



The University of Texas at Austin
Steve Hicks School of Social Work

Opioid Misuse in Adolescents: Prevention and Detection

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DISCLOSURES

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CONFLICT OF INTEREST

The planners and presenters of this activity have no relevant financial relationships with any commercial interests pertaining to this activity.

Acknowledgement

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WHAT ARE OPIOIDS?

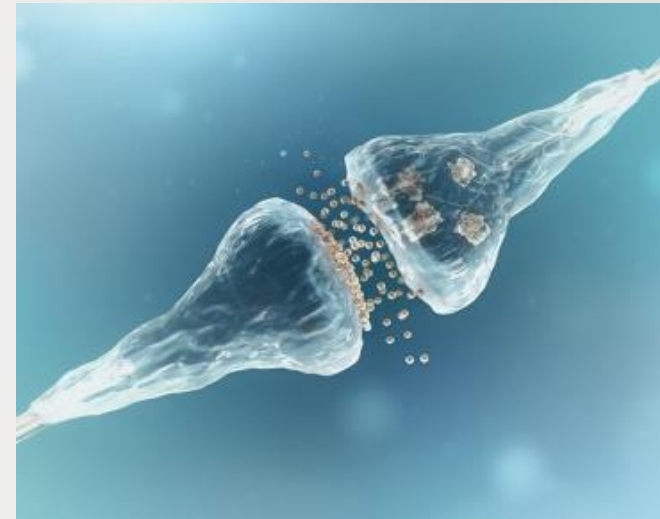
What are Opioids?

Type of Opioid	Examples
Natural opioids (sometimes called opiates)	Morphine, Codeine, Thebaine
Semi-synthetic	Hydromorphone, Hydrocodone, Oxycodone, Heroin
Fully synthetic	Fentanyl, Methadone, Tramadol



The Opioid System

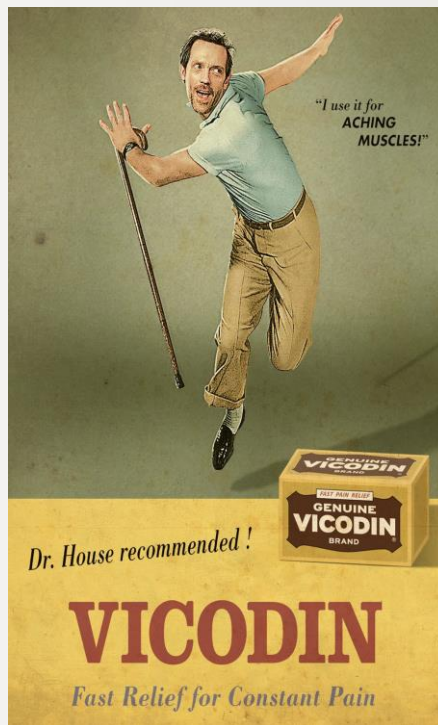
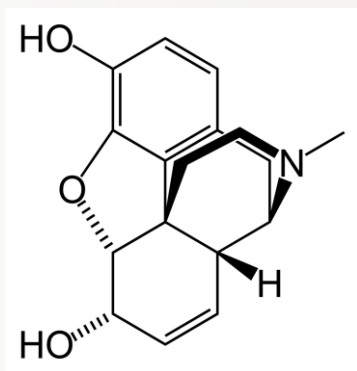
- Controls pain, reward, and addictive behaviors
- Opioids attach to and activate opioid receptor proteins
- Opioids suppress *perception* of pain and calm emotional response to pain



Source:

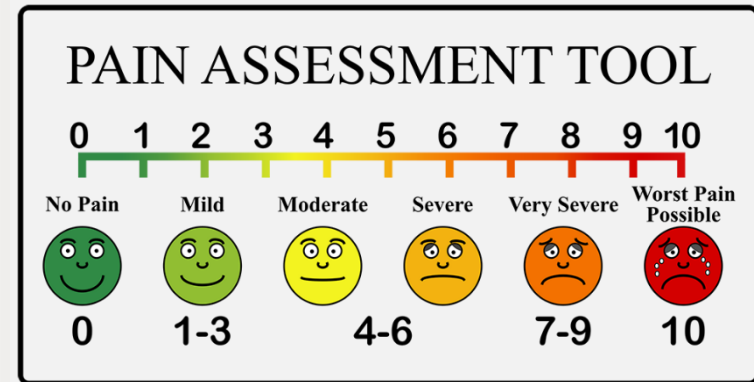
Gutstein H, Akil H. Opioid Analgesics. In: *Goodman & Gilman's the Pharmacological Basis of Therapeutics*. 11th ed. McGraw-Hill; 2006:547-590.

Opioid History



Pain in the United States

- In 2016, nearly one in five adults had chronic pain in the past six months
- Estimated cost of \$635 billion
- Late 1990s, pain was recognized the fifth vital sign



Sources:

QuickStats: Age-Adjusted Percentage of Adults Aged ≥18 Years Who Were Never in Pain, in Pain Some Days, or in Pain Most Days or Every Day in the Past 6 Months, by Employment Status — National Health Interview Survey, United States, 2016.

MMWR Morb Mortal Wkly Rep 2017;66:796.

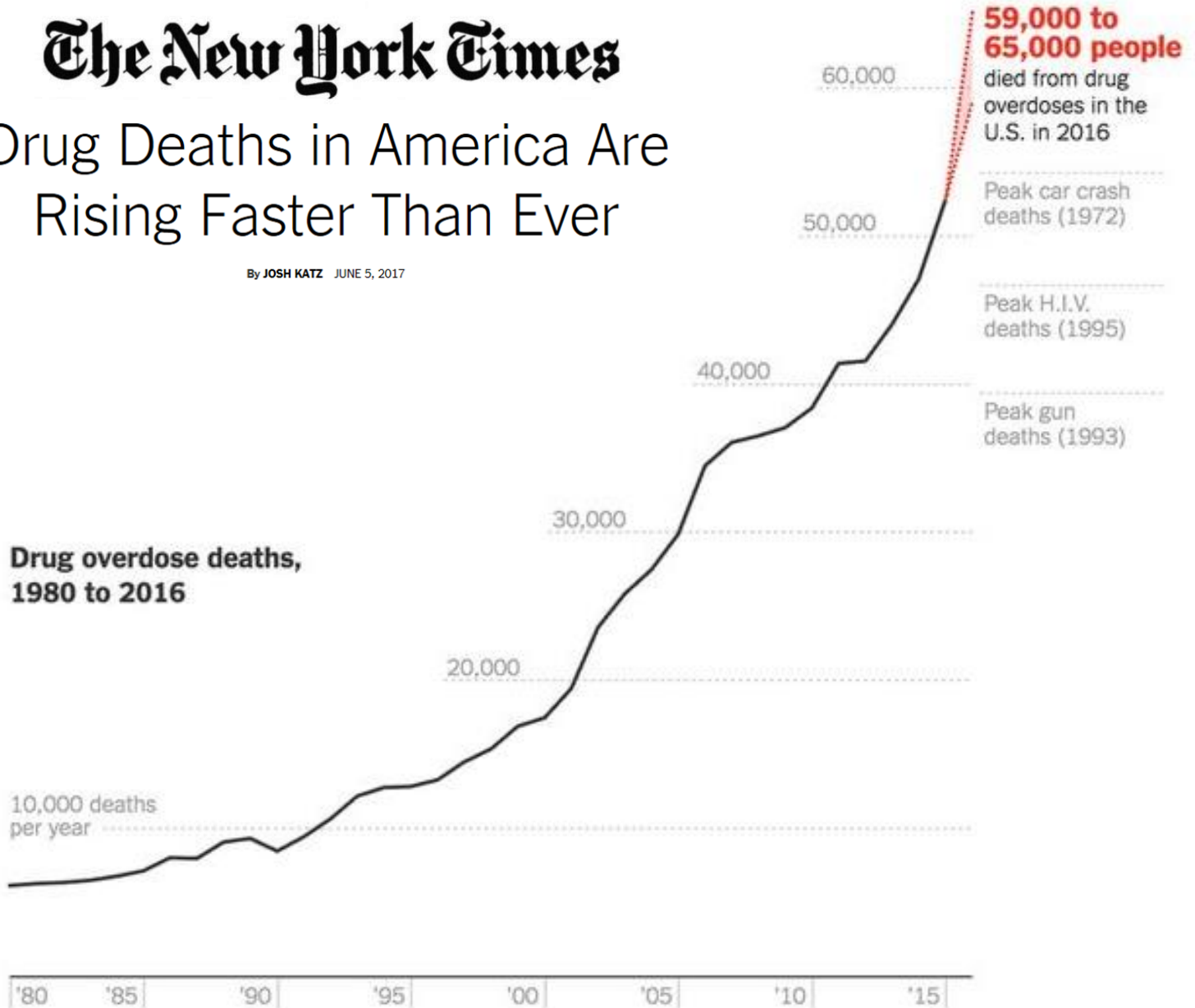
Gaskin, D.J., & Richard, P. (2012). The Economic Costs of Pain in the United States. *The Journal of Pain*, 13 (8), 715.

The New York Times

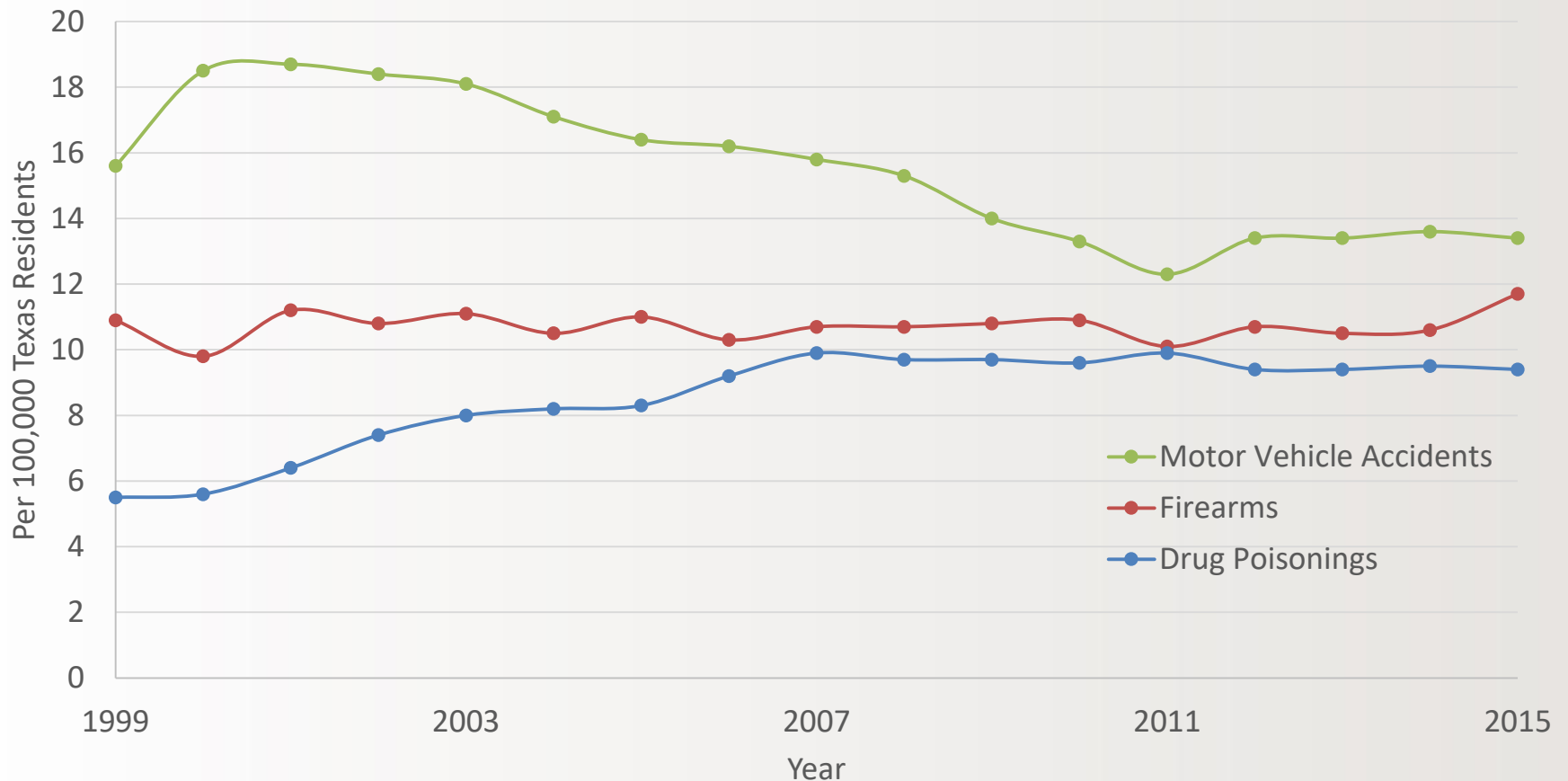
Drug Deaths in America Are Rising Faster Than Ever

By JOSH KATZ JUNE 5, 2017

Drug overdose deaths, 1980 to 2016



Trends in Injury-Related Deaths among Texas Residents: 1999-2015



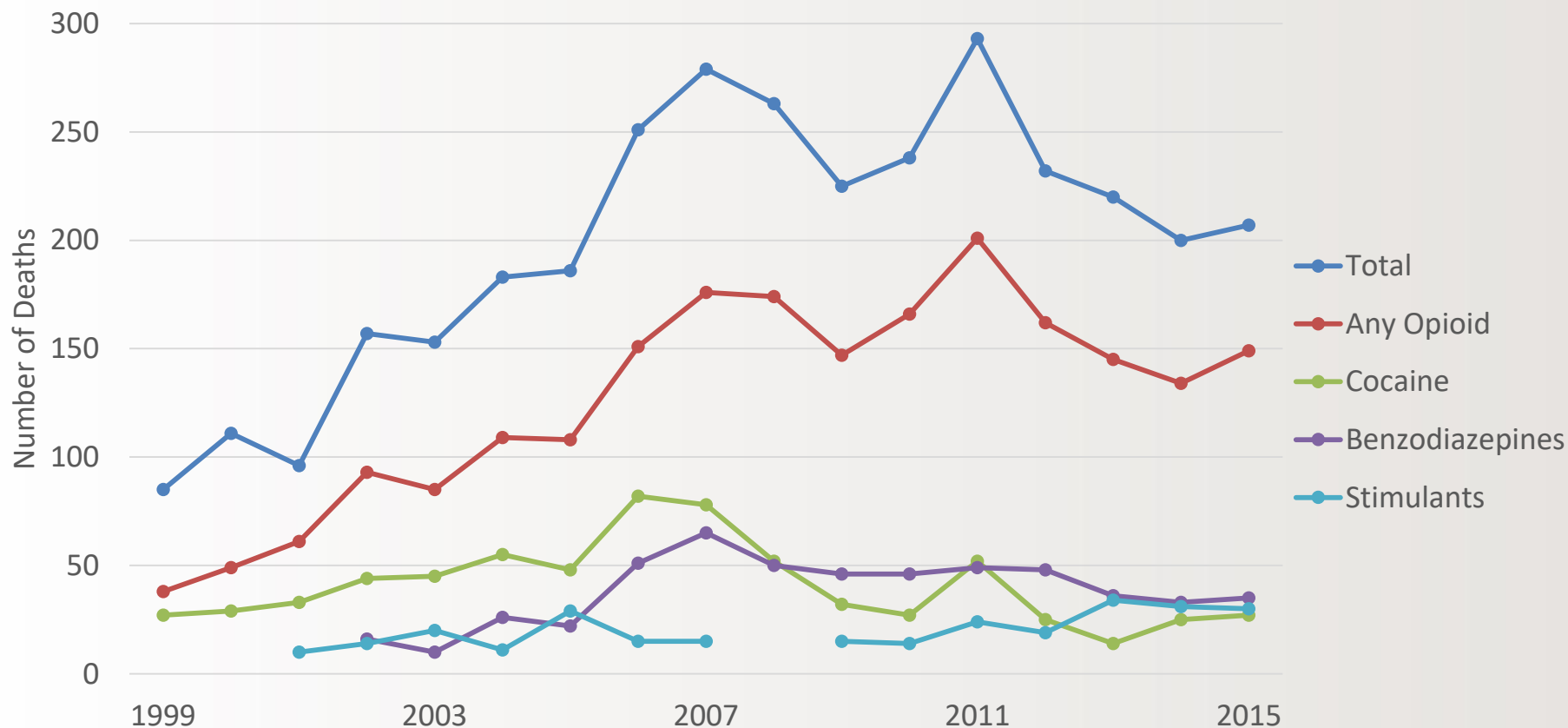
Source: Texas Death Certificates

Prepared by Texas Department of State Health Services, Center for Health Statistics 3/6/2018

Injuries are from all manners, including unintentional, suicide, homicide, undetermined intent, and legal intervention.

Drug poisoning deaths include those resulting from drug overdose and other misuse of (legal and illegal) drugs.

Accidental Poisoning Deaths among 15-24 Year Olds in Texas: 1999-2015



Source: Texas Death Certificates

Accidental Poisonings based on County of Occurrence

Prepared by Texas Department of State Health Services, Center for Health Statistics 3/6/2018

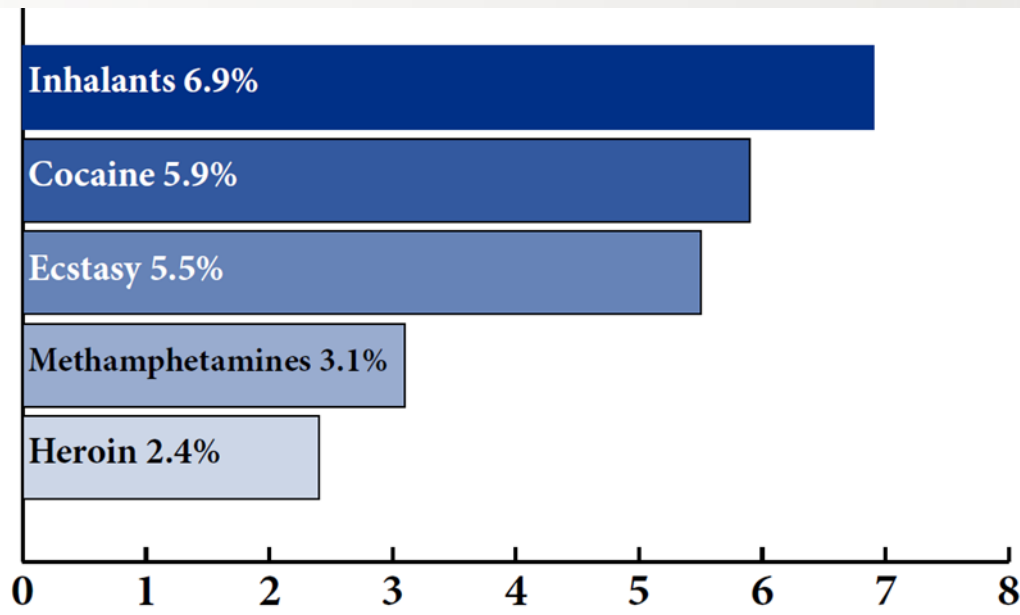
Illicit Drug Used Among Texas High School Students – YRBS

- Marijuana is by far the most commonly used illicit drug among Texas high school students.
- Over the past 10 years, illicit drug use has decreased among Texas high school students for all substances **except heroin and marijuana which have remained steady.**

Source: Illicit Drug Use; Texas Department of State Health Service; Texas Youth Risk Behavior Survey, January 2018

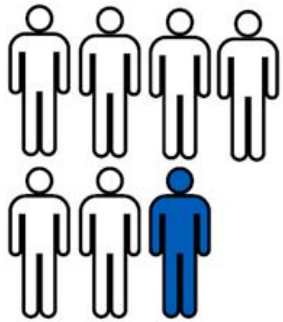
Illicit Drug Used Among Texas High School Students – YRBS

- Other illicit drugs used by Texas High School students include opiates like heroin.

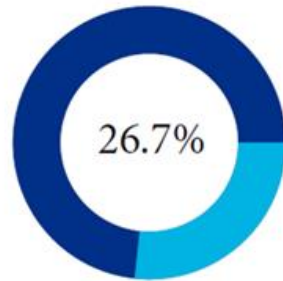


Lifetime Use of Illicit Drugs by Texas High School Students, 2017 Texas Youth Risk Behavior Survey (YRBS)

YRBS Data



About 1 in 7 (14.9%) Texas high school students took opioids without a prescription or differently than how they were prescribed.



More than 1 in 4 students (26.7%) were offered, sold, or given an illicit drug on school property in the past 12 months. This rate has remained steady despite decreases in drug use.

Source: Illicit Drug Use; Texas Department of State Health Service; Texas Youth Risk Behavior Survey, January 2018

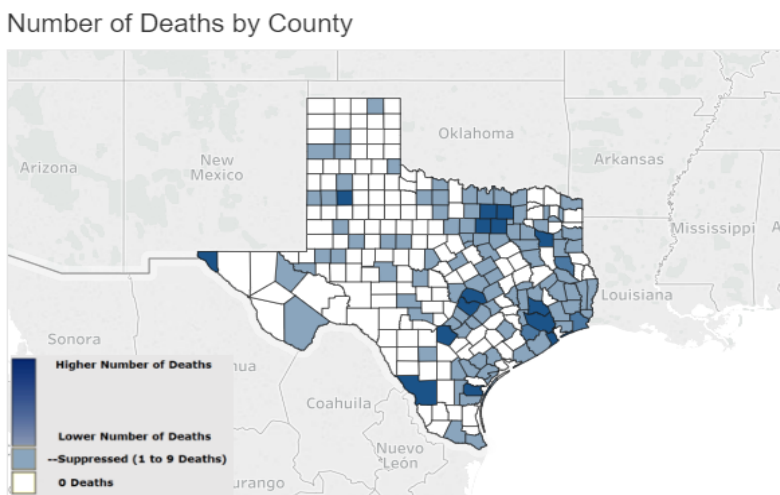
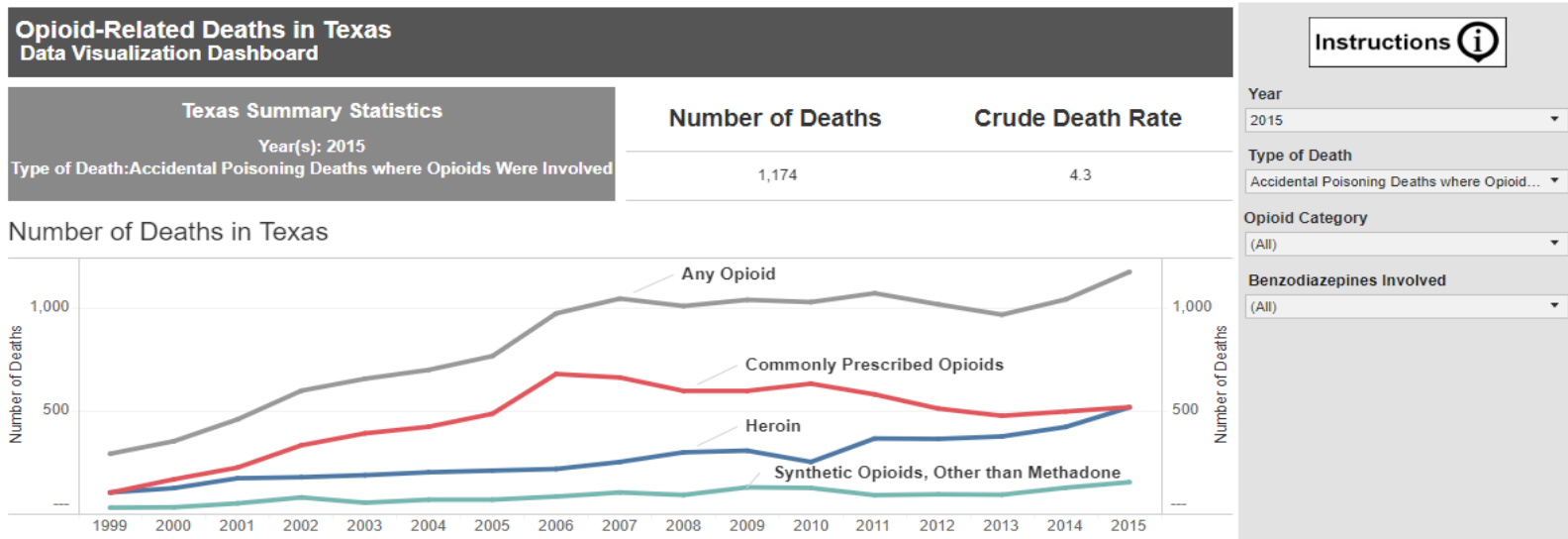
Overdose Often Occurs Due to Combination of Opioids with Alcohol and Other Drugs

7 out of 10 teen nonmedical users combine Rx opioids with other substances¹

The substances most commonly co-ingested were...



Texas Health Data: Opioid-Related Deaths



Note: Total Number of Deaths from 1 to 9 are masked with "---" on this page.

WHAT IS ADDICTION?

Addiction

“Ad-dictum”

In Roman law, a court award of one person to another (e.g. a debtor to a creditor); surrender to a master.

Notion of **slavery**.



Drug Use Starts Early and Peaks in Adolescence

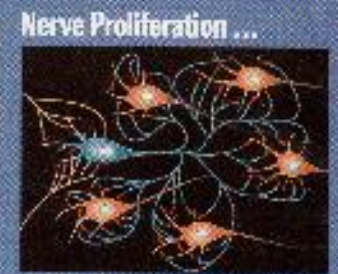
Drug abuse starts early and peaks in teen years



- Adolescence is a period of profound brain maturation.
- We *thought* brain development was complete by adolescence
- We now know... maturation is not complete until about **age 25.**

INSIDE THE ADOLESCENT BRAIN

The brain undergoes two major developmental spurts, one in the womb and the second from childhood through the teen years, when the organ matures by fits and starts in a sequence that moves from the back of the brain to the front



By age 23 for girls and 25 for boys, the neurons in the front of the brain have formed the vast majority of new connections. Over the rest of the years, most of these links will be pruned.

Corpus Callosum

Thought is an involved and often intricate activity. It is the bundle of nerve fibers connecting the left and right hemispheres of the brain. Both sides control the nerve fibers making and processing information and more all the time.

Prefrontal Cortex

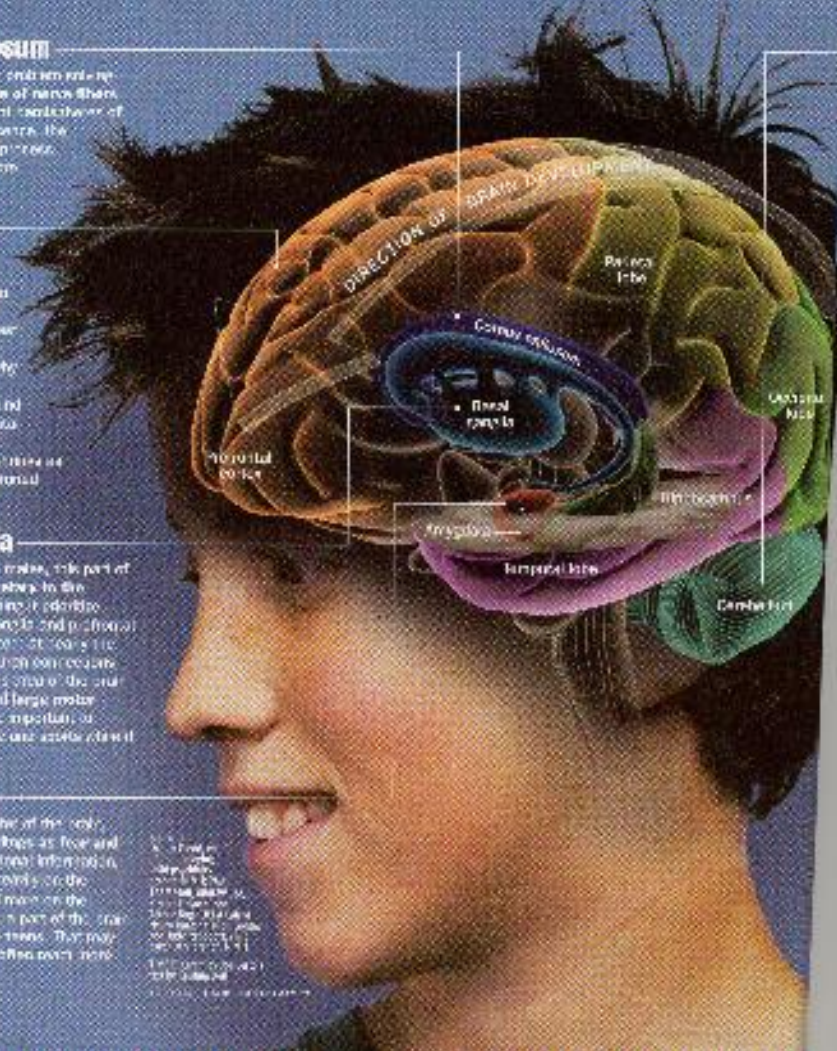
The CEO of the brain, also called the seat of higher thought, is the last part of the brain to mature—often not fully until the late 20s. It is behind the forehead, the prefrontal cortex is the seat of planning, decision-making, and impulse control.

Basal Ganglia

Large in females than in males, this part of the brain acts like a secretary to the prefrontal cortex by holding it up to date on information. The basal ganglia and prefrontal cortex are highly connected. It helps the individual make decisions and control impulses. The basal ganglia is also involved in small and large motor movements, so it is an important support structure in making and controlling movements.

Amygdala

The so-called emotional center of the brain, it is the seat of such primal feelings as fear and rage. In the early 2000s, information has been heavily researched on the amygdala. It is a small mass of the related structures, a part of the brain that is involved in emotion. It may also be involved in memory, and it is important to regulate other parts of the brain.

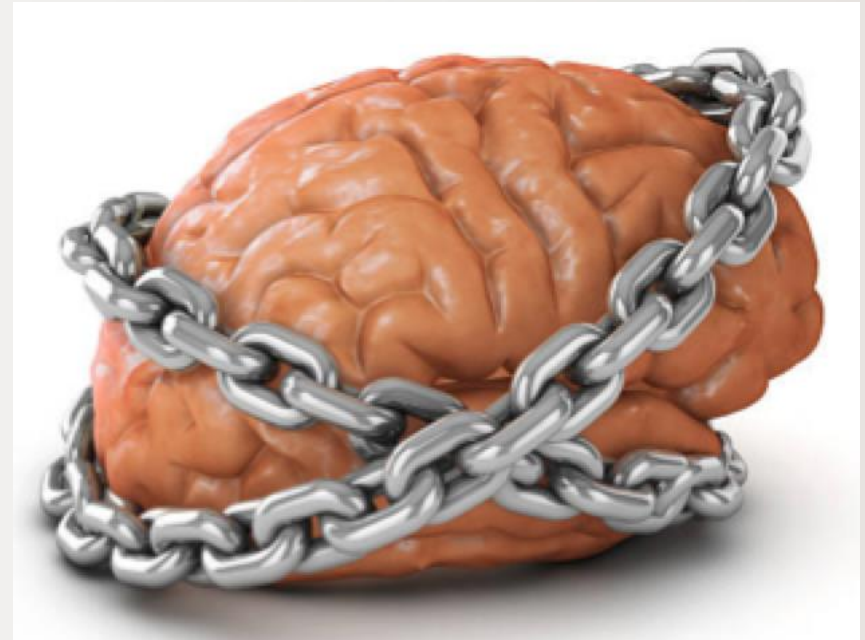


Winters, K. (2014). This is Your Brain on Adolescence. Presentation at University of Texas at Austin Young People and Drugs. Austin, Texas. April 8, 2014.

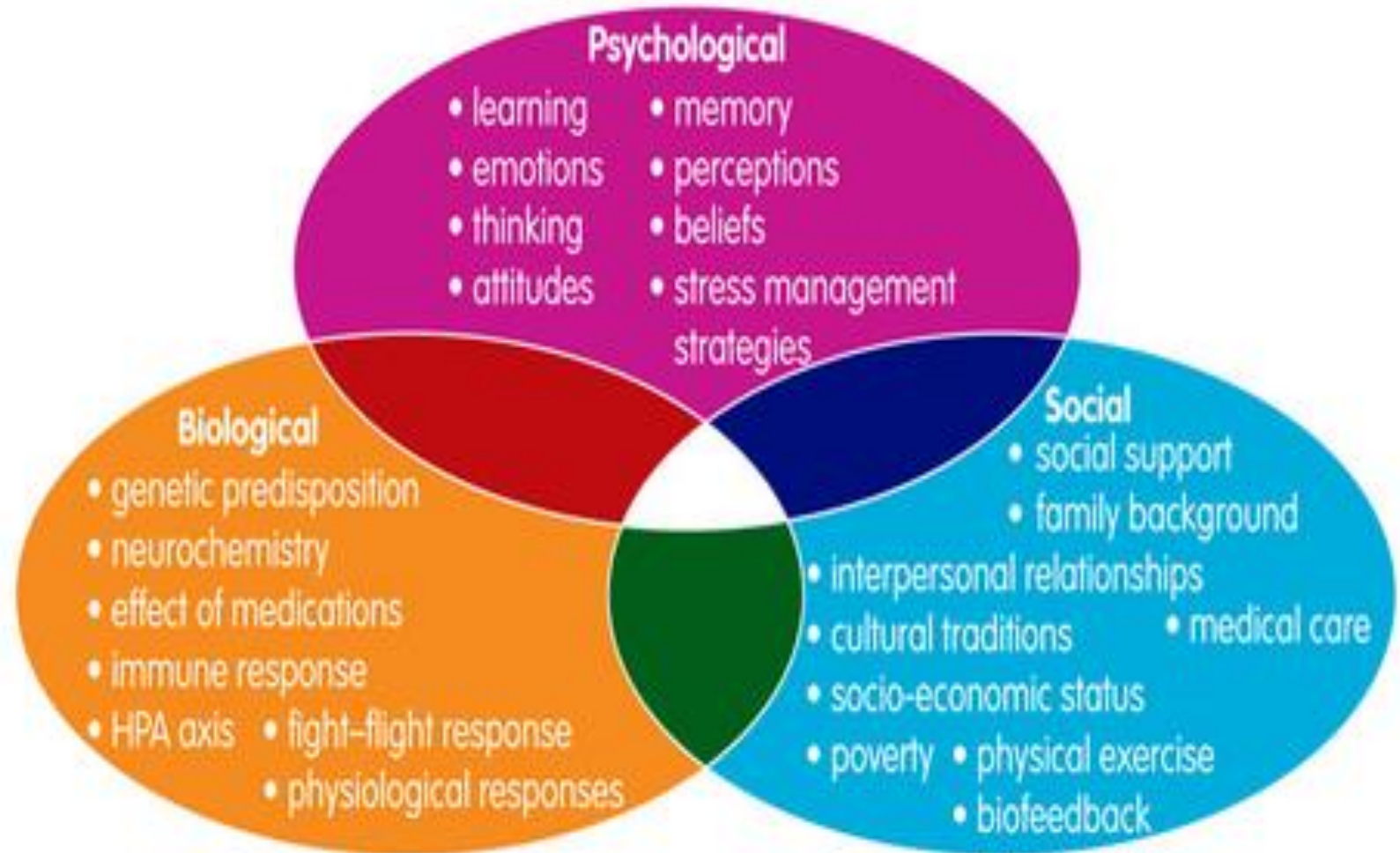
Developing Brain = Less Brakes on the “Go” System



- During adolescence, the developing dopamine system is “robust”
- This creates a greater risk of the dopamine hijacking process for the developing brain, compared to an adult brain



- **biopsychosocial framework:** an approach to describing and explaining how *biological, psychological* and *social* factors combine and interact to influence physical and mental health



RISK FACTORS FOR OPIOID MISUSE

Teenagers at highest risk: Opioid misuse higher in youth with . . .

- History of delinquent activities
- Recent mental health, trauma or emotional problems
- Involvement with the illicit drug market
 - More than one-third (39%) of those who had ever sold illicit drugs self-reported misusing prescription opioids during the previous year
- Lenient attitudes of people their age trying marijuana
- Association with more marijuana-using classmates
- Little attendance at religious services
- Concurrent alcohol and tobacco and nearly endemic among users of illicit drugs

News flash . . .

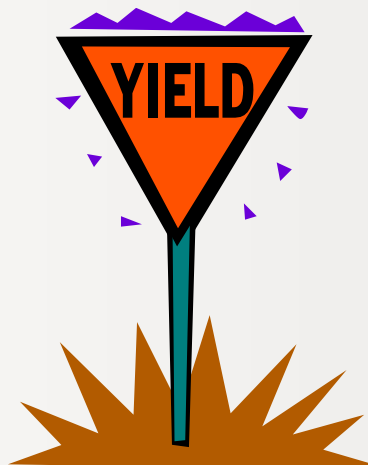
Though it gets less press, the opioid epidemic has been hitting teens and children hard, with hospitalization rates for opioid exposures nearly doubling for teens and more than doubling for kids under 5 between 1997 and 2012.

This is due to

- Family member's prescriptions, now declining.
- Improper storage (medicine cabinets, purses, counter tops)
- About a third of recreational and other non-medical use by teenagers included leftover drugs from their *own* past prescriptions

Warning Signs

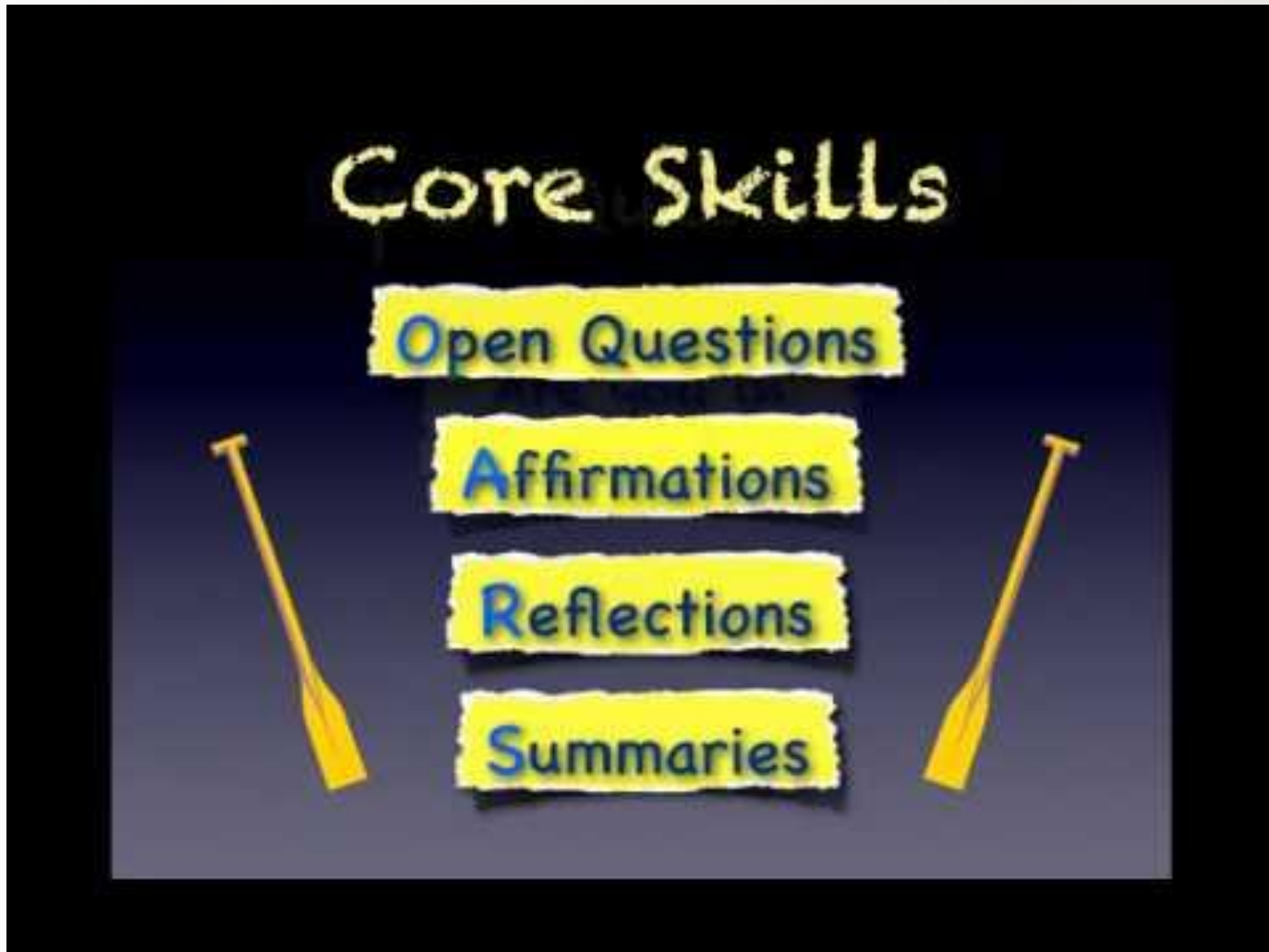
- family substance abuse
- truancy or sudden grade drop
- change in peer group
- quitting important activities
- legal difficulties
- drug-related paraphernalia
- unknown source of income
- physical changes
- "hanging out" in strange places
- justification of use due to stressors



TOOL KIT: How to talk about drugs

- Set a respectful and inquisitive, intimate and safe tone
- Do not interrupt
- You cannot change someone – they must choose change
- Don't make assumptions – there is no typical “profile” for substance misuse and addiction
- Listen more than talk – reflect what you hear – don't try to FIX
- Be candid and nonjudgmental
- Affirm perspective, feelings, and freedom of choice
- Ask questions tentatively
- Be patient and do not get defensive – people with substance use problems may turn the conversation quickly to make the person asking lose balance
- Use non-stigmatizing language

Practice MI: Use Your OARS



Assessment/Screening Tool: CRAFFT

C Have you ever ridden in a **car** driven by someone (including yourself) who was “high” or had been using alcohol or drugs?

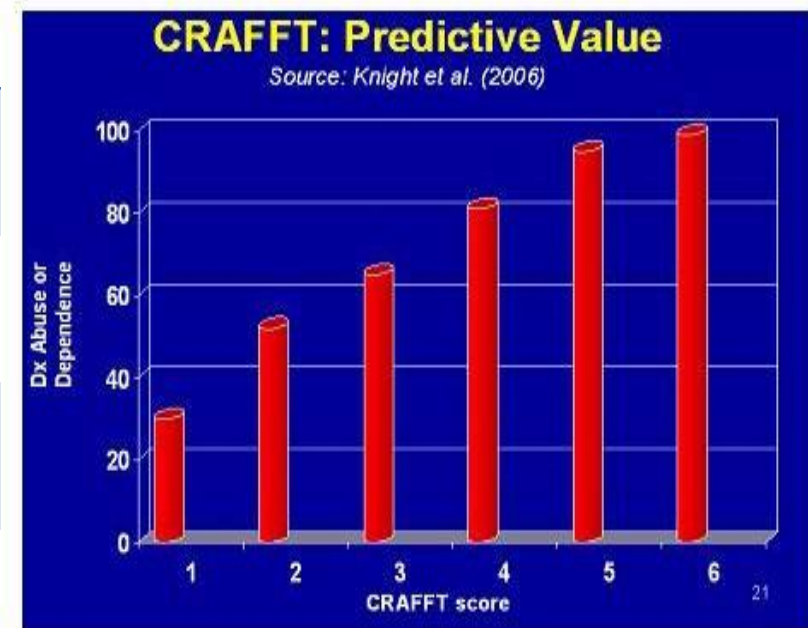
R Do you ever use alcohol or drugs to **relax**, feel better about yourself, or fit in?

A Do you ever use alcohol or drugs while you are by yourself, **alone**?

F Do you ever **forget** things you did while using alcohol or drugs?

F Do your **family** or **friends** ever tell you that you should cut down on your drinking or drug use?

T Have you ever gotten into **trouble** while you were using alcohol or drugs?



Referrals and Resources

- Outreach, Screening, Assessment, and Referral Centers (OSARs)
 - <https://www.dshs.texas.gov/sa/OSAR/>
- Peer Coaches
- Treatment Centers
- Detox
- Recovery ATX and TONI