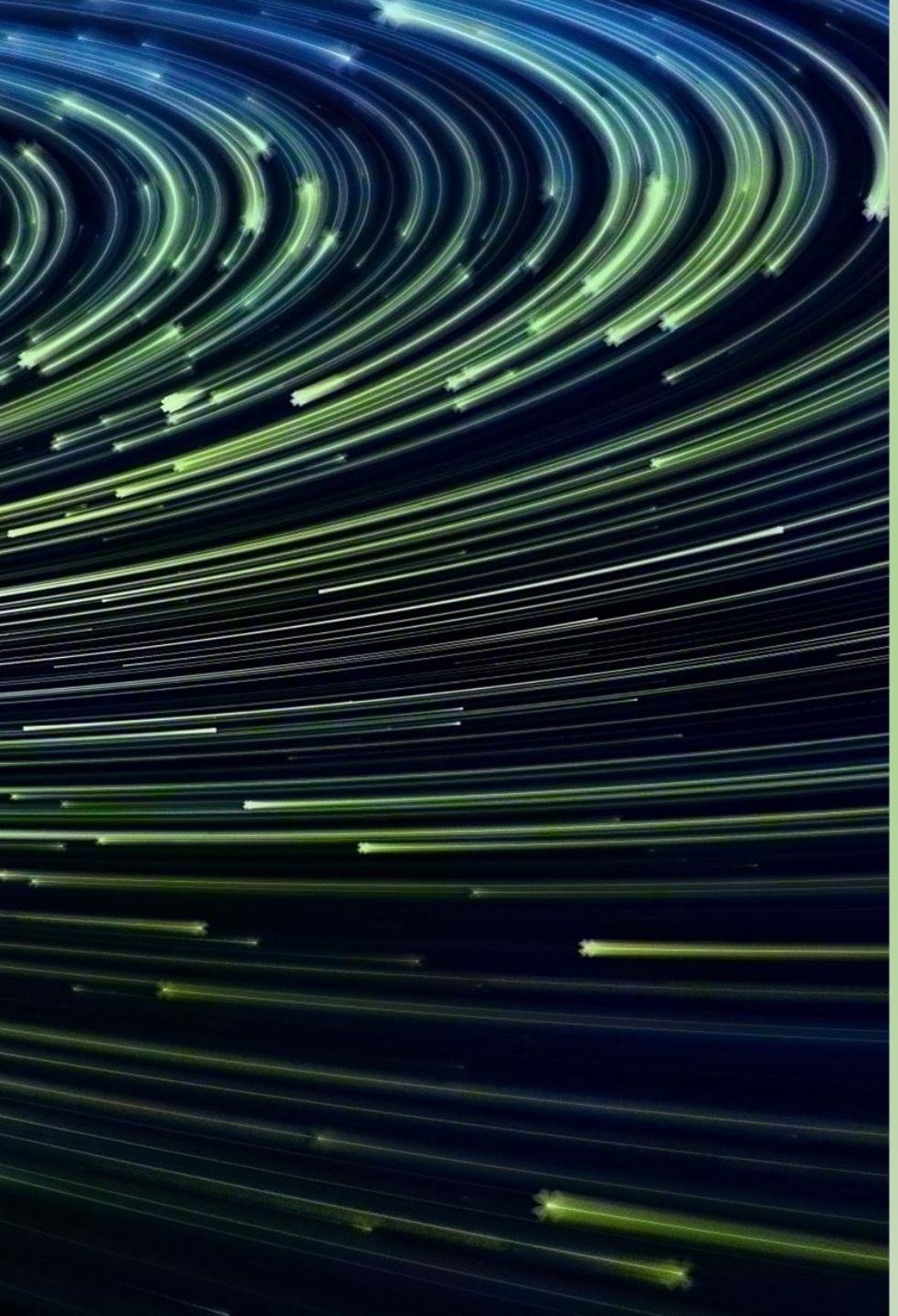
MADDS

Massachusetts Drug Supply Data Stream

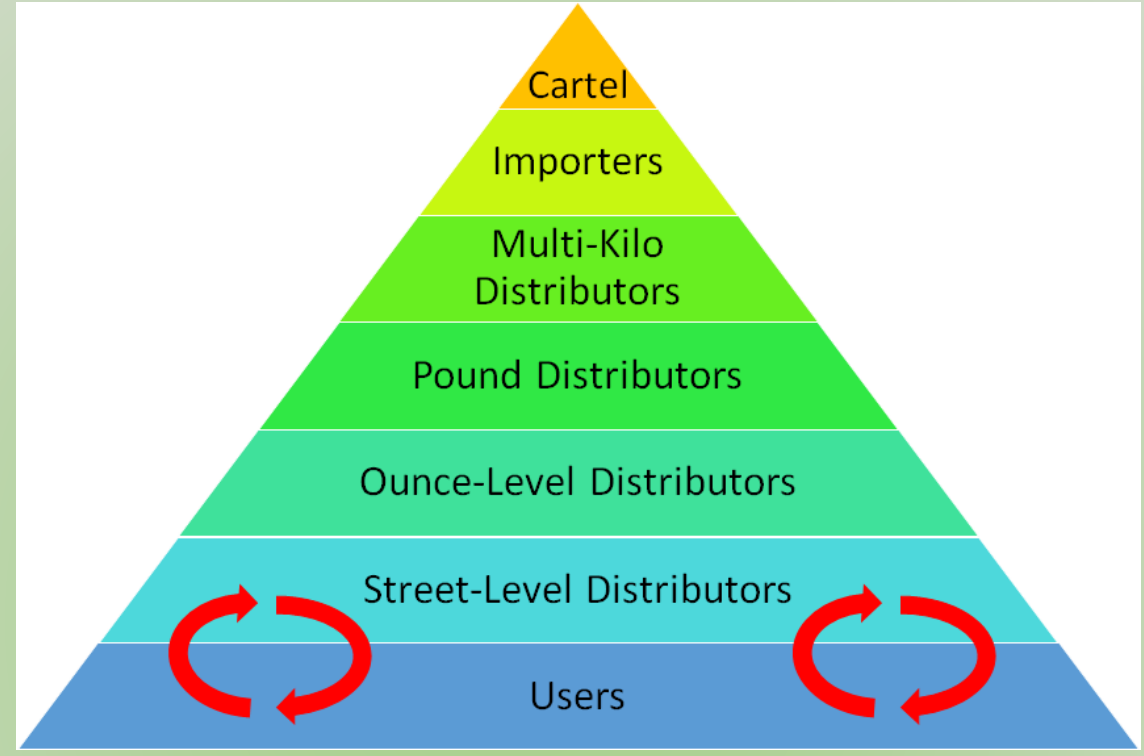
A Police-Community-Public Health Partnership

Brandeis UNIVERSITY



The Science Behind Drug Checking

Improves safety of the drug supply (Evidence: European, darknet studies)	Decreases violence in drug transactions Improves consumer knowledge and confidence Increases safety of supply (fewer unsafe adulterants/cuts, increases purity) Stabilizes market
Provides an opportunity for empowerment, health promotion, and consumer behavior change (Evidence: Fentanyl Test Strip studies)	Promotes health and dignity of people who use drugs With knowledge and interaction with harm reduction staff, people change behaviors Question: *Do people change anyway in the face of fentanyl? Do FTS help speed that change?*
Engagement tool for new, hard to reach populations (Evidence: RIZE MA evaluation, Peiper et al.)	Preliminary data suggest increases in program utilization, patient navigator contacts when coupling drug checking at outreach with existing medical and harm reduction services, 1-to-1 kit-to-referral rate observed among pilot police department-led and police-community partnered programs



Who cuts drugs?

Point of Care Service

- Providing an additional service and safety measure to new and existing SEP clients
- Able to provide specialized and one on one harm reduction messaging given results of sample
- Predict and preemptively respond to changes in drug supply in local area

Drug Supply Monitoring

- Collaborate with community partners & police depts in key hubs concerned about local supply
- Collect and test
  - *Donated/discarded drug trash*
  - *Police dept samples from non-criminal cases*
- Share results in summary & individually with programs, communities
- Community partners provide specialized, one on one harm reduction messaging given results of sample
- Create a profile of the drug landscape to see changes over time/by community
- Predict changes in drug supply, early warnings, better tailored responses

MADDS Overview

Collect sample from community partner/police department and gather situational and subjective information

Scan sample with FTIR (on-site), test with fentanyl test strips (on-site), send for GC/MS confirmation testing (off-site) and review by medical toxicologist

Report out findings to partners, communities and the state

Introduction

- Who we are:
  - Traci Green, Principal Investigator
  - Becca Olson, Project Manager
  - Benjamin Pulminskas, Analytical Chemist
  - Rachel Wightman, Medical Toxicologist



- What is the project?
  - MA Department of Public Health funded, partnered with NEHIDTA
  - Piloted in 2019 in Boston and New Bedford
  - Current sites: New Bedford*, Quincy*, Lynn*, Berkshire County, Boston AHOPE
    - Boston*, Greenfield*, Holyoke, Lawrence, Metrowest: Framingham, Natick, Hudson, Marlborough, Ashland

Process

- **Collect sample** from participants/police departments

Once used cookers

Once used Cottons

Baggies

Wax folds/stamps

Part of a pill

- How much sample? *About the amount 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

Talk to the donor/review the case file to learn more!

What was it like? Tell us more!

Information from people who use drugs or from the case file can help us get better and quicker results back. We ask people/abstract from case files:

- Bought as?
- Route of Consumption? (injected, sniffed, etc)
- Expected OR unexpected reactions (how "normal" was it)?
- Did you like it/was is harmful?
- Scene or context information
- Anything else you/they think is important

Community partner sample collection

Storage

- Put sample in locking bag provided and store them in the locked location set out by your organization. Make sure you are familiar with these specific instructions and follow the safety protocols!

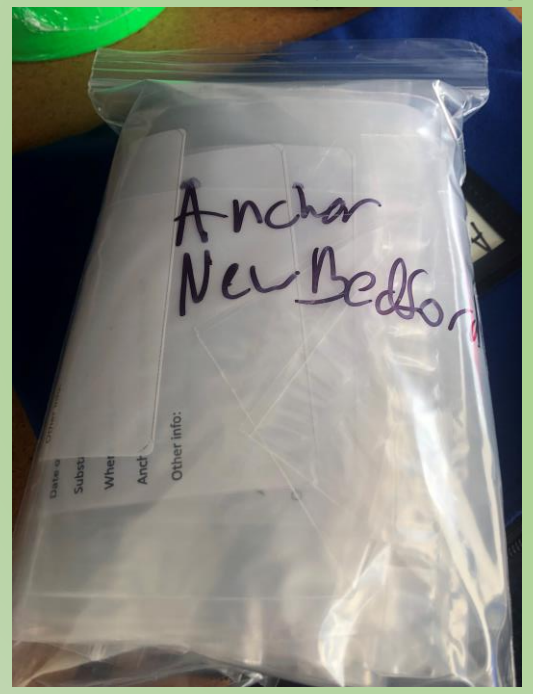
Test on-demand, on-site

- Once samples are collected, call or text the Brandeis team to arrange for them to come for testing

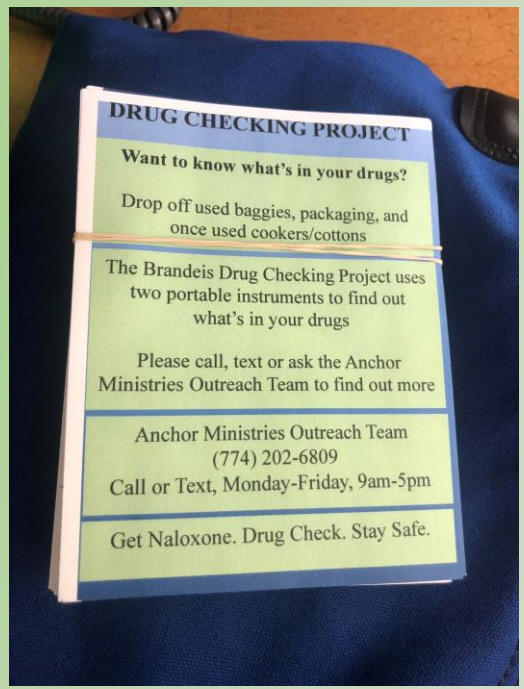
Community partner trash collection “kit”

Locking sample bag

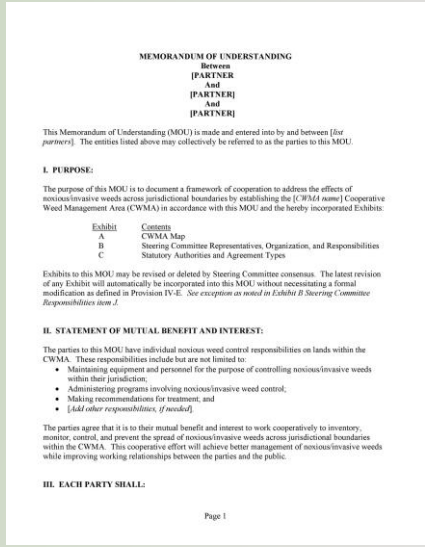
Labeled sample baggies



Flyers



MOU



MEMORANDUM OF UNDERSTANDING
Between
[PARTNER
And
[PARTNER]
And
[PARTNER]

This Memorandum of Understanding (MOU) is made and entered into by and between [*list partners*]. The entities listed above may collectively be referred to as the parties to this MOU.

I. PURPOSE:

The purpose of this MOU is to document a framework of cooperation to address the effects of noxious/invasive weeds across jurisdictional boundaries by establishing the [*CWMA name*] Cooperative Weed Management Area (CWMA) in accordance with this MOU and the hereby incorporated Exhibits:

Exhibit	Contents
A	CWMA Map
B	Steering Committee Representatives, Organization, and Responsibilities
C	Statutory Authorities and Agreement Types

Exhibits to this MOU may be revised or deleted by Steering Committee consensus. The latest revision of any Exhibit will automatically be incorporated into this MOU without necessitating a formal modification as defined in Provision IV-E. *See exception as noted in Exhibit B Steering Committee Responsibilities item J.*

II. STATEMENT OF MUTUAL BENEFIT AND INTEREST:

The parties to this MOU have individual noxious weed control responsibilities on lands within the CWMA. These responsibilities include but are not limited to:

- Maintaining equipment and personnel for the purpose of controlling noxious/invasive weeds within their jurisdiction;
- Administering programs involving noxious/invasive weed control;
- Making recommendations for treatment; and
- [*Add other responsibilities, if needed*].

The parties agree that it is to their mutual benefit and interest to work cooperatively to inventory, monitor, control, and prevent the spread of noxious/invasive weeds across jurisdictional boundaries within the CWMA. This cooperative effort will achieve better management of noxious/invasive weeds while improving working relationships between the parties and the public.

III. EACH PARTY SHALL:

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Bruker Alpha FTIR

BTNX Fentanyl Test Strips

GCMS from drugsdata.org

Medical Toxicology Consultation

Test with tools, interpret with care

Massachusetts Drug Trends 2020, during COVID-19

- More and different fentanyl precursors
  - weaker fentanyl supply
  - More fentanyl sources
  - Sloppy synthesis—danger is inconsistency
- More adulterants to fentanyl/heroin (xylazine, tramadol)
  - Weaker fentanyl supply
  - Withdrawal symptoms not relieved
  - Heavy sedation but not necessarily respiratory depression (impression of needing more naloxone to reverse)
- Cocaine heavily cut and many adulterants, even full replacements

Xylazine

Photo	Sample Name	Active Contents: Substance	Active Contents: Ratio / Amounts	Date Published	Date Tested	Location	Data Source
	Fentanyl Code: AC2020B321 Sold as: Not Specified	• Xylazine • Fentanyl • 4-ANPP • Metamizole • Phenethyl 4-ANPP • Cocaine	• 20 • 19 • 2 • 1 • 1 • 0.5	Jan 27, 2021	Jan 26, 2021	Lawrence, MA	DrugsData (EcstasyData)
	Fentanyl Code: AC2020B340 Sold as: Not Specified	• Fentanyl • Xylazine	• 1 • 1	Jan 27, 2021	Jan 26, 2021	Quincy, MA	DrugsData (EcstasyData)
	Fentanyl Code: AC2020B298 Sold as: Not Specified	• Xylazine • Fentanyl • 4-ANPP	• 7 • 6 • 1	Jan 25, 2021	Jan 22, 2021	Lynn, MA	DrugsData (EcstasyData)
	Dope Code: AC2020B360A Sold as: Dope	• Xylazine • Fentanyl • 4-ANPP • Acetaminophen	• 10 • 6 • 1 • 1	Jan 21, 2021	Jan 16, 2021	Boston, MA	DrugsData (EcstasyData)
	4812v Code: AC2020A006 Sold as: Percocet	• Diphenhydramine • Fentanyl • 4-ANPP • Unidentified • Xylazine	• 10 • 5 • 2 • 1 • trace	Oct 22, 2020	Oct 20, 2020	Boston, MA	DrugsData (EcstasyData)
	Tan Powder Code: AC2020B190 Sold as: Not Specified	• Fentanyl • Lidocaine • Tramadol • 4-ANPP • Acetaminophen • Phenethyl 4-ANPP • Procainamide • Xylazine	• 28 • 21 • 7 • 5 • 5 • 2 • 1 • trace	Oct 09, 2020	Oct 04, 2020	Quincy, MA	DrugsData (EcstasyData)

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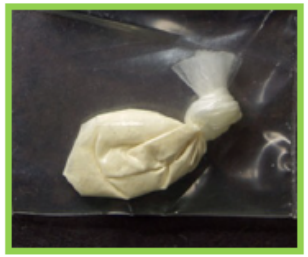
STREET NARCOTICS ALERT



Synthetic Cannabinoid "MDMB-4en-PINACA" detected in Heroin/Fentanyl/Dope

Samples of this potent substance were detected across jurisdictions in Massachusetts (Boston, Lynn, Pittsfield & North Adams) from February 2020 to January 2021. This drug is synthesized by different illicit laboratories so dosing may vary, even within the same batch. If you have suspicions about the content of a drug, contact the MADDS project for possible testing.

How to identify synthetic cannabinoids

- Synthetic cannabinoids appear as a yellowish powder and blend in to other illicit powdered street drugs.
- Samples have been found both in powdered form and in the residue of cookers and cottons used for preparing drugs for consumption.
- Media and poison control reports indicate that synthetic cannabinoids are usually sprayed onto plant material and smoked. They can also be vaped, injected or consumed orally.

Health Effects

- These symptoms have been reported from synthetic cannabinoid exposure: cardiovascular effects (elevated blood pressure, fast heart rate, heart attack, or stroke), rapid loss of consciousness, unresponsiveness, seizures, vomiting, delirium, psychosis, and aggressive and violent behavior.
- Severe poisoning is more common with synthetic cannabinoids and can cause death. In most of the reported deaths, it was mixed in with other substances, such as fentanyl, heroin, and other opioids.

How to Respond

Summon medical attention. Administer Narcan if symptoms present as possible polysubstance/opioid overdose.

For more info and resources scan:

MADDS is a state-funded collaboration between Brandeis University researchers, the Massachusetts Department of Public Health, various town police departments and local harm reduction agencies.

Contact us at maddsbrandeis@gmail.com

Updates, 2-min roll call videos

Take home points and next steps

- Monitoring the illicit drug supply in partnership with public health and public safety is feasible
- Trends detected through illicit drug supply monitoring are meaningful for public health and public safety, and may be important for clinical practice
- Optimize dissemination of sample results and detected trends to people who use drugs, communities, and other stakeholders
- Future efforts will explore validation, standardization, and triangulation of trends

THANK YOU!!

For questions on MADDS contact tracigreen@brandeis.edu or becca.olson@brandeis.edu

Check the *Community Resources* tab of the Opioid Policy Research Collaborative website for videos, reports, and other helpful info

heller.brandeis.edu/opioid-policy/