

The Opioid Epidemic & SBIRT

Alicia Kowalchuk, DO, FASAM

TCHP Grand Rounds

November 17th, 2018

Baylor
College of
Medicine

Acknowledgements

BCM FASD Practice and Implementation Center

- Roger Zoorob, MD
- Sandra Gonzalez, PhD, MSW
- Mohamad Sidani, MD
- Susan Gardner Nash, PhD
- Luis O Rustveld, PhD
- Kiara K Spooner, DPH

CDC-RFA-DD14-1402

InSight SBIRT Residency Training Program

- James Bray, PhD
- Vicki Waters, MS, PA-C

Substance Abuse and Mental Health Services
Administration Grant Number UT79T1020247

Learning Objectives

- Discuss the epidemiology of opioid epidemic nationally and locally.
- Describe effective healthcare and public health responses to the opioid epidemic.

Terminology

AUD: alcohol use disorder

OOD: opioid use disorder

TUD: tobacco use disorder

SUD: substance use disorder

MAT: medication assisted
treatment

FASD: fetal alcohol spectrum
disorders

AEP: alcohol exposed pregnancy

SEP: substance exposed
pregnancy

TEP: tobacco exposed pregnancy

FAS: fetal alcohol syndrome

NAS: neonatal abstinence
syndrome

Houston is a Hub

Large quantities of narcotics come from the southern border area to Houston for transit to other areas nationwide.

Heroin

Methamphetamines

Cocaine

Marijuana

Synthetics (Opioids, Kush, Bath Salts)

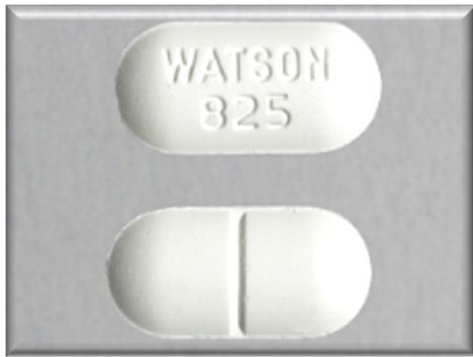
Drugs in Houston are cheap (compared to the rest of the country)

Houston has not experienced the tremendous number of heroin OD cases like in the northeastern states, but we have counterfeit prescription pills made with fentanyl (and everything else).

We are also flooded with diverted (but genuine) pharmaceutical pills.

We are just starting to see powdered fentanyl sold as heroin.

Where do we find fentanyl



Fentanyl....the game changer

- January 2017 HPD Narcotics Seized 1 kilo of fentanyl
- May 2017 Pasadena PD Narcotics seized 8 kilos
- July 2017 HPD Narcotics seized 3 kilos
- July 2017 HPD Narcotics seized 13 kilos

First time fentanyl really came on HPD radar:

December 22, 2015

Patrol officer asked for assistance from narcotics with a Hit and Run investigation.

10 grams of butyryl fentanyl (25,000 doses)

27 grams 25I-NBOMe (680 doses synthetic LSD)

1759 grams of alprazolam (7500 doses of Xanax)

1 stolen pistol, 1 machine gun, 2 warrants

2017 Fatal Overdoses in Harris County

- 252 Cocaine
- 147 Heroin
- 110 Methamphetamines
- 59 Fentanyl analogs
- 33 Methadone (3 no other drugs present)
- 23 Alcohol (with no drugs present)
- 29 PCP (10 with no other drugs present)
- 14 Tramadol
- 13 Promethazine
- 7 Freon/propellant (R-152a, also used in “canned air”)
- 6 Synthetic cannabinoids “Kush” (5 no drugs/alcohol present)
- 5 U-47700
- 4 Diphenhydramine (no other drugs/alcohol present)
- 3 Buprenorphine
- 3 acetaminophen (no other drugs/alcohol present)

Half of deaths due to overdose involve 2 or more drugs

Fatal Overdoses in Harris County

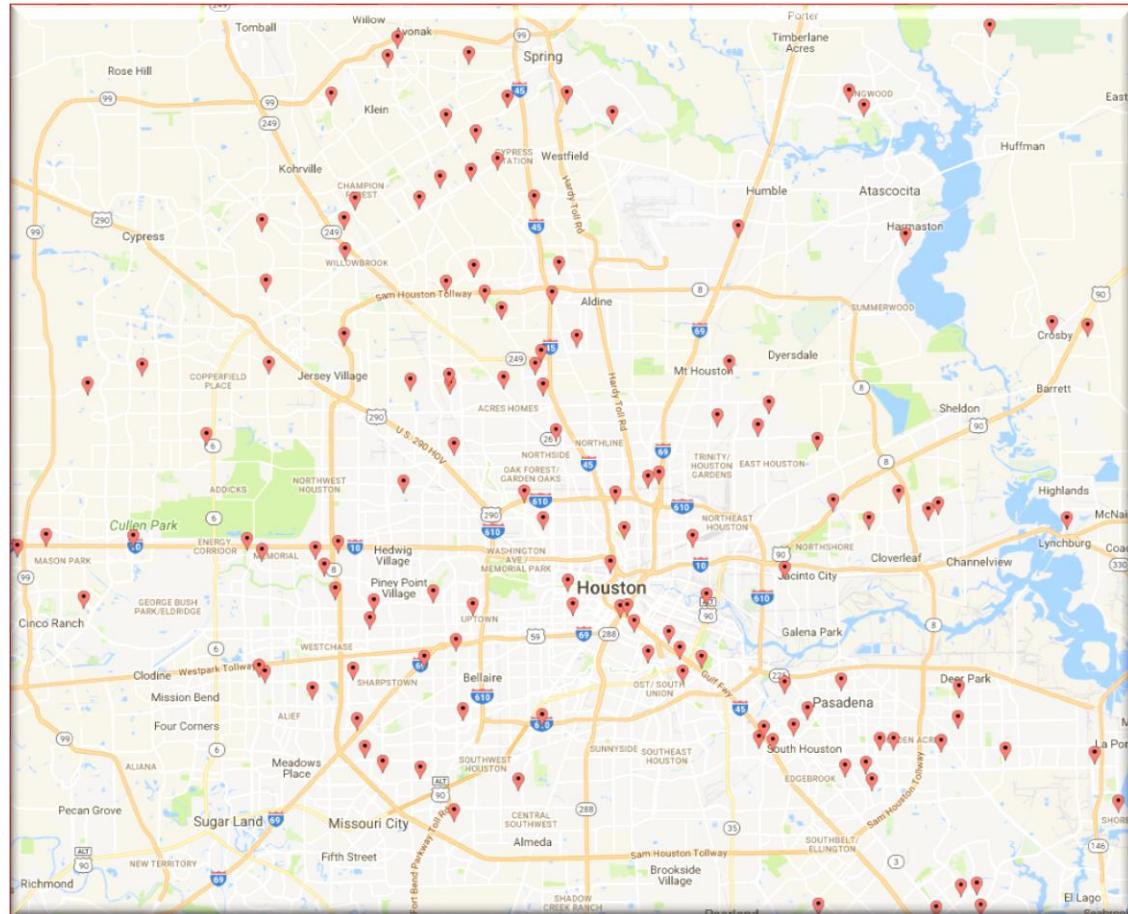
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Heroin	49	68	79	96	147
Fentanyl	19	17	16	25	59
All opioids	234	236	255	270	303
Cocaine	143	128	170	237	250

Half of deaths due to overdose involve 2 or more drugs

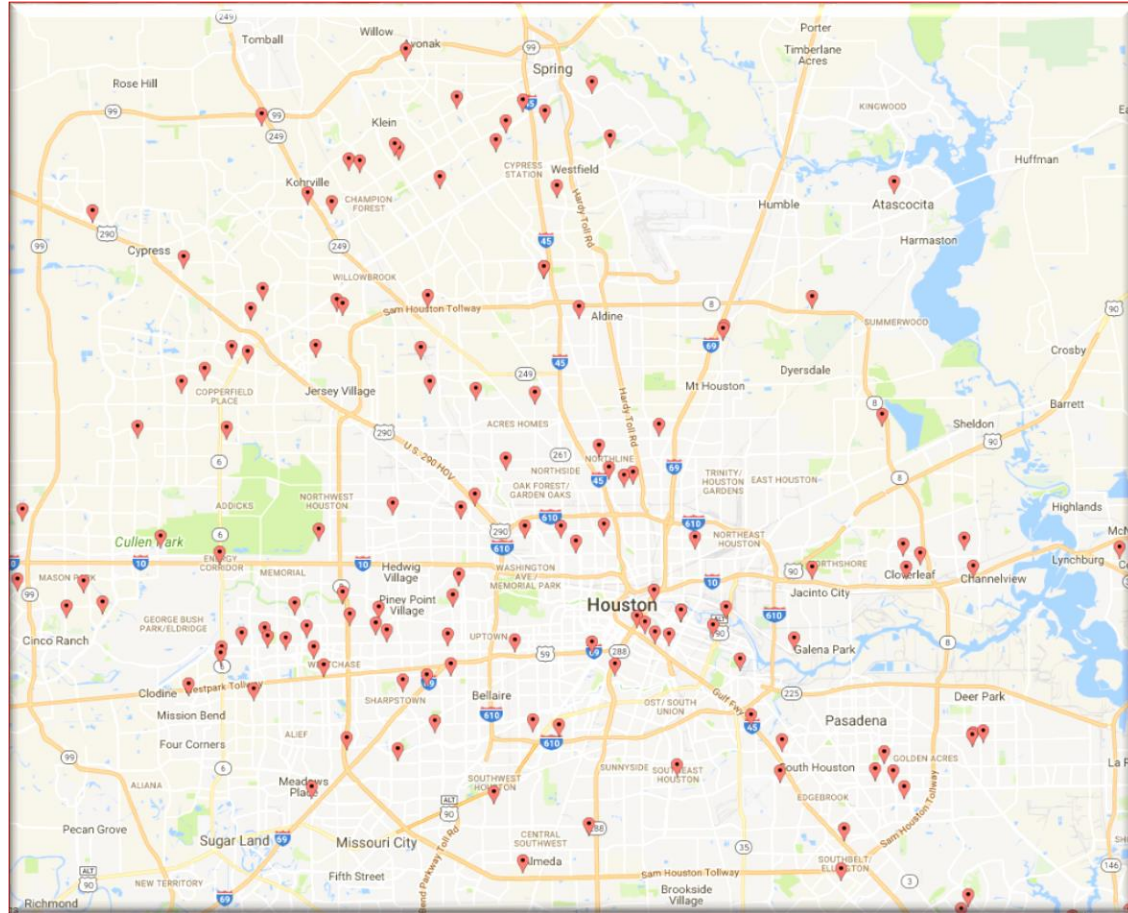
Multidrug toxicity is very common

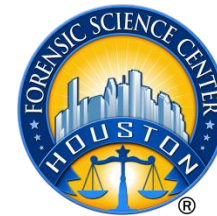
- 2-2-17 (WF 48) Drowning and combined toxic effects of ethanol, alprazolam, clonazepam, diazepam, temazepam, bupropion, methorphan, doxepin, fluoxetine, hydroxyzine, carisoprodol and oxycodone
- 2-19-17 (WF25) Combined drug toxicities, including alpha-pyrrolidinopropiophenone (synthetic cathinone), clonazepam, lorazepam, cocaine, etizolam, methamphetamine, methylenedioxymethamphetamine, furanylfentanyl, para-fluorobutyrylfentanyl/para-fluoroisobutyrylfentanyl, flubromazepam, delorazepam, and diclazepam
- 10-16-17 (HM 33) Combined alprazolam, cocaine, fentanyl, heroin, phencyclidine, methamphetamine, and tramadol toxicities

Fatal opioid OD's January – June 2017



Fatal opioid OD's July – December 2017

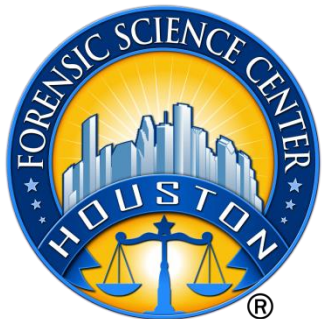
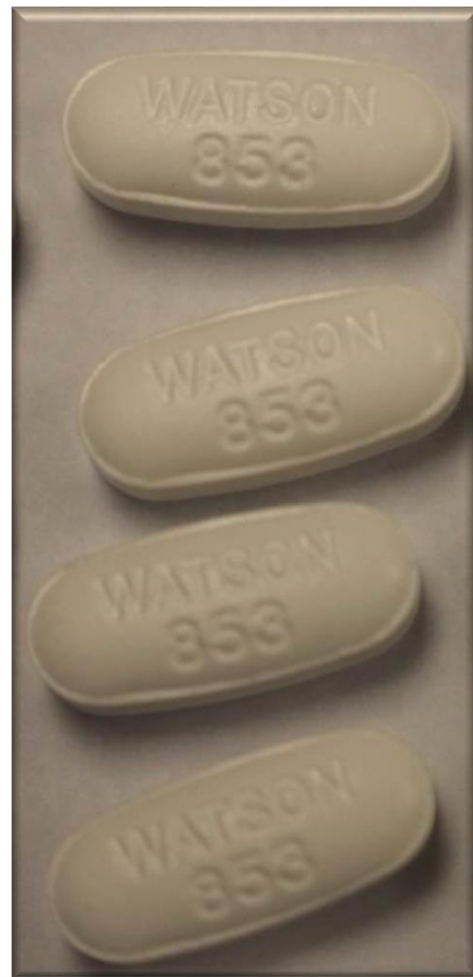




What we're seeing in Houston

powder (100 g)	U-47700	U-47700
tablets with A215 logo	oxycodone	Fentanyl
tablets with GG249 logo	alprazolam	Furanylfentanyl, U47700, U49900, MMB-CHMICA
crystalline powder (0.08 g)	meth / fentanyl	Carfentanil
white powder (2 g)	meth	Furanyl fentanyl
tablets with GG249 logo	alprazolam	U-47700
chunk substance/powder (40 g)	heroin	Heroin, fentanyl
tablets with V 4812 logo	oxycodone	Fentanyl, U-47700
tablets with V 4812 logo	oxycodone	Fentanyl, phenylfentanyl,U-47700
tablets with V 3601 logo	hydrocodone	U-47700
tablets with Percocet 10/325 logo	oxycodone	Fentanyl, phenylfentanyl
tablets with smudged logo	oxycodone	U-47700
tablets with G3722 logo	alprazolam	U-47700
bottle with liquid	heroin	Heroin, fentanyl
tablets with WATSON 853 logo	hydrocodone	Fentanyl
spoon with residue	heroin	cocaine, heroin, fentanyl
tablet with C230 logo	oxycodone	Methoxy PCP, alprazolam, methoxyacetyl fentanyl
tablets with R039 logo	alprazolam	Methoxy PCP, alprazolam, methoxyacetyl fentanyl
powder (0.60 g) ; syringe	fentanyl	Heroin,fentanyl
powder (0.34 g)	fentanyl	Fentanyl
powder (0.24 g)	heroin	Fentanyl
powder (0.62 g)	heroin	ANPP (fentanyl precursor)
tablets with C230 logo	oxycodone	U-47700
tablets with M30 logo	mdma	Fentanyl
powder (0.28 g)	heroin	Fentanyl

Recovered counterfeit drugs



Typical illicit pill operation



Typical illicit pill operation



Whatever you want them to be



Hydrocodone



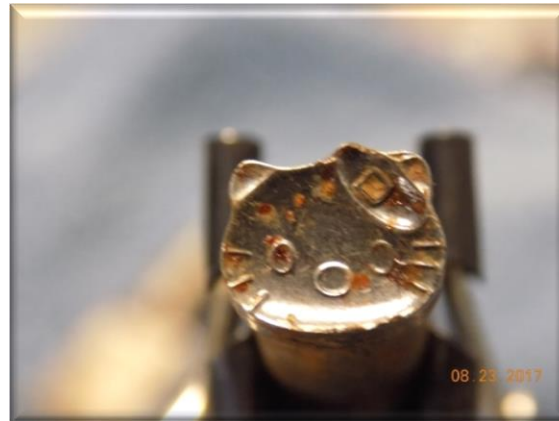
Assorted Rx drugs



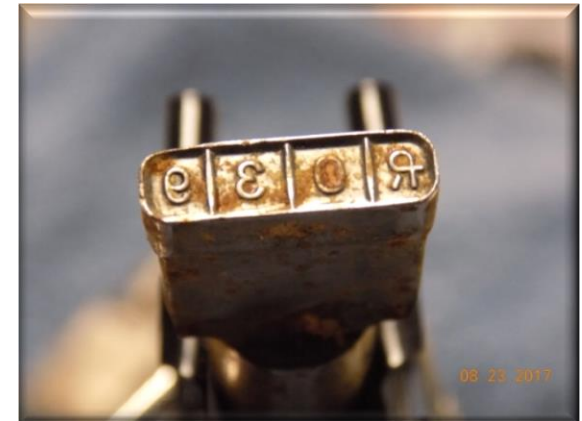
Morphine or OxyContin



Mario



Hello Kitty

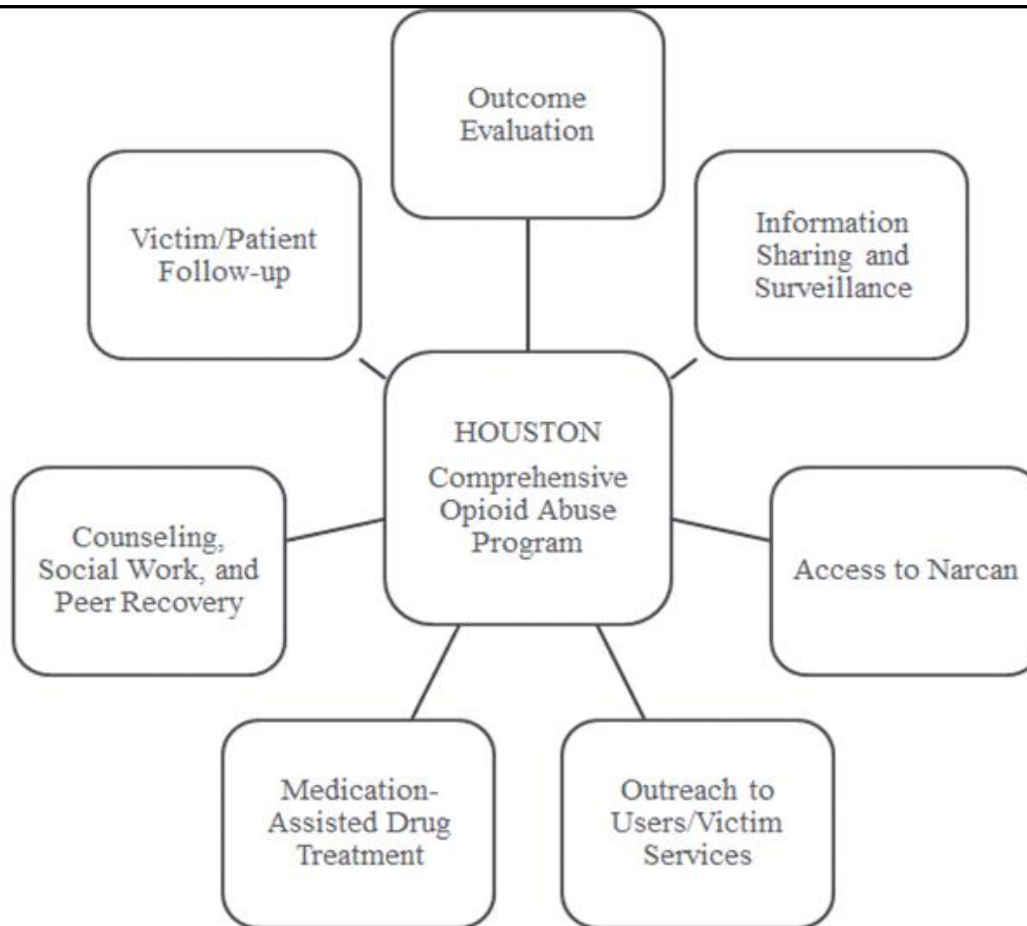


Xanax

Houston Comprehensive Opioid Abuse Program

- Who COAP is
 - HPD
 - HFD
 - UT Health Science Center
 - Houston Recovery Center

Houston Comprehensive Opioid Abuse Program



- Lieutenant Steve Casco 281-796-3884 Stephen.Casko@HoustonPolice.org
- Lieutenant Rachel Garza 832-977-0142 Rachel.Garza@HoustonPolice.org
- Senior Police Officer Erik ter Meulen 713-594-0279 Erik.Termeulen@HoustonPolice.org

What is popular In Houston?

GREAT QUESTION!

- Methamphetamines (“Ice” and liquid form)
- Marijuana
- Synthetic Cannabinoids (“Kush”, “bath salts”)
- Cocaine/Crack Cocaine
- Opioids (Heroin, Real/Fake Prescription Pills, Fentanyl)

Lots of people use many substances

(HIDTA 2018 Threat Assessment, 2018)

The Deadly Counterfeit Drug Trade Thrives in Texas

Houston, May 2017:
250,000 lethal doses
of raw fentanyl and 10
kilos of fentanyl-laced
counterfeit oxycodone
pills found.

Amarillo, June 2017:
Locals hospitalized after
taking contaminated
Xanax pills

Pasadena, May 2017:
8 kilos of fentanyl
seized.

The country has seen an upsurge in counterfeit prescription pills masquerading as painkillers and Xanax. These pills are disguised as real medications but made with deadly fentanyl or its even deadlier variants, and even a fraction of a single pill can mean death in less than 30 minutes of ingesting it.

Fentanyl is a serious threat to Texans. In 2017, after San Antonio police had been seeing fake pills for 2 years, the DEA shut down a San Antonio and Houston-based trafficking operation, seizing pill presses, raw fentanyl, 10 kilograms of fentanyl-laced oxycodone pills, and 11 kilograms of fake Xanax and Adderall laced with methamphetamine.

Texans have suffered because of counterfeit medical treatments.

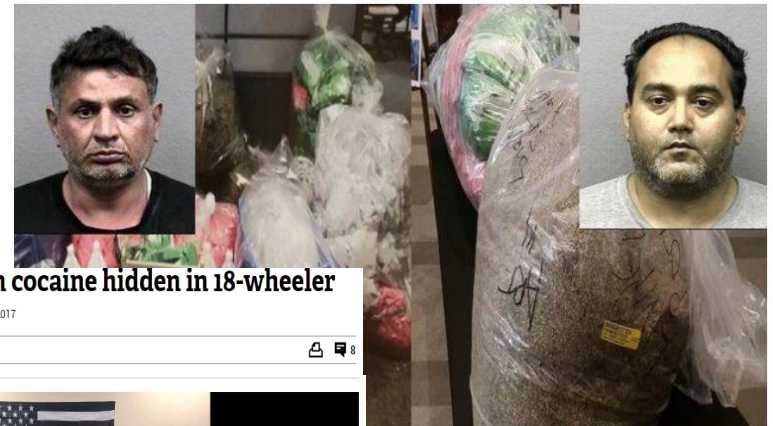
243 different medical practices in Texas have been implicated in buying from black market distributors that sold counterfeit cancer treatments and other therapies. Families who have lost relatives to cancer will never know if their loved ones were given real medication or fake, and if they died from a lack of treatment.

Texas has been the site of five major counterfeit drug prosecutions, convicting criminals who sold counterfeit imported Xanax, Valium, sibutramine, Cialis, Viagra, Stilnox and Alli. ❤️

Police: 2 people arrested after \$2.5 million Kush bust

By Ashlynn Turner - Content Editor

Posted: 2:12 PM, April 20, 2017
Updated: 4:10 PM, April 20, 2017



Fort Bend: \$2.1 million in cocaine hidden in 18-wheeler

By Dana Burke Published 11:45 am CST, Thursday, November 9, 2017



Houston man charged with drug trafficking marijuana, meth seized from home

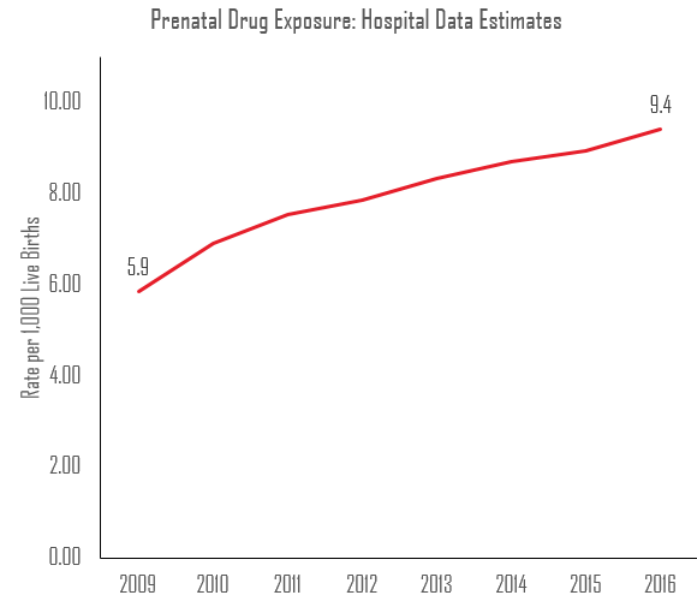
Houston Herald • news@houstonherald.com May 4, 2017 1 min to read



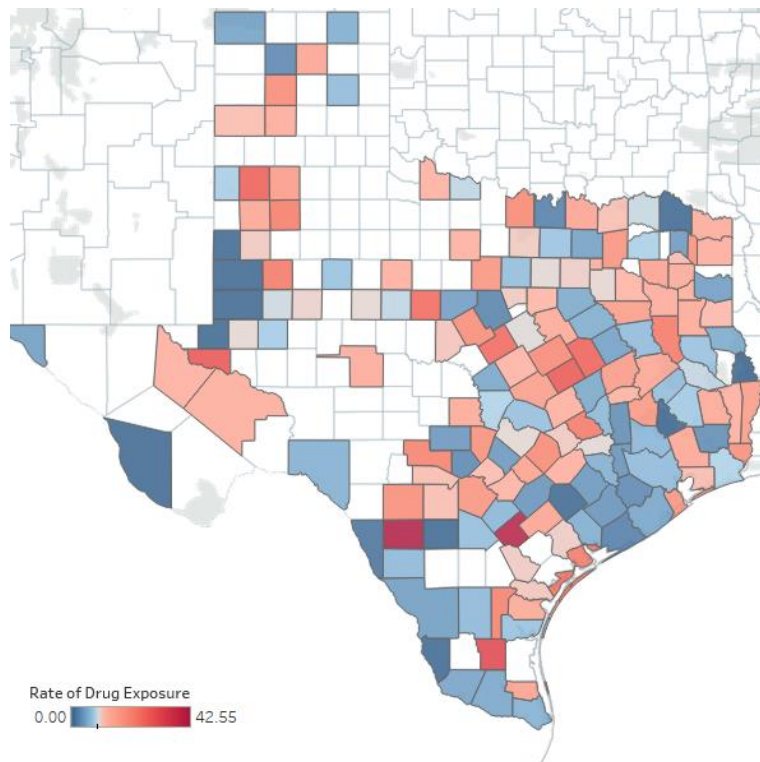
The Texas County Sheriff's Department seized 211 grams of marijuana and 119 grams of marijuana Monday in Houston. Duster

among pregnant women?

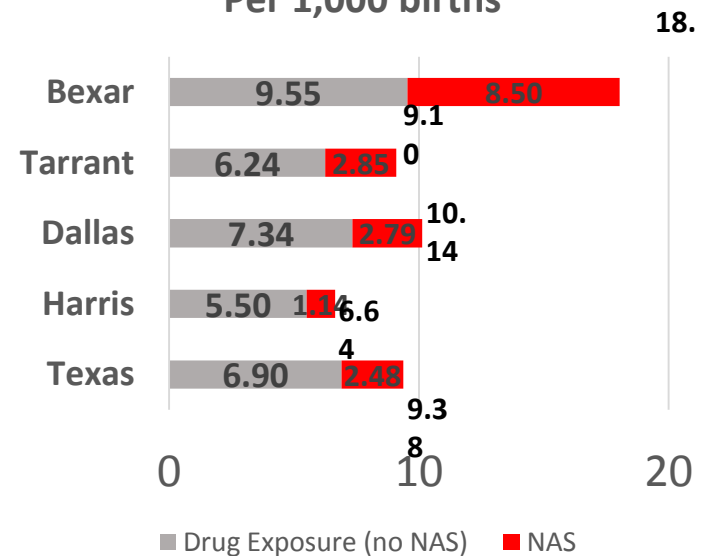
- The rate of infants affected by drugs in utero has doubled in Texas since the mid 2000's
- Poly-substance use high
- ~ 35% of prenatal drug exposure cases have a Neonatal Abstinence Syndrome (NAS) diagnosis indicating opioid use
- Screening & testing practices, reporting not uniform



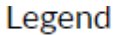
Statewide Prenatal Drug Exposure, 2016



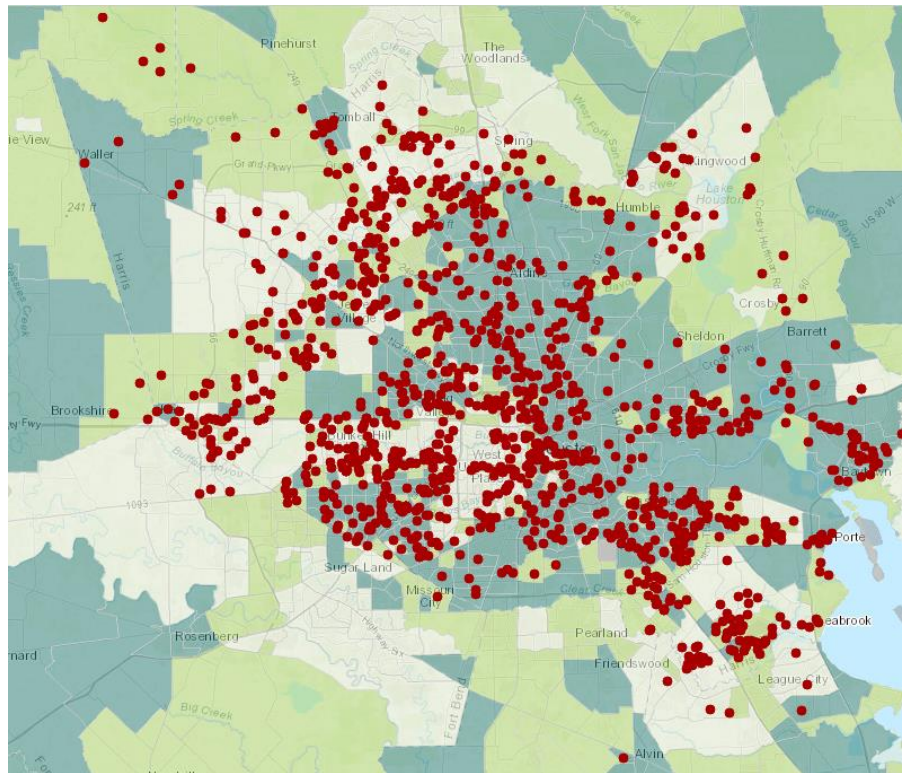
2016 Rates of Prenatal Drug Exposure
Per 1,000 births



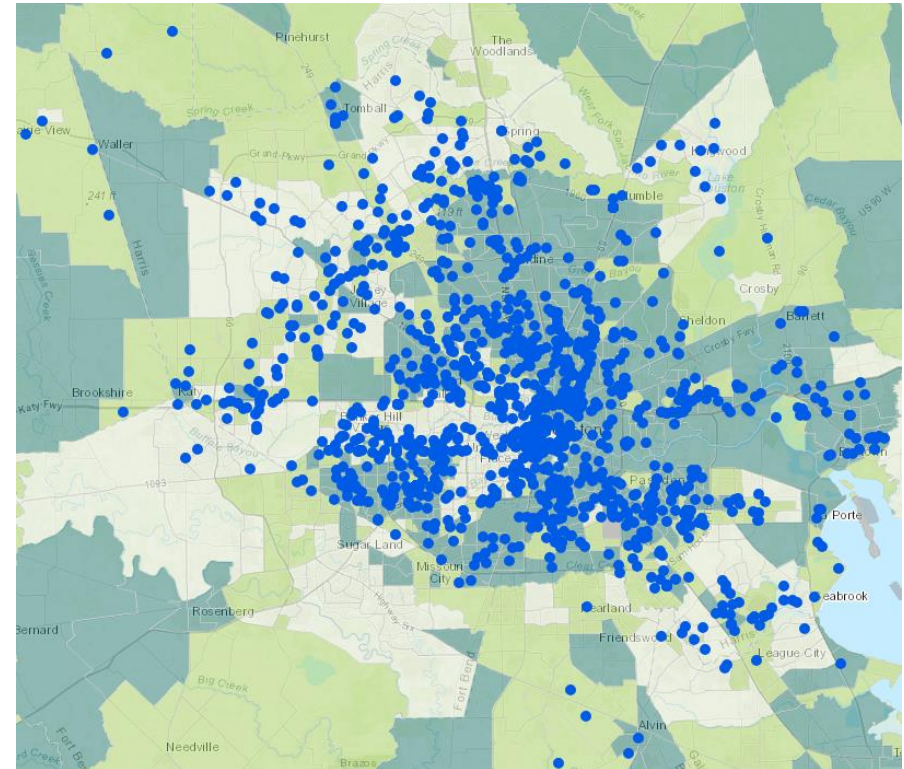
Number and age-adjusted rates of drug overdose deaths by state, US 2016



**Houston had more deaths in
2016 due to overdose than 21
STATES**




Opioid Involved





Not Opioid Involved

Overall SVI

 $> 0.66 - 1$ (High vulnerability)

 $> 0.33 - 0.66$

 $0 - 0.33$ (Low vulnerability)

Year	Deaths
2013	45
2014	39
2015	36 
2016	45
2017	60 (25%)

 Opioid Involved Deaths of Women of Childbearing Age

 MAT Clinics


 MAT with State Funding

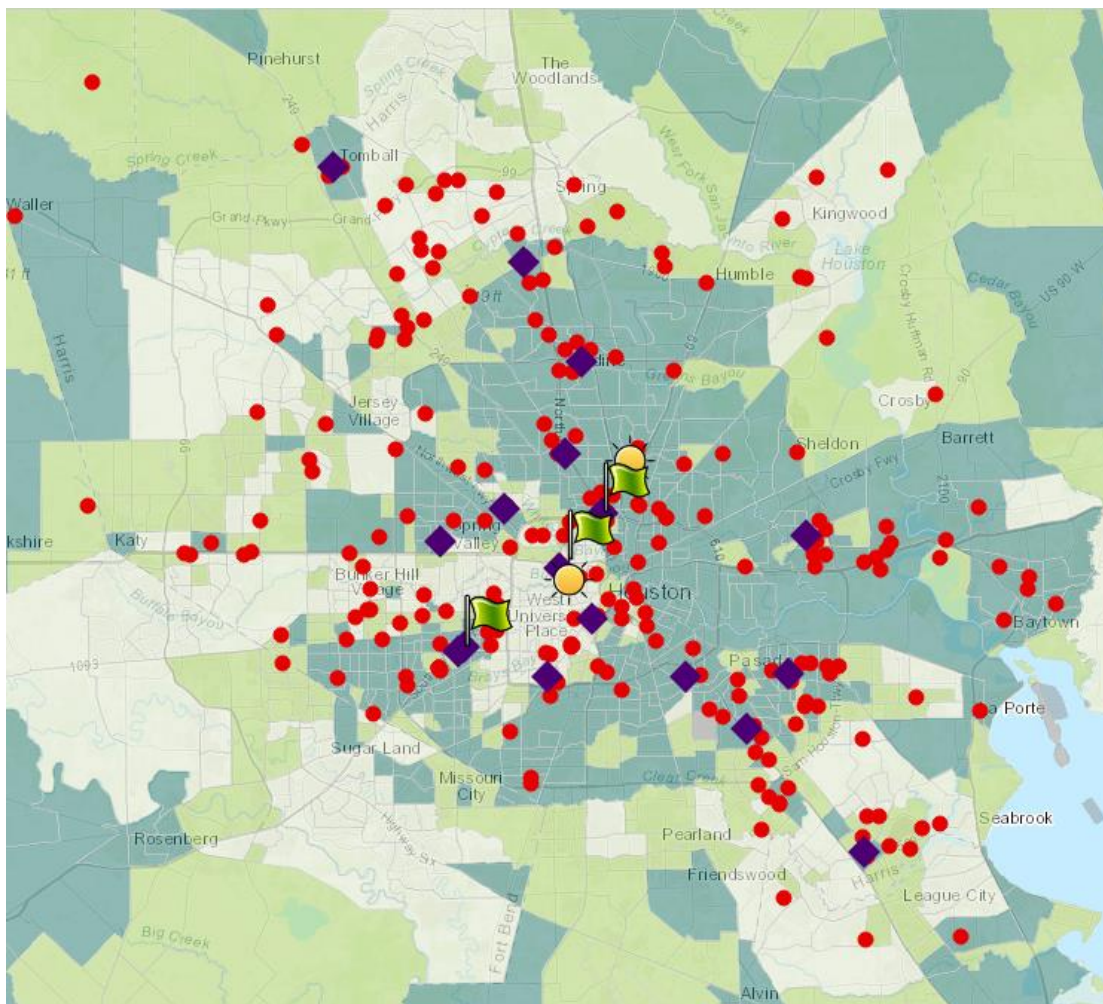
 PPI Programs

Overall SVI

 > 0.66 - 1 (High vulnerability)

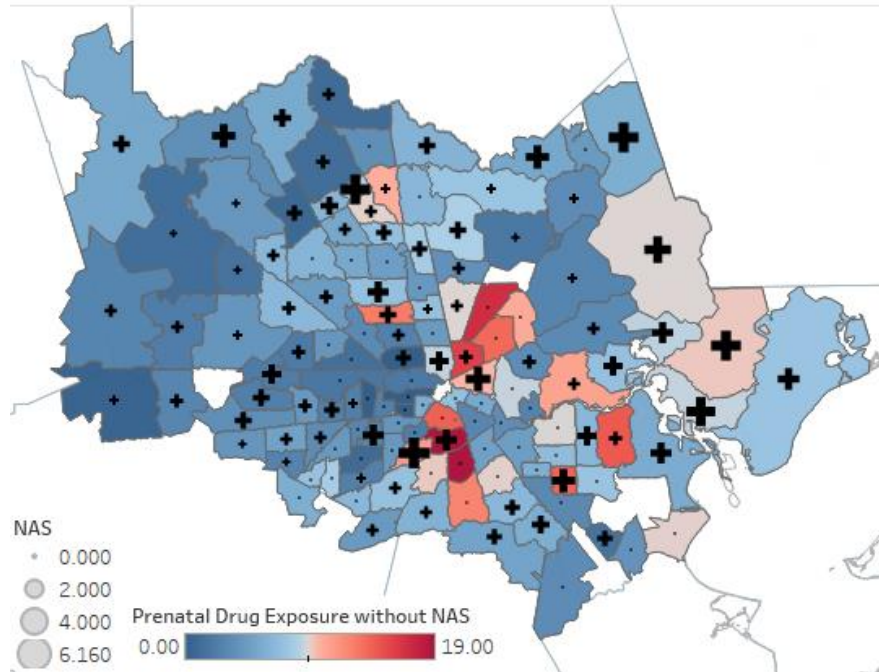
 > 0.33 - 0.66

 0 - 0.33



Prenatal Drug Exposure and NAS Rates for Harris County, 2015-2017

Rate of infants with prenatal drug exposure (per 1,000 births) and rate of Neonatal Abstinence Syndrome, (2015-2017)



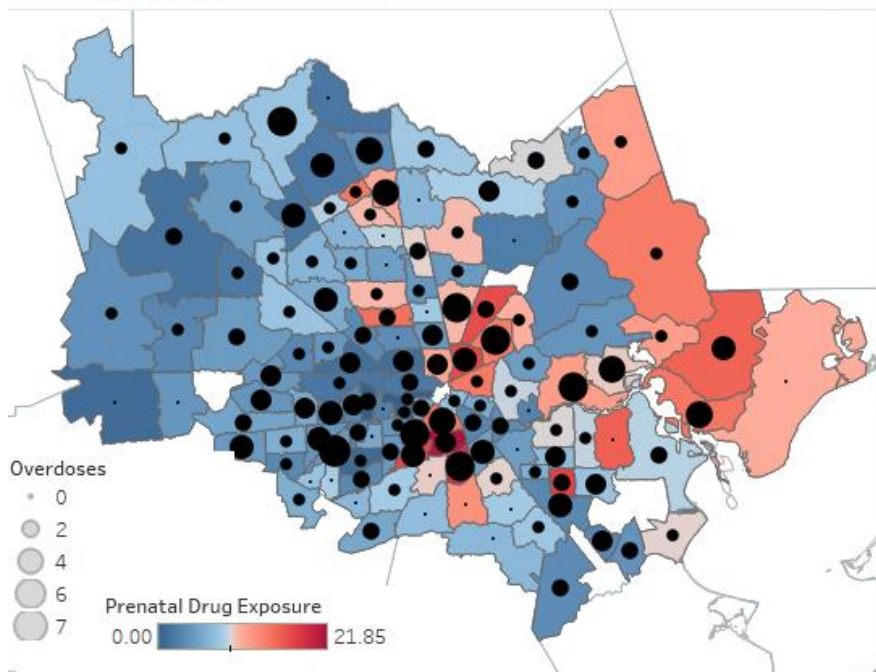
Communities with non-NAS drug exposures only slightly correlated with NAS communities.

Interpretation: For pregnant women, opioid use occurring in different areas than other drug use.

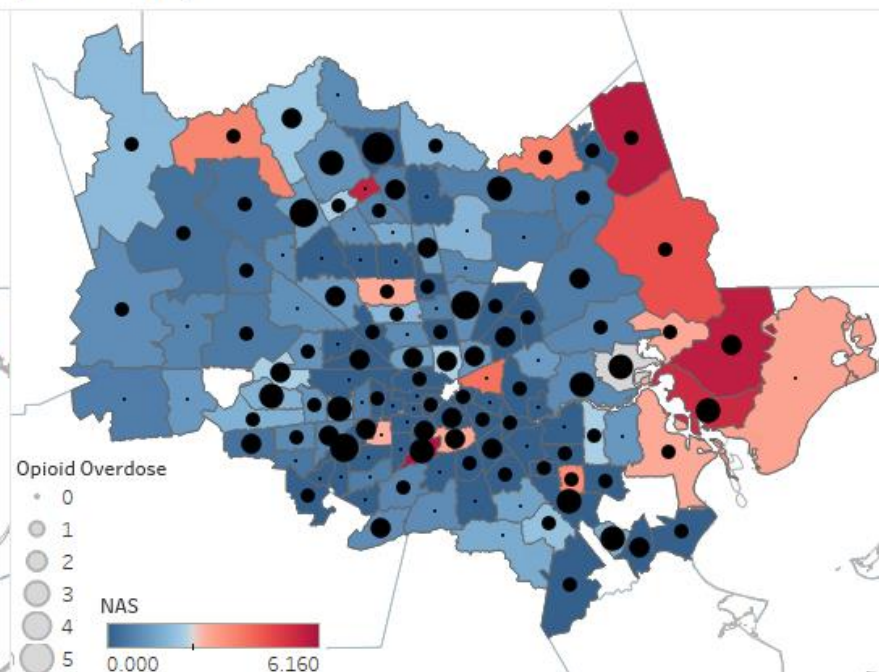
Meaning our outreach efforts may need to shift to new locations.

Discrepancy between Overdose deaths and prenatal drug exposure

Rate of infants with prenatal drug exposure (per 1,000 births) and number of overdoses to women of child bearing age, (2015-2017)



Rate of infants with NAS (per 1,000 births) and number of opioid related overdoses to women of child bearing age, (2015-2017)



CONTACT INFO:

Beth Van Horne

BETHANIE.VANHORNE@BCM.EDU

832-822-1940

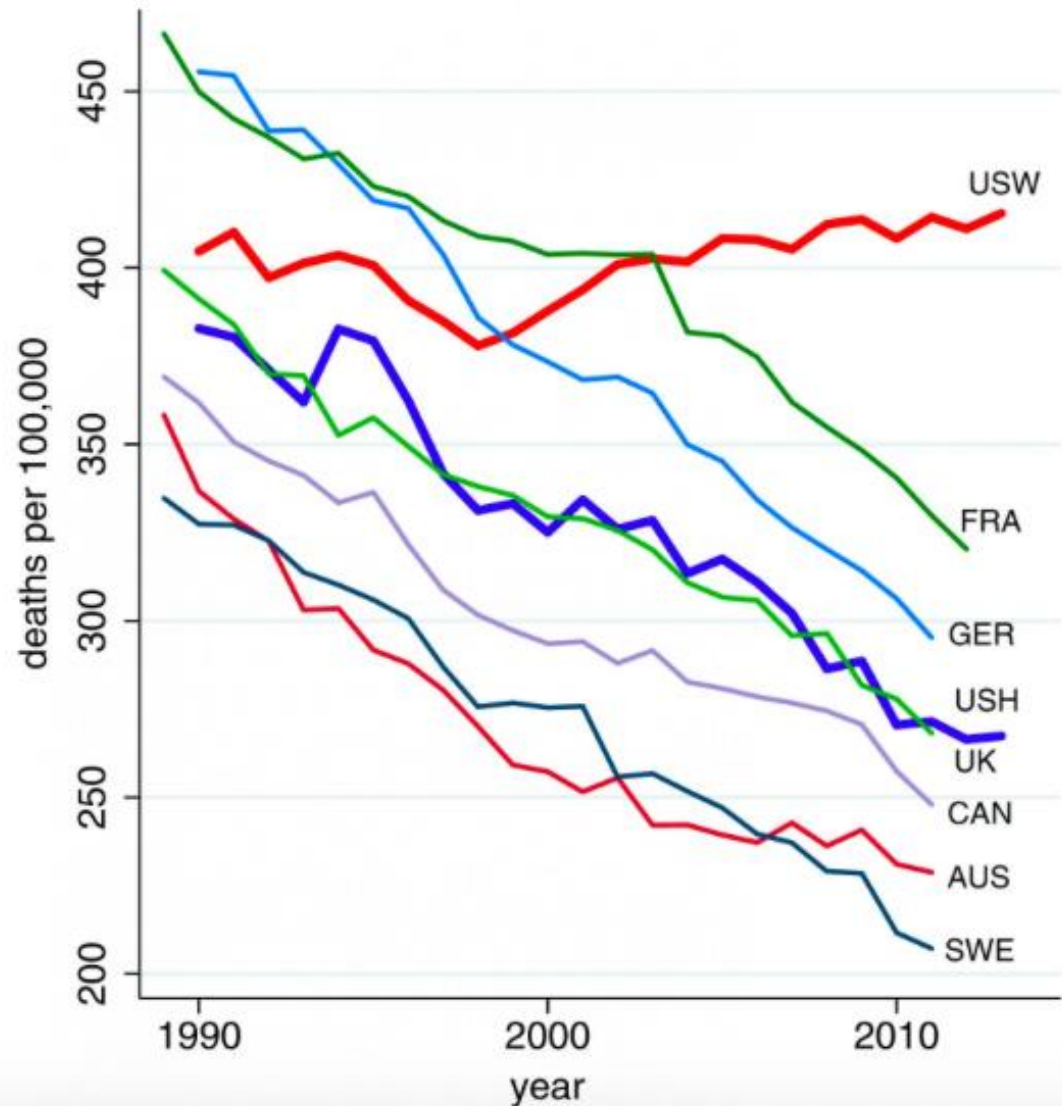
The Opioid Epidemic

- **Overdose is THE leading cause of death for people under 50 in the US**
- US overdose deaths in just 2016 (64K) exceeded:
 - total US casualties during the entire Vietnam War (58K)
 - AIDS-related deaths in 1995, worst year of AIDS crisis, (51K)
 - Peak year, 1991, of US homicides, (25K)
 - Suicides, rising for past 30 years (to 44K in 2015)
- For the first time in modern US history, **life expectancy decreasing** for younger generations, primarily driven by overdose deaths
- US overdose deaths in 2017 a record high of 72K

(Source: Proceedings
of the National
Academy of Science)

Death rate for
U.S. non-Hispanic
whites (USW),
U.S. Hispanics
and six
comparison
countries, aged
45-54.

(Source: Proceedings of the
National Academy of
Sciences.)



The Perinatal Opioid epidemic

- 1999: 1.5 in 1000 deliveries mother with OUD
- 2014: 6.5 in 1000 deliveries mother with OUD
- Overdose is now the leading cause of perinatal mortality for women
- Every 25 minutes another newborn is diagnosed with Neonatal Abstinence Syndrome (NAS)
- 2017 National Survey on Drug Use and Health (NSDUH):
 - Past Month Opioid Misuse in Women 15-44yo:
 - Pregnant: 1.2% 2016 **INCREASED** to 1.4% 2017
 - Non pregnant: 1.7% 2016 **decreased** to 1.6% 2017

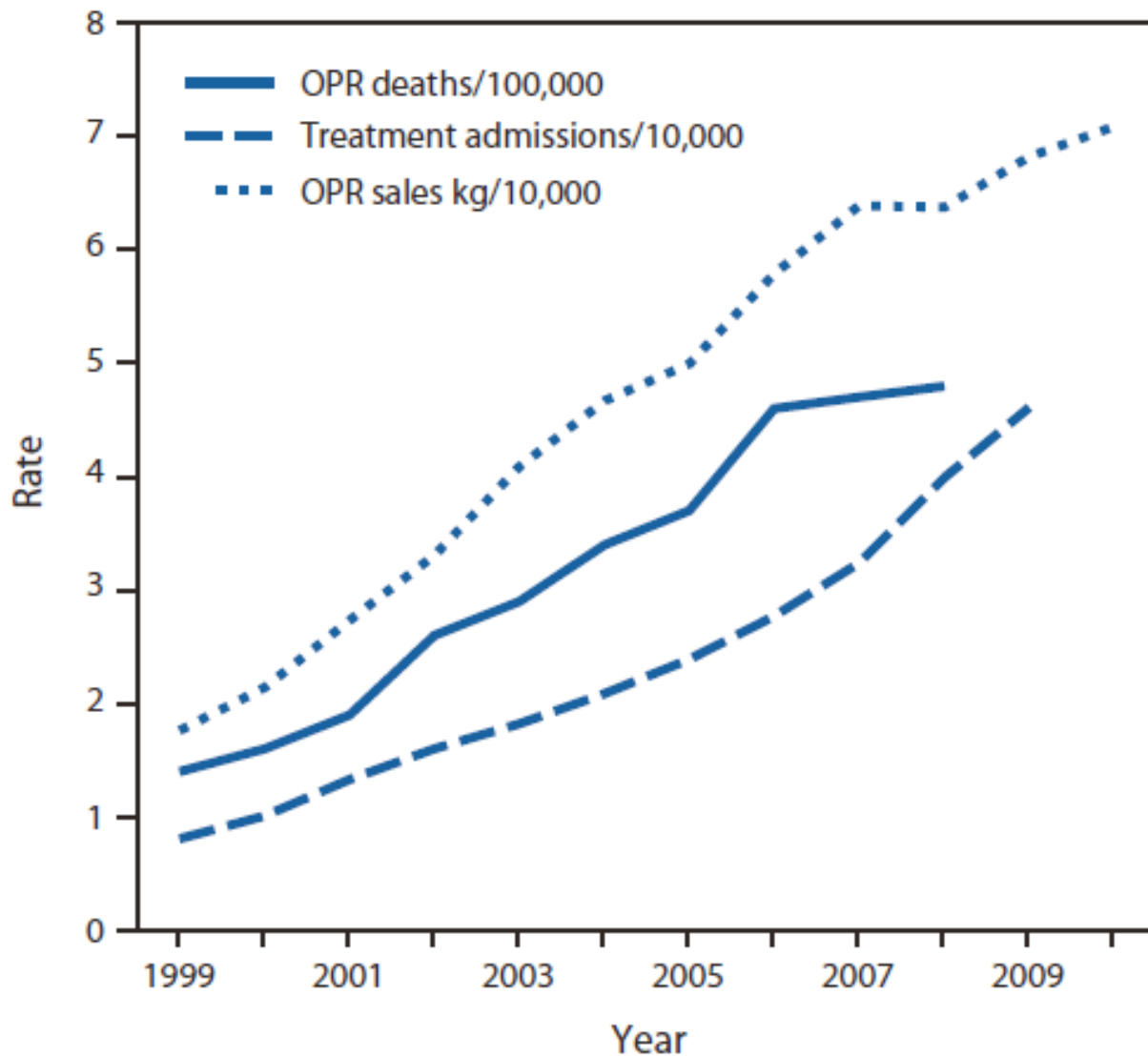


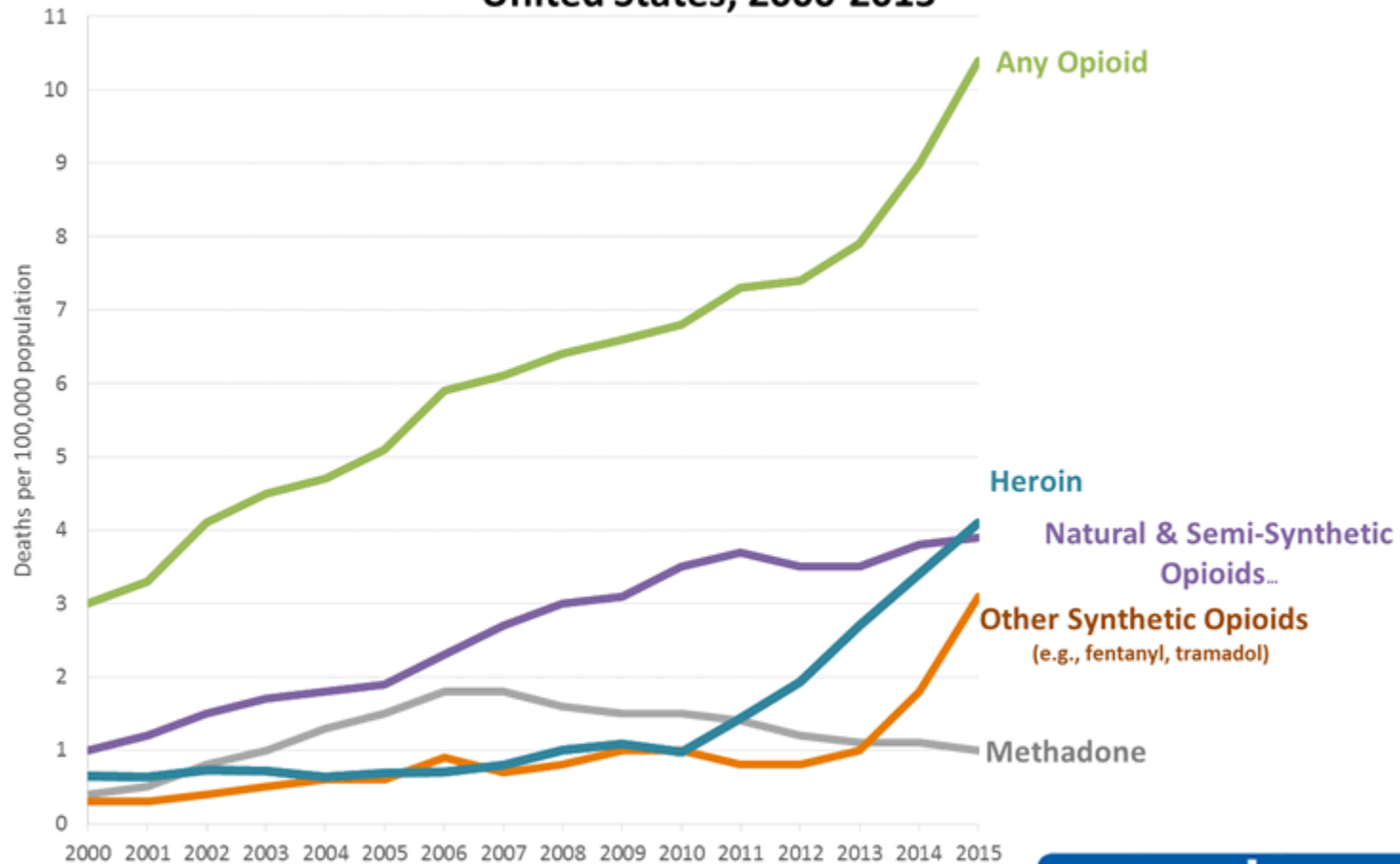
FIGURE 2. Rates* of opioid pain reliever (OPR) overdose death, OPR treatment admissions, and kilograms of OPR sold --- United States, 1999--2010

Vital Signs: Overdoses of Prescription Opioid Pain Relievers --- United States, 1999--2008

November 4, 2011 / 60(43);1487-1492

Leonard J. Paulozzi, MD, Christopher M. Jones, PharmD, Karin A. Mack, PhD, Rose A. Rudd, MSPH, Div of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC. **Corresponding contributor:** Leonard J. Paulozzi, lpaulozzi@cdc.gov.

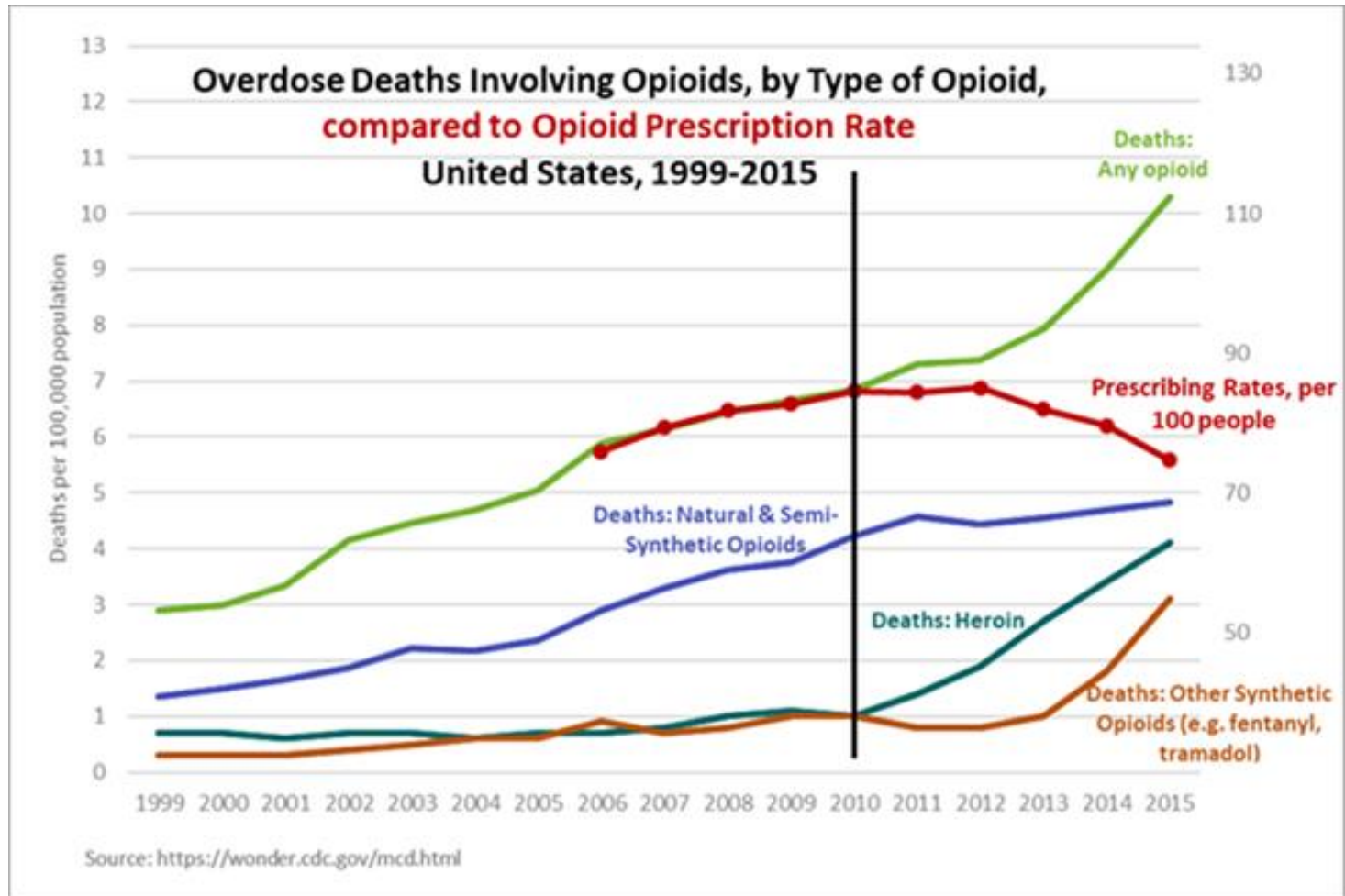
Overdose Deaths Involving Opioids, by Type of Opioid, United States, 2000-2015



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2016. <https://wonder.cdc.gov/>.

www.cdc.gov
Your Source for Credible Health Information

decreased opioid RX is NOT Enough



The Synthetics

- Heroin: 2 MEQ
- U-47000 aka 'Pink': 10 MEQ
- Fentanyl: 100 MEQ lethal dose 2mg
- Carfentanyl: 100,000 MEQ lethal dose 20 micrograms
- [\$1000 pill press (5K pills/hr) + \$250 die molds for oxycontin and xanax + \$100 fentanyl 25gm + \$900 other chemicals = \$2250] >>> [1mg fentanyl per pill = 25K pills at \$10 per pill = \$250,000]



Funding and Resources

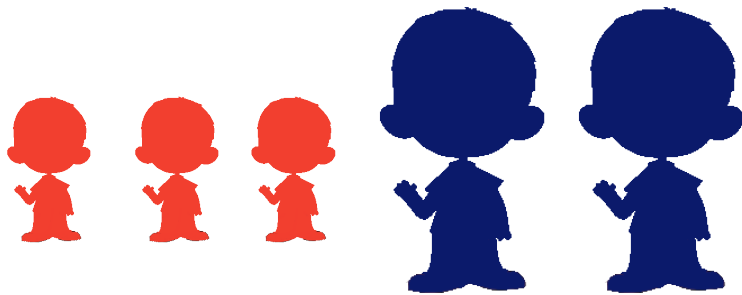
- \$27.4 million to Texas from US HHS for (largely) OUD treatment services
 - Decreased waiting lists for methadone maintenance at OTPs (opioid treatment providers)
- Private/public insurance, 'Goldcard', Self pay
- Buprenorphine MAT in Harris Health System
- Buprenorphine MAT at some FQHCs
- State-funded detox: Cenikor, Santa Maria Hostel, Right Step
- Houston Recovery Center aka Sobering Center

Don't forget the 'legal stuff'

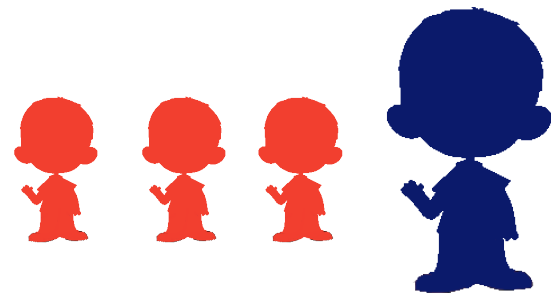
- Alcohol use is related to more than 105,000 deaths every year in the US.
- Tobacco use causes four times as many deaths as alcohol: more than 430,000 deaths each year.

SUDs & Families

The effects of family SUDs on children



**Live with \geq one adult
with a SUD**



**Exposed to alcohol
problems in families**

CDC Guidelines 2016

- Non pharmacologic therapies and non opioid pharmacologic therapies preferred
- Risk assessment tools not so helpful: risky drugs not (just) risky patients
- 50mg ME+ = high dose, avoid 90mg ME+
- Opioids for acute pain: 3 days typically sufficient
- 52 pages: READ PAGE 16

VA/DOD Guidelines 2017

- Avoid long-term opioid therapy to treat chronic pain...
- ...esp if: untreated SUD, concurrent benzo use, age < 30 yo
- No 'safe' dose
- Routine suicide risk assessment at initiation and ongoing
- Avoid 90mg ME+ dosing for chronic pain
- Offer OEND: overdose education and naloxone distribution
- MAT for patients with OUD and chronic pain

198 Page Full Report

30 Page Clinician Summary

7 Page 'Pocket Card'

Managing acute pain to Prevent Progression to Chronic PAIN/OUN

- 3 to 7 days maximum needed opioid script for most acute, painful conditions
- 30 day script leads to increased disability and increased likelihood of ongoing opioid use at 6 months and beyond
- Acetaminophen and ibuprofen (both given orally) as efficacious as oral opioid analgesics (with or without acetaminophen) for acute orthopedic injury in the EC setting

Andrew K. Chang, Polly E. Bijur, David Esses, Douglas P. Barnaby, Jesse Baer. Effect of a Single Dose of Oral Opioid and Nonopioid Analgesics on Acute Extremity Pain in the Emergency DepartmentA Randomized Clinical Trial. *JAMA*. 2017;318(17):1661–1667. doi:10.1001/jama.2017.16190

Prescription Drug Monitoring

- State based, electronic databases
 - Usability and access varies by state
 - Some states share data (eg. Louisiana and Texas)
 - ?Limitations on who can access and need for patient consent to access coming?
 - Need for national database
 - Border state issues
 - Mandatory in Texas with each controlled substance script by September 2019
-
- <https://texas.pmpaware.net/login>

Harm Reduction – Naloxone

\$\$\$\$\$

- Ezvio
- Auto-injector SC or IM
- 0.4 mg dose
- Visual+voice instructions
- Press on outer thigh for 5 sec (over clothes ok)
- Compact (3 ½ x 2 x ½)
- Retractable needle



\$\$-\$\$\$

Naloxone (Narcan)

IM/SC or intranasal

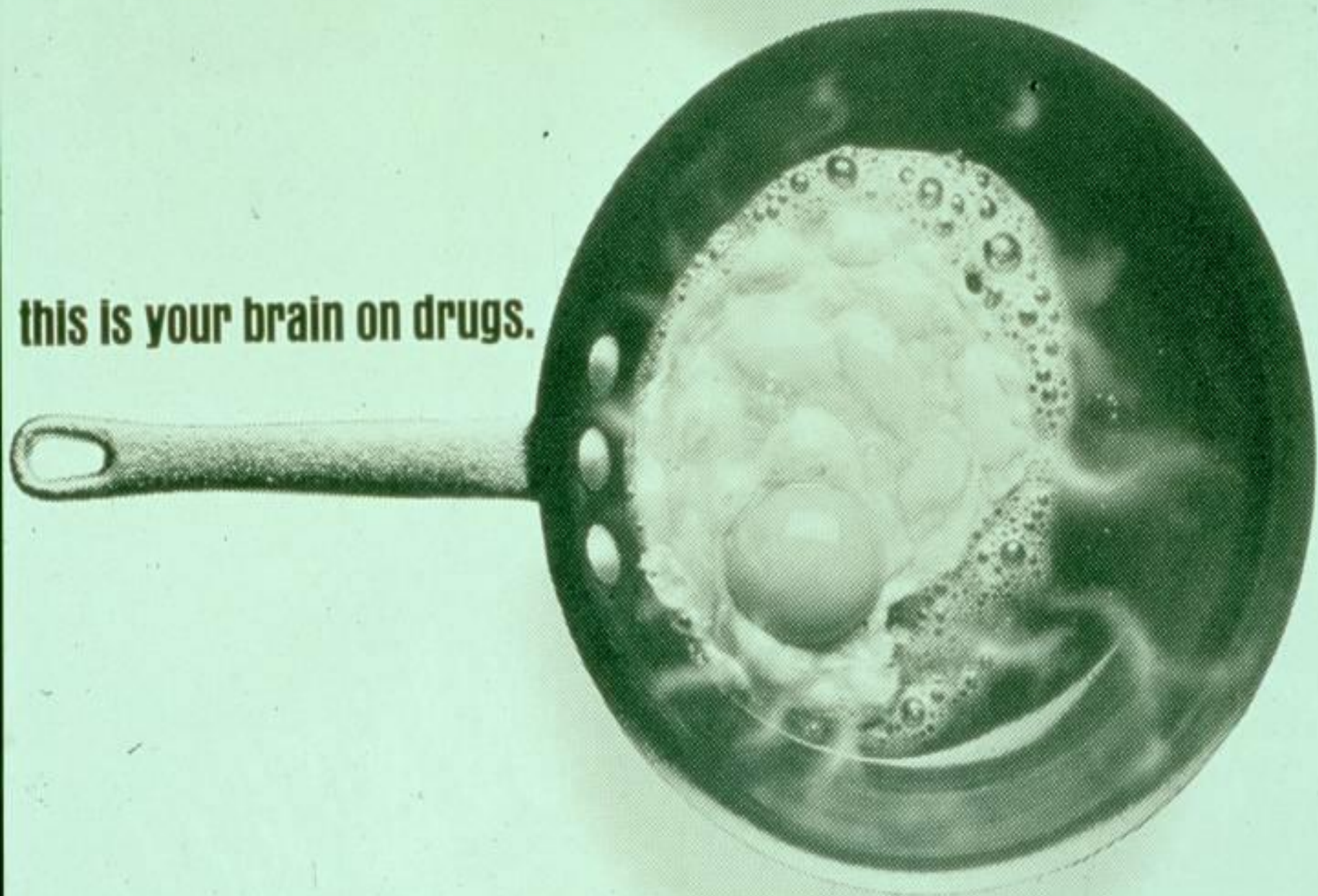


Opioid Use Disorder (OUD)

Treatment

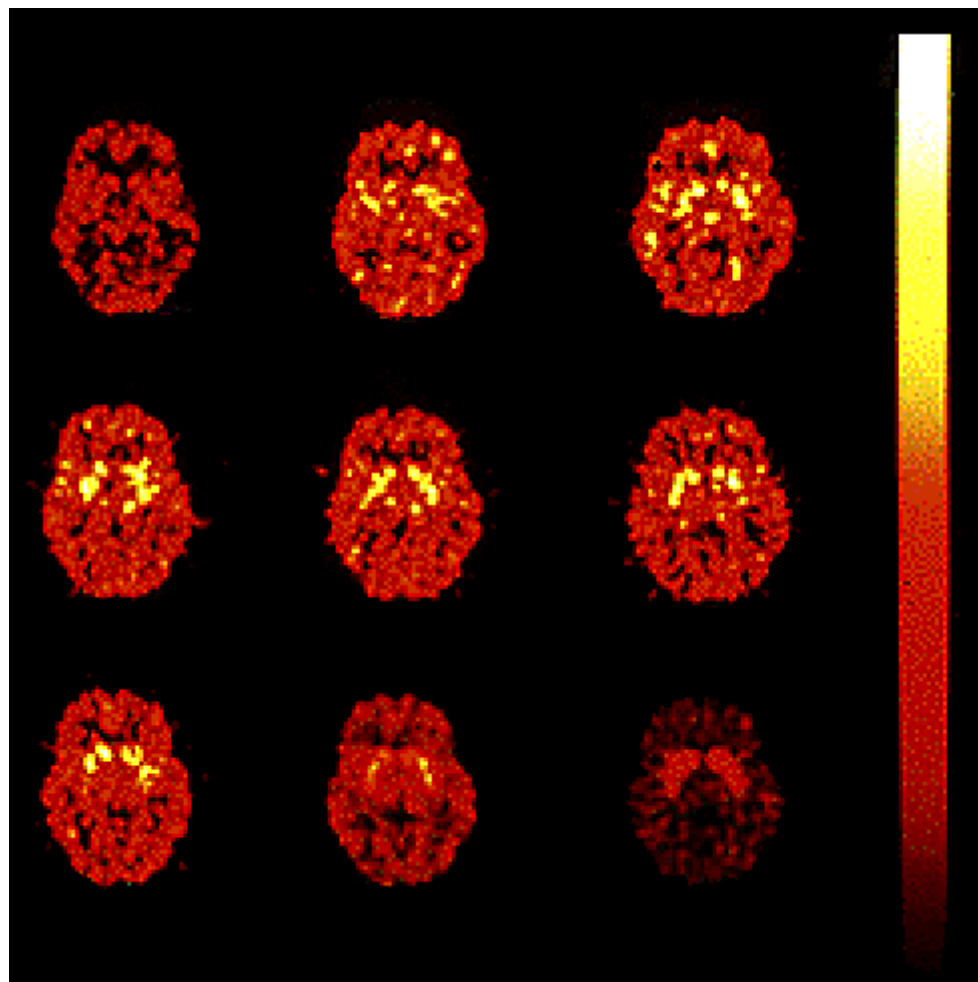
- Methadone maintenance: licensed Opioid Treatment Program (OTP)
- Buprenorphine maintenance
- Agonist MAT = GOLD STANDARD TX OF OUD IN PREGNANCY
- Opiate antagonist: naltrexone
 - Decreased opioid use; decreased retention in treatment; suicide risk in early treatment (NIDA CTN X:BOT study)
- ?Detoxification
- Partial hospitalization/Residential/Intensive outpatient
- (Narcotics Anonymous/ Methadone Anonymous)
- www.samhsa.gov – treatment locator

this is your brain on drugs.



Your Brain on Drugs

YELLOW

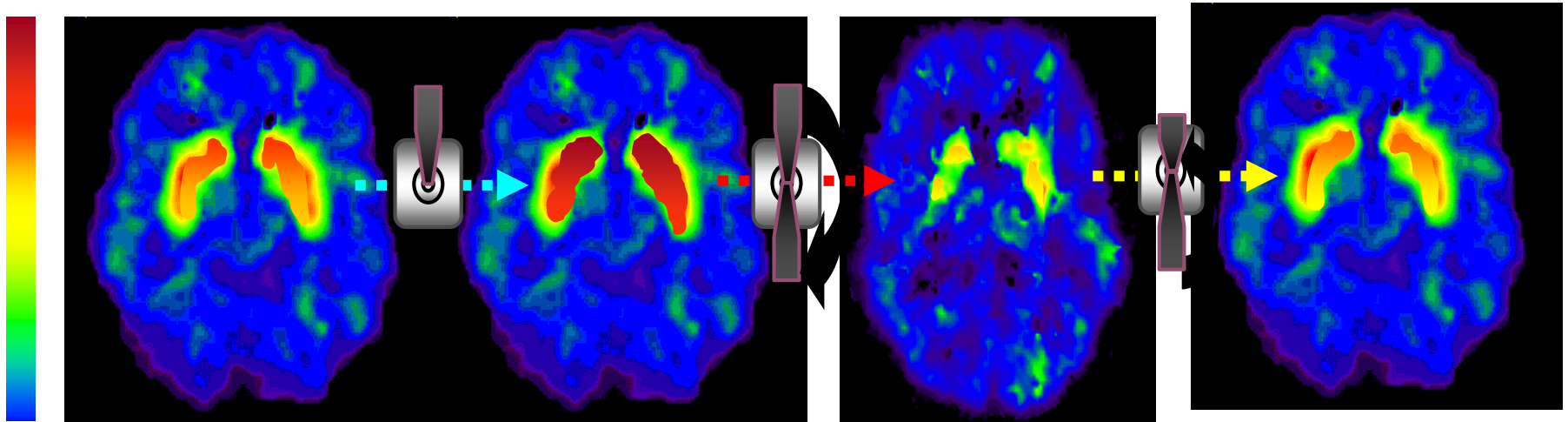


Normal

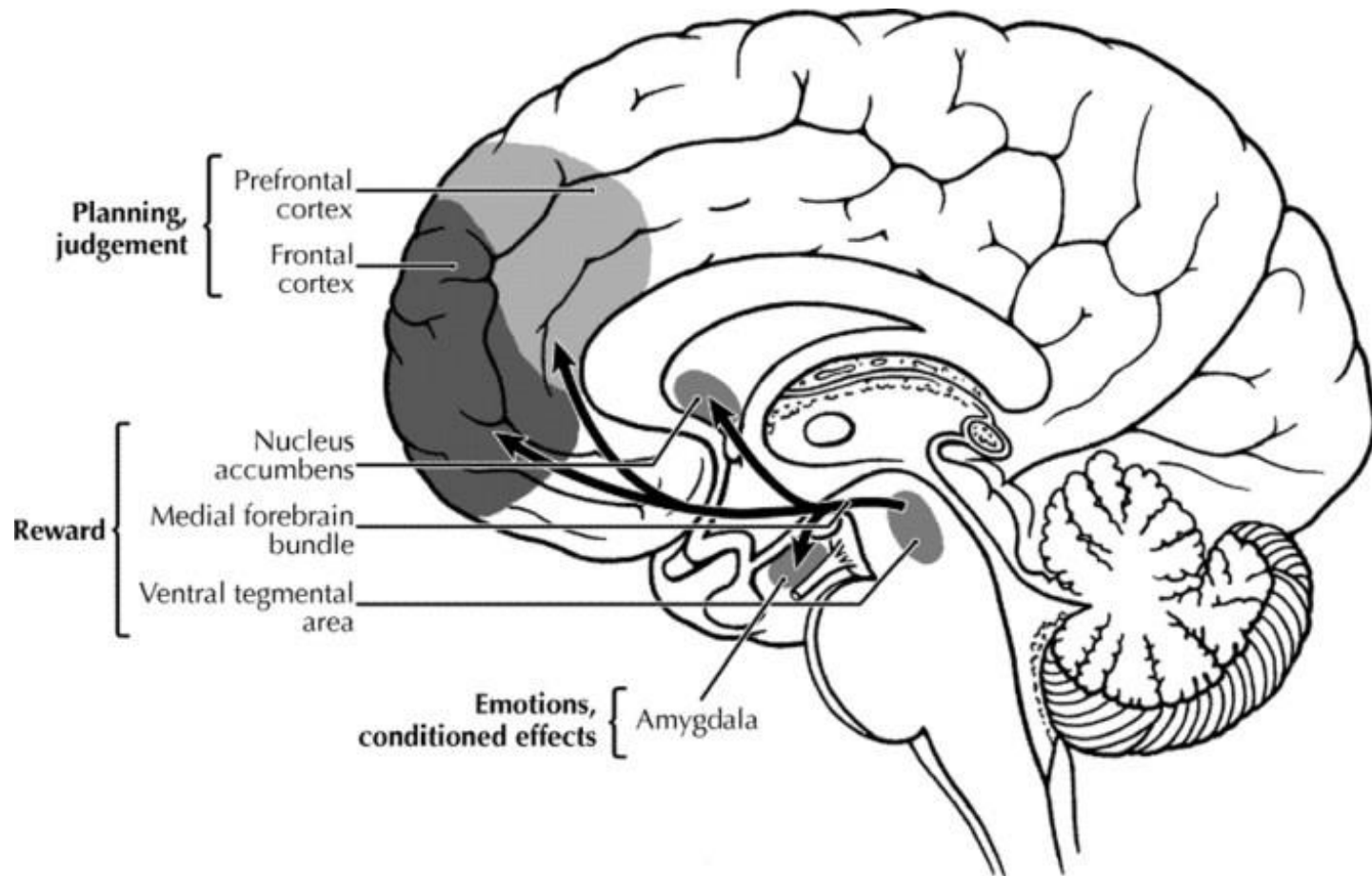
Drug Use

Addiction

Treatment



The Pleasure-Reward Center



Substance Use and Health

- 50% of all pregnancies are unplanned
- Women who use substances may not realize they are pregnant until significant exposure has occurred

	Women ages 15-44	Pregnant Women
Current drinkers	54%	11%
Binge drinkers	24%	5%
Heavy drinkers	6%	1%
Current smokers	27.3%	16.4%

- Most children, adolescents, and adults receive no intervention or treatment
- You are in a position to make a difference!

SEP PREVENTION

Primary prevention

- SBIRT in ALL patients 9+
- Women ages 14-44: assess pregnancy risk and discuss effective contraception when appropriate

Secondary prevention

- SBIRT in ALL pregnant women
- Counsel safe SUD limits are 0 for ALL substances

Tertiary prevention

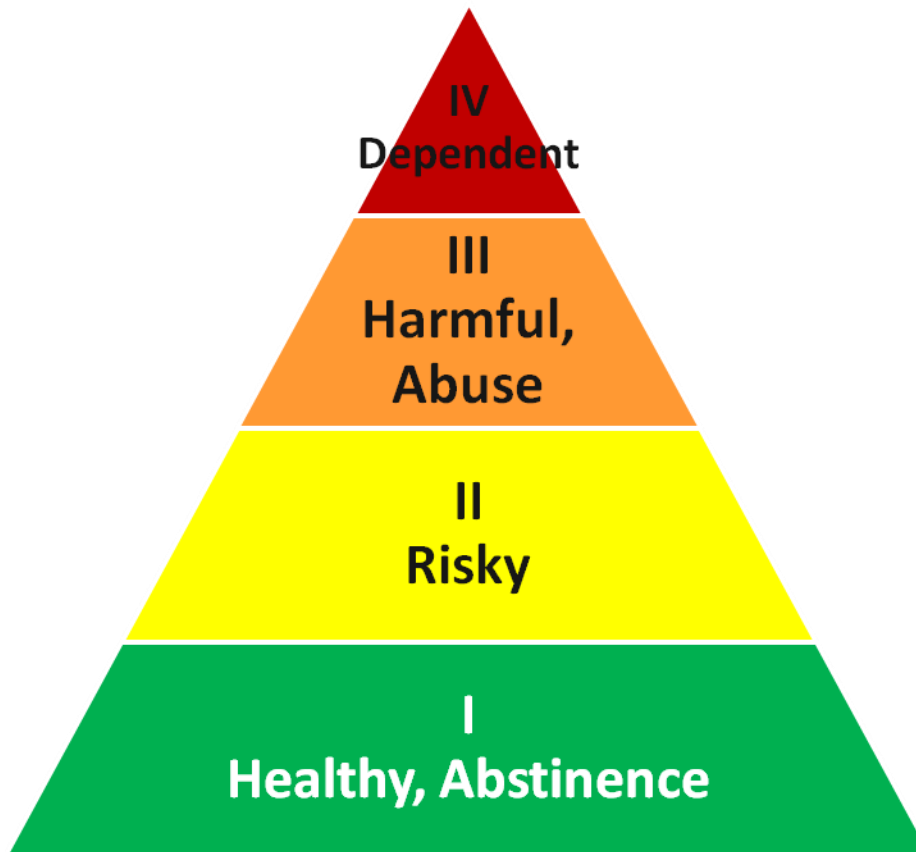
- Screen women with children for prior SEPs and provide counseling and referral as needed

- Non judgmental: reduce STIGMA
- SBIRT in pregnant women:
 - Screen for ANY substance use:
 - T-ACE
 - TWEAK
 - Referral thresholds lower
 - MAT with methadone or buprenorphine if OUD
- Women with prior SEP at greatest risk for current/future SEP

What is SBIRT?

- Screen all patients for problematic use of alcohol, drugs and tobacco
- Provide Brief Intervention to patients at-risk of developing a substance use disorder (risky-drinkers and all drug users)
- Refer patients with substance use disorders to appropriate Treatment services








Substance Use Continuum



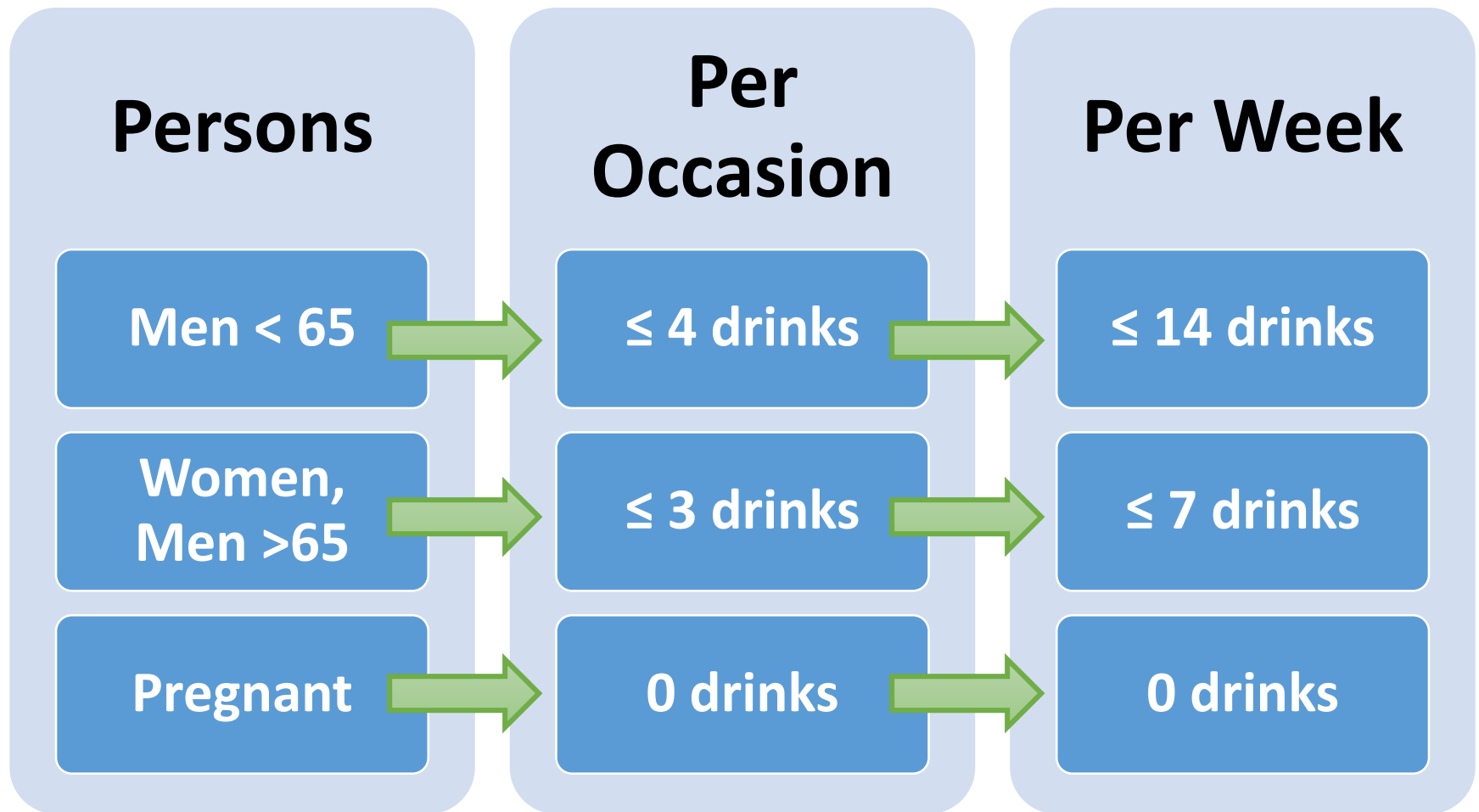
Use	Consequences	Repetition	Loss of Control
*	*	*	*
*	*	*	N/A
*	*	N/A	N/A
*	N/A	N/A	N/A

Standard Drink Chart




12 oz. of beer or cooler	8-9 oz. of malt liquor 8.5 oz. shown in a 12-oz. glass that, if full, would hold about 1.5 standard drinks of malt liquor	5 oz. of table wine	3-4 oz. of fortified wine (such as sherry or port) 3.5 oz. shown	2-3 oz. of cordial, liqueur, or aperitif 2.5 oz. shown	1.5 oz. of brandy (a single jigger)	1.5 oz. of spirits (a single jigger of 80-proof gin, vodka, whiskey, etc.) Shown straight and in a highball glass with ice to show level before adding mixer*
						
12 oz.	8.5 oz.	5 oz.	3.5 oz.	2.5 oz.	1.5 oz.	1.5 oz.

Healthy Drinking Limits

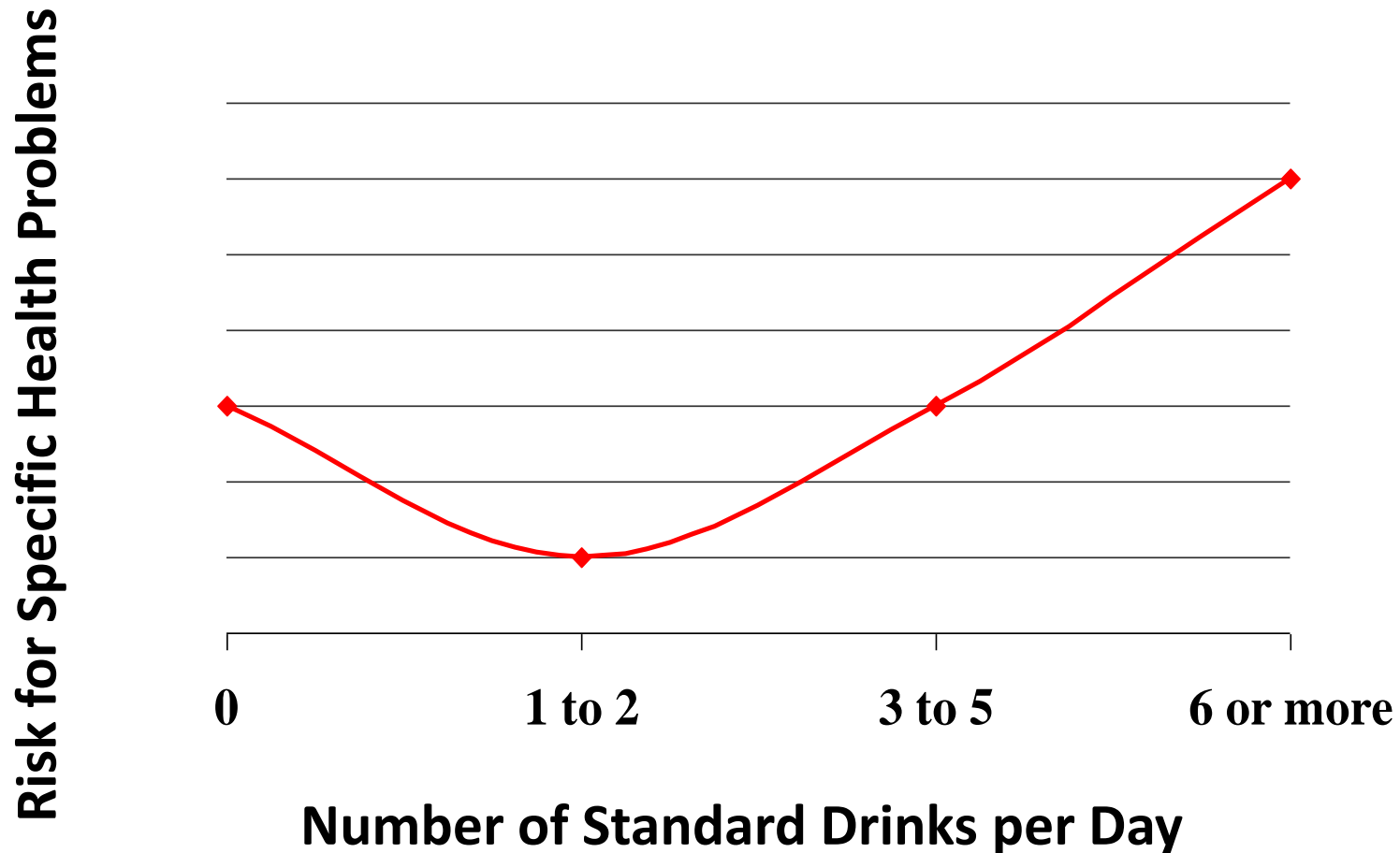


Frequency of Alcohol Use Disorders

Pattern of Alcohol Use	Frequency of Pattern	Incidence of Alcohol Disorders in Pattern
Does not exceed daily/weekly limits	72%	1 in 100
Exceeds daily limit	16%	1 in 5
Exceeds daily AND weekly limits	10%	1 in 2



Alcohol Use & Disease



Slide courtesy of Andrea DiMartini, MD, AMSP

Why SBIRT?

- Alcohol and drug use is common in adolescents and adults
 - Alcohol, tobacco and other drugs are the number one preventable cause of death
 - 3 out 10 Americans drink at levels that elevate health risks
- The likelihood of lifetime diagnosis of alcohol use disorder (AUD) increases two fold in children and adolescents who experiment with alcohol or marijuana
- Most children, adolescents, and adults receive no intervention or treatment
- You are in a position to make a difference!

Houston Resources

- Council on Recovery Houston: treatment matching, IOP
 - www.councilonrecovery.org or (713)942-4100
- Harris County Youth Services: part of CPS, runaways, school programs
 - www.hc-ps.org or (713) 394-4000
- Memorial Hermann Prevention and Recovery Campus: comprehensive from detoxification through aftercare
 - www.mhparc.org or (713)939-7272
- Palmer Drug Abuse Program: free, 12 step, IOP, crisis intervention
 - www.pdap.com or (713)301-0516
- Teen and Family Services: sliding scale fee, IOP
 - www.teenandfamilyservices.org or (713)464-3950

“Addressing Addiction in America”

<https://addiction.surgeongeneral.gov>

- <https://www.drugabuse.gov/>
- <https://www.samhsa.gov/>
- <http://prescribetoprevent.org/>
- www.texasoverdosenaloxoneinitiative.com
- <http://www.bu.edu/aodhealth/index.html>