
Brain Injury, Overdose, and Harm Reduction

— Laura Bartolomei-Hill, LMSW —
September 24, 2018

Where I'm coming from

I am currently a social worker in two settings:

- Inpatient Psychiatry Department at the University of Maryland Medical Center - Midtown Campus
- Desi's Place, an outpatient harm reduction-based suboxone program

Previously worked in the Office of Overdose Prevention at the Maryland Department of Health studying overdose trends across the state

Completed six months of outpatient concussion treatment for a sports-related brain injury in college

Big fan of Iowa

Values Clarification

Individual choice and self-determination are important to center in the treatment of brain injury and/or substance use.

1. YES
2. I think so.
3. I'm not sure
4. I think no.
5. Definitely not

Definitions

Opioids

Natural or synthetic drug containing opium (or a by-product of opium):

- Used to manage pain, suppress cough, feel high (euphoria, detachment)
- Includes prescription medications and illegal drugs
- Can suppress respiration

Can come in the form of a pill, capsule, powder, or liquid and can be snorted, smoked, injected, or swallowed.

Fentanyl is a powerful synthetic opioid that is often sold as heroin and has driven the opioid overdose rate

Opioid Overdose

A negative health event directly caused by taking too great an amount of an opioid or opioids, alone or in combination with other substances.

Opioids can suppress the the urge to breathe.

- Suppressed respiration can lead to to unconsciousness, coma, brain injury, and death
- Lack of oxygen leads to the skin and mucus membranes turning blue/pale
- Surviving an overdose depends on restoring respiratory function and getting enough oxygen (naloxone, rescue breathing)

Acquired brain injury

An injury to the brain that “occurs after birth”

- Traumatic brain injury
- Tumors
- Blood clots
- Strokes
- Seizures
- Toxic exposures (lead)
- Infections
- Lack of oxygen to the brain



What is a Traumatic brain injury?

“A TBI is caused by a bump, blow or jolt to the head or a penetrating head injury **that disrupts the normal function of the brain.** Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from “mild,” i.e., a brief change in mental status or consciousness to “severe,” i.e., an extended period of unconsciousness or amnesia after the injury.”
-CDC

Long-term symptoms

Emotional

- Depression
- Anxiety
- Loss of Interest
- Poor Motivation
- Inappropriate expression of anger
- Impulsivity
- Irritability
- Disinhibition
- Social challenge
- Emotional volatility

Cognitive

- Forgetfulness
- Inattention
- Difficulty Multitasking
- Difficulty thinking clearly
- Difficulty remembering new information

Sleep

- Sleep less than usual
- Sleep more than usual
- Trouble falling asleep

Physical

- Headaches
- Dizziness
- Balance problems
- Feeling tired
- Sensitivity to noise or light
- Nausea

Overdose

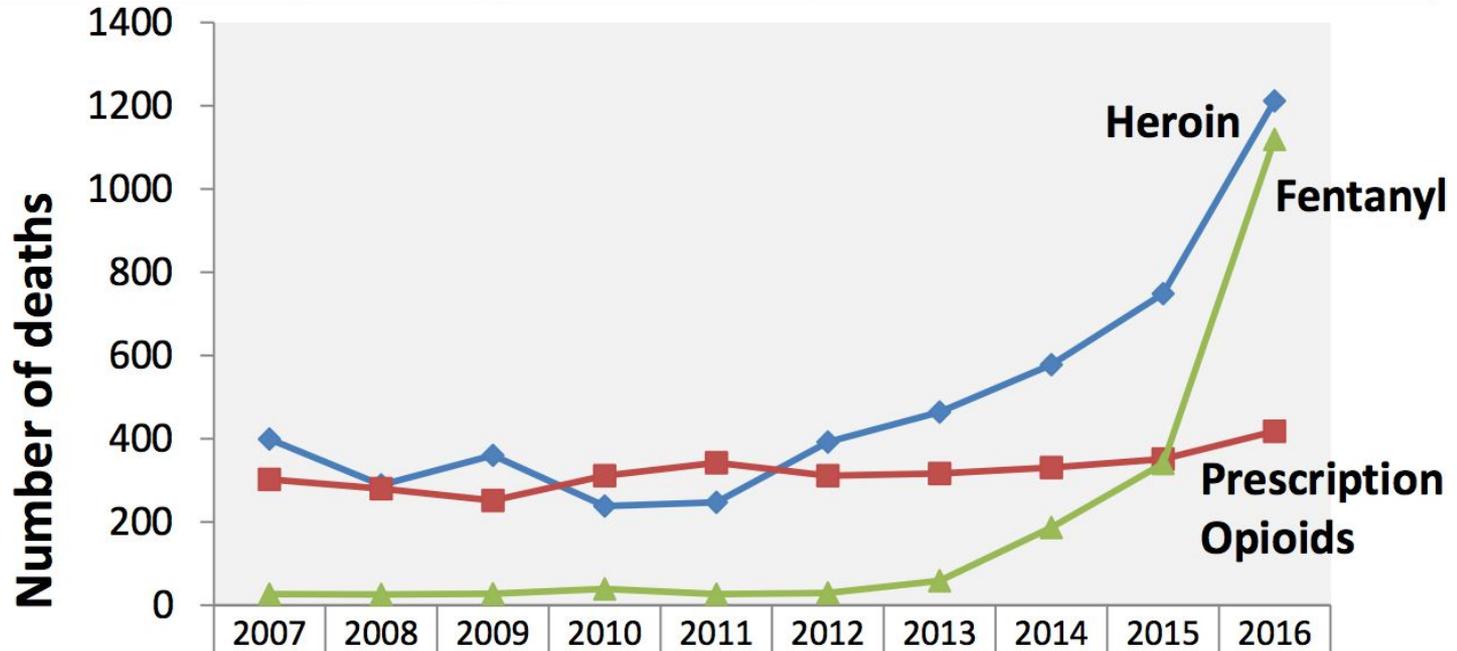
Overdose deaths are on the rise across the country

More than 42,000 people died from overdoses involving opioids in 2016.

Overdose deaths from opioids have increased by more than 5 times since 1999.

Fentanyl, a powerful synthetic opioid, and its analogs, have changed the heroin supply, particularly in places where white powdered heroin is more common (midwest, east coast).

Figure 7. Number of Opioid-Related Deaths Occurring in Maryland by Substance, 2007-2016.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Heroin	399	289	360	238	247	392	464	578	748	1212
Prescription opioids	302	280	251	311	342	311	316	330	351	418
Fentanyl	26	25	27	39	26	29	58	186	340	1119

*Total opioids include heroin, prescription opioids, and illicit forms of fentanyl.

Overdose Fatality Review Findings in MD

Between 2015-2016 Local Overdose Fatality Review Teams in Maryland found:

- *Mental Health Comorbidity:* In 40.4% of cases, a mental health diagnosis and/or engagement in mental health services was identified
- *Previous overdose:* In 23.4% cases reviewed, teams found evidence of a one or more previous nonfatal overdoses
- *History of traumatic brain injury:* Six local teams noted history of traumatic brain injury as an important attribute in death reviews
- Other common findings: History of homelessness, history of incarceration

Intersections

- 1) People with a history of acquired brain injury may struggle in traditional substance use treatment settings, which may put them at risk for overdose
- 2) Individuals surviving an opioid overdose may sustain an acquired brain injury through one or multiple overdoses.

Individuals with co-occurring brain injury and SUD may struggle to abstain from drugs, even when abstinence is their goal.

Individuals with co-occurring brain injury and SUD may struggle to adhere to treatment rules.

Individuals with co-occurring brain injury and SUD may choose to use drugs recreationally or to relieve pain.

Individuals with co-occurring brain injury and SUD should have access to resources to use drugs more safely, to treatment programs that accommodate their individual needs, and to health care providers who meet people where they are.

Harm Reduction

A definition for Harm Reduction

Harm Reduction is a set of practices that help people behave safely while also shifting systems and environments to be safer. Harm Reduction recognizes that society, and the systems within, have historically put people who use drugs and/or engage in sexwork in more harm through oppressive policy and stigmatizing culture.

- *Baltimore Harm Reduction Coalition*

Harm Reduction Interventions

- Needle exchange programs
- Naloxone and overdose prevention trainings
- Supervised Consumption Spaces
 - Spaces where individuals consume drugs (purchased outside)
 - Over 100 facilities around the world, none in the US
 - No fatal overdose has ever been reported in an SCS around the world
 - Reduce public drug use, connect people to treatment, reverse overdoses

Harm Reduction Approach - Desi's Place

Success is measured by *individual growth*, not by urine tox screen results.

We create a culture of honesty and safety by not penalizing or punishing drug use.

We have honest conversations with our clients about how to prioritize safety in their drug use.

Individualized accommodations for those with brain injuries

All therapy groups are encouraged, but voluntary.

Co-prescribing naloxone

Make an Overdose Prevention Plan

Risk factor	Possible Intervention
Using after a period of abstinence (due to relapse or exit from a hospital or correctional institute)	<i>Start Low, Go Slow!</i> Use a test shot to gauge tolerance
Unknown potency of product due to fentanyl	Fentanyl test strips, Familiarity with seller
Mixing substances - mixing opioids with benzos can increase OD risk	Understand how the substances interact and use one substance at a time
Using alone	Don't lock the door, make sure family or friends have naloxone
History of overdose	Assess and treat comorbidities, use less

Creating a less harmful environment

How are your programs addressing the policies and system-level factors that affect individuals with brain injury and SUD?

Homelessness?

Drug criminalization and mass incarceration? Impact on families?

Access to health insurance?

Lead poisoning and safe housing?

Non-stigmatizing and inflexible health care?

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