HOW DID I GET HERE?

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CONFLICTS OF INTEREST

none

LEARNING OBJECTIVES

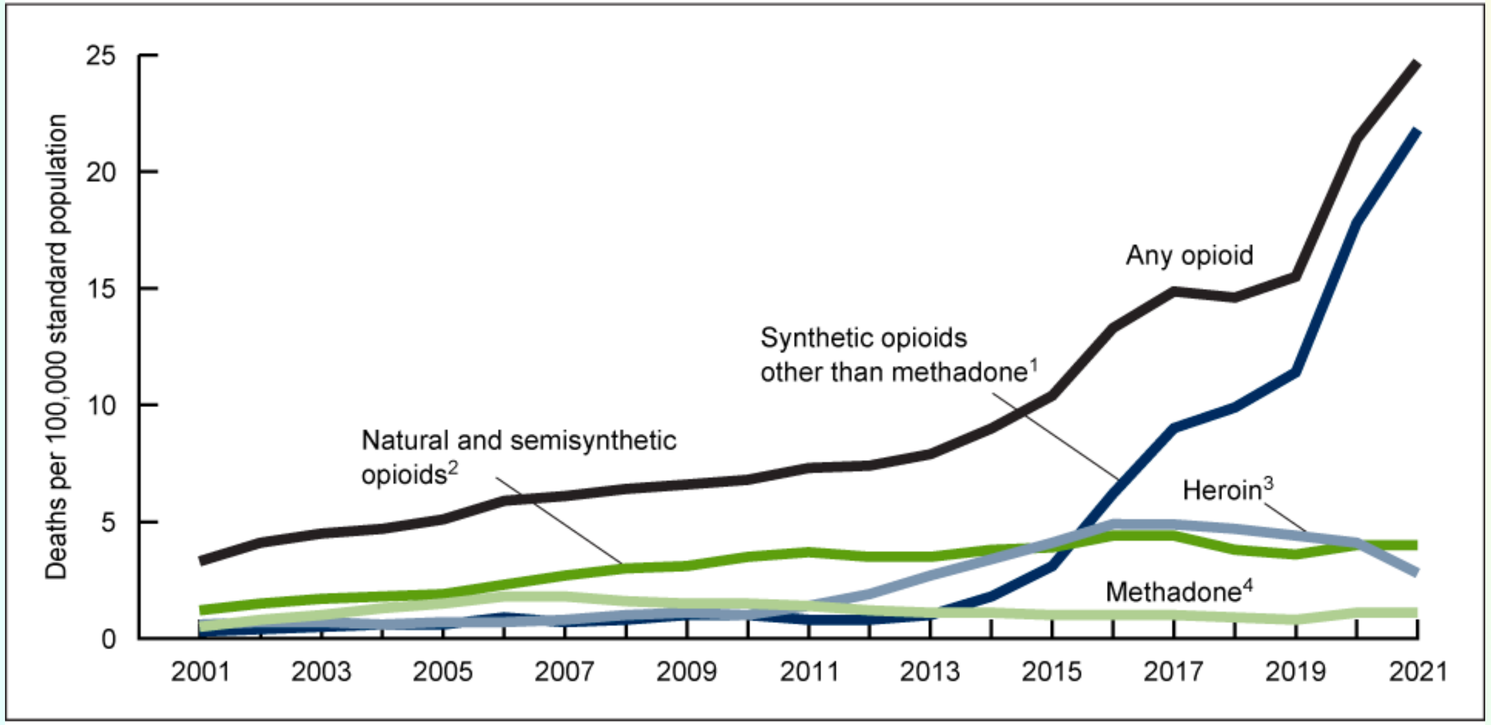
1.Understand the reluctance to practice Addiction Medicine
2. Learn to struggle with the principles of harm reduction
3.Understand the risks of injection drug use
4.Identify the range of clinical interventions, including vaccines, medications (such as PrEP)
5.Recognize methods used to inject drugs, and how to counsel PWIDs about risk mitigation opportunities
6.Understand how to incorporate HR and Addiction Medicine into an Internal Medicine practice

DARKEST PERU

MOTHER/DAUGHTER SCREEN AND VACCINATE COMMUNITY PARTICIPATORY HPV RESEARCH

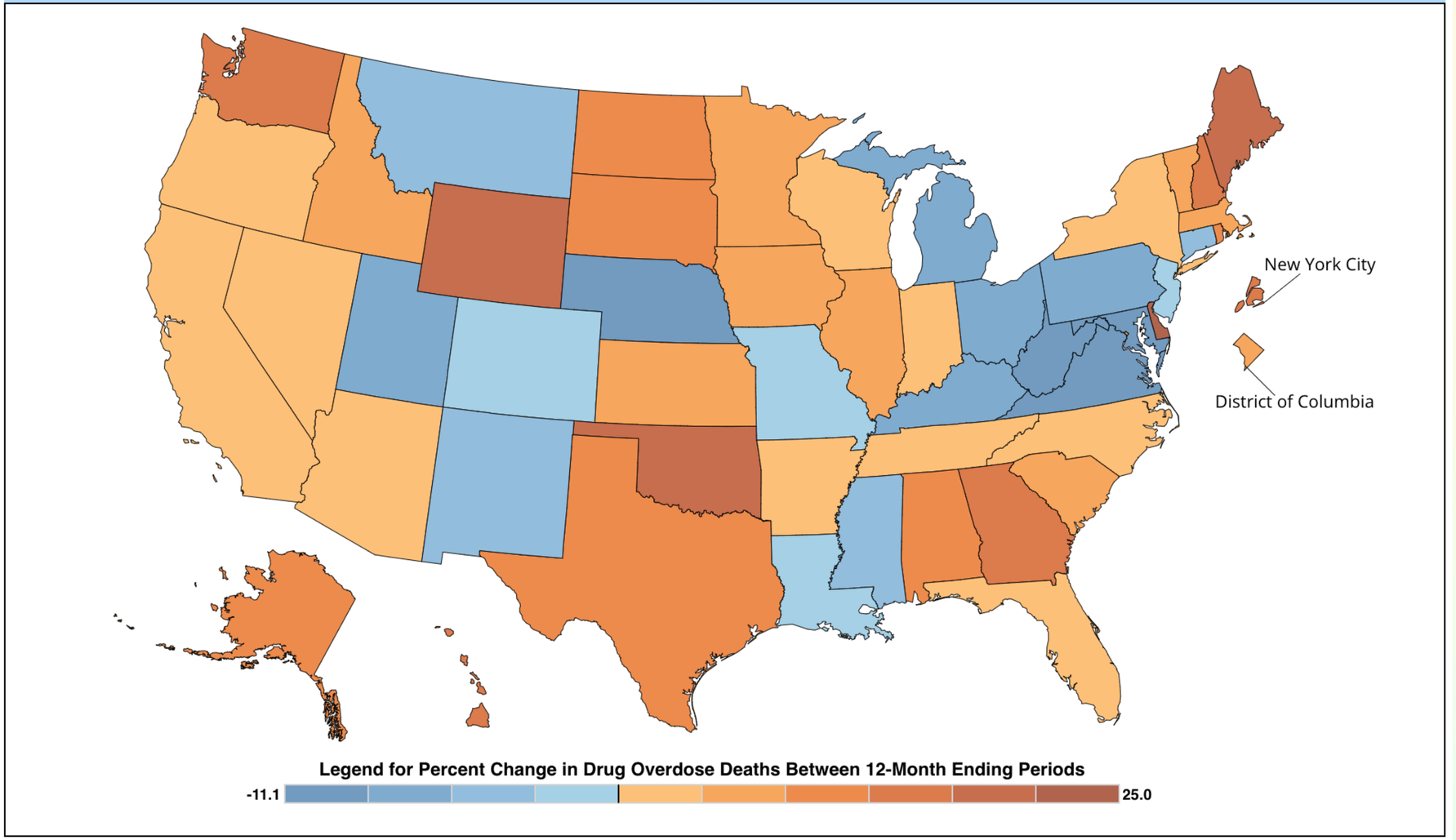
SUBSTANCE USE DISORDER- SCOPE OF THE PROBLEM FOR OPIOIDS

Figure 4. Age-adjusted rate of drug overdose deaths involving opioids, by type of opioid: United States, 2001–2021



[1]Significant increasing trend from 2001 through 2021 with different rates of change over time, $p < 0.05$.
[2]Significant increasing trend from 2001 through 2010, then stable trend from 2010 through 2021, $p < 0.05$.
[3]Significant increasing trend from 2001 through 2015 with different rates of change over time, stable trend from 2015 through 2019, then significant decreasing trend from 2019 through 2021, $p < 0.05$.
[4]Significant increasing trend from 2001 through 2006 with different rates of change over time, significant decreasing trend from 2006 through 2019, then stable trend from 2019 through 2021, $p < 0.05$.
NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Among these deaths, the following ICD–10 multiple cause-of-death codes indicate the drug type(s) involved: T40.0–T40.4, T40.6, any opioid; T40.1, heroin; T40.2, natural and semisynthetic opioids; T40.3, methadone; and T40.4, synthetic opioids other than methadone. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Deaths involving more than one opioid category (a death involving both methadone and a natural or semisynthetic opioid, for example) were counted in both categories. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, ranging from 75% to 79% from 2000 through 2013 and increasing from 81% in 2014 to 95% in 2021. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db457-tables.pdf#4.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality File.

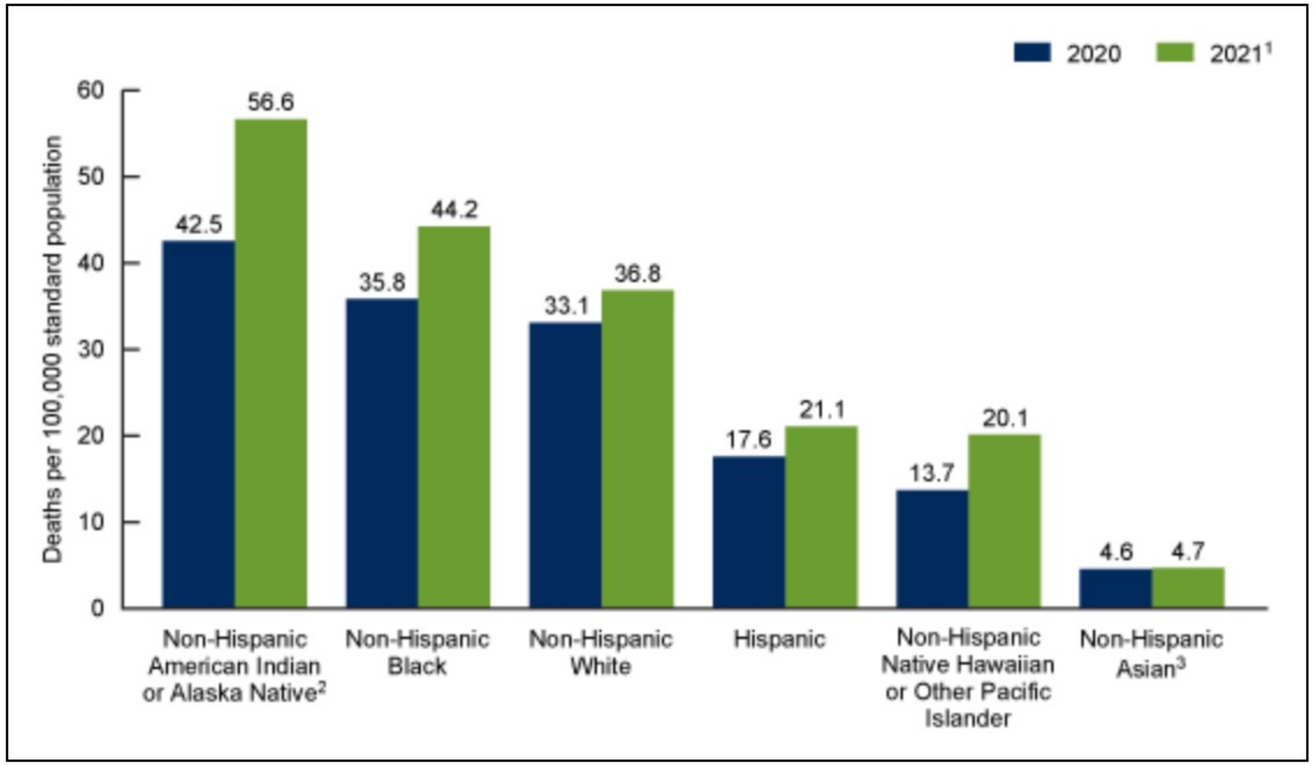
Figure 1b. Percent Change in Predicted 12 Month-ending Count of Drug Overdose Deaths, by Jurisdiction: September 2021 to September 2022



HTTPS://WWW.CDC.GOV/NCHS/NVSS/VSRR/DRUG-OVERDOSE-DATA.HTM (NEW MEXICO: PREDICTED DEATHS 983, PRECENT CHANGE -5.2% BUT UNDER REPORTED, MASS: 2645, +5.29%)

NON HISPANIC AMERICAN INDIAN OR ALASKA NATIVE PEOPLE HAD THE HIGHEST DRUG OVERDOSE DEATH RATES IN BOTH 2020 AND 2021

Figure 3. Age-adjusted rate of drug overdose deaths, by race and Hispanic origin: United States, 2020 and 2021



[1]Except for non-Hispanic Asian people, rates in 2021 were significantly higher than in 2020 for all race and Hispanic-origin

HIV AND HPV

DUKE, BOSTON , BROWN, PERU!

MGH CHARLESTOWN

POPULATION 19,000

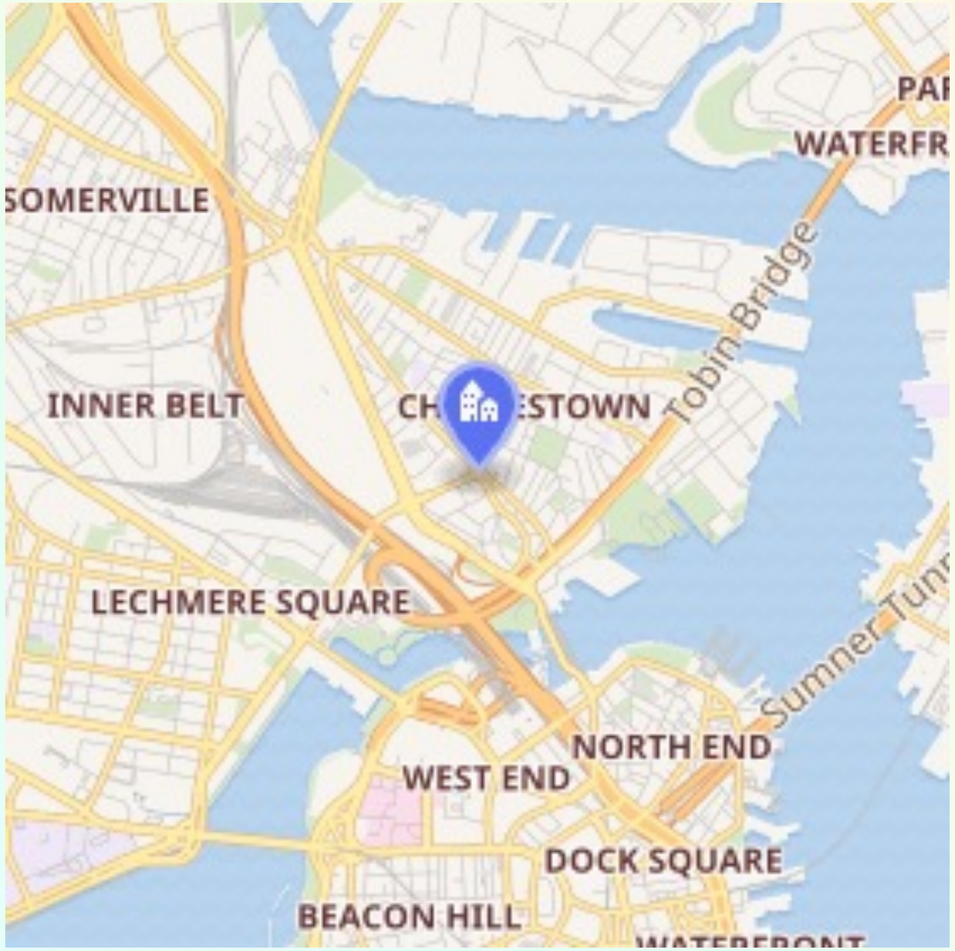
cancer, heart disease, diabetes, and other chronic diseases are drivers of mortality in Boston

MISHAWAM - 1623

SACHEM WONOHAQUAHAM

significant racial and ethnic disparities in these conditions

Charlestown (758.2) > Boston’s age-adjusted mortality rate per 100,000 (702.5)



DISPARITIES IN HOUSING

THE CASE

Miguel: 56 Spanish speaking man with tobacco use disorder, chronic back pain, and opioid use disorder

- returns to care after 1 year absence. Was stable on buprenorphine 8 mg BID but relapsed upon return from PR
- BP elevated to 186/88, not on his regimen of nifedipine, HCTZ, lisinopril. Reports CP, recently. ECG with Q wave concerning for ? Previous infarct
- Injection site with warm 4 cm area of induration without fluctuance on RUE
- Very antalgic gait with a cane

WHAT IS HARM REDUCTION

SAMSA

*emphasizes engaging directly with people who use drugs to prevent overdose and infectious disease transmission, improve the physical, mental, and social wellbeing of those served, and offer low-threshold options for accessing SUD treatment and other health care services

* important part of the Biden-Harris Administration’s comprehensive approach to addressing SUD through prevention, treatment, and recovery where individuals who use substances set their own goals.

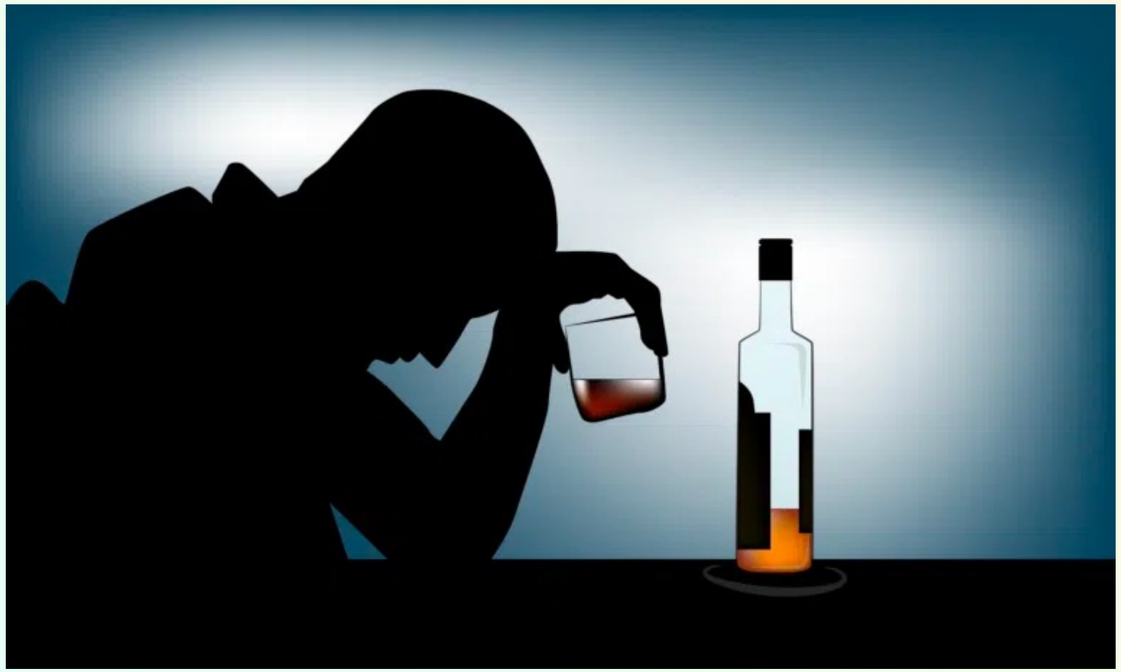
* Harm reduction organizations incorporate a spectrum of strategies that meet people “where they are”

* works by addressing broader health and social issues through improved policies, programs, and practices.

HTTPS://WWW.SAMHSA.GOV/FIND-HELP/HARM-REDUCTION

HARM REDUCTION DOES NOT…

MINIMIZE THE REAL AND TRAGIC HARM ASSOCIATED WITH DRUG OR ALCOHOL USE



NOT ALL USE IS SUD

DSM5 Criteria for Substance Use Disorder (based on the last 12 months):	
Control Issues	
Taking substance in larger amounts or over a longer period than intended	
Persistent desire or unsuccessful effects to cut down or control use	
Spending a great deal of time on on activities necessary to obtain, use, or recover from the effects of the substance	
Consequences of Use	
Recurrent use resulting in failure to fulfill major role obligations at work, school or home	
Giving up or reducing important social, occupational or recreational activities because of ongoing use	
Recurrent use despite social or interpersonal problems caused or exacerbated by effects of use	
Recurrent use despite knowledge of an ongoing or recurring physical or psychological problem that is likely either caused or exacerbated by the substance	
Recurrent use in physically hazardous situations	
Cravings	
Cravings (are there thoughts, emotions, feelings, people, places or things that bring on a strong desire or urge to use the substance)	
Physical Dependence	
Tolerance	
Withdrawal	
Total score = (2-3 mild disorder, 4-5 moderate disorder, 6+ severe disorder)	***

WHAT DO YOU DO WITH MIGUEL?

MANUEL, CONTINUED

2 WEEK FOLLOW UP

- reports no IV use for 3 days, however also reports the pharmacy did not dispense Bup.
- Referral to orthopedics for back pain
- Stress test still pending

HR: DOES IT WORK?

Prescription monitoring programs

–Paulozzi et al. Pain Medicine 2011

•Prescription drug take back events

–Gray et al. Arch Intern Med 2012; 172: 1186-87

•Safe opioid prescribing education

–Albert et al. Pain Medicine 2011; 12: S77-S85

•Opioid agonist treatment

–Clausen et al. Addiction 2009:104;1356-62

•Supervised injection facilities

–Marshall et al. Lancet 2011:377;1429-37

•Overdose Education and Naloxone Distribution

INJECTION USE

Item	Less safe	Safer
Syringe	New/Reused/Shared	New every time (pharmacy, SEP)
Cooker	Spoon, bottle cap, aluminum can	New (disposable) cookers
Water	Standing water, spit, tap water, toilet water (tank vs bowl), bottled water	Unopened, sterile water, boiled
Filter	Cigarette butt, lint, Q-tip, cotton ball, tampon	Prepackaged (dental) cottons
Tourniquet	Belts, socks, condoms, exam gloves	Rubber/latex straps
+/- Acid	Vinegar, lemon/lime juice, Kool-aid, Emergen-C	Vitamin C
Skin Cleaner	(none)	Alcohol pads
Heat		

Credit: Dr. Wei Sum Li and Dr. Dinah Applewhite

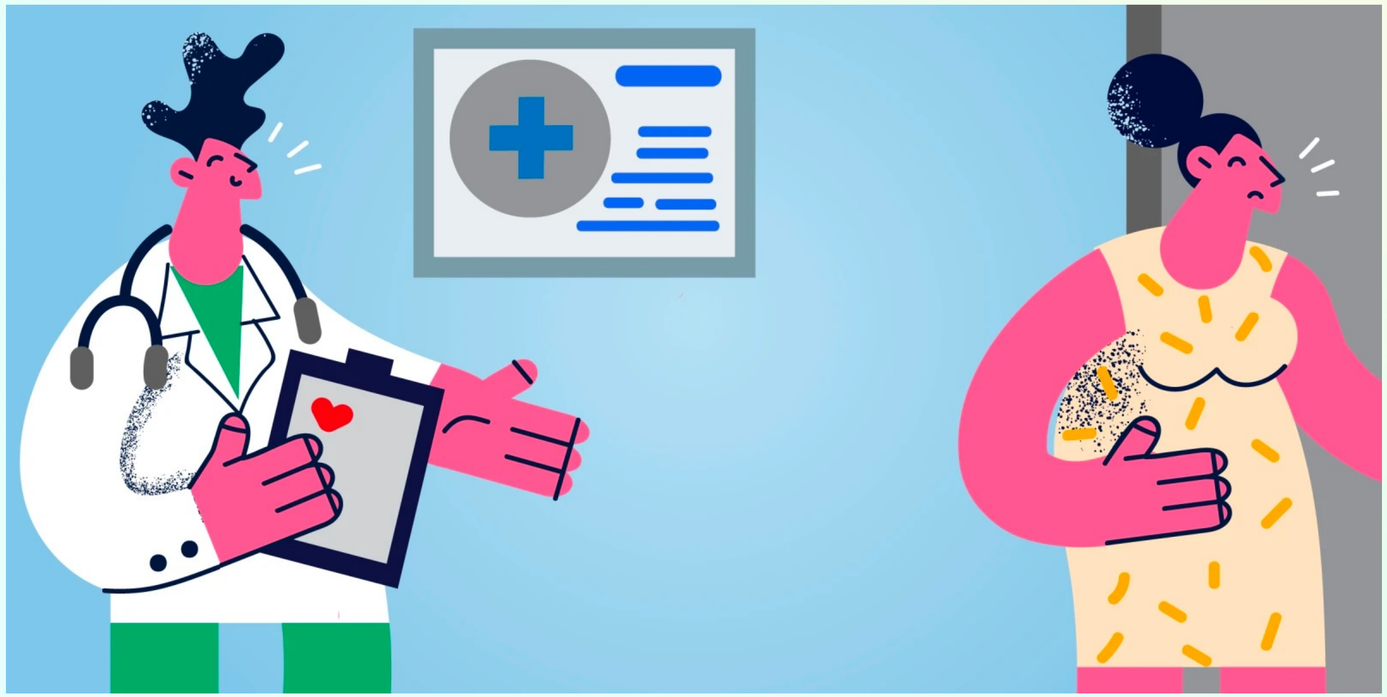
MANUEL

2 WEEK FOLLOW UP

- nurse Tracy!
- 10/10 CP starting at 1130 AM in the shower, took a SL nitro, aspirin, smoked a cig
- Presented to clinic where he was diaphoretic and grey
- EKG showed ST depressions in v4-6
- Transfer to ED

HOSPITAL COURSE

- Trop of 15-18.
- coronary CTA - CAD-RADS 4B/N - (3-vessel obstructive >= 70% disease with severe stenoses in mid LAD, first obtuse marginal, and proximal RCA. The coronary artery calcium score was 1515.
- left AMA.



WHAT DO YOU DO WITH MIGUEL?

MIGUEL RETURNS TO MGH

CAD
Cardiac catheterization- DES x 1 to LCx/OM; mod RCA, LAD, and prox Lcx lesions all iFR neg. plan for DAPT x 1 year.

Opiate Use disorder
ACT was consulted and he was started on methadone therapy. After further thought - he opted not to continue methadone maintenance, and this was weaned according to ACT recommendations. Pharmacy has provided for narcan to the bedside

Skin Abscess
Bilateral forearms with localized areas of induration with some small circular scab like areas. Skin is warm and fluctuant, but not erythematous. Afebrile. Dermatology was consulted - felt this was most consistent with bilateral abscesses although foreign body granuloma vs retained needle tip could not be ruled out. UE u/s showed extensive ill-defined subcutaneous edema in bilateral forearms, possible developing phlegmons, no drainable fluid.

FYI: Xylazine is being mixed with Fentanyl in MA

Xylazine:

is like clonidine but has more risks and is not made for humans.
It looks just like fentanyl and can't be tested for.

Effects:

- Pain Control
- Sleepiness/Hard to Move
- Feeling Relaxed

the more you use, the stronger it is

- Low body temperature
- Slower breathing
- Low blood pressure/dizziness

Tips on Xylazine

- **Start low, go slow.** It stays in the body for hours so doses can pile up, your high may last longer. Try not to use alone and be extra careful if you take clonidine.

- **Use naloxone (Narcan) & call for help.** Naloxone will treat fentanyl overdose but not xylazine. If somebody isn't waking up with naloxone they may need other medications to save their life.

- **Check your skin.** People who use xylazine may get more wounds, even in spots they don't inject. Care for wounds early.

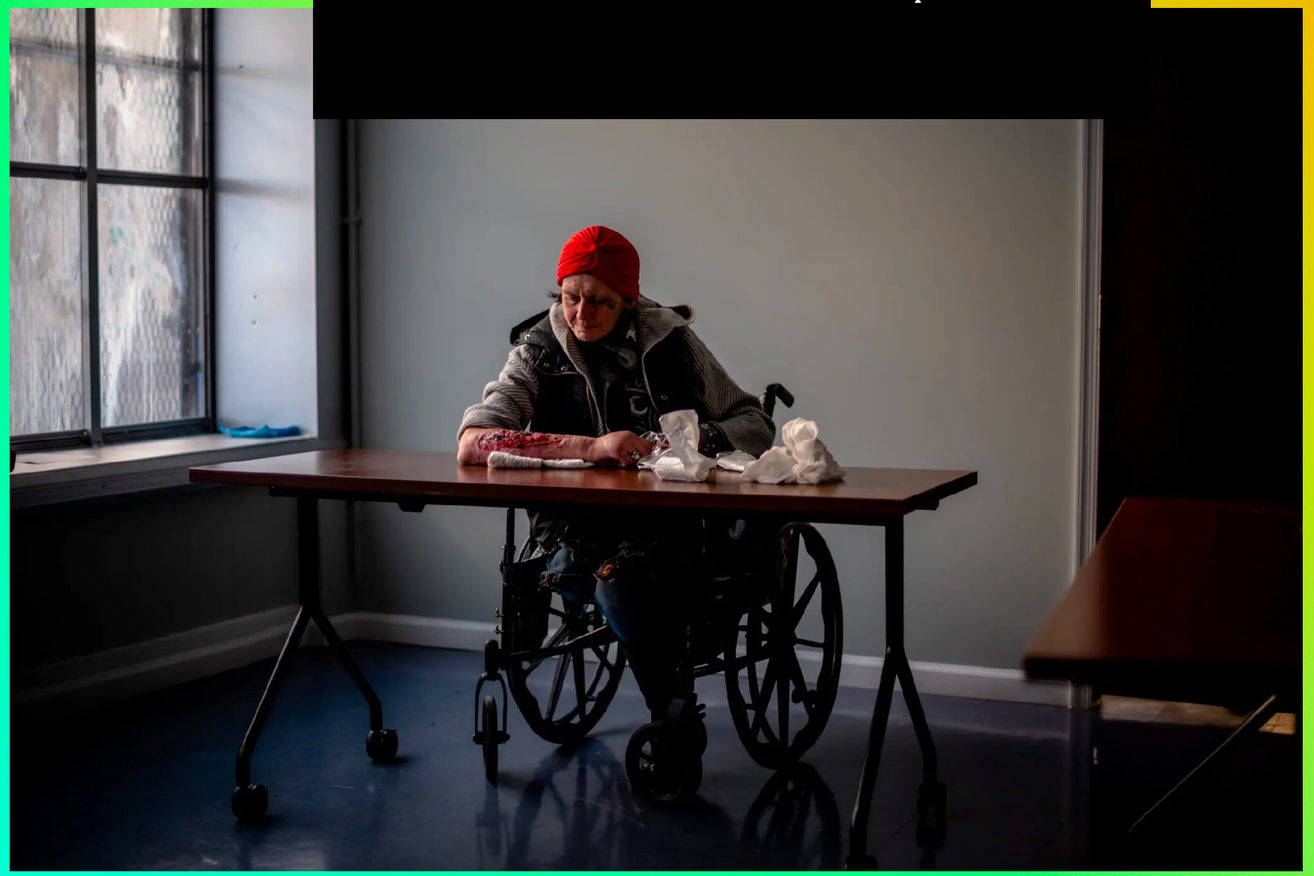
For more information or support around substance use contact:

- **AHOPE Needle Exchange,** 774 Albany Street, Boston; 617-534-3976
- **MGH Bridge Clinic,** Massachusetts General Hospital, 55 Fruit Street, Boston; 617-643-8281

The New York Times

Tranq Dope: Animal Sedative Mixed With Fentanyl Brings Fresh Horror to U.S. Drug Zones

A veterinary tranquilizer called xylazine is infiltrating street drugs, deepening addiction, baffling law enforcement and causing wounds so severe that some result in amputation.



POST HOSPITAL FOLLOW UP

1.Opioid dependence
2.He reports using IV fentanyl this morning to help alleviate his chronic back pain. Unfortunately he uses alone and declines the idea of using with someone else. Uses primarily for pain control.
3.Referred to orthopedics and PT.
4.Narcan sent to pharmacy.
5.Patient would like to start suboxone 2mg for MAT. Explained instructions for suboxone dosage and usage to patient. He will follow up with OBAT RN

NSTEMI/ hypercholesterolemia
Assessment and Plan:
At last visit, lipids were elevated. He reports no recent dietary changes.
1.continue to promote adherence to daily atorvastatin.
2.Repeated lipid panel today.
3.Advised d/c cigs- nicotine replacement prescribed

PEP vs PrEP

<72h since exposure

- PEP (post-exposure)
  - 3-drug regimen
    - Tenofovir disoproxil fumarate 300mg/emtricitabine 200mg (TDF/FTC Truvada) + Dolutegravir 50mg DTG Tivicay) x28 days

>10-14d since exposure

- PrEP (pre-exposure)
  - 2-drug regimen
    - Tenofovir disoproxil fumarate 300mg/emtricitabine 200mg (TDF/FTC Truvada) daily ongoing
    - Tenofovir alafenamide/emtricitabine (TAF/FTC) Descovy if eGFR 30-60

SUPERVISED CONSUMPTION SITES

AKA SUPERVISED INJECTION FACILITIES

3 decades of evidence in Canada and Europe:

Prevent overdose
Reduce in HIV and hepatitis C transmission
Reduce injection-related infection
Reduce public injections
Safe disposal of syringes
Increase access to medical and social services

SAFE INJECTION SITES

2021

no recorded deaths in supervised injection facilities in countries that permit them

evidence linking them to fewer overdose deaths and ambulance calls in their neighborhoods

No link between safe injection sites and the rates of various crimes

public drug use dropped off in some places.

Less than

10% of people

with past-year alcohol use disorder
receive any treatment.

Source: 2019 NSDUH

CORE IM

5 PEARLS

TREATING ALCOHOL USE DISORDER

throwback!

SCREENING: AUDIT-C

OFFER TO: everyone

WHAT: 3 questions to screen for unhealthy alcohol use:

- How often do you have any alcohol-containing drink?
- How many drinks at a time?
- How often do you have 6 or more drinks at a time?

1

SUPPORTIVE: NON-PHARMACOLOGIC OPTIONS AND SBIRT

OFFER TO: everyone with UAU/AUD

WHAT: a comprehensive menu of supportive care including:

- SBIRT/brief intervention
- 12-step groups
- peer support groups
- psychiatric support and counselling

2

FIRST-LINE: NALTREXONE ACAMPROSATE

NALTREXONE

WHAT: opiate receptor antagonist
STARTING DOSE: 50mg daily
USE CAUTION: cirrhosis
can precipitate opiate withdrawal

ACAMPROSATE

WHAT: NMDA/GABA neuromodulator
STARTING DOSE: 666mg TID
USE CAUTION: renal disease

3

SECOND-LINE: TOPIRAMATE GABAPENTIN

TOPIRAMATE

STARTING DOSE: 100mg BID
USE CAUTION: renal disease
SIDE EFFECTS: altered taste
mental fogginess
paresthesias

GABAPENTIN

STARTING DOSE: 300mg TID
USE CAUTION: renal disease
SIDE EFFECTS: drowsiness

4

NEW! PSILOCYBIN NALMAFENE DEEP BRAIN STIM

PSILOCYBIN

a psychedelic

use is currently under investigation in AUD, PTSD, and depression

NALMAFENE

κ opioid receptor antagonist in use in Europe

longer half life, better bioavailability than naltrexone

DEEP BRAIN STIMULATION

stimulation of the nucleus accumbens

decreases cravings and EtOH consumed

HR: ALCOHOL USE DISORDER

WHAT DOES NOT WORK

exclusively emphasizing abstinence and “educating students” about the evils of alcohol
at best, have no effect in reducing alcohol use and related consequences (Moskowitz, 1989)
Eg DARE

Clarification: HR is NOT anti- abstinence!

Neighbors C, Larimer ME, Lostutter TW, Woods BA. Harm reduction and individually focused alcohol prevention. Int J Drug Policy. 2006 Jul;17(4):304-9. doi: 10.1016/j.drugpo.2006.05.004. PMID: 17301880; PMCID: PMC1797804.
Clayton Neighbors, Mary E. Larimer, Ty W. Lostutter, and Briana A. Woods

HR: EVIDENCE IN AUD

implementation of screening and brief intervention in primary care and trauma settings is now a best-practice recommendation

5–10 min of physician advice regarding the risks of excessive consumption, guidelines for reduced-risk drinking, and strategies to avoid excessive drinking are associated with reductions in alcohol use and related harms in general medical populations (Kristenson, 1983; World Health Organization Brief Intervention Study Group, 1996; Bien, Miller, & Tonigan, 1993; Dunn, Deroo, & Rivara, 2001).

brief (i.e., 15 min) discussions with a PCP about alcohol consumption, risks, strategies to reduce consumption, and negotiation of goals for reduced-risk drinking not only resulted in significant decreases in alcohol use and related negative consequences amongst problem drinkers, but were also associated with significant cost savings with respect to utilization of other health care services as compared to a control. Fleming, Barry, Manwell, Johnson, and London (1997) and Fleming et al. (2000, 2002)

brief, motivational intervention to encourage reductions in alcohol use and related risky behaviors in an emergency room found that individuals in the intervention group reported reduced alcohol-related negative consequences, as well as reduced driving under the influence and risky driving behaviors, in comparison to controls (Monti et al. (1999)

ADVOCACY

CORONAVIRUS

I'm A Doctor, And I'm Losing Patients To A Deadly Side Effect Of The Pandemic

The restrictions imposed by COVID-19 have put the community of substance users under severe duress.

By Carolina Abuelo, MD, Guest Writer

May 15, 2020, 12:30 PM EDT | **Updated** May 15, 2020

FIZKES VIA GETTY IMAGES

In the last few weeks, I've lost two patients of mine at the primary care clinic in [redacted]ere I work as a physician. But I didn't lose them to COVID-

QUESTIONS?