

# THE UNCERTAIN PROMISE OF USING ADVANCED TECHNOLOGY REAL-TIME DRUG CHECKING AS A MECHANISM FOR HARM REDUCTION, STRUCTURAL INTERVENTION, AND HUMAN LIBERATION



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Maya Doe-Simkins*

# Acknowledgements





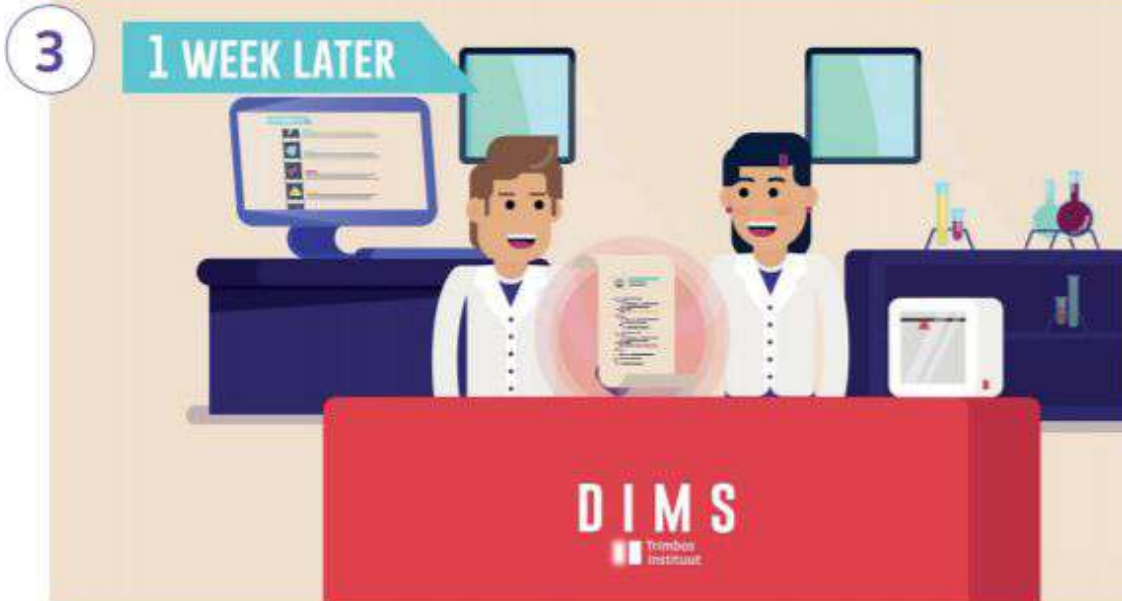
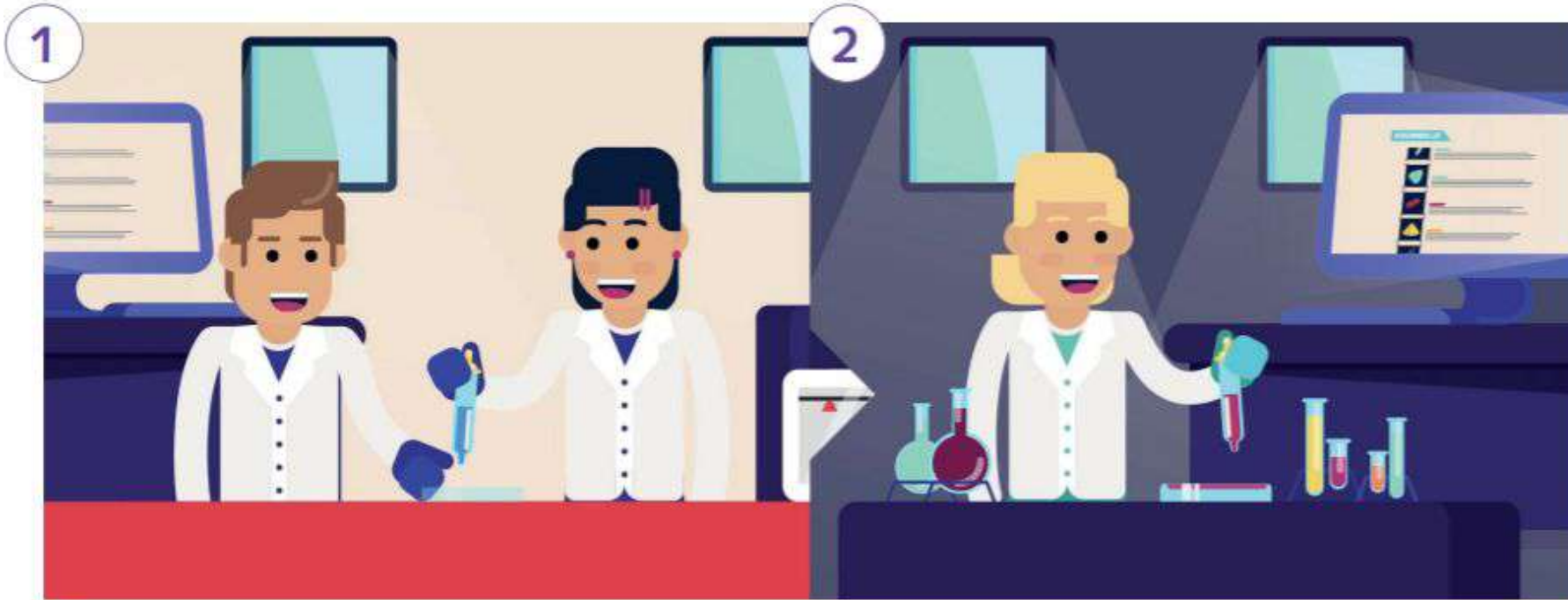


BACKGROUND

# Longstanding Culture of Substance Checking among Humans who Put Stuff in their Bodies







Samples that cannot be identified are sent to the DIMS-bureau for further analysis. A week later, the laboratory results are entered into the online database by the DIMS-bureau. Users can then call the drug checking facility to obtain the test results.





checkIT!

Information, Beratung, Analyse - anonym & kostenlos

Cannabis  
50 & Plus

VIENNA





BARCELONA







## European drug-checking services in existence in 2017



Source: T. Brunt. Drug checking as a harm reduction tool for recreational drug users: opportunities and challenges. Commissioned by the European Monitoring Center for Drugs and Drug Addiction (EMCDDA). [http://www.emcdda.europa.eu/system/files/attachments/6339/EuropeanResponsesGuide2017\\_BackgroundPaper-Drug-checking-harm-reduction\\_o.pdf](http://www.emcdda.europa.eu/system/files/attachments/6339/EuropeanResponsesGuide2017_BackgroundPaper-Drug-checking-harm-reduction_o.pdf). Updated 30 October 2017.



# DanceSafe



## HYDRATION STATION



## INFORMATION STATION

HYDRATION  
STATION



# DanceSafe





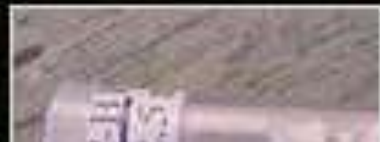
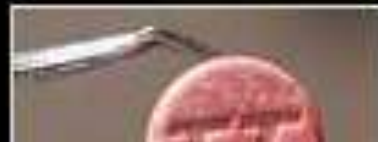


# EROWID

Documenting the Complex Relationship Between Humans & Psychoactives



Plants & Drugs  
Mind & Spirit  
Freedom & Love





# Indiana State Police planning to buy more d devices

Sep 26, 2016



Sections

Arkansas Democrat Gazette

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## State buys 5 devices to scan drugs, keep officers safe

State buys 5 of them to scan substances, keep officers safe

by Clara Turnage | October 11, 2018 at 4:30 a.m.



Follow



Russell Johnson, a contract instructor for Thermo Scientific, demonstrates the new TruNarc Handheld Narcotics Analyzer that the Arkansas State Police received Wednesday at state police headquarters in Little Rock. - Photo by Mitchell PE Masilun

Recomm

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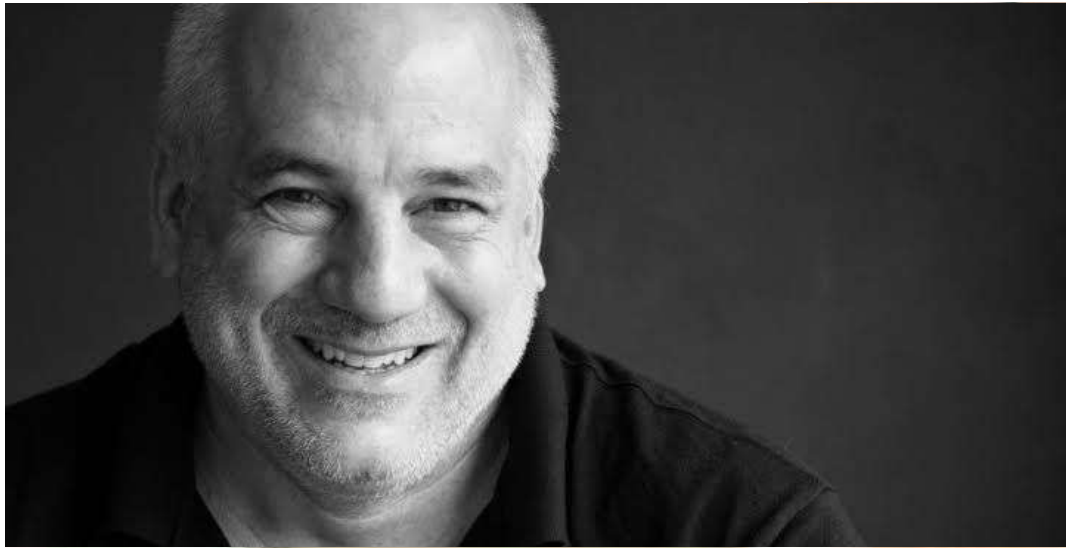




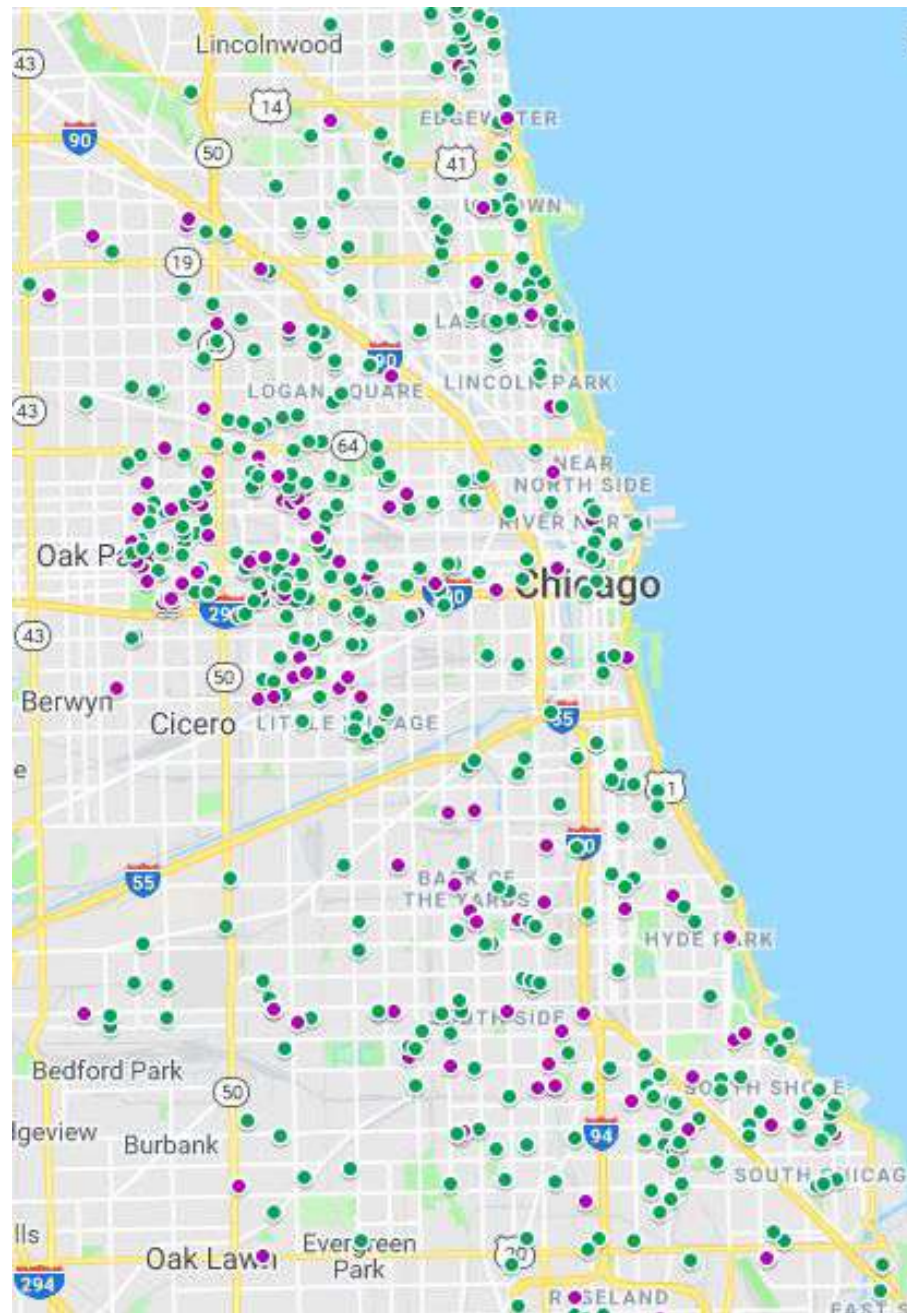
ACDC-RT



# Origin Of The Idea

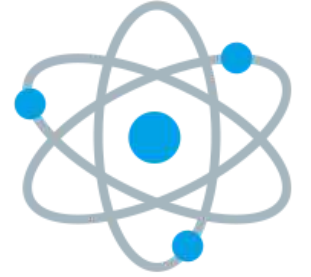
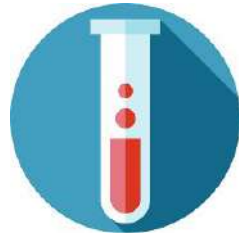




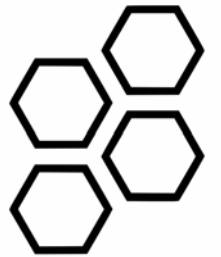




CHROMATOGRAPHY



SPECTROSCOPY





SPECTROMETRY



IMMUNOASSAY

## Ways in which drug checking services can vary

Technique	Colormetric reagents	High-performance liquid chromatography	Gas chromatography	Mass spectrometry
Timing				
Testing for	Presence or absence of a component	Information on whole range of substances present		Quantitative information about all compounds
Setting	At home	On-site/mobile		Remote site
Who	Individuals		Professionals	
Results	Drug content	Public health alerts	Harm reduction information	Brief interventions
Use of results	Individual harm reduction		Public health action	Market monitoring

Source: T. Brunt. Drug checking as a harm reduction tool for recreational drug users: opportunities and challenges. Commissioned by the European Monitoring Center for Drugs and Drug Addiction (EMCDDA). [http://www.emcdda.europa.eu/system/files/attachments/6339/EuropeanResponsesGuide2017\\_BackgroundPaper-Drug-checking-harm-reduction\\_o.pdf](http://www.emcdda.europa.eu/system/files/attachments/6339/EuropeanResponsesGuide2017_BackgroundPaper-Drug-checking-harm-reduction_o.pdf). Updated 30 October 2017.



## Heterogeneous Mixture

VS

## Homogeneous Mixture



particles distributed non-uniformly



particles distributed uniformly



Cereal in milk



Ice in soda



Vodka



Steel



Soil



Blood

ThoughtCo.



Air



Rain

This is a chocolate chip cookie. But is it?





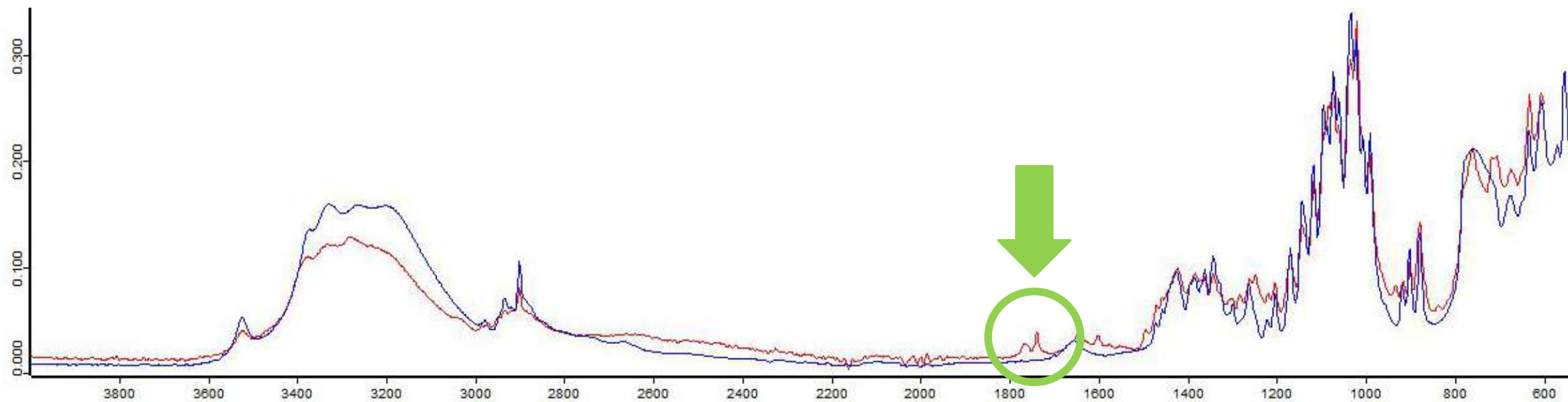
# Step 1: FTIR











Hit No.	Color	Hit Quality	Compound Name	CAS number	Molecular formula	Molecular weight
1	<input checked="" type="checkbox"/>	676	Lactose			
2	<input type="checkbox"/>	670	Lactose BP			
3	<input type="checkbox"/>	653	alpha-Lactose (Lot #79H01681)			
4	<input type="checkbox"/>	307	D-Mannitol			

## Step 2: HPMS







A close-up shot of a middle-aged man with grey hair and black-rimmed glasses, wearing a dark jacket over a light-colored shirt. He is looking slightly off-camera and appears to be speaking. In the background, the back of another person's head and shoulders are visible, wearing a blue shirt.

# NOT IN THE MANUAL

AN EOD SERIES

**MX<sub>800</sub>**

**TRACE SAMPLING**

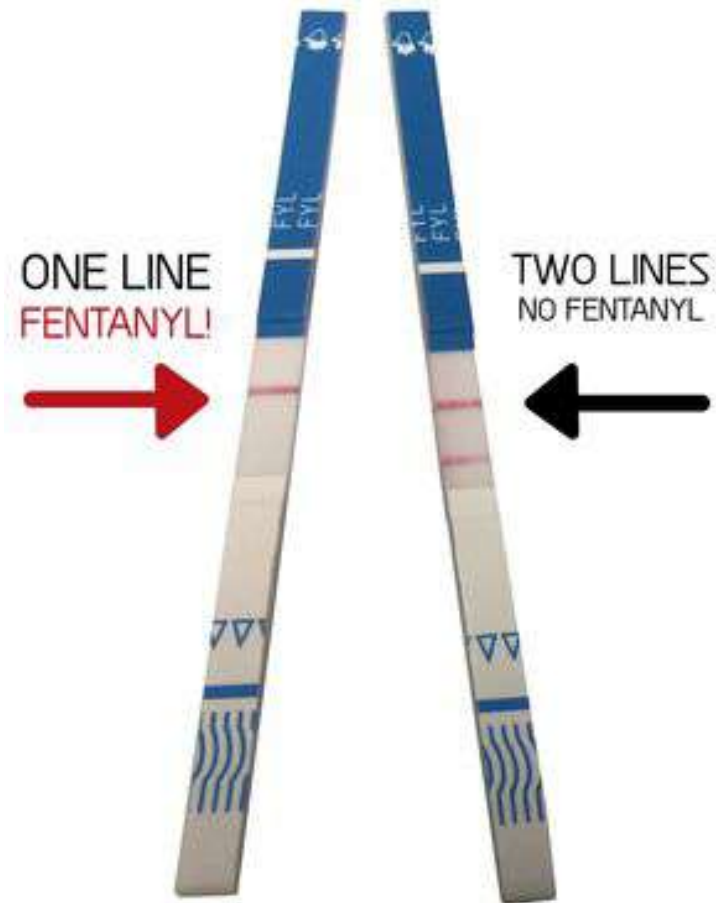


**FEDERAL  
RESOURCES.**





# Step 3: Test Strips



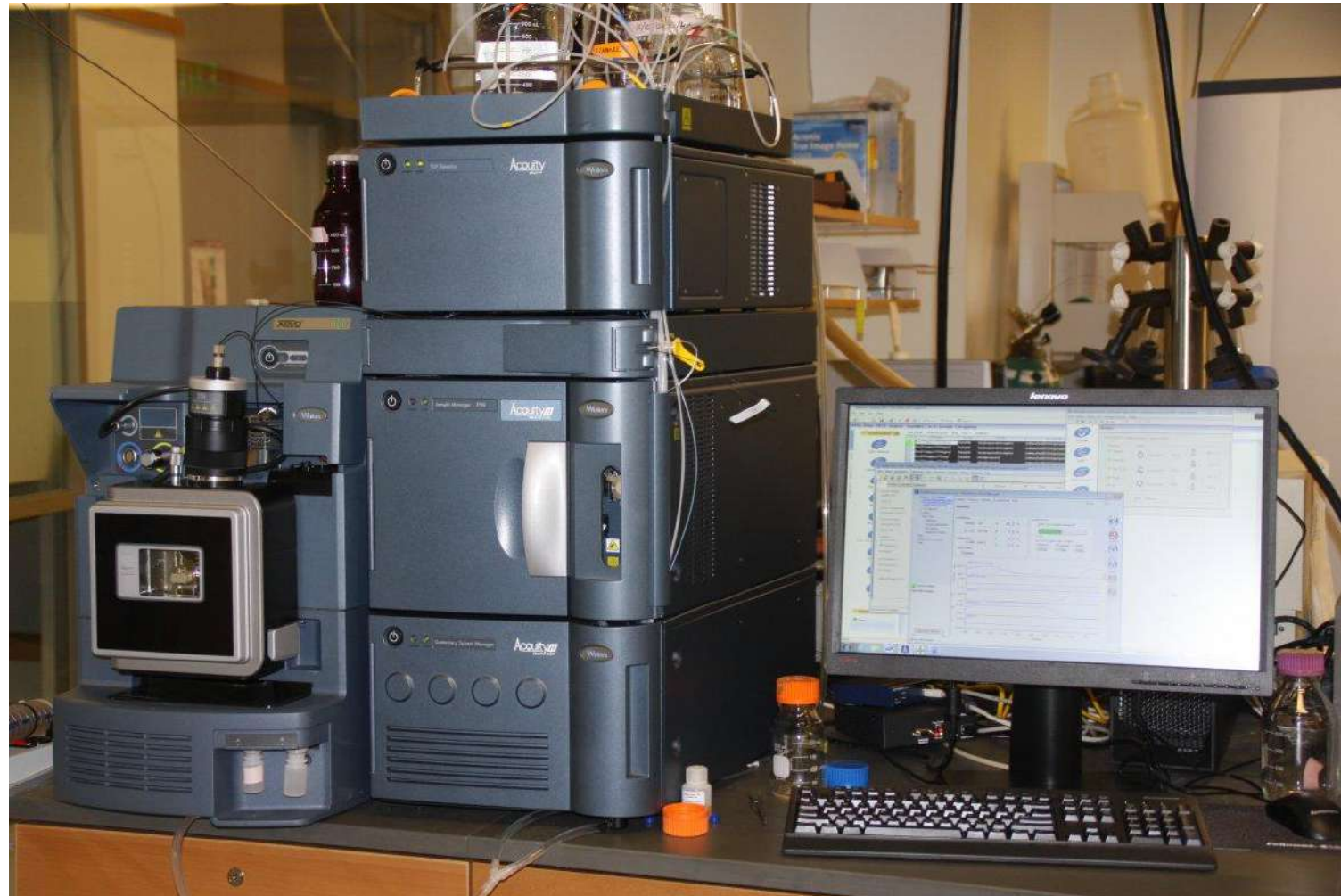


## BTNX FENTANYL ANALOGUE LIST

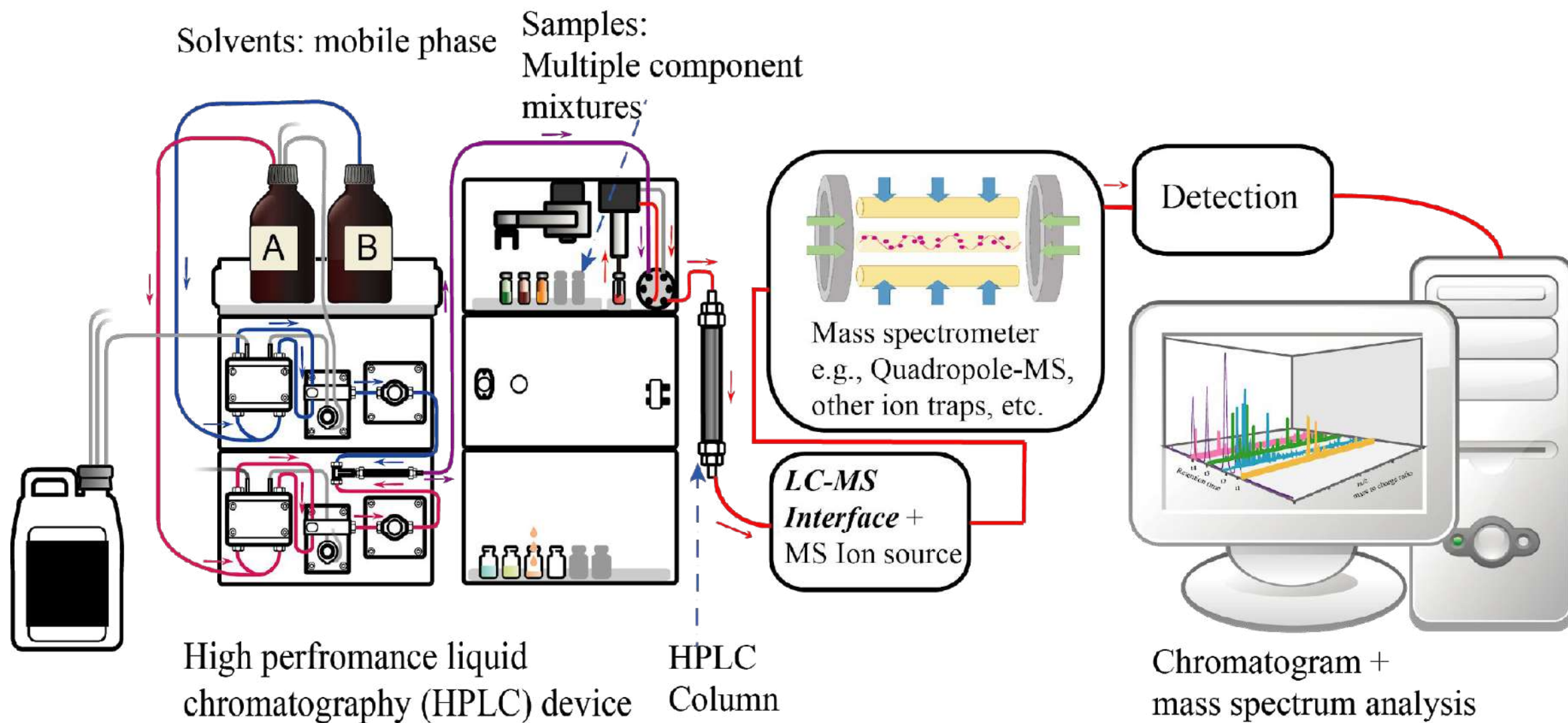


Cross Reactivity List	
CARFENTANIL	BUTYRYL FENTANYL
P-FLUORO FENTANYL	ACETYL FENTANYL
FENTANYL	FURANYL FENTANYL
VALERYL FENTANYL	OCFENTANIL
3-METHYL FENTANIL	REMIFENTANIL
SUFENTANIL	NORFENTANYL

## Step 4 (sometimes): LC/MS

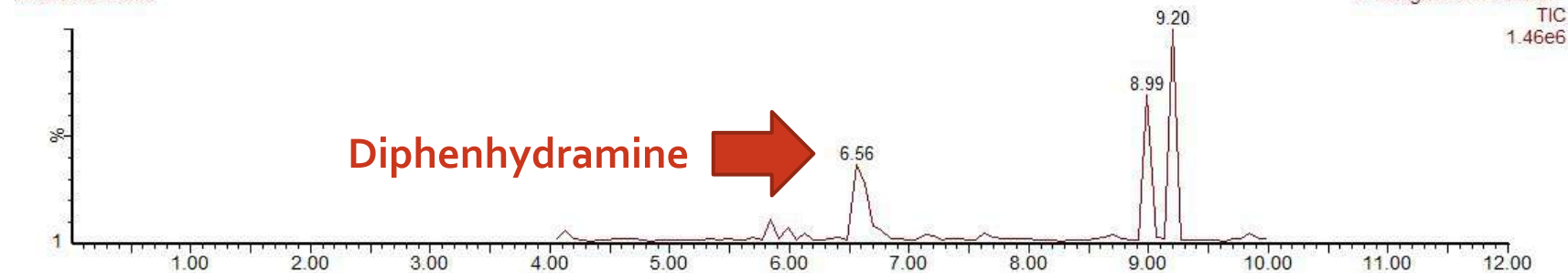




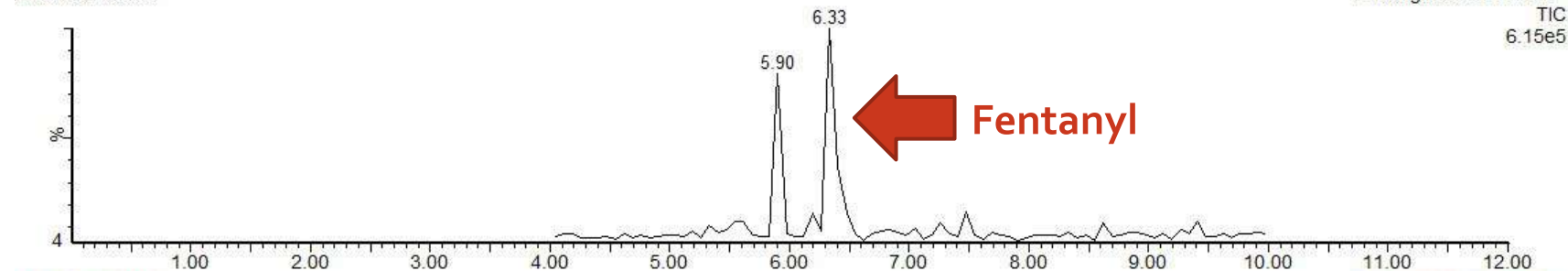


# CRA 9

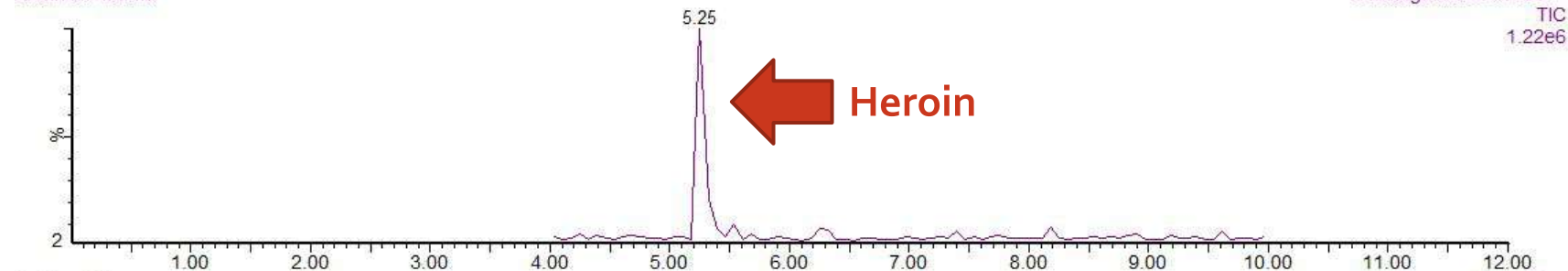
Archive 9-MSMS



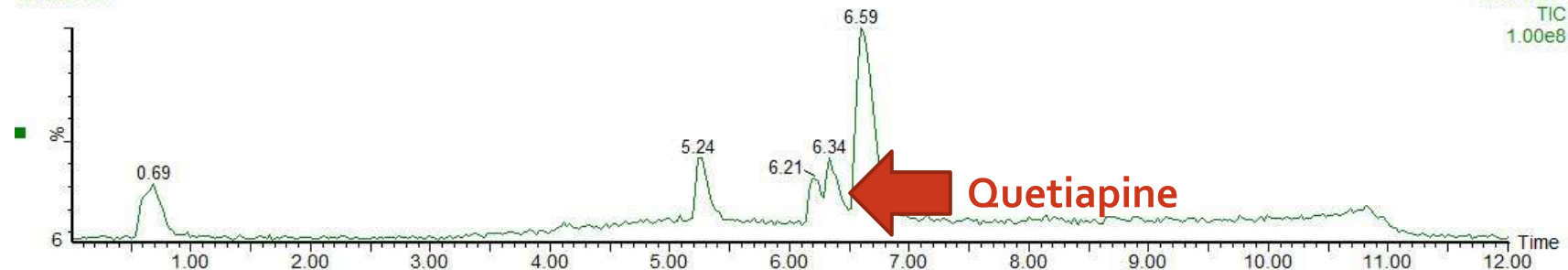
Archive 9-MSMS



Archive 9-MSMS



Archive 9-2

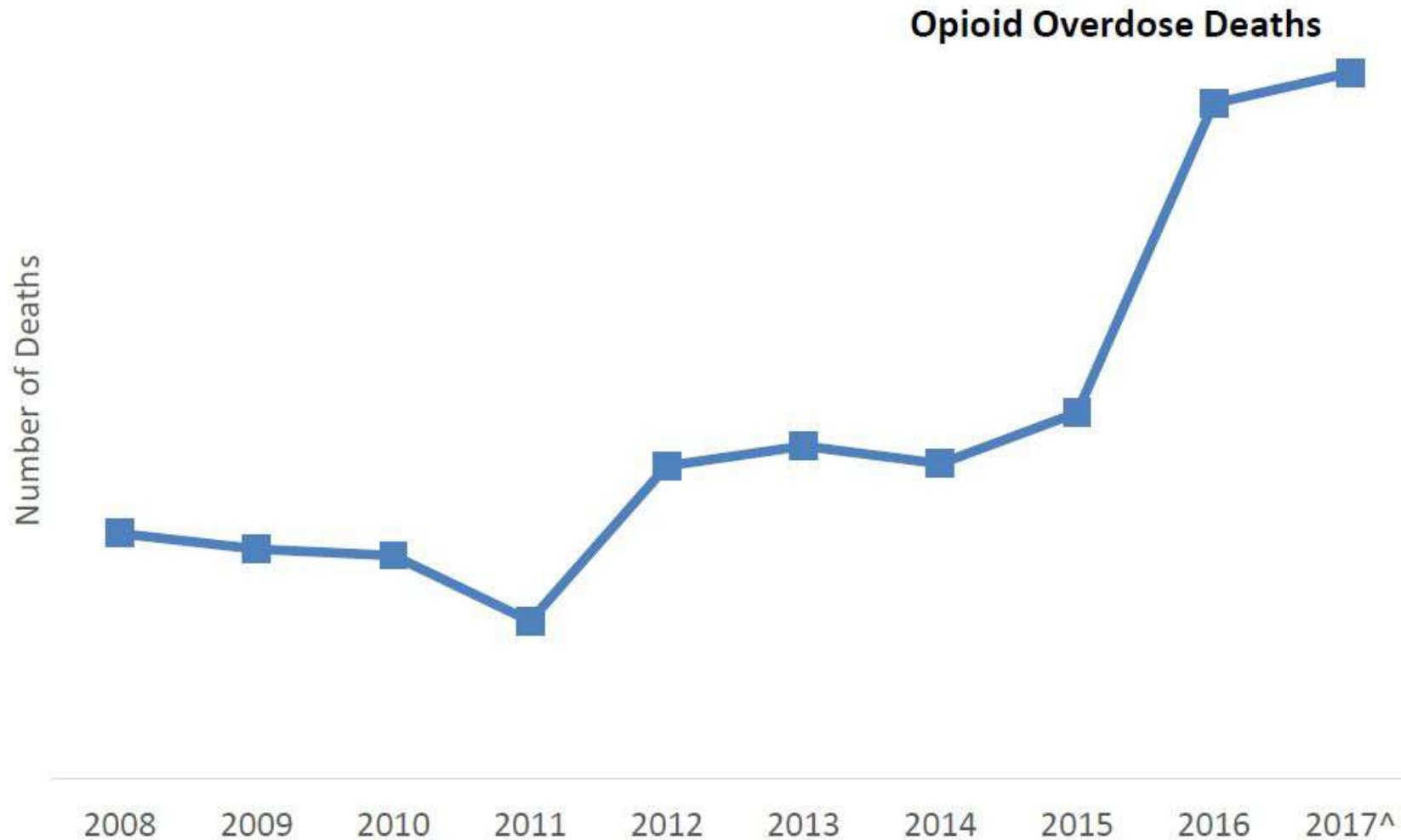






# CHICAGO

## Opioid overdose deaths have increased dramatically in the past ten years in Chicago

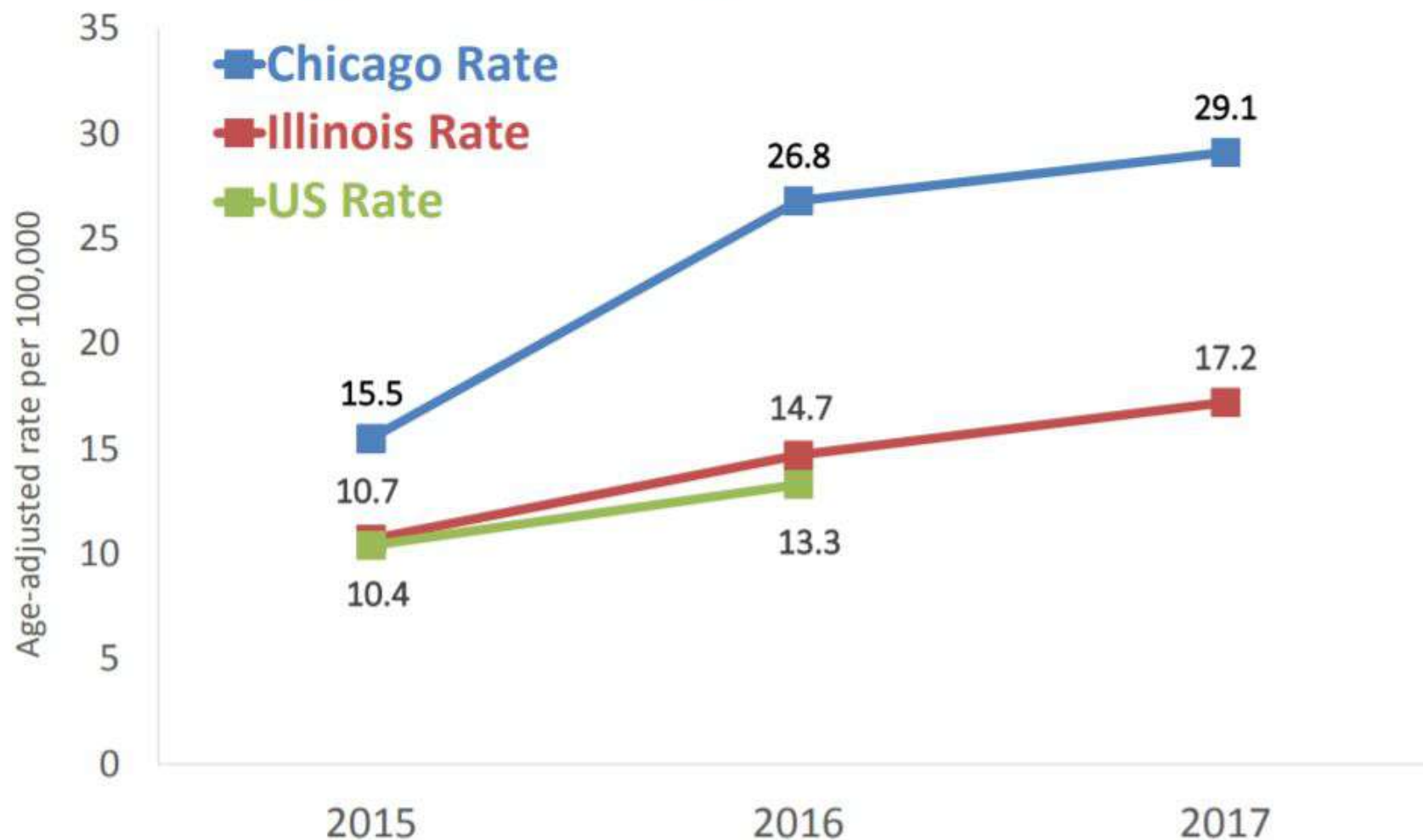


**Data Sources:** Years 2008-2016: Illinois Department of Public Health, Division of Vital Records, Death Certificate Data Files.

**^Year 2017:** Cook County Medical Examiner. These data refer to deaths that occurred among Chicago Residents.

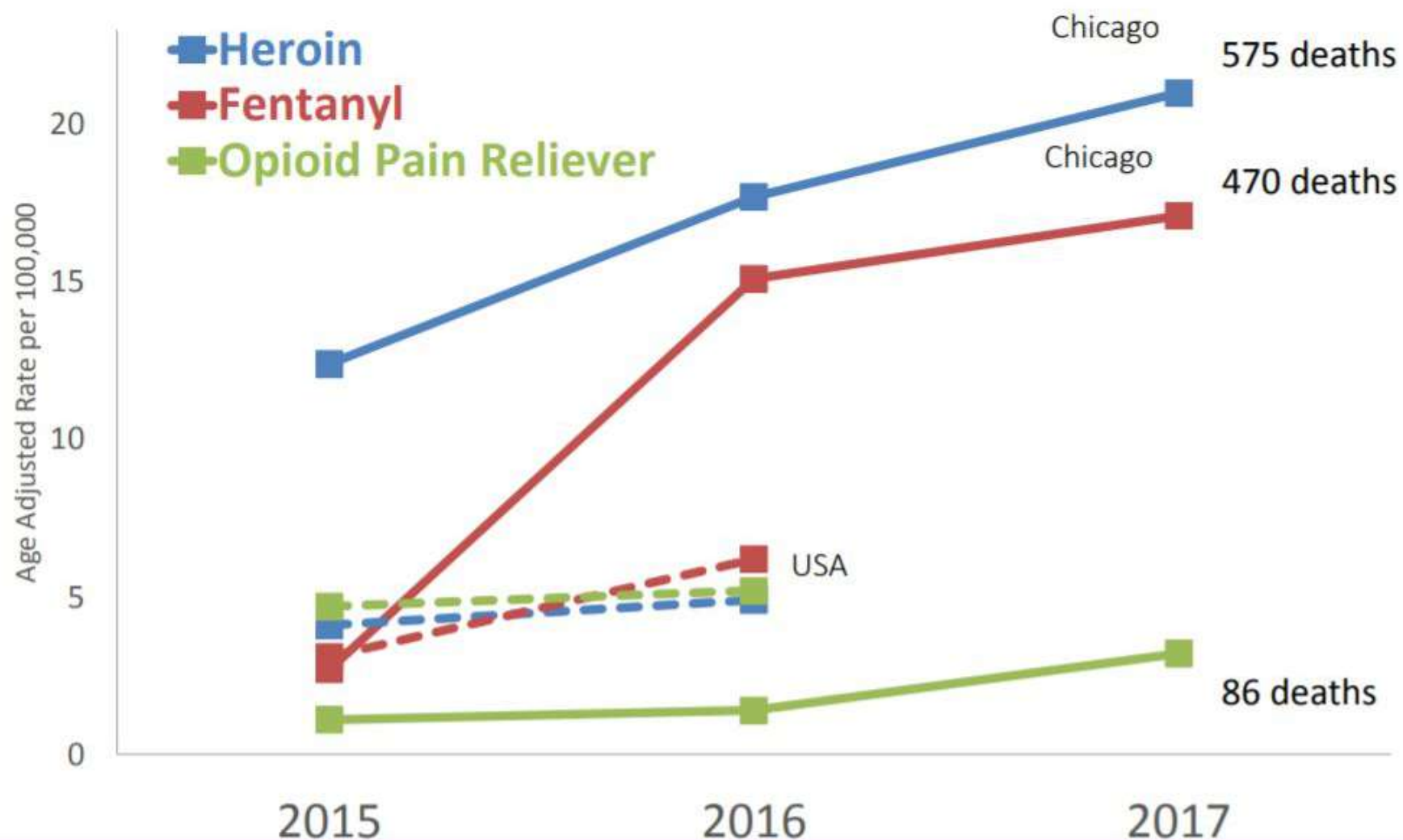


## The opioid overdose death rate is over 1.5x higher in Chicago than in Illinois



**Data Sources:** Chicago Rate- Cook County Medical Examiner. Includes all opioid-related overdose deaths that occurred in Chicago (2015 and 2016). Illinois Rate: Illinois Department of Public Health. US Rate: Centers for Disease Control and Prevention (<http://dx.doi.org/10.15585/mmwr.mm6712a1>). US Census Bureau

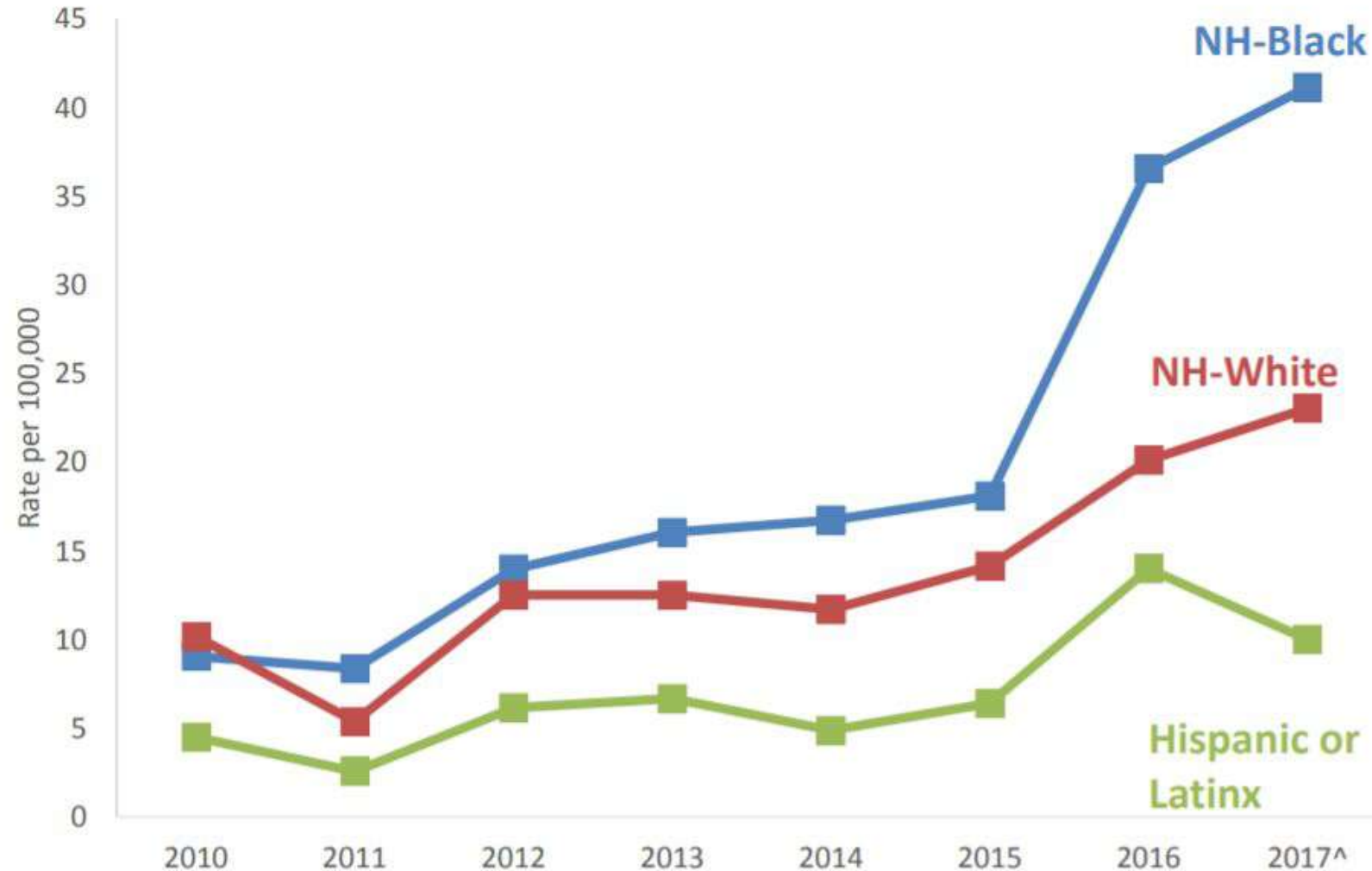
## Fentanyl and heroin overdose death rates are over 5x and 6x higher than the opioid pain reliever overdose death rate



**Data Source:** Cook County Medical Examiner. Includes all opioid-related overdose deaths that occurred in Chicago (2015-2017)



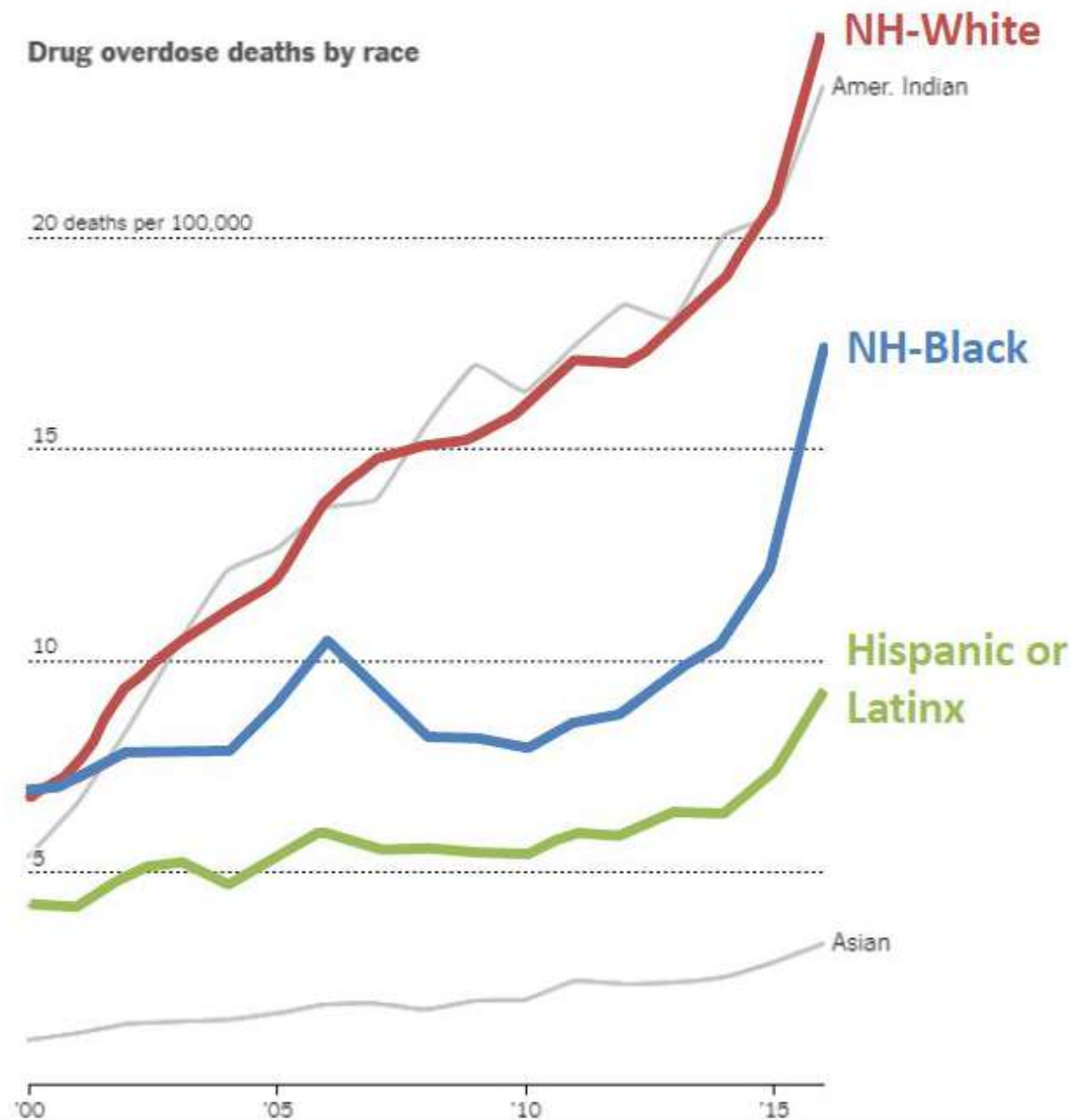
## Racial disparities in opioid-related overdose death rates in Chicago persist and have widened in recent years



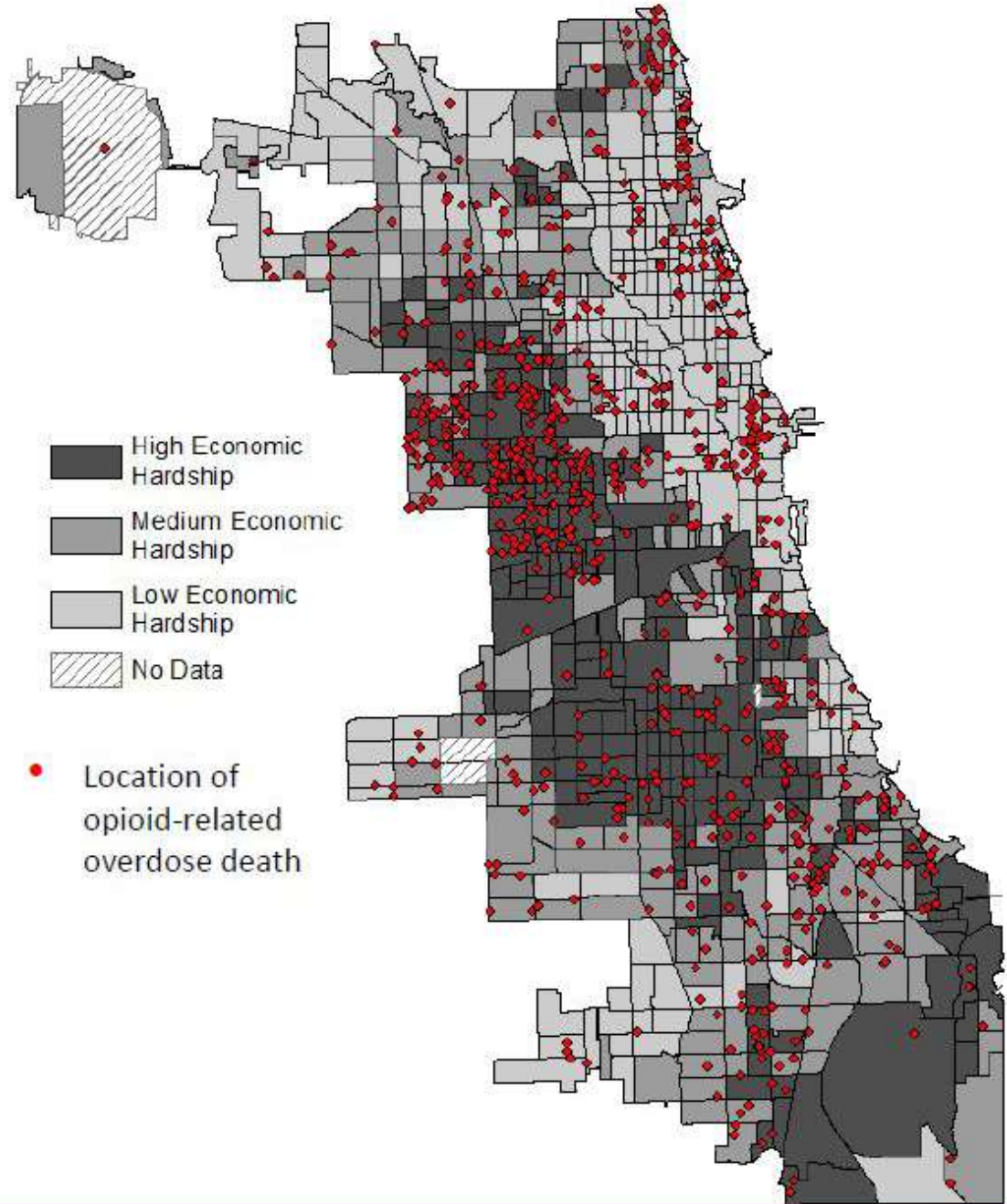
**Data Sources:** Years 2008-2016: Illinois Department of Public Health, Division of Vital Records, Death Certificate Data Files.

^Year 2017: Cook County Medical Examiner. These data refer to deaths that occurred among Chicago Residents.

In contrast, in the US, overdose death rates are highest among NH Whites, however drug overdose deaths are rising the fastest among NH Blacks











VEHICLE FOR POSITIVE CHANGE III

The Chicago Recovery Alliance  
anypositivechange.org

MORGAN OLSON

18 214 CV

CELEBRATION





# Results



**124** samples

48% heroin

15% heroin + fentanyl

48% fentanyl

1% cocaine

19% amphetamine

4% Novel Synthetic Opioids  
(AH-7921 & U-47700)



# Results



18 samples

100% cocaine

11% amphetamine



7 samples

100% cocaine base

71% amphetamine

# Results



**1** sample  
1 fentanyl



**5** samples  
1 heroin  
2 fentanyl

2 cocaine



# Results



2 samples  
2 ketamine



6 samples	
1 amphetamine	5 MDMA
1 fentanyl	1 methamphetamine

# Results



**1** sample

1 methamphetamine



**1** sample

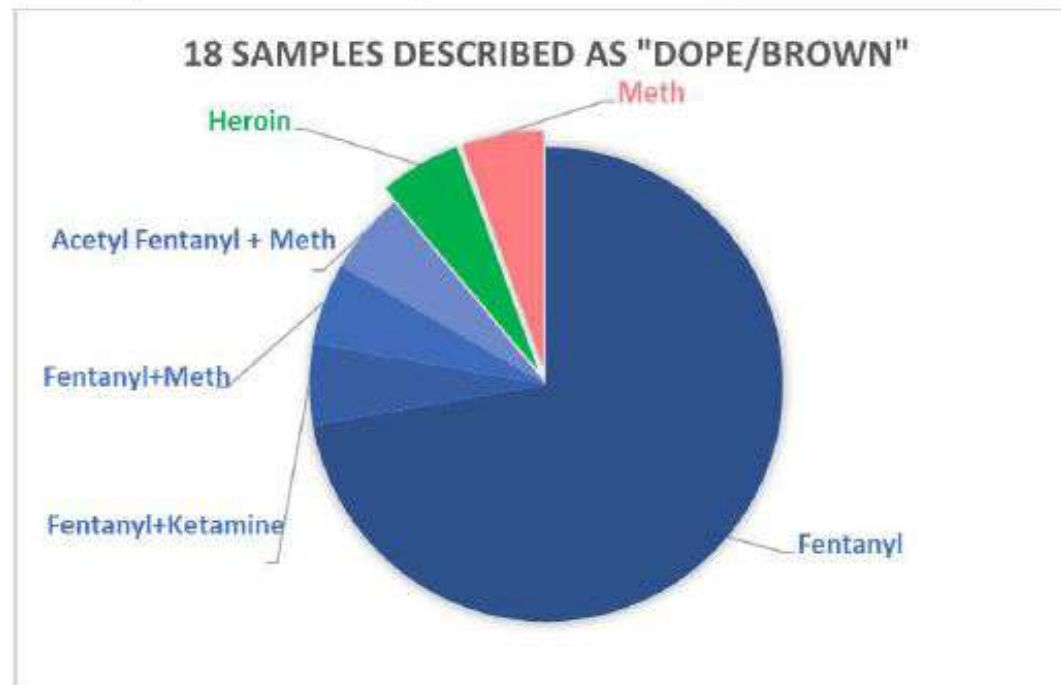
1 PCP



# What's REALLY in your stuff?

— April: Opioids —

Drug samples checked at AHOPE Harm Reduction Services Program

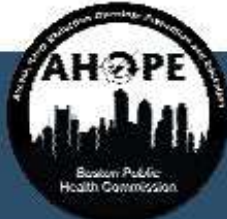


18 Samples  
described as  
'Dope/Brown'

RESULTS	
Fentanyl	13
Fentanyl + Ketamine	1
Fentanyl + Meth	1
Acetyl Fentanyl + Meth	1
Heroin	1
Meth	1

-Important-

The machine we use to check drugs (MX908) is NOT able to identify: Benzodiazepines, THC, PCP, cathinones and other (less common) drugs. For a complete list of what we can look for, or if you have questions about your drugs, talk to an AHOPE staff member. No drug checking is 100% accurate, start low and go slow!



You can drop off samples at AHOPE during our normal hours (Monday 7:30AM-10:30AM and 1PM-3PM, Tuesday-Friday, 7:30 AM-12PM and 1PM-3PM) or call the outreach phone (617-534-7828) to find us in an area near you

ACDC is a collaboration between the DOPE Project, Homeless Youth Alliance, Glide Harm Reduction and the DUU to provide people who use drugs with accurate and detailed information using LC/MS to help prevent overdose and other drug-related harms caused by the unregulated and inconsistent drug supply in the US.

# ALLIANCE FOR COLLABORATIVE DRUG CHECKING (ACDC)



**SAN FRANCISCO**

**Results for April 2019**



For more information contact  
Eliza Wheeler  
[ejwharmreduction@gmail.com](mailto:ejwharmreduction@gmail.com)

or

Kristen Marshall  
[marshall@harmreduction.org](mailto:marshall@harmreduction.org)

## DOPE42

Sample collected  
4/26/19 at Homeless  
Youth Alliance

### SAMPLE PROFILE

Purchased in the Tenderloin

Sold as black tar heroin

Caused itchy rash, burning in  
feet, neck, back, swollen lips,  
had no legs

### WHAT WAS IT?

Major component: heroin

Trace components:  
cocaine, lidocaine and  
methamphetamine

### SO WHAT?

Even though this sample has some trace amounts of stimulants in it, the allergy-like reaction was most likely because of the poorly processed heroin. The majority of the sample was 6-acetylcodeine, an impurity from incomplete processing of heroin which could cause these reactions.

## DOPE43

Sample collected  
4/19/19 at Homeless  
Youth Alliance

### SAMPLE PROFILE

Purchased in the Tenderloin

Sold as fentanyl

Caused a speedy sensation,  
anxiety, antsy, twitchy

### WHAT WAS IT?

Major component: fentanyl

Minor components: heroin,  
methamphetamine

Trace components: cocaine

### SO WHAT?

This sample was primarily fentanyl, it did contain some meth (but only a trace of cocaine) so the speedy sensation is likely due to the presence of stimulants.



## Reflections on the Uncertain Promise

- \* Practical street science
  - Reproducibility, generalizability
  - Scalability
  - Validity and reliability
- \* Individual harm reduction interventions (change)
- \* Structural intervention
  - Safer drug supply
  - Reduction in community-level OD incidence
- \* Discursive (Cultural) Change
  - Bodily autonomy / consciousness / pleasure
  - Consumer protection
  - Prohibition's bloody hands (structural violence)









# FORWARD

