



Iowa's Evolving Drug Trends & *Public Safety Implications*

Iowa-Illinois Safety Council

Substance Abuse and Marijuana in the Workplace: September 25, 2019

Dale Woolery, Director

Iowa Office of Drug Control Policy

Emerging Drug Issues: Overview

PRODUCT DIFFUSION

- Forms:** THC & CBD oils, waxes, edibles, vapes; Synthetics; Meth “ice”
- Mixtures:** Heroin + Fentanyl &/or Meth &/or Marijuana; Other cocktails
- Distribution:** Mail & Shipping Services
- Consumption:** Oral; IV; vaping (Nicotine, THC)

POTENCY ESCALATION

- Alcohol:** Concentrations (craft beers)
- Nicotine:** Levels (vaping pods)
- THC:** Concentrations (hash oils, waxes & edibles)
- Meth:** Purities (nearly 100% “ice”)
- Fentanyl:** Lethality

POLICY CHANGE

- LAWS:** Marijuana (THC &/or CBD) medicalization & legalization; Hemp; Psychedelic Mushrooms (psilocybin) & Ecstasy (MDMA) legalization; Opioid regulations; Smoking & Vaping proposed restrictions; etc.?

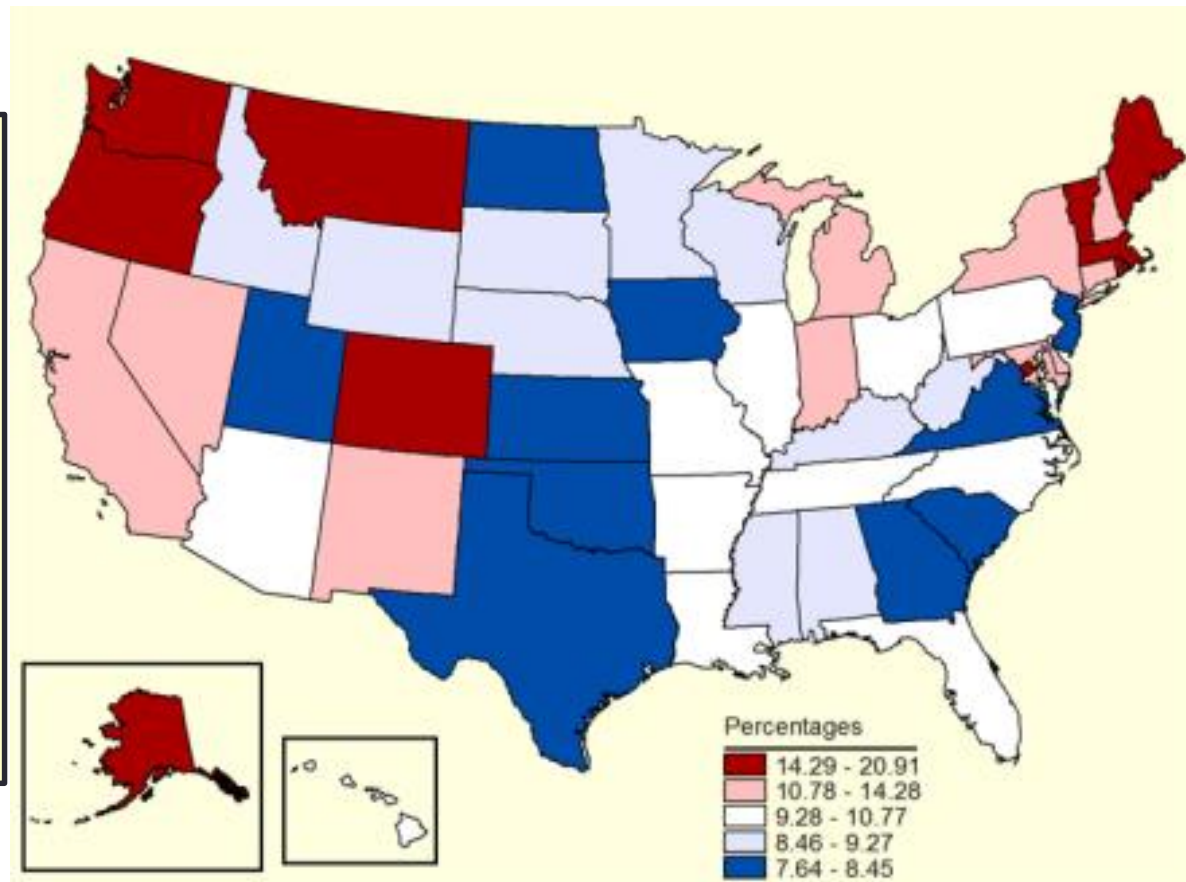
Rates of U.S. Illicit Drug Use, by State

Map: 12+ Current (Past Month) Use

lowa ranks:

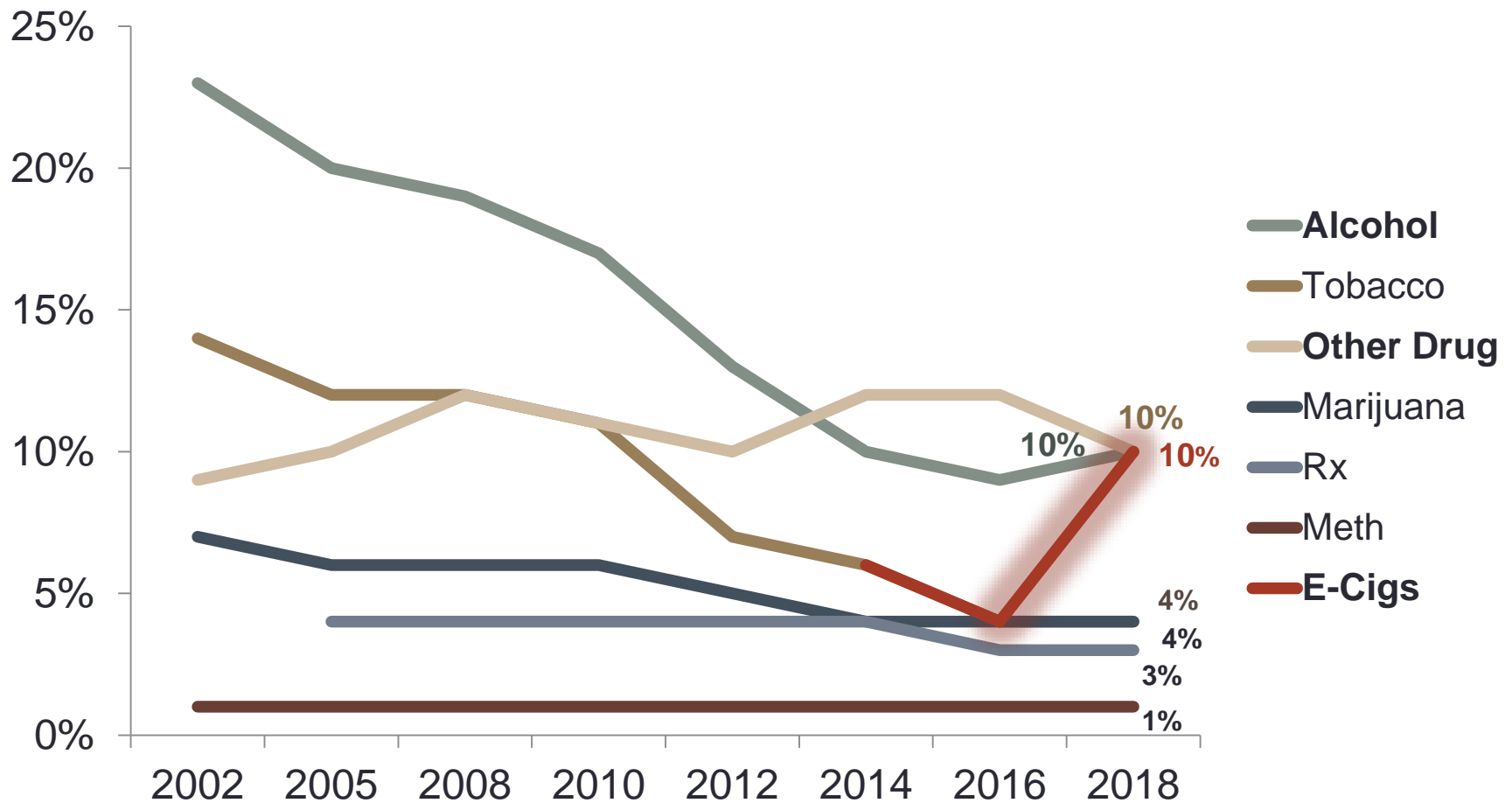
47th in overall illicit drug use,
 45th in marijuana use,
 44th in heroin use (yearly),
 31st in pain reliever misuse (yearly),
 46th in the rate of drug overdoses,
 20th in tobacco use,
 6th in binge alcohol drinking,
 29th in meth use (yearly)
 (8th highest rate of meth *treatment*).

National Survey on Drug Use & Health, 2016-2017;
 CDC, 2017; & Treatment Episode Data Set, 2017



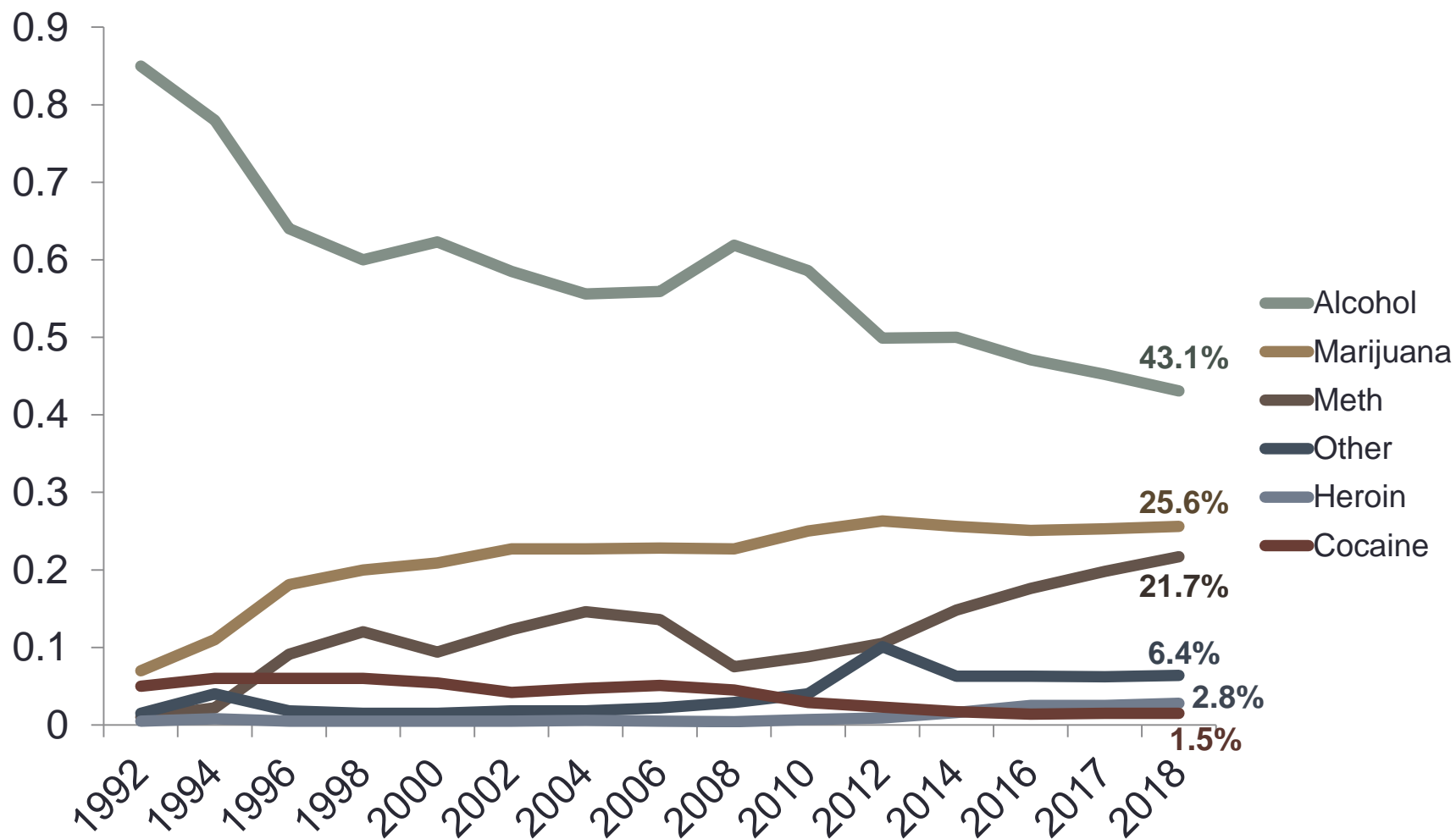
Iowa Youth Substance Abuse

6th, 8th and 11th Grade Users, Last 30-Days



Iowans' Most Common Drugs of Abuse

Primary Substance Cited by Iowans in Treatment



Drugged driving deaths up in Iowa after nearby states legalize marijuana

Stateline

Drug-related crashes up in Iowa, while the number of alcohol-related crashes fall

Drugged Driving Deaths Spike With Spread of Legal Marijuana, Opioid Abuse

'Drugged driving' surpasses drunken driving among drivers killed in crashes, report finds

Drugged driving on the rise as marijuana, opioid use puts motorists at risk, study finds

Why It's Difficult to Develop a Roadside Test for Marijuana

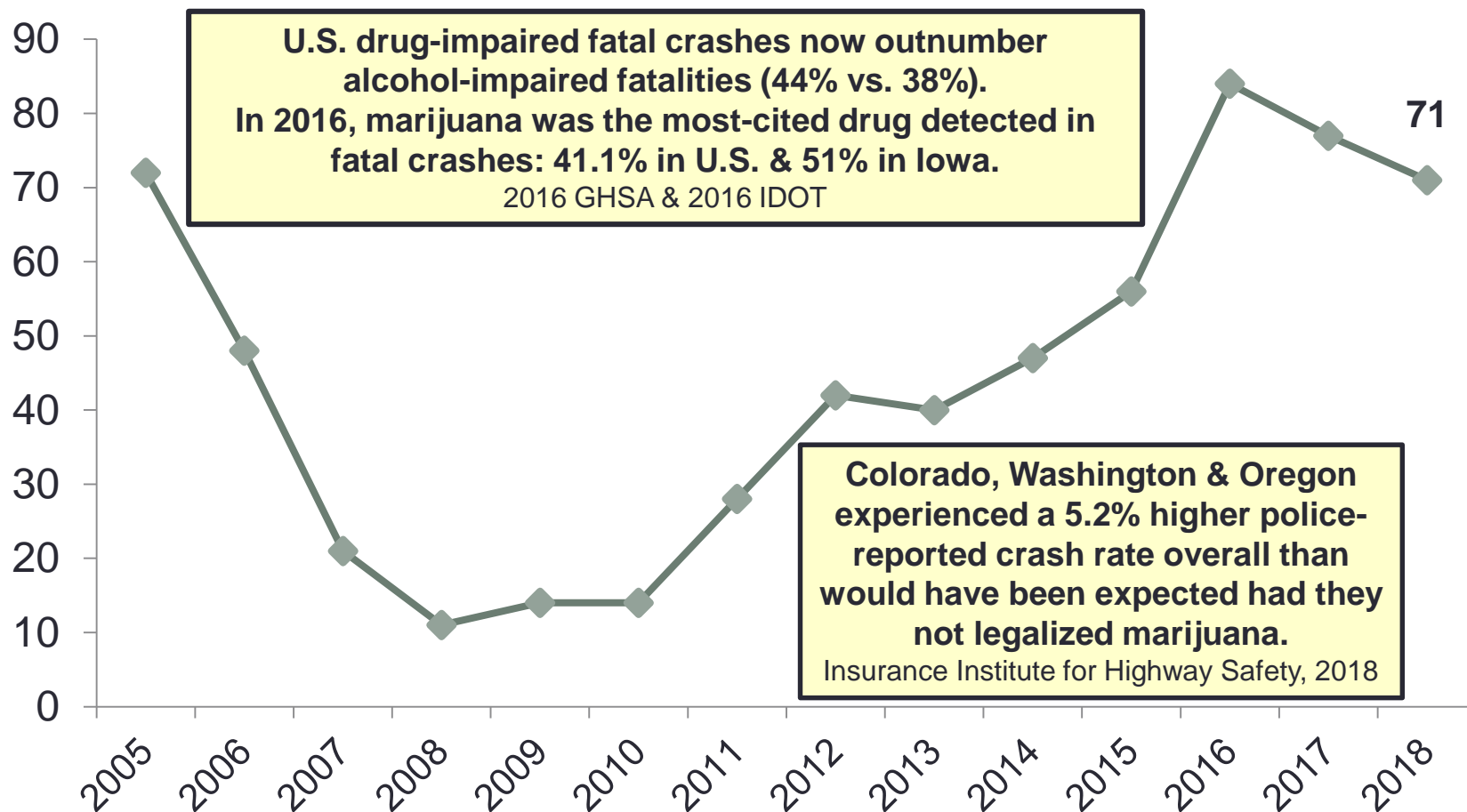
Police in Colorado and California are using tests to see if drivers are high on marijuana. But more exact testing is needed as more states legalize the drug.

Growing number of fatal car crashes linked to drug use

Some people think marijuana or opioids don't impair their ability to drive – and some even believe these drugs make them safer drivers.

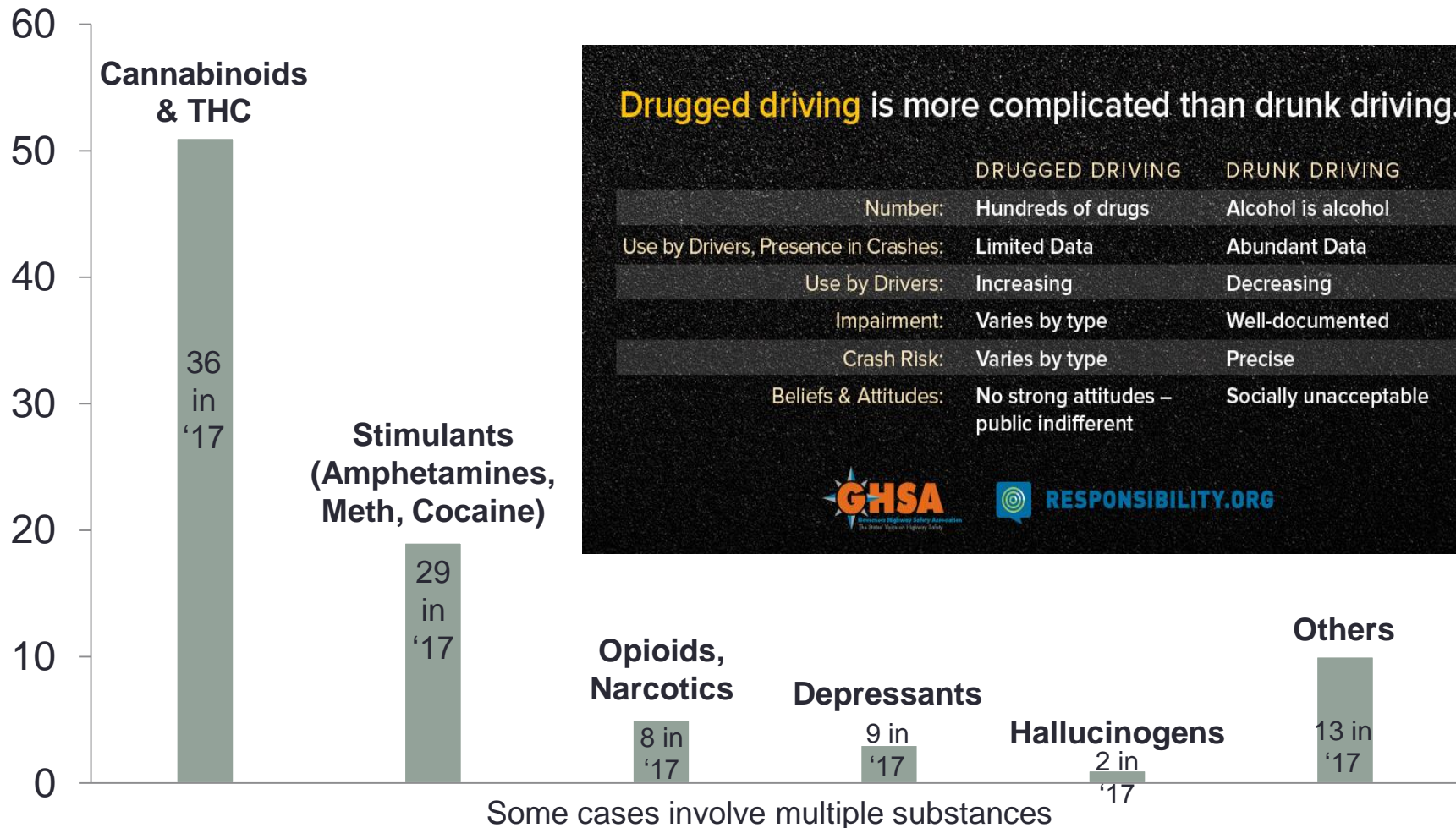
Iowa Drug-Related Traffic Fatalities

Drug & Mixed Drug/Alcohol-Related Traffic Deaths



Iowa Drug-Related Traffic Fatalities

2018 by Drug Type (not including alcohol-only)



Drugged driving is more complicated than drunk driving.

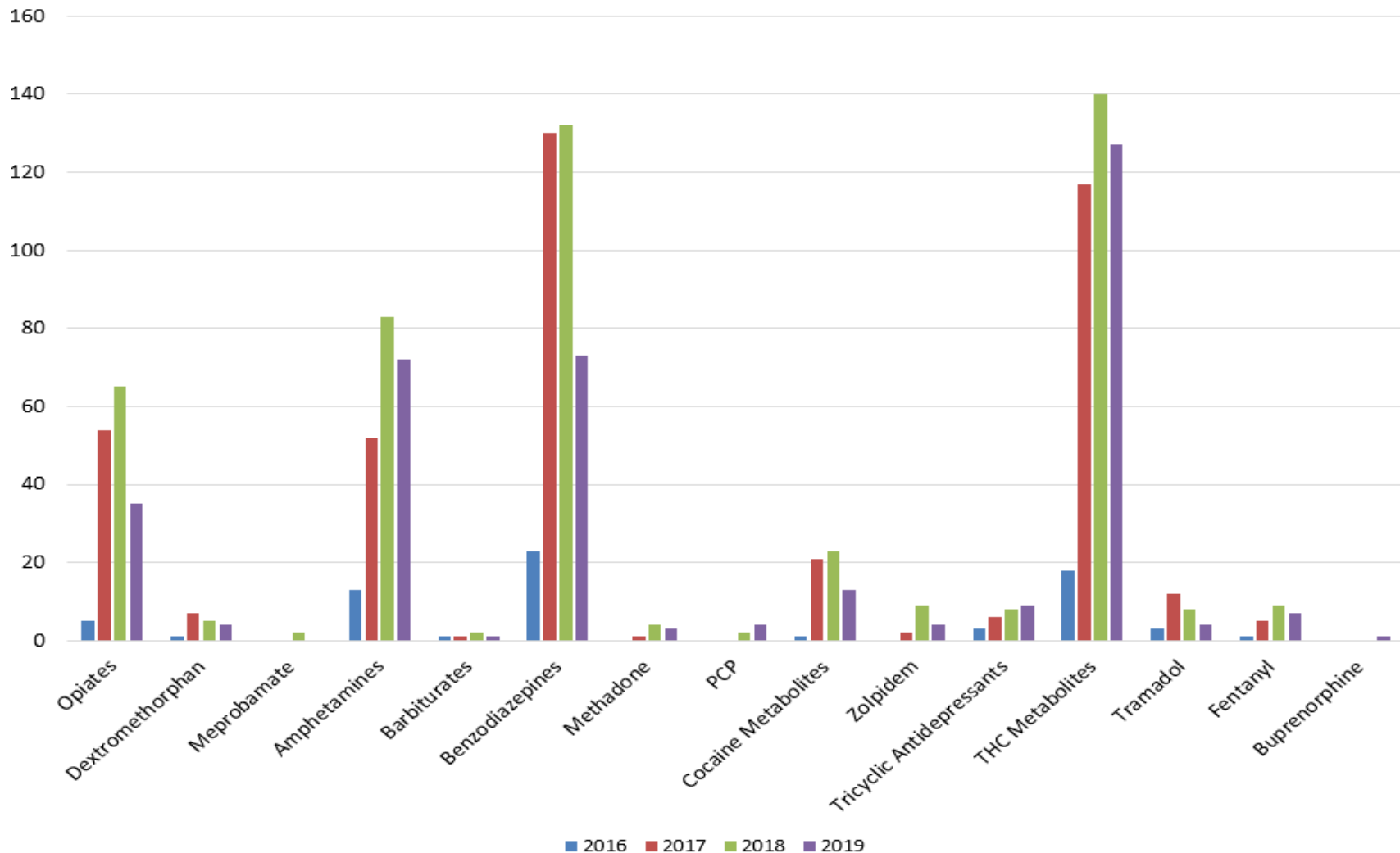
	DRUGGED DRIVING	DRUNK DRIVING
Number:	Hundreds of drugs	Alcohol is alcohol
Use by Drivers, Presence in Crashes:	Limited Data	Abundant Data
Use by Drivers:	Increasing	Decreasing
Impairment:	Varies by type	Well-documented
Crash Risk:	Varies by type	Precise
Beliefs & Attitudes:	No strong attitudes – public indifferent	Socially unacceptable



Iowa Driving-Related Blood Screens

DCI Lab Positive Results on Cases from Law Enforcement

Blood Positive Screens by Drug Category

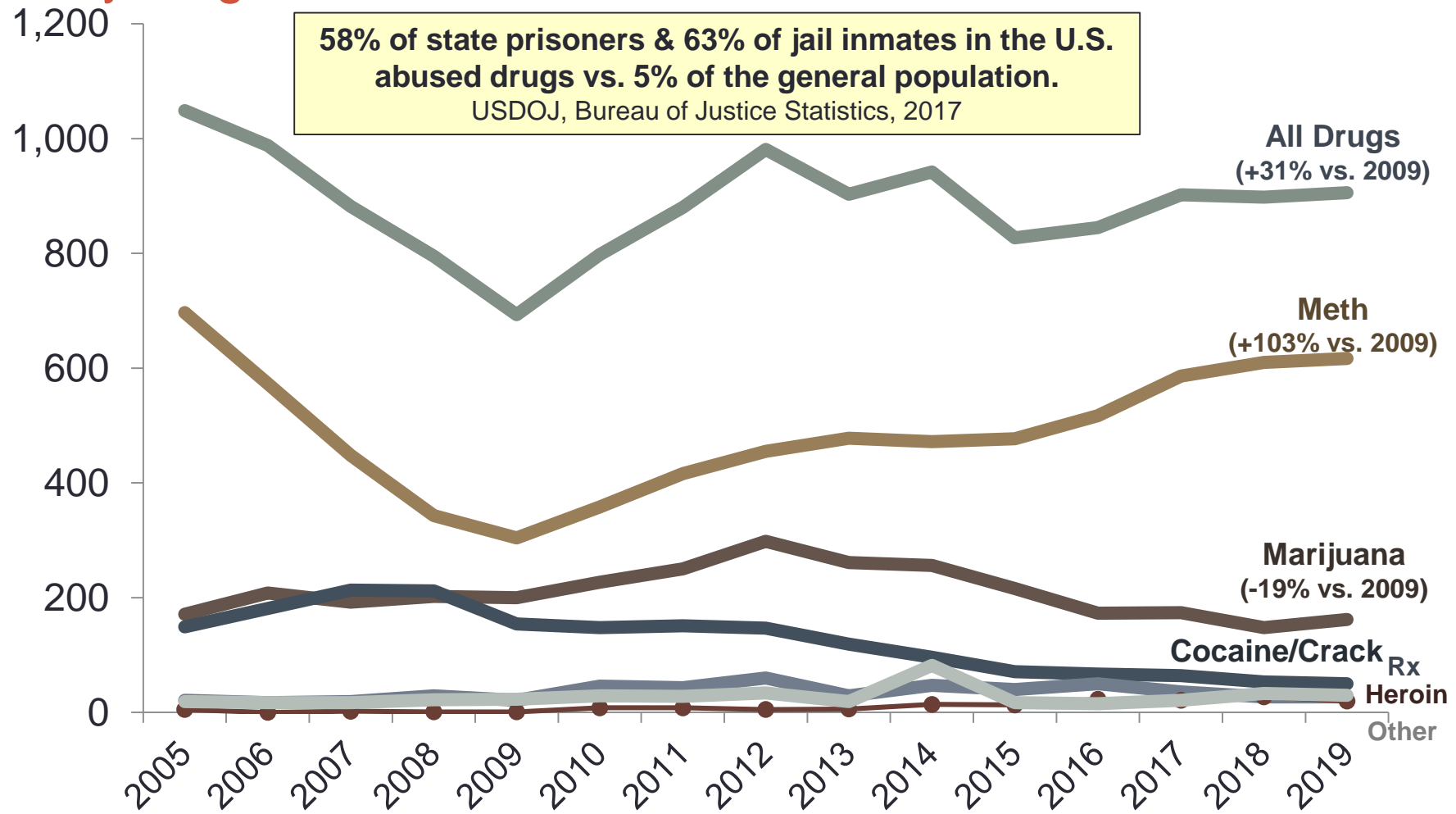


*2019 year to date through July.

Iowa Department of Public Safety, 2019

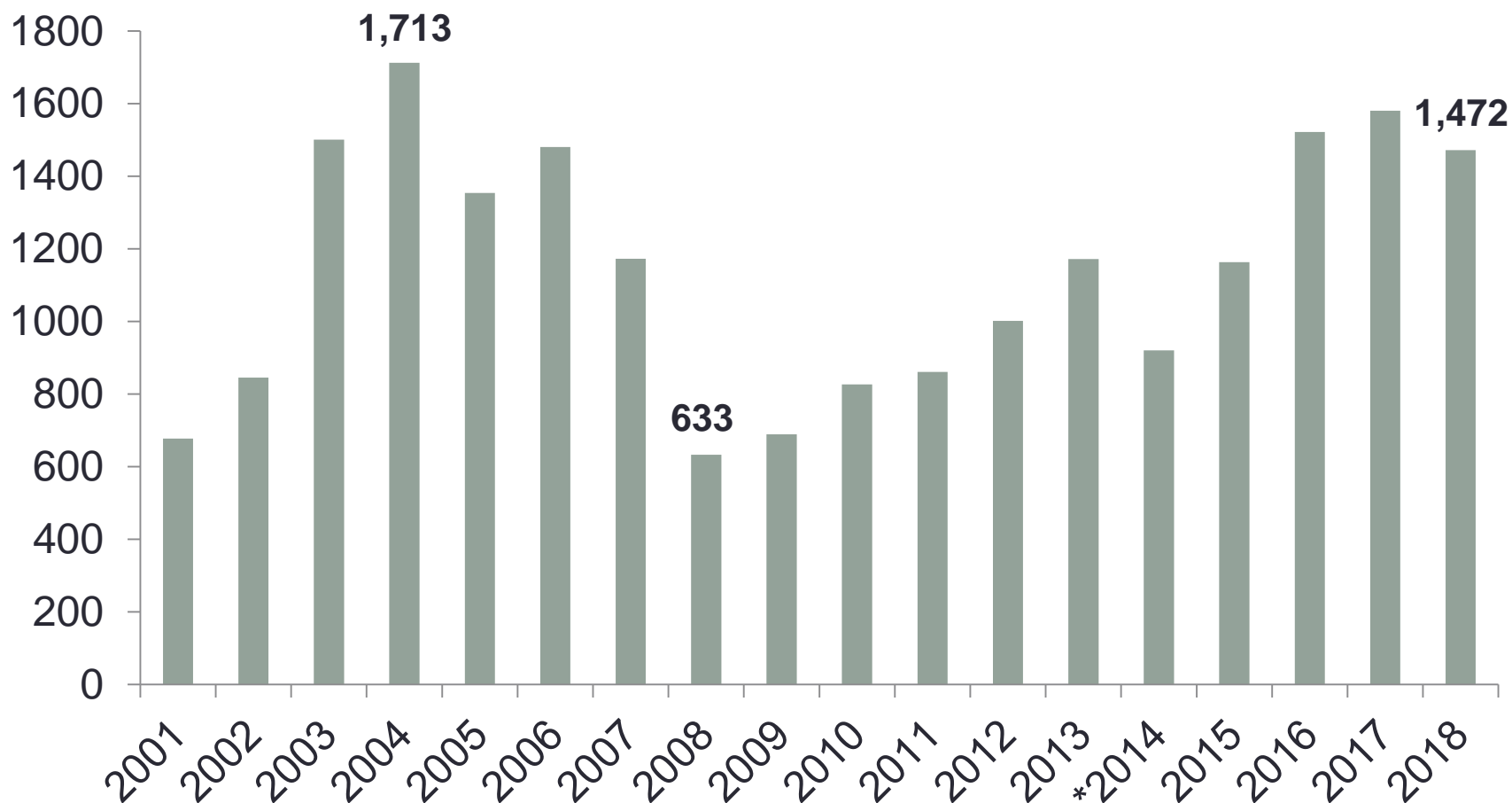
Iowa “Drug-Related” Prison Admissions

Primary Drug Involved



Iowa Drug-Related Child Abuse

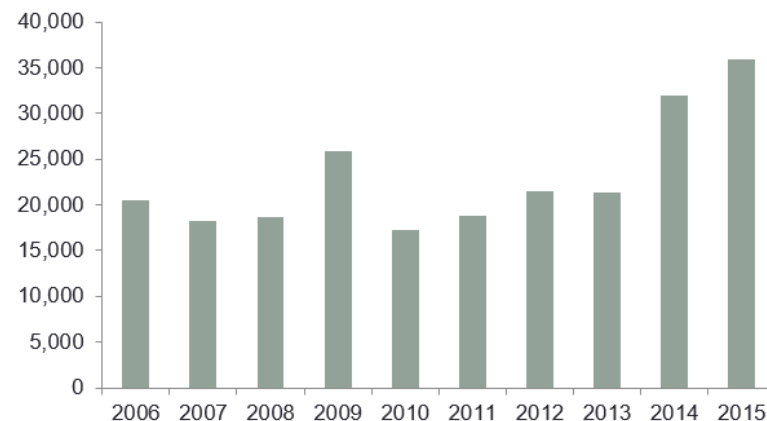
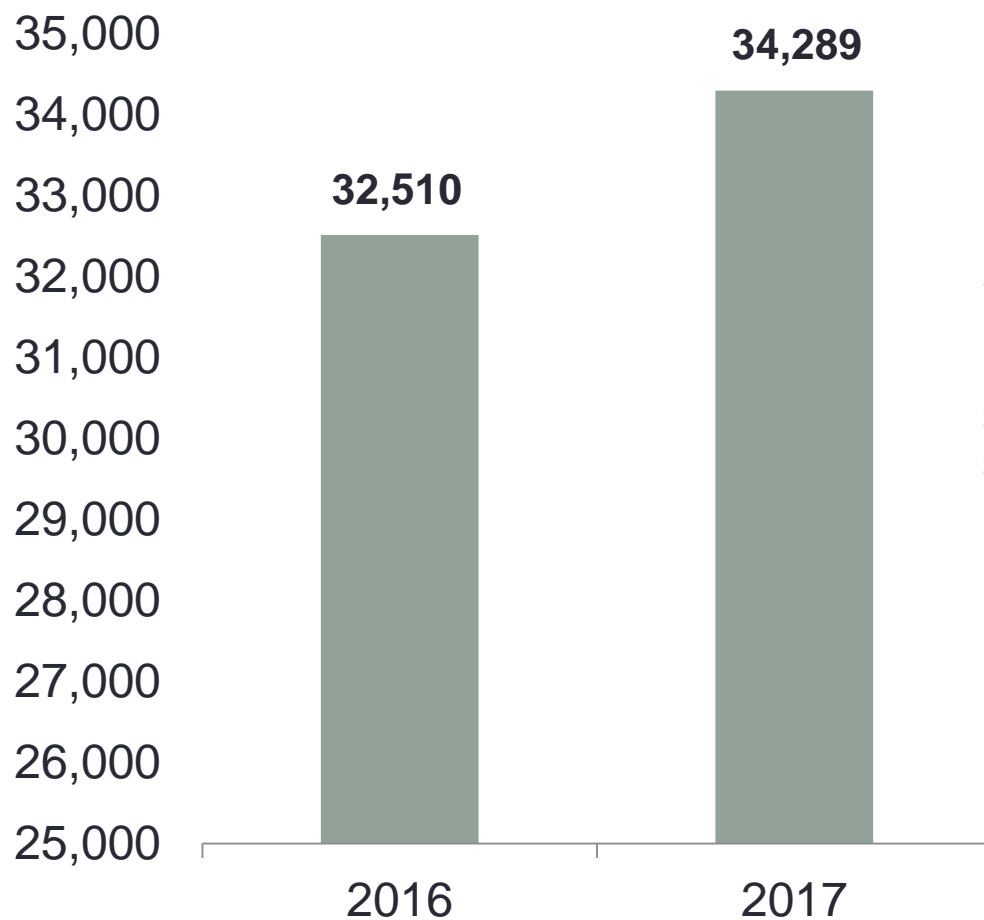
Confirmed/Founded Cases: Presence of Illegal Drugs in Child's System



(*Caution advised interpreting trends due to protocol changes in 2014 & 2017) Iowa Department of Human Services, 2019

Iowa Drug & Alcohol-Related ED Visits

Use as Causal or Contributing Factor

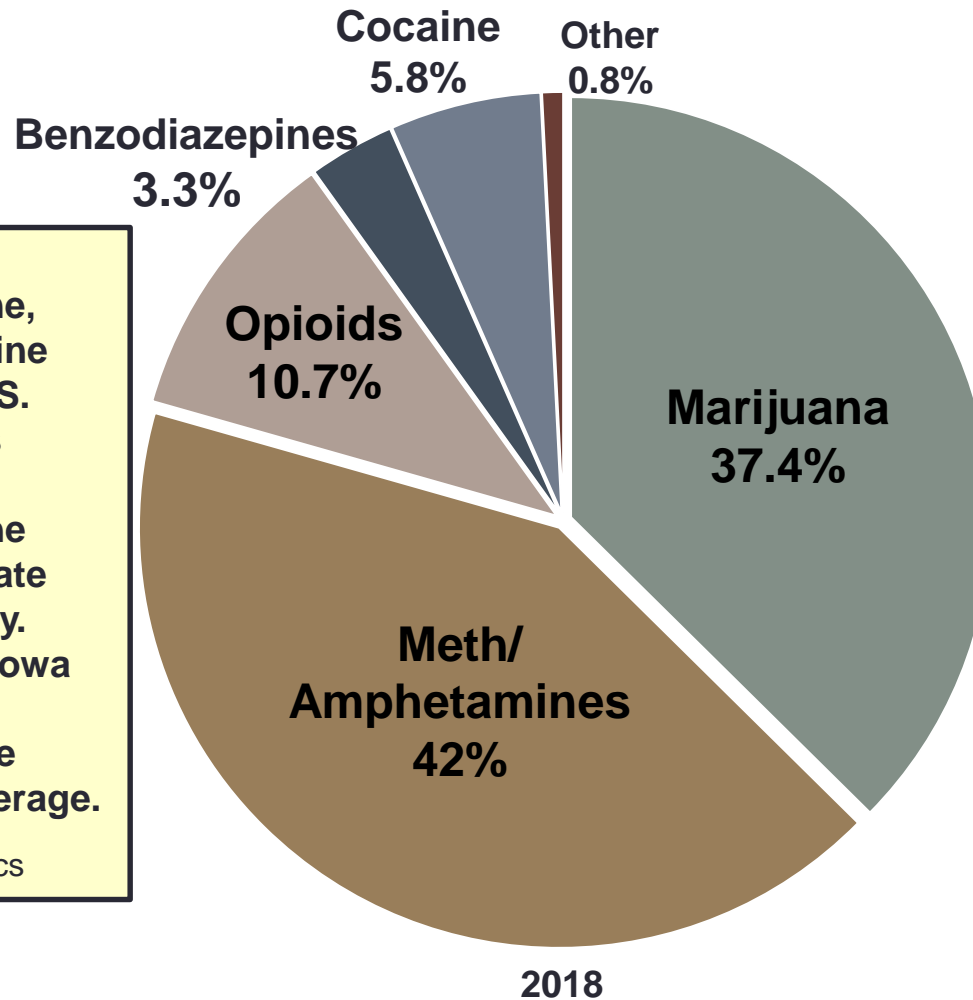


(*Reporting methods changed in 2015, resulting in a new baseline in 2016.)

Iowa Department of Public Health, 2018

Iowa's Workplace

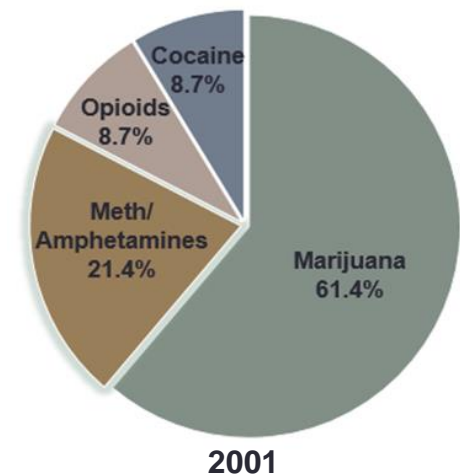
Small Sample of Positive Drug Tests Reported 2018 vs. 2001 (% of Total)



The use of meth/amphetamine, marijuana & cocaine detected in the U.S. workforce is at its highest rate in a decade, though the opiate positivity rate declined nationally. Except for meth, Iowa workplace drug detection rates are below the U.S. average.

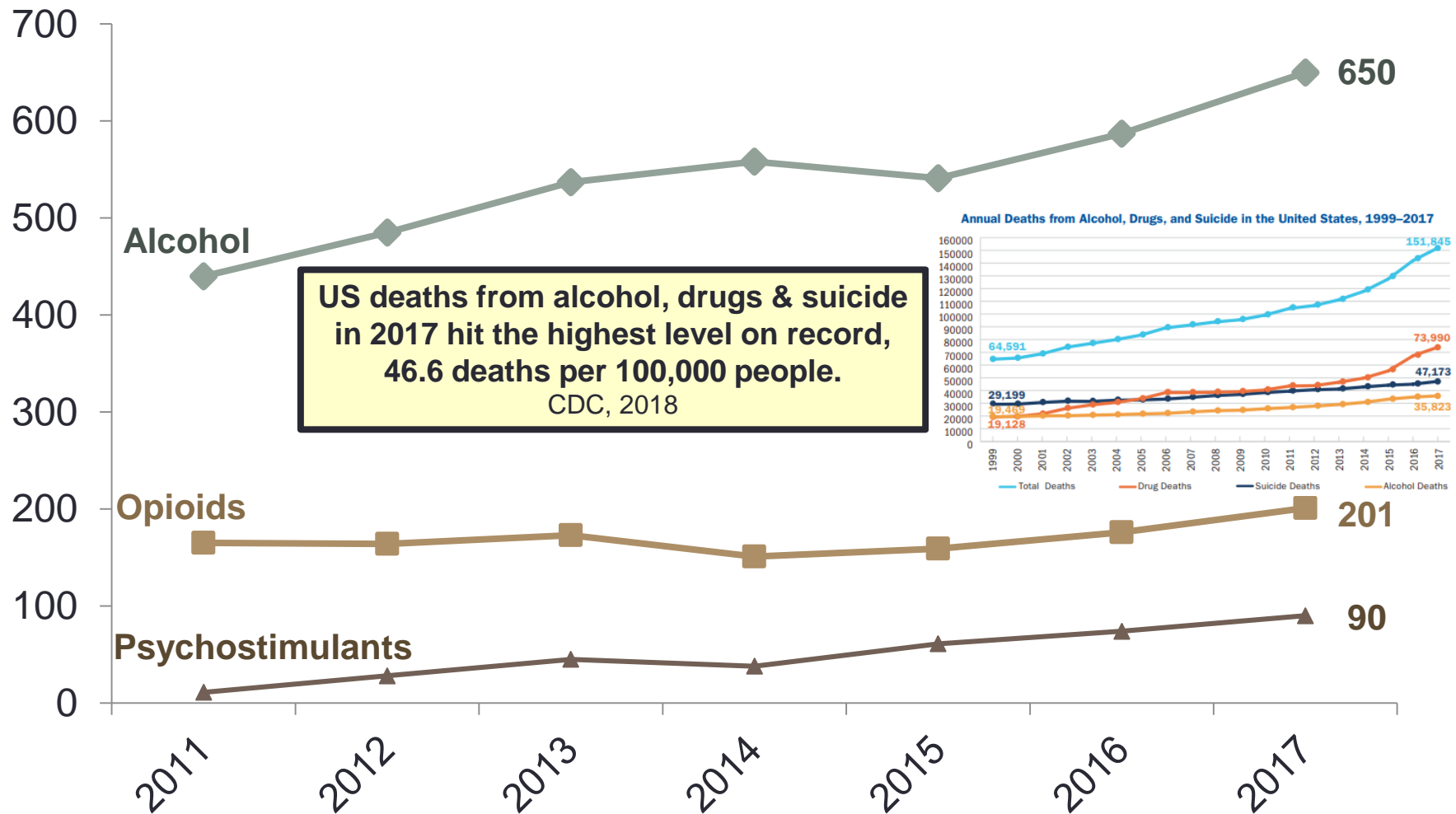
2018 Quest Diagnostics

Evolving Questions:
 Zero tolerance?
 Impairment thresholds?
 Medical exemptions?
 Selective substances?
 Policy content?
 Policy communication?



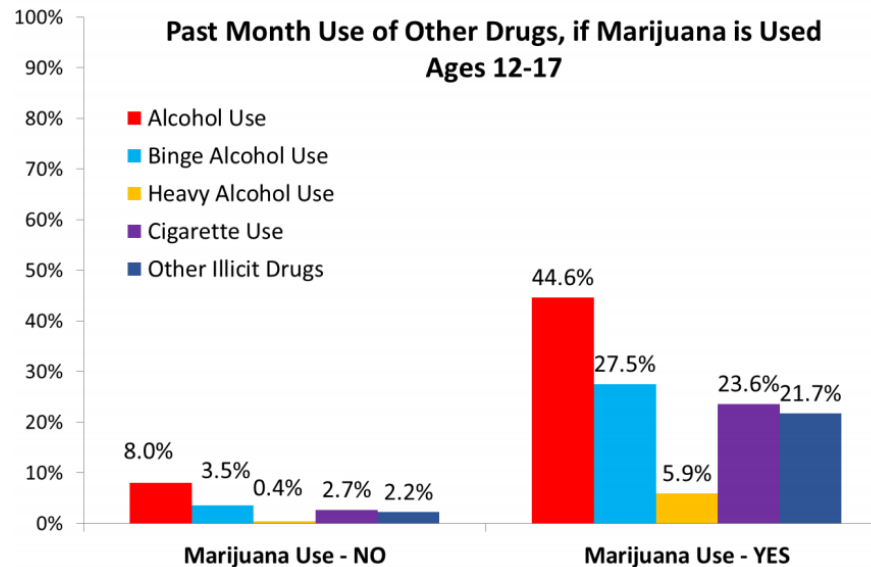
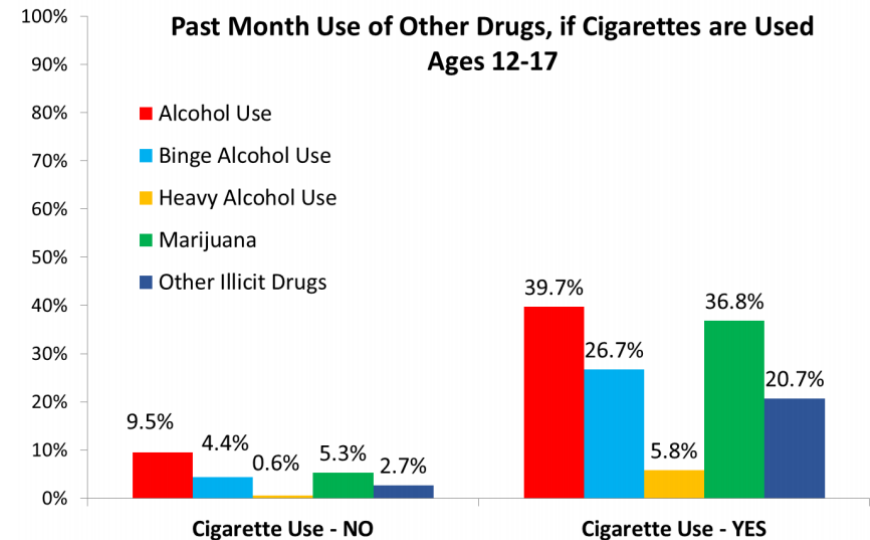
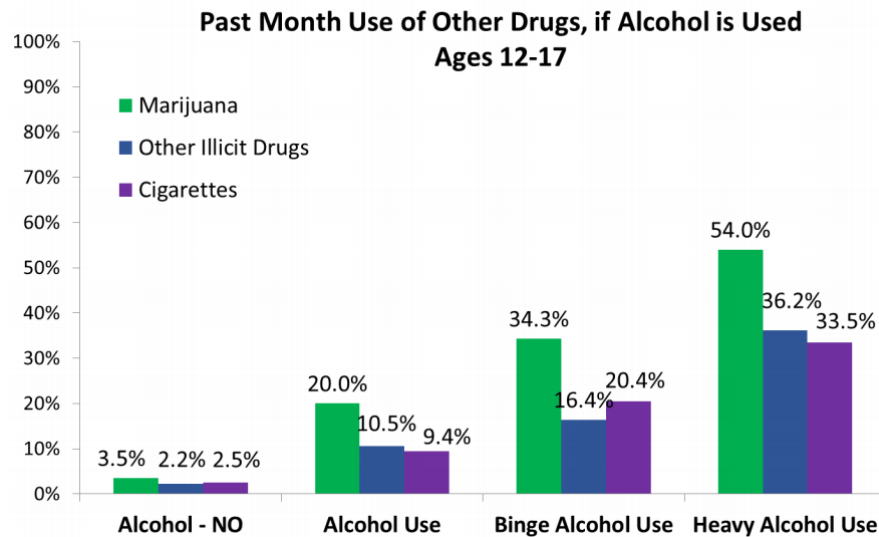
Substance-Involved Deaths in Iowa

Involving Alcohol, Opioids and Psychostimulants (e.g., Meth)



Substance Use Disorder Precursors

Most SUDs are Rooted in Behavior that Begins in our Teens

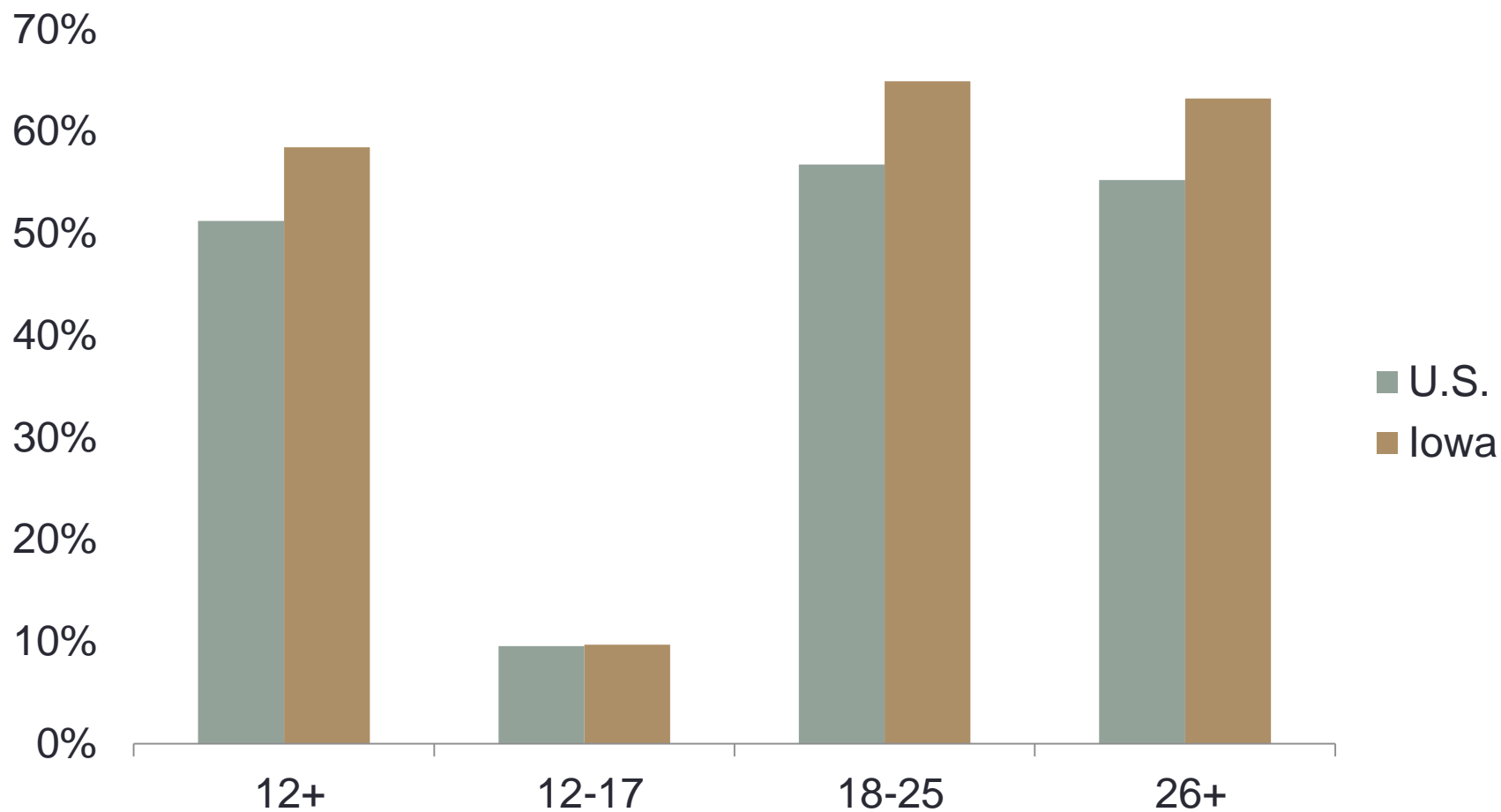


Alcohol & Tobacco/Nicotine

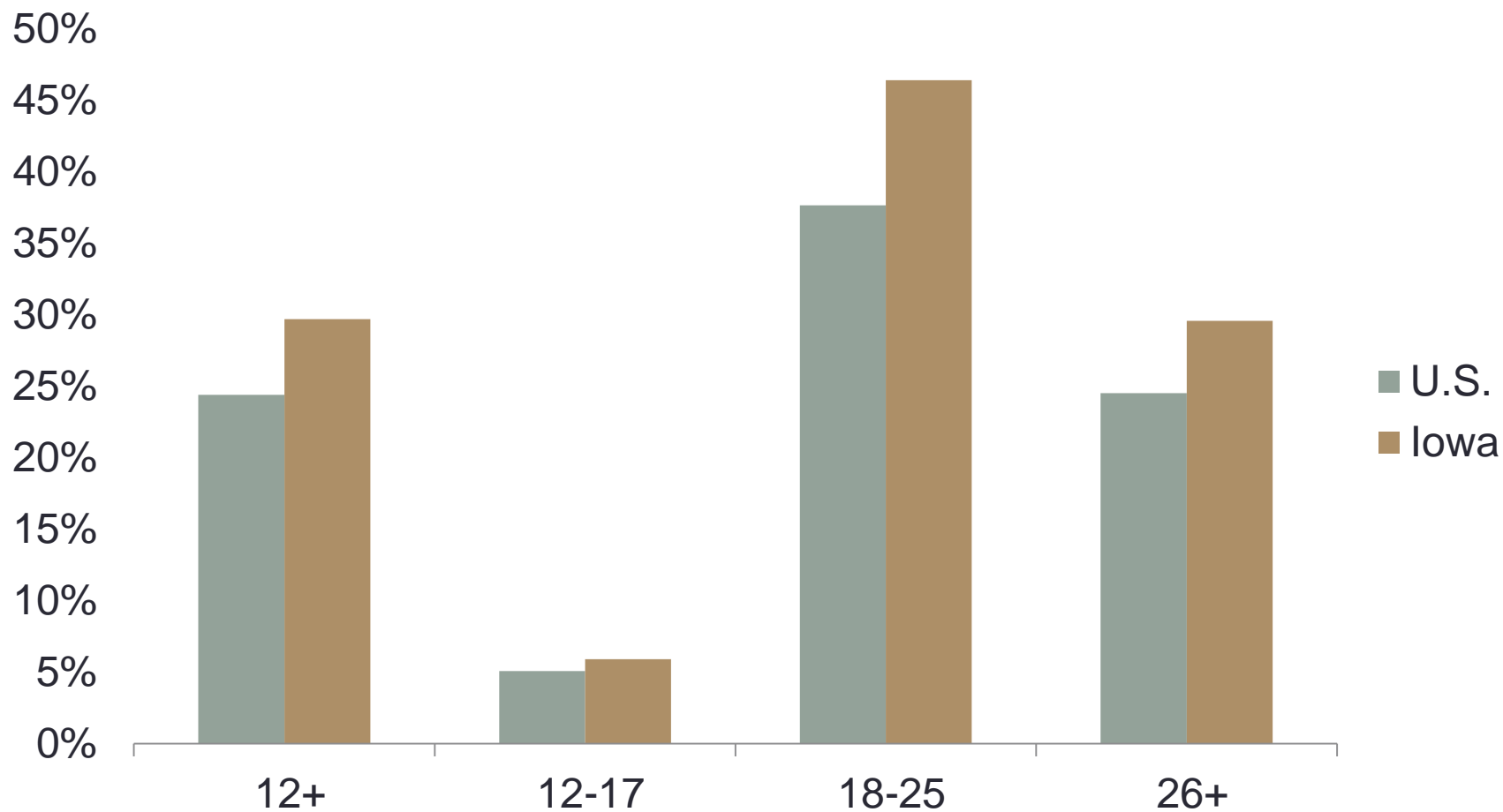


Current Alcohol Use

Last 30-Days

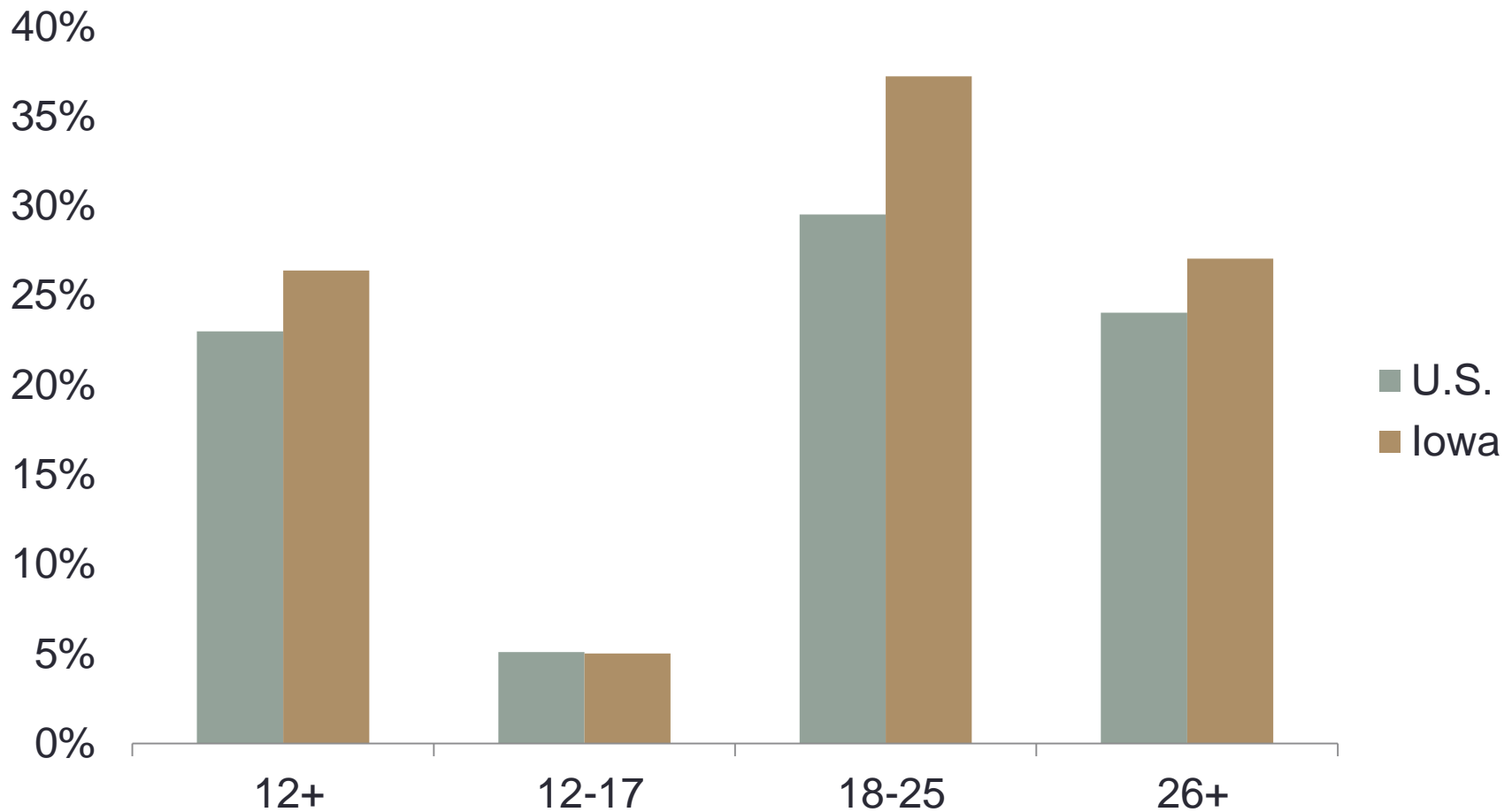


Current Binge Drinking Last 30-Days



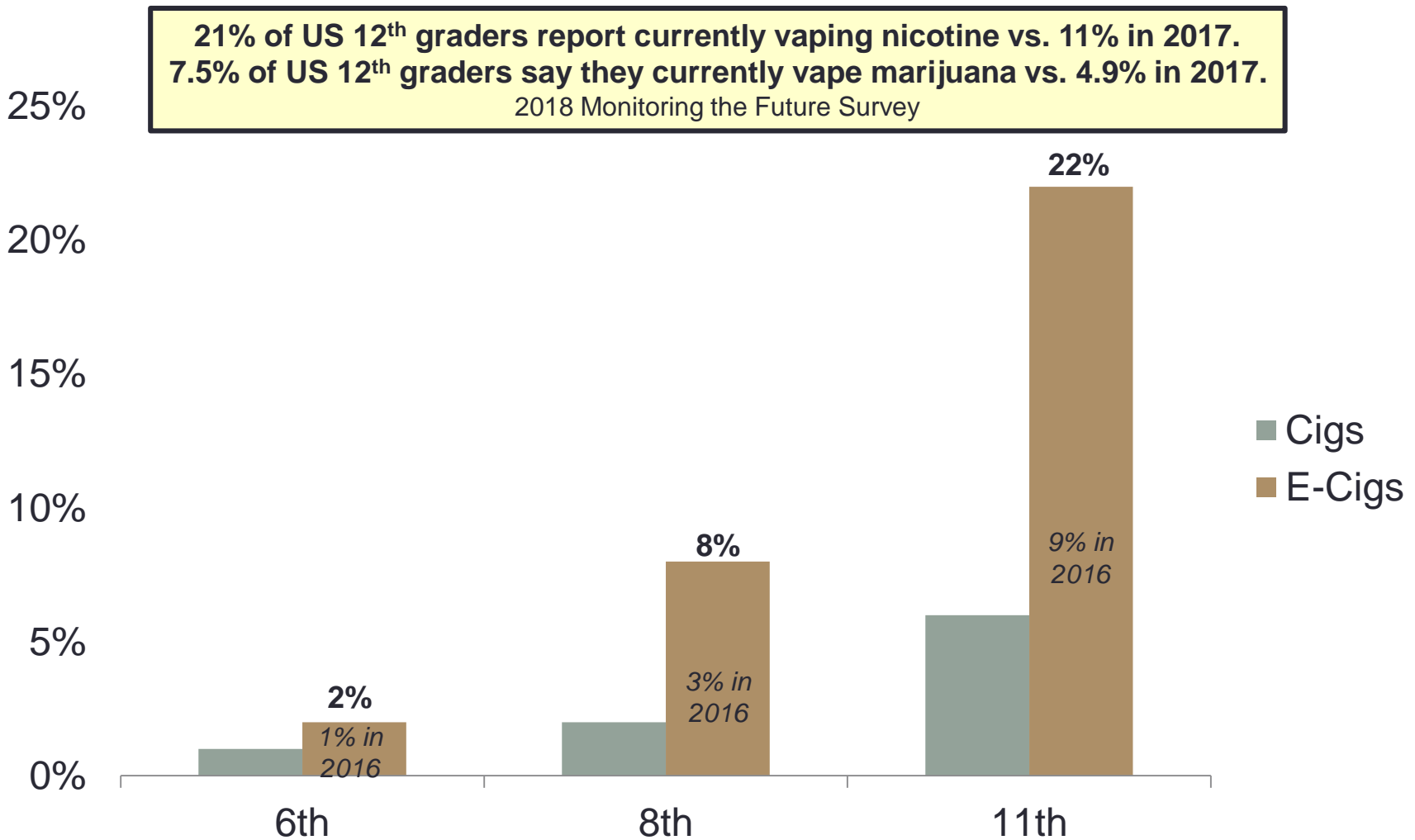
Current Tobacco Product Use

Last 30-Days



Iowa Youth Cigarette vs. E-Cigarette Use

Last 30-Days



Electronic Smoking by Youth

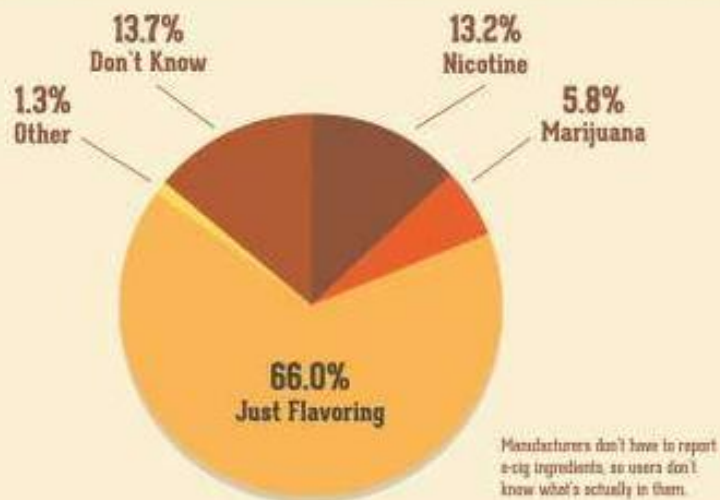
Nicotine & THC

NIGHTLY NEWS

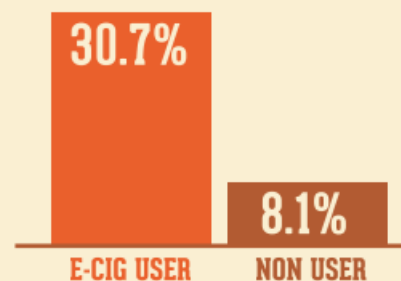
CDC warns people to stop vaping after rise in serious lung disease including 5 deaths

TEEN E-CIG USERS ARE MORE LIKELY TO START SMOKING.

WHAT DO TEENS SAY IS IN THEIR E-CIG?³



Start Smoking Within 6 Months



*Includes combustible tobacco products [cigarettes, cigars, and hookahs]

JAMA Pediatrics, August 12, 2019

Association Between Electronic Cigarette Use & Marijuana Use Among Adolescents & Young Adults: A Systematic Review and Meta-analysis

This meta-analysis found a significant increase in the odds of past or current & subsequent marijuana use in adolescents & young adults who used e-cigarettes. Findings highlight the importance of addressing the rapid increases in e-cigarette use among youths as a means to help limit marijuana use in this population.

National Institutes of Health & Chadi, et al., 2019



Marijuana

Potential to Heal or Hurt?

“Medical”

“Extracts” “CBD & THC” “Concentrates”

“Recreational”

Language Matters

Marijuana or Cannabis Plant:

Dried leaves, flowers, stems & seeds from the plant, *Cannabis sativa*.

Concentrates:

High THC marijuana products (e.g., hash oils, waxes & edibles).

Cannabinoids:

Chemical compounds found in marijuana. Scientists say marijuana consists of more than 100 cannabinoids (& over 500 chemicals in total).

Cannabinoid Receptors:

Brain neuron molecules to which cannabinoids attach, disrupting mental & physical functions (memory, coordination, concentration, etc.).

Cannabidiol (CBD):

A non-psychoactive marijuana compound that may have medical value.

Delta-9-tetrahydrocannabinol (THC):

Marijuana's main psychoactive compound that may have therapeutic value.

Language Changes

Then

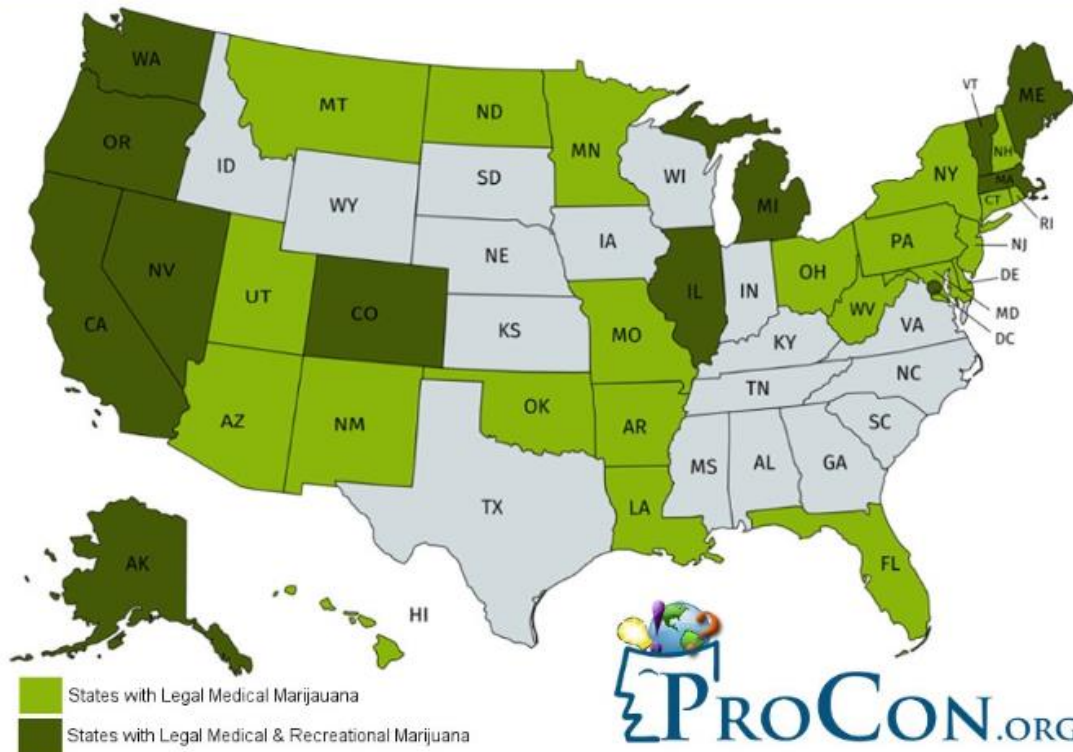
- Weed
- Grass
- Pot
- Reefer
- Hash
- Hemp
- Joints
- Blunts
- Buds

Now

- Hash or Honey Oil
- Wax or Earwax
- Budder, Crumble, Shatter
- Black Glass
- Edibles
- Reggie
- Loud
- Tree
- Green

Marijuana Laws & Use by Teens

11 Legal Recreational Marijuana States & DC
33 Legal Medical Marijuana States & DC

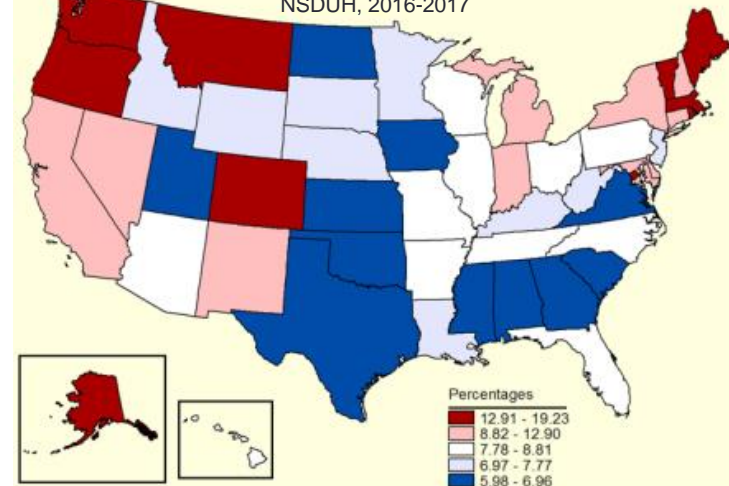


- CBD Only Medicinal Use = 14 States (e.g., Iowa)
- No Legal Use = 3 States

*Marijuana remains an illegal Schedule I controlled substance under federal law.

Past Month Use by 12-17 Year Olds

NSDUH, 2016-2017



Health Group Positions on Marijuana

- Major public health organizations do not support smoked marijuana.



- The American Academy of Pediatrics “opposes marijuana use by children & adolescents...the use of ‘medical’ marijuana outside the regulatory process of the FDA...&...legalization of marijuana.”

Marijuana impairs/worsens respiratory systems, heart rate, coordination, judgment, memory, problem-solving & mood. It contributes to auto crashes & can cause severe anxiety & psychosis.

National Institute of Drug Abuse, 2018

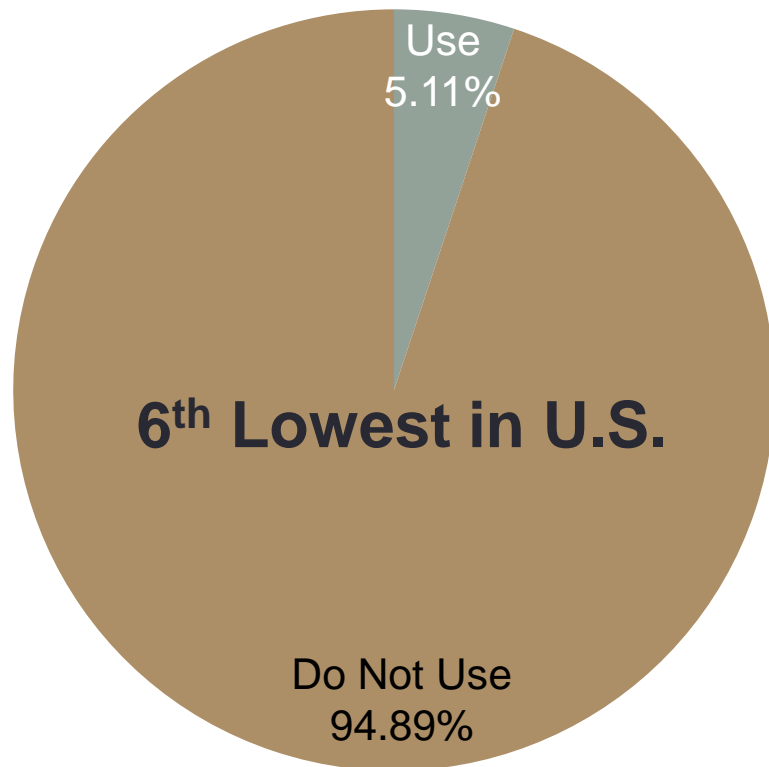
Between 9 & 30% of those who use may develop some degree of marijuana use disorder. People who begin using before age 18 are 4 to 7 times more likely than adults to develop a disorder.

National Institute of Drug Abuse, 2018

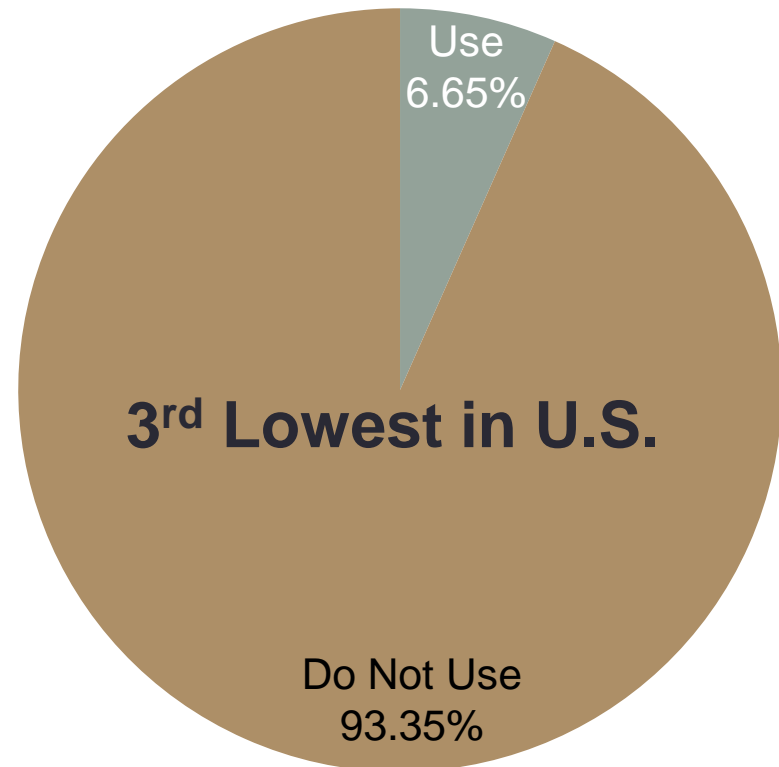
Iowans' *Current* Marijuana Use

Most Iowans are **NOT** *current* marijuana users (past 30 days)

**Iowa Youth 12-17 years old
currently using marijuana.**



**Iowans 12 & older
currently using marijuana.**

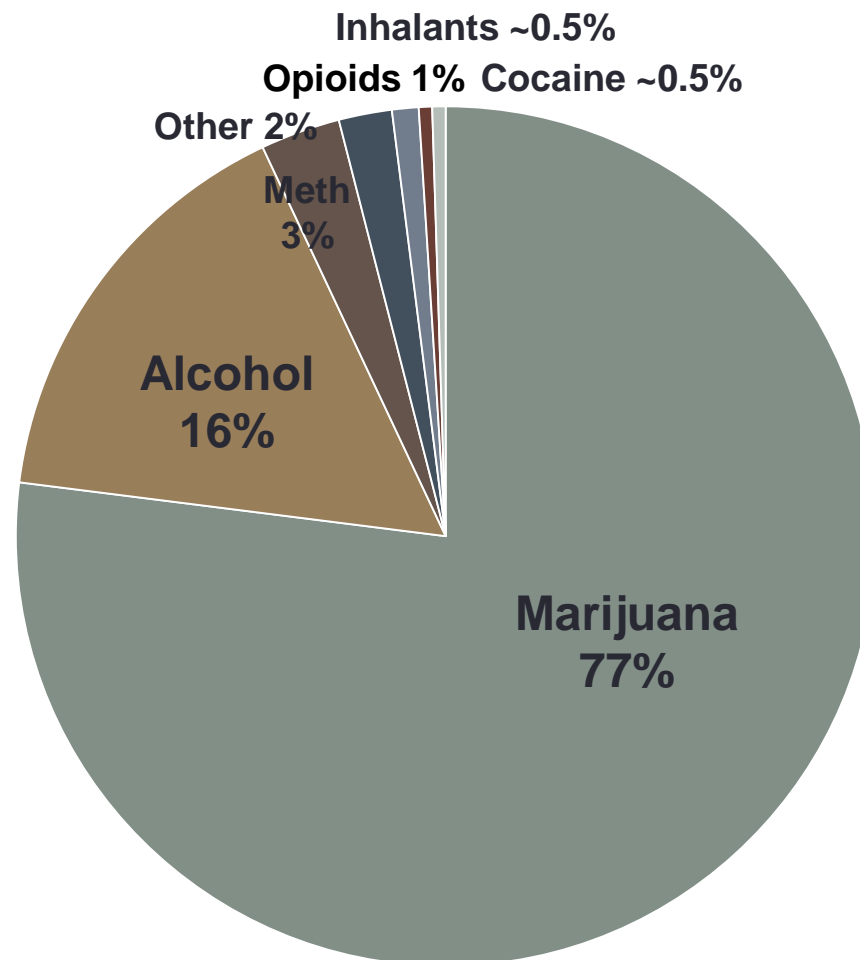


(Marijuana is primary drug for 77% of Iowa juveniles in treatment.)
Iowa Department of Public Health, 2018

National Survey on Drug Use & Health, 2016/2017

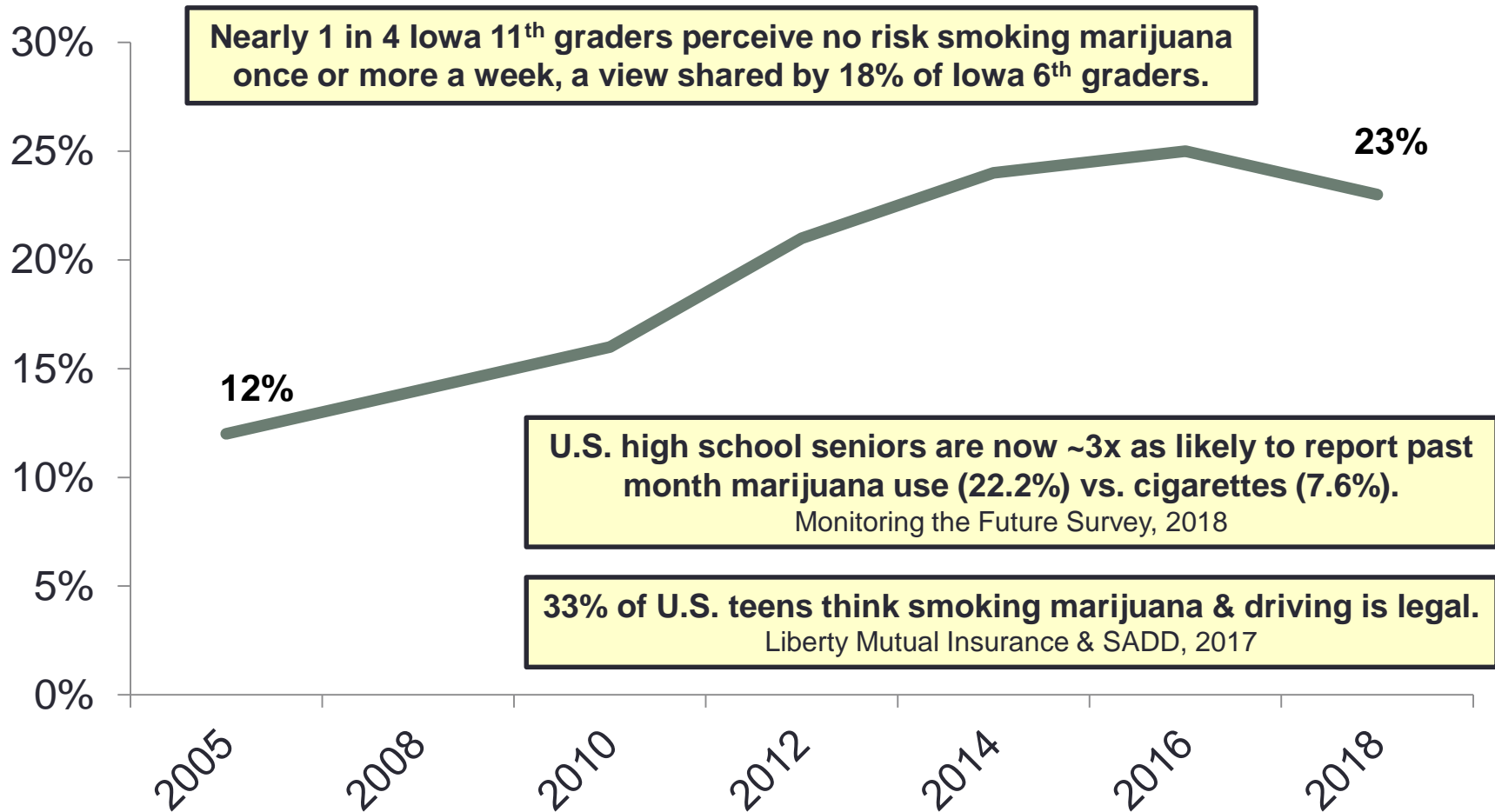
Drugs of Choice: Iowa Youth

Primary Substance for Juveniles in Treatment



Iowa Youth Attitudes about Marijuana

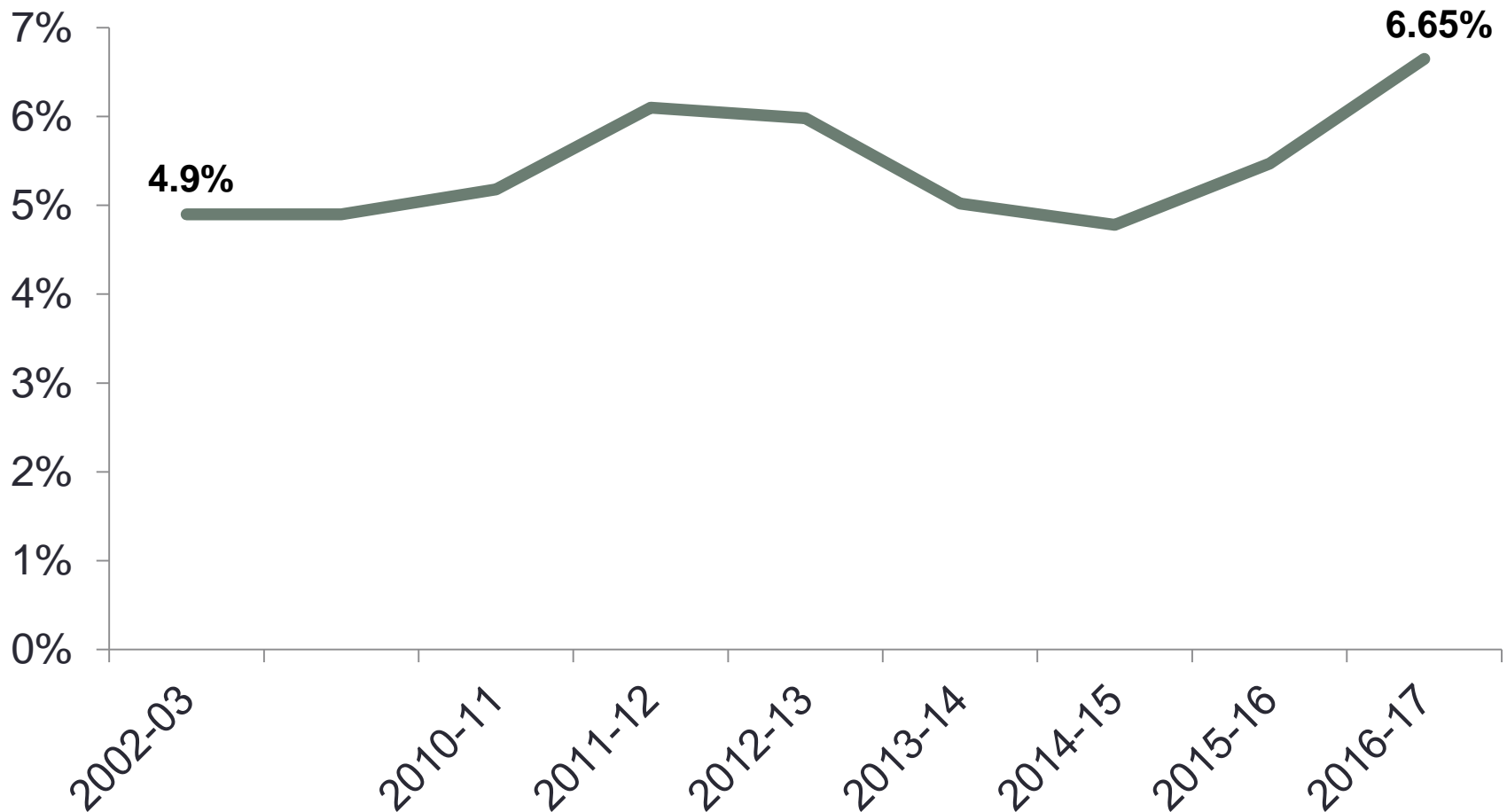
Lower Perceived Risk Coincides with Higher U.S. Rates of Use



Iowa Youth Survey, 2018

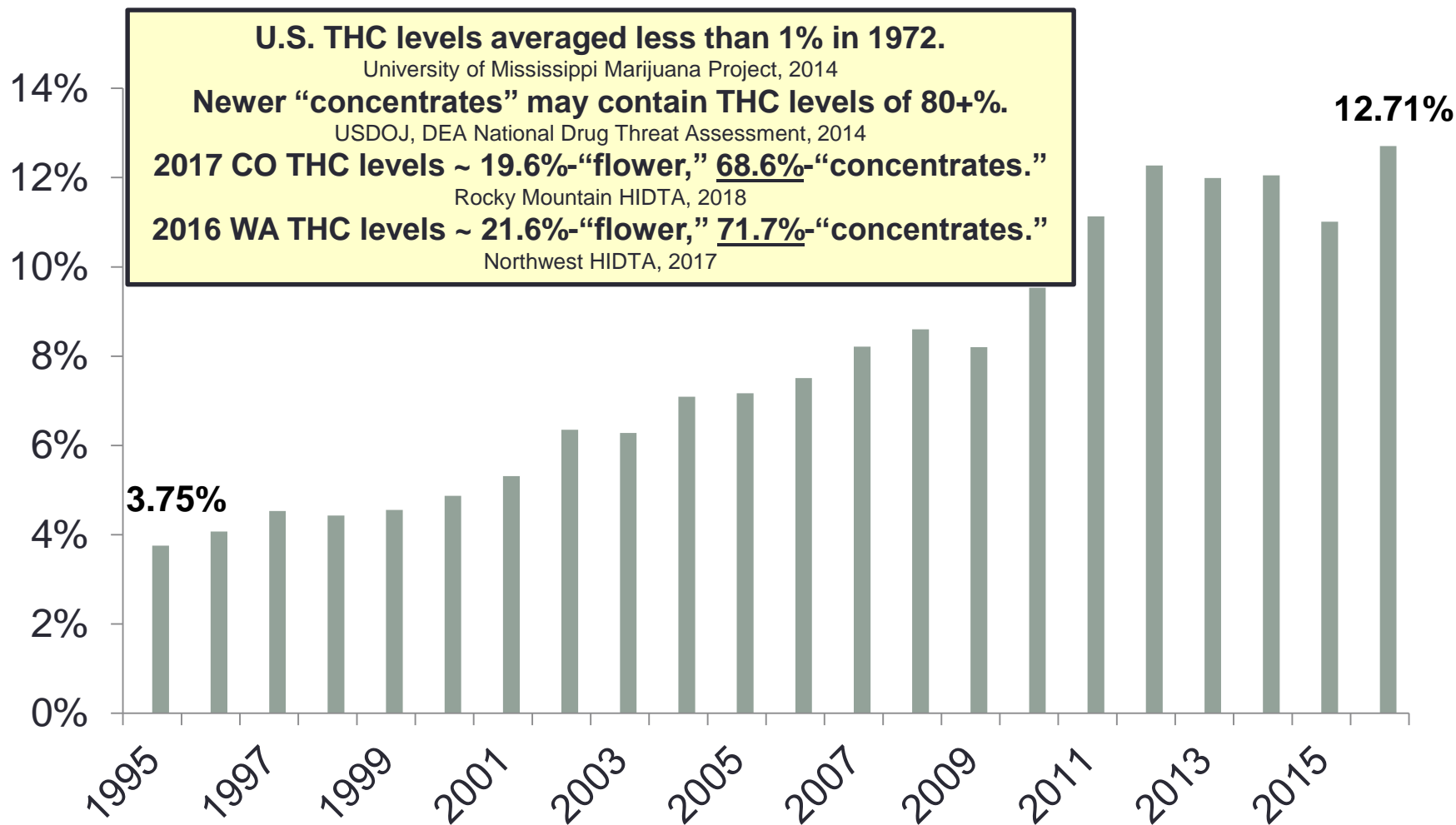
Iowa Marijuana Use

Current Use (Past Month) by Iowans 12+



Marijuana's Increasing THC Potency

Plant Material ("Weed") Seized in U.S.



Concentrates

Less is More...THC



Butane Hash Oil (BHO)



"Ear Wax"



Hash Oil Capsules



"Budder"



"Shatter"



"Green Crack" wax

"Diamonds"



Concentrates

Less is More...THC

AROMA
DISPENSARY

HOME OF THE **30 CLUB!** **12+ STRAINS OVER 30% THC**
UP TO 39.5% THC! WOW!

HOME OF THE **90 CLUB!**
CONCENTRATES OVER 90% THC!
UP TO 99.99% THC! WOW!

THCA DIAMONDS... **90%+ THC!**... **30 CLUB**
STRAIN OF THE DAY

This is The New School

CANNABIS

NOT WHAT YOU SMOKED IN THE 70'S

NOW AVAILABLE AT

Peak
DISPENSARY

REC 21+

3RD & BROADWAY, DENVER
720-390-7804 • PEAKMJ.COM

HUNDREDS OF EXTRACTS
AND EDIBLES
50+ STRAINS OF FLOWER

THE CLEAR
95% THC

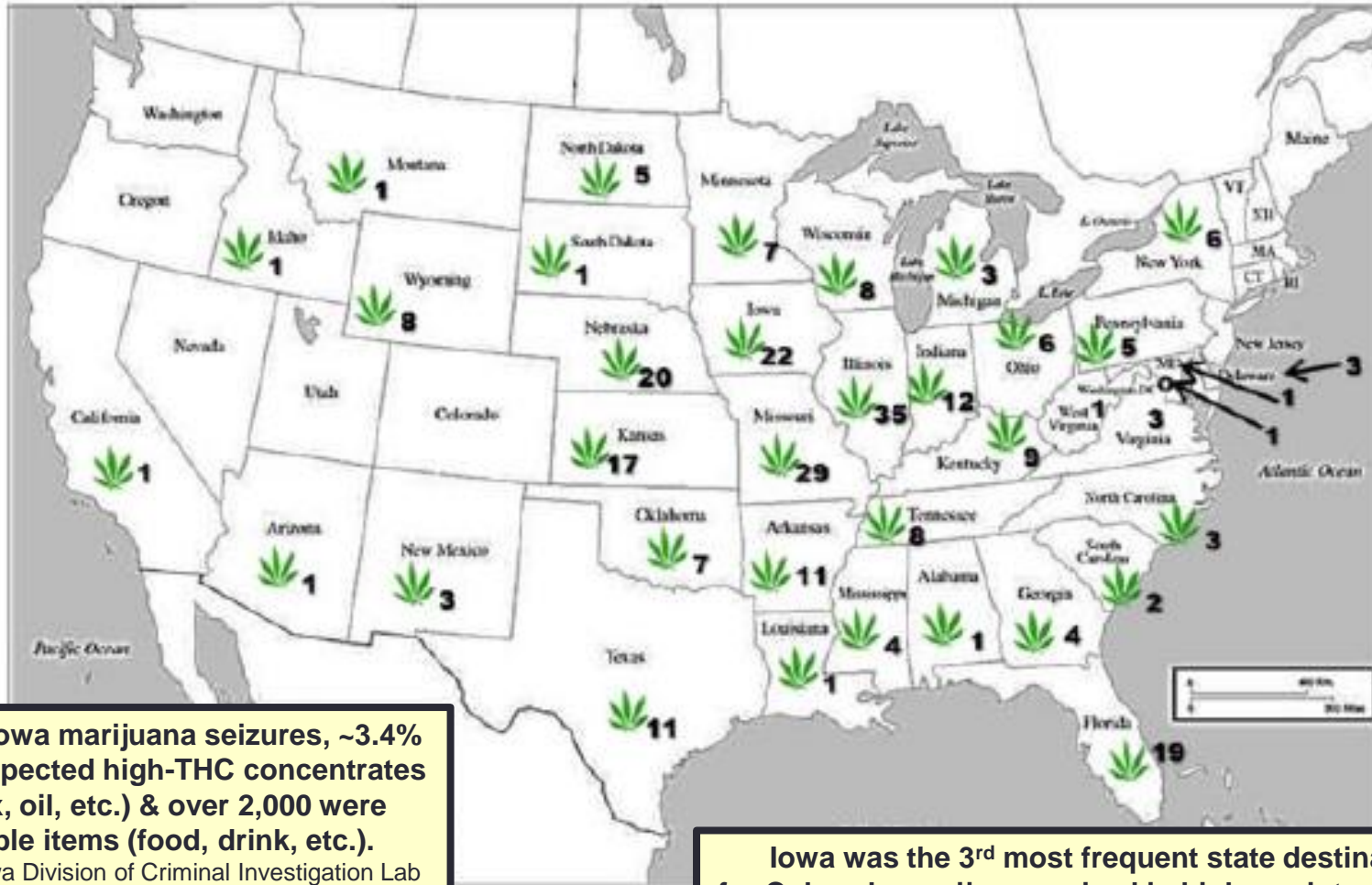
THE CLEAR™

The Clear & Clear - Natural Potent Power

Logos: **ib**, **DIXIE**, **Kindman**, **DRX**, **evellab**, **MARY'S MEDICINALS**

Marijuana from Colorado to Other States

2017 State Destinations for Colorado Marijuana (WA to IA too)



Of all Iowa marijuana seizures, ~3.4% are suspected high-THC concentrates (wax, oil, etc.) & over 2,000 were edible items (food, drink, etc.).

2018 Iowa Division of Criminal Investigation Lab

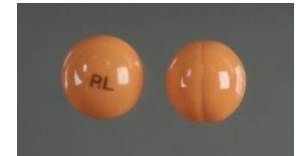
Iowa was the 3rd most frequent state destination for Colorado marijuana seized in highway interdictions.

2017 El Paso Intelligence Center

“Medical” Marijuana *Derivatives & Extracts*

Marinol, Syndros (Dronabinol) & Cesamet (Nabilone):

FDA-approved synthetic cannabinoids—containing THC & CBD—legally available as prescription pills to treat cancer chemotherapy nausea & appetite loss.



Sativex (mouth spray):

A product with 2 cannabinoids extracted from the cannabis plant failed FDA-authorized tests for cancer pain, but is being tested for spasticity & other treatments.



Epidiolex (oral liquid):

Contains the non-psychoactive cannabis extract Cannabidiol (CBD). Recently approved by the FDA & reclassified as a Schedule V controlled substance by the DEA after clinical trials, this Rx product is now available in pharmacies.




Iowa “Medical Cannabidiol” (mCBD):

State law authorizes products regulated by the Iowa Department of Public Health to be used by qualified patients for eligible conditions.



“Other” CBD (Hemp-Based, Non-Medical)

CR Consumer Reports | Product Reviews | News | Take Action | About Us |  Sign In | [Become a Member](#)

CBD Goes Mainstream

CR surveyed more than one thousand CBD users nationwide to find out whether it's changing their lives—and how

USA TODAY | NEWS | SPORTS | LIFE | MONEY | TECH | TRAVEL | OPINION |  51° | CROSSWORDS | MORE   [Subscribe](#)

CBD hype: Is this hemp-plant derivative snake oil or a legit remedy?

CNN BUSINESS | Markets | Tech | Media | Success | Perspectives | Video | U.S. Edition +

These hemp farmers are making a killing on the CBD industry

Quantitative Lab Testing?

Advisories on other (OTC) CBD Products



...“it’s illegal to introduce drug ingredients like these into the food supply, or to market them as dietary supplements.”



...“local law enforcement agencies retain the authority and discretion to take criminal enforcement action against people who sell or possess OTC CBD products...the Office of the Attorney General has the authority to take enforcement action against any person for false or misleading advertisements or deceptive sales practices related to CBD products.”



“Iowans who dispense, sell, possess or use such products are not protected from criminal prosecution....”

**A 2017 University of Pennsylvania School of Medicine study found ~70% of CBD products sold online are mislabeled, posing potential harm to consumers.*

Medical Marijuana Opioid Misuse



Interpret with CAUTION!

Despite cautions against corollary conclusions from a study that found states with medical marijuana laws from 1999-2010 experienced a **slower increase in opioid OD deaths (-21%)**, medical marijuana was touted as an opioid epidemic solution.

A new study, using the same methods to extend the original analysis through 2017 & include more medical marijuana states, finds an **increase in opioid OD deaths (+23%)**.

According to the lead author, “We don’t think cannabis was saving lives...10 years ago, & we don’t think it’s killing people now.” Researchers urge caution & more study.

Meth





Number of new heroin users drops dramatically, but meth, marijuana use up, survey says

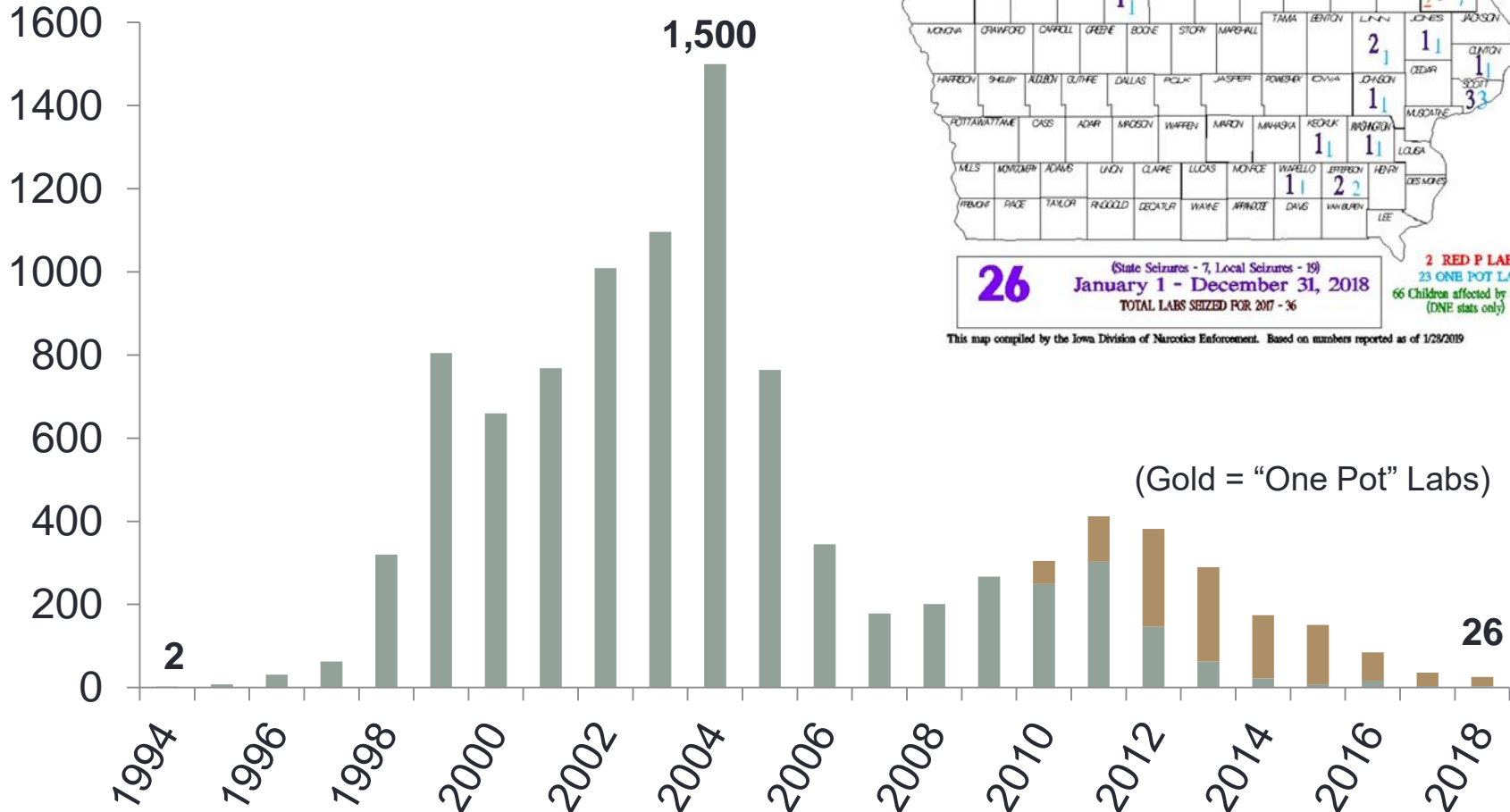
Jayne O'Donnell and Terry DeMio, USA TODAY NETWORK Published 10:37 a.m. ET Sept. 14, 2018 | Updated 6:44 a.m. ET Sept. 15, 2018



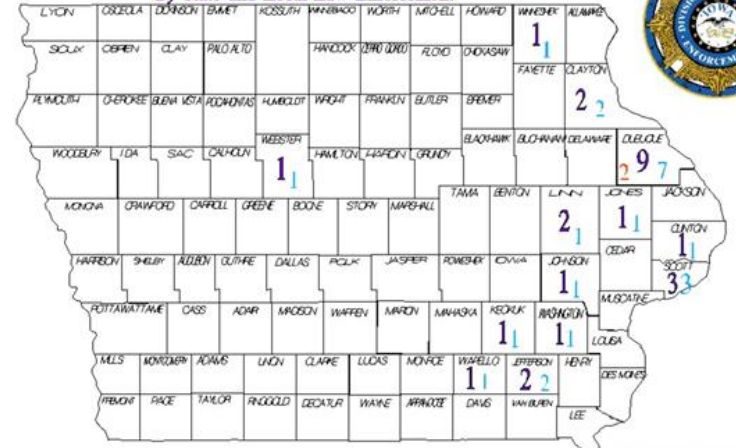
Photo by DEA

Crystal methamphetamine

Iowa Meth Labs



2018
Clandestine Laboratories Seized
By State and Local Law Enforcement



26 (State Seizures - 7, Local Seizures - 19)
January 1 - December 31, 2018
TOTAL LABS SEIZED FOR 2017 - 36

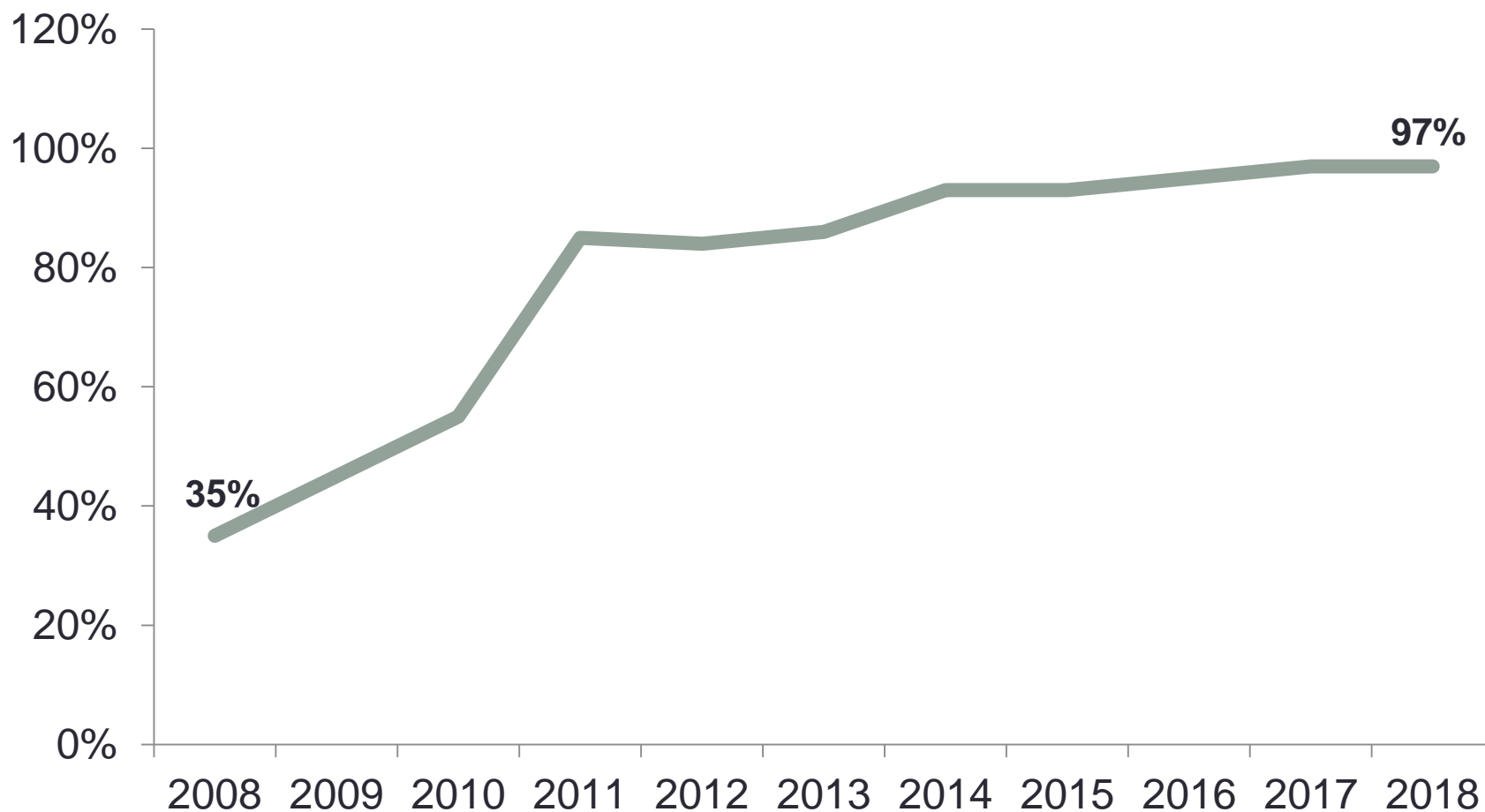
2 RED P LABS
23 ONE POT LABS
66 Children affected by drug labs
(DNE stats only)

This map compiled by the Iowa Division of Narcotics Enforcement. Based on numbers reported as of 1/28/2019

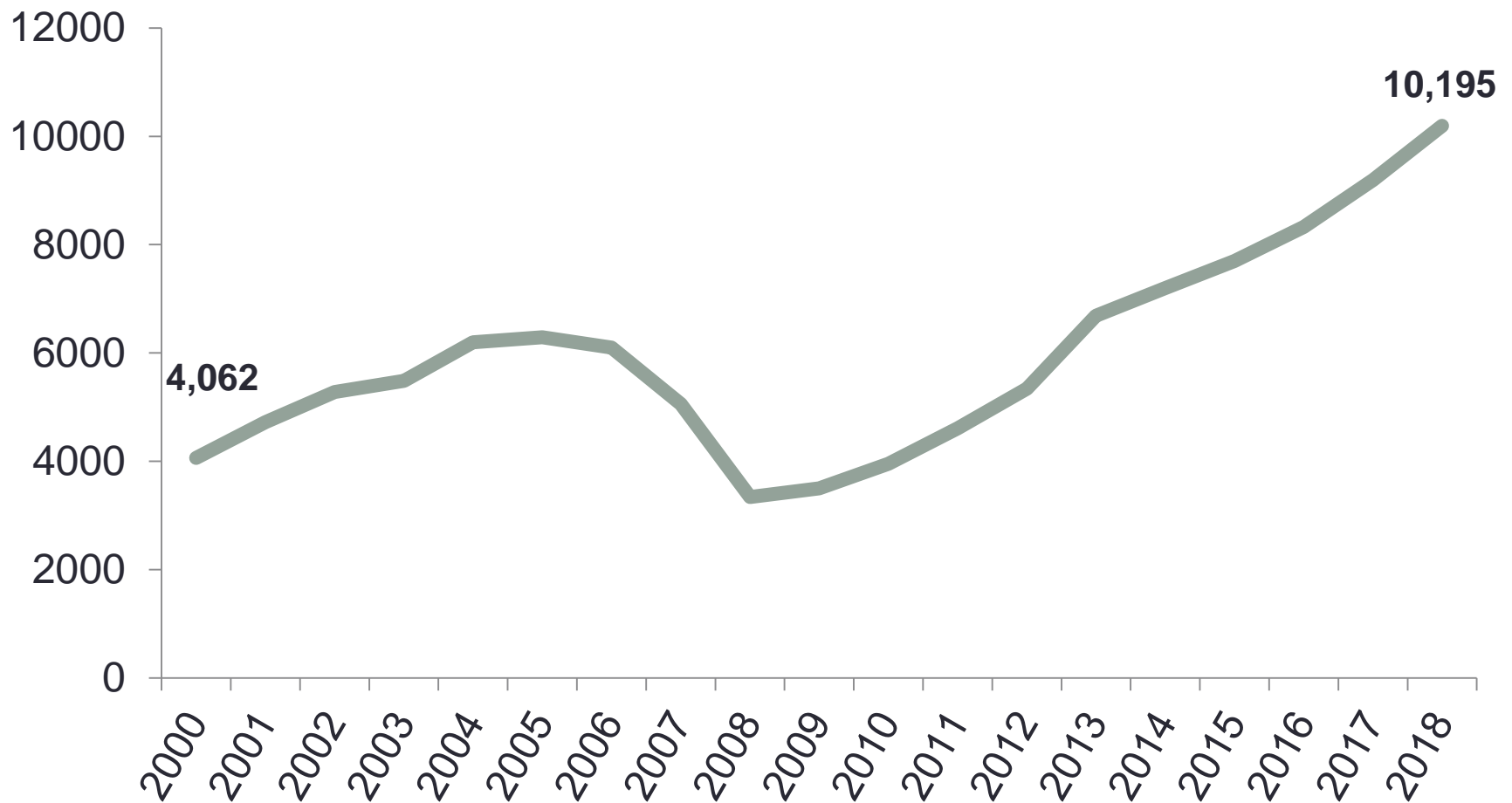
(Gold = "One Pot" Labs)

Iowa Meth Purity

Crime Lab Fiscal Year Averages

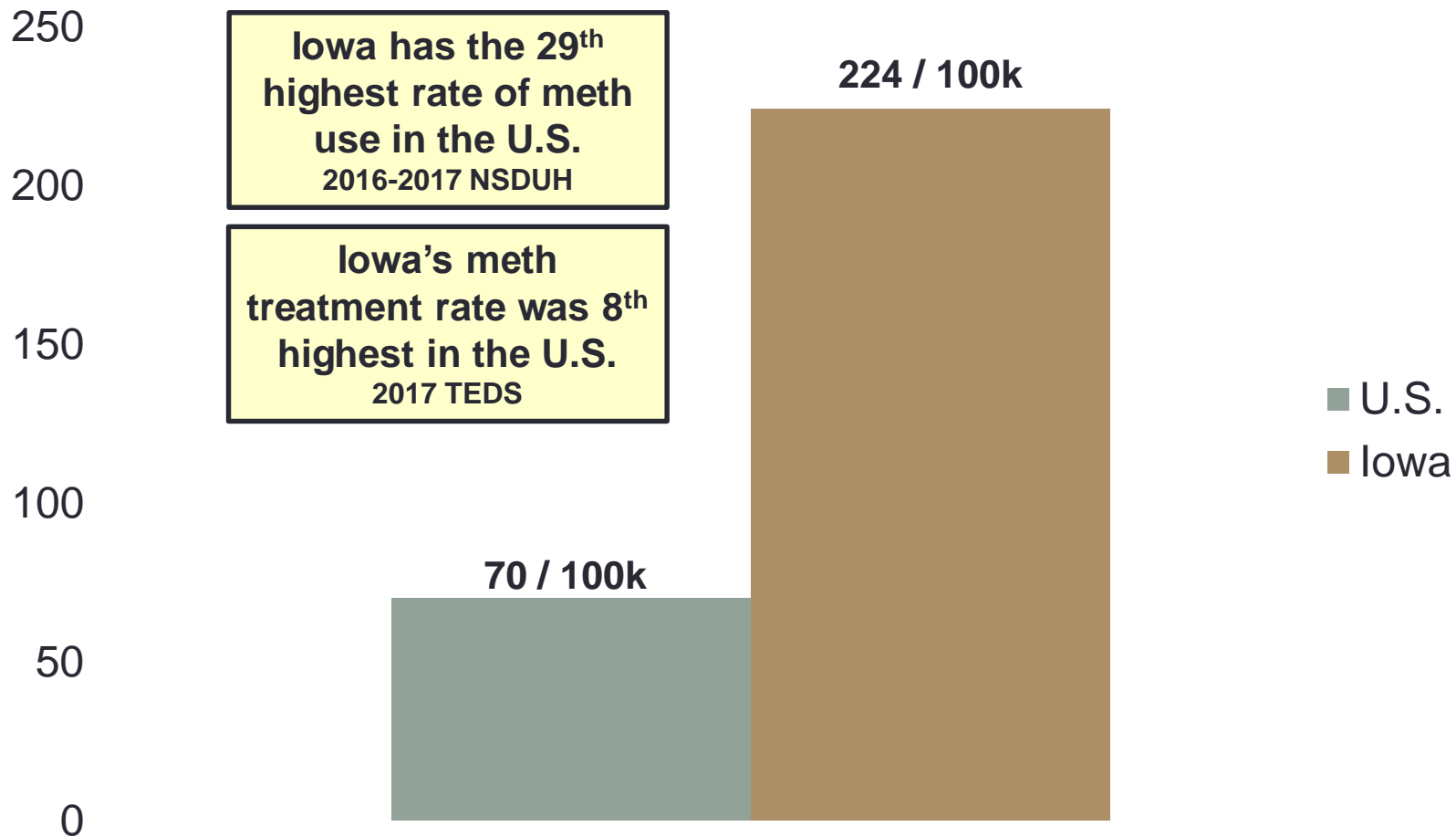


Iowa Meth Treatment Admissions



Rate of Primary Meth Treatment

12+ Substance Use Disorder Treatment Admissions for Meth

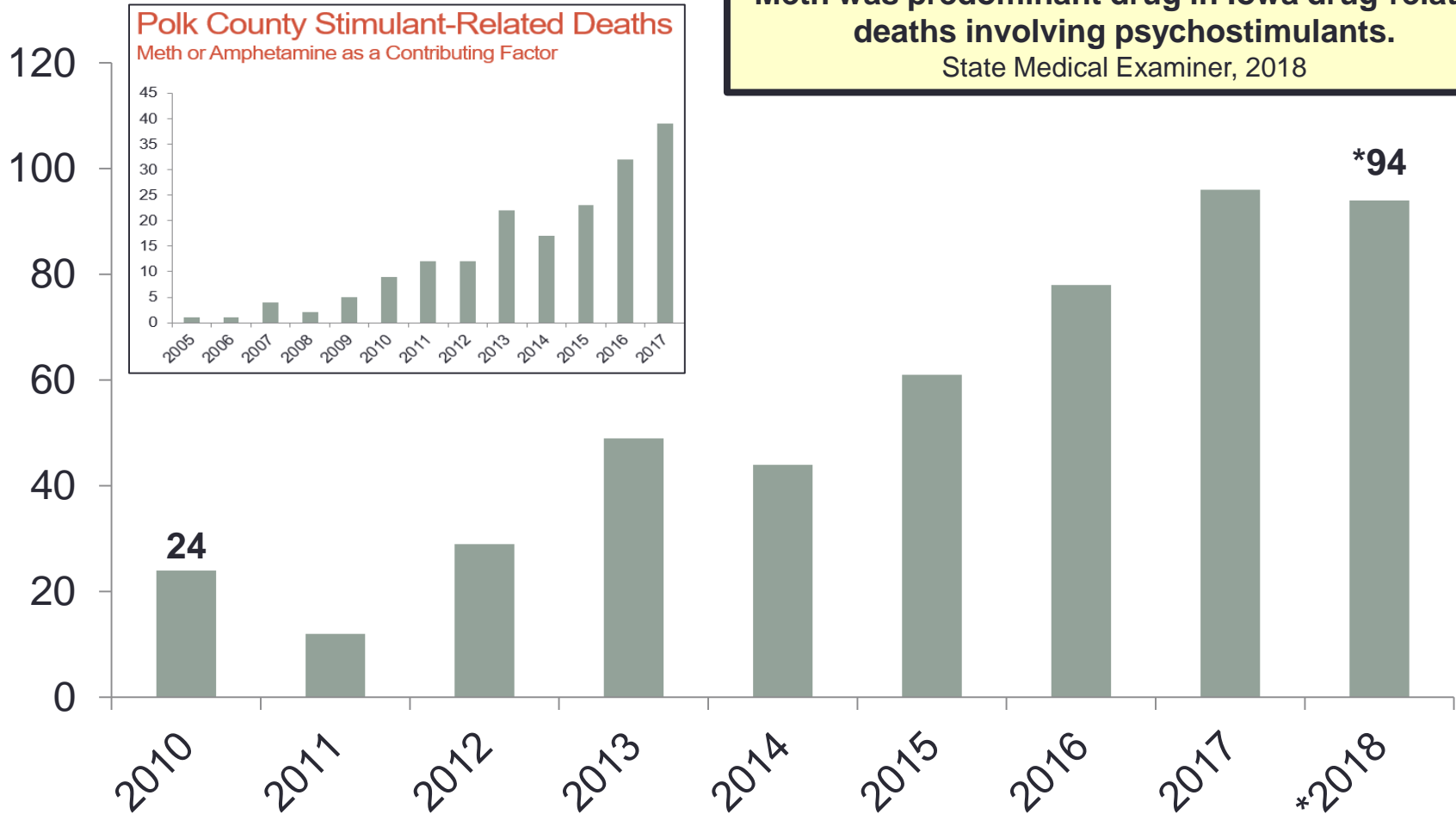


Iowa Psychostimulant-Related Deaths

As a Contributing Factor

Meth was predominant drug in Iowa drug-related deaths involving psychostimulants.

State Medical Examiner, 2018



(*Preliminary total for 2018.)

Iowa Department of Public Health, 2018

Alert: Meth Conversion Labs



Identifying a Methamphetamine Conversion Laboratory

September 17th, 2018

Midwest HIDTA Bulletin #2 – 2018

Drug traffickers have been identified as utilizing meth in solution as a concealment method to transport the drug from the Southwest Border to market areas around the U.S. Meth in solution is not an end-user product; the solution must be converted into usable form, crystal meth, following transport. **Meth conversion labs** typically utilize highly flammable materials and a heat source to convert the meth in solution into crystal meth, presenting a significant risk to law enforcement and other members of the community who may come into contact with these labs.

Crystal Meth Suspended in Liquid



Opioids

- Rx
- Heroin
- Illicit Synthetics
(fentanyl analogs, etc.)



Opioid Misuse: Top Line Trends in U.S.

The U.S. has <5% of the world's population, but consumes ~75% of its Rx, including 81% of its oxycodone & >99% of its hydrocodone.

UN 2010

About 3 out of 4 new heroin users report previous Rx opioid misuse.

CDC 2018

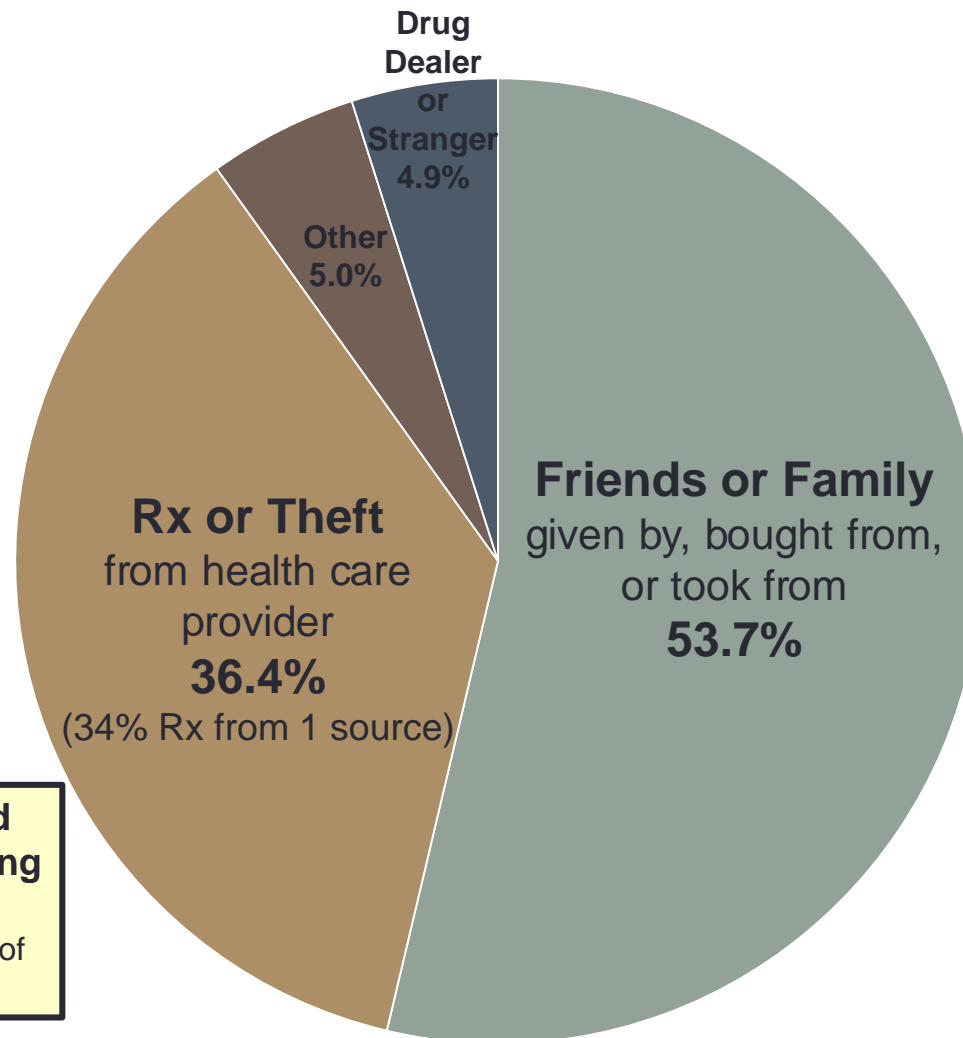
Drug ODs claimed 70,237 U.S. lives in 2017, 192 daily ...68% or 130 from opioids. Over 700,000 Americans have died from drug ODs since 1999.

Surging synthetic opioids (e.g., fentanyl/analogs) are now the leading cause of opioid OD deaths in the U.S., followed by heroin & Rx.

CDC 2017

Sources of Opioids being Misused in U.S.

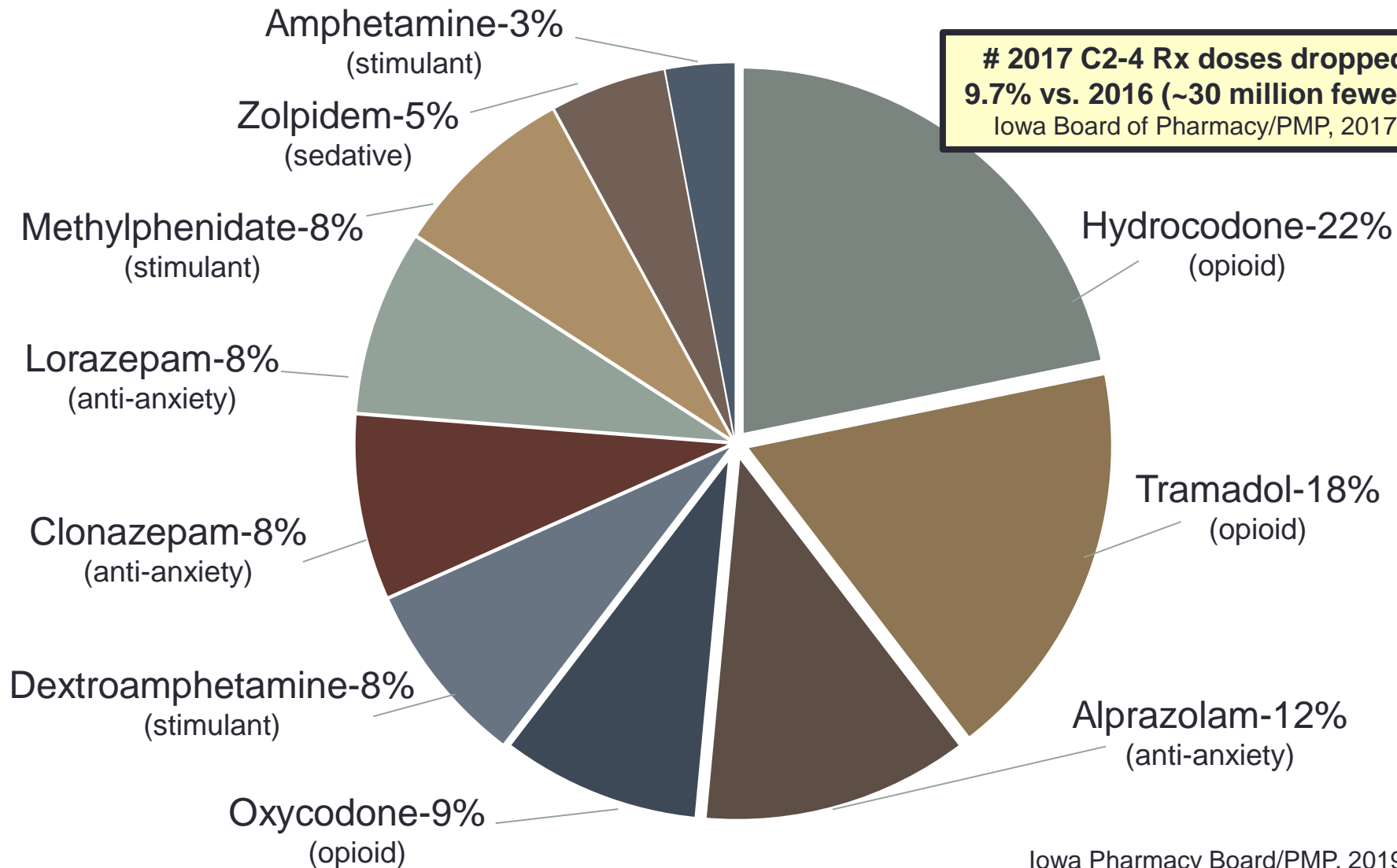
Among those 12+ Misusing Rx Pain Relievers in the Past Year



63.4% of Rx opioid misusers report doing so to relieve pain.
2017 American Journal of Public Health

Top 10 Iowa Rx Controlled Substances

CIIs-CIVs per Iowa's Prescription Monitoring Program (PMP) in 2018



Ease of Access & Perception of Safety



Classmates hospitalized after sharing medication

The Hoyt Middle School students had taken the unidentified drug at school. Teachers noticed their odd behavior.

Girl's overdose should be 'lesson,' stepfather says

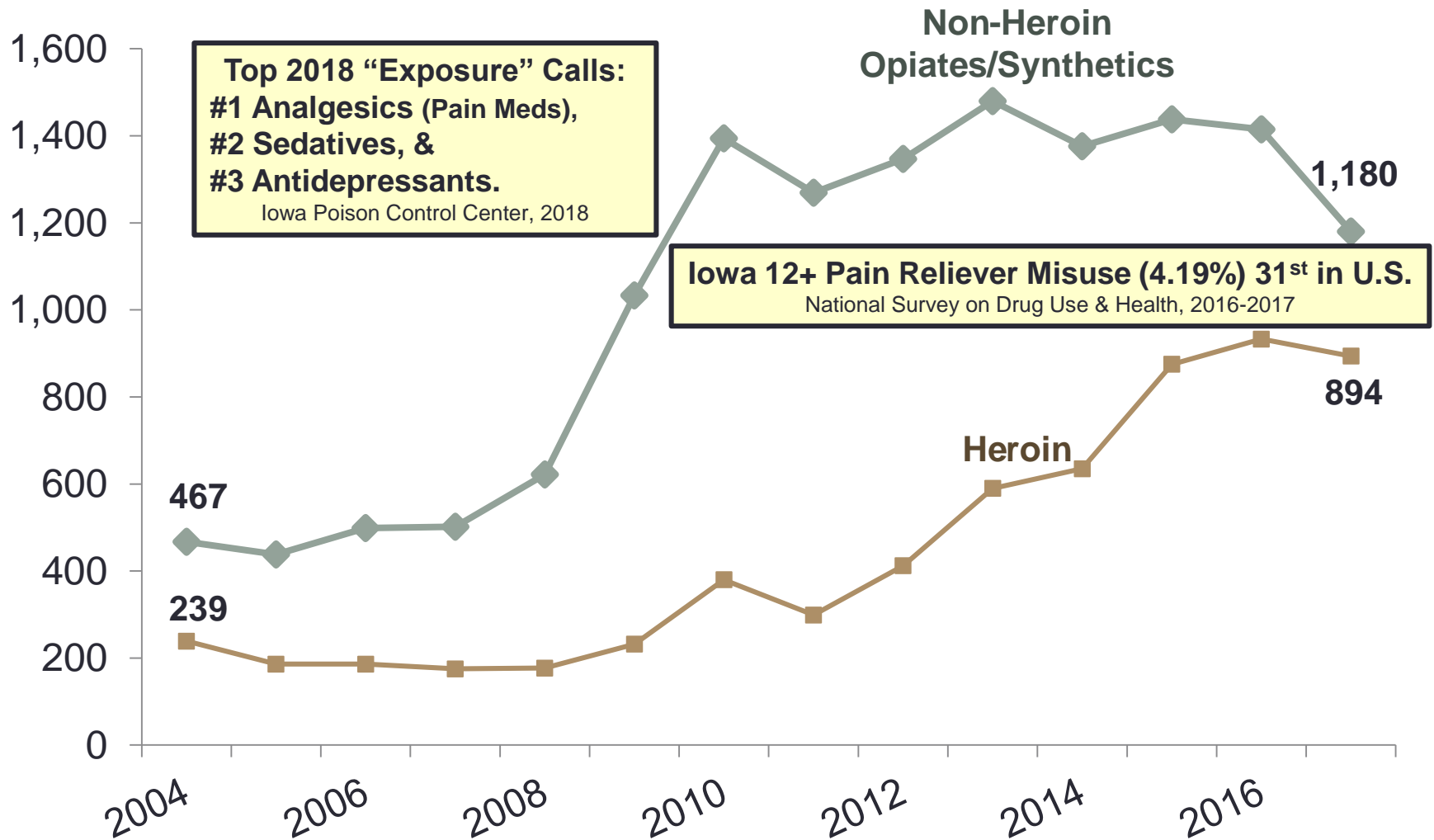
She and four other Des Moines middle-schoolers took a parent's prescription drug; one of them remains hospitalized.

74% of farmers say they've been directly impacted by opioid misuse & 77% say it's easy to get a large amount of Rx opioids in their community w/o a prescription.

American Farm Bureau & National Farmers Union, 2017

Iowa Opioid Treatment Admissions

Heroin + Non-Heroin Opiates/Synthetics Primary at Admission



Opioid Misuse: Potential Precursors

Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least 3 other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and **death** for users.

People who are addicted to...



ALCOHOL

are

2x



MARIJUANA

are

3x



COCAINE

are

15x



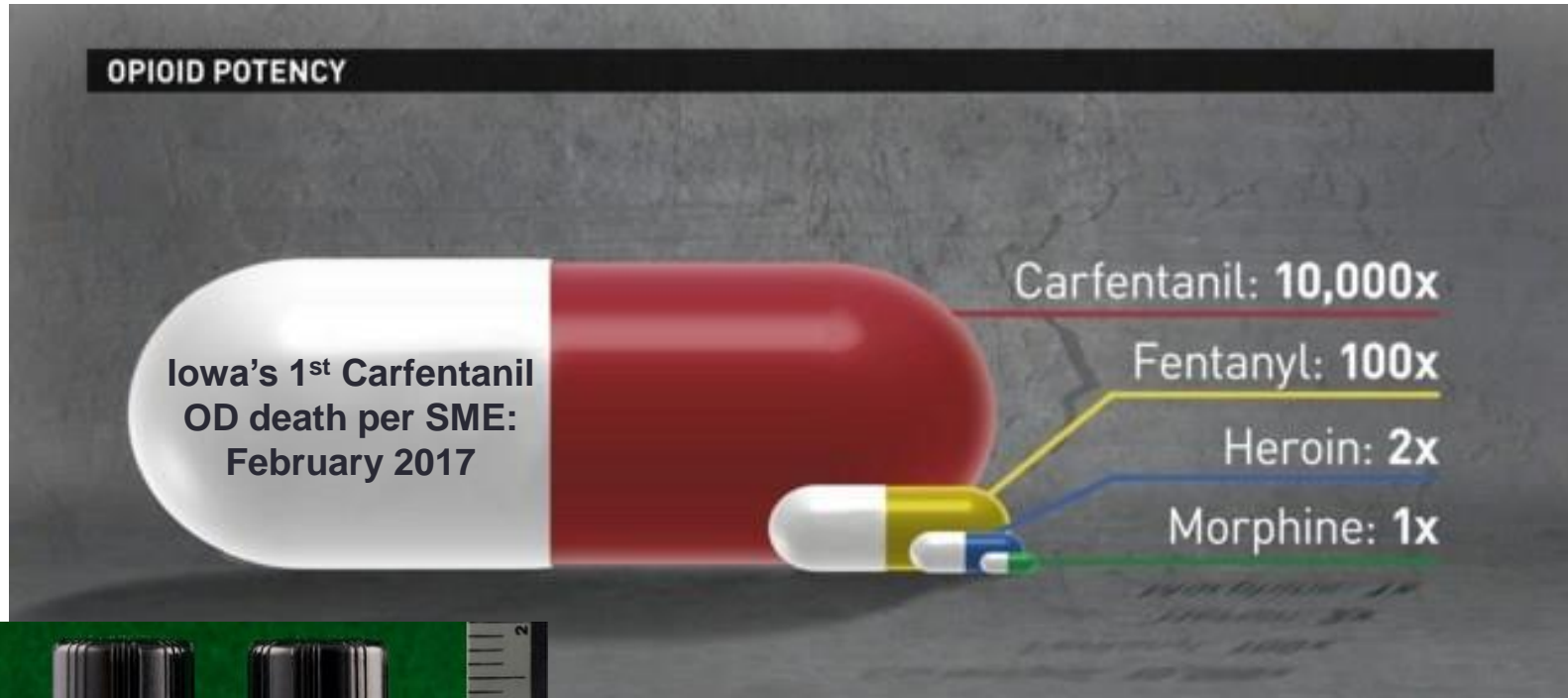
Rx OPIOID PAINKILLERS

are

40x

...more likely to be addicted to heroin.

Illicit Synthetic Opioids: Less is More

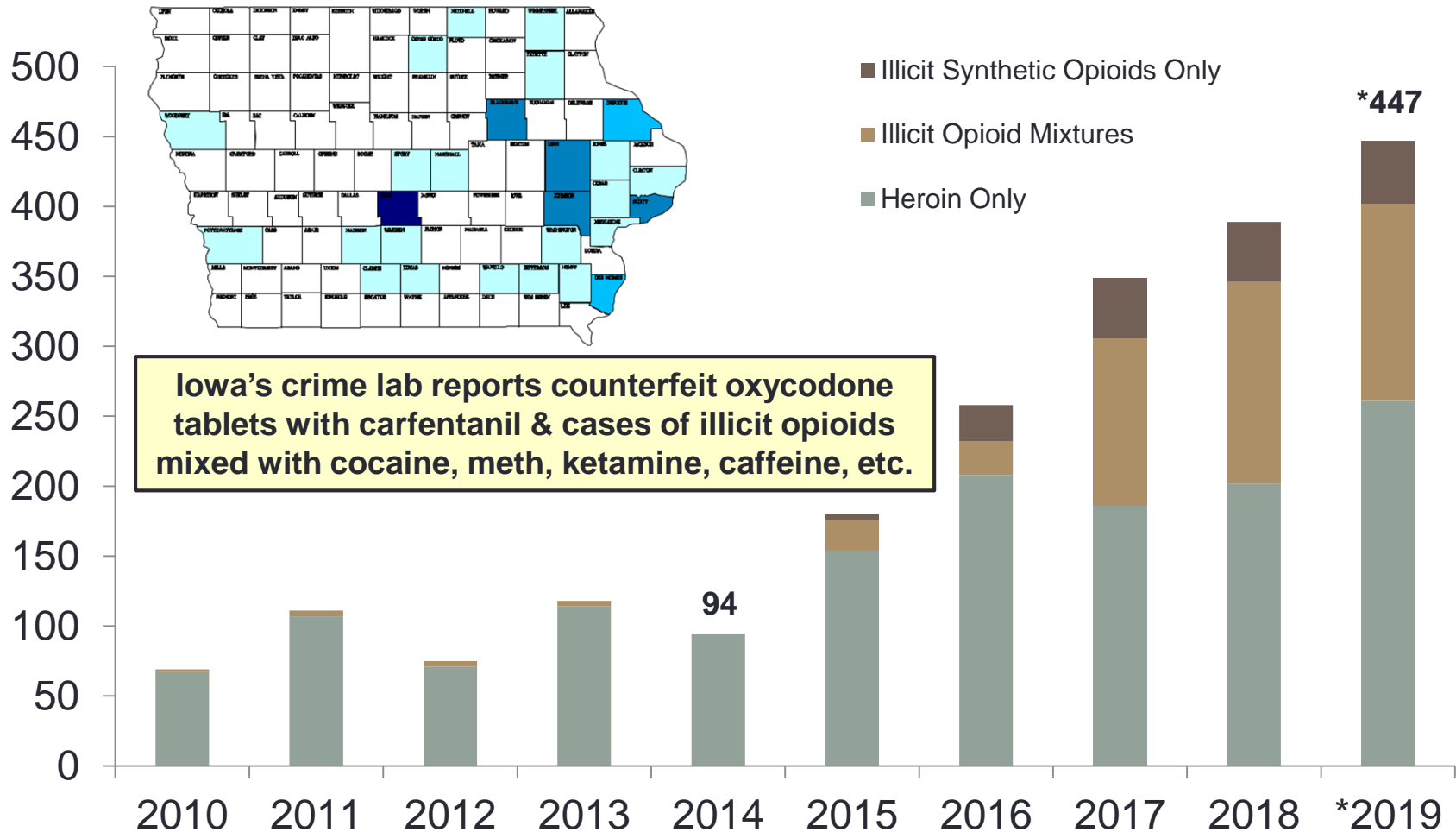


Often mixed with heroin, illicit *synthetic opioids* (e.g., fentanyl analogs)—in tiny amounts—can be much more lethal vs. heroin.



Heroin, Fentanyl & Illicit Synthetic Opioids

Law Enforcement Seizure Cases per Iowa's Crime Lab

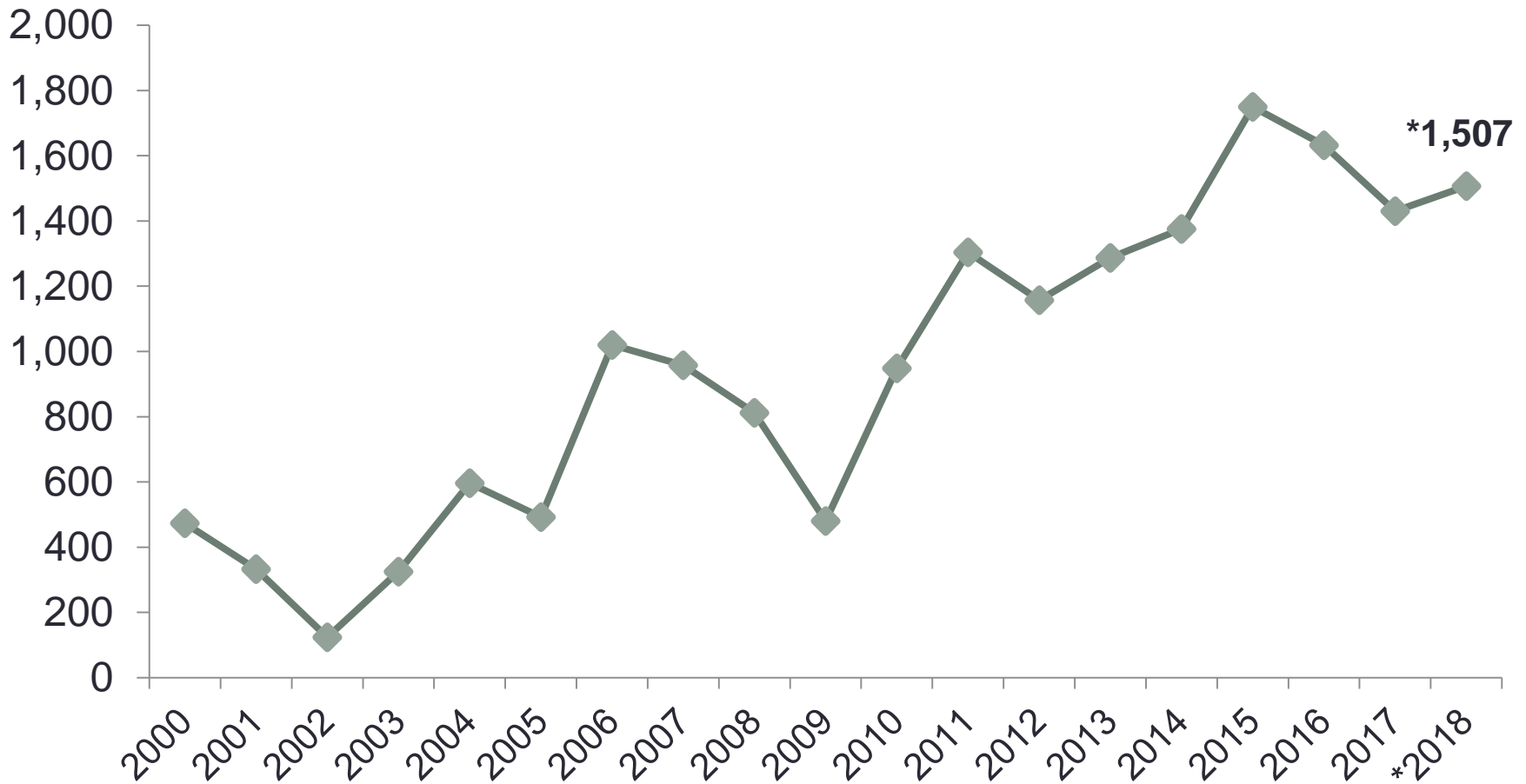


*2019 projection based on YTD pace through July.

Iowa Department of Public Safety, 2019

Iowans with Chronic HCV (Hepatitis C)

Confirmed Diagnoses possibly due to IV Drug Use, etc.

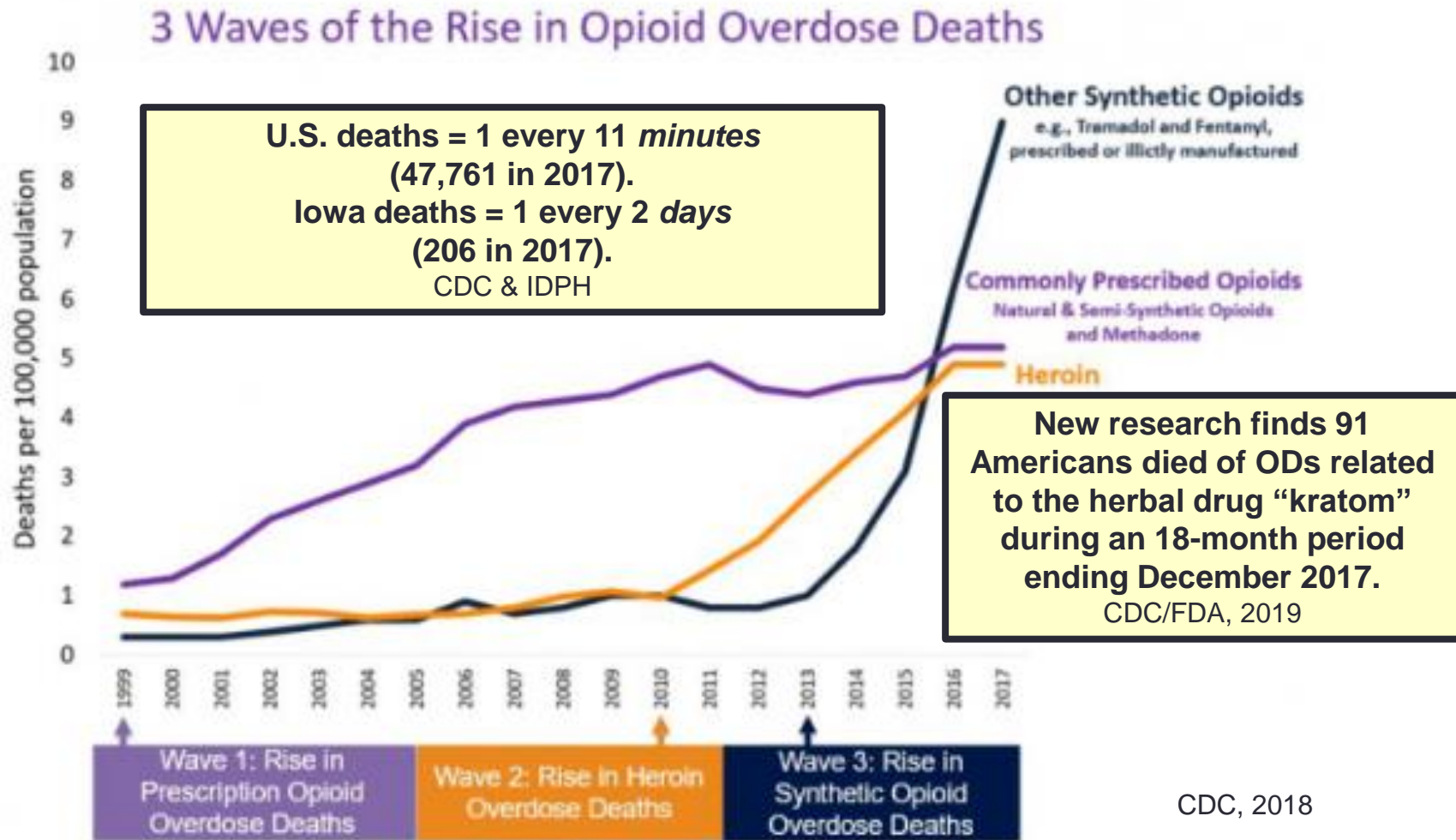


*2018 data are preliminary.

Iowa Department of Public Health, 2018

Opioid OD Deaths: 1999-2016

By Type of Opioid (Rx, Heroin, Fentanyl, etc.)



CDC, 2018

Kratom: Drug of Concern?

What is kratom?

A tropical tree native to Southeast Asia. Consumption of leaves produces both stimulant effects (low doses) & sedative effects (high doses), & can lead to psychological & physiological dependence.

How is it used?

Kratom leaves typically are crushed & smoked, brewed into tea, or placed into gel capsules or tablets. Leaves may be dried or powdered, & chewed.

What are the effects?

Low doses: Stimulant effects such as increased alertness, physical energy & talkativeness.

High doses: Sedative effects that can lead to addiction.

Several cases of psychosis have been reported, including delusion, confusion & hallucinations. Effects on the body include nausea, itching, sweating, dry mouth, constipation, increased urination, tachycardia, vomiting, drowsiness, loss of appetite, etc.

***At least 1 kratom-related Iowa OD death has been reported, in 2017.**

Legal status?

Currently unregulated federally, though some states have imposed regulations or prohibitions on kratom possession & use. The FDA & DEA have listed kratom as a “drug & chemical of concern.”



Kratom tree



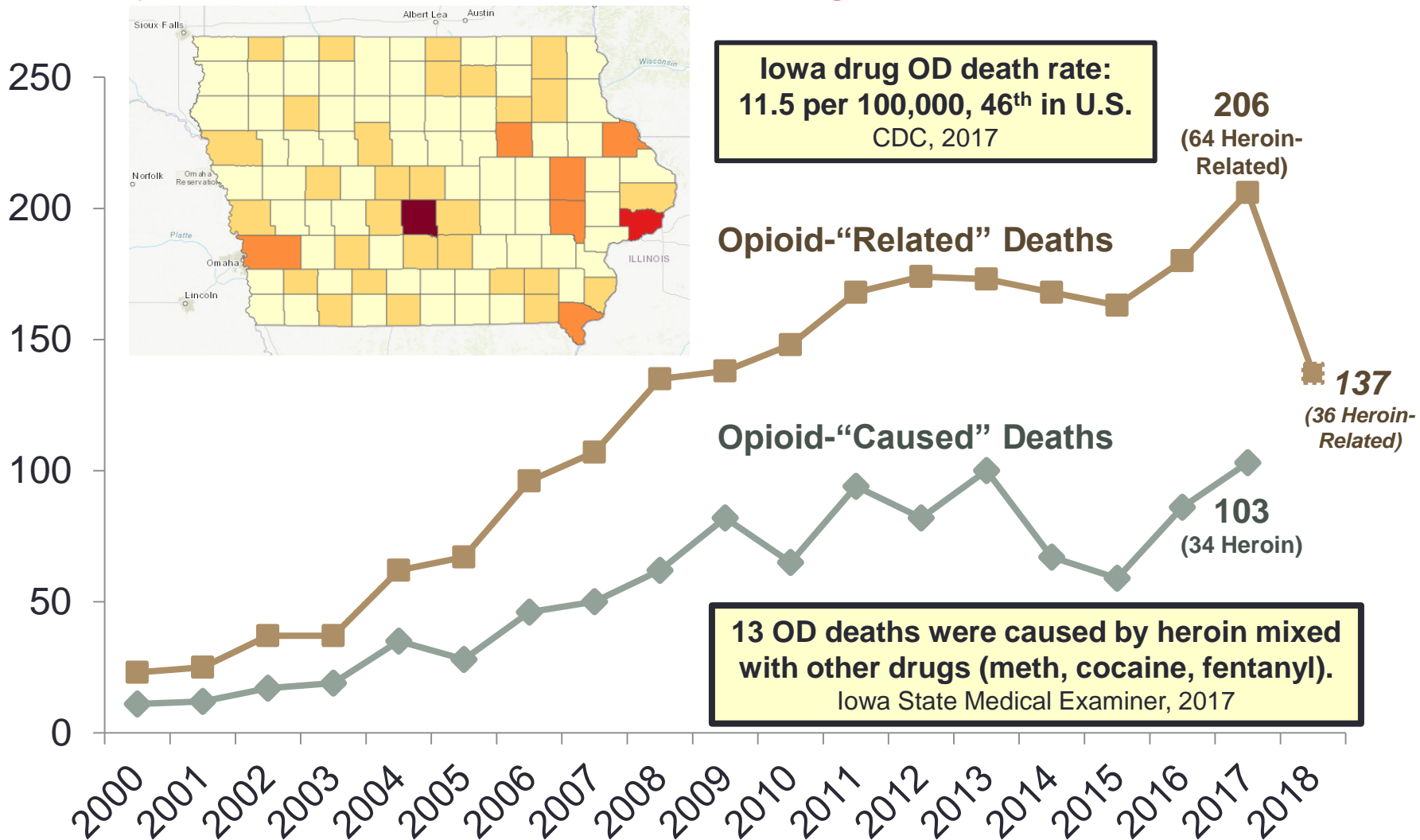
Leaf of kratom tree



Kratom capsules

Iowa Opioid OD Deaths

Primary Cause of Deaths vs. Contributing Factor (Related) Deaths

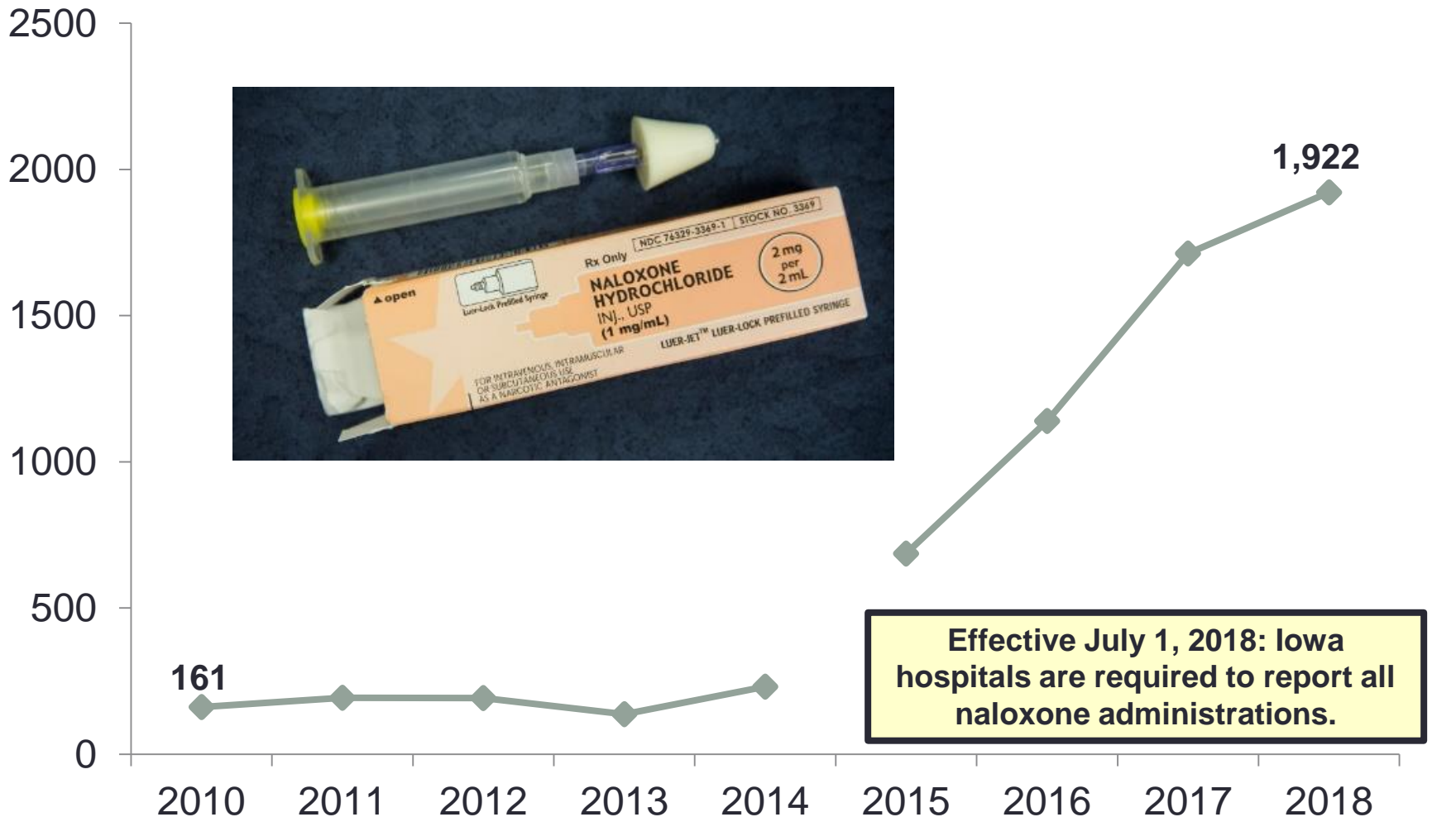


("Related" totals include "caused" deaths.)

Iowa Department of Public Health, 2019

Iowa Opioid OD-Related Naloxone Use

Annual Cases of Administration by Iowa EMS Providers



(Reporting process changed in 2015.)

Iowa Department of Public Health, Emergency & Trauma Services, 2019

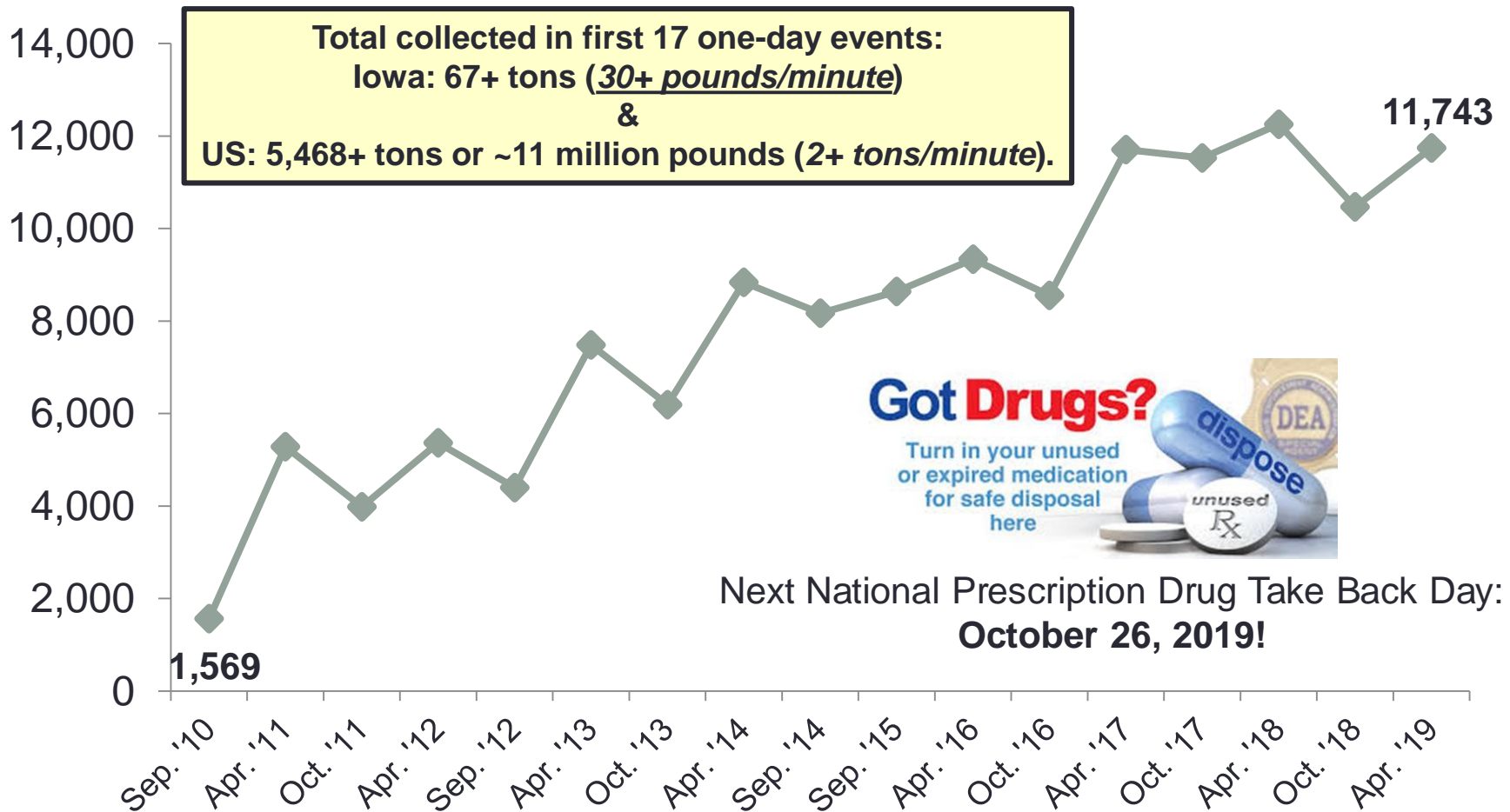
Iowa Medication Assisted Treatment Provider Locations



107 Iowa MAT Providers in 2018 vs. 31 in 2015

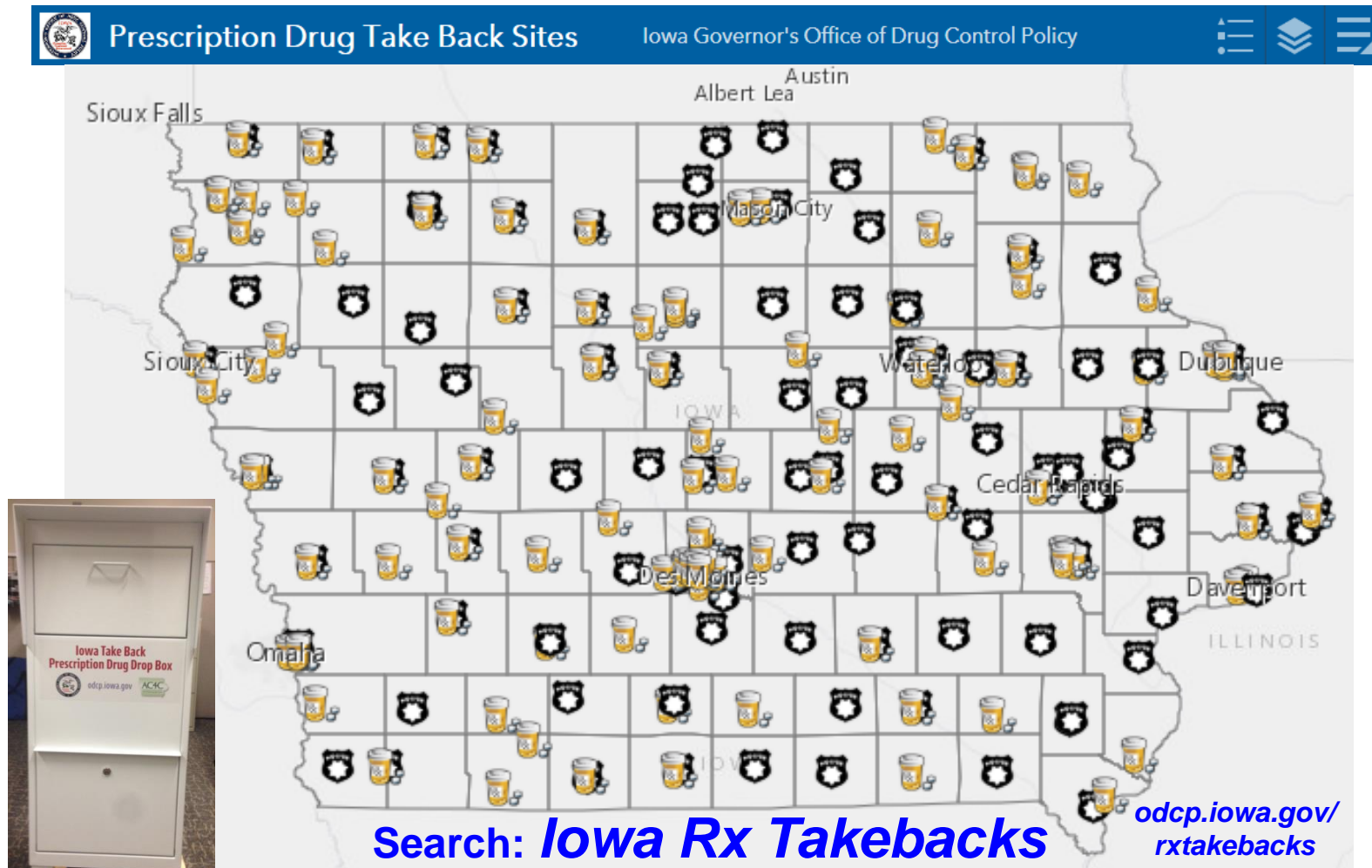
Iowa "Take-Back" Initiative

Amount (in Pounds) of Rx Drugs Collected



Iowa Permanent Rx "Take Back" Sites

Controlled Prescription Drug Disposal Locations



238 Sites in all 99 Counties (121 Pharmacies & 117 Law Enforcement Centers) vs. 47 in January 2016

Iowa Drug-Related Legislation

2019: Enacted

- Children's' Mental Health Services Reform (HF 690)
- Medicaid Preauthorization Waiver-Medication Assisted Treatments (HF 623)
- Medicaid Temporary Suspension for Iowans in Public Institutions (HF 423)
- Hemp Legalization (SF 599)

2019: Vetoed

- Medical CBD Expansion (HF 732)

2019: Did Not Pass

- Needle Exchange Pilot Program (SF 500 / HF 580)
- Controlled Substance Schedule & PMP Enhancements (SF 572 / HF 728)
- Raise Legal Age for Tobacco Product Use (SF 607)
- Alcohol Poisoning 911 Good Samaritan Immunity (SF 342)
- Marijuana Possession Reduced Penalty for Small Amounts (SF 378)
- Legal Marijuana (SF 469), Psychedelic Mushrooms & MDMA (HF 248/249)

Other Recent Legislation

2018 Enacted

- Comprehensive 13-Phase Opioid Response (HF 2377)
PMP auto-registration, required opioid-related use, proactive notices, near real-time reporting, reporting non-pharmacy transactions, first responder naloxone reporting, prescriber report cards, & surcharge; plus continuing education per CDC guidelines, penalties for inappropriate prescribing, electronic prescribing, banning new illicit drugs & Good Samaritan OD protections.

2017: Enacted in Iowa

- Controlled Substance Act Enhancement (SF 332)
- Prescription Drug “Take Back” Fees (SF 484)
- Drug Endangered Children Protections (HF 543)
- Synthetic Drug Controls (HF 296)
- Prescription Monitoring Program Medical Examiner Access (HF 523)
- Medical CBD Production & Distribution (HF 524)

2016: Enacted in Iowa

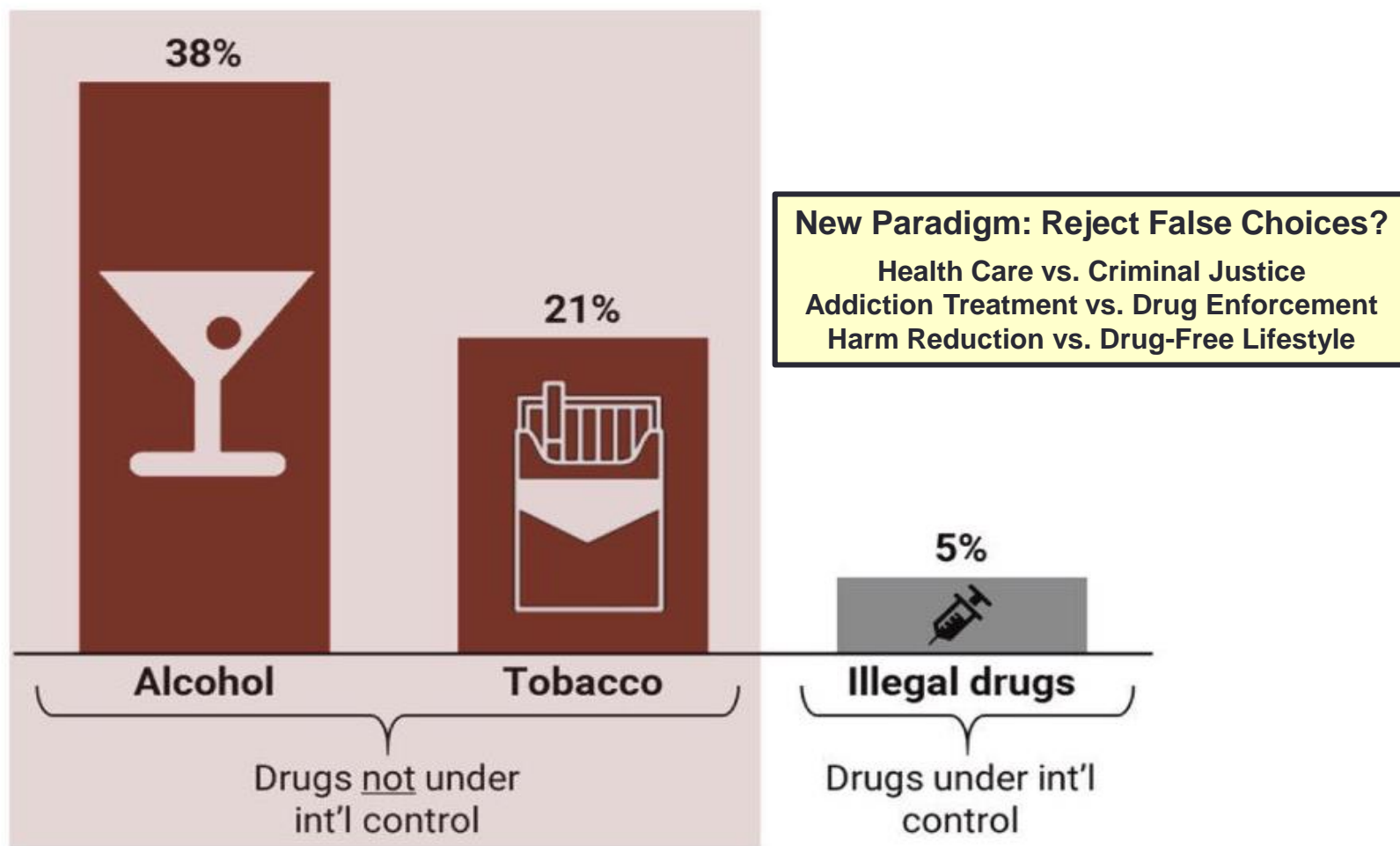
- Naloxone Access
- Prescription Monitoring Program Integration

Enacted Federally

- 2016: U.S. Comprehensive Addiction & Recovery Act (CARA)
- 2016, etc.: U.S. 21st Century Cures Act

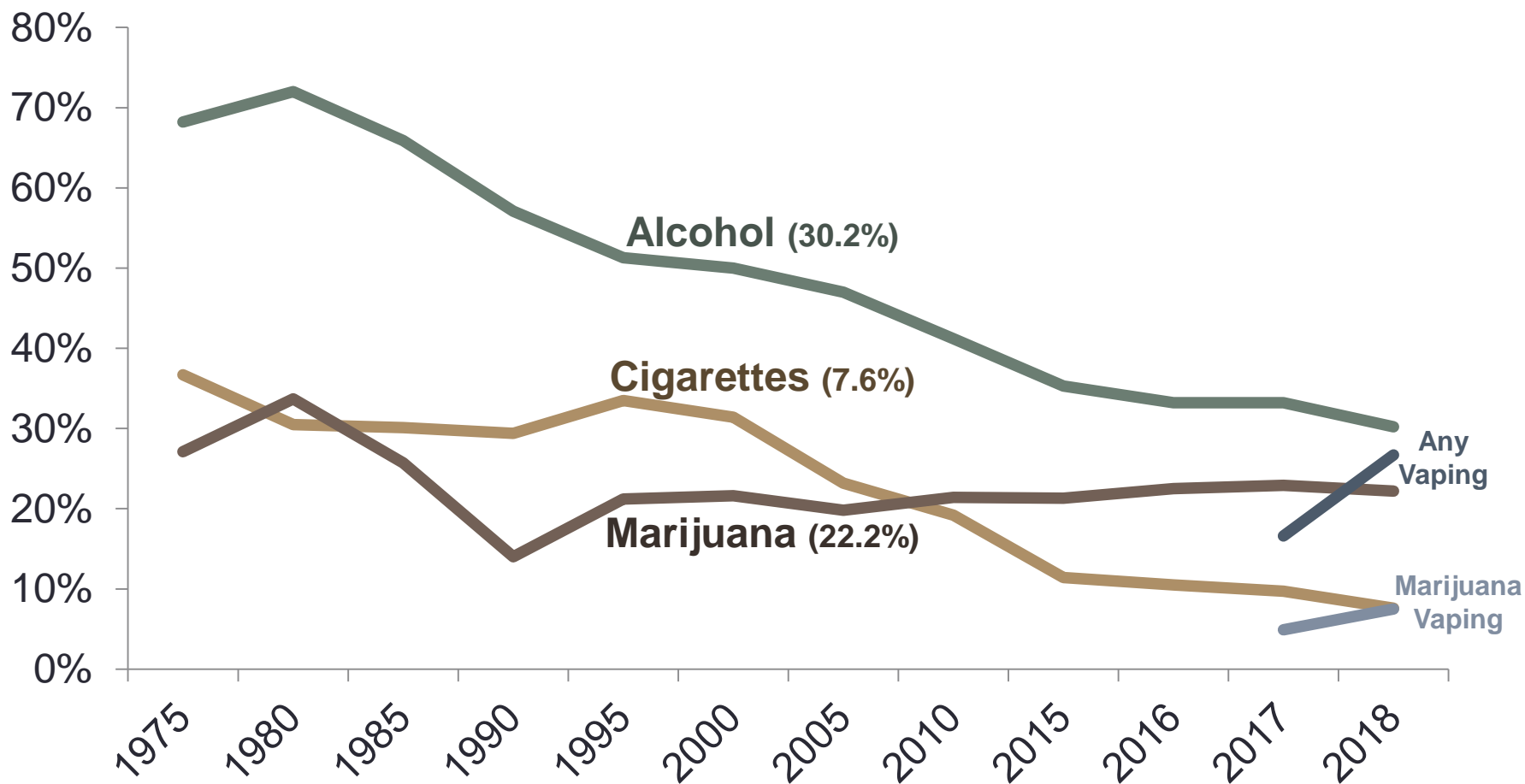
Do Drug Control Laws Work?

Percentage of people worldwide who used drugs in the past year (ages 15+)



Youth Substance Use 40+ Year Trends

Current Use (past 30 days) Among U.S. 12th Graders



Lessons Learned

To Address Opioids & Other Controlled/Addictive Substances

- ❖ Prescribers & Patients: Start “slow and low.”
- ❖ Prescribers & Dispensers: The PMP is a valuable tool, when used.
- ❖ First Responders & Others: Naloxone can save lives.
- ❖ Health Care Professionals: Peer, patient & partner education is required (e.g., prescribing guidelines, Rx safety & Take Backs, SUD referrals, etc.).
- ❖ Behavioral Health Providers: Medication *Assisted* Therapy works.
- ❖ Health & Enforcement Professionals: More robust data reporting & sharing (e.g., Iowa Data Exchange) improves surveillance & response.
- ❖ Parents: Talking with children helps prevent drug abuse before it starts.
- ❖ Everyone has a role to help reduce substance abuse in Iowa!

STAY SAFE!



Iowa Governor's Office of Drug Control Policy

Visit Our Website: <https://odcp.iowa.gov>

Get Help 24/7: Call 855-581-8111, Text 855-895-8398 or go to YourLifelowa.org