

An Overview of Substance Use Disorders

Olawale Ojo MD MSc



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HEROIN—HYDROCHLORIDE

is pre-eminently adapted for the manufacture of cough elixirs, cough balsams, cough drops, cough lozenges, and cough medicines of any kind. Price in 1 oz. packages, \$4.85 per ounce; less in larger quantities. The efficient dose being very small (1-48 to 1-24 gr.), it is

The Cheapest Specific for the Relief of Coughs

(In bronchitis, phthisis, whooping cough, etc., etc.)

WRITE FOR LITERATURE TO

FARBENFABRIKEN OF ELBERFELD COMPANY

SELLING AGENTS

P. O. Box 2160

40 Stone Street, NEW YORK



COCAINE TOOTHACHE DROPS

Instantaneous Cure!

PRICE 15 CENTS.

Prepared by the

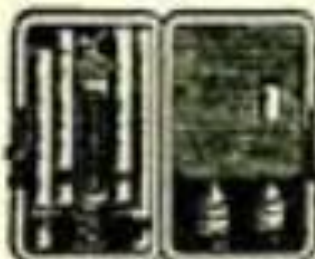
LLOYD MANUFACTURING CO.

219 HUDSON AVE., ALBANY, N. Y.

For sale by all Druggists.

A late 19th-century American advertisement for Cocaine Toothache Drops promises "Instantaneous Cure!" (Photo by © CORBIS/Corbis via Getty Images)

HYPODERMIC SYRINGES.



Hypodermic Syringe, nickel plated, with two needles, two vials and extra wire, in neat morocco case.

No. D2200 Price, each.....\$1.50
Postage, 8 cents.

Hypodermic Syringe, nickel plated, more complete instrument than above, with two needles, four vials, extra wire, etc., in morocco case.

No. D2202 Price, each.....\$2.00
Postage, 8 cents.

Hypodermic Syringe, best grade, four vials, two needles, extra wire and washers, in closed end, aluminum pocket case.

No. D2204 Price, each.....\$2.50
Postage, 8 cents.

Needles for Hypodermic Syringes. Assorted sizes.

No. D2206 Price, each, 25c; per doz.....\$2.70

Hypodermic Syringe.

WITH CLASS BARREL.



LIGHTENS *the* DAYS WORRIES

Fatigue is the price of labor, 5 cents is the price of the drink that dispels it: When worn out by business cares, send to the nearest soda fountain for a glass of delicious

Coca-Cola

COOLING—REFRESHING
THIRST-QUENCHING

S. H. ... 5 cents



Guaranteed under the Pure Food
and Drugs Act, June 30th, 1906,
Serial Number 3324

UNITED STATES GOES "DRY"

NEBRASKA'S VOTE COMPLETES PROHIBITION RATIFICATION

36 STATES VOTE FOR AMENDMENT TO CONSTITUTION

Prohibition of Manufacture and Sale of Alcoholic Beverages Throughout Nation Will Be in Effect One Year Hence.

ENFORCEMENT LAWS BEING FRAMED NOW

Warlike Embargo on Intoxicants After July 1 Will Be Real Beginning of "Dry" Country—Other States to Vote.

WASHINGTON, Jan. 16.—Prohibition became part of the basic law of the United States today.

Ratification of the federal dry amendment by the legislature of Nebraska makes that measure the 15th amendment to the federal constitution.

All but a half dozen of the 48 states are expected to adopt the amendment in the next few weeks. At the close of Nebraska today gives the ratification three-fourths of the votes, the number necessary to authorize to John Raskycom the K. O. punch.

One year from today every saloon, brewery, distillery and wine press in the land must close its doors, unless an hour seems likely, they are already closed at that time by war prohibition, which goes into effect next July 1 and

His Ear to the Keyhole



POLICE SHAKE-UP TO RESULT FROM GAMBLING INQUIRY

Mayor and Chief Girvin After Conference Say Some Changes Will be Made, Give No Details—Alleged Gamblers and Keepers of Disorderly Houses, Arraigned.

Proposed changes or transfers in the police department as a result of the investigation into gambling and disorderly house conditions in Buffalo, which Chief Girvin and District Attorney Moore have conducted with private detectives during the past two months, was the subject of discussion between Mayor Buck and the chief of police in the mayor's private office this morning. They talked for more than an hour.

There will be some changes in the department of police. That was agreed upon by the chief of police and the head of the department of public safety. The changes will be made within a few days, both admitted. What they will be and whether they will be in the form of transfers, demotions or shifts among the captains of police, neither Mayor Buck nor Chief Girvin would say for publication.

"There certainly will be some changes, but what they are I cannot say at this time, because it hasn't materialized as to what changes will be best for the prevention of crime in Buffalo," Chief Girvin said as he left Mayor Buck's office at the conclusion of their hour conference.

"Mayor Buck and I have talked the matter over and I am not to recommend certain changes. I cannot say too much now because I do not wish to embarrass the mayor. I have discovered two or three weak spots and it will be my duty to strengthen them. The changes will not be in the nature of punishment, but simply for the good of the department."

"Will they be changes among the men high up in the department?" was asked of the chief of police.

"That I cannot say at this time, except that the changes will be important ones," replied the chief.

"Will the changes be due to the spreading of gambling and disorderly houses in the city?" was asked.

GIVES \$100,000 TO FINE ARTS ACADEMY FOR PURCHASE OF PAINTINGS



Col. Charles Clifton. The gift of \$100,000 by Colonel Charles Clifton to the Buffalo Fine Arts Academy for the purchase of paintings.

WILSON AIMS TO PLACE BAN ON ALL WARS

American Delegates to Peace Conference Believe Best Insurance Against Hostilities Is by Abolishment of Secret Autocratic Bodies.

LEAGUE OF NATIONS AN IMPORTANT TOPIC

British Plan Would Require United States to Assume New Responsibilities in the Near East and Africa—Serious Questions Involved.

By DAVID LAWRENCE. Special Cable to The News. Copyright, 1919, by New York Evening Post Company for Buffalo Evening News.

PARIS, Jan. 16.—Our numerous conversations or discussions as to the League of Nations have made certain fundamentals clear. The American method has been to discover in place of other nations on what parts they agree, leaving till a later date all differences. The feeling was said to be unanimous as to three things:

No supernational executive power lodged in individual nations.

No federation of states under an international cabinet, legislature or judiciary.

No supernational police force with permanent high command of army or navy.

The British plan thus far published indicates a desire to leave such matters

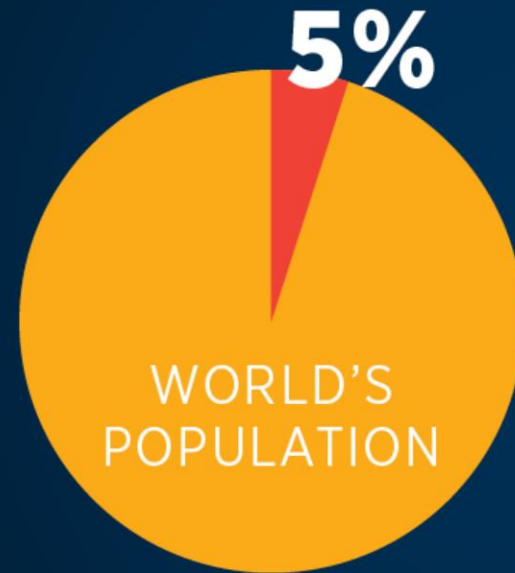
Nixon's war on drug addicts

From **RICHARD SCOTT**

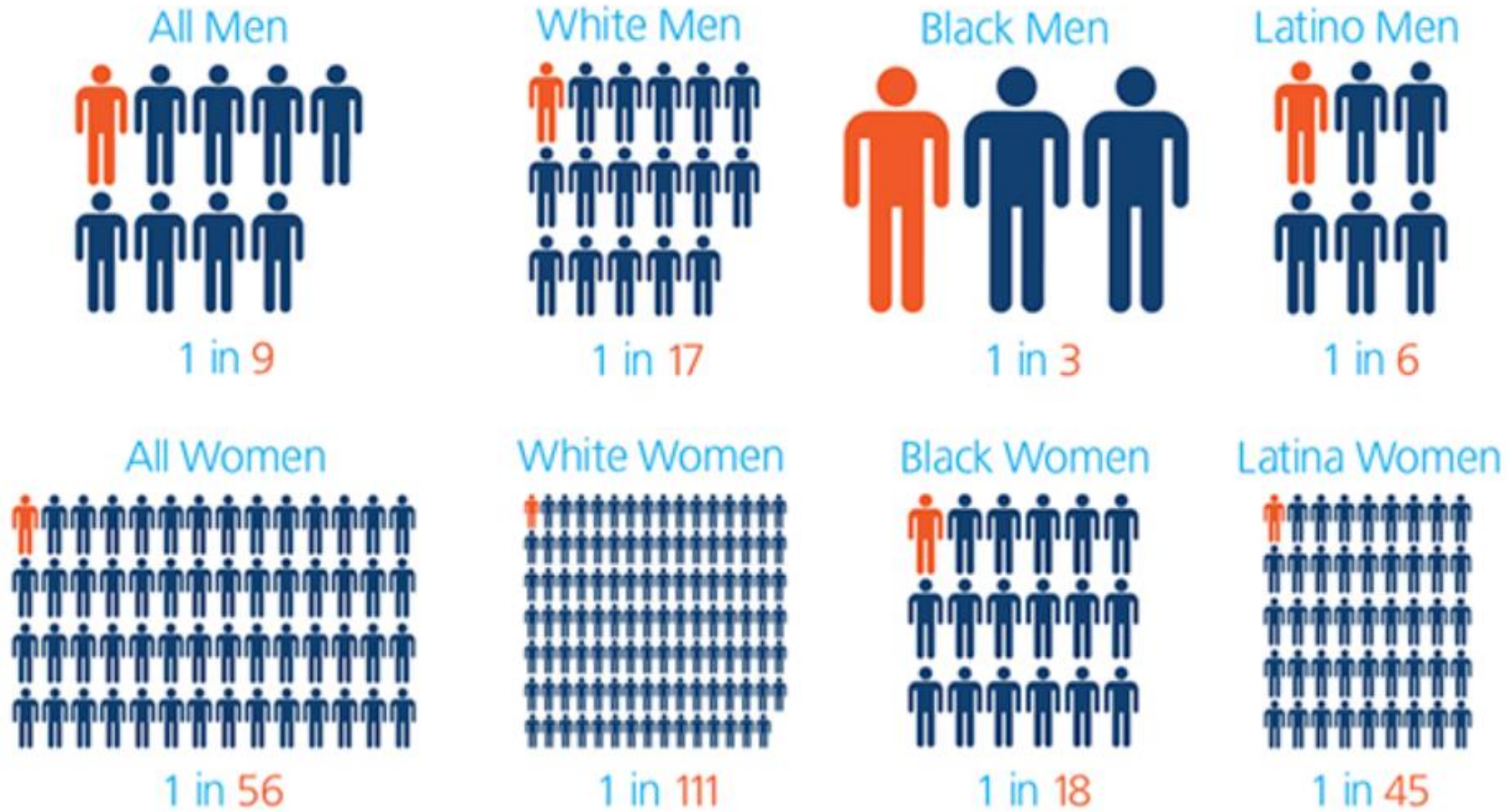
Washington, June 17

President Nixon told Congress today that the drug problem in the United States had assumed the dimensions of a national emergency. He asked for an additional £64 millions to provide emergency measures for dealing with it.

THE UNITED STATES HAS:

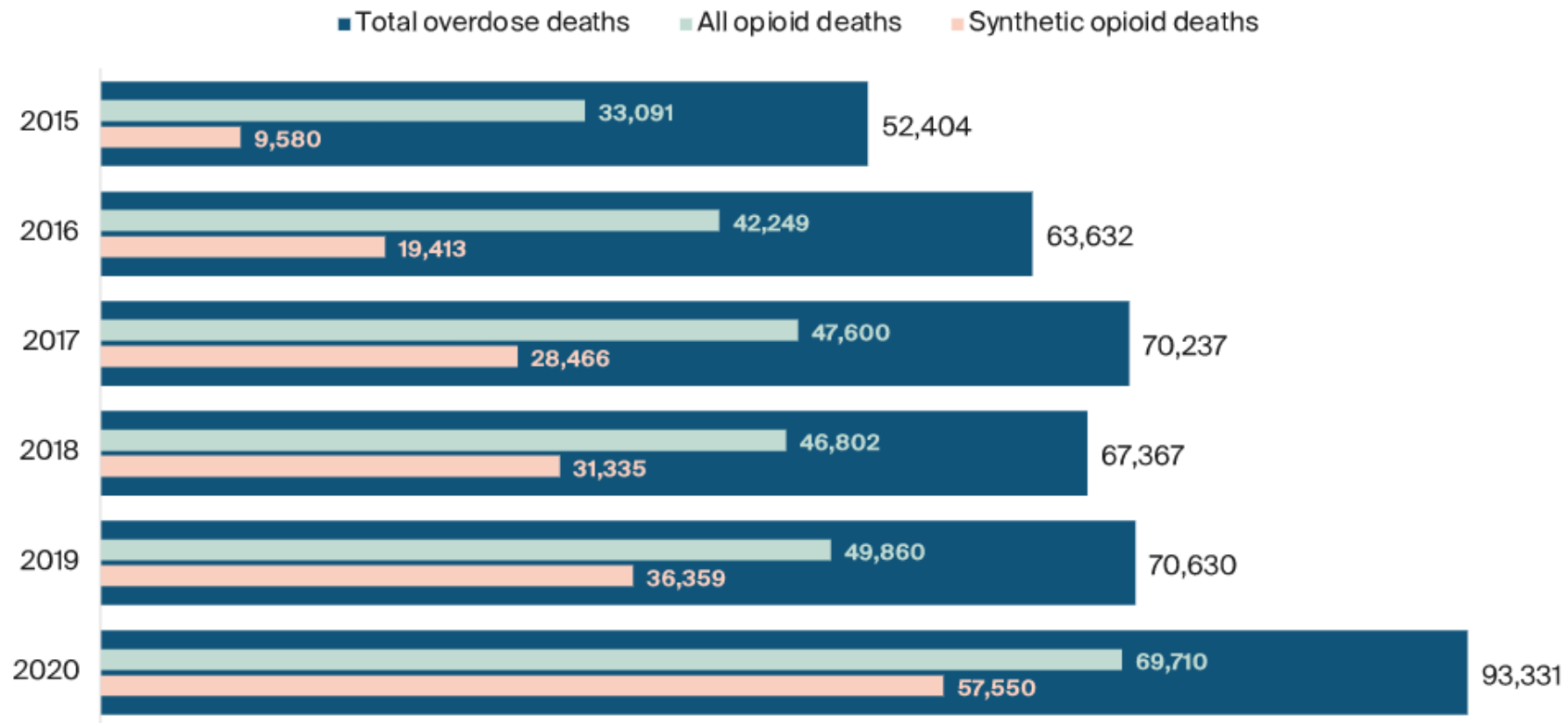


Lifetime Likelihood of Imprisonment



Source: Bonczar, T. (2003). *Prevalence of Imprisonment in the U.S. Population, 1974-2001*. Washington, D.C.: Bureau of Justice Statistics

Annual drug overdose deaths



Note: Synthetic opioid deaths exclude those from methadone. Specific drug-class deaths are not mutually exclusive, as some deaths are attributable to multiple drug types.

Data: 2015–2019 – Final data from [CDC WONDER](#); 2020 – National Vital Statistics System, [Provisional Drug Overdose Death Counts](#), Dec. 2020 predicted totals (not final data, subject to change).

Source: Jesse C. Baumgartner and David C. Radley, "The Drug Overdose Mortality Toll in 2020 and Near-Term Actions for Addressing It," *To the Point* (blog), Commonwealth Fund, July 15, 2021, updated Aug. 16, 2021.

Definition of Substance Use Disorder

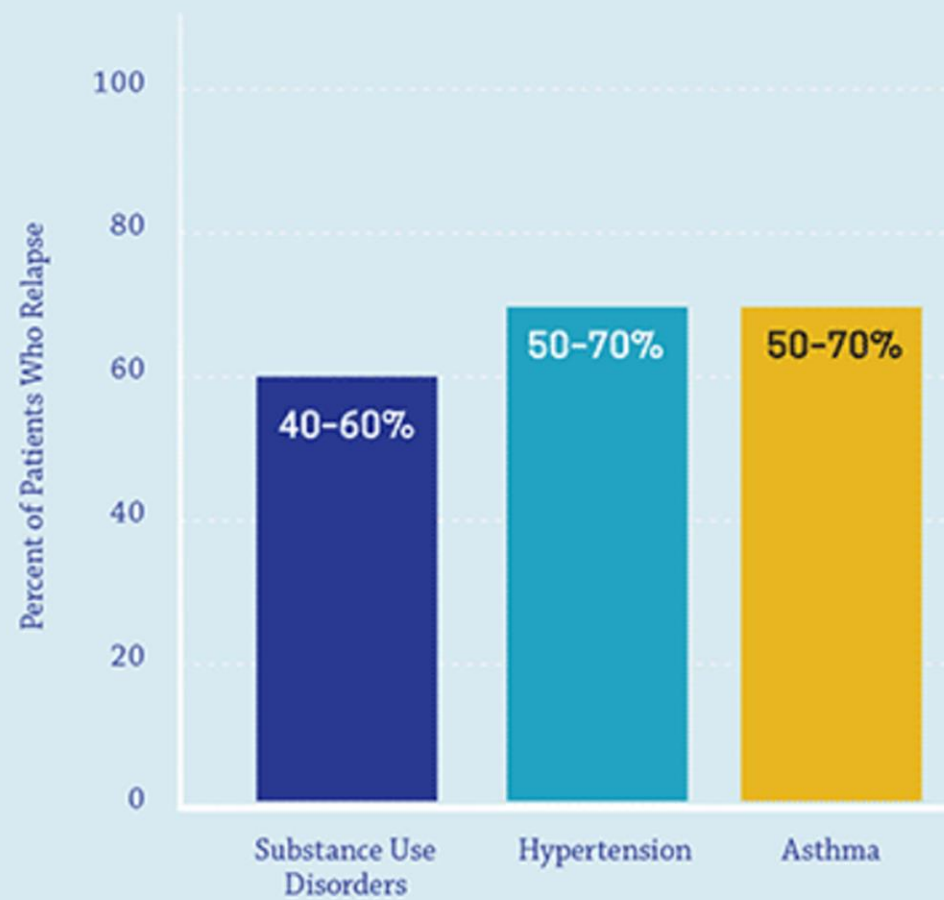
According to DSM-5, a substance use disorder (SUD) involves patterns of symptoms caused by using a substance that an individual continues taking despite its negative effects

Substance Use Disorders are Medical Illnesses

Substance use disorders are **acquired chronic illnesses**

- **Acquired** because it starts with voluntary self-administration
- **Chronic** because repeated self administration produces gradual but progressive injuries
- **Illness** because it affects specific brain circuits controlling inhibition, motivation, cognition, reward sensitivity and stress tolerance

Comparison of Relapse Rates Between Substance Use Disorders and Other Chronic Illnesses



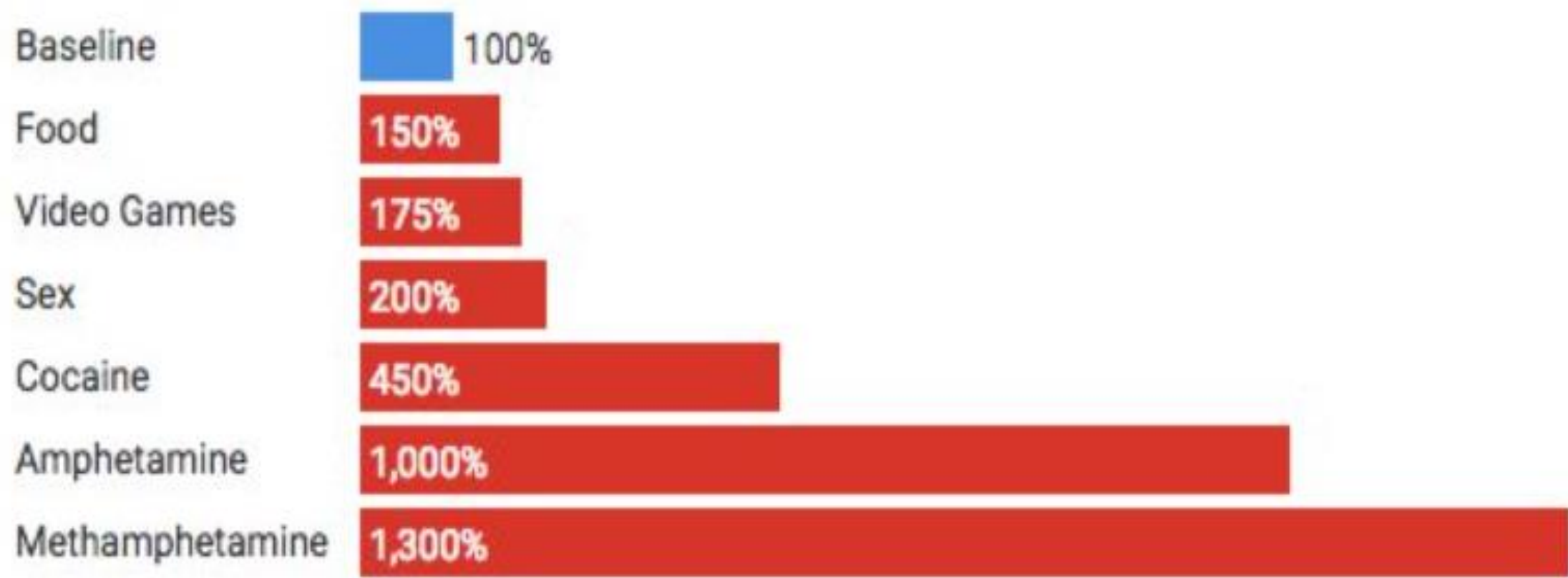
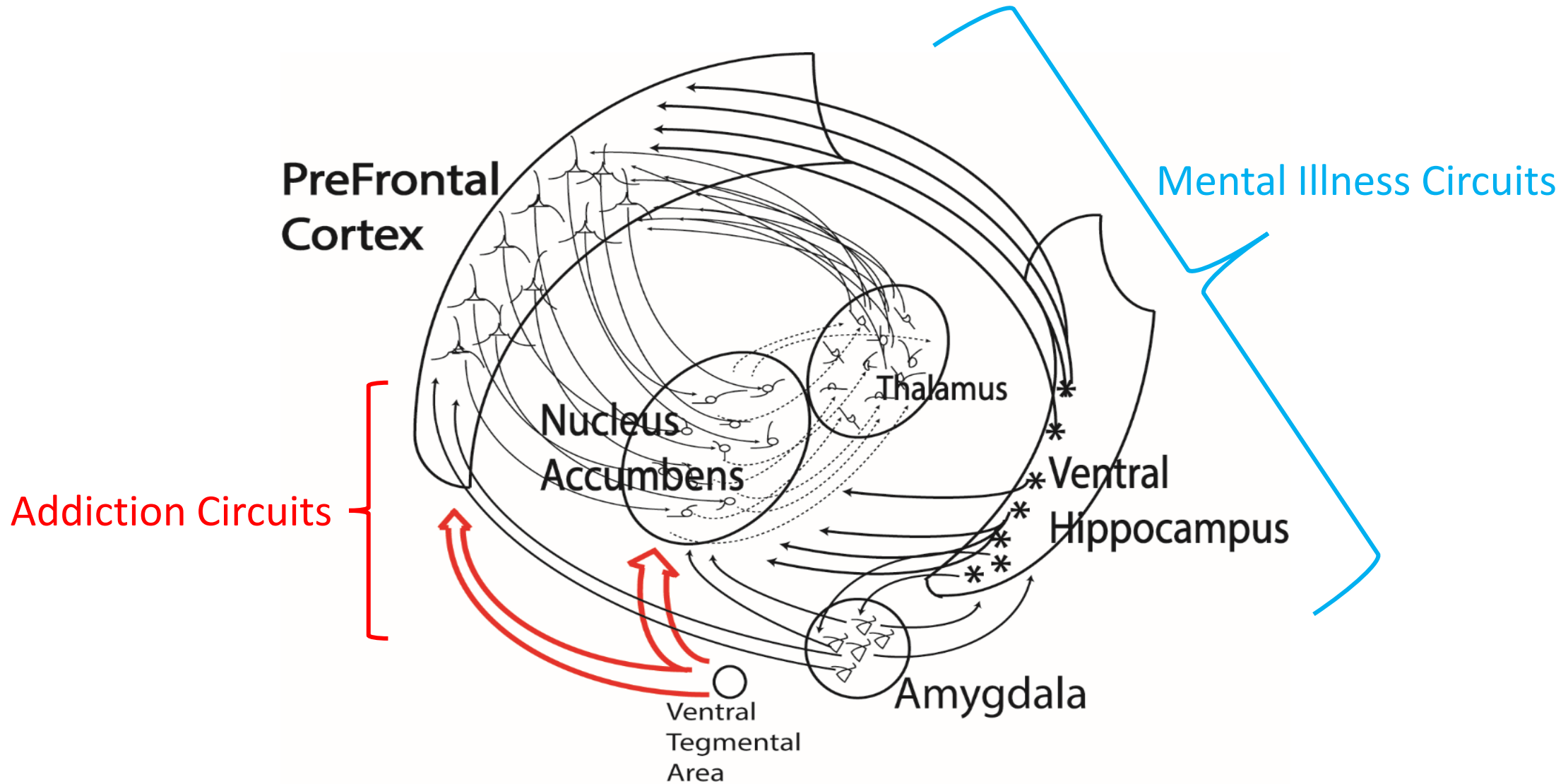


Chart: The Conversation, CC-BY-ND • Source: [National Institute on Drug Abuse](#) • [Get the data](#)

Addiction Is Mental Illness



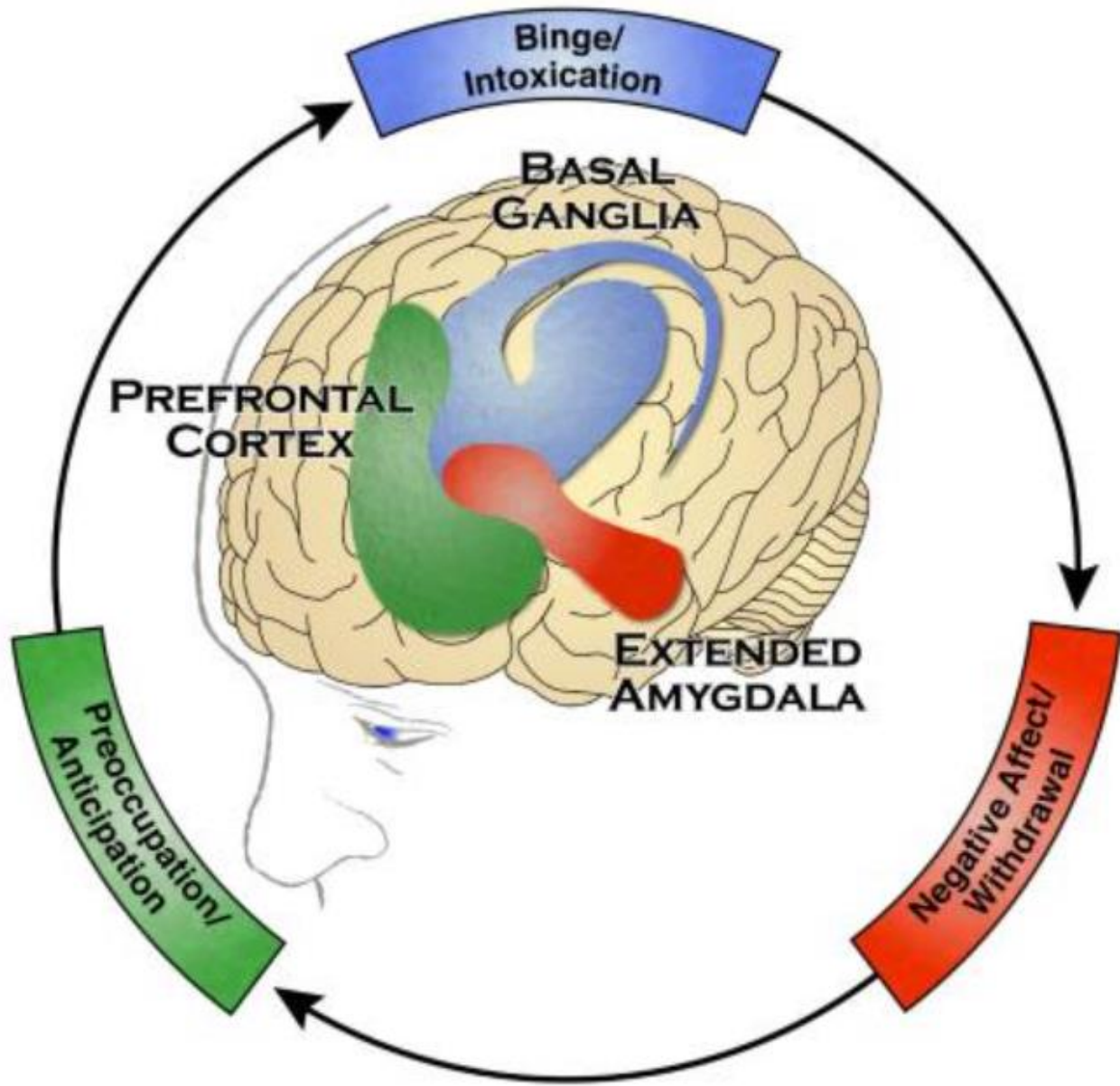
Adapted From: Chambers "The 2 x 4 Model", Routledge/CRC press, New York, 2018



**Acute
Use**

**Chronic
Use**

Alford, Boston
University, 2012



- Binge/Intoxication Stage: reward, incentive salience, and pathological habits
- Negative Affect/Withdrawal Stage: reward deficits and stress surfeit
- 3. Preoccupation/Anticipation Stage: craving, impulsivity, and executive function

Impaired control

- ❑ Substance is often taken in larger amounts or over a longer period than was intended
- ❑ There is a persistent desire or unsuccessful efforts to cut down or control substance use
- ❑ A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects.
- ❑ Craving, or a strong desire or urge to use the substance.

Social impairment

- ❑ Recurrent substance use resulting in a failure to fulfil major role obligations at work, school, or home.
- ❑ Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.
- ❑ Important social, occupational, or recreational activities are given up or reduced because of substance use.

Risky use of substance

- ❑ Recurrent substance use in situations in which it is physically hazardous.
- ❑ 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 the substance

Pharmacological criteria

- ❑ Tolerance, as defined by either: a need for markedly increased amounts of the substance to achieve intoxication or desired effect OR markedly diminished effect with continued use of the same amount of the substance.
- ❑ Withdrawal, as manifested by either: the characteristic withdrawal syndrome for the substance OR the substance (or a closely related substance) is taken to relieve or avoid withdrawal symptoms.

Effects

- The social, economic, and financial impact on lives of both patients and their families- loss of home, job, and relationships
- Significant medical issues- Hep B, C, HIV, liver cirrhosis
- Trauma- Family members such as children and spouses are secondary victims with significant trauma sequelae.
- Immense societal stigma associated with drug use- not limited to the general public and medical field and individuals with substance disorders.

- Less Empathy- Individuals with substance use disorders are seen as being responsible for their own plight.
- Access to care is often much more challenging for individuals - , treatment and training in substance use disorders was not a top priority.
- Pecking order that exists among individuals with substance use- Alcohol us viewed more favorably than cocaine.

Diagnosis

- Interview
- Scales
- Test- urine drug test

Medications

- Use disorder- naltrexone, suboxone, methadone
- Withdrawals- Clonidine
- For Overdose- Narcan
- Psychiatric medications

Psychotherapies

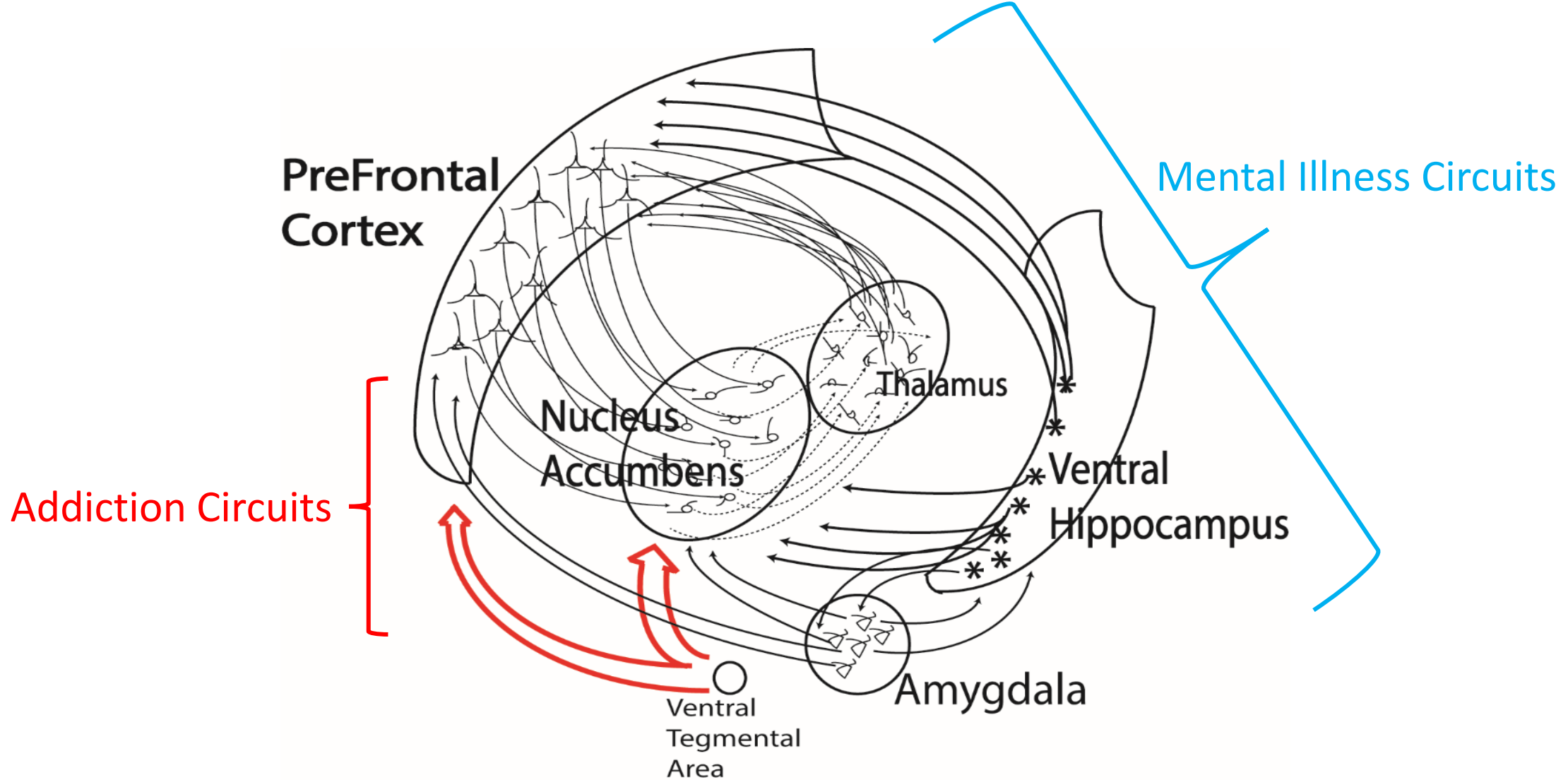
- Motivational interviewing
- CBT
- Trauma based therapy
- Group therapy

What to do when a loved One is affected

- Don't delay
- Express your concerns honestly. Emphasize that you care for the person and are worried about their well-being. Offer specific examples of your loved one's drug-related behavior that have made you concerned—and be honest about your own feelings.
- Listen.
- Be prepared for denial
- Don't Blame or Shame

- Avoid trying to lecture, threaten, bribe, or punish the person. Getting angry or making emotional appeals will likely only add to the user's feelings of guilt and reinforce their compulsion to use.
- Don't expect a single conversation to fix the problem.
- Offer them information
- Encourage Them to Get Help
- Keep Healthy Boundaries

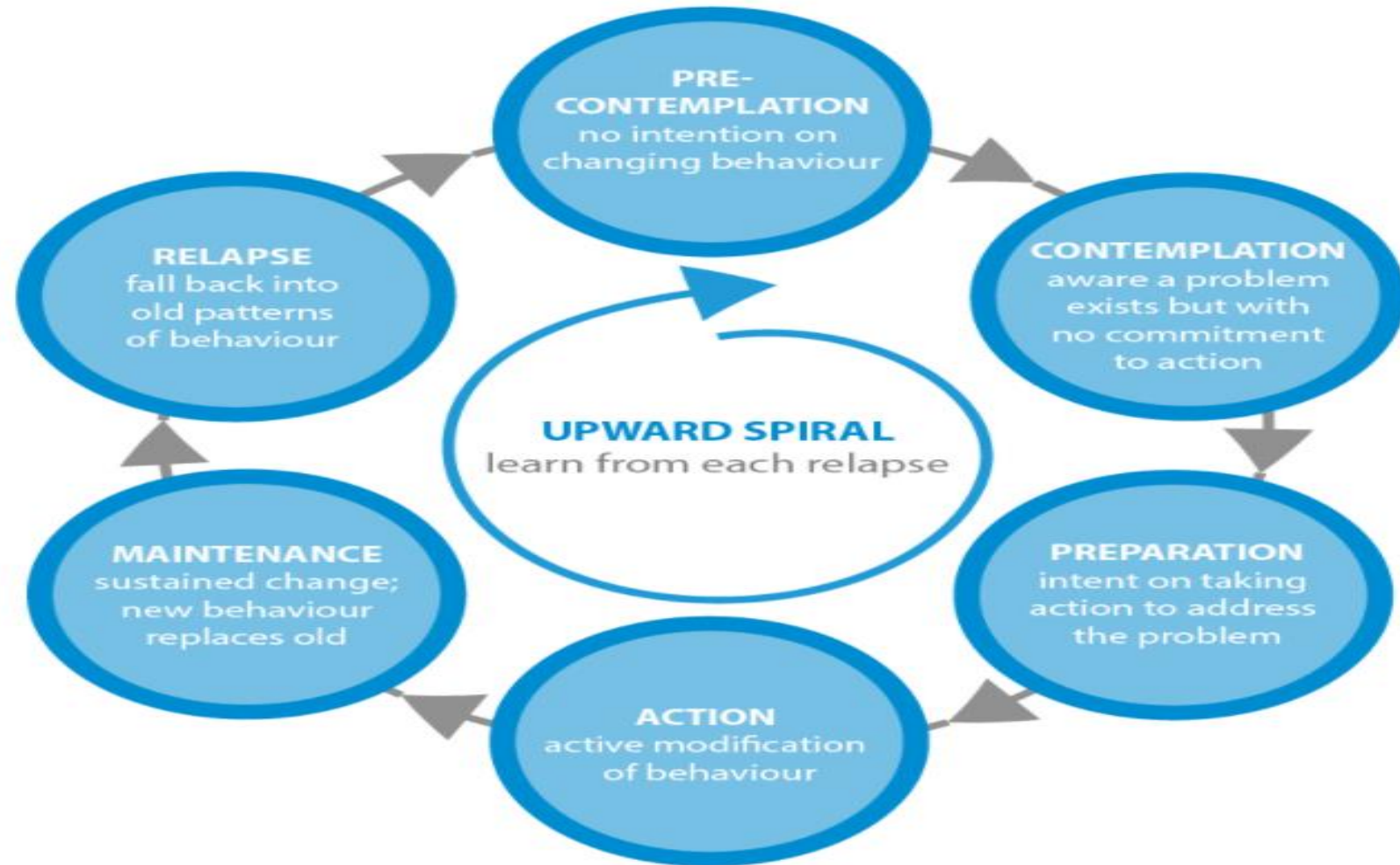
What happens in the brain



Adapted From: Chambers "The 2 x 4 Model", Routledge/CRC press, New York, 2018

Treatment

STAGES OF CHANGE



Stigmatizing Stereotypes

Old Language	New Terms
Addict	Person with a Substance Use Disorder (SUD)
Addicted to ____	Has a ____ use disorder
Alcoholic or Drug addict	Person with an alcohol use disorder or drug use disorder
Clean	Negative or in recovery
Dirty	Active use

TRICK QUESTION

- What is the most used substance in the United States?