personnel interviews. With the exception of police, responders and ED personnel usually did not handle or test the drugs found at overdose scenes so had little experience distinguishing between heroin and fentanyl. R/ED personnel learned that consumers could distinguish between heroin and fentanyl by their color, consistency, potency, and subjective feeling. Fentanyl was described as being a lighter color than heroin by several R/ED personnel. “We’ll talk to someone on the street and they’ll say, ‘Well, I knew he was going to overdose because when he injected it was light’” (EMS). Consumers also reported to R/ED personnel that the subjective high was different for fentanyl. “Some [patients] will tell me that it feels different when they use it, so they may not perceive it when they're looking at it but after using it they feel that the two drugs are different” (ED).

**SUMMARY**

From the interviews with R/ED personnel, it is apparent that they report little knowledge of the formulation of heroin and fentanyl.

Conversely, consumers believe there are many ways to determine whether a substance is heroin or fentanyl, including by sight, taste, effect (strength, speed of onset, and duration of high), and cost. Overdoses are not limited to those injecting FLH, as some consumers are reporting overdosing after inhalation of the product.
Fentanyl-seeking Behavior

**OPIOID CONSUMERS**

While nearly all consumers endorse seeking out drugs or batches that cause overdose and single out fentanyl as the drug involved in the uptick in the number of overdoses in New Hampshire, consumers report not initially seeking fentanyl when it initially hit the market several years ago. Currently, consumers do not, on average, report clamoring for fentanyl or FLH. The majority are either neutral or negative on the subject of fentanyl-seeking behaviors.

Negative positions range from, “I never looked for it. I never enjoyed it. I didn’t like it,” to “it’s just a horrible thing. It’s just too strong.”

About a quarter of the consumers expressed neutral or ambivalent positions on fentanyl-seeking, citing the lack of the availability of heroin as the reason for their continued use of fentanyl: “I wasn’t able to really get it [heroin]... fentanyl was the only thing around. It wasn’t much of a choice. It was either buy fentanyl... or be sick... or not get high.”

“I would pay more to get heroin but you can’t find any...”

“At this point, will take whatever is available... fentanyl tends to be more available.”

“I don’t know anybody that just goes out looking for fentanyl... I mean it’s mixed with the heroin, but I think mainly people are looking for the heroin, but now they’re hand in hand.”

Consumers were probed on their assessment of availability of prescription opioids (pills), heroin, fentanyl, and the FLH. Corroborating reports note that although a majority of opioid consumers would rather have heroin than fentanyl or FLH, they are “hand in hand.”

“if you find a heroin dealer, pretty much you’re finding fentanyl”

“everybody has the heroin/fentanyl mix over pills”

“prescription opioids are astronomically priced”

“unless you know somebody is prescribed it or is disabled or gets it monthly or something”

“[Prescription opioids are] harder to find... because people who are selling their prescriptions only have so much”

“OxyContin is pretty much something of the past”
The final quarter of interviewees indicated they did seek fentanyl and/or FLH over other opioids. The primary reason was due to the preferred high associated with fentanyl: “Because we want whatever is strongest and the cheapest... It's sick. I know me using, when I hear of an overdose, I want it because I don’t want to buy bad stuff. I want the good stuff that's going to almost kill me.”

“It just kind of popped up one day. I’ve never sought out fentanyl alone, but I did seek out fentanyl dope because the high is better.”

“Once you use fentanyl alone or fentanyl with heroin, you don’t want to go just back to heroin because it's so much better. It intensifies the heroin. It hits you quicker. It doesn’t last as long as heroin so you need to use more of it and more, and it’s more expensive and then you're only seeking out fentanyl.”

“Some people want a consistent high, other people look for the rush. Me, I kind of like both, but it’s more the initial high for me, so fentanyl seems to be what I seek now.”
FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

R/ED personnel offered mixed reports regarding whether consumers were seeking out batches of drugs that caused an overdose. Some R/ED personnel heard from consumers and dealers that consumers would seek out drugs that caused an overdose to get the “biggest bang for the buck” (EMS) because these batches were proven to be the “strongest stuff” (Fire). Other R/ED
personnel instead heard that consumers sought drugs to “get to a specific level” of intoxication
(Fire), rather than seeking the most potent drugs.

R/ED personnel stated that some consumers specifically sought out fentanyl, citing that “for the
first time, we’ve had people when we revive them say they shot fentanyl, because that’s what
they wanted. They went out and they sought it” (EMS). However, overall they reported limited
knowledge related to fentanyl-seeking behavior.

**SUMMARY**

Although R/ED personnel conveyed mixed reports of consumers seeking drugs that cause
overdose, consumers were clear that they do seek them.

While the majority are neutral or averse to fentanyl, if it is present in a batch that caused an
overdose, consumers report seeking that batch anyway.
Knowledge among consumers regarding the sources of opioids was not overwhelmingly detailed and/or forthcoming, which may be a result of fear despite the interviewers’ best efforts to assure confidentiality. When asked to talk about where consumers think the drugs that are causing overdoses are coming from, “Massachusetts” was by far the most often cited location and almost three quarters specifically cited “Lawrence,” Massachusetts, as the primary gateway: “Most people I know that get it, they go down to Lawrence, MA, and grab larger amounts and bring it up here to sell for money because it’s a lot cheaper down there and it’s just all over the street... Lawrence seems like it’s one of the capitals for distributing heroin.”

Other Massachusetts’ towns mentioned include Lowell, Haverhill, and Boston. New York and Connecticut were additional states cited as likely portals. Some went so far as to identify the ethnicity of the people dealing in heroin and fentanyl:

“Spanish neighborhoods tend to me more loaded”

“[there are] cartel members in Lawrence right now”

“it usually comes from ethnic cultures and there’s a lot of ethnic cultures there [Lawrence]”

If indeed the majority of heroin and fentanyl in New Hampshire are coming from Massachusetts, consumers generally believed that this was due to the potential for profit on the streets of New Hampshire. One interviewee suggested that, “all these dealers know there [in Massachusetts] that they might be profiting $3 off a bag or they might be profiting an extra $200 off a pack, which is 100 bags. When they come up here [to New Hampshire], they’re profiting 10 times as much.”

These profits are a function of absorbing the risks involved with driving to Massachusetts. Consumers report that the Internet is not a source of opioids.
FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

When asked about the trafficking of fentanyl into New Hampshire, EMS, firefighters, and ED personnel were predominantly uninformed:

“I know it’s moving, but where, how, who, that’s beyond me” (Fire)

“China is what I’ve read in the papers. I have no evidence other than the media” (ED)

“I haven’t heard where specifically the distribution routes are for this...” (EMS)

Like the consumers, R/ED personnel believed that the drugs causing overdoses were originally from China and Mexico, but were transported to New England by other gangs and cartels.

“Mexicans are the suppliers. Also, you have supplier-distributor... You have these working relationships. You’re not seeing active Mexican cartel members up here selling it. They’re getting it to the distributors up here” (Police).

Within New England, responders thought the drugs were transported to New Hampshire from Massachusetts (Lawrence, Lowell, Springfield, Holyoke, Methuen), New York State, and Springfield, Vermont. Sixty percent of responders mentioned Lawrence, Massachusetts, as the local source for fentanyl and other drugs causing overdoses.

The responders posited that Lawrence was the distribution hub because fentanyl originated in Mexico and was then distributed by other Spanish-speaking cartels, who had members residing in Massachusetts. “You work out why Lawrence is such a large distributing area, it’s a very high Dominican population. Dominicans tend to be the distributors of the fentanyl and heroin” (Police).

R/ED personnel offered mixed reports on whether consumers were ordering fentanyl and other drugs that caused overdoses on the Internet. As discussed by one police officer, this may be occurring, but is not the primary source of fentanyl or heroin in New Hampshire: “I’ve had a few
cases where the reports of people order online from overseas, and then they decided to ship them. Yes... Do I think that's the norm by any means? No... I think that's very small, but I think it does happen” (Police).

Regardless of fentanyl's origins, R/ED personnel unanimously started witnessing changes in the availability of fentanyl between 2014 and 2015. “The whole fentanyl thing is relatively newish, past couple of years” (EMS).

Increased availability of fentanyl in New Hampshire was attributed to fentanyl’s cheaper cost, stronger effects, and ability to be locally manufactured. Because fentanyl is synthetic, it can be produced locally. This reduces manufacturing costs, transportation costs, and risks associated with smuggling drugs across borders.

Fentanyl's potency also negates the need to transport large quantities. One study estimated that a gram of fentanyl can be divided into 7,000 individual doses (Suzuki & El-Haddad, 2017). It is therefore easier to transport fentanyl “because you figure you can take a lot more smaller product of fentanyl and cut it, versus heroin, to ship up or to smuggle into this region” (Police). In combination, these properties of fentanyl are attractive to dealers, and provide a cheaper, stronger product to consumers.

While most R/ED personnel focused on the rise of fentanyl in New Hampshire, one responder mentioned that the availability of cocaine may be increasing in response to fentanyl overdoses: “People have started to use less of the fentanyl 'cause they're afraid of dying. Dealers are starting to sell it a little bit less. More cocaine is being sold... They're not dealing with that fentanyl stuff. They're not gonna be responsible for someone dying... They still want to make their money. They're just changing products” (Police).
SUMMARY
It was corroborated by opioid consumers and R/ED personnel that the drugs causing overdoses are originating in China and Mexico. Fentanyl became prominent in New Hampshire beginning in 2014 and 2015, with Lawrence, Massachusetts, being the hot spot for local manufacturing. Interviewees report Massachusetts as the source due to the potential for profit in New Hampshire (e.g., absorbing the risks of transporting over the state border). Overall, the demand for fentanyl is reported to be driven by its lower cost, higher potency, and availability compared to other opioids.
INTERVIEW FINDINGS BY CATEGORY: EXPERIENCES WITH OVERDOSES

Experiences with Overdoses

**OPIOID CONSUMERS**

All but two of the twenty consumers interviewed for this study endorse seeking out drugs/batches that cause overdose:

“[Overdosing is] one of the best highs you’ll ever have.”

“If they have the option between something that people have OD’d on and something they haven’t they probably will go with the stuff they OD’d on just because they know it’s good. There’s not big groups of people walking around the streets turning down things unless people died on them.”

90% of those interviewed admitted to seeking out batches of drugs which were known to cause overdose

The majority had experienced at least one opioid overdose and it was more than likely either a heroin overdose or an overdose on a FLH. Inhalation and intravenous use were the routes of administration most associated with overdose. Overdose on
pure fentanyl was the least likely reported opioid overdose among consumers. It is important to note that while consumers believe they know what they are using, this is not a perfect science. Seven of the twenty consumers had not overdosed personally, but all knew/witnessed people who had overdosed, many of whom had overdosed and died. When asked what about the presumed causes of the recent spate of overdoses in New Hampshire, consumer responses were without hesitation and unequivocal: “Everybody knows what it is. It was just fentanyl... whatever the fuck they’re putting in it to make it stronger than just plain fucking dope... Every time people get batches they just do what they’re used to doing, not even realizing that just because you bought it from the same dude doesn’t mean that it’s the same stuff.”

First and foremost, all agree that fentanyl is the drug to blame for the increased number of overdoses in New Hampshire and that this is due to its relative potency compared to heroin. The qualifying remark, “whatever the fuck they’re putting in it to make it stronger than just plain fucking dope,” highlights another common denominator across interviews, namely uncertainty about the product available on the street. Consumers know this product is more powerful, and they are certain that fentanyl is involved. Consumers also believe they know how much product they will need to use to keep from getting sick and/or get high and they readily acknowledge seeking the drugs or batches that are known to have caused overdoses among friends or in their area. This is where the certainty ends.

There is frank discussion of gray areas and/or dimensions of the uncertainty that warrant attention: inability to predict the concentration (product variability), inconsistencies due to perceived chemical miscalculations, and inexperience with fentanyl high (delayed onset). Consumers’ recollections of overdose experiences, as well as assessments of friends’ overdose experiences are punctuated by talk of notions that dealer supplies are increasingly variable, e.g., “just because you bought it from the same dude doesn’t mean that it’s the same stuff,” and “you don’t know what you’re getting anymore... there’s research chemicals; I know this because there are kids [in drug court] who tell me they get high and ... they’re not failing any drug tests.”

Additional uncertainty is evidenced by frequent mention of inconsistencies due to perceived chemical miscalculations during the drug mixing or cutting process: “People are cutting it with other materials to get more weight out of it... they’ll be like, ‘it should hold up,’ but it ends up separating...then all of a sudden you’ll be doing a bag and it’ll be garbage and you’ll get to...
the bottom and all of a sudden it’ll be powerful” and “I had been using in small increments, and I wasn’t getting high. I was getting high but not what I expected. Then I got down to the bottom of the bag and I did it; that’s when I went out. I actually smashed my head off something... I woke up to my mom and the ambulance and the police... inconsistency of the portions... It was not strong in the beginning, and then it was all in the bottom of the bag or something.”

An additional variable that introduces further uncertainty into an already highly imprecise scenario is the inexperience consumers report with a FLH high. Several interviewees talked about a delayed onset of the high as a potential contributor to overdose. One person said, “[Fentanyl mix] feels different... I think people don’t think they are as high as they are, and they use again and put themselves over.”

**Folk Overdose Reversal Methods**

A consequence of fearing legal prosecution for overdose was the use of folk methods overdose reversal methods before calling 911, including cold showers or co-ingestion of stimulants. R/ED personnel particularly discussed encountering the cold shower folk method of overdose reversal.

“There’s a couple movies and some misinformation over the years that if somebody is overdosed on heroin you stick them in the shower... Unfortunately, that’s not true, so we found everybody from people who’ve been brought in from the shower, we find that very commonly. We’ve seen people with ice shoved down their pants. It’s almost kind of comical at times because we try to tell these people this doesn’t work.” (EMS)

Although R/ED personnel seemed slightly bemused by widespread beliefs in the power of cold showers to reverse overdoses, ED personnel expressed concern at lay beliefs that the combination of opioids and stimulants may prevent or reverse overdose.

“Anecdotally, I've had the opportunity to ask a couple of them about that combination [opioids plus methamphetamine or cocaine]. Interestingly, some have said that, well, I thought that maybe that way I wouldn’t overdose on the heroin, that the overdose wouldn’t affect me.” (ED)

Unfortunately, studies of methamphetamine and heroin co-ingestion suggest that the drugs have synergistic effects that may increase the drugs’ lethality (Trujillo 2011, Uemura 2003), perhaps contributing to worse outcomes for consumers.
INTERVIEW FINDINGS BY CATEGORY: EXPERIENCES WITH OVERDOSES

FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

Breadth and depth of the opioid problem

The massive breadth and depth of the opioid problem in New Hampshire was a major theme emerging from the responder interviews. R/ED personnel described the opioid problem as being “extensive,” “prominent,” and an “absolute epidemic” that “affects everybody, from unborn children to the elderly. It ruins so many lives. It ruins so many families. It’s just horrific” (EMS).

While R/ED personnel noted that opioid use previously may have been more prevalent among young adults and those with lower socioeconomic status, the majority acknowledged that opioid use now impacts every demographic, “has no boundaries,” and “doesn’t discriminate.” One firefighter explained this shift: “We’re seeing a lot more than we ever did. It was always kind of scattered, small numbers every year, and tended to be people who we would consider to be chronic drug users, but that doesn’t seem to be the case in what we’re seeing now” (Fire).

Another paramedic described the ubiquity of opioid use: “There’s no pattern. It affects everyone, rich, poor, White, Black, Asian, Hispanic, Middle Eastern. I mean, it doesn’t matter if you live in a van down by the river or a mansion on the hill. It can affect you, and it will affect you” (EMS).

A subset of R/ED personnel specifically referred to the pervasiveness of opioid use among the current cohort of young adults in New Hampshire, “between the ages of twenty and forty” (EMS), labeling this cohort as a “lost generation.” In conjunction with demographic shifts in the prevalence of opioid use, responders noticed shifts in the geographic locations of overdose events from urban to more rural settings, and from private homes to public locations. One responder explained that more overdoses are happening in vehicles: “I’m seeing more people behind the wheel now, in the past 10 years than ever before. People think that it’s a recreational drug, like you’re at the bar and then just heading home” (EMS).
R/ED personnel also spoke extensively about the negative impact of New Hampshire's opioid use problems on families. In addition to intergenerational patterns of substance use, R/ED personnel discussed how the effects of opioid use had immediate deleterious impacts on families, “sort of like throwing a rock in a pond. You can see those concentric rings going out” (EMS).

Parents and spouses sometimes contacted the responders, begging for help finding treatment for their loved one. Many responders had arrived at overdose events and found children witnessing their parent overdose.

Many responders had arrived at overdose events and found children witnessing their parent overdose.

“You kind of look and see what it’s done to families, too… whether it was kids looking on, whether it was parents at their wit’s end, spouses at their wit’s end, neighbors shaking their heads, there was always some impact outside that specific person or area.” (EMS)

Causes of overdoses

R/ED personnel overwhelmingly reported that they believed the FLH was responsible for the increase in opioid overdoses. As one police officer stated, “it’s a pretty dramatic increase, and I would say that’s due to the fentanyl” (Police).

Although some R/ED personnel still had patients reporting heroin overdoses, the majority of responders believed that the FLH was specifically associated with the surge in overdose rates. R/ED personnel cited fentanyl’s potency, inconsistency in heroin/fentanyl mixes, and consumers’ desire to “chase the high” as drivers of increasing overdose rates.

R/ED personnel were generally familiar with fentanyl as a medication. Some had also administered fentanyl to patients for pain and had detailed knowledge about fentanyl’s potency: “It’s a very potent opiate. It’s about 50 times more potent per weight, for the effect, than morphine” (ED). The potency of fentanyl was frequently discussed as a cause of overdoses: “Heroin isn’t killing people. If it was only heroin, we wouldn’t have probably an eighth of the problem we have now. People wouldn’t be overdosing. But fentanyl drops you like a stone” (Fire).

Aside from the potency of fentanyl, R/ED personnel believed that the inconsistency in the FLH also contributed to rising rates of overdose in New Hampshire. Several R/ED personnel were familiar with the process by which heroin and fentanyl are mixed. They reported that this process
“not a big scientific thing. It's usually done in a blender. They don't need a sterile lab for it or anything” (EMS).

Due to the lack of precision, the concentration of heroin to fentanyl in a batch can vary significantly: “The Police Department will test in five different spots in the finger, and get five different concentrations. You’ll have people that may overdose, like you and I may use and be fine, but our friend may use from that same batch and overdose and die, because it's a higher concentration of whatever than what they were expecting” (EMS). This inconsistency within batches could thereby lead one consumer to overdose, while another might use from the same batch and have no issues.

Though consumers reported that heroin was being mixed with fentanyl, the R/ED personnel believed that some consumers were unaware of the composition of the heroin/fentanyl they consumed, stating “not every patient who is buying this stuff is aware that it's been cut into the product” (ED). This lack of knowledge ostensibly caused some consumers to use larger doses than necessary and overdose.

Aside from fentanyl, multiple R/ED personnel believed that overdoses occur because users try to “chase the first high that they ever had” (EMS). This caused consumers to use increasingly higher doses of heroin/fentanyl, in an attempt to “catch up to that dragon” (EMS).

In the words of one emergency department physician: “Here’s something that I’ve heard from patients; I’ve heard this from their mouths. The first time they ever really got high, they said it was like being back in their mother’s womb. All was right with the world. They have spent the rest of their life chasing that first-time sensation, but when they get something stronger like fentanyl or carfentanil, they have a glimmer of that intense feeling... They want the best high without killing themselves; that’s what they’re all about.” (ED).

In R/ED personnel’s minds, using increasingly larger doses of opioids was especially dangerous given the combination of potent fentanyl mixed inconsistently with heroin.
## Interview Findings by Category: Experiences with Overdoses

### Family Members at the Scene of Overdoses

Family members or friends are generally present at the scene when the responders arrived. These family members often found the consumer unresponsive and had placed the call to 911. "Very, very rarely are we seeing just that person who has overdosed, obviously, because somebody has to call" (EMS). Many family members reported being unaware that the consumer was currently using opioids and were confused about why their loved one was unresponsive.

> "I've seen a lot of people that are calling 911, and they don't realize what's going on. Then you get to talking with them afterwards because they're trying to figure out if this is a heroin overdose or some other type of medical. They said that their spouse or their friend has been a user, and they've quit or at least they thought they've quit... Once we asked their loved ones some questions, it dawns on them, and they realize that some of the patterns that they've been doing in the past is adding up." (Police)

These family members are often agitated or upset. This situation is particularly poignant when the 911 caller was a child: "If there are younger kids around, it's sad, because they, most of the time, have no idea what's going on. They just know that mommy, or daddy, or brother are sick" (EMS). In contrast, bystanders at overdose events knew that the consumer was using opioids. Sometimes these bystanders would take time to clean up the scene and eliminate any drug-related paraphernalia before responders arrived. "There are sometimes it will be unusually clean around the person, like you can tell walking into it that they didn’t want to admit that there was a drug problem... so they just try and get rid of all the stuff before we get there, whether it's needles, or baggies, or the drug itself, or straws" (EMS). In these cases, bystanders worried about the legal consequences of the consumer's opioid use. This fear was intensified by the police presence at overdose calls. One police officer acknowledged this issue, stating, “They’re afraid that something big is going to happen once the police get there” (Police).

These encounters with consumers’ family members showed R/ED personnel that the effects of opioid use extend beyond the consumer, and also served as a mechanism to humanize consumers, in part by making R/ED personnel think of their own families. Several responders mentioned that treating overdoses and interacting with family members of consumers caused them to worry about their own children. In addition, these encounters with non-opioid-using family members increased R/ED personnel's empathy toward consumers. In one interview an emergency department physician explained how the overdose death of a coworker’s son motivated him to continue treating people who use opioids:

> "He was a handyman, and he and his son were in the truck one morning. He had the son in the backseat... The son had come in the morning and said, "Dad, I was up late last night with my friends. I just need to lay down in the backseat and get a little rest before we get to the job." They got to the job and he was dead and blue, and had overdosed in the truck right behind his father driving to work... In his honor, I am trying to give back. What a terrible thing... No family is ever the same with that kind of thing." (ED)

Interactions with family members often took an emotional toll on R/ED personnel, especially when R/ED personnel had to inform the family that their loved one died or when responders arrived at a scene and young children were present. Several responders vividly described scenes where young children witnessed their parent(s) overdose on opioids:

> "I responded to a residence where a 13-year-old girl had called in because she found both her parents unresponsive in the living room... She's making pancakes in the kitchen. She walks out into the living room to ask her mother a question, and they're both unresponsive... Both of them had overdosed on heroin... To find two in the same house like, and the circumstances in how it was found, that's probably going to stick with me for the rest of my life." (EMS)

Another firefighter described an overdose call where "...a nine-year-old was doing CPR on his mother being talked through the whole system by 911, which is absolutely tragic" (Fire). These situations were described as being “the worst” and contributing to emotional burnout. “Sometimes you can't forget. You can’t unsee what you see every day” (Fire). Though many R/ED personnel sometimes had conflicted emotions toward consumers themselves and opioid use, they widely acknowledged the tragic nature of opioid use on families and struggled with witnessing this impact.
Protocol for treating overdoses

The majority of R/ED personnel felt confident in treating overdoses and reported a clear focus on their job over judgment when called to an overdose event. Overwhelmingly, R/ED personnel reported high confidence in their ability to treat overdoses:

“We’re very well trained. I think it’s very smooth for us.” (Police)

“We’re extremely good at managing overdoses.” (Fire)

“From the medical standpoint, it’s a fairly simple call to manage.” (Fire)

“Procedurally, it’s really simple.” (Fire)

“It's simplicity itself.” (ED)

One firefighter explained, “I’m not here to judge people. I’m just here to do my job. People have different types of problems and I think the opioid users... it’s just another disease. It’s no different than alcoholism or smokers or anything like that” (Fire). When called to treat a person who overdosed, responders felt a responsibility to “prevent death in every way possible” (EMS) and “treat it like any other” (Fire) medical issue.

R/ED personnel provided in-depth descriptions of the general protocol used to respond to overdose calls. Upon arriving, responders first assessed the scene to gather information. “As we walk in, we’re looking for the paraphernalia. Are the tourniquets still on their arm? Is there other evidence nearby? Spoons, lighters, syringes, that kind of thing. I think beyond that and their general living arrangement, and of course our safety” (Fire). Because the 911 caller was not always aware that the consumer overdosed on opioids, R/ED personnel used those scene cues to determine whether an opioid overdose seemed probable.

“If it’s a pretty generic heroin, like pretty low strength, we’ll be able to wake them up with a single dose, which is two milligrams. When you start to get above three doses, so when you’re looking at like six, eight, ten milligrams, you’re almost always going to be dealing with fentanyl. In the state, as paramedics, we can give a maximum of ten milligrams. There are times when we’ve given all ten and not been able to wake somebody up. Then you’re looking at... You could be looking at carfentanil. You could be looking at W18.” (EMS)
Once responders established that the event was an opioid overdose, they could then use Narcan and cardiopulmonary resuscitation (CPR) to stabilize the patient. “Our protocol specifically is obviously support their respiratory effort, support their cardiac output, get the Narcan onboard as fast as you can... and then bringing them out using that, kind of that cascade of things” (EMS). Because of fentanyl’s strong respiratory depressant effects (Suzuki & El-Haddad, 2017), the following quotes show that responders focused on keeping consumers breathing while administering Narcan:

“Usually it’s just depressed respiratory effort...” (EMS)

“We try to keep them breathing.” (EMS)

“We make sure their airway is open. We make sure that they’re breathing, whether on their own or with our help that they get some oxygen...” (Fire)

“You’re breathing for them. You’re assessing whether they have vital signs... CPR is started. Rescue breathing is started. Narcan’s started. Then wait.” (Fire)

Responders needed to know whether a patient overdosed on opioids to effectively treat them with Narcan, but knowing whether the patient used heroin, fentanyl, or opioid analgesics was not critical. “I bunch them in my brain as opiate overdoses. How they got there, or to what the specific agent was, doesn’t matter” (ED). Many responders were cognizant that consumers using fentanyl or other fentanyl analogues may require additional doses of Narcan.

Currently, responders estimated that it is standard to administer more than two milligrams of Narcan. “Early 2015 is when we started to see a consistency with moving from just over two milligrams to revive somebody to three and a half milligrams. We’ve been at three and a half milligrams on average all of 2016” (EMS). Several responders stated that this increase in Narcan dose paralleled when “fentanyl started to be mixed in” (EMS) with heroin batches in New Hampshire.

“We don’t treat anybody differently, whether you’re a drug addict or whether you’re a granny who needs help up off the floor. A patient is a patient, and we’re going to be with you for fifteen to twenty minutes. We’re going to be as nice and as kind to you as we possibly can, because we don’t want to dissuade you from calling back when there’s another problem.” (EMS)

After reviving patients with Narcan, responders must evaluate their vitals and mental health to determine a treatment plan. As some consumers became aggressive after receiving Narcan, police
INTERVIEW FINDINGS BY CATEGORY: EXPERIENCES WITH OVERDOSES

officers generally remain at the scene to help subdue consumers. “We back away right off and let them get in there if the guy becomes combative or the girl becomes combative” (Police). A subset of responders hypothesized that this aggressive behavior was sometimes related to polydrug use. “Unfortunately, what you see is the heroin overdose, then when you reverse the heroin you get the effects of the other co-ingestant. You can go from having a very sedated overdose patient to having a very agitated, you know, high-on-methamphetamines or high-on-cocaine patient” (ED). One responder also mentioned witnessing cardiac events because of co-ingestion of heroin and other substances.

During this time, paramedics often try to create an alliance with the patient and any bystanders by seeking to make their protocols “scene and patient focused” (Fire). Creating trust between responders and consumers also serves to improve communication, as responders must explain to patients that Narcan wears off and re-overdose can occur.

Generally, EMS and firefighters transport patients to the ED for observation after reviving them. Many consumers resist transportation to the ED. “Some of these folks, we wake them up with Narcan. The law enforcement is generally there. They don’t want to go to the hospital. They understand what that means, and they absolutely are refusing” (Fire). Aside from fears of legal consequences, responders noticed that consumers feared experiencing withdrawal while under observation in the ED. Unless a patient is “really not oriented to the day or time” (EMS) the patient has “the legal right to refuse” (Fire) additional treatment.

ED personnel first see consumers when they arrive in the ED. The majority of patients are transported by EMS and firefighters after being treated at the scene of the overdose. These patients have usually received Narcan already and are more likely to be medically stable. Other patients are dropped off by bystanders and require immediate resuscitation.

Once stabilized, patients generally want to leave the ED against medical advice. “Basically, for the most part, when these patients receive Narcan, their next goal is to get out to get more drugs is my impression” (ED). The ED interviewees recognized that fear of withdrawal contributed to this desire to leave immediately. Although ED staff believed that many patients being treated for opioid overdoses have other medical conditions, these are often not discussed because of patients’ desire to leave. “Well, I suspect that they have multiple other conditions, but that we’re aware of... They don’t fess up to it. I think they’re smart enough to know if they say the right or the wrong thing... that could lead to them being stuck there, feeling the symptoms of withdrawal” (ED).
Though the police, firefighters, and EMS providers are a unified force in responding to overdose events, there is variable interagency communication aside from responding to calls. Some police and fire departments report extensive information sharing with other agencies when a spate of overdoses occur in their region. Police departments also send any confiscated drugs to the state laboratory for testing. These lab results are infrequently shared with other agencies outside the police department. “Never, never [had lab results shared]. Other than some occasional chance encounters with maybe the investigating cop, they’re never shared with us on any kind of a predictable basis” (Fire). Often they are not even shared with the police officers who attended the overdose event. “The lab reports don’t come back to the officers generally. They come back to just prosecution. I would say 95% of the time, we don’t know what the lab results are unless it’s a blood test for DWI or something like that” (Police). These lab results may be useful to responders because they provide “an idea of where things are being supplied from, the quality and the quantity of what is coming in” (EMS). Because Narcan doses may vary by opioid type, data from recent laboratory testing could inform the treatment of opioid overdoses in the field.

“There are two separate processes. It varies as to whether they came by private vehicle or by EMS... If they come in from a qualified pre-hospital provider... they will have Narcan... When they arrive in the emergency department, we will assess them, obviously, from a medical standpoint, and then, depending on if there’s any acute medical conditions, obviously those take priority in some instances... If they come in by private vehicle, and they’re sort of dropped off... those are a little more scary... because they tend to be more somnolent, and those are the ones who look like if they hadn’t gotten dropped off a few minutes sooner, they wouldn’t have made it.” (ED)
INTERVIEW FINDINGS BY CATEGORY: EXPERIENCES WITH OVERDOSES

OVERDOSE RESPONSE PROTOCOL

EMS  Fire  Police

- Arrive and assess on scene
- Determine whether event was caused by an opioid overdose
- Stabilize patient with CPR
- Administer Narcan
- Assist if patient becomes aggressive

IF PATIENT IS REVIVED

- Create alliance with patient and bystanders
- Transport patient to the emergency department if willing

TRANSPORTED BY EMS

- Arrive at the Emergency Department (ED)
- Assess & treat co-occurring medical & mental health problems
- Observe patient in ED

TRANSPORTED BY BYSTANDER

- Revive with Narcan
- Assess & treat co-occurring medical & mental health problems
- Observe patient in ED

IF PATIENT DIES OF OVERDOSE

- Conduct investigation into overdose death

Legend
- Emergency Department
- Fire Department
- Police Department
- Emergency Medical Services

Figure 9. Responder Protocol for Treating Overdose Calls
Conflict between police goal of tracking down drugs and EMS goal of saving lives

One emerging theme was conflict between the police’s primary goal of enforcing the laws and EMS’ primary goal of saving patients’ lives. Several police officers described their primary role as investigating drugs and getting them off the street. “As law enforcement, it’s kind of, not a double-edged sword, but our main job has always been to enforce the law... Make people accountable for their actions” (Police). Because bystanders are not always forthcoming about the reason for the 911 call, police officers on overdose calls are often actively “looking to see if we can find a rig or a needle, tourniquets, anything like that to try to put this piece together” (Police). Although the Good Samaritan law prevents New Hampshire police officers from prosecuting bystanders at an overdose event, the police can conduct full investigations after overdose deaths. This process was described by one police officer: “Witnesses are located and identified. We collect any phones there for phone dumps... any drugs, and then we do a full investigation, take full statements from everybody, we do a victimology and backtrack the victim for at least the past several days... try to find out where they got this” (Police).

In juxtaposition to the police’s role, EMS providers seek to “really focus on the caregiver role” (Fire). These responders described making a concerted effort to reduce their involvement in any investigation and to keep their “main focus... directly on the patient” (EMS). Providing compassionate and patient-centered medical care was important to EMS responders. One EMS responder explained, “I think everybody in EMS, the reason they get into EMS, besides the lights and sirens... I think you really have a desire to make a difference out there... When people are down and out and need help, you want to be the one that helps them” (EMS).

In some circumstances, the roles of the police and EMS clashed. Several EMS responders worried that the police presence as enforcers of the law hindered their ability to treat and transport patients for additional services.

“The problem with law enforcement can never shut off being cops... We go to these things, the cops want to know, ‘Where’s your dope?’ Every time, first question. ‘You can’t arrest me, but where’s your dope? If it’s hiding, I’m going to find it,’ that kind of stuff. That, when you’re dealing with a medical thing, is a very uncomfortable interaction, and it doesn’t help the situation. It doesn’t help, ‘Okay, you can trust me. We’re going to get you to treatment,’ after this guy was just drilling you about where your dope is. That continues to be a part of the problem.” (Fire)
Although EMS responders believed that tracking down dealers and reducing the flow of heroin and fentanyl is an important task, several expressed concerns that this discouraged patients from obtaining additional help for their opioid use.

**Impact on R/ED personnel**

In conjunction with the increased number of overdose calls, R/ED personnel spent more time treating and handling the consequences of opioid use disorders. For some, this contributed to the development of increased compassion and empathy toward opioid users. “*I think it all comes down to I was very judgmental at first, but I think now I just feel sorry for what they actually have to go through*” (EMS). This group of R/ED personnel described how their views on opioid use evolved through gaining first-hand experience working with this population and viewing their “struggle.”

Conversely, other R/ED personnel reported that frequently treating opioid overdoses led to increased cynicism toward opioid use and the feeling of “*becoming immune to it*” or “*more robotic*” during encounters with consumers. In general, many responders felt conflicted toward consumers. “*It’s very difficult when you see the same patients over and over again that generally tend to be pretty rude, unhappy, and not wanting to be there, and for people to maintain their positive attitude towards them gets tough after a time*” (ED).

R/ED personnel often saw consumers during their worst moments. Consumers were sometimes aggressive or rude to R/ED personnel after receiving treatment for overdoses. Police officers also encountered consumers both at overdose events and during other calls, witnessing “*absolutely appalling behavior.*” One police officer explained: “*I’m conflicted. I see these people who are using. I see them throwing away their lives. They’re committing crimes to chase the dragon... to get the next fix. It makes a lot of work for you. I do feel sorry for addicts. I think it’s a bad hand that they were dealt, but on the other hand, I know that they’re committing so much crime in the area*” (Police).

Although this group of R/ED personnel wanted to have compassion toward opioid users, many could not surmount their negative encounters with consumers. Attitudes toward consumers were also sometimes moderated by consumers’ path to opioid use. Though consumers described an intersection of risks that led to their opioid use, some responders’ attitudes toward consumers varied by whether they initiated opioids recreationally or through a prescription. “*I have learned of a lot of people transitioning from opioid pills from pain injuries and things like that, that it can happen like that. I personally have no respect for anybody that would just decide to do this as a recreational drug and then becomes addicted; you’re an idiot*” (Police). In some cases, placing opioid use in a disease framework appeared to help responders differentiate
between consumers’ behaviors and their actions and increase empathy. *“It’s an illness that hacks your brain. I explain it to patients that, ‘This is a brain hack. You’ve been hacking your brain, and you’ve hurt your software’”* (ED).

**SUMMARY**

This sample of consumers and R/ED personnel had extensive experience with overdoses. The majority of consumers had experienced an overdose, and the R/ED staff had all treated numerous overdoses. Consumers and R/ED personnel unanimously agree that fentanyl is the primary cause of the increased rate of overdoses in New Hampshire. Both groups noted that fentanyl’s potency and inconsistency in FLHs cause consumers to overdose, particularly those lacking experience with the fentanyl high. Consumers also specifically endorsed seeking out batches of drugs that caused an overdose, noting that these batches were clearly strong.

R/ED personnel also discussed the massive breadth and depth of the opioid problem in New Hampshire. In their experience, overdoses are now occurring across all demographics in New Hampshire and widely impact the family and friends of consumers. Responders had high confidence in treating overdoses, though they noted that the primary goals of law enforcement officers and firefighters/EMS providers sometimes diverged at the scene of overdose events.
INTERVIEW FINDINGS BY CATEGORY: EXPERIENCES WITH OVERDOSES

Other consequences of the opioid use epidemic in New Hampshire

Aside from the increasing rate of overdoses and overdose deaths in New Hampshire, R/ED personnel explained that the opioid epidemic also contributed to local cases of human trafficking and prostitution, the spread of disease from intravenous (IV) drug use, and increased public awareness of opioid use. Three responders had encountered potential cases of human trafficking or prostitution.

"You know there's human trafficking going on. You can see it up the street" (Fire). Responders sometimes encountered these situations when treating overdoses, and suspected these situations were more prevalent than previously expected. "[Human trafficking happens] a lot more than I think we even realize. A lot more than I realize. It doesn't take much to actually come under the qualifications of human trafficking, especially when it comes to drugs. It may be somebody prostituting out their friend, prostituting out their sister for an exchange for drugs" (EMS).

RE/D personnel also frequently commented on increased rates of infections and diseases spread from IV drug use. Many patients entering the ED for opioid overdoses have localized infections from IV use that require treatment, "Very often, I'd say the most common complication is localized infection from the injection site that we see, aside from the effects of the narcotics themselves" (ED). In addition, ED responders suspect that rates of Hepatitis C are increasing in New Hampshire, due to sharing dirty needles. As one ED provider described, "I think we probably have a Hepatitis C problem in this state that we're not really cognizant of, because we don't report Hepatitis C. It's not a reportable infectious disease yet, and yet, every other person who uses drugs has Hepatitis C, or it feels that way" (ED).

Rates of infective endocarditis and other valve infections may also be on the rise, and three responders had seen cases of IV drug use-related endocarditis in young patients. The R/ED personnel explained that these additional medical problems complicated the treatment of patients with opioid use disorders. "I think it has presented a challenging set of patients because it's not just the overdose it's the other things that come with using IV drugs. In many ways the overdose are kind of simple. They come in, you give them Narcan, they get better. It's the abscesses, it's the endocarditis, it's the bacteremia" (ED).

Finally, R/ED personnel believed that the opioid epidemic contributed to increased public awareness of opioid use and overdose. Multiple responders had received calls from bystanders who witnessed someone in a vehicle and immediately assumed the person had overdosed. One police officer described a call where a bystander assumed a nurse had overdosed.

"Just last night I was working and we got a report of a female that was passed out in her car. Back a couple of years ago, it would have been what makes you think she's passed out... Now it's assumed on our side and the public side that it's an overdose. Nine times out of 10, it is an overdose but last night she was actually waiting for her husband to get out of work and she just closed her eyes. She was a professional. She was in scrubs... The ambulance came and she thought it was a big production for something so minor. I think the public is aware and they're pretty vigilant." (Police)

R/ED personnel had mixed emotions about whether this increased awareness was positive: "I mean, it's sad that society is swung that way. You assume that everybody is overdosing when they're sitting in a car. I think that's bad obviously, but I think it's good because people's lives are being saved because people are calling and stepping up" (Police).
Experiences with Narcan

**OPIOID CONSUMERS**
Interviewees were asked about their access to Narcan, as well as experiences being administered and/or administering the opioid antagonist. Emergent themes all appear to be barriers to access and use of Narcan.

![Figure 10. Perceived Barriers to Accessing Narcan Among Opioid Consumers](image)
Lack of knowledge and/or awareness was a common denominator for many of the interviewees’ comments on the subject of access to Narcan:

“I wouldn’t even know [where to find it]”

“You always see flyers about it but you have to travel to get it”

“Yes, when I came to Groups they asked me if I wanted to get a prescription for Narcan but I said no because I know I am not going to overdose... I was so grateful for Suboxone and I’m not going to overdose. Plus, I never shot up my pills”

“I don’t know if people actively go and try and acquire it... I’m not sure if you need a prescription... I’ve never tried to acquire it myself”

These consumer quotes are representative of a pervasive lack of knowledge about how to access Narcan, lack of knowledge about indications for the use of Narcan, lack of awareness of laws on widespread standing orders (open script) at pharmacies across New Hampshire, and lack of interest.

Levels of knowledge about access varied but there was a pervasive sense that consumers don’t want or need it. Perceived costs combined with a false sense of security pose a significant barrier to access for many: “Nobody thinks they’re gonna OD...Nobody is gonna spend $50 bucks, especially if they have a problem [opioid addiction].’ ‘It doesn’t seem like they’re affordable unless you get it for free from an outreach center. It’s not high on your priority to go to a place like that when you got stuff that you got to do. That and you don’t want someone Narcanning you when you don’t think that you need it because it feels really horrible.’”

This latter sentiment introduces another often-cited barrier, namely that the physical side effects (e.g. withdrawal) from Narcan that some have experienced, and that all seemingly have heard about, are to be avoided at all costs. When asked about side effects of Narcan administration, it became clear that consumers understand how Narcan works – it acts quickly to displace the opioids from the opioid receptors in the brain and in so doing, precipitates near immediate withdrawal symptoms.

It is well known that people dependent on opioids will continue to use opioids despite severe negative consequences simply to avoid becoming sick or going into full opioid withdrawal. Thus, it is unsurprising that consumers describe the physical side effects of being administered Narcan in the following highly descriptive, vivid ways: “[You feel] fucking miserable and hate whoever did it to [you]” and “The only effects I’ve witnessed after you use it is the person is instantly
sick. The thing is once they’re in instant withdrawals, the first thing they’re going to do when they leave the hospital is they’re going to go out and find some heroin to make themselves feel better…I’ve always told people that if I was OD’ing, try and get me to come back on their own and worst case use Narcan but I don’t want it used on me.” This quote summed up why Narcan is aversive to many – it causes immediate withdrawal. Therefore, it is common for consumers who have been administered Narcan to use opioids within hours of their reversals. “It’s sad but it’s what they do.” No other physical side effects were noted by consumers.

Perceived stigma is another barrier to accessing Narcan. One consumer said that he “hear[s] that now in NH they are trying to have an open prescription at the pharmacy and I have a problem with the pharmacy thing...a lot of users don’t trust the pharmacies...its legal but most stores are not participating.” Another consumer thought that you can go to the police station or the fire station or a hospital to get Narcan if “you want it for the right reason,” but he doesn’t “think they would give it to a strung-out addict who is just gonna overdose and try and bring himself back.” And yet another consumer acknowledges that he stole his Narcan kit so he doesn’t “know how normal people get this shit.” The sense that pharmacies are choosing not to participate in the open prescription movement, that one might not be worthy of a kit, or that consumers are not “normal” all point to the perceived stigmatization of this population and how it impacts access to and the use of Narcan.

Fear of the police, a result of a lack of confidence in the good faith application of the Good Samaritan law, is another identified obstacle. For example, one young man said, “I think people say it and it’s like nobody believes it [Good Samaritan Law]. Somebody says, ‘Oh you can call, you won’t get in trouble’ and people are like ‘Dude you’re fucking dumb. I’m not calling’.”

One final deterrent to widespread access and use of Narcan is the rage that some people suggest consumers express to the first responders and/or friends who administer Narcan after an overdose. Exemplifying this sentiment, one consumer said, “You are pissed. Pretty much every time I’ve overdosed, and everybody that I know has overdosed, has said, ‘I wasn’t overdosing. I was just really high, and you ruined it.’ But then the paramedic’s there saying, ‘No, no, you were dead.’” Notably, just under half of this consumer subsample had personal experience with Narcan, though many of those in this category have witnessed its administration on friends or family.

FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL
R/ED personnel were asked several questions about Narcan. There was a prevalent sense of amazement among responders at the life-saving effects of Narcan (e.g., “If there’s any miracle drug out there for that type incident, that’s it” (Fire)). However, many R/ED personnel were
quick to note that Narcan “is a short-term fix, unfortunately, for a very long-term problem” (EMS); “I think it’s a necessary evil. I mean, plain and simple, it saves lives and I think nobody wants to see another human being die” (EMS).

Some responders feared that the public has misconceptions about Narcan given that patients are sometimes beyond the point of revival: “I could dump a gallon of Narcan into them and it’s not going to wake them up, and have the family wonder why. Narcan has been billed as a miracle drug by politicians, and bureaucrats, and so called experts. When the timing is right, it is a miracle drug. However, it doesn’t help everybody” (EMS). One responder wanted to be sure that those who are unfamiliar with Narcan understand that people who are overdosing are unable to give Narcan to themselves. Another explained that the reversal effects of Narcan can wear off quickly and send the patient back into an overdose.

R/ED personnel also had mixed viewpoints about whether administering Narcan intravenously or intranasally is safer and more effective. While some believe that intravenous administration allows providers to be “a lot more nuanced in how we use Narcan, so we’ve learned to tailor it to, really, just their respiratory drive as opposed to having them be both wide awake sitting upright, staring at you in withdrawal” (ED), others believe that intranasal administration is safer for both patients and providers, as long as providers wait a sufficient amount of time after administering each dose. “When you gave an IV, if you administered it too fast, people would wake up instantly. They would be incredibly violent and angry, so now you have an angry, combative patient and a contaminated sharp needle in the back of a very small ambulance, and that posed a huge risk for us. Now, being able to give it intranasally is much safer for administering it. The problem with it is that it definitely takes much longer to be absorbed into the bloodstream, and EMS professionals and healthcare providers tend to not be that patient. What used to take 30 seconds, maybe 60 seconds to work, sometimes can take 5, maybe even a full 10 minute before it fully wakes the patient up. People become impatient, so they give more of it. Next thing you know, you wake the patient up too quickly and they’re combative and they wanna tear your head off. But intranasally is a much safer route for administering Narcan.” (EMS)
The vast majority of R/ED personnel reported no unanticipated side effects caused by Narcan. There was one account of a Narcan administration resulting in a nose bleed due to improper administration by a layperson who forgot to attach the atomizer. Additionally, one ED provider cited pulmonary edema as a known side effect but explained it is caused by administering too much Narcan or giving it too quickly. R/ED personnel had never heard of brain damage as a result of Narcan administration and conjectured that any reports of brain damage “could have been caused by lack of oxygen to the brain prior to the administration [of Narcan]” (Fire). While withdrawal symptoms are a potentially anticipated effect of Narcan, R/ED personnel explained that these symptoms can be attenuated through careful administration: “If you give it nice and slow, you can get the exact effect you want, but you just need to be mindful about that” (Fire).

R/ED personnel reported that the availability of Narcan has increased in communities: “It’s so easy, there’s so much Narcan out there. Everybody’s giving it out” (Fire). One EMS provider discussed a program in which he and his team “actually distribute Narcan out to the previous overdoses that we have in town” (EMS). However, R/ED personnel had conflicting opinions regarding whether the public should have access to Narcan. Some believed that public availability is beneficial: “It can appropriately be in places where addiction overdoses are known to incur. That includes private homes, or party areas” (ED). Others thought that making Narcan available to laypeople is counterproductive: “Making it more widely available, they’re only living to use another day, as opposed to changing the lifestyle or the behaviors that are leading them to use. I think that actually will at some point be contributing to the problem and not making it better” (Fire).

There was greater consensus that responders should carry Narcan. “In the medical setting it is an essential drug. I like it in the hands of all first responders, including police, and fire, and EMS” (ED). However, one responder expressed concerns that some medical professionals may need more education to know that administering Narcan is only appropriate for opioid overdoses and not for other types of overdoses.

Several potential unintended negative consequences were noted as a result of Narcan’s availability in communities. A few R/ED personnel had heard of “Narc parties” or “Lazarus parties,” in which people use Narcan with a sober friend so that they can use more or a higher potency of an opioid. Others believed that consumers who have been given Narcan by a bystander may not seek professional treatment. Many R/ED personnel also worried that Narcan may give a false sense of
security: “I am mindful that when a patient who has opiate addiction disorder possesses Narcan, they sometimes make a cognitive mistake thinking, ‘Well, I will be able to survive even an overdose, so I can really push my high right to the edge.’ That is foolish thinking caused by their addiction, and it can kill them” (ED). One responder noted there is so much Narcan available that “we don’t even know the extent of the overdoses anymore” (Fire). Another responder speculated that Narcan is over-utilized, claiming that “people hear overdose, and the first thing they want to do is give Narcan” (Fire).

SUMMARY
Overwhelmingly, opioid consumers report significant barriers to accessing and using Narcan in New Hampshire, including high costs, fear of police, fear of stigmatization, lack of knowledge (e.g., access, indications and laws), and fear of side effects. Side effects, notably withdrawal and anger associated with withdrawal, were a deterrent from wanting Narcan administered during an overdose.

Conversely, R/ED personnel state Narcan is widely available and a lifesaving medication. Although there are mixed beliefs on whether it should be available to the public, there was consensus that responders should carry it. R/ED personnel also shared mixed recommendations on whether it is safer or more effective administered intravenously or intranasally, but agreed that side effects beyond anger associated with withdrawal have not been observed.
INTERVIEW FINDINGS BY CATEGORY: HARM REDUCTION

Harm Reduction

OPIOID CONSUMERS
Consumers addressed questions about their thoughts on three harm reduction strategies: needle exchange programs, fentanyl testing kits, and the increased availability of buprenorphine ‘off the street’ as a stop gap to treatment access. Needle exchange programs received near unanimous support.

“In Salem NH, you can’t buy needles which is just crazy. You either have to go to Mass or to Manchester; ‘I don’t know why they fucking don’t have it in NH,”

“There are a lot of people who are not comfortable going into the pharmacy and having some pharmacist staring at him like he is a drug addict and treating him badly... and a lot of pharmacies are non-cooperative anyway. I have had pharmacists look at me and say ‘that’s illegal. I can’t give that.’ And I say, ‘Don’t lie.’ You do need a needle exchange program. It needs to be [here].”

Needle exchange programs received near unanimous support

Consumers felt that the implementation of a needle exchange program in the state is a “wonderful idea” and “will help prevent the spread of diseases.” Most consumers are “all for it” noting that "Vermont has a needle exchange...and In Massachusetts you can just go into any pharmacy and buy them.”

The suggestion of increased availability of fentanyl testing kits as a harm reduction strategy was not nearly as well-received as the idea of needle exchange programs. Responses fall along a heavily negatively weighted continuum, from “That’s a good idea. I never thought about that before,” to “I don’t know if people would use it” to “[it’s] wasting product,” to “I don’t know if those are going to help anybody really,” to “If they know its [Fentanyl] in there, those people that are seeking are going to want it more.”

One consumer bluntly stated that fentanyl testing kits are “not really practical because honestly, if I was sick and I went to go cop, I’m not going to take time to test for shit first. I’m just going to throw the shit in the spoon and fucking put it in my arm.”

Increasing the availability of Suboxone makes good sense to the majority. The general feeling is that: “More doctors should prescribe it.” ‘What is the big threat of Suboxone off the street? Nobody is out there using Suboxone. Drug addicts do not search out Suboxone to abuse...
these are the people who are actually starting to think about treatment and if it is easier for them to get some treatment real quick from the guy next door then you are going to do that because it is so hard to get treatment any other way.”

A few holdouts believed harm reduction strategies simply enable users to continue to harm themselves; however, they are significantly outnumbered. Other suggestions for harm reduction strategies did not surface in these interviews.

FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

Many R/ED personnel agreed that harm reduction strategies are necessary given the current issues at hand. “I’m all in favor... This is the thing... It’s a disease. Patients are going to use and abuse these drugs regardless of what we do, so to minimize the side effects. I would use the same argument that I would use for bystander Narcan, which is, let’s admit it’s here and do the best we can to try to minimize the impact” (ED).

The necessity of needle exchange programs in particular was cited frequently due to “reports of needles found on playgrounds and hiking trails” (Police) as well as in parking lots. Several expressed concerns about infectious diseases: “I’m 100% for needle exchange, and the reason I am is because of the Hepatitis C and the HIV side of it” (EMS); “[I’m] for needle exchange programs because again there’s published data that it lowers transmission of blood borne diseases” (ED).

Harm reduction practices may benefit not only consumers, but also responders. Many responders expressed the need to protect themselves because of risks of transdermal overdoses and needle punctures: “I’ve searched cars... just littered with syringes. It’s scary because you’re taking the extra time to go through and make sure you don’t get stuck. We’ve had officers here stuck with needles. They go through the treatment and it’s tough on them and their family.” (Police) “As I’m sure you know, fentanyl can be transferred through the skin, so certainly we take huge precautions, and they can be inhaled and all that stuff in its powder form. You can end up overdosing your officers if you’re not careful how you handle it. We handle any crime scene full booties and gloves and things like that” (Police).

One responder explained that most tests are happening in the lab now, rather than in the field, because of the risk of overdose: “That's changing because the dangers of fentanyl is very scary. Typically, if we had a powder product we would field test it in the past. Now, we’re not really doing that because if I just touch it on my skin I could die in overdose” (Police).

Responders reported that dealers sometimes warned consumers about the potency of a batch of drugs as a form of street harm reduction: “Based on the text messages, the dealer was
concerned and saying, 'Be careful. Make sure there’s somebody with you. This is a hot batch.’ They’re pretty much putting that warning out because they know that they just had a heroin overdose from their batch, and so now that they’re selling it, they’re letting their customers know that this is a hot batch and be careful” (Police). However, ideas about the frequency with which dealers warned consumers varied among responders. One claimed that “they [dealers] don’t care about that. They could care less about that” (Police). Another responder discussed the possibility of alerting the public to a batch of opioids that has caused many overdoses. However, this responder cautioned that this approach is likely to have the opposite of the intended effect because many consumers actively seek drugs that have caused overdoses.

Some responders had conflicted attitudes toward harm reduction, either feeling like they do not know enough to have an opinion or that “it’s like telling them it’s okay” (Fire). This sort of ambivalence was common among police officers: “I don’t know. I don’t think you can stop the person from using one way or another. I mean, so if they can be safe about it, I guess. I don’t necessarily have an issue with that, I guess. It’s weird because I also don’t want to promote... I’m kind of contradicting myself. I’m torn on that” (Police).

SUMMARY
There was unanimous support amongst opioid consumers and R/ED personnel for needle exchange programs as a harm reduction strategy. R/ED staff reported that this would not only benefit consumers, but the responders who are often in contact with syringes.

Furthermore, consumers offered that wider availability of Suboxone could be an additional harm reduction strategy, whether on the streets or by provider prescription. Interviewees did not believe testing kits in the community would be advantageous and did not offer additional means of harm reduction.
Experiences with Treatment

OPIOID CONSUMERS

“Every time I’ve tried to get into places except for the last time, it was a really long waiting list, at least a month... that’s the hardest part is getting treatment right when you need it, when you’re ready and then help paying for the treatment.”

“It shouldn’t be so hard to get help!”

“The wait for a Suboxone clinic was months and months, like literally. Usually when they do call you, or when the places that called me it was, ‘can you come right now?’ If you can’t come right now, they’re like, ‘oh, well now you’re back to the bottom of the waiting list.’”

“Even the Suboxone clinic, when I first tried to get in there they were like, ‘yeah, you’ll be on the waiting list and that could be about a month or two.’ What am I supposed to do for a month or two?”

“[When you want to get clean, there is no immediate help... My mom was really frustrated with it. She was calling around everywhere. She started calling Vermont places.]”

Figure 11. Representative Quotes Highlighting Theme of a Perceived Lack of Treatment Availability in New Hampshire
Underscoring the importance of treatment for opioid use disorders in New Hampshire, it is important to note that consumers report not being able to cut down or stop using opioids on their own. When consumers did make contact with treatment programs, their experiences suggest significant barriers to accessing treatment, as well as being successful in treatment. Waiting lists are notable for how often they are referenced:

“Every time I've tried to get into places except for the last time, it was a really long waiting list, at least a month... the hardest part is getting treatment right when you need it”

“The wait for a Suboxone clinic was months. Months and months, like literally. Usually when they do call you or when the places that called me called me, it was, ‘Can you come right now?’ If you can’t come right now they’re like, ‘Oh, well now you’re back to the bottom of the waiting list.’”

Summarizing how waitlists function as significant barriers to getting help, two consumers quotes make it plain:

“[Waitlists] are one of the key things for addicts because nobody wants the wait. It discourages you...that’s why I think so many people don’t end up going, because there’s just not enough places that can get you in within a reasonable amount of time,”

“I feel like the window for asking for help and seeking treatment is very small because they [addicts] don’t always want to do it. When you know somebody who’s willing and able and ready and physically standing there in the halls of the [treatment program] in front of you, and you say, ‘Come back in 8 weeks,’ that’s crazy. You could be dead tonight. Eight weeks is a fucking long time in the trenches.”

Lack of available programs emerged as a perceived barrier as well and contributed to the lengthy waiting lists:
INTERVIEW FINDINGS BY CATEGORY: EXPERIENCES WITH TREATMENT

“I’d definitely make more sober houses, more halfway houses. There’s only a few out here, there needs to be more on the sea coast and there just needs to be more of them. There needs to be more beds available”

“[There are] no medical detoxes in New Hampshire. And rehabs, a lot of them want you to be at least 30 days clean... A lot of them when you call, they’ll suggest you go to a clinic, like Suboxone or a methadone clinic, which is really hard because there is always a waiting list. When you want to get clean, there is no immediate help”

Finally, the tenor of frustration at gaining access to treatment when a consumer was ready to get help is exemplified by the following quote: “Although there are a lot of different treatment facilities out there and way more now than ever was or anything like that... the problem is that they’re nearly impossible to get into. I had to call and call, and call. I tried to get in treatment centers for six months and either they were full or they didn’t take my insurance, or I hadn’t used long enough, or I wasn’t using the right drug, or I didn’t live in the right town. I didn’t make enough money or just whatever. It was ridiculous. It took me forever. It seemed like no matter what I tried or where I turned, I could not get help.”

Several consumers mentioned treatment facilitators include individual counseling, group counseling, and most salient to consumers, pharmacotherapies. Consumers pointed to the need to talk one-on-one with a counselor as an essential ingredient to treatment. One young woman explained, “if I had my way and I was in charge, I would integrate a one on one counseling appointment at least every couple of weeks or once a month to really check in and be able to talk about any issues you have. I would say every two weeks. I think that would really be my money’s worth.” Another felt that, “if I didn’t have my counselor, I wouldn’t be where I am today,” while yet another consumer said, “I think counseling has probably been the most helpful part [holding me accountable for my actions].”

Underscoring the importance many placed on the power of accountability to another human being, one consumer stressed that “It’s not just about medications... my counselor will meet with me 10 times a day if I want, and it’s no charge. My doctor sits down with me. He knows my name. We have urine tests. They send them out to a lab so you ain’t getting away with crap. She [counselor] knows that relapse happens... when I had my relapse, it was like a week after I went, and I know I wasn’t gonna have a urine test, but I felt so guilty about it because they really do build a connection and relationship with you, so I called her to tell her...”

From the perspective of what is not helpful, one consumer suggested that the least helpful part of treatment for him was the lack of individualized treatment options. “It’s not individualized...it’s
Group counseling surfaced as another essential ingredient to effective treatment for many consumers. Mapping onto the notion of accountability previously mentioned regarding individual counseling, one person said: "It's nice to hear other people and share stories. It's nice people that you trust, this is your people in a group. [We] hold each other accountable."

"I know people think [Suboxone is] a crutch, talk shit about it, but in my personal experience, I feel like it's done more good than anything else."

"Honestly, being on Suboxone, I have never felt better, ever. Even when I was using, I didn't feel as good as I do now being on Suboxone. I never have bad experiences with it. It always stays consistent with my body. It seems to work just as good today as it did the first day I started using it."

"I noticed that since I started doing Suboxone, that I have decreased my use a lot since then. I was using every day... I probably use once or twice a week now."

"Suboxone has been great, it's been a miracle. I still go to meetings 3 times a week. I'm not required to go there, I don't have to take Suboxone. It's definitely given me a second chance at life. I've got my kids back. I feel like I got my soul back. I just got a good job."

Medication references dominated the consumer responses about experiences with treatment and what they found most helpful. Suboxone was the overwhelming topic of choice and this medication's role in assisting with recovery was shared repeatedly.

Many Suboxone references assert the benefit of this medication over methadone in terms of the associated withdrawal,
perceptions that methadone is more focused on making money than helping people recover, and, in one instance, because of the lack of required group counseling:

“Suboxone seems to be the best thing that has worked for me so far. Methadone worked as well, but ... It was business first there. If you don’t have your $15 a day, then goodbye. Suboxone is different because I have Medicaid and my Medicaid pays for it.”

“Suboxone is a lot easier to get off than MTD”

“My experience with methadone wasn’t really a good one. It was more of a business than trying to actually help people. They would let people go ridiculously high on their dose, I think you had to go to group therapy once a month which is ridiculous...it was pretty apparent that is was more of a moneymaker than for any humanitarian reasons.”

One lone consumer found methadone superior to Suboxone: “Suboxone, I abused it. I can shoot it, so I abused it.... When I tried the methadone, I was very against it. I thought it was the worst thing you could possibly try...[however] It’s like a miracle thing, because I’ve never done this well on anything before. I just started filling out the paperwork today to start going down 2mg at a time. Within the next year, I’m hoping to be off the methadone.” However, overall Suboxone may be more familiar to interviewees, as the minority had experience with methadone.

Vivitrol received scant attention from consumers. However, the one consumer who mentioned experience with the medication provided unqualified support compared to Suboxone: “If you really want to get clean, then the Vivitrol is really the only way to go. The Suboxone is just delaying the inevitable, because you are going to get sick.”

Lastly, issues related to cost pervaded the discussion of treatment, with many consumers expressing dismay at an array of funding-related issues. These funding-related issues include a lack of providers who accept state insurance (“It’s crazy, they’ll tell you [that] you have to go to a program as part of your parole. Well, you can’t go to a fucking program unless you have insurance and out of the four programs or whatever there are, only one of them will accept state insurance”), insurers who pay for medication but not other
components of treatment deemed by most consumers as necessary ("My insurance doesn’t even cover group. It only covers the medication"), high copays ("I have to rob Peter to pay Paul to come up with my $65 copay every week…I have a lot of bills") and that, in some instances, Suboxone is cheaper outside of the treatment context ("I actually wanted to get into this Groups but they were full. Until recently they weren’t accepting any new clients, but I’m not really interested. I don’t have money for it. It’s cheaper to buy on the street. I can get the same amount as everyone else does here for a cheaper price").

Talk of cost as a barrier is somewhat offset by a few consumer comparisons of the costs of treatment and the costs of continued opioid use: “I think a lot of people don’t realize ... I heard a lot of people complaining about the price of coming to this. It’s not cheap but going from doing hundreds of dollars a day of heroin to spending a couple hundred dollars a week on recovery. It’s a no-brainer for me. I’ve said that in group before and it wasn’t the most popular. Depends on if your life’s worth it.”

FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL
When sharing their experiences with the treatment system, R/ED personnel explained that there are few, if any, treatment referral processes in place after stabilizing a patient after an overdose. Two ED providers discussed offering access to recovery coaches, but one lacked knowledge about patients’ receptivity to this option. The other said that the response to recovery coaches is "pretty poor" and that “users are not interested in sticking around and waiting for them to show up. More often than not, the patient will either leave AMA [against medical advice] or leave without continuous treatment before the recovery coaches can talk to them” (ED).

R/ED personnel explained that they can share pamphlets and contact numbers with patients, but believed that “giving them a business card is not really the referral that they really need” (Fire). Some feel uninformed about the process: “It’s not well organized. I don’t know much about it. I haven’t been very well educated on exactly what we would be referring to” (EMS). One ED provider noted that “a very, very small percentage of the overall narcotic patients” (ED), are referred to psychiatric care, predominately in instances where the overdose was a suicide attempt.

R/ED personnel described several barriers to instituting treatment referral processes. One responder doubted that Eds have the time, resources, and appropriate providers to make referrals. Regarding availability to assist with treatment referrals, staffing limitations were noted for fire/EMS and police as well. For example, “I don’t have extra officers to transport people around. I need officers enforcing the law” (Police).
Many R/ED personnel discussed a lack of available services to which to refer patients: “I guess one of my concerns would be the availability of those resources even if they technically exist. Are they really 24/7? Are they really open for everybody or is it one of those if they've got beds they'll help you, but otherwise we'll turn people back to the street, so that's a concern” (Fire). Two responders discussed a lack of knowledge about existing services, and one explained that patients are not alert enough to consider a referral after being treated in the field and that a referral “would be best met at the hospital during their recovery time” (Fire). Another explained that there is not adequate funding to the organizations that are qualified to conduct referrals. Uncertainty about the effectiveness of treatment services was pervasive. “People will get out of a 30-day program or a 28-day program or a seven-day detox and they’ll be using the next minute” (Fire); “I mean, I’m conflicted. I don’t think programs work as far as … I’ve seen people come out of rehab and come right back to it. I think there’s a small margin of success. I don’t know. I don’t know what’s better if incarceration is better or treatment” (Police).

There were mixed opinions expressed about medication-assisted treatment (MAT). Many R/ED personnel expressed concerns that the medications can be misused and that “substituting one addiction for another, I can’t really see how it’s going to work in the long run” (EMS). However, others discussed the benefits: “I am completely for it, and I think it can be done to the very highest standards of evidence-based medicine. Especially given that we have 40 years of published data to its effectiveness. That we need to de-stigmatize the use of legal opiates in the management of chronic opiate addiction. It has to be done by professionals, because drugs like methadone, and buprenorphine can also kill if misused, or mis-prescribed. It’s high risk stuff, and no one going into this should be under any illusion that it’s easy, but it’s effective. Recidivism rates are lower, and survival, which is really what we’re all about here, is much better” (ED).

There is a consensus among the R/ED interviewees that consumers are unable to stop using opioids without help. For example, “once you're addicted, it's like any other addiction. It changes your brain chemistry and you need to be... You need help. You can't do it yourself to get clean, I would imagine” (Police).

Most also agree that consumer motivation impacts the effectiveness of treatment: “You got to have the person or patient or a subject, whatever you want to call them, has to be willing to get treated in order for it to work. It’s like anything else, anything that you try or try to stop doing or something, you got to be, in your mind you got to be wanting to do that to actually make it work” (Fire); “A lot of times I think people who come in on their own, I’m done,’ do a
lot better than people who are forced to come in by their families. If you don’t have that passion to get out of it” (Fire).

Recommendations for the Treatment System

Perhaps the most widely shared opinion among R/ED personnel was the need for increased availability of all services related to addressing the opioid crisis, especially treatment:

“There’s not enough. It’s better than it was a year ago, but with the scope of the problem that we see and the number of people that we have looking for treatment, there’s not enough” (EMS)

“I just think that having the treatment facilities out there needs to be kind of at the forefront right now. I think they just need to get more of those treatment facilities out there and more options for them” (EMS)

“Immediate referral for drug and alcohol detox. The red carpet. Our own homegrown Betty Ford, with a state commitment to say, ‘This matters’” (ED)

R/ED personnel explained that funding-related barriers also must be addressed. One such barrier is often insurance. R/ED personnel expressed that insurance should not prevent someone from getting treatment: “I think if somebody wants to do it then they should have that ability to do it whether or not their insurance can afford it or anything. That’s usually a huge crutch” (Police). Another issue is funding for treatment programs, which R/ED personnel currently find insufficient: “Put more money into it... I mean, everything comes down to money, really. You need to make it more available” (Police).

Additionally, R/ED personnel agreed that access to treatment must be simplified: “It [treatment access] has to be easy, and it has to be coordinated. It can’t be difficult to obtain. The person essentially has got to be put in a position where they have to do very little other than say, ‘Yep, I’m ready’” (Fire).

Some R/ED personnel also emphasized that treatment should be more individualized: “I think that they need to understand that treatment has to be out there, but it has to be out there in many different forms because not one treatment that’s right for one person is going to be right for the other, so I think there needs to be many different treatments out there, many different options for them” (EMS).
The need to reduce stigma was also discussed. A responder explained that community members need to be aware of their own biases: “Also, you can’t have people saying, ‘Well, yeah, that’s a great place to put it in this little Victorian house, but I don’t want it in my neighborhood.’ But you’ll be the first one to complain that there’s not treatment out there, but you don’t want it in your neighborhood. I think that whole ‘I want to see it, but not in my backyard’ thing has to go away” (EMS).

Similarly, an ED provider discussed challenging the stigma among his colleagues: “I am a little more direct in confronting bad thinking among colleagues about this. Which doesn’t necessarily win me friends. I try to be polite about it, but people don’t like their beliefs challenged necessarily” (ED).

Several R/ED personnel contended that services must address the full range of co-occurring problems, including mental health problems, other drug use, and housing, especially as underlying mental health issues were mentioned by a few R/ED personnel as critical to understanding some patients’ use of drugs. One ED provider explained that identifying drug use as an isolated problem is shortsighted: “To me, the biggest problem is that these patients … The narcotics are only part of their problem. Their socioeconomic environment, their resources, their monetary, financial, legal, other problems all conspire to make them in this situation that really is tough to get out of. It’s not simply a drug problem for most of them, in my opinion” (ED). Another subset of R/ED personnel acknowledged housing as critical in addressing the issue: “We need supportive housing” (Fire).

Two ED providers emphasized that the opioid crisis should be addressed through a multi-pronged approach. One stressed that treatment, prevention, and harm reduction must work together. For example, “syringe exchange or clean needles, couple that with recovery resources or counseling or referrals” (ED).

Another provider summarized his thoughts on addressing the crisis through multiple layers: “I would have a federally and state funded addiction treatment clinic, with all the moving parts, including methadone, buprenorphine, and other accepted medically assisted treatments. I would have trained, certified professionals at all levels. From the physicians, to the nurses, to the psychologists, to the counselors. I would have residential setups for the pregnant women, and help with them. I would continue the buprenorphine in the internal medicine and family medicine clinics, because there’s a category of patient who works, who considers themselves a ‘good citizen,’ but doesn’t want the stigma of walking into the methadone clinic once a day, on public display. Those people could be accommodated under that model. It simply takes more money, and more personnel to fight this, and some real estate, a business plan if you will” (ED).
One responder also noted the importance of providing services for families affected by opioid use, particularly services for children, though this responder did not provide further details.

**SUMMARY**

Responders and consumers overwhelmingly acknowledged that consumers are unable to stop using opioids without help, yet noted a lack of available services in New Hampshire. Lengthy waitlists and trouble navigating the treatment system prevent consumers from obtaining treatment. Few responders offered treatment referrals after overdose events because of staffing shortages, limited knowledge about treatment options, and a dearth of open treatment slots.

Both groups recommended increasing treatment options for opioid use disorders, especially Suboxone, medically-assisted detoxification, and group and individual counseling. In addition, treatment for co-occurring mental health problems must be more available. Funding was another major barrier to treatment access. Consumers encountered difficulties paying for their treatment, while responders noted a lack of funding for programs.
Prevention

**OPIOID CONSUMERS**

Ideas about how best to prevent continued escalation of the opioid crisis in New Hampshire included messaging for prevention experts and those who implement prevention efforts in the state, physicians who prescribe opioids, treatment providers and law makers. The consensus among consumers is that middle school or earlier is “a good time to start the conversation.”

One consumer clarified that, “I think we need to start educating kids younger, because I definitely – besides at home – I didn’t hear about drugs until high school and I was doing them long before that.”

The education that consumers believe is best suited to deter youth from experimenting with opioids involves scaring youth by showing how average people descend into the depths of opioid addiction: “Show a successful person in a commercial and then show them starting to use in the bathroom at work. Show them starting to use in their car outside of their work. Show them losing their teeth, losing their everything. Then show them dead on the side of the street somewhere.”

Prescribers are admonished by consumers to prescribe opioids prudently to prevent future problematic opioid use among the wider New Hampshire population: “Just limit the accessibility to getting anything.” Further, patients who are prescribed opioid analgesics must be educated about the addictive potential of these drugs, and must also be held accountable in the event that they misuse and/or divert their medications. Physicians and treatment providers are encouraged to increase the availability of Suboxone: “Drug addicts do not search out Suboxone to abuse...these are the people who are actually starting to think about treatment ...and if it is easier for them to get some treatment real quick from the guy next door then you are going to do that because it is so hard to get treatment any other way.” Also, increasing treatment options in general: “I know a lot of people- I think they should offer more funding into- I know a lot of people who need treatment, who really wanna get there, but they can’t go to a place like this or where I go. They can’t afford it.”

Consumers also suggested the need to work to dismantle stigma surrounding opioid use disorder by highlighting that it is no longer just marginalized groups who are falling prey to this disease:

“We have to get past this stigma of it... It’s not the homeless person on the street... it’s your teacher, it’s really close to home.”
“We have to get past this stigma of it... It’s not the homeless person on the street... it’s your teacher, it’s really close to home.” Dismantling stigma is expected to also play a role in interrupting intergenerational substance use because, as one consumer reports, “I know some people, if there’s addiction in their family they’re afraid to tell anybody because they don’t want to get taken out of the family.”

FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

R/ED personnel focused on four major targets for preventing future opioid use and overdose: educating youth and families, improving the management of pain, and mobilizing the entire community.

Just like the consumers, R/ED personnel unanimously endorsed early education as a critical medium for preventing opioid use and overdose. This education encompassed teaching young people about drug use (e.g., “But we got to get into the schools. We got to start educating everybody” (Fire)) and understanding pain (e.g., “I think we need prevention programs that are all about... and getting people to understand that pain is a normal part of life and a normal part of healing” (ED)), in addition to providing resources for young adults who may already be using drugs (e.g., “I think that there needs to be far more education for our youth, along with places, phone numbers for them to call, and just be like, ‘Hey, listen. I’m thinking about using. I need help’” (EMS)).

R/ED personnel viewed interrupting the intergeneration cycle of drug use as another necessary component of improving prevention strategies, “It’s a cycle. I think educating families would be a huge part of it” (Police).

To improve the management of pain and reduce nonmedical prescription opioid misuse, R/ED personnel advocated for eliminating the trend toward “pain as a fifth vital sign” to reduce the pressure on providers to prescribe opioid analgesics.
“One is if you're going to come up with a plan on how to tackle this issue, it needs to be complete community involvement. It's not something that only one organization, or one entity, or one slice of the community pie can fix. Everybody has to be involved, and until you go out and ask in the community what people's capabilities, resources, backgrounds, professions are, you're not going to have the right answer, no matter how hard you try.” (EMS)

R/ED personnel generally supported the newly adopted limits on opioid prescription in New Hampshire, but also advocated for more patient education about pain and opioid analgesics. “As we go from healthy young people... to aging bodies... they need a lot of counseling and teaching to say, 'This is part of the human condition, it's going to hurt. Don’t expect me to fix it, it will fix itself, sort of. You are aging'” (ED).

For patients with chronic pain, R/ED personnel wanted more non-opioid options for pain management, “You can cut off the amount of drugs that are being prescribed for pain, but you have to have other options for them as well” (EMS).

Finally, R/ED personnel felt that patients receiving opioid analgesics need additional education about the effects of opioids and the risks of becoming physiologically dependent.

Ultimately, R/ED personnel believed that the entire community must be mobilized and involved. R/ED personnel felt a responsibility to advocate for their patients, but emphasized that prevention must encompass the entire community to be effective.

SUMMARY
There was concurrence among opioid consumers and R/ED personnel that education on substance use and its consequences must occur earlier than it currently is, before middle school, and that prevention efforts should include dismantling stigma and intergenerational substance use.

Furthermore, agreement was reported on engaging physicians in addressing the opioid crisis by eliminating pain as the “fifth vital sign”, prescribing opioids more prudently (e.g., greater patient education and utilization of non-opioid options), and increasing the availability of Suboxone. R/ED personnel ultimately voiced that the entire community must be mobilized to effectively prevent contributing to the opioid crisis.
Laws and Policies

OPIOID CONSUMERS
Consumers did not generally seem well informed about laws that affect opioid users in New Hampshire, but they were quick to describe the laws as “harsher,” “stricter,” and “not easy going at all.”

Opioid consumers recounted many examples of interactions with New Hampshire law enforcement officers that conveyed their perceptions of being targeted and/or harassed unnecessarily, above and beyond what is prescribed by law. Consumers spoke of being, “charged with felony possession of a straw,” or “arrested for an empty needle.” One person ranted that “there was no drugs in the car, just an empty bag, but NH wanted to pick up charges against me, so yeah, I was arrested and held with an extremely high bail...I thought it was a bit extreme.” Another recounted an experience being pulled over by the police in New Hampshire and having his Narcan kit taken away. He said the officer told him, “‘You are not allowed to have this,’ and I was like ‘That’s funny, they give it out in Vermont.’” One consumer summarized, “I think that the law’s coming down harder on the opioid user than they ever have.”

Perceived harassment is compounded by mistrust of law enforcement as evidenced by references to the Good Samaritan Law:

“Correct me if I’m wrong because I’m not too up to date but my perception of that if somebody OD’s in front of you and you call, [the police are] gonna do nothing, right? I feel like people are kind of skeptical. I definitely would be.”

“I’ll ask a person I’m getting high with, ’If I go out, will you call 911? I don’t care if you throw me out on the sidewalk, but just promise me you’ll call the police,’ because people are scared.”

When asked what consumers would change about the laws that affect opioid users in New Hampshire, the predominant theme was to make more treatment available through either increases in treatment availability, treatment options, including opening a medical detoxification program or passing something akin to Massachusetts’s Section 35 that enables a loved one to have someone detoxed against their will, or increasing the number of insurance companies that cover treatment for opioid use disorders. Pair this theme with the frequent
INTERVIEW FINDINGS BY CATEGORY: LAWS AND POLICIES

mention of how jail fails to address the needs of the opioid user [mutual exclusivity of jail and treatment] and the frustration is not hard to understand:

“You might have to sit in jail for 5 years, then, if you want to be clean, go after [to treatment]”

“What is prison going to do? Absolutely nothing...just give you a worse mentality than ever”

“They said they offered AA meetings and stuff like that, but people never showed up to [run them]”

Besides being unable to obtain treatment in jail, Suboxone appears to be the most readily available opioid in jails which, in a number of instances, is underscored as the reason some consumers do not consider it a path to sobriety if/when they seek treatment. Finally, felony convictions signal the pointlessness of getting clean to some. One called this the “snowball effect” – “now I’m a felon, I’ve ruined my life.”

FIRST RESPONDERS AND EMERGENCY DEPARTMENT PERSONNEL

R/ED personnel were asked several questions about New Hampshire policies and laws that affect people who use opioids. While this was not pervasive, a few responders were explicit about their lack of knowledge around these policies and laws, stating such things as “I don’t know exactly what the laws are” (Fire), and “they come up with 900 of them every year, so I don’t know” (Police).

Others expressed concern about the unintended consequences of the crackdown on opioid prescriptions, one of which is the possibility of pushing people toward illicit drugs: “I will say that if someone truly has pain or someone truly has an addiction, I honestly don’t believe that my not prescribing them opiates is going to stop them from somehow attaining them. I’m fearful that we are pushing more people to illicit drug use by becoming restrictive with these things, but I don’t have any data to back that up” (ED).

Another potential consequence is not treating pain effectively: “I think that’s good in a way but I also think that’s harming people that really need their meds as well... Because there’s a lot of people out there that have no other way to go, that they have to have those pain meds. It’s preventing them from getting their proper care because there’s no other treatment for them for that pain issue” (Fire).

ED providers described prescription drug monitoring programs (PDMP) as useful tools but as cumbersome in emergency departments: “It’s designed for someone who’s got a full-time office staff to do that. It’s just got to be way more streamlined if it’s ever going to have an impact. That would be my biggest plea, to make this thing extremely user-friendly” (ED); “I love
prescription drug monitoring programs. I just think to mandate it as every single time in a busy ER is incompatible with my other goals for patient care" (ED). Two providers also noted the need for PDMPs to cross state lines; otherwise, they are substantially less useful for communities that are close to borders.

Similar to ED providers’ mixed opinions on PDMPs, police officers felt conflicted about the Good Samaritan Law. Officers seemed to think that the law saves lives and that it is good “if there’s evidence showing that it has encouraged more people to call to stop people from dying” (Police).

However, some officers felt like the law was a barrier to their duties and that “some people can use it as a shield to hide behind” (Police). Oftentimes officers would express both pros and cons of the law: “The whole aspect where if you call for help because of an overdose, that you can’t be arrested for something that’s on the scene, I think those laws have helped to a degree, but I also think that they’ve hindered law enforcement because some of the best information you get on drug dealing actually comes from evidence you find at scenes and things like that. While I think it’s helped some people actually pick up the phone and call, I think it’s hindered in a way, but I think it’s competing harms, like would you rather see the person get help and actually live from the overdose, or would you rather see them get prosecuted?” (EMS, former Police)

Several officers and a firefighter also discussed a desire to increase prosecution for drug offenses:

“I think that users and abusers, they should be spending more time behind bars to teach them a lesson” (Fire)

“We need to do something with the laws to prosecute multiple offenders much more strictly or at least abide by the guidelines you have in place” (Police)

“Law enforcement side, we need more of it. There needs to be more, going after the bigger people. It’s not that we’re not trying; it’s just that, honestly, if you talk to all the different people at different task forces around here, there’s so much. You put out a fire with a squirt gun, really” (Police)

However, one of these officers acknowledged that many people who use opioids are “buying drugs and then selling enough to support their habit. A lot of these users aren’t big-time drug dealers; they’re people who are supporting their habit” (Police).
INTERVIEW FINDINGS BY CATEGORY: LAWS AND POLICIES

SUMMARY
Consumers were not well informed about New Hampshire laws that may impact people who use opioids. In general, consumers expressed frustration and mistrust toward law enforcement officers and the criminal justice system, particularly the lack of treatment available in jails. This mistrust also contributed to doubts about the Good Samaritan law, which could reduce consumers' likelihood of calling 911 after witnessing an overdose. Police officers also expressed feeling conflicted about the Good Samaritan, and some did support increased prosecution for drug-related offenses.

Some responders also expressed a lack of knowledge about New Hampshire laws that affect opioid consumers, though were most knowledgeable about laws surrounding opioid prescribing, prescription drug monitoring programs (PDMP), and the Good Samaritan law. Responders had mixed opinions regarding these laws. Crackdowns on prescribing may reduce opioid prescribing, but might cause opioid consumers to seek illicit drugs and may prevent pain from being treated effectively. PDMPs are viewed as useful, but burdensome.
NEW HAMPSHIRE’S JUXTAPOSITION WITH NATIONAL DATA

The following national data, along with the interviews from this study, emphasize the critical points where New Hampshire stands out from the rest of the United States.

Prevalence of substance use in New Hampshire

New Hampshire consistently ranks in the top ten states of drug use, according to the Substance Abuse and Mental Health Services Administration (SAMHSA) National Survey on Drug Use and Health (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014a).

Opioid prescribing in New Hampshire

While overall rates of opioid pain relievers were consistent with national rates in 2012, New Hampshire had significantly higher prescribing rates of long-acting/extended release pain
reliever, high-dose opioid, and benzodiazepines prescribed concurrently (Centers for Disease Control and Prevention (CDC), 2014).

### Rates of prescription pain medications per 100 people (CDC, 2014)

<table>
<thead>
<tr>
<th>Region</th>
<th>Opioid Pain Reliever Prescriptions</th>
<th>Long-acting/extended release opioid prescriptions</th>
<th>High-dose opioid prescriptions</th>
<th>Benzodiazepine prescriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Hampshire</td>
<td>71.7</td>
<td>14.8</td>
<td>8.2</td>
<td>37.5</td>
</tr>
<tr>
<td>U.S. National</td>
<td>82.5</td>
<td>10.3</td>
<td>4.2</td>
<td>37.6</td>
</tr>
<tr>
<td>Average</td>
<td></td>
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</tbody>
</table>

### Opioid-related overdoses in New Hampshire

Since 2014, the state of New Hampshire has seen a disproportionately high rate of opioid overdose compared to other states, especially involving the use of fentanyl. From 2013 to 2014 alone, the Centers for Disease Control (CDC) reported a 73.5% increase in opioid overdoses in the state; estimations of that number have only increased in the years since. In the 2013-2014 reporting period, New Hampshire residents died of synthetic opioid-related overdoses at a rate of 12.4 per 100,000. The second-closest state to that rate during that reporting period, Rhode Island, saw synthetic opioid-related overdose deaths at a rate of 7.9 per 100,000. In December 2016, the CDC released updated data for the 2014-2015 reporting period. Alarmingly, New Hampshire saw a doubling of synthetic opioid-related overdose deaths per capita; 24.1 per 100,000 in New Hampshire died from synthetic opioid-related overdoses in 2014-2015. The second-closest state reporting deaths in that period was Massachusetts, which saw 14.4 per 100,000 (Centers for Disease Control and Prevention (CDC), 2016; Rudd, Aleshire, Zibbell, & Gladden, 2016).

### Substance use treatment admissions in New Hampshire

In 2011, New Hampshire had higher rates of treatment admissions for opioids other than heroin per capita than the national average (Substance Abuse and Mental Health Services Administration (SAMHSA), 2015b). Despite this, only 1.4% of New Hampshire treatment admissions for any substance use disorder in 2011 were to medication-assisted treatment programs (Substance Abuse and Mental Health Services Administration (SAMHSA), 2015a). New Hampshire has the fewest buprenorphine-waivered physicians per 100,000 residents in the northeast (Knudsen, 2015). Nationally, states had an average of 8.0 (SD=5.2) waivered physicians per 100,000 residents, while Northeastern states had an average of 15.5 (SD=6.3) waivered
DISCUSSION: UNIQUENESS OF NEW HAMPSHIRE

physicians per 100,000 residents. New Hampshire lagged behind the national and Northeast average, with 7.1 waived physicians per 100,000 residents.

From 2001 to 2011, New Hampshire consistently had lower rates of treatment admissions per 100,000 residents than both the national average and the New England average (Substance Abuse and Mental Health Services Administration (SAMHSA), 2015b).

Figure 12. Treatment Admission Rates per Year (SAMHSA, 2015b)

Mental health disorders in New Hampshire

From 2000 to 2014, NSDUH data suggest that rates of mental health disorders in New Hampshire are similar to the national average. The percentages of New Hampshire residents with depression, thoughts of suicide, and severe mental illness have not changed significantly during this time period (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014b). Rates of treatment for mental health disorders were also comparable to the national average from 2010 to 2014 (New Hampshire Bureau of Drug and Alcohol Services, 2015; Substance Abuse and Mental Health Services Administration (SAMHSA), 2014b).

New Hampshire funds for health and treatment

Compared to the other New England states, New Hampshire had lower total and per capita spending for treatment in 2014 (NH Governor's Commission, 2015).
DISCUSSION:
UNIQUENESS OF NEW HAMPSHIRE

New Hampshire also has lower public health funding per resident than the national average, according to the Trust for America’s Health (Trust for America’s Health, 2016).

<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>New Hampshire</td>
<td>$4,846,868</td>
<td>1,323,459</td>
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<tr>
<td>Vermont</td>
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<td>Connecticut</td>
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<td>Maine</td>
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<td>Rhode Island</td>
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<td>New England</td>
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<table>
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<tr>
<th>Region</th>
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<tbody>
<tr>
<td>New Hampshire</td>
<td>$66</td>
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<tr>
<td>U.S. National Average</td>
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<tr>
<td>Vermont</td>
<td>$114</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>$102</td>
</tr>
</tbody>
</table>

**New Hampshire has no needle exchange programs**

The United States has one of the lowest rates of needle exchange availability in the developed world. New Hampshire is the only Northeast state with no needle exchange programs or laws explicitly legalizing needle exchange (LawAtlas, 2016).

**Law enforcement Fentanyl encounters in New Hampshire**

In 2015, New Hampshire was one of the three states that had the highest rates of law enforcement encounters (drug submitted for analysis) testing positive for fentanyl by laboratories (rates over 20.0 per 100,000 residents: NH, MA, and OH) (Gladden, Martinez, & Puja, 2016).
SUMMARY

The urgency of this study was driven by the aim of understanding what is unique about New Hampshire that is fueling the increased opioid-related overdose deaths. State authorities pressed the issue further in Phase 1, voicing concern regarding the historical high trends of alcohol and drug use beyond the current opioid crisis in the state. Based on available national data and interviews conducted in this study, there are unique aspects to New Hampshire compared to other states in the Northeast and across the country.

First, New Hampshire has prescribed significantly higher rates of long-acting/extended release pain reliever prescriptions, high-dose opioid pain relievers, and benzodiazepines concurrently compared to national averages (Centers for Disease Control and Prevention (CDC), 2014). Given what we’ve learned from interviews on trajectory of opioid use, this is one of the key paths to later heroin and fentanyl use when opioid prescriptions are terminated. Furthermore, this has historically made prescription pain medications more available for diversion on the streets. With recent prudence in prescribing, and consequently less illicit availability of pills, the demand has shifted to heroin and other synthetic opioids like fentanyl.

A startling reality in New Hampshire is the shortage of funds for health and treatment. Compared to other New England states, New Hampshire has had lower total and per capita spending for treatment (NH Governor’s Commission, 2015), along with lower public health funding per resident than the national average (Trust for America’s Health, 2016). Lack of early prevention and treatment availability were expressed by both opioid consumers and R/ED personnel across the state. When programs did exist in their area, long wait lists and steep costs were further barriers, particularly for medication-assisted treatment. In 2011, only 1.4% of New Hampshire treatment admissions for any substance use disorder were to medication-assisted treatment programs, so this may be an area to focus expansion efforts (Substance Abuse and Mental Health Services Administration (SAMHSA), 2015b).

New Hampshire has a lower rate of Suboxone prescribers per capita than the national average or other Northeastern states. Nationally, states had an average of 8.0 (SD=5.2) waivered physicians per 100,000 residents, while Northeastern states had an average of 15.5 (SD=6.3) waivered physicians per 100,000 residents. New Hampshire lagged behind the national and Northeast average, with 7.1 waivered physicians per 100,000 residents (Knudsen, 2015). Opioid consumers unanimously pronounced greater availability and access to Suboxone as not only an effective and preferred treatment method, but also a strategy for prevention and harm reduction. Because Suboxone may not be the optimal pharmacotherapy for individuals with chronic pain who have used non-prescription fentanyl (Rosenblum et al., 2012), increasing the availability of methadone
woul d be another critical step to offering more medication-assisted treatment options. The absence of needle exchange programs in New Hampshire has also been acknowledged as a concern across interviewees. Although not unique to the United States, it should be noted that the other region in the country experiencing a spike in fentanyl-related overdoses along with HIV-positive diagnoses, Appalachian counties in Indiana and Kentucky, has responded to the crisis by enabling local governments to implement needle exchange programs as a public health response (Indiana General Assembly, 2011).

An additional noteworthy characteristic about New Hampshire is its interstate access and proximity to the supply chain of opioids, specifically the manufacturing of fentanyl in Lawrence, Massachusetts (Seelye, 2016). Consumers and R/ED personnel corroborated that fentanyl and FLH are predominately entering from the Massachusetts border and that New Hampshire is a vulnerable target given the profit potential for dealers trafficking over the state border. Furthermore, FLH is attractive to consumers in New Hampshire given its lower cost, higher potency, and availability compared to other opioids.

To reduce overdose rates in New Hampshire, breaking down barriers to accessing and using Narcan is an important step. Opioid consumers noted fears of legal prosecution, concerns about side effects, and a lack of knowledge about Narcan access, indications for use and laws as substantial barriers to Narcan use. Additional training, community outreach, and education may be necessary to increase Narcan uptake and use among opioid consumers and other community members (Mueller, Walley, Calcaterra, Glanz, & Binswanger, 2015).

Further consideration should be given to New Hampshire’s unique rural setting. This could give way to increased boredom among residents and contribute to seeking mood altering states, along with jobs and lifestyles that increase the risk for accidents and injuries resulting in prescription pain killers (e.g., logging and wood splitting) (Runyon, 2016). Intergenerational substance use may be a particularly problem in rural regions because research suggests that prescription opioids are more commonly diverted from family members than other individuals (Keyes, Cerda, Brady, Havens, & Galea, 2014). Because kinship networks are wider in rural regions, these connections may facilitate the procurement of prescription opioids (Keyes, 2016). Self-sufficiency and individualism are core values of rural New Hampshire that may reduce help-seeking behaviors among those experiencing problematic opioid use (Carpenter-Song, Ferron, & Kobylenski, 2016). New Hampshire’s “Live Free or Die” motto, potentially justifying risky behaviors, also warrants deliberation.
FURTHER DEVELOPMENT

Following this NDEWS Report of the “Understanding Opioid Overdoses in New Hampshire” rapid epidemiological study, detailed analyses of the full sample will be completed. This will lend to a full sample publication of findings, along with in-depth publications on the various categories and emergent themes. Moreover, pointed recommendations and proposals for state and federal consideration will be provided.

Based on data from this research, preliminary considerations for New Hampshire’s approach to tackling the opioid overdose crisis include:

- Increase public health funds targeting substance use;
- Expand prevention programs in elementary and middle schools;
- Strengthen treatment to include broader availability, modest cost, and inclusion of medication-assisted options and holistic approaches;
- Incentivize physicians to become buprenorphine-waivered providers;
- Assist physicians with prudent prescribing of opioids, educating patients, and alternatives to pain management;
- Support first responder and emergency department personnel with vicarious trauma associated with responding to overdoses;
- Initiate needle exchange programs;
- Collaborate with Massachusetts on addressing the manufacturing and trafficking of fentanyl and other opioids; and
- Launch programming to dispel stigma and fear:
  - Educate consumers (e.g., Narcan and Good Samaritan Law)
  - Education physicians and pharmacists (e.g., chronic disease management and value of Narcan)
  - Educate law enforcement (e.g., alternative approaches to punitive measures)
  - Educate the public (e.g., opioid crisis is not isolated to one demographic/area and breaking the intergenerational cycle of addiction)


StataCorp. (2015). *Stata Statistical Software: Release 14*. College Station, TX: StataCorp, LP.


APPENDIX

Table of Identified Categories and Themes
Qualitative Interview Guide for Consumers
Qualitative Interview Guide for Responders
Brief Demographic Survey for Consumers
Brief Demographic Survey for Responders
## APPENDIX

<table>
<thead>
<tr>
<th>Categories and Themes</th>
<th>Consumer</th>
<th>R/ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trajectory</strong></td>
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<td></td>
</tr>
<tr>
<td>Early experimentation</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Severe injuries</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Substance use among nuclear family</td>
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<td>X</td>
</tr>
<tr>
<td>Co-occurring mental health problems</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Abrupt taper of prescription</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Formulation of Heroin and Fentanyl</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differences between heroin and fentanyl (color, taste, potency, subjective experience, onset and duration of effects, cost)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Powder over patch or pills</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Administration through injection and snorting</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Fentanyl-Seeking Behaviors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral or negative toward fentanyl</td>
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<td></td>
</tr>
<tr>
<td>Actively seeking fentanyl</td>
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<td>X</td>
</tr>
<tr>
<td><strong>Trafficking and Supply Chain</strong></td>
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<td></td>
</tr>
<tr>
<td>Lack of knowledge about trafficking (EMS/ED/Fire)</td>
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<td></td>
</tr>
<tr>
<td>Fentanyl coming from Massachusetts and New York</td>
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<td>X</td>
</tr>
<tr>
<td>Original sources China and Mexico</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Distribution by cartel members</td>
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<td>X</td>
</tr>
<tr>
<td>Changes in availability 2014-2015</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Reasons for fentanyl increase (potential profit in NH, ease of transportation and manufacturing)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Experiences with Overdoses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breadth and depth of the opioid problem</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Seeking drugs that cause overdose</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Causes of increased overdoses (fentanyl's potency, product variability, inconsistencies in mixing product, inexperience with fentanyl high, 'chasing the high')</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Protocol for treating overdoses</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Conflict between goals of police and EMS</td>
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<td>X</td>
</tr>
<tr>
<td><strong>Experiences with Narcan</strong></td>
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<tr>
<td>Barriers to Narcan use (lack of knowledge, cost, fear of police, fear of physical side effects, stigma)</td>
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<tr>
<td>'Short-term fix'</td>
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<td>X</td>
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<tr>
<td>No unanticipated side effects</td>
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<td>X</td>
</tr>
<tr>
<td>Increased availability</td>
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### Categories and Themes

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<thead>
<tr>
<th>Categories and Themes</th>
<th>Consumer</th>
<th>R/ED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unintended negative consequences</strong></td>
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<td>X</td>
</tr>
<tr>
<td><strong>Harm Reduction</strong></td>
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<td></td>
</tr>
<tr>
<td>Support for needle exchange programs</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ambivalence toward fentanyl testing kits</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>‘Sad reality’ and conflicted attitudes</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Needed to protect responders and consumers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase availability of buprenorphine</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Experiences with Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannot stop without help</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Experiences getting treatment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Treatment facilitators (buprenorphine)</td>
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<td></td>
</tr>
<tr>
<td>Treatment barriers (no available services, complex to access, funding issues)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Barriers to instituting referral procedures</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Need to increase availability of services</td>
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<td>X</td>
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<tr>
<td><strong>Prevention</strong></td>
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<td></td>
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<tr>
<td>Early education and intervention</td>
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<td>X</td>
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<tr>
<td>Prudent prescribing</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Patient education about opioids</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dismantle stigma and mobilize community</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Laws and Policies</strong></td>
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</tr>
<tr>
<td>Lack of knowledge of laws</td>
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<tr>
<td>Perceived harassment and mistrust of law enforcement</td>
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<td></td>
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<tr>
<td>Mutual exclusivity of jail and treatment</td>
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<td></td>
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<tr>
<td>PDMP useful but cumbersome (ED)</td>
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<td></td>
</tr>
<tr>
<td>Conflicted feelings toward Good Samaritan law (Police)</td>
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<td></td>
</tr>
<tr>
<td>Desire for more prosecution (Police &amp; Fire)</td>
<td>X</td>
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</table>
Subjective Experiences of Opioid and Fentanyl Use

Qualitative Interview Guide for Consumers

Sample Topic Guide

Introduction

I would like to talk with you about your life, your experiences using substances, and your knowledge about overdose in New Hampshire. I will also ask you about your use of opioids, which are prescription painkiller drugs like oxycodone or fentanyl, and illegal drugs like heroin, and your experiences receiving substance use treatment services in New Hampshire. I’m interested in understanding these things from your point of view, from your perspective. I am here to learn from your experience; you’re the expert.

As I’ve already said, what we talk about for our research is confidential and anonymous. I will not discuss this interview with anyone except other members of the research team. Please try to be as honest and open as you can so we can learn from your experience and potentially help save the lives of others who may be at significant risk of overdose or death.

If there are questions that you do not feel comfortable answering or discussing, you do not have to answer them. Please tell me and we’ll move on to the next question. If you need or want to take a break at any time, please let me know. If you get tired and would like to continue the interview at another time, please let me know. This interview will take approximately 60 minutes of your time.

Before we go on, do you have any questions for me?

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1 As is standard in qualitative research, interview questions will be revised and refined as the research progresses. In this sample topic guide we present the broad thematic topics and sample questions that may be covered in the interview. The interviewer will probe, as appropriate, to inquire more specifically into these domains of interest.
**Substance Use Experience**

1. Maybe we can start by having you tell me a little about your use of drugs in general? [Note: encourage participant to speak open-endedly about his/her experience.]
   — How would you say you’re doing right now? Getting better? Worse?

**Knowledge about Overdose in New Hampshire**

*In the next few questions, I’ll ask you about your experiences with overdoses. Anything you can share may be really helpful so please do not leave any details out.*

2. Have you ever overdosed on drugs? Tell me about that/those experience/s?
   — What drug did you overdose on?
   — How did you use that drug?
   — Did you overdose accidentally?

3. Recently, there have been many drug overdoses in New Hampshire. What have you heard about these overdoses, if anything?
   — Are there discussions on the street about the causes of these overdoses?
   — What kinds of drugs are people overdosing on around here?
   — What do you think is in those drugs? (A single drug versus a mixture of drugs?)
   — How are people using those drugs? (Intravenous use? Oral use? Other?)

4. Where do you think the drugs causing these overdoses come from?
   — Are local dealers selling them? Where do you think they’re getting them?
   — Are people ordering these drugs online?

5. Do you think people are seeking out drugs that might have caused overdoses?

6. Have you had any experiences with Narcan?
   — Is Narcan easy to get?
   — How do you get Narcan?
     o What side effects or things did you notice after you received Narcan?
     o Have you witnessed or heard about anyone receiving Narcan and having negative effects from it? If yes, what types of effects? [if effects are suggested, probe about brain damage at the end of the exchange]

**Opioid Use Experience**
Now I’d like to ask you some questions specifically about your experiences with opioids like heroin or fentanyl.

7. I can see from the information sheet you filled out for me that you started using opioids around ____ years ago. Can you tell me a little about your use of opioids? [Note: Interviewer should use this to prompt for drug use trajectory and specifically about fentanyl.]
   — How do/did your use of opioids affect your life? What about fentanyl specifically?
   — Have you ever tried cutting down or stopping use? What has been difficult? Any obstacles that really stand out?
   — Were you ever prescribed opioids for chronic pain?

Now I’d like to ask you some questions specifically about using fentanyl in New Hampshire.

8. Try to remember the first time you used fentanyl…would you say you looked for it specifically or was it more by accident that you used it?
   — Please describe that first experience…
   — Do you take it in combination with other drugs, like heroin or cocaine?
   — If you believe you know you have used fentanyl in the past/currently, How do you know you have used fentanyl as opposed to heroin or a heroin/fentanyl mix [word of mouth? dealer advertising? media? subjective experience different in any way from POs or heroin?]
   — How did you take/use it?

9. If you would describe yourself as primarily a heroin user, would you say you use/seek fentanyl due to the low availability of heroin? low purity of heroin? and/or high price of heroin? If yes to any of these questions, please elaborate…

Now I am going to ask you about your sources...Remember I’m not going to give this information to anyone and I’m not going to ask you for any names.

10. Tell me, if you can, a little bit about how you got fentanyl or where it came from?

11. In states where people buy prescription pills off the street it’s possible that fentanyl overdose deaths might increase because many counterfeit pills are sold as diverted pain relievers (meaning they’re made with fentanyl and other unknown drugs but sold as legitimate prescription pills) and it’s hard to tell if they’re fake or real.
   — What is your reaction to that statement?
   — How available is heroin in this area?
   — How available are prescription opioids (not fentanyl) in this area?
— How available is fentanyl in this area? Where do 1, 2, 3 come from? (...to the best of your knowledge)... your dealer gets (1,2,3) from X who gets it from X...
  o If you are close to/familiar with the supply chain in some way, please describe variability in the availability of different opioids...

12. A recent New York Times article on fentanyl included a statement from a former nurse who is on methadone after years of shooting up heroin. She said of fentanyl, “it's cheaper, and the high is better, so more addicts will go to a dealer to get that quality and grade...even if it means they could die.”
— What is your reaction to that statement? Does it ring true?

13. If you were to characterize/describe a fentanyl high: Is the fentanyl high different than a heroin high? If so, how does it differ? (qualitatively 'better’?, ‘fast-acting’?)

14. Imagine you hear that someone you know OD’d on a heavy mix or a hot spot in a bag sold by one of your dealers... describe how you might react?

15. In a recent Valley News article (a NH newspaper) one man said he’s seen countless friends, girlfriends and strangers “fall out and come back” in the throes of an overdose, or not come back at all. He, too, “died once,” he says, but his friend’s mom brought him back. He wasn’t happy about it. “Most shooters want to die; they have a death wish,” he said. “Death is a gift for people like us...suggest not doing it [fentanyl] if you don’t want to die.”
— What are your thoughts on this? (Agree/disagree?)

16. I’m going to read you some statistics from a recent Union Leader article.

In 2015, there were 399 overdose deaths in New Hampshire.
151 were caused by fentanyl alone.
74 were from fentanyl combined with other drugs.
36 were from heroin and fentanyl combined.
31 were from heroin alone.
“Two-thirds of the drug overdose deaths in New Hampshire last year involved fentanyl, a powerful opioid that is becoming the drug of choice for addicts here. The drug crisis that has been devastating families across the state is now largely a fentanyl epidemic.” (Union Leader, January 2016)
  - Does it feel like a crisis to you on the street?
  - When you hear statistics like these and when you hear people talk about opioid use and overdose due to opioids in NH in ‘crisis’ terms, what comes to mind for you? What is your reaction? (Do you think what NH is experiencing right now is a crisis or an epidemic?)
Substance Use Treatment Services in New Hampshire

Now let’s talk about your experiences receiving substance use treatment services in New Hampshire.

17. Please tell me a little bit about your experiences getting treatment for your opioid use, if you have ever sought treatment…?
   — Why did you begin treatment in New Hampshire in the first place?
   — Please tell me about your experiences with medication-assisted treatment (like methadone, buprenorphine, or naltrexone) in New Hampshire?
   — What has been helpful about the treatment you’ve received in New Hampshire?
   — What hasn’t worked so well? What would you change if you were in charge?

New Hampshire State Policy

I want to talk to you a little bit about some laws in New Hampshire that affect people who use opioids.

18. Have you ever been arrested on drug charges in NH, or been arrested and found in possession? How many times?
   — Have any of those arrests ever led to substance use treatment?
   — Have you heard of the Gloucester (pronounced Gloster) Angels program in MA? When people are found in possession by police they are given the option to either enter treatment or be charged.
     — Do you think a program or system like that would work and get people into treatment and sober in NH?
   — Do you have any experience with drug court in NH? What do you know about it? Do you think it is/could be beneficial to getting people into treatment?

19. How well do you think you understand New Hampshire state laws that affect people who use opioids [recent prescribing crackdowns, child services involvement, possession charges, overdose arrests, etc.]?
   — In your experience, what has been helpful?
   — What hasn’t worked so well? What would you change if you were in charge?

20. If anything were possible, how would you prevent people from using opioids in the first place?
   — What do you think the state could do to make prevention more effective?

21. What do you think the state could do to make treatment more effective [increase treatment options, collaborative care (like housing), open more OTPs, starting more
state-funded OTPs instead of relying on private companies, increasing treatment options for those on state Medicaid, etc.]?

22. What are your thoughts on harm reduction practices [fentanyl testing kits so people know what they are buying/taking, needle exchange programs, buying buprenorphine or methadone off the street while you wait to get into a program]?
— Is Narcan being used as a harm reduction strategy? (Are people using Narcan with a sober buddy (Lazarus or Narc parties) so they can use more or a higher potency?)
— Are there harm reduction strategies that people are doing on the street in this area?

23. Historically, New Hampshire has always had high rates of drug use. What do you think is the reason people in New Hampshire use drugs [higher rates of mental health issues, community relationships, environment, job opportunities and infrastructure, family situation, things like that]?

Wrap-up

Well, we’re just about finished with the interview. We’ve covered a lot of ground today. I want to thank you for sharing your experiences with me.

24. Before we stop for today, are there any things that you’d like me to know about your story that you want to make sure gets heard?

25. How do you feel right now about this interview and what we talked about?
Subjective Experiences of Opioid and Fentanyl Use

Qualitative Interview Guide for Responders

Sample Topic Guide

Introduction

I would like to talk with you about your perspectives on responding to and treating overdoses from opioids, fentanyl, and/or heroin in New Hampshire. I'm interested in understanding these things from your point of view.

As I've already said, what we talk about for our research is confidential and anonymous. I will not discuss this interview with anyone except other members of the research team. Please try to be as honest and open as you can so we can learn from your experience.

If there are questions that you do not feel comfortable answering or discussing, you do not have to answer them. Please tell me and we'll move on to the next question. If you need or want to take a break at any time, please let me know. If you get tired and would like to continue the interview at another time, please let me know. This interview will take approximately 60 minutes of your time.

Before we go on, do you have any questions for me?

Overdose and Fentanyl Experience

1. I'd like to start by asking you to characterize and describe the overdose problem in NH from your perspective.

As is standard in qualitative research, interview questions will be revised and refined as the research progresses. In this sample topic guide we present the broad thematic topics and sample questions that may be covered in the interview. The interviewer will probe, as appropriate, to inquire more specifically into these domains of interest.
Now I’d like to ask you some questions specifically about opioids like heroin or fentanyl. We’re interested in learning about your experiences with opioids in your community, and responding to and treating overdoses from these drugs.

2. Please tell me a little about the people you see in your work with opioid overdoses.
   — User characteristics (age, race)
   — [For first responders], What’s going on at the scene (drugs at the scene, route of administration, bystanders)
   — Do you see overdoses from any one drug more than another in your line of work?
   — What is your understanding of fentanyl use in New Hampshire?
   — Where do you think the drugs causing these overdoses are coming from?
   — Do you hear reports that users are seeking out certain drugs because they are causing overdoses?

3. What are your assessment/investigative protocols for overdoses?
   — What is the process?
   — Does knowing what the person used affect your course of treatment?
   — Is fentanyl routinely tested for by law enforcement upon confiscation of substances such as heroin, cocaine, etc.
   — Is acetyl fentanyl or other fentanyl analogs routinely tested as well upon confiscation?
   — Are lab results currently shared with other agencies?
   — Is there a referral protocol after emergency treatment?
   — How is that referral handled?
   — How do you feel about this process?

4. Have you ever had to administer Narcan (naloxone) to someone? What was that like?

5. Have you noticed any trends or patterns in administering Narcan in New Hampshire?
   — Have you witnessed any unanticipated side effects from a Narcan administration?
   — Have you witnessed or heard about any Narcan administrations that resulted in brain damage?
   — Have you heard of people participating in Lazarus parties or Narc parties?

6. What is your view on the use of Narcan?

7. Please tell me about an overdose or an experience with opioids that still sticks with you, if there is one?
8. Has treating this problem affected you personally? Has it affected you professionally?

9. What is your opinion of opioid users? Would you say you have any biases one way or the other? What about fentanyl users? Has that opinion changed over time?

**Substance Use Treatment Services in New Hampshire**

Now let’s talk more about your experiences referring people to substance use treatment services in New Hampshire.

10. Tell me a little bit about your experiences getting people into treatment for their opioid use.
   — What has been helpful about your treatment referral system?
   — What hasn’t worked so well? What would you change if you were in charge?

11. What is your viewpoint on medication assisted treatment (methadone, buprenorphine, or naltrexone)?

12. What is your viewpoint on harm reduction as a treatment strategy (testing kits on the street, needle exchange programs)?

13. What are your ideas for better prevention and treatment in New Hampshire?

14. If you have not had the opportunity to help connect someone to treatment for their opioid use, please share a colleague’s experience if you can recall it with any detail.

**New Hampshire State Policy**

I want to talk to you a little bit about some laws in New Hampshire that affect people who use opioids. I want to get your understanding of whether public policy does enough in NH to address this issue, from your personal point of view and your professional experiences.

15. What, in your experience, has been helpful about New Hampshire state laws regarding opioids [recent prescribing crackdowns, child services involvement, arrest laws, the new Good Samaritan immunities, the Prescription Drug Monitoring Program (PDMP), etc.]?

16. What hasn’t worked so well? What would you change if you were in charge?
What changes would make your job easier?

17. What do you think the state could do to make prevention and treatment more effective?

Fentanyl Product and Trafficking
18. Are you aware of specifics about fentanyl as a product?
— How is it sold? (powder, pill, patch)
— What are the different cocktails you’ve encountered?
— When do you think fentanyl hit the supply chain in NH?
— Do you know who is producing it? (If cut with heroin, who is performing the cutting of the fentanyl into the heroin product can be identified? If in pill form, who is producing the pill can be identified?)
— In your opinion, are low-level dealers aware that fentanyl is present in the products they are selling?
— Are dealers making buyers beware?
— Do you see fentanyl being used as a marketing tool?
— Do you think buyers are aware that fentanyl is present in the products they are buying?
— In your experience, are buyers seeking out fentanyl?

19. What is your experience with trafficking of fentanyl?
— Are there specific groups in NH or surrounding states that you know of that are bringing them into the area?
— How do you think fentanyl is getting into NH?
— How do you think it’s getting into the US? [Probe for Internet orders]

20. Historically, New Hampshire has always had high rates of drug use. What do you think is the reason people in New Hampshire use drugs [higher rates of mental health issues, community relationships, environment, job opportunities and infrastructure, family situation, things like that]?

Wrap-up
Well, we’re just about finished with the interview. We’ve covered a lot of ground today. I want to thank you for sharing your experiences with me.

21. Before we stop for today, are there any things that you’d like me to know about your experiences that we haven’t covered?

Thank you for your time, and the work that you do responding to this crisis.
### Brief Demographic Survey for Consumers

**Study ID:** _______________

- **Gender**
  - [ ] Male
  - [ ] Female
  - [ ] Transgender
  - [ ] Prefer not to answer

- **Race**
  - [ ] American Indian/Alaska Native
  - [ ] Asian
  - [ ] Native Hawaiian or Other Pacific Islander
  - [ ] Black or African American
  - [ ] White
  - [ ] Other
  - [ ] More Than One Race
  - [ ] Unknown or Not Reported

- **Ethnicity**
  - [ ] Hispanic or Latino
  - [ ] Not Hispanic or Latino

- **Age:**

- **Highest level of education**
  - [ ] Less than high school degree
  - [ ] High school diploma/GED
  - [ ] Associate’s degree
  - [ ] Bachelor’s degree
  - [ ] Master’s degree
  - [ ] Some college, no degree

- **Employment status**
  - [ ] Working full-time (40 hrs/week)
  - [ ] Working part-time (less than 40 hrs/week)
  - [ ] Looking for work, unemployed
  - [ ] Retired
  - [ ] Disabled, permanently or temporarily
  - [ ] Keeping house
  - [ ] Student
  - [ ] Other
  - [ ] Only temporarily laid off, sick leave or maternity leave

- **Marital status**
  - [ ] Married
  - [ ] Re-married
  - [ ] Widowed
  - [ ] Divorced
  - [ ] Separated
  - [ ] Never Married
  - [ ] Living with Partner

- **Housing status**
  - [ ] Own a home
  - [ ] Rent a home/apartment
  - [ ] Live with someone (no rent)
  - [ ] Residential/halfway house
  - [ ] Shelter
  - [ ] Homeless

- **County you live in:**

- **How old were you when you started using alcohol?**

- **How old were you when you started using drugs (other than opioids)?**
  - [ ] Marijuana
    - Age of first use: _______________
  - [ ] Cocaine
    - Age of first use: _______________
  - [ ] Hallucinogens
    - Age of first use: _______________
  - [ ] Stimulants
    - Age of first use: _______________
  - [ ] Benzodiazepines
    - Age of first use: _______________
  - [ ] Sedatives or hypnotics
    - Age of first use: _______________
  - [ ] Inhalants
    - Age of first use: _______________
  - [ ] Other
    - Age of first use: _______________
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>How old were you when you started using opioids?</td>
<td>- Prescription pain killers Age of first use:</td>
</tr>
<tr>
<td></td>
<td>- Heroin Age of first use:</td>
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<tr>
<td></td>
<td>- Fentanyl Age of first use:</td>
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<tr>
<td>Have you ever used fentanyl?</td>
<td>- Yes, Fentanyl alone</td>
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<td></td>
<td>- Yes, Fentanyl mixed with another drug Please list:</td>
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<td></td>
<td>- No</td>
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<td>- Unsure/I don’t know for certain</td>
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<td>How long ago did you last use prescription pain killers?</td>
<td>- Past week</td>
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<td>- Past month</td>
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<td>- Past 6 months</td>
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<td>- More than 6 months ago</td>
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<td>How long ago did you last use heroin?</td>
<td>- Past week</td>
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<td>- Past month</td>
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<td>- Past 6 months</td>
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<td>- More than 6 months ago</td>
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<td>How long ago did you last use fentanyl?</td>
<td>- Past week</td>
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<td>- Past month</td>
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<td>- Past 6 months</td>
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<td>- More than 6 months ago</td>
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<td>How many times have you been in treatment for opioid use?</td>
<td>- Outpatient __</td>
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<td>- Intensive Outpatient __</td>
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<td>- Residential __</td>
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<td>- Detox __</td>
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<td></td>
<td>- Opioid Treatment Program (methadone/suboxone) __</td>
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<td></td>
<td>- I've never been in treatment</td>
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<tr>
<td>How many times have you been in treatment for mental health problems?</td>
<td>- Outpatient __</td>
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<td></td>
<td>- Intensive Outpatient __</td>
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<td>- Residential __</td>
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<td>- Inpatient/hospitalization ___</td>
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<td>- I've never been in treatment for mental health problems</td>
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<td>Are you currently on a waiting list at a treatment center?</td>
<td>- Yes</td>
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<td></td>
<td>- No</td>
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<td>What medications have you been prescribed for your opioid use problem?</td>
<td>- Naltrexone/Vivitrol [Currently, Previously, Never]</td>
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<td></td>
<td>- Buprenorphine [Currently, Previously, Never]</td>
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<td></td>
<td>- Methadone [Currently, Previously, Never]</td>
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<td></td>
<td>- I've never been prescribed medications for opioid use disorder</td>
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<tr>
<td>How many times have you overdosed?</td>
<td>- Heroin __</td>
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<td>- Fentanyl __</td>
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<td>- Both __</td>
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<td></td>
<td>- Other __</td>
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<td>- I've never overdosed</td>
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<td>Have you ever been given Narcan (or naloxone) to reverse an overdose?</td>
<td>- Number of events:</td>
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<td>- Highest number of administrations during one event:</td>
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<td>- I've never had Narcan to reverse an overdose</td>
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<td>Study ID: ________________</td>
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<td><strong>Race</strong></td>
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<td>[ ] White</td>
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<td>[ ] More Than One Race</td>
<td>[ ] Unknown or Not Reported</td>
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<td><strong>Ethnicity</strong></td>
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<td>[ ] Not Hispanic or Latino</td>
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<td><strong>Age</strong></td>
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<td><strong>Department or Division</strong></td>
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<td>[ ] Police</td>
<td>[ ] Fire</td>
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<td><strong>County you work in:</strong></td>
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<td><strong>Department role:</strong></td>
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<tr>
<td><strong>Number of years you've been in this role:</strong></td>
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<td><strong>Number of opioid overdoses you have responded to:</strong></td>
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<tr>
<td><strong>Number or percent of opioid overdoses that have involved fentanyl:</strong></td>
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<tr>
<td><strong>Number of people you have personally administered Narcan/naloxone to:</strong></td>
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<tr>
<td><strong>Average number of Narcan/naloxone doses you give each person:</strong></td>
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