Polysubstance Use & Medication-Assisted Treatment
DSM-IV Criteria for polysubstance dependence:

For a period of at least twelve months, a person has repeatedly and indiscriminately used substances from at least three groups of substances but no single substance has predominated. During this period, the dependence criteria were met for substances as a group but not for any specific substance. This is often confused with multiple specific dependences present at the same time.

- Tolerance
- Withdrawal
- Loss of control
- Time spent obtaining, using the drug and recovering from the effects of the drug
- Interference with activities to use drugs including recreational activities, social activities and occupational activities
DSM-V eliminated polysubstance disorder, instead specifying each drug of abuse and dependence.

• Substance-use disorder is a combination of the two DSM-IV categories of substance abuse and substance dependence. This new category measures an individual’s symptoms on a mild to severe continuum.

• Substances are each specified as separate disorders, such as stimulant-use disorder or alcohol-use disorder (caffeine use is not included in DSM-5 as a disorder).

• All substance disorder diagnoses are made using the same 11 criteria or indicators.

• Drug craving has been added as one of the 11 criteria, and the DSM-IV criterion of problems with law enforcement is eliminated from the DSM-5.

• Severity of disorder is determined by the number of criteria that apply to an individual. Two or three criteria indicate a mild disorder; four to five a moderate disorder; and six or more a severe one. At least two criteria are necessary for a diagnosis; in the DSM-IV, only one was required.
Other notable DSM-5 changes:

- **Cannabis withdrawal** is listed as a new diagnosis.
- **Caffeine withdrawal** is listed as a new diagnosis.
- Early remission from a substance use disorder is defined as at least 3 but fewer than 12 months without meeting the disorder’s criteria (*except for craving*).
- Sustained remission is defined as at least 12 months without meeting the disorder’s criteria (*except for craving*).
- Two new specifiers are “in a controlled environment” and “on maintenance therapy.” (Specifiers are used to clarify or expand on applicable criteria.)
- The specifier indicating a physiological subtype has been eliminated.
Prevalence of polysubstance use:

Difficult to determine due to lack of truthful self-reporting, but adolescents between the ages of 12 and 25 years are more likely to use illicit drugs than adults 26 years and older and are likely to use nicotine and alcohol.

Marijuana is the most widely used illicit drug followed by prescription drugs including opioids and stimulants.

• Does this apply to anyone here....?
Reasons for polysubstance use:

- Although polysubstance abuse often refers to abuse of multiple illicit drugs, it is also inclusive of prescription medications used in nonmedical circumstances. Prescription medications may be inadvertently combined with other substances without awareness of the potential for negative consequences such as consuming alcohol with prescription sedatives or opiate pain medications.

- Others may intentionally engage in polysubstance abuse to amplify the desired effect of the drugs by stacking one or two drugs for a specific effect.

- Multiple drugs may be combined for different feelings/experiences such as using methamphetamine to remain alert while using alcohol or heroin, combining cocaine and heroin for the same reason or using THC laced with cocaine.
Reasons for polysubstance use:

- Alternate drugs may be used to replace when the drug of choice is not readily available such as drinking alcohol when heroin is not available.

- Different drugs may be used in a cycling fashion with intensive use for a period of time followed by abstinence and use of another drug to lower tolerance to the initial drug until resumption of the preferred drug.

- One drug may be used to counteract the unwanted effect of another drug such as a cocaine user drinking alcohol to help calm down.
Dangers!

• Specific short term and long term effects related to polysubstance abuse will differ according to the particular combination but there are general dangers associated with combining substances including synergy effects that are more severe than the additive side effects from the separate drugs. General side effects include nausea, vomiting, imbalance, poor coordination, changes in heart rate, blood pressure and respiratory rate.

• Drug interactions may reduce metabolism, increase blood concentrations boosting toxicity.

• Health consequences are more severe for polysubstance users. Hepatitis C is more common with heavy drinkers who inject drugs. Tobacco smokers who use cocaine are more at risk for myocardial infarctions.
Dangers!

- **Overdoses** are more likely with multiple substances. Certain substances mask the effects of other substances allowing inadvertent higher doses to be used without feeling the full effect. Passing out is a protective mechanism that stops an individual from drinking more when they are approaching potentially life threatening blood alcohol levels. If a stimulant is used simultaneously, this mechanism may be overridden and lethal consequences may occur.

- Overdoses from multiple substances of abuse are **more complicated to treat**. Naloxone may reverse the opioid overdose but this is ineffective for alcohol, benzodiazepines or stimulants.

- Concurrent **mental health disorders are exacerbated** by substance abuse and multiple substances amplify this effect on underlying mental disorders.
Alcohol intoxication:

   20-30 mg/dL

2. Severe problems with coordination and judgement.
   100-200mg/dL

3. Slurred speech, nystagmus and blackout.
   200-300mg/dL

4. Respiratory depression, impaired vital signs and possible death.
   >300mg/dL
Specific Substance Combinations

Alcohol with Opiates and/or Benzodiazepine

• Use of alcohol (alone) can result in alcohol poisoning, blackouts, respiratory depression and death.
  • It is commonly used with opiate pain medication, stimulants and antianxiety medication.
  • The sedative effects are amplified and respiratory depression is often the cause of death with alcohol and benzodiazepine use.

• Use of alcohol and benzodiazepine increase the risk of overdose by 24-55 percent. The most often cause of fatalities related to benzodiazepines is mixing their use with other drugs of abuse or alcohol.
Specific Substance Combinations

Cocaine and Alcohol

• When cocaine and alcohol are combined, the amount of cocaine in the blood circulation is increased by 30%.

• Cocaethylene is a psychoactive metabolite that remains in the circulation allowing for more alcohol use with decreased perception of alcohol's effects.

• Overdose with alcohol is more likely as a consequence.
Specific Substance Combinations

Sedatives and Depressants:

- Respiratory depression, slurred speech, unsteady gait, poor coordination with impaired ability to drive, impaired attention, stupor and coma.
- Opiates
- Benzodiazepine
- Alcohol
- Muscle relaxants
- GHB (“date rape drug”)
- Marijuana

Stimulants:

- Increase heart rate and blood pressure, anorexia, pupillary dilation, cardiac arrhythmias, seizures, dystonia, coma, hyperpyrexia.
- Methamphetamine - longer effect
- Cocaine
- Cathinones - bath salts, ketamine
- MDMA, Ecstasy
- PCP/ephedra
- Ritalin, Adderall, caffeine, nicotine
- Dexamethorphan cough syrup/ephedrine
Polysubstance use complicates intoxication, overdose and detoxification.
Considerations for MATx:

• It is **imperative** to get a complete history of the patient’s use history including frequency, amount, and duration of each substance.

• Patients should be advised *before* any questions are asked of the **importance of honesty**. We need to inform them they will not be judged, but it is a matter of **safety and effective treatment planning**.

• Since withdrawal from multiple substances is more complicated than withdrawal from one substance, inpatient medical detox is generally recommended, but should be assessed on a case by case basis.

   *(You can seek consult via ECHO!!)*