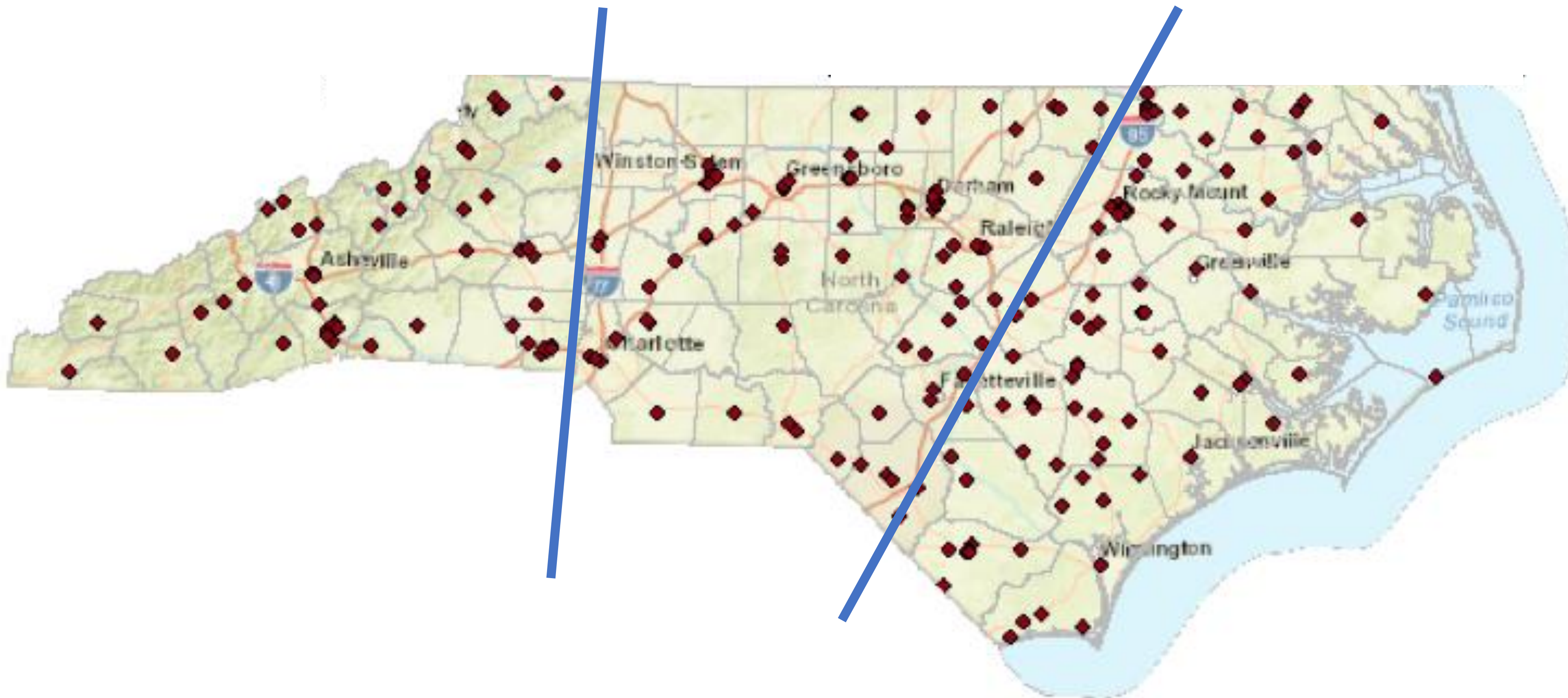
Addiction Medicine Basics: Substance Use Disorders

Karen Isaacs 6/9/22

Disclosures



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NCCHCA 2019 Report Card, 6/2/22

Objectives

- Identify epidemiology of substance use disorders in NC
- Improve literacy for addiction medicine terminology
- Gain comfort in diagnosing and treating various substance use disorders

Which of these drugs is most abused in NC?

a) Prescription opioids
b) Marijuana
c) Cocaine

SAMHSA: 2019 National Survey on Drug Use and Health;
Absolute Advocacy: 10 Most Commonly Abused Drugs in the US

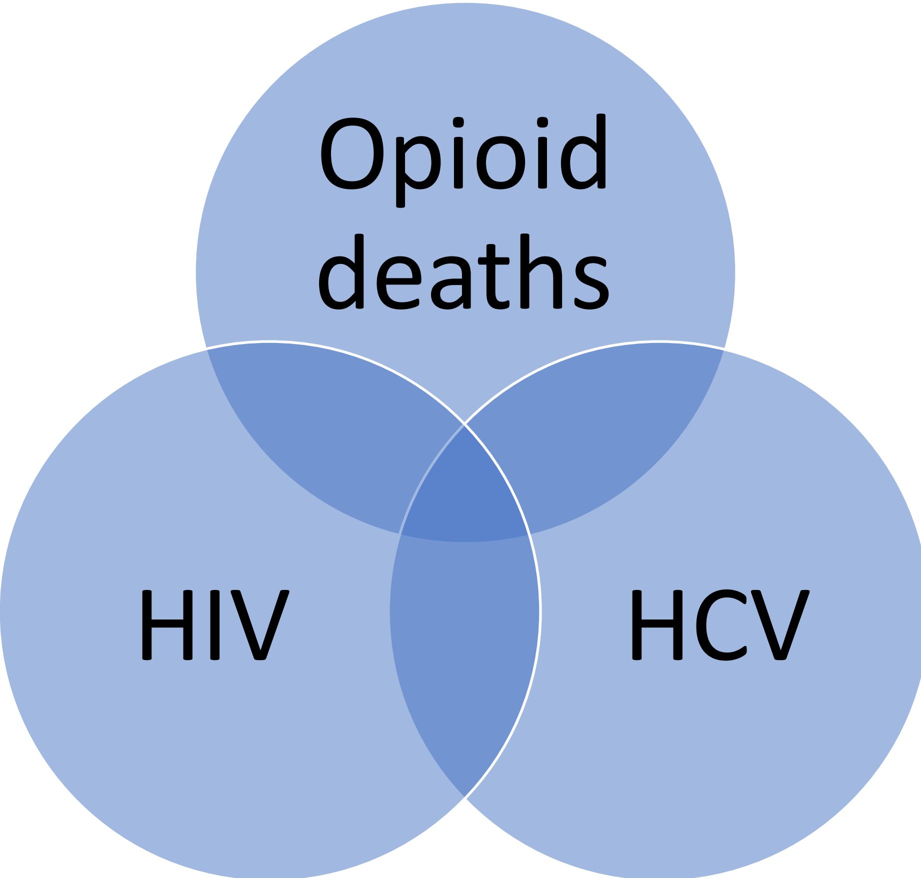
Drugs of Abuse in NC

- Marijauna
- Cocaine
- Heroin
- Methamphetamine
- Prescription drugs

- Alcohol
- Tobacco

Blanchard Institute: NC Drug and Alcohol Abuse Statistics

Syndemic



NC DHHS

Addiction Medicine Terminology

- Addiction
- Substance Use Disorder
- Substance Induced Disorders
  - Intoxication
  - Withdrawal
  - Mental Disorders
- Withdrawal management
- Abuse
- Dependence

ASAM: Standards of Care

True or False

- Janet is a 70 year old women admitted for COPD. Because she was a bit confused upon admission, you held her Roxicodone 5mg tid prn medication that she uses for her back pain.
- By day 2 of her admission, she is improving.
- Early on day 3 of her admission, she has acute abdominal pain with nausea and heaving, diaphoresis, and body aches. You astutely recognize likely opioid withdrawal.

True/False: Janet has opioid use disorder.

True or False

- You see Tim, a pleasant 63 year old male you've known for 10 years.
- He has been mostly stable on his chronic pain regimen for low back pain:
    - Gabapentin 400mg po tid
    - Oxycontin 10mg po tid
    - Percocet 5-325mg po tid prn breakthrough
- You typically prescribe him a 3 month supply, as he has no red flags (attends his appts on time, no unexpected UDS findings, is polite, keeps up with his med supply).

True/False: There is no concern for him having opioid use disorder.

Addiction Medicine Terminology

- Substance Use Disorder
  - Substance is taken in larger amounts or over longer periods than intended
  - Persistent desire or unsuccessful efforts to cut down or control the substance use
  - A great deal of time is spent in activities necessary to obtain the substance, use substance, or recover from the effects of the substance
  - Cravings or strong desire to use the substance
  - Recurrent substance use resulting in failure to fulfill major role obligations at work, home, or school
  - Continued use the substance 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 the substance use
  - 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
  - Tolerance, as defined by either of a) need for markedly increased amounts of the substance to achieve intoxication or desired effect, or b) markedly diminished effect with continued use of the same amount of the substance
  - Withdrawal, as manifested by either of a) the characteristic substance withdrawal syndrome, or b) the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms

[*Mild*: 2-3 symptoms, *Moderate*: 4-5 symptoms, *Severe*: 6+ symptoms]

DSM-V

Addiction Medicine Terminology

Modifiers:

- *In early remission*
  - use disorder criteria gone for 3 - <12 months; though may still have cravings
- *In sustained remission*
  - use disorder criteria gone for ≥12 months; though may still have cravings

- *In a controlled environment*
  - access to substance is restricted

DSM-V

Addiction Terminology: Words Matter

Stigmatizing Language	Preferred Language
Abuser	
Addict; addicted to__	
Alcoholic	
Clean	
Dirty	
Drug habit	
Lapse/relapse/slip	
Recreational or casual user	
Reformed addict	
Substance abuse	

Addiction Medicine Terminology

- Harm reduction
  - Naloxone
  - Needle exchange
  - Safe use places
  - Rapid fentanyl test strips
  - MAT / MOUD
    - Medication assisted treatment
    - Medication for addiction treatment
    - Medication for opioid use disorder

ASAM: Dictionary of Addiction

True or False

- Needle exchange programs are legal in NC.

Addiction Medicine Terminology

- Treatment Planning
  - ASAM criteria
  - Integrated care
  - Co-located care
  - Dual diagnosis

SAMHSA: Co-occurring Disorders and Other Health Conditions;
ASAM: Standards of Care

Addiction Medicine Terminology

- Addiction medicine specialist
  - Physician Certification
    - American Board of Preventive Medicine
    - American Osteopathic Association (MDs eligible as of 5/26/21)
    - American Board of Psychiatry and Neurology
    - International Society of Addiction Medicine
    - American Board of Addiction Medicine (up til 2016), American Society of Addiction Medicine (up til 2008)
  - Non-physician certification
    - Addictions Nursing Certification Board
    - National Certification Commission for Addiction Professionals
  - Maintenance of certification

ASAM: Certification Pathways

Screening for Substance Use

USPSTF: screen all adults for harmful use of psychoactive drugs (as long as services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred), Grade B

- Single Item:
  - How many times in the past year have you used an illegal drug or a prescription medication for nonmedical reasons? (positive = 1+)
- NIDA Quick Screen
- 4Ps (5Ps in pregnancy)
- CAGE
- AUDIT
- DAST-10
- NIDA Quick Screen
- CRAFFT
- TAPS Tool

- SBIRT
- 5As of smoking cessation
- Motivational interviewing
- Address SDOH, trauma

USPSTF; NIDA: Screening and Assessment Tools Chart; SAMHSA TIP 63

True or False

- You have been managing Penny's neck pain for 15 years since she was injured an MVA.
- At today's encounter, you obtain more history and realize that she meets criteria for OUD.
- You use sensitive language to offer a brief intervention, and she accepts a recommendation for treatment.

True/False: The only thing to do is to refer her to a drug treatment center.

Case

56 year old patient with schizoaffective disorder arrives in your clinic with her ACT nurse, seeking help for alcohol treatment

ASAM Criteria

Standardized comprehensive biopsychosocial assessment, meant to inform placement and treatment planning

1. Acute intoxication and/or withdrawal potential
2. Biomedical conditions and complications
3. Emotional, behavioral, and cognitive conditions and complications
4. Readiness to change
5. Relapse, continued use, or continued problem potential
6. Recovery/living environment

ASAM: Criteria Assessment Interview Guide

ASAM Criteria: Levels of Care

- **Level 4:** medically managed intensive inpatient services

- **Level 3.7:** medically monitored intensive inpatient
- **Level 3.5:** clinically managed high-intensity residential
- **Level 3.3:** clinically managed population-specific high-intensity residential
- **Level 3.1:** clinically managed low-intensity residential

- **Level 2.5:** partial hospitalization
- **Level 2.1:** intensive outpatient program (IOP)

- **Level 1:** outpatient services

ASAM: Criteria Assessment Interview Guide

ASAM Criteria: Concurrent treatment and recovery services

- **COC**: Co-occurring capable treatment, integration of services for stable mental health conditions and SUD. (All levels of care should offer this)
- **COE**: Co-occurring enhanced treatment, integration of services and equal attention for unstable mental health conditions and SUD
- **BIO:** Biomedical enhanced treatment, integration of services and equal attention for serious physical health conditions and SUD
- **OTS:** opioid treatment services
  - Opioid treatment program (OTP)
  - Office based opioid treatment (OBOT)
- Other MAT, for non-opioid SUD
- Housing
- Recovery support services (assistance for transportation, childcare, legal, vocational, school/edu, financial, peer support, 12 Step, etc)

Specific Substances

Marijuana (delta 9 THC)

- Derived from cannabis plant
  - Many forms; peak effects inhaled (15 - 30 minutes), ingested (30 minutes - 3 hours)
  - Medicinal use: chronic pain, nausea/vomiting, anorexia, glaucoma, seizures
- Receptor: CB1 (central), CB2 (peripheral)
- US: schedule I drug (preparation with >0.3% THC)
  - NC partially decriminalized certain marijuana possessions (no prison time or criminal record for 1st time possession of small amount for personal use)
  - 6/2/22: NC Senate approved bill to legalize medical marijuana in NC (this week, it go to House of Representatives, and then possibly Governor)

The News & Observer: Medical Marijuana Legalization; NORML: NC Laws and Penalties; UpToDate: Cannabis articles

Marijuana (delta 9 THC)

- Intoxication: euphoria, anxious, incr HR and BP, dry mouth, incr appetite, ataxia, slurred speech, conjunctival injection, cognitive impairment. Chronic mood changes.

- Withdrawal: nonspecific, poor sleep, irritable, anxiety, depression
- Withdrawal treatment: supportive

UpToDate: Cannabis articles

Marijuana (Cannabis) Use Disorder

Treatment:

- Psychosocial
- Abstinence
- MAT: no consistent evidence of efficacy, no FDA approved meds

UpToDate: Cannabis articles

Delta 8 (delta 8 THC)

- Derived from hemp (<0.3% THC)
  - From hemp flower (broken down and fractionally distilled); contains low natural amount
  - To synthesize more, manufacturers use potentially harmful chemicals to convert CBD or delta 9 THC, to delta 8 THC
- Receptor: CB1 > CB2
- delta 8 THC is from hemp, which is legal. But due to synthetic conversions, DEA considers this a Schedule 1 drug
- Similar to psychoactive effects of delta-9 THC, but less potent

US FDA: 5 Things to Know about Delta 8 THC;
The News & Observer: How are CBD and THC Different?

CBD (cannabidiol)

- Derived from cannabis plant, and diluted down
- Receptors: CB2 > CB1
- Has <0.3% THC, thus legal in NC. Not a controlled substance.

US FDA: What You Need to Know

Synthetic cannabinoids (Spice, K2)

- Derived from a mix of herbs (shredded plant material) and laboratory-made chemicals (synthetic cannabinoids) with mind-altering effects. Some of chemicals in it are similar to those in marijuana, but effects are sometimes very different and more potent
  - Often labeled “not for human consumption” and disguised as incense or potpourri.
  - Smoke it +/- mix with marijuana, herbal tea, liquids in e-cigarettes
- Receptors: CB1, CB2. More potent at CB1 than THC.
- Illegal. Schedule I controlled substance.

- Intoxication: often more pronounced than THC in sympathomimetic effects, aggressive behavior and agitation, dystonia, and seizure.
- Withdrawal: also more significant. Incr HR and BP, diaphoresis, seizures, AMS

NIDA: Synthetic Cannabinoids DrugFacts;
UpToDate: Synthetic Cannabinoids articles

Cocaine

- Derived from leaves of coca plant
  - May be mixed with flour, cornstarch, etc or other drugs (opioids, stimulants, levamisole)
  - Powder (nasal, gums, injected) or rock crystal/crack (inhaled)
    - high from snorting lasts 15-30 minutes, vs from smoking 5-10 minutes
- Receptors: serotonin, dopamine, catecholamine re-uptake transporters (blocks reuptake); sodium channel blockade (local anesthetic)
- Schedule II drug. Illegal.

- Intoxication: happy, energy, alert, irritability, paranoia, restless, anxiety, vasoconstriction, tremors, incr HR/temp/BP. Major cardiovascular risks
- Withdrawal: depression, fatigue, incr appetite, poor sleep and then hypersomnolence, slowed thinking
- Withdrawal treatment: supportive

NIDA: Cocaine DrugFacts; UpToDate: Cocaine articles

Methamphetamines/Amphetamines

- Pharmaceutical in late 1800s; also synthesized from chemicals (like ephedrine, pseudoephedrine). Can snort, swallow, inject, smoke
- Receptors: dopamine, NMDA
- Schedule II drug.

- Intoxication: wakefulness, decr appetite, incr RR/HR/BP/temp, anxiety, agitation, violence, paranoia
- Withdrawal: dysphoria, anhedonia, fatigue, incr sleep, anxiety, drug craving, incr appetite. Followed by subacute phase up to 3 weeks
- Withdrawal treatment: supportive

NIDA: Methamphetamine DrugFacts;
UpToDate: Methamphetamine articles

Bath Salts

- Synthetic cathinones (stimulants). Can mimic khat plant.
  - snorted, smoked, swallowed, injected. available in powdered, crystalline, tablet or capsule form.
  - Often labeled “not for human consumption” and disguised as research chemicals, plant food, jewelry cleaner.
- Receptors: release dopamine, serotonin, norepinephrine; also block reuptake
- Schedule 1 drug.

- Similar to other stimulants but with risk of fatal overdose, hallucinogenic and psychotic behavior.
- Likely to not show up on UDS.

NIDA: Synthetic Cathinone DrugFacts;
UpToDate: Amphetamine and Synthetic Cathinone articles

Cocaine/Stimulant Use Disorder

Treatment:

- Psychosocial
- Abstinence
- MAT: No consistent evidence of efficacy; no FDA approved medications

NIDA: Cocaine DrugFacts; UpToDate: Stimulant Use Disorder articles

Opioids

- Pharmaceutical in 1800s, derived from opium. Heroin derived in 1874 from morphine.
  - Snorting, IV, subcutaneous, IM
- Receptors: mu > kappa, delta
- Heroin: Schedule 1 drug.   Opioids (most): Schedule II drug

- Intoxication: analgesia, CNS depression, decr RR, euphoria, smooth muscle relaxation, pinpoint pupils
- Withdrawal: restless, muscle/bone pain, insomnia, diarrhea, nausea/vomiting, goose bumps, runny nose, dilated pupils
- Withdrawal treatment: buprenorphine; methadone; prn clonidine +adjuncts

UpToDate: Opioid and Opioid Use Disorder articles

Opioid Use Disorder

How many of you prescribe buprenorphine?

How many of you have an X waiver?

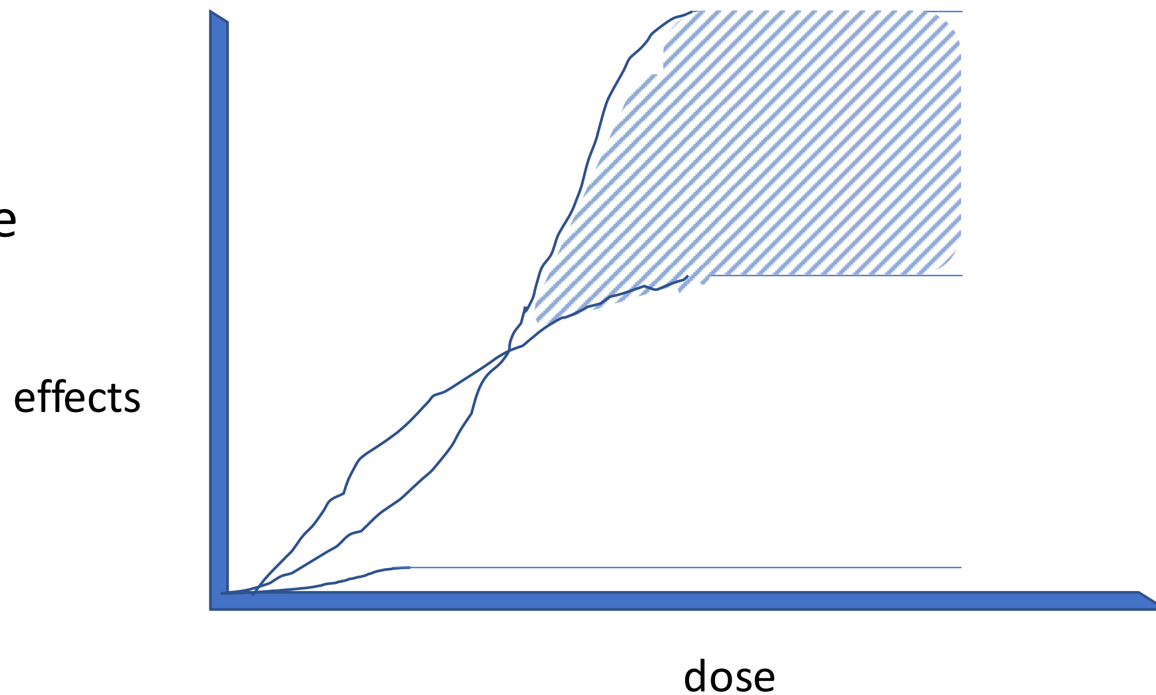
Opioid Use Disorder

Treatment:

- Psychosocial
- Abstinence
- MOUD:
  - Methadone
  - Buprenorphine +/- naloxone
  - Naltrexone

Settings:

- OTP
- OBOT



SAMHSA TIP 63

True or False

- Sierra has recently diagnosed OUD (while using po Oxycodone for past 4 months), but has good social support and would like to avoid daily dosing with MOUD.
- She has PMH of obesity and NASH with elevated LFTs.

True/False: Naltrexone is a good option for her.

True or False

- John has end-stage renal disease and is on Tue/Thur/Sat dialysis. He has OUD.

True/False: Methadone is his only option for MOUD.

True or False

- Brianne is your patient, a 28 year old G3P1011 at 20 weeks gestation.
- She is being treated for OUD, and is doing well on Subutex maintenance.

True/False: Subutex is the only medicine that can be safely used in pregnancy for MOUD.

True or False

- Frank experienced cardiac arrest with torsades de pointes in the emergency department, with QTc 540. His QTc prolongation appears to be congenital.
- He has a history of OUD, most recently using 8 bags of IV heroin daily.

True/False: MOUD is contraindicated in this patient.

Kratom

- Derived from plant, mitrogyna speciosa. Herb with opioid and stimulant-like properties (energy and relaxation both). Has properties that induce mu-opioid receptor agonism. Use in SE Asia as multi-purpose remedy in traditional medicine.
  - Oral dried/solution, extract, or brewed leaves, chilled raw leaves, crushed and smoked
  - Stimulant effects at low doses; sedative effects at higher doses
  - self-treatment of opioid withdrawal; treat pain, fatigue and mental health problems.
- Receptor: mu
- US DEA has listed kratom as “drug of concern” though not a controlled substance

- Intoxication: variable…alertness, energy, euphoria, talkative, nausea, itch, decr appetite, sweating, dry mouth; sedation at higher doses, psychosis
- Withdrawal: sweating, runny nose/watery eyes, abdominal pain, nausea/vomiting, weak muscles, irritability, restless, restless legs
- Withdrawal treatment: supportive

NIDA: Kratom; DEA: Drug Fact Sheet on Kratom

Alcohol

- Fermented beverages from ?7000 BC
- Receptors: acetylcholine, serotonin, GABA, NMDA
- Exempt from Controlled Substances Act.

- Intoxication: slurred speech, nystagmus, disinhibition, unsteady gait, memory impairment, stupor, coma
- Withdrawal: agitation, anxiety, restless, poor sleep, tremor, diaphoresis, nausea/vomiting. Seizures, hallucinosis, DTs
- Withdrawal treatment: benzos, phenobarbital, supportive

UpToDate: Alcohol and Alcohol Withdrawal articles

Alcohol Use Disorder

Treatment:

- Psychosocial
- Abstinence
- MAT:
  - 1st line: Naltrexone IM or po, Acamprosate
  - 2nd line: Disulfiram, Topiramate, Gabapentin

UpToDate: Alcohol Use Disorder articles

Tobacco

- From tobacco plant, ?0 BC
  - Smoke, snuff, chew, dip
- Receptor: nicotinic
- Exempt from Controlled Substances Act

- Intoxication: abdominal cramps, agitation, altered breathing, seizure, headache, muscle twitch
- Withdrawal: cravings, anger, frustration, poor concentration, restless, anxiety, increased appetite, poor sleep
- Withdrawal treatment: supportive, NRT, bupropion, varenicline

UpToDate: Smoking Cessation articles

Tobacco Use Disorder

Treatment:

- Behavioral counseling
- Abstinence
- MAT: start before or at time of quit date; rx for 12 weeks +
  - NRT: patch, gum, lozenge, inhaler, nasal spray
    - Short and long acting combo is better
  - Bupropion
  - Varenicline
- 1-800-quit-now

UpToDate: Smoking Cessation articles

Vaping, Electronic Cigarettes

- Introduced in 2007
- Battery powered; atomizer heats liquid (with or without nicotine) into aerosol that is inhaled.
- Types:
  - Minis: cigalikes…disposable
  - Mid sized
  - Mods: maximum vapor production

UpToDate: Vaping and ecigarette articles

Case

56 year old patient with schizoaffective disorder arrives in your clinic with her ACT nurse, seeking help for alcohol treatment

- she does not work, is on disability, rents room in house
- limited family nearby
- has payor that helps with financial responsibilities
- has 30+ year use of alcohol, including several prior treatment programs. Underwent withdrawal during hospital stay 8 years ago, for related pancreatitis. Also has alcohol steatohepatitis, COPD and tobacco use
- recent alcohol use has escalated, to at least 12 pack daily; drinks to avoid shakes. You can smell alcohol on her (it is 11am). Rare marijuana use.

What is her diagnosis?

What is your recommendation for treatment?

Case

33 year old patient arrives for complaint of vaginitis. During the rooming process, she tells the nurse she is concerned about her inability to get off Percocet.

- she reports Percocet since rx for polycystic kidney pain 2yr prior; no longer prescribed but buys it from friend. Uses 2-4/day, and uncomfortable when stopping
- uses kratom to help with symptoms when she cannot get Percocet
- single, has 8yo son in her custody, works in chromium lab, has support from parents
- rare alcohol socially, no other drugs. Denies injection drug use

What is her diagnosis?

What treatment options do you offer, and how do you start? (it's a Thursday)

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