

Substance-Related and Addictive D/os

Substances include:

- Alcohol, including mouthwash
- Illegal drugs such as heroin, cocaine, marijuana
- Medications, including otc
- Medical use substances including nitrous oxide, rubbing alcohol
- Toxins, including moth balls, paint, glue

Substance-Related Disorders

Two general classifications –

- Substance Use Disorders

(formerly Substance Dependence and Substance Abuse)

- Substance-Induced Disorders

Substance Intoxication

Substance Withdrawal

Substance-Induced conditions

(Delirium, Persisting Dementia, Persisting Amnestic Disorder, Psychotic Disorder, Depressive Disorder, Bipolar and Related Disorder, Anxiety Disorder, Sleep Disorder, Sexual Dysfunction, etc.)

Substance Use D/o (1/3)

- A. A problematic pattern of alcohol/substance use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
1. Substance is often taken in larger amounts or over a longer period of time than was intended.
 2. There is a persistent desire or unsuccessful efforts to cut down or control substance use.
 3. A great deal of time is spent in activities necessary to obtain substance, use substance, or recover from its effects.
 4. Craving, or a strong desire or urge to use substance.
 5. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home.
 6. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

Substance Use D/o (2/3)

7. Important social, occupational, or recreational activities are given up or reduced because of substance use.
8. Recurrent substance use in situations in which it is physically hazardous.
9. Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.
10. Tolerance, as defined by either of the following:
 - a. A need for markedly increased amounts of substance to achieve intoxication or desired effect
 - b. A markedly diminished effect with continued use of the same amount of the substance.
11. Withdrawal, as manifested by either of the following:
 - a. The characteristic withdrawal syndrome for the substance.
 - b. The substance (or a closely-related substitute) is taken to relieve or avoid withdrawal symptoms.

Substance Use D/o (3/3)

Specifiers:

- In Early Remission
- In Sustained Remission
- In a Controlled Environment
- Severity (Mild (2-3), Moderate (4-5), Severe (6+))

Substance Intoxication

1. Development of a reversible substance-specific syndrome due to recent use of a substance
2. Clinically significant maladaptive behavioral or psychological changes that are due to physiological effect of substance (e.g., belligerence, mood lability, cognitive impairment, impaired judgment)
3. Symptoms are not due to presence of a GMC and are not better accounted for by a another mental disorder

Substance Withdrawal

1. Development of a substance-specific syndrome due to the cessation or reduction of heavy and prolonged use of a substance
2. Substance-specific syndrome causes clinically significant distress or impairment in social, occupational, or other importance areas of functioning
3. Symptoms are not due to presence of a GMC and are not better accounted for by a another mental disorder

Diagnostic Issues

Substance abusers often downplay use (helpful to get corroborative information from family members, past records/treaters, lab results)

Prognostically informative information –

Ingestion routes (injection, snorting, smoking, vs. oral)

Speed of substance action

Duration of substance effects

Length of time using, frequency of use, last use

Mental Disorder and Substance-Related Disorder vs. Substance-Induced Mental Disorder

- symptoms of the mental disorder were present prior to substance use
- symptoms of the mental disorder continue to be present after substance washout period (e.g., 4 weeks or more)
- history and presenting symptoms

Alcohol

In most Western societies, 90% of people consume alcohol at some point in life.

At least 30% of drinkers (= 27% of the population) develop alcohol-related problems (Sher, 2004).

Depending on the study and epidemiological data, alcohol is present in 30-70% of suicide attempts, 18-66% of committed suicides, 28-86% of homicide offenders, 13-60% of sexual offenders, 32-54% of child molesters (Roizen, 1993).

Alcohol

Intoxication –

inappropriate sexual or aggressive behavior, over-friendliness/
gregariousness, mood lability, impaired judgment

one or more shortly after use: slurred speech, incoordination, unsteady
gait, nystagmus, impaired attention or memory, social
withdrawing

stupor or coma

Withdrawal –

cessation/reduction of use after heavy and sustained use produces 2 or
more within several hours to days: significantly increased autonomic
activity (significantly elevated pulse, blood pressure), sweating

hand tremors, psychomotor agitation, insomnia, anxiety, nausea/
vomiting

may also have transient psychotic-like symptoms

grand mal seizures

Cannabis

Includes Marijuana, Hashish

Intoxication –

within 2 hours of use

feeling “high”/relaxation, sensation of slowed time, impaired motor coordination, conjunctival injection, increased appetite, dry mouth, tachycardia

Withdrawal (new) –

after prolonged near daily use for few months, 3 or more within 1 week of cessation/reduction: irritability/anger/aggression, nervousness/anxiety, sleep disturbance, decreased appetite, restlessness, depressed mood, headache/abdominal pain/shakiness

Caffeine

In coffee, sodas, tea, chocolate/cocoa, stimulants, weight-loss aids, Red Bull, 5-hour Energy shots, Excedrin migraine pills

Intoxication –

recent consumption of >250 mg.

5 or more: restlessness, nervousness, excitement, insomnia, flushed face, diuresis, GI disturbance, muscle twitching, rambling flow of thought and speech, tachycardia, periods of inexhaustibility, psychomotor agitation

Withdrawal (new) –

after prolonged daily use, 3 or more within 24 hours of cessation/reduction: headache, marked fatigue or drowsiness, dysphoric mood/depressed mood/irritability, difficulty concentrating, flu-like symptoms (nausea, vomiting, or muscle pain/stiffness)

Hallucinogens

Includes LSD, mescaline, Phencyclidines (PCP, Ketamine, Angel Dust)

Intoxication –

marked anxiety or depression, IOR, fear of losing one's mind, paranoid ideation, depersonalization/derealization, illusions, hallucinations, perceptual intensification

two or more shortly after use: pupil dilation, tachycardia, perspiration, palpitations, blurring of vision, tremors, incoordination

Flashbacks (Hallucinogen Persisting Perception Disorder) –

Intact reality testing (not psychotic but perceptual disturbance) and causes clinically significant distress and/or impairment

Phencyclidines

Intoxication –

onset usually within 1 hour

belligerence, assaultiveness, impulsivity, unpredictability,
psychomotor agitation, impaired judgment

vertical or horizontal nystagmus, hypertension or tachycardia,
numbness, diminished response to pain, ataxia (loss of muscle
coordination), dysarthria (loss of speech production/coordination),
muscle rigidity, seizures or coma, hyperacusis (heightened sensitivity
to sounds)

Inhalants

Includes gasoline, paint thinner, spray paint, cleaners, glue, white-out, Reddi-Whip (Nitrous oxide)

Intoxication –

belligerence, assaultiveness, apathy

2 or more: dizziness, nystagmus, incoordination, slurred speech, unsteady gait, lethargy, depressed reflexes, psychomotor retardation, tremor, generalized muscle weakness, blurred vision, stupor, euphoria

Opioids

Includes Opium, Morphine, Heroin, Demerol, Methadone, Fentanyl, Oxycodone, Oxycontin (Vicodin, Percocet, etc.) Codeine

Intoxication –

initial euphoria followed by apathy, dysphoria, psychomotor retardation/agitation, impaired judgment

must have pupillary constriction and at least one shortly after use:
drowsiness or coma, slurred speech, impaired attention

Withdrawal –

cessation/reduction of use after heavy and sustained use (or use of an antagonist) produces 3 or more within several minutes to days:
dysphoric mood, nausea/vomiting, muscle aches, lacrimation or rhinorrhea (tearfulness or runny nose), , pupillary dilation, piloerection, sweating, diarrhea, yawning, fever, insomnia

Sedatives, Hypnotics, Anxiolytics

Includes Benzodiazepines (Ativan, Valium, Xanax, Klonipin),
Barbituates, Carbamates

Intoxication –

inappropriate sexual or aggressive behaviors, mood lability, impaired judgment

one or more shortly after use: slurred speech, incoordination, unsteady gait, nystagmus, impaired attention, stupor or coma

Withdrawal –

cessation/reduction of use after heavy and sustained use produces 2 or more within several hours to days: significantly increased autonomic activity (significantly elevated pulse, blood pressure), sweating, hand tremors, psychomotor agitation, insomnia, anxiety, nausea/ vomiting

may also have transient psychotic-like symptoms

grand mal seizures

Stimulants, Amphetamines, Cocaine

Amphetamines include Methamphetamine (inc. Crystal Meth), Methylphenidate (Ritalin), Diet pills (Dexadrine)

Intoxication –

feeling “high”/euphoric, sociability changes (gregariousness, hypervigilance, interpersonal sensitivity), anxiety, tension or anger, stereotyped behaviors, impaired judgment

2 or more shortly after use: pupil dilation, tachycardia/bradycardia, perspiration/chills, weight loss, elevated or lowered blood pressure, nausea/vomiting, psychomotor retardation or agitation, muscle weakness, respiratory depression (difficulties breathing), chest pain, cardiac arrhythmias, confusion, seizures, dyskinesias, dystonias, or coma

Stimulants, Amphetamines, Cocaine

Withdrawal –

cessation/reduction of use after heavy and sustained use produces:

dysphoric mood AND 2 or more within several hours to days:

fatigue, vivid unpleasant dreams, insomnia/hypersomnia, increased appetite, psychomotor retardation or agitation

Tobacco - Nicotine

Includes cigarettes, tobacco (pipes), cigars, gum and patches

Withdrawal –

after daily use for several weeks or more, cessation or reduction results in 4 or more within 24 hours: dysphoria, insomnia, irritability/ frustration or anger, anxiety, difficulty concentrating, restlessness, increased appetite or weight gain

< 25% of individuals who stop smoking for the first time are successful

45-50% of individuals who smoke eventually stop smoking

Substance Use D/o – Prevalence

Substance	Adolescents	Adults
Alcohol	4.6% 1-month Binge: 8%	8.5% (12.4% M, 4.9% F) 1-month Binge: 23-28% 18-34 y.o.
Cannabis	3.4 % (3.8% M, 3.0% F)	1.5% (2.2% M, 0.8% F)
Hallucinogens, incl. Phencyclidines	low (57% of 12 th gr. have used in the last year)	low
Inhalants	0.4%	0.1%
Opioids	1.0%	0.37-0.82% (0.5% M, 0.26% F)
Sedatives, Hypnotics, Anxiolytics	0.3% (0.2% M, 0.4% F)	0.2%
Stim. – Amphetamines	0.2% (0.1% M, 0.3% F)	0.2%
Stim. – Cocaine	0.2%	0.3%
Tobacco - Nicotine		13% (14% M, 12% F)

Substances – Statistics

The following slides are from the Substance Abuse and Mental Health Services Administration (SAMHSA) website

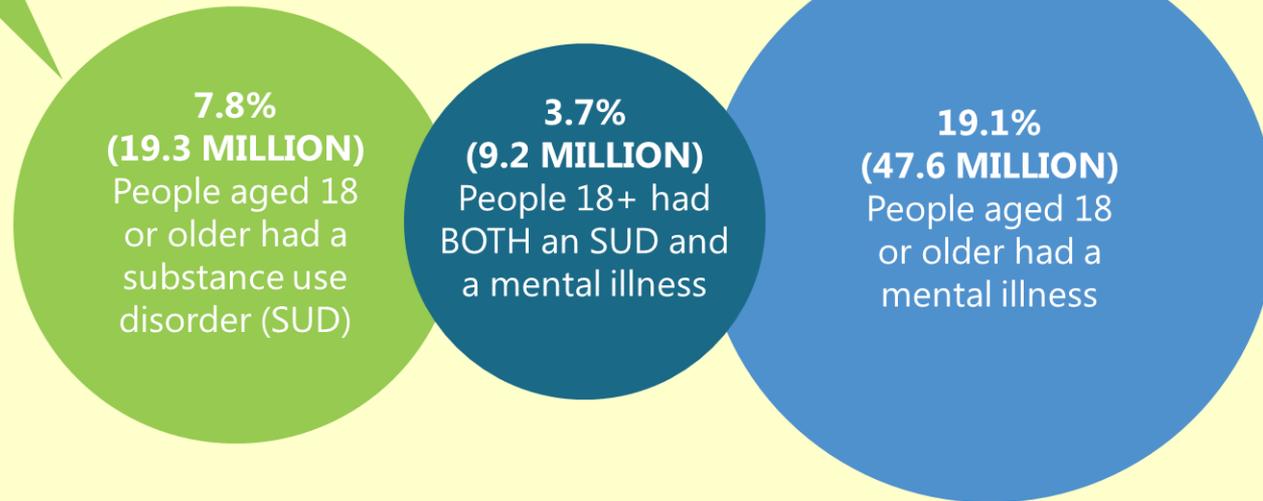
Mental Illness and Substance Use Disorders in America

PAST YEAR, 2018 NSDUH, 18+

Among those with a substance use disorder:

- 3 IN 8 (38.3% or 7.4M)** struggled with illicit drugs
- 3 IN 4 (74.5% or 14.4M)** struggled with alcohol use
- 1 IN 8 (12.9% or 2.5M)** struggled with illicit drugs and alcohol

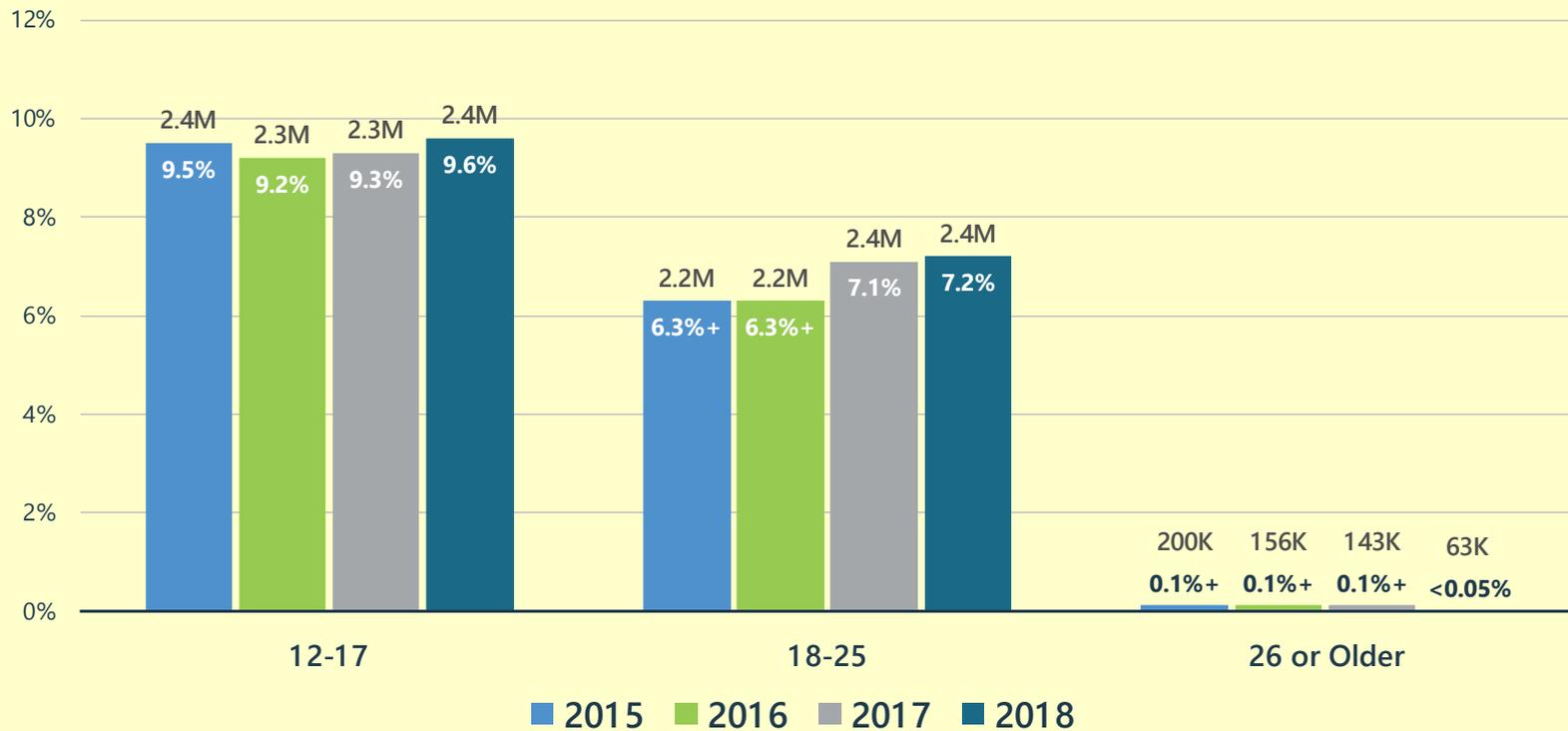
Among those with a mental illness:
1 IN 4 (23.9% or 11.4M) had a serious mental illness



In 2018, **57.8M** Americans had a mental and/or substance use disorder.

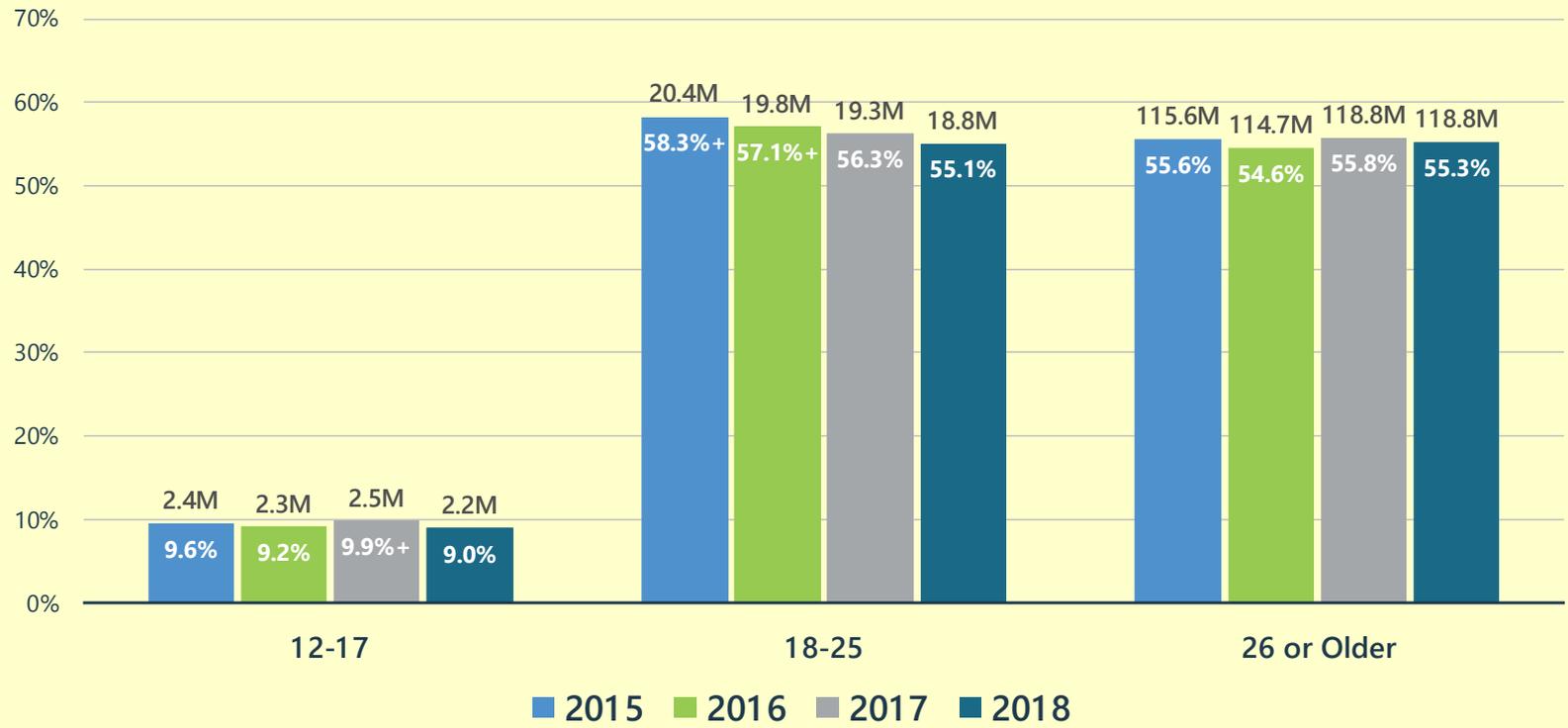
Alcohol Initiates

PAST YEAR, 2015-2018 NSDUH, 12+



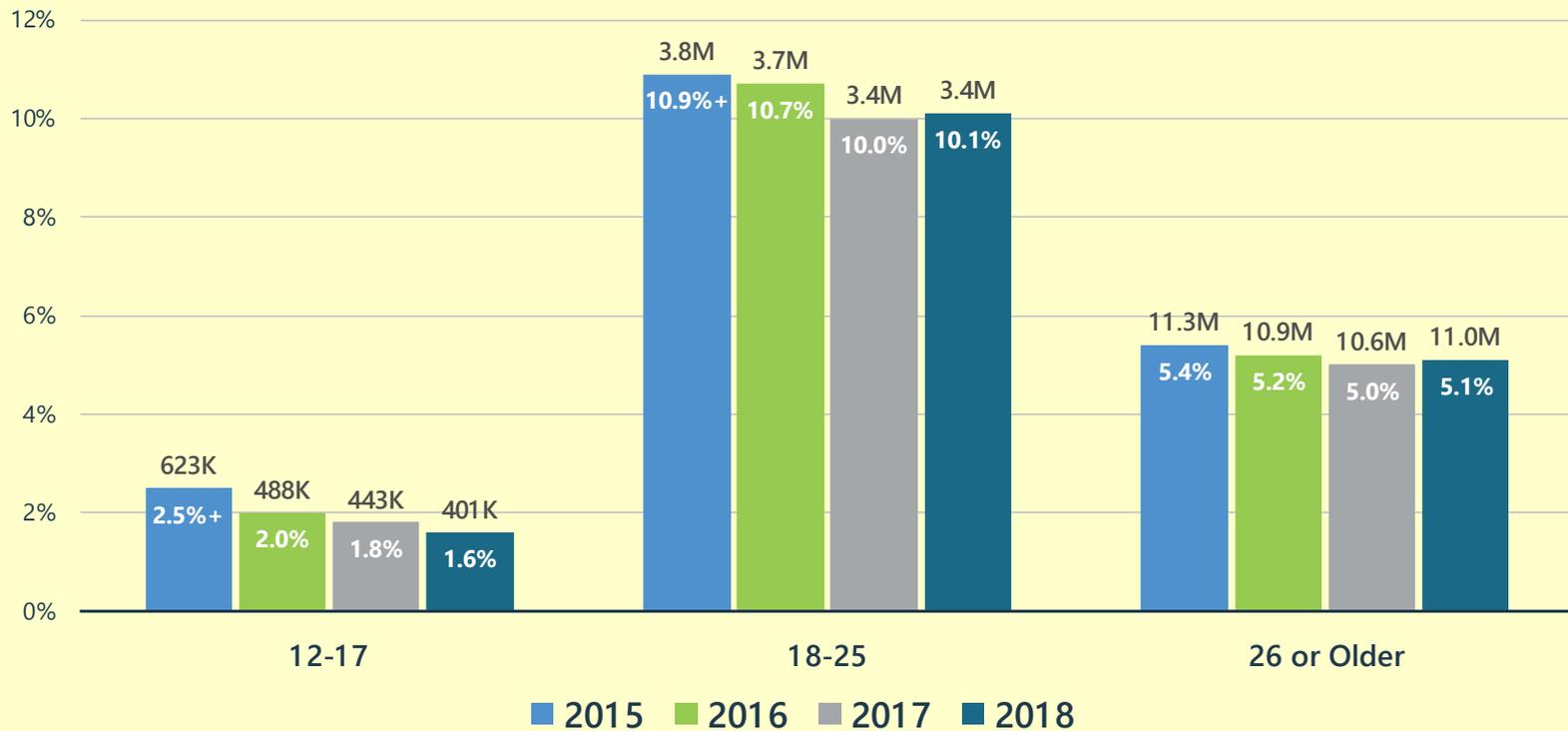
Alcohol Use

PAST MONTH, 2015-2018 NSDUH, 12+

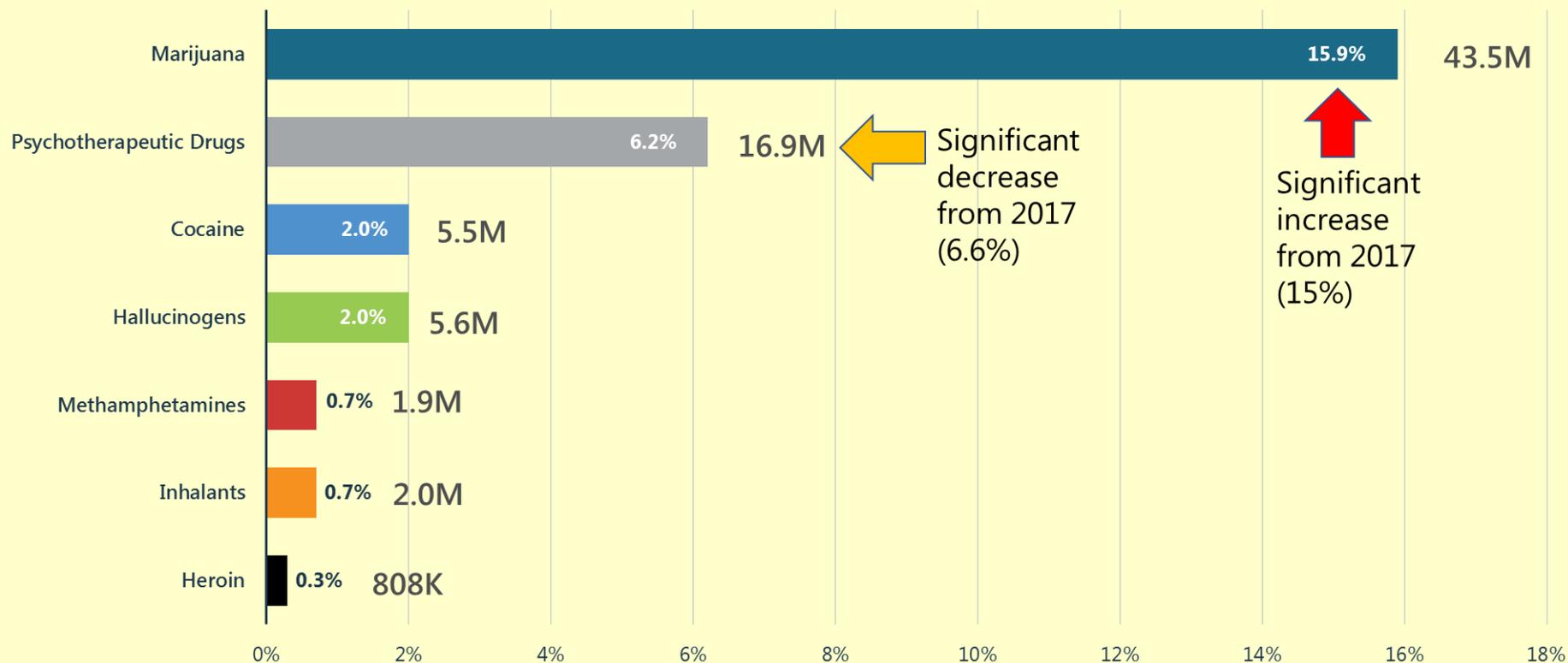


Alcohol Use Disorder

PAST YEAR, 2015-2018 NSDUH, 12+



Illicit Drug Use: Marijuana Most Used Drug



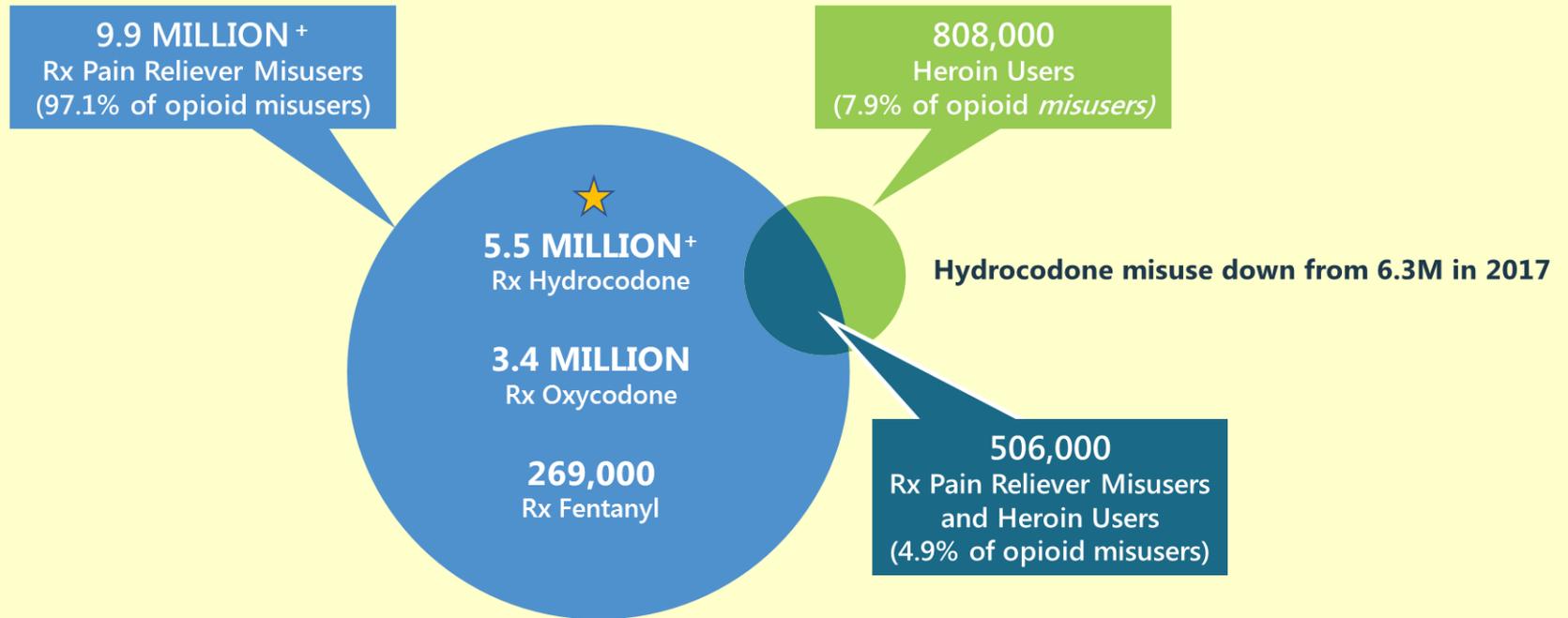
PAST YEAR, 2018 NSDUH, 12+

Opioids' Grip Lessening: Prescription Pain Reliever Misuse

PAST YEAR, 2018 NSDUH, 12+

★ Significant decrease
from 11.4M opioid
misusers in 2017

10.3 MILLION PEOPLE WITH OPIOID MISUSE (3.7% OF TOTAL POPULATION)

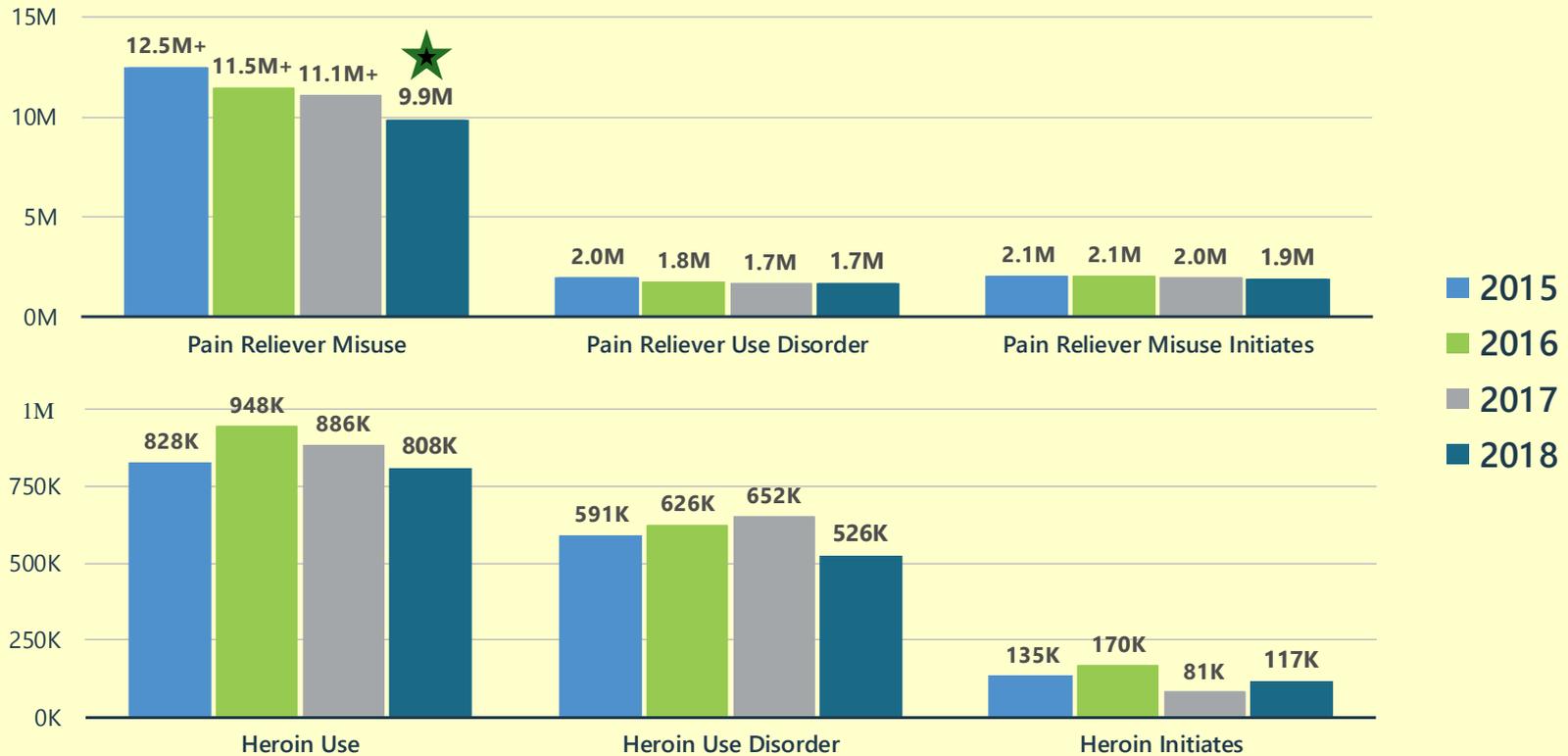


Rx = prescription.

Opioid misuse is defined as heroin use or prescription pain reliever misuse.

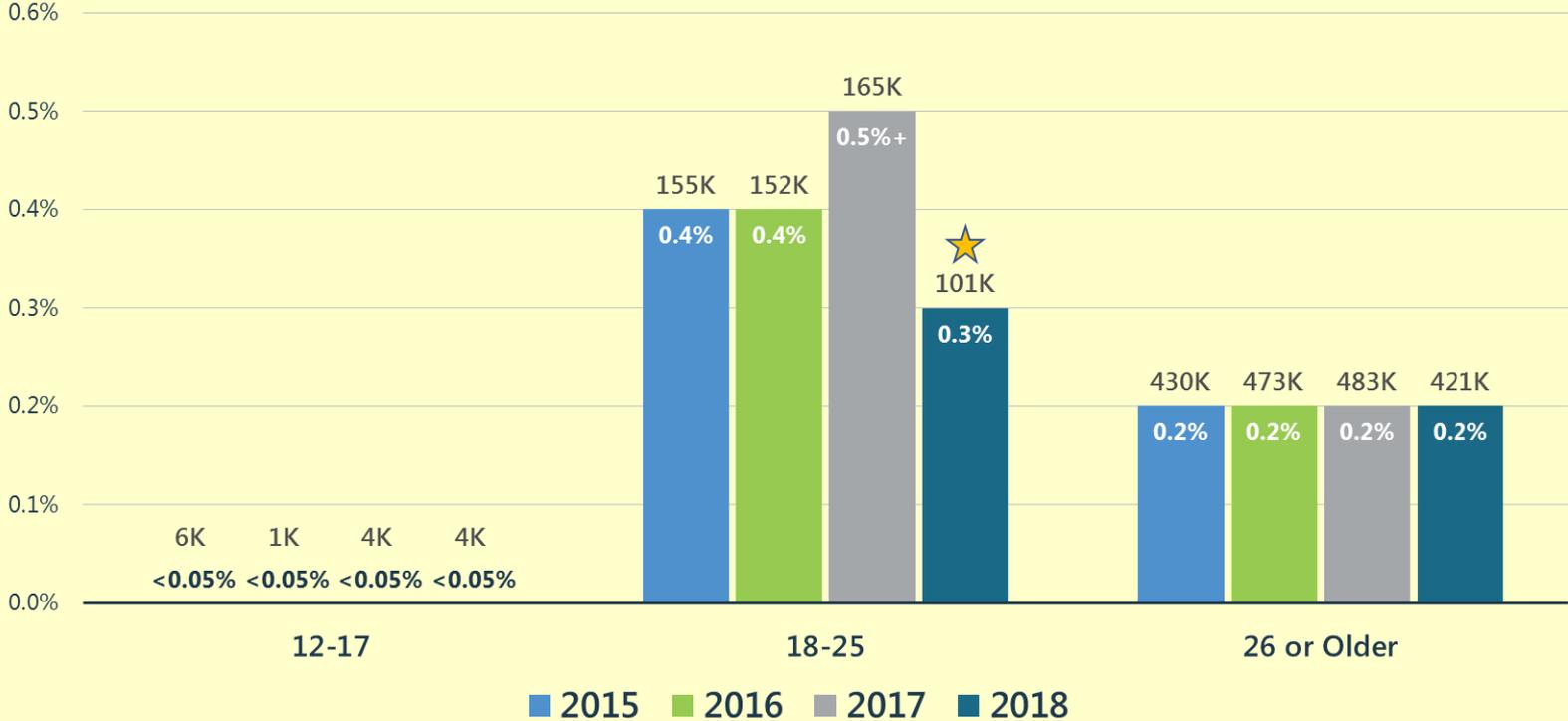
Prescription Pain Reliever Misuse and Heroin Use

PAST YEAR, 2015-2018 NSDUH, 12+



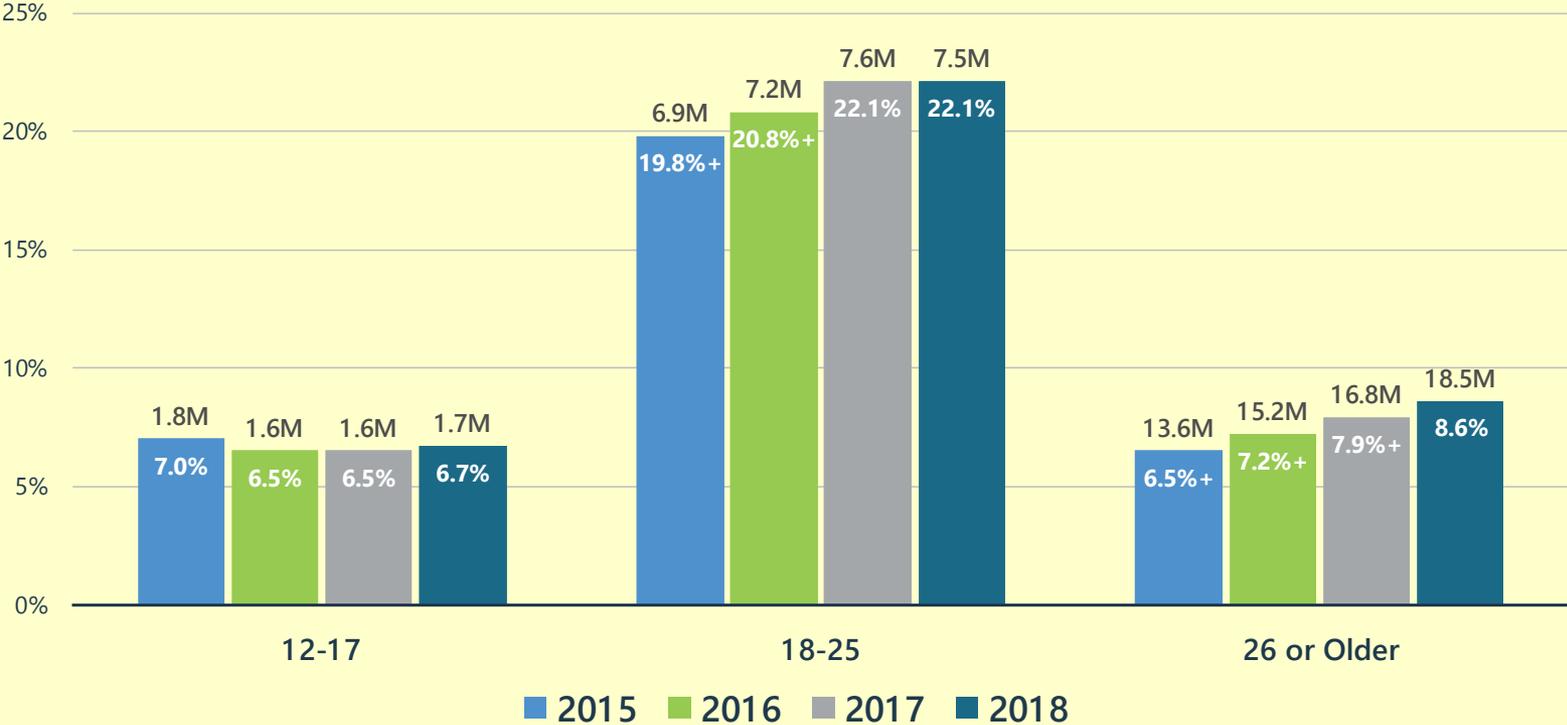
Heroin-Related Opioid Use Disorder

PAST YEAR, 2015-2018 NSDUH, 12+



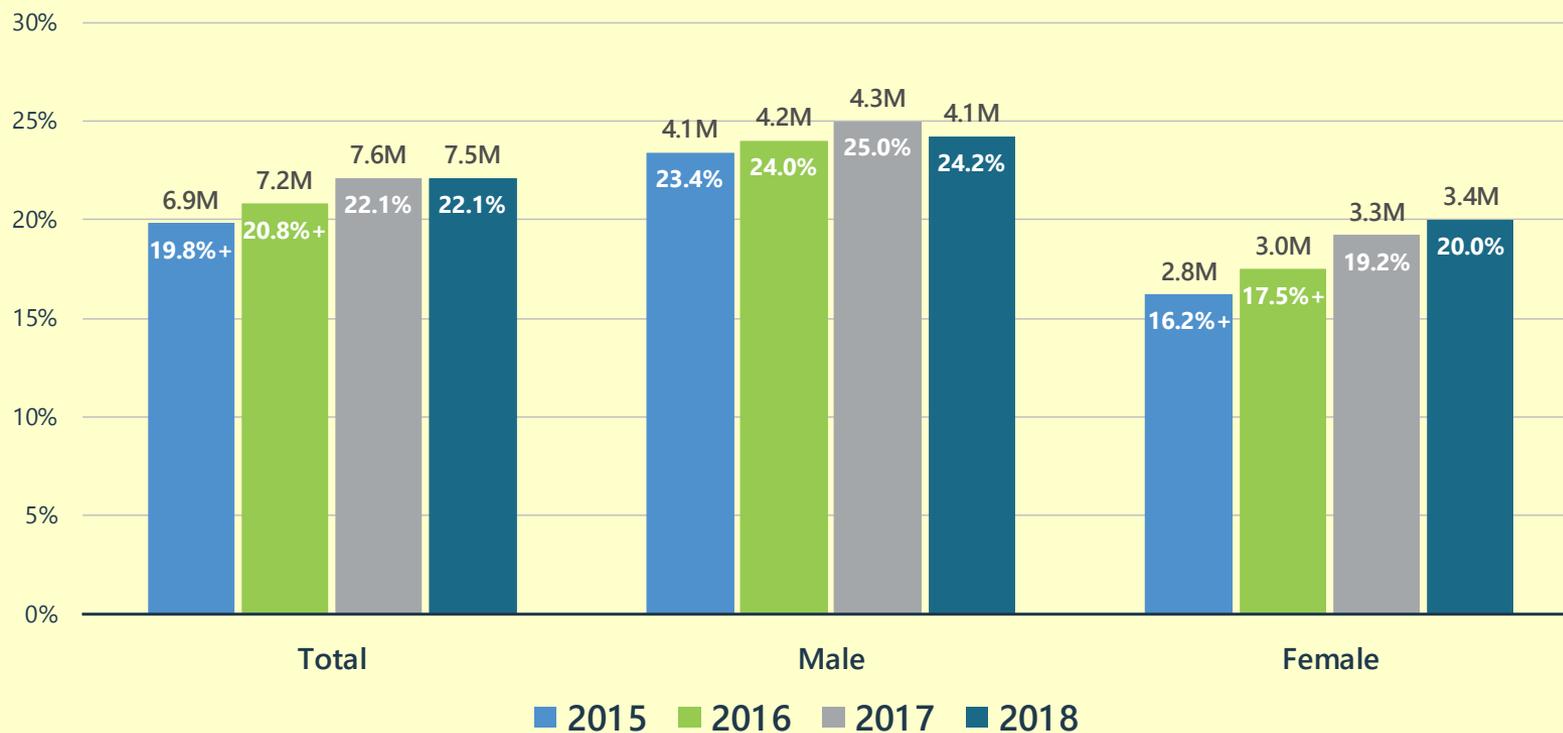
Marijuana Use

PAST MONTH, 2015-2018 NSDUH, 12+



Marijuana Use among Young Adult Men and Women (18-25 y.o.)

PAST MONTH, 2015-2018 NSDUH, 18-25



+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Marijuana Use Disorder

PAST YEAR, 2015-2018 NSDUH, 12+



+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Cocaine Use: Significant Decline among Young Adults (18-25 y.o.)

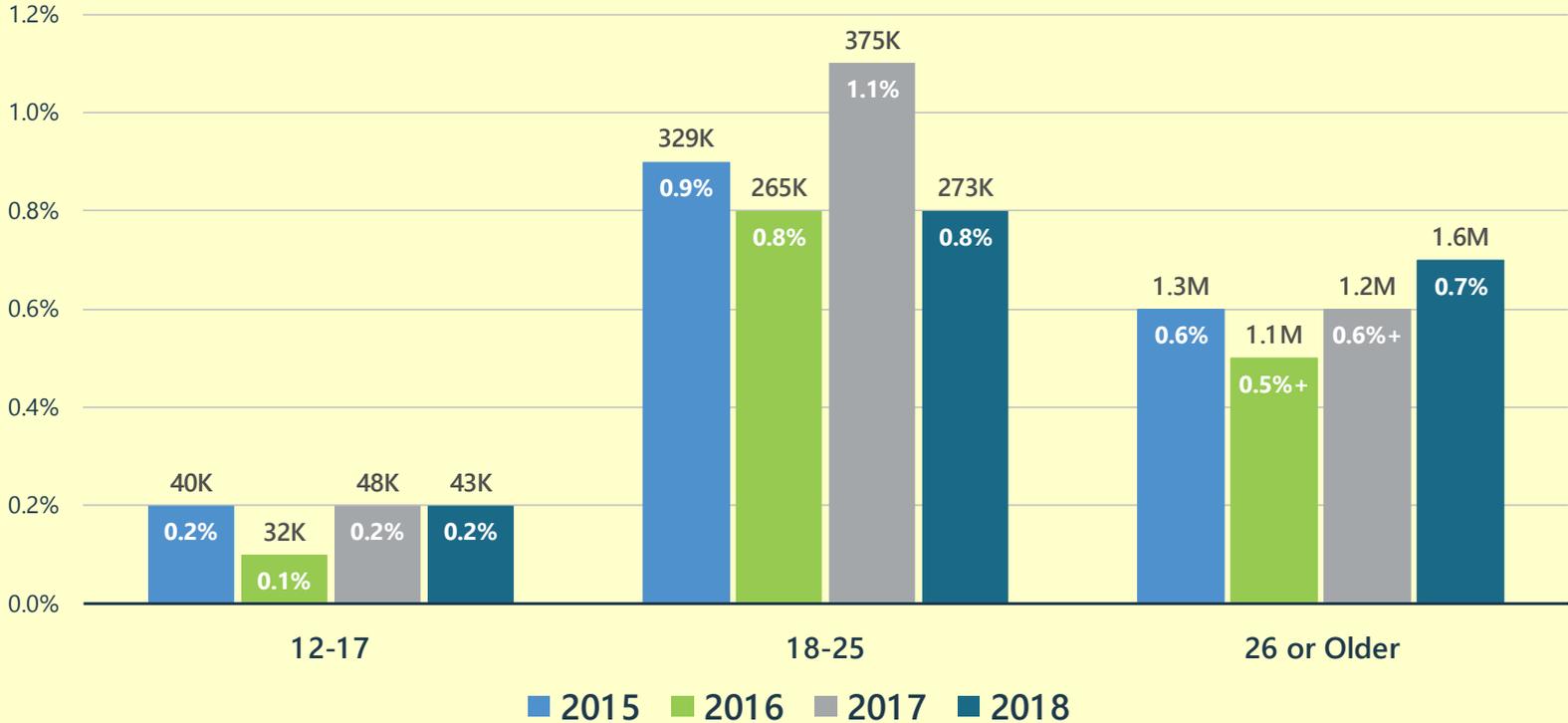
PAST MONTH, 2015-2018 NSDUH, 12+



+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Methamphetamine Use: Significant Increase in Adults ≥ 26 y.o.

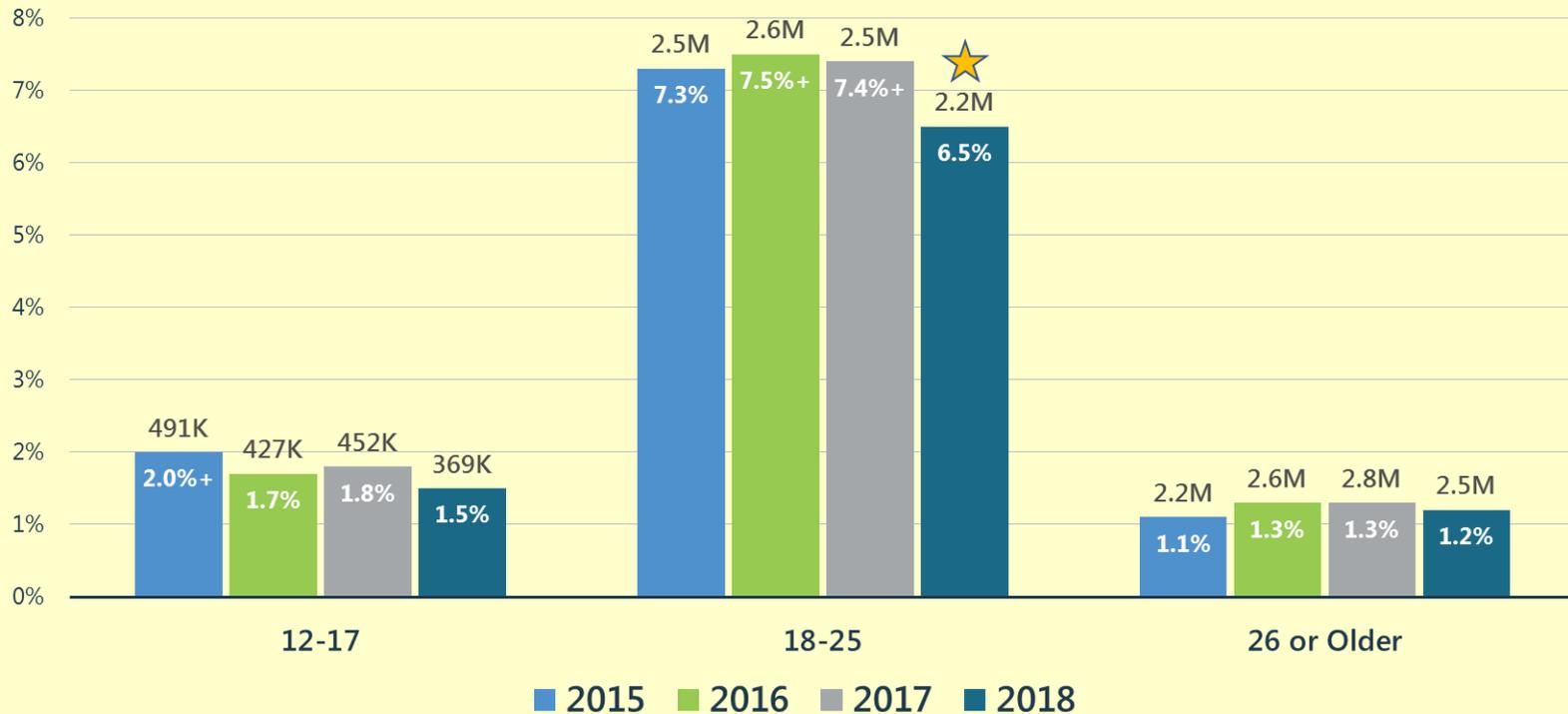
PAST YEAR, 2015-2018 NSDUH, 12+



+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Misuse of Prescription Stimulants

PAST YEAR, 2015-2018 NSDUH, 12+



SOURCE: See forthcoming 2018 Detailed Table 7.5, 7.11, and 7.14 for more information.

+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Hallucinogen Use: LSD

PAST YEAR, 2015-2018 NSDUH, 12+



Estimates represent past year use of LSD (lysergic acid diethylamide), a type of hallucinogen.

+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Substances – Course

Gender

Males > Females for all except adolescents for Sedatives, Hypnotics, Anxiolytics and Amphetamine-like Stimulants

Onset

Childhood and Early adolescence – Inhalants, Nicotine

Middle adolescence to 20s – Alcohol, Amphetamines, Cannabis, Cocaine, Opioids, Sedatives, Hypnotics, Anxiolytics

20s – Hallucinogens, Phencyclidine

Chronicity often depends on substance

Hallucinogens and Phencyclidine tend to be much less chronic

Inhalants tend to be less chronic because individuals move on to other substances (e.g., Alcohol)

Alcohol and Opioids tend to be more chronic, as do Tobacco and Caffeine

Substances – Comorbidity

Other mental disorders -

Psychotic Disorders, Mood Disorders, Eating Disorders, ADHD
Anxiety Disorders, particularly Social Phobia and PTSD
Personality Disorders, particularly Antisocial, Narcissistic, and
Borderline Personality Disorder

Often have medical/physical complications

Neuropsychological, neuroanatomical (anoxia, inhalant use)

Edemas, vein sclerosis, cellulitis (via injection use)

Hepatitis, HIV (via injection use)

STDs and Tuberculosis (associated w/ sexual activity, impaired
judgment, prostitution)

Pulmonary, circulatory effects, vasoconstriction

Bronchitis, emphysema, respiratory problems (via smoking)

Accidents, burns, bruises (from altered perceptions, freebasing or
mixing with flammable liquids, increased violence/aggression)

Sinusitis, nasal inflammations (snorting, smoking)

Gambling Disorder (1/2)

- A. Persistent and problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting 4 (or more) of the following in a 12-month period:
1. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
 2. Is restless or irritable when attempting to cut down or stop gambling.
 3. Has made repeated unsuccessful efforts to control, cut back, or stop gambling.
 4. Is often preoccupied with gambling (e.g., having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).
 5. Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed).

Gambling Disorder (2/2)

6. After losing money gambling, often returns another day to get even (“chasing” one’s losses).
 7. Lies to conceal the extent of involvement with gambling.
 8. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
 9. Relies on others to provide money to relieve desperate financial situations caused by gambling.
- B. The gambling behavior is not better explained by a manic episode.

Specifiers:

Course specifiers: Episodic, Persistent

Remission specifiers: In early remission, In sustained remission

Mild (4-5), Moderate (6-7), Severe (8-9)

Gambling Disorder

Symptom criteria are similar to that of substance dependence and abuse (hence the conceptualization of it as an addiction)

Similar thought distortions of overconfidence, denial. A different one re: superstitions.

Relationship with money paramount

Individuals with this disorder are often highly competitive, energetic, restless, poorer impulse control, and easily bored

17% have attempted suicide

1:2 F:M

Females more likely to be depressed and use gambling as an escape

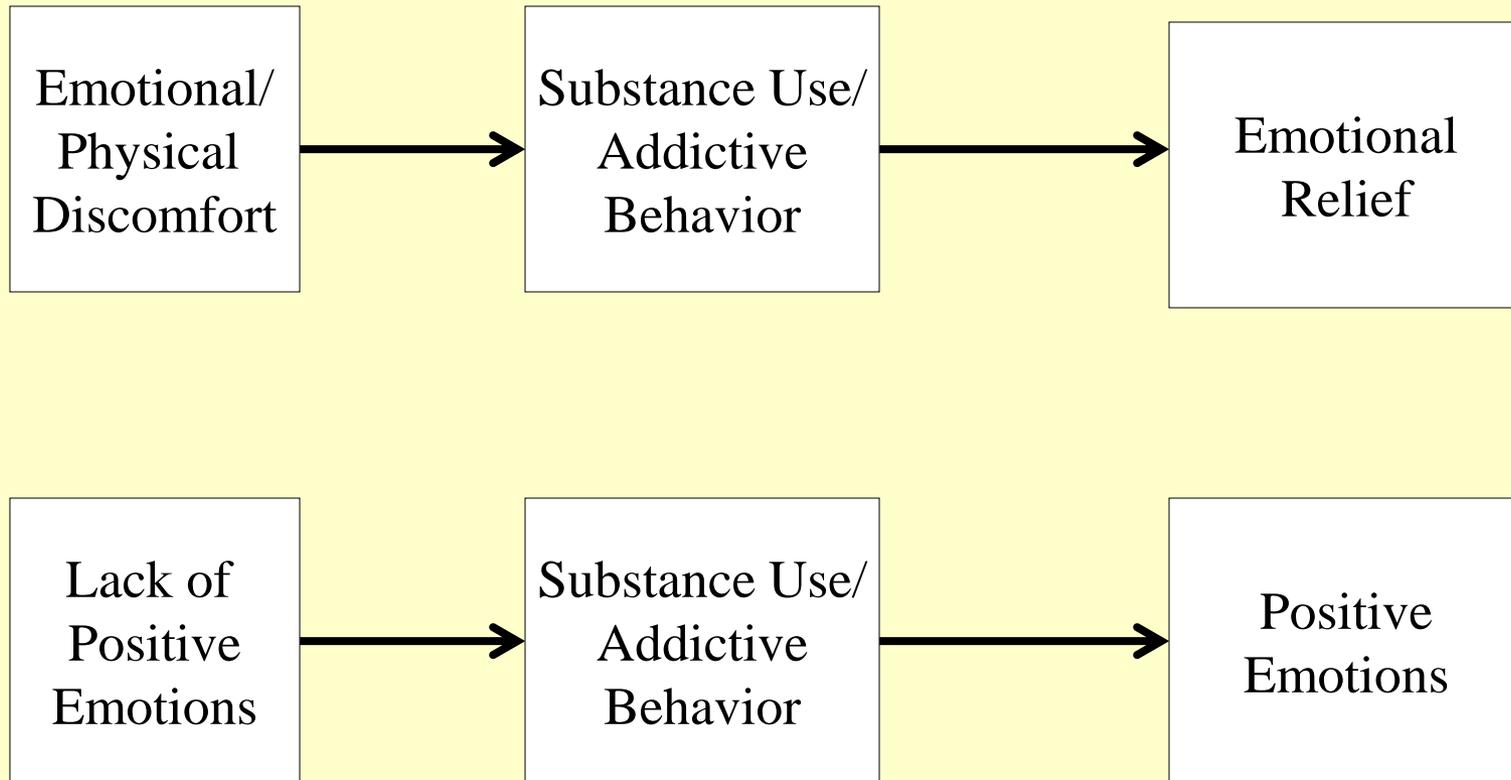
Prevalence: 0.4-3.4% of adult population, with higher rates in places where gambling is legal (e.g., Australia, Puerto Rico)

For Gambling Disorder: 1-year prevalence is 0.2-0.3%

lifetime is 0.6% for men, 0.2% overall.

Onset in adolescence for males, for females often in early 30s.

Substance-Related/Addictive Disorders – Classical Conditioning Etiology



Substance Use – Etiology

Psychospiritual

- Concepts of “Separation Anxiety” and “Existential crisis”
- Separation from Creator leads to existential anxiety
 - lack of transcendence
 - lack of significance
- Use of substances to cope with anxiety, depression, anger, low self-esteem, loneliness, boredom, etc.

Substance Use – Etiology

Biological

Estimated 40-60% of risk for alcohol-related disorder explained by genetic factors

Individuals with a close family member who has Alcohol Use Disorder, Severe is 3-4x more likely to develop Alcohol Use Disorder, Moderate or Severe

Studies of monozygotic vs. dizygotic twins generally show double concordance rates between alcohol-related disorders for identical twins vs. fraternal twins

- 58% of identical twins vs. 29% of fraternal twins for alcohol dependence (Virginia study by Kendler et. al, 1992)

Substance Use – Etiology

Behavioral Theories

Stimulus Association and Positive Reinforcement

- feelings of euphoria or relaxation are reinforcing
- feelings began to be associated not only with substance use but also with stimulus cues e.g. places for buying or using drugs, people associated with use, certain hours of the day

ABC –

Antecedents – triggers such as work stress, marital arguments

Behavior – substance use

Consequences – improved mood, apathy, sleep

Lack of learning frustration tolerance/delay of gratification

- reinforcement not available (or low) for periods of abstinence

Differential reinforcement

- individuals were otherwise reinforced when using substances vs. when not using (increased social contact, sex)

Substance Use – Etiology

Psychodynamic Theories

Theorized that individuals fixated at the Oral (vs. Anal and Oedipal) stage of development (trust and gratification issues, problems with delay of gratification) were more likely to abuse substances

Family Systems Theories

- Through transgenerational transmission, substance use is passed down to successive generations (particularly with Alcohol)
- In some dysfunctional families, one family member has been “selected” as the pathological member that family can rally around/blame/focus on to divert attention from their own dysfunction
- Substances may be used by one family member and other family members join in the use as a means of connection/relatedness

Substance Use – Etiology

Stress and Self-medication

- Used by individuals to relax, to increase energy
- Dependence and abuse result from loss of control and/or deficits in other, more adaptive coping mechanisms that contribute to increased reliance on substance to regulate stress, mood, emotions (anger, anxiety)

Sociocultural Theories

- Sometimes substances are used for cultural reasons (e.g., some Native American and African groups use substances as a means for increased spiritual connection)
- “Social drinking”, peer pressure (e.g., college fraternities)
- Among some social groups, hallucinogen use is encouraged to “open the mind” to new creative ideas

Substance - Treatment

- Detoxification/Rehabilitation
 - For placement of individuals in a controlled environment to remove accessibility of substances
 - To monitor and treat withdrawal effects
 - Intensive structuring and psychosocial rehabilitation
- Medication
 - Substance antagonists (e.g., naltrexone, suboxone, antabuse) that block substance receptor sites in the brain and counteract the desire effect (high, low)
 - High non-compliance rates
 - Substance agonists (e.g., methadone) that will mimic substance effects so as to decrease physical, psychological, financial, and social repercussions of substance use (“harm reduction”)
 - Some proponents of agonist use suggest this increases sense of control to patients

Substances - Treatment

- Harm Reduction
 - Conceived by health policy makers in Europe, Harm Reduction believes it takes a pragmatic approach to substance abuse/dependence from a societal standpoint.
 - Basic tenet is that there will never be a drug-free society, therefore the goal is to minimize harmful impact of drugs to society as measured by disease and crime rates vs. use rates.
 - Believes that some substances are less harmful than others and should be viewed and treated as such (e.g., cocaine is more harmful than cannabis)
 - Advocates prevention, education, treatment, over legal penalties, incarceration, and international law enforcement

Substances - Treatment

- Psychotherapy
 - Groups can be helpful when group members agree treatment goals of abstinence, improved social and occupational functioning, use of group for accountability
 - Individual therapy often focused on Behavioral Therapy interventions such as avoidance of stimuli associated with cravings/increased desire to use substance and stimulus substitution (e.g., hypnosis for smoking cessation, change of venue for social support)
 - Behavioral Therapy interventions also focus on increased self-monitoring and mindfulness of ABCs
 - Cognitive Therapy is often used to address dysfunctional thoughts related to substance use especially when individuals relapse (e.g., “I’ve failed again, I’ll always fail so what’s the point of trying so hard to abstain.”)

Substances - Treatment

- Church-sponsored Interventions, AA, and 12-step Programs
 - Addressing existential needs and the anxiety that comes from being separated from the Creator
 - Addressing the idea of spiritual weakness and need for help from both Creator and fellow spiritual community members
 - Accountability AND grace

Substances - Treatment

Motivational Interviewing

<http://www.div12.org/psychological-treatments/treatments/metmetcvt-for-mixed-substance-abuse/>

Behavioral Couples Therapy

<http://www.div12.org/psychological-treatments/treatments/behavioral-couples-therapy-for-alcohol-use-disorders/>

Prize-based Contingency Management (a behavioral therapy)

<http://www.div12.org/psychological-treatments/treatments/prize-based-contingency-management-for-mixed-substance-abusedependence/>