Community Drug Checking for People Who Use Drugs

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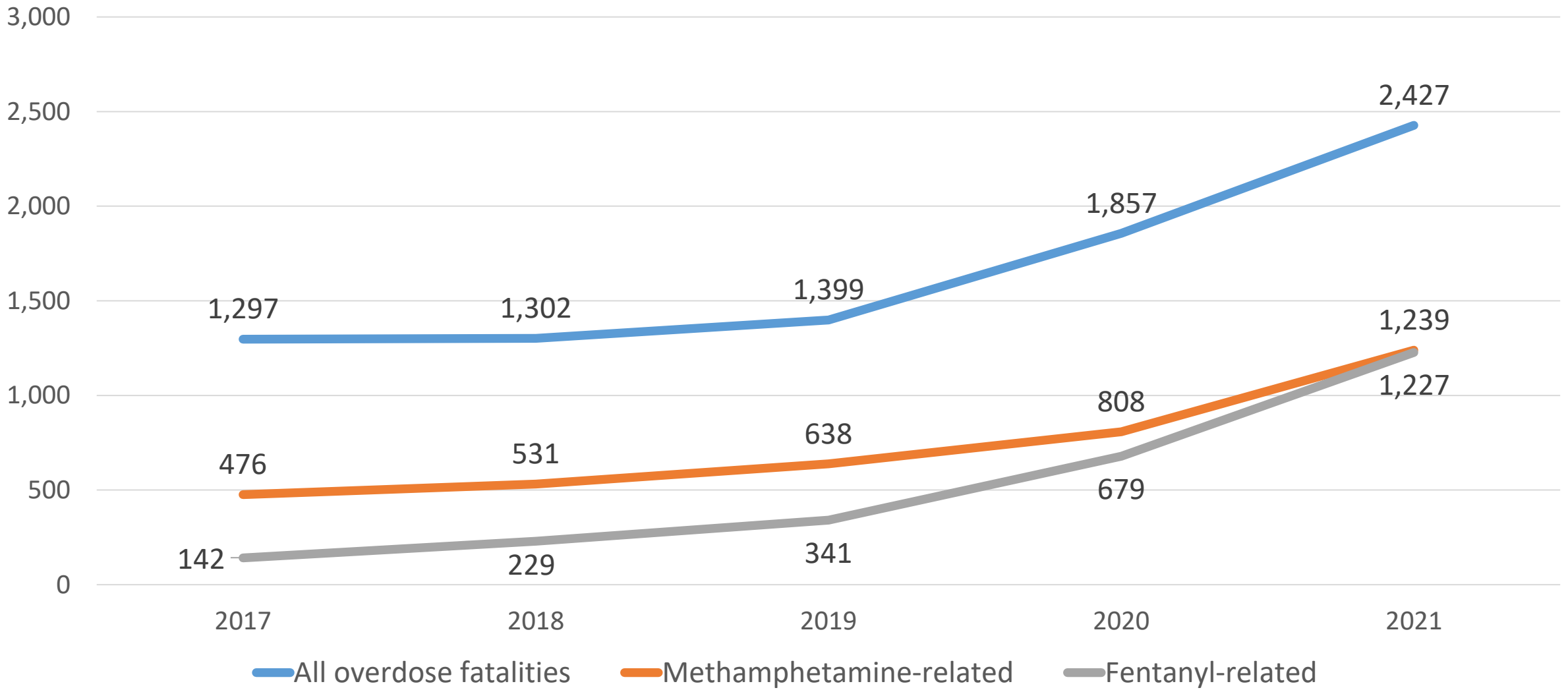
History of Overdose in Washington

Overdose Fatalities in Washington

- Overdose deaths continue to rise in WA
- Methamphetamines and synthetic opioids, mostly fentanyl, are responsible for growing number of deaths
- Many deaths involved a synthetic opioid with another drug category, most commonly methamphetamine (15% of all overdose fatalities)

Overdose Fatalities in WA, 2017-2021



Introduction of Drug Checking as Harm Reduction Tool

Drug Checking History

- Public health intervention utilized for over 50 years
- Emerged across the US in the late 1960's on psychedelics
- Later expanded in Europe (specifically Netherlands) in the 90's at dance events to test MDMA and ecstasy
- Has since expanded with emphasis on expanding and preventing harms from new psychoactive substances, including synthetic opioids
- Currently a global network of drug checking services

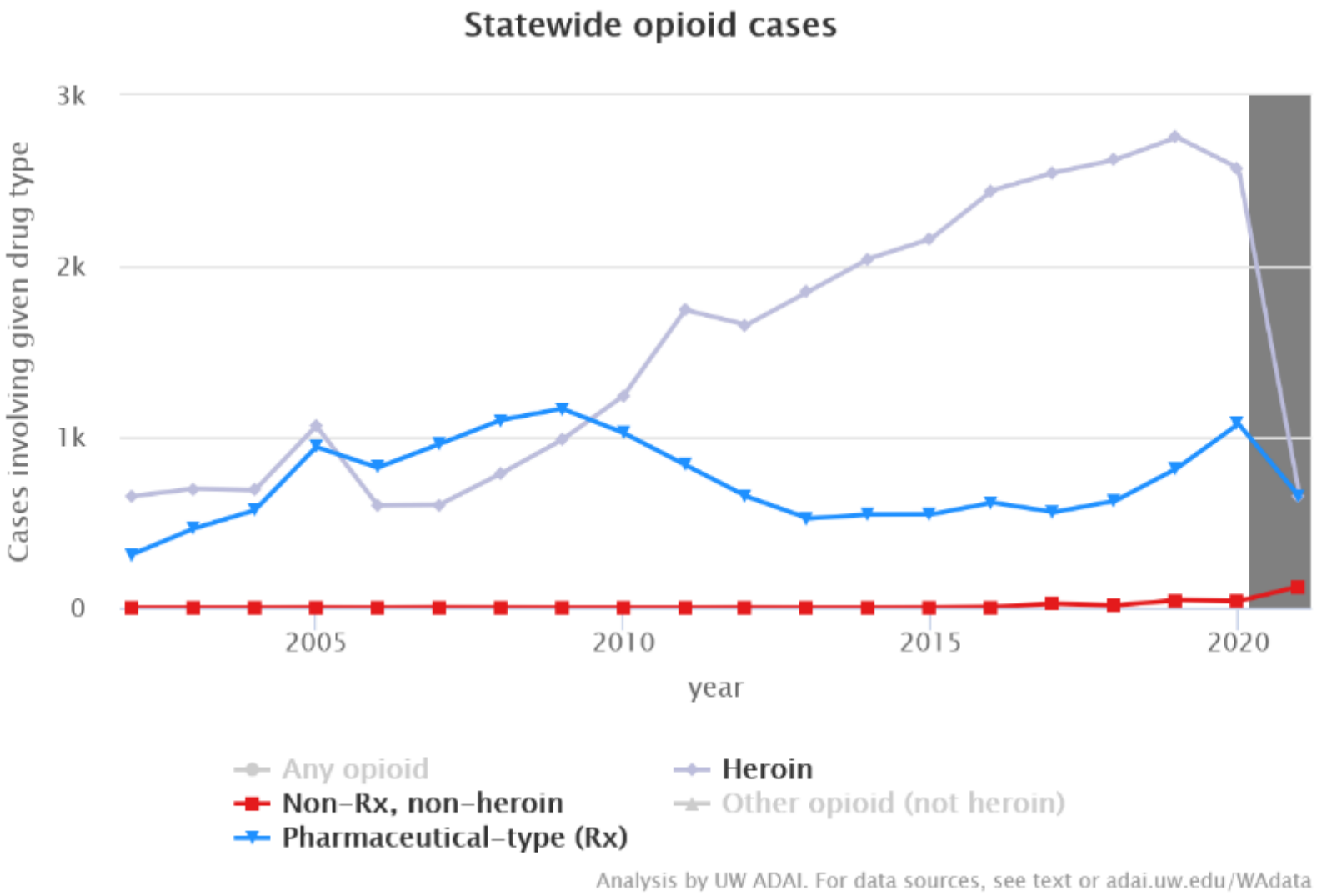
Evidence Base

- Study in Greensboro, NC found that fentanyl test strips associated with changes in drug use behavior and increased perceived overdose safety
  - Those with a positive FTS had 5x the odds of reporting changes in drug use behavior
- FORECAST Study: Johns Hopkins Bloomberg School of Public Health
  - Found that 84% of participants were concerned about fentanyl, and drug checking would help them protect themselves from overdose

Evidence Base, cont'd

- Study in Baltimore focused on female sex workers found that testing their drugs led to reductions in substance use, injection, and solitary drug use
- Study in Vancouver, BC- those who received a positive fentanyl test strip were more likely to reduce their dose, leading to decreased likelihood of overdose

Pre-Availability of Drug Checking



- Currently rely on crime lab data to get detailed information on drug trends and supply
- Public health professionals translate this data into actionable interventions and education

What is Drug Checking?

- Evidence-informed harm reduction tool
- Use of various technologies to analyze and provide insight on the chemical components of substances/drugs
- Depending on what technology is used – drug checking can detect psychoactive compounds as well as other adulterants and bulking agents

Objectives of Drug Checking: Purpose & Benefits

Tool of engagement for PWUD

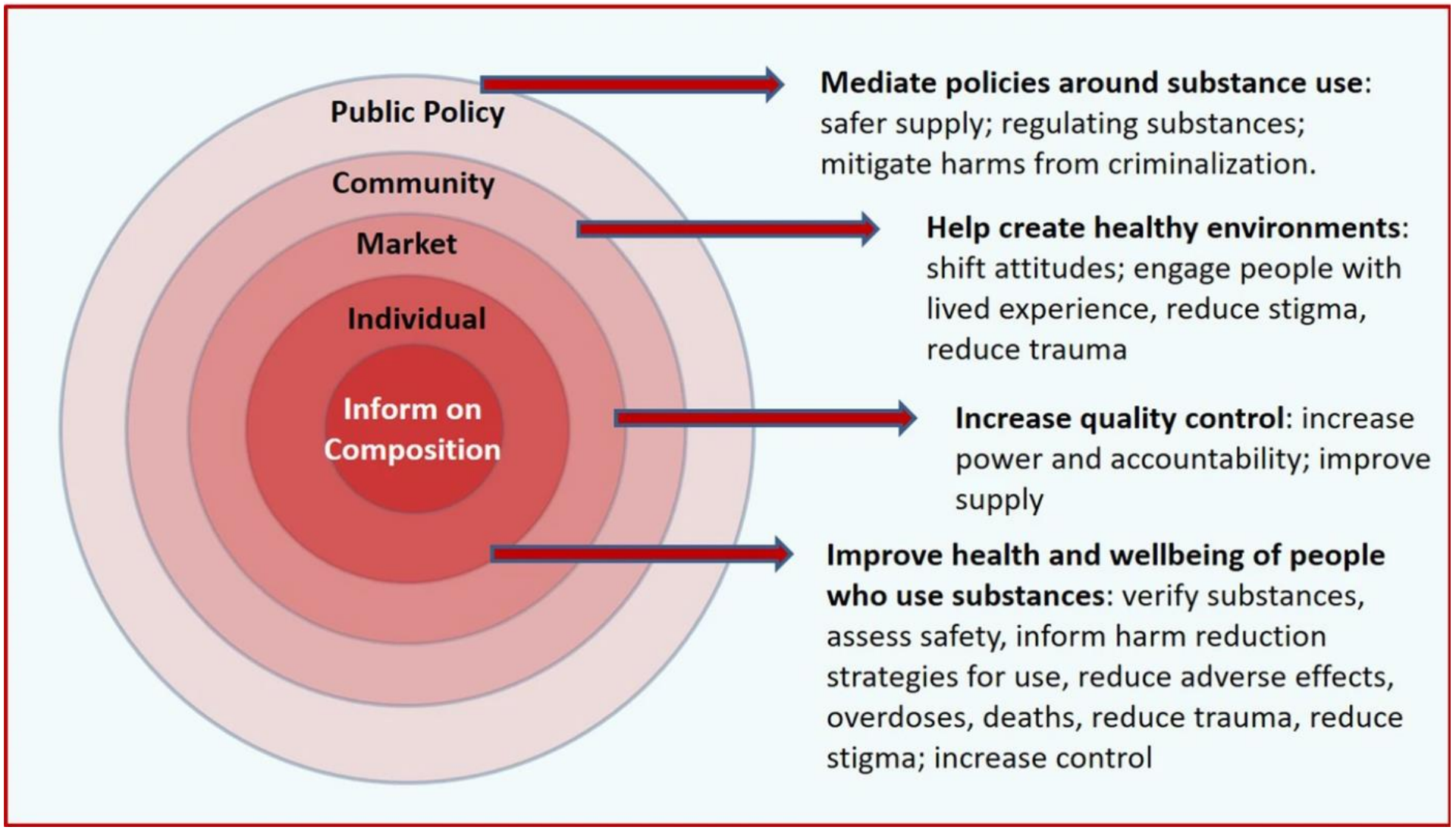
- Offer reliable information on safer use and access to harm reduction supplies
- Provide an opportunity to reach people at risk, are marginalized, or who are not served by other harm reduction services
- Provide opportunity to discuss an individual's relationship with substances and offer referrals for additional support – increases engagement with other services offered
- Empowers PWUD with knowledge about the drug supply allow them to make informed decisions and employ risk reduction strategies

Observation of Drug Trends

- Increase individual and community knowledge of what is in the local drug supply, and reveals emerging trends
- Increase effectiveness of community response when new substances emerge
- Gather data on how people are using drugs (e.g. reports of drug effects, demographics, interaction and mixes, routes of administration, and motives)

Public Health & Safety

- Provide PWUD with information about their substances and the content of their drug sample so they can make informed decisions regarding their personal drug use
  - Important for preventing overdose deaths, adverse reactions, and related incidents
  - Informs public health education and interventions
- Monitors drug supply before health outcomes are observed
- Provide access to tailored harm reduction messaging for PWUD



Wallace, B., van Roode, T., Pagan, F. *et al.* The potential impacts of community drug checking within the overdose crisis: qualitative study exploring the perspective of prospective service users. *BMC Public Health* **21**, 1156 (2021).

Drug Checking Technologies

Fourier-Transform Infrared (FTIR) Spectroscopy

- Works by shining infrared light at a sample and measuring how the light is absorbed
- Commonly used chemical analysis
- Can detect up to 6 components in drug samples, including cuts or buffs
- Detection limit of ~5%, substances in small amounts may not be detected

Immunoassay Strips

- Should always be used in combination with FTIR because substances can be toxic below the 5% detection limit
- **Fentanyl test strips**
  - Determine presence or absence of fentanyl in a drug sample
  - Highly sensitive – detection limit 20ng/mL
- **Benzodiazepine test strips**
  - Determine presence or absence of benzodiazepine in a drug sample
  - Sensitive to some analogues, but not all – detection limit ~300 ng/mL

FTIR & Immunoassay Strips

What these technologies **can** tell you:

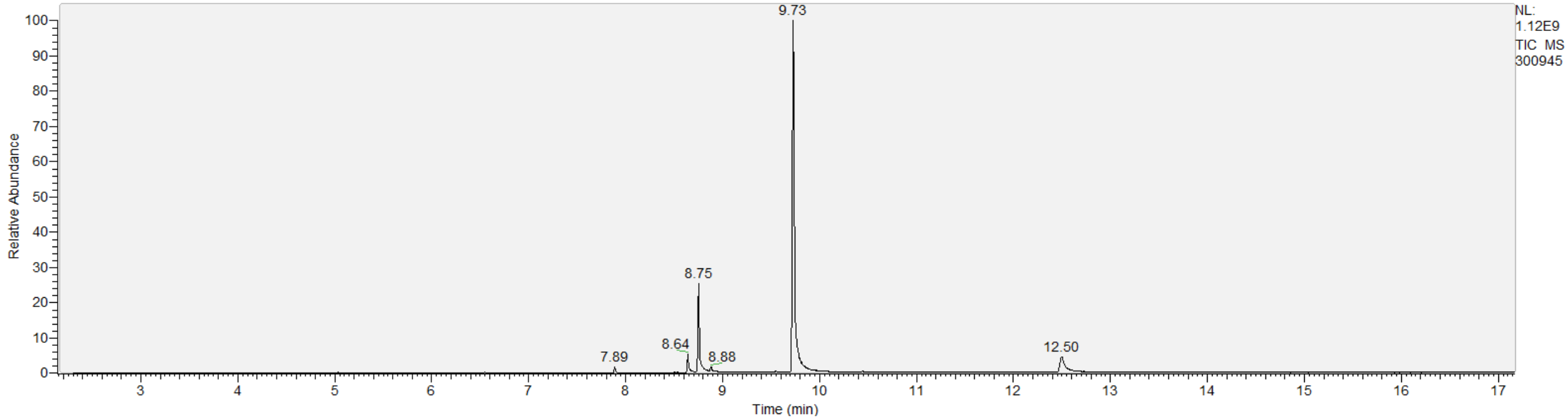
- Up to 3-4 different components in a mixture and approximate proportions
- Other drugs and cutting agents that may be mixed or used as a filler
- Immunoassay strips: whether fentanyl and/or benzodiazepines are present in a sample

What these technologies **cannot** tell you:

- FTIR cannot detect substances present below 5%
- Exact percentages in a mixture
- Cannot always differentiate specific substances with similar chemical make-up (e.g. fentanyl analogues, cathinone analogues, etc)

Confirmatory/Secondary Testing

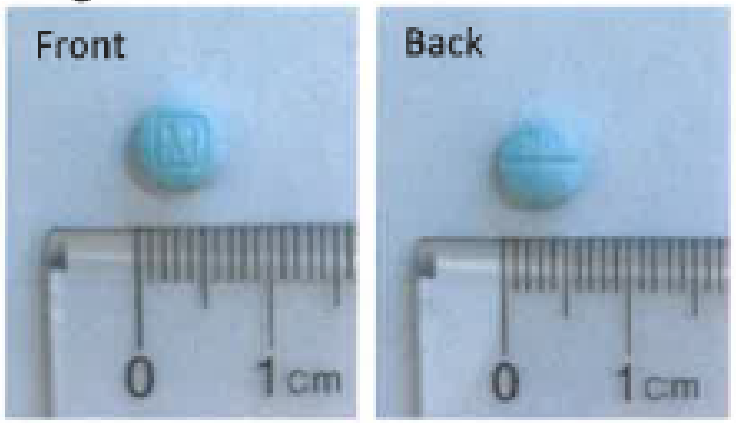
- Confirmatory testing
  - Use of advanced technology to confirm FTIR and immunoassay strips
  - Gas chromatography-mass spectrometry (GC-MS)



GC-MS results for a sample collected containing fentanyl, 4-ANPP, phenethyl 4-ANPP, and N-propionyl norfentanyl

Quantitative Example from King County, WA

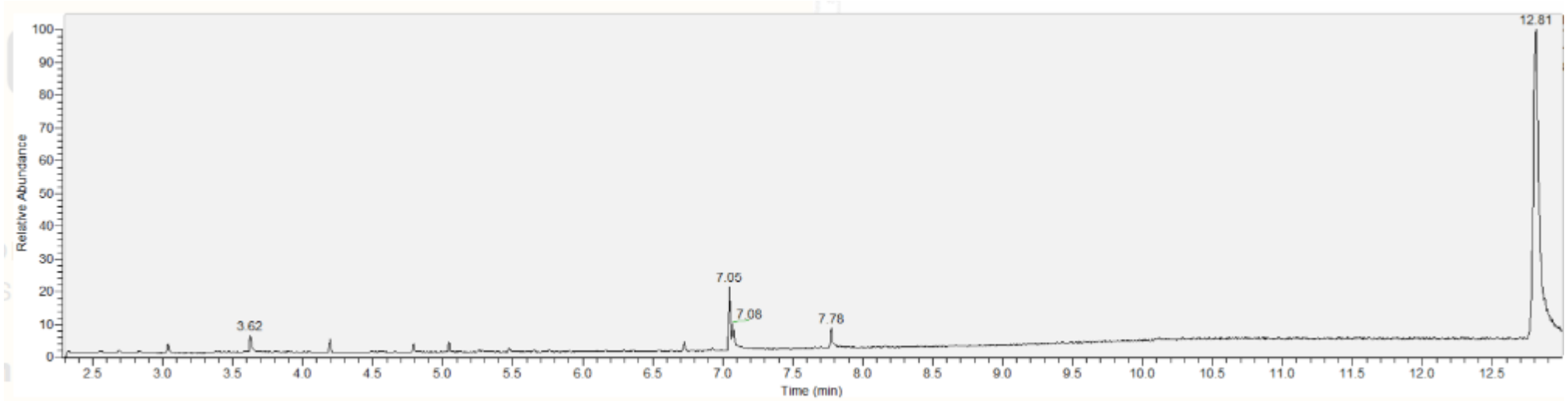
Drug Product ID: DEA-2022-738-220414-WA-98133-003-T1
Description: Blue tablet with "M" and "30" markings.
TOTAL WEIGHT OF EXHIBIT: 107.6mg tablet
Image:



Analytical Results:

Confirmed Drug	Percentage within Drug Product	Actual Amount within Drug Product	Total Weight of Exhibit
Acetaminophen	38.9% (389mg/g)	42mg	107.6mg
Fentanyl	1.4% (14mg/g)	1.5mg	
4-ANPP	0.39% (3.9mg/g)	0.42mg	
Acetyl Fentanyl	0.0013% (0.013 mg/g)	0.0014mg	

Qualitative Example from King County, WA



From Seattle, Washington on 12/9/2022
Assumed to be benzodiazepine

2 major substances detected:

- **bromazolam**
- **methamphetamine**

Looks = green pill

Implementation of Drug Checking at Community Programs

Drug Checking Service Models

- Point of care
  - Fixed site
  - Mobile services
- Pop-up/Event based
- Mail-based

Support Needed for Implementation

- Funding support
- Staff
  - Drug checking technician
  - Onsite support staff
  - Management
- Training
  - Technician/technical
  - Harm reduction principles & communication
- Existing programmatic infrastructure

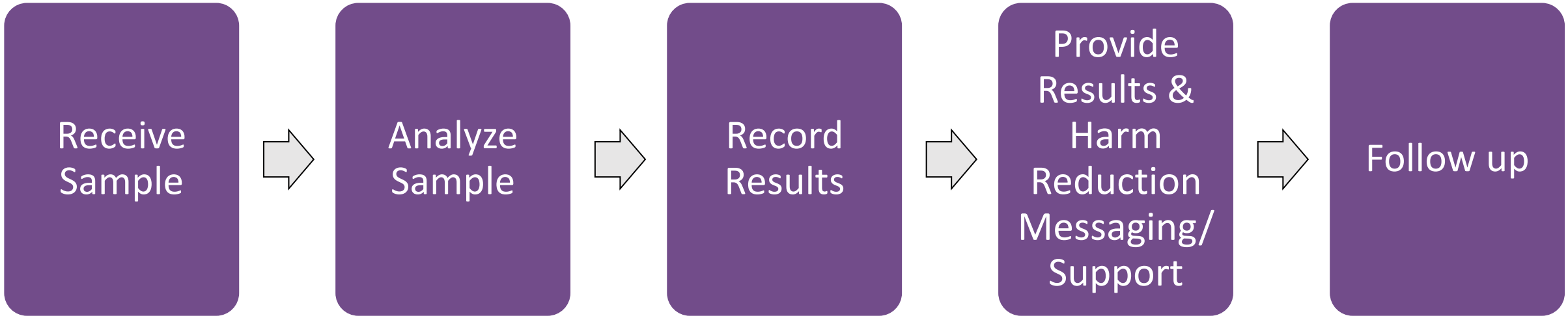
Key Competencies for Technicians

- Computer skills
- Analytical skills
- Communication skills
- Harm reduction skills
- Self-care

Technician Training

- History of drug checking
- Drug checking as a harm reduction tool
- Immunoassay strip use & limitations
- FTIR: what it is, how it works, limitations
- FTIR operational procedures
- Software use & spectrum analysis
- Data recording
- Complete drug checking process

Drug Checking Workflow



Beyond Drug Checking

- Added service to existing comprehensive harm reduction organizations
- Programs offer:
  - Safe use supplies
  - HIV, Hep C and infectious disease testing and treatment
  - Naloxone access
  - Linkage to medication for opioid use disorder
  - Wound care services
  - Access to other supportive services: housing, insurance enrollment, food pantry, primary health care, etc.

Beyond Drug Checking, cont'd

- Results from project will be shared broadly to public health and harm reduction partners to inform targeted interventions and education

Thank you!

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