MADDS Expansion:
I-91 Project

Massachusetts Drug Supply Data Stream (MADDS)

NEHIDTA

Traci Green
Becca Olson
James Downes
Stephanie Thompson
Drug supply is a major determinant of drug-related deaths. Knowing a drug’s content informs our responses. Only known after a death, hospitalization, arrest, and often way too late to be informative, rarely shared publicly.

A strategy that boosts samples to toxicology and forensic labs risks overwhelming and delaying an already taxed and critical structural lab system. Field-based tools exist and people can be trained to use them. Protecting consumer safety is a proven prevention approach.
Dissecting the Drug Supply

• Support source identification
• Signatures: Identification of new synthesis, emergence of different synthesis
  • Precursors, mediators, protective components that remain as remnants
  • Consider health effects: harmful and not harmful
• Localized alarms
• Emerging threats

Weak, FTIR found only Lactose; FTS+
Why do Drug Checking?

- Improves safety of the drug supply (Evidence: European, darknet studies)
- Decreases violence in drug transactions
- Improves consumer knowledge and confidence
- Fewer unsafe adulterants/cuts
- Stabilizes market

- Provides an opportunity for empowerment, health promotion, consumer behavior change (Evidence: FORECAST, Fentanyl Test Strip studies)
- Promotes health and dignity of people who use drugs
- With knowledge and interaction with harm reduction staff, people change behaviors

- Engagement tool for new, hard to reach populations (Evidence: RIZE MA evaluation, Peiper et al.)
- Increases in program utilization, program contacts when coupling drug checking at outreach with existing medical and harm reduction services
- Improves safety of the drug supply
- Decreases violence in drug transactions
- Improves consumer knowledge and confidence
- Fewer unsafe adulterants/cuts
- Stabilizes market
Community drug checking focuses on supply effects for people using drugs
Community Drug Checking Program Overview

“Massachusetts style”

Samples provided from harm reduction partner site/police department and gather situational and subjective information.

Scan sample with FTIR (on-site), test with fentanyl/benzo/xylazine test strips (on-site), send for additional lab testing (off-site) and review by medical toxicologist.

Report out findings to partners, submitter, communities and the state.

But is it adaptable to CT, VT, rural areas?
What is tested?

- Remnant drug samples collected or donated

- How much sample?  *About half of a grain of rice*

- For Police Department samples, eligible samples are *Non-criminal cases only*!
  - Controlled buy, found property, non/fatal overdose, one baggie/stamp bag = personal quantities
Test with tools, interpret with care

- Bruker Alpha FTIR
- Fentanyl, Benzo, Xylazine Test Strips
- GCMS/LC-QToF by off-site lab
- Medical Toxicology Consultation
Talk to the donor to learn more!

Information from people who use drugs can help us get better and quicker results. We ask:

- What was the sample expected to be?
- How was it used? (injected, sniffed, etc.)
- Expected OR unexpected reactions (how “normal” was it)?
- Context information
- Health problems experienced after use (abscess, seizure, overdose)
- Anything else you/they think is important
StreetCheck Web App

www.streetcheck.org
Input data, receive results with a community designed application

Collector-Operator-Administrator
Groups (community programs), Tenants (states)
+Public-facing trends, limited anonymous sample data
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Current Community drug checking program sites*

PURPLE=**MADDS**, Massachusetts Public Health Dept

GREY=Sites in progress

YELLOW= NIH- and FORE-funded research projects

**RED=I-91 project (Overdose Response Strategy, ONDCP/CDC Foundation)**

*Data from all sites pooled on StreetCheck for transparency and sharing
# I-91 Project

<table>
<thead>
<tr>
<th>Community Programs, Locations</th>
<th>ORS Team</th>
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<tbody>
<tr>
<td>VT: AIDS Project of Southern VT (Brattleboro, Bennington)</td>
<td>James Downes (DIO) Stephanie Thompson (PHA)</td>
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<tr>
<td>CT: Connecticut Harm Reduction Alliance (Hartford), Yale Syringe Service Program (New Haven), Liberation Programs (Bridgeport)</td>
<td>Bobby Lawlor (DIO) Anna Gasinski (PHA)</td>
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<tr>
<td>Western MA: Tapestry Health (Holyoke, Greenfield)</td>
<td>Mike Sampson (DIO) Amanda Consigli (PHA)</td>
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</table>
I-91 Project Site Partners

Harm reduction organizations
• Bridgeport, New Haven, Hartford
• Holyoke, Greenfield
• Brattleboro, Bennington

Willing to work in collaboration with ORS partners to implement project
Orientation, Training

- Site visits to share, meet staff, prepare space
- Online and in-person trainings, refresher
- Ongoing supports, consultations
- Learning collaborative, drop-ins
What did and didn’t happen with public safety partners?

- No police departments in any of the sites provided samples for testing or participated as an active site
  - State-specific challenges: staffing/personnel, permissions, uncertainty in direction from courts
- **All** police departments engaged in multiple meetings with the team and provided active or tacit (written) support of the project
- Reconnected with community harm reduction partners
- “New page” in post-COVID-19 era efforts
Getting to ‘Yes’: Innovations in Permissions

Memorandum of Understanding-style

MEMORANDUM OF UNDERSTANDING

BETWEEN

BRANDEIS UNIVERSITY

AND

BERKSHIRE DISTRICT ATTORNEY’S OFFICE

The Berkshire District Attorney’s Office and Brandeis University, a Massachusetts not for profit corporation with an address of 415 South Street, Waltham, MA enter into this Agreement as of August 5, 2020 (the “Effective Date”).

WHEREAS, fatal opioid overdoses have risen 450% in Massachusetts since 2000, and understanding the rapidly changing epidemic from the viewpoint of active drug users would add greatly to the understanding of the fentanyl crisis and opportunities for prevention and response;

WHEREAS, the Centers for Disease Control and Prevention (“CDC”) is funding and supporting the continuation of the “Rapid Assessment of Consumer Knowledge Project” (the “RACK” Study);

WHEREAS, Brandeis is participating in a component of the RACK Study by conducting surveillance of packaging detritus (trash) and other derelict and discarded materials used by people who use drugs to determine the presence and composition of any remnant substance;

WHEREAS, this approach conduct public health surveillance of the discarded detritus of the opioid epidemic relying upon materials found in public places, abandoned spaces, and otherwise derelict or intended for public disposal (i.e. in a transfer station or other disposal facility);

WHEREAS, Brandeis University, led by Tracy C. Green, PhD, MSc, is cataloging this detritus as part of the RACK Study;

WHEREAS, Dr. Green and her team (the “Brandeis Research Team”) will obtain, catalogue the detritus, test it, and dispose of it as originally intended;

WHEREAS, Berkshire county police departments, as designated and agreed upon, and other community partners in Berkshire obtain detritus that may be useful to the RACK Study and wishes to provide the detritus to Dr. Green and her team of researchers for use in the RACK Study; and

WHEREAS, Brandeis University and the Berkshire District Attorney’s Office (the “Parties”) wish to memorialize their understanding of how they will work together to support the RACK Study;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter expressed, the sufficiency and receipt of which is hereby acknowledged, the Parties hereto, intending to be legally bound, agree as follows:

The Berkshire District Attorney’s Office (BDAC) will support the RACK Study by:

- Providing a designated point of contact for the RACK Study leadership
- Providing logistical support, including access to facilities and equipment
- Partnering with the RACK Study team to identify and collect detritus samples
- Providing funding for the project, as necessary

Brandeis University will:

- Conduct the RACK Study in collaboration with the BDAC
- Catalogue and test the collected detritus
- Provide regular updates to the BDAC on the progress of the study

Both parties agree to:

- Maintain confidentiality of all information obtained during the study
- Share findings on a regular basis
- Work together to address any issues that arise during the study

This Agreement shall remain in effect until August 5, 2023, or until the completion of the RACK Study, whichever occurs first.

August 1, 2022

Cheryl Zoll
Tapestry Health Systems, Inc.
1985 Main St, 2nd Floor, Ste. 202
Springfield, MA 01103

CF 0149-22

Dear Ms. Zoll,

We at the Holyoke Police Department recognize that fatal opioid overdoses have risen 450% in Massachusetts since 2000, and we understand the rapidly changing epidemic from the viewpoint of active drug users would add greatly to the understanding of the fentanyl crisis and opportunities for prevention and response. We also understand that the New England High Intensity Drug Trafficking Area (“NEHIDTA”) is funding and supporting the “I-91 Drug Checking Project (I91DC)”, which is an expansion of the Massachusetts Drug Supply Datasream and related efforts referred to more broadly as the Streetcheck Drug Supply Datasream.

We understand and support that Brandeis University Research Staff, Tapestry Health program staff and/or other program staff will be collecting, cataloging, scanning, and sending for confirmatory testing via authorized routes and disposing of remnant drug and packaging detritus at the Tapestry Health site in the City of Holyoke pursuant to appropriate Brandeis University and Drug Enforcement Agency protocols, policies and procedures. We also understand that this project will involve the collection of remnant drug trash (e.g. once used cartridges and cassettes, residue in wax bags) and that clients will go to Tapestry for the purpose of donating remnant drug trash to participate in the program.

Good luck with the project and we support these efforts for the safety and wellbeing of all in our community.

Please let me know if you have any questions.
Results

All community partner sites fully operational

Over 500 samples collected and tested across the project sites in one year

All data and quick reports publicly accessible on Streetcheck.org by state, or together
Xylazine Prevalence in Opioids

- Across CT, MA, VT samples
- Opioid samples only, over time
- Detected as pills (M30, Percocet) and powders (heroin/dope/fentanyl)
- Some local trends: brown or color used to differentiate from white powders
So, it’s present, but how much Xylazine is in a given drug?

Quantification (% weight)

CFSRE weighs samples of 10mg+

Derives % inactive drug, % fentanyl/analogos (purity ratio), % heroin, % xylazine

High variability

In contrast, Philadelphia xylazine ranges 25%-40% weight
Lessons learned: Can community drug checking be adapted to other states, rural areas?

- Interfaces with mobile outreach work well
- Can fit into clinical space, phlebotomy space, office space, big or small
- Harm reduction staff can be trained to conduct all aspects of program
- Mailing samples is less preferable to real-time testing and should be available to all, especially rural partners
Lessons Learned

Community harm reduction organizations are true experts and do amazing things with this tool in their toolbox

• “We've learned it's important to offer drug trash checking services before someone consumes a substance, as well as after there is an adverse health event. Testing before use helps people to make informed decisions about what they are putting in their bodies and we can use this information to reduce risk of overdose. Testing after use is beneficial for information purposes and for research purposes related to the drug supply. Both are important and have value!”
Lessons Learned

- Collaboration with ORS partners was critical for talking with local leadership and law enforcement
- StreetCheck is a versatile platform and can be adapted and used in other states
- Diversify labs
- Legislative action may be needed
- Whenever possible, avoid starting a multi-state community project during a pandemic 😊
Addressing Barriers and Challenges

“The biggest barriers or challenges we face with this are probably stigma and fear of perceived consequence by the person getting their drug trash tested.”
• Provided small incentives ($5 giftcards) to support outreach team’s initial discussions
• Business cards, incorporate into outreach messaging
• Secure highest level legal and other permissions as possible to protect staff, participants
• Invest in collaborations, communications with public health and public safety

Permissions and MOUs
• Memo (CT, MA)
• State’s Attorneys meetings
• Tenacity and persistence

Supply chain delays in instruments, supplies
• Mail-based initial sample collection

Staffing constraints (public safety)
• Focus on community program scale-up

“We are using our drug trash checking results to create different forms of communication to people who are at risk of overdose to inform them about what is in their substances. In addition to testing samples for people who use drugs, there is also value to testing samples and sharing results with people who sell drugs. For example, during a nationwide Adderall shortage, one person who took part in the drug checking initiative learned that what they were selling were pressed meth pills. Since learning this, the person informed the people purchasing the Adderall pills what is actually in them. In turn, the people purchasing them are now better equipped with understanding what they are putting in their body and how it will affect their body differently.”
How people use the data

“We use our results to inform participants of trends, monitor above average fentanyl surges, and tailor or pivot our outreach (ex. adding more wound care or focusing on an area with high overdose rates).”

Supply caretaking: To explore local drug market trends (dilution, adulterating), reflect back anomalies, and also share helpful actions that suppliers are taking or could take.
How people use the data

Developing **new partnerships**, reaching **new demographics of PWUD** to share information, drug checking services, and connecting to other harm reduction services and materials:

- More racially and geographically diverse groups of PWUD
- PWUD by different routes of administration (oral, insufflation) who may not otherwise attend SSPs
Typical sample

- Injected: normal, nothing out of the ordinary
- Weaker than old dealer but consistent with new dealer
- Normal experience, all from same dealer, same day use

Drug checking: more than just alerts

What is “normal”, what can be expected

Promotes dignity, awareness, self-care

Learning opportunity
Atypical samples

March 2023

- Wk 1: Not yet used

- Wk 2: Used, stronger than usual, developed abscesses

April 2023

- Wk 5: Multiple overdoses (nonfatal, fatal)
  - Injected: stronger than usual, tasted and smelled like CHEMICALS.
  - No “dope rush”, just went out. Only used 3 bags vs. usual 5-10. On second use, felt foggy, hard time walking.

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FTIR Results

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<td>Mannitol</td>
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Key Findings

- Note that this stamp is associated with several severe overdoses in the local area. Please take care and keep plenty of naloxone with you!
- Xylazine is a strong sedative and high amounts of a strong sedative can be harmful. Learn more [here](#).
2023 ORS Conference

MADDS Drug Checking Program in Vermont

James G. Downes, III, MS,
Drug Intelligence Officer, ORS
Drug Intelligence Officers (DIO)

- Partner with public health agencies and public health analysts to bridge communication gap with public safety
- DIOs fill a critical gap in intelligence sharing by:
  - reporting cross-jurisdictional links
  - communicating interstate intelligence
  - relaying case referrals between agencies
  - developing timely intelligence reports for law enforcement audiences
Relationship Building
Leverage existing Relationships
Identifying Champions
Sharing the Vision and Mission
Setting the Table
Partner Needs
Information Gaps
Establishing and Maintaining program Credibility and Accountability
Relationship Building is Continuous and Evolving
Setting the Stage

DIO and PHA Positioned Well
Know the Environment
Know the Stakeholders
Existing Environment both Socially, Politically and Economically
What are the Local Issues
Who are the Champions
Leveraging Existing Relationships

DIO and PHA Leverage Relationships in both Public Safety and Public Health
Partner Needs

Identify Partner Needs and Local issues
Information Gaps

Gaps in Drug Supply
Harm Reduction Gaps
Outreach Gaps in Information
Lack of Data Analysis
VISION and Mission

Clearly articulate the vision
Share Mission Statement
Align with partners mission and values
Maintaining Program Integrity and Accountability
Current Status

VT Legislation
Opioid Settlement Funding to support state-wide program investment
VT DOH leadership
Thank you!

Questions? Contact tracigreen@brandeis.edu Beccaolson@brandeis.edu jdownes@nehidta.org stthompson@nehidta.org

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https://journals.lww.com/jphmp/Fulltext/2022/11001/Implementation_and_Uptake_of_the_Massachusetts.15.aspx