WHAT IS SUBSTANCE USE MODELING?

1

Audience
People with lived and living experience of substance use and people working in community organizations.

Goal
Explain what substance use modeling is and how it can inform policy in a simple, digestible way.

This will help us develop modeling projects informed by the community.

2

Modeling is a way to make educated guesses about what would happen if we made different decisions.

3

We use mathematics to predict how interventions or policies could work in many communities with different substance use experiences.
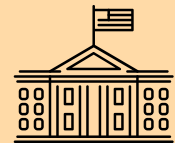
4

We can model a lot of different outcomes and different levels:

Local   **State**   **National**

5

Substance Use Modeling Can:

✓ **Project the future**: Project experiences of substance use, overdose, and health.

✓ **Compare interventions**: Assess how interventions work in individuals and communities.

✓ **Study policies**: Explore how changes in government policies can affect people who use drugs.

✓ **Promote well-being**: Highlight differences in health and identify ways to improve outcomes for all.

6 Examples of Substance Use Modeling:

✓ Overdose prevention centers can save money or are a good investment in the U.S. and Canada.[1]

✓ For example, in San Francisco, Los Angeles, and San Diego over the next ten years these centers could prevent...

18% - 32%
of new HIV infections among people who inject drugs and

24% - 30%
of new HCV infections among people who inject drugs.[2]

[1]Behrends et al. Value Health 2024;27(5):655-669.
[2]Killion et al. Int J Drug Policy 2024;132:104557.

More Examples:

In British Columbia, Canada, naloxone kits, overdose prevention sites, and medications for opioid use disorder prevented

3,030
overdose deaths in 2016/17.[3]

[3]Irvine et al. Addiction 2019;114(9):1602-1613.

In North Carolina, providing buprenorphine to people who could receive Medicaid if expanded would prevent
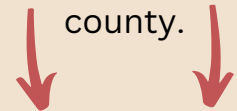
1,704
overdoses yearly and save the state **$224** million over 5 years.[4]

[4]Berghammer et al. Drug Alcohol Depend Rep 2024;12:2772-7246.

In New York, programs to increase naloxone distribution and buprenorphine availability need to be tailored for the county.

a one size fits all approach is **not** as effective.[5]

[5]Cerda et al. Epidemiology 2024;35(3):418-429.

7 How is this Modeling used?

➜ **Inform better policy decisions**

➜ **Make better budget decisions**

➜ **Advocacy**

8

Ultimately, substance use modeling can support making decisions that will improve the health of people who use drugs.