

From Awareness to Action: Management of Alcohol Use Disorder in Primary Care

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Learning Objectives

1. Describe why alcohol use screening, diagnosis and treatment of alcohol use disorder (AUD) in outpatient and urgent care settings is important for patient care and public health.
2. Apply successful evidenced based strategies to address unhealthy alcohol use and AUD.
3. Apply best practice approaches for screening and evaluating patients' alcohol use and readiness to change.
4. Learn how to utilize the FDA-approved and off-label medications indicated for AUD
5. Learn the basics of ambulatory withdrawal management for alcohol



www.cdc.gov/alcohol

Deaths on the rise in the US from excessive alcohol use*

2016-2017

2020-2021



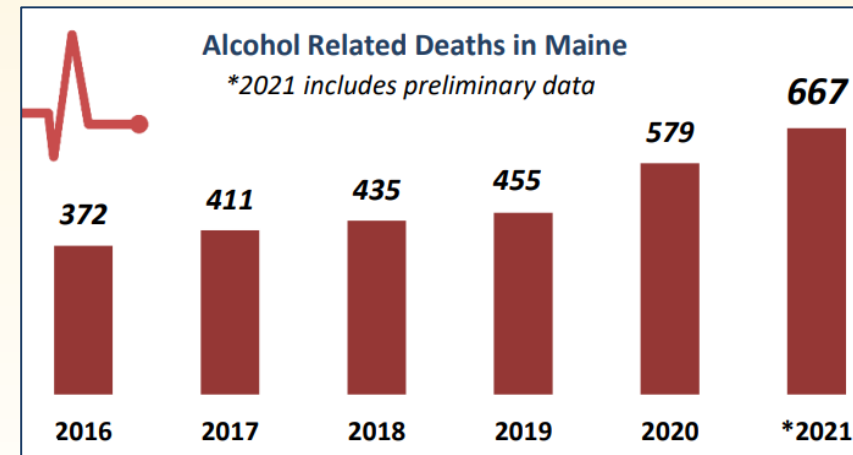
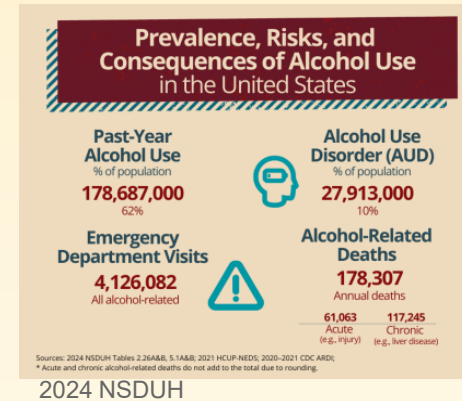
*178,000 deaths each year in the US during 2020-2021, compared to 138,000 deaths each year during 2016-2017.

Lives Impacted

ALCOHOL IS THE 3RD LEADING CAUSE OF

More than 178,000 people die from excessive alcohol use in the U.S. each year

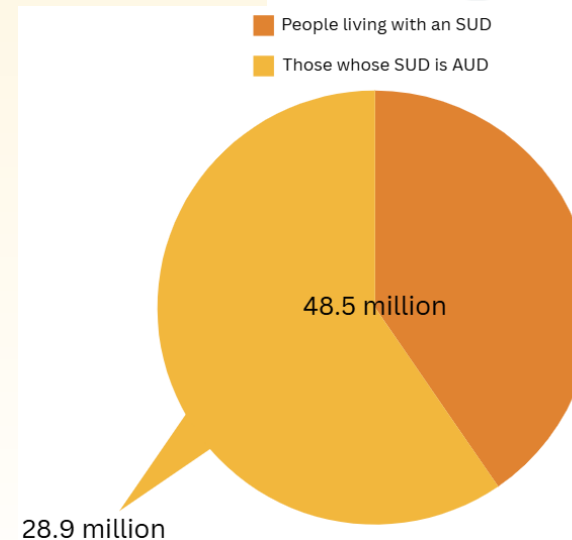
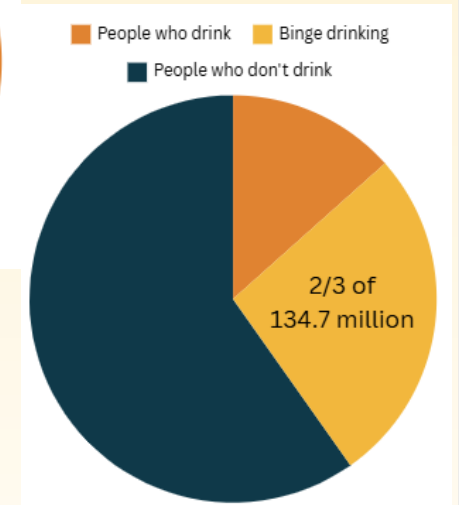
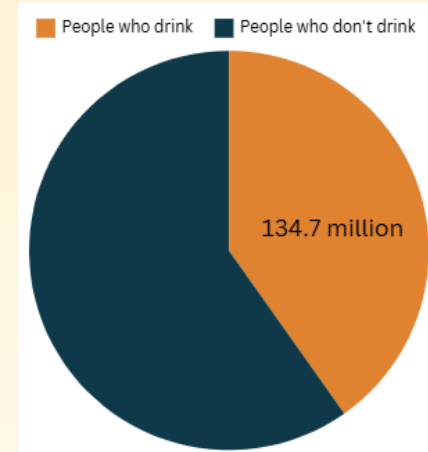
National Institute On Alcohol Abuse and Alcoholism. (2024). *Alcohol Use in the United States: Age Groups and Demographic Characteristics* | National Institute on Alcohol Abuse and Alcoholism (NIAAA). Nih.gov.



(2022, August). *ALCOHOL AND COVID-19 PANDEMIC IN MAINE AND THE NATION*. MaineSEOW.com; Maine State Epidemiological Outcomes Workgroup (SEOW).

Alcohol Use Stats & Risk Levels

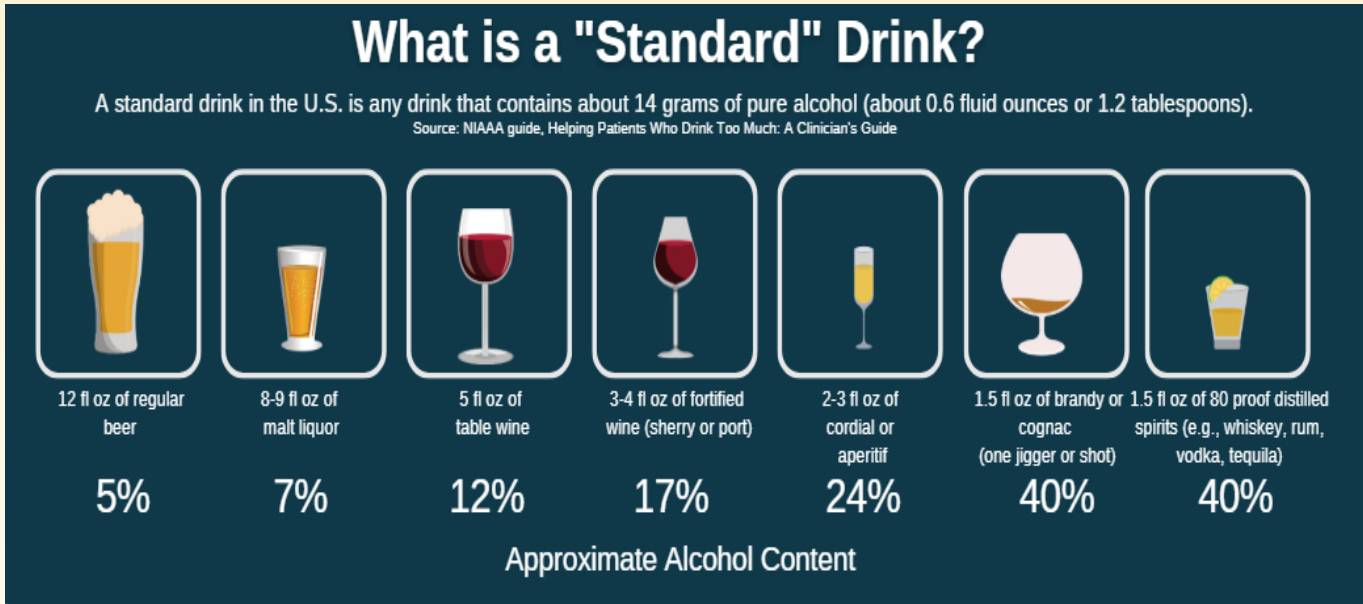
- People who drink in the US: 134.7 million
 - 2/3 are reportedly persons who binge drink
- Those in the US living with a SUD: 48.5 million
 - 28.9 million are for an AUD
- 178,000 people died from excessive alcohol use in 2023
 - 105,007 drug overdose deaths occurred in 2023



Garnett, M. F., & Miniño, A. M. (2024). Drug Overdose Deaths in the United States, 2003-2023. *HRB National Drugs Library (Health Research Board)*, 522(522).

National Institute On Alcohol Abuse and Alcoholism. (2024). *Alcohol Use in the United States: Age Groups and Demographic Characteristics* | National Institute on Alcohol Abuse and Alcoholism (NIAAA). Nih.gov.

Alcohol Consumption Levels





Why do we care?

How to broach the subject of alcohol use with patients, and why we do it.

Surgeon General's Report



Scan QR code to visit
www.hhs.gov/surgeongen-eral/reports-and-publications/alcohol-cancer/index.html

Alcohol and Cancer Risk

2025

The U.S. Surgeon General's Advisory



Alcohol and Cancer Risk. (2024, December 19). HHS.gov.

Surgeon General's Report

Consuming alcohol increases the risk of developing at least 7 types of cancer

The infographic shows a human silhouette with a colored path representing alcohol's journey. It starts in the mouth (orange), goes to the throat (yellow), then down the esophagus (purple), to the liver (red), and finally to the colon and rectum (pink). The path is highlighted with a thick line that changes color at each organ.

Mouth
(Oral Cavity)

Throat
(Pharynx)

Voice Box
(Larynx)

Esophagus

Breast
(in Women)

Liver

Colon & Rectum

Source:
"Alcohol and Cancer Risk."
National Cancer Institute,
<https://www.cancer.gov/about-cancer/causes-prevention/risk/alcohol/alcohol-fact-sheet>

Office of the
U.S. Surgeon General

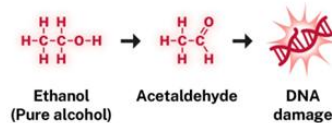
Surgeon General's Report

Four ways alcohol can cause cancer



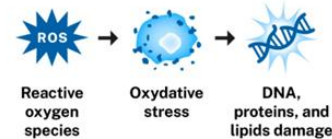
MECHANISM A

Alcohol breaks down into **acetaldehyde** which damages DNA in multiple ways, causing an increased risk of cancer.



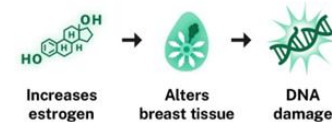
MECHANISM B

Alcohol induces **oxidative stress**, increasing the risk of cancer by damaging DNA, proteins, and cells and increasing inflammation.



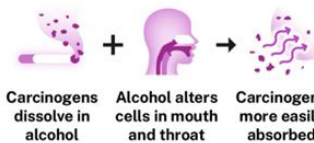
MECHANISM C

Alcohol alters **levels of multiple hormones**, including estrogen, which can increase breast cancer risk.



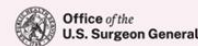
MECHANISM D

Alcohol leads to greater absorption of **carcinogens**.



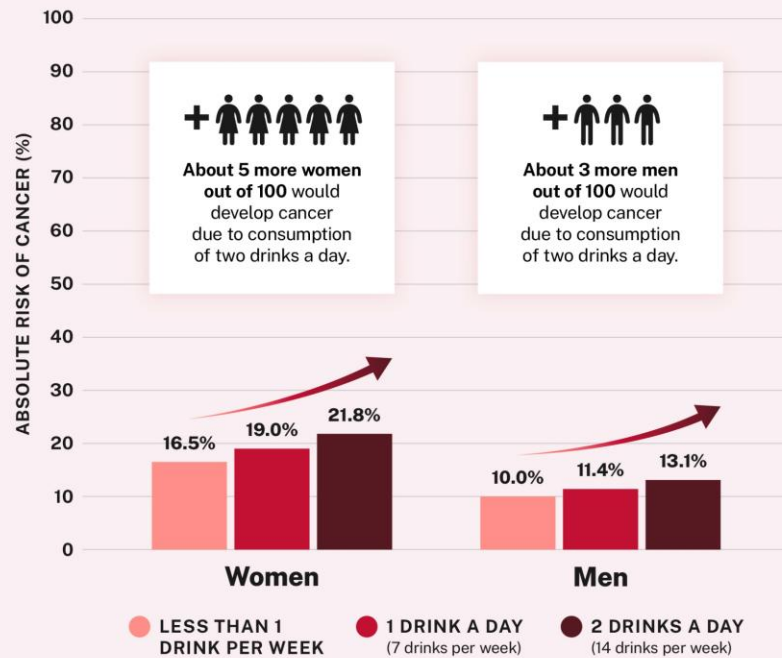
*Rungay et al. (2021) reviewed these four mechanisms through which alcohol can cause cancer along with several other possible pathways that appear to influence cancer risk. These include disruption of one-carbon metabolism, alteration of retinoid metabolism, and impaired immune function among others.

Source: Rungay H, Murphy N, Ferrari P, Soerjomataram I. Alcohol and Cancer: Epidemiology and Biological Mechanisms. *Nutrients*. Sep 11 2021;13(9) doi:10.3390/nu13093173



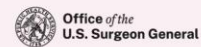
Surgeon General's Report

Higher alcohol consumption increases alcohol-related cancer risk in women and men



This graph represents the cumulative absolute risk of alcohol-related cancer in women and men over the lifespan by age 80. Alcohol-related cancer includes breast, colorectum, esophagus, liver, mouth, throat, and voice box cancers.

Source: Calculated with data from Sarich, P., Canfell, K., Egger, S., Banks, E., Joshy, G., Grogan, P., & Weber, M. F. (2021). Alcohol consumption, drinking patterns and cancer incidence in an Australian cohort of 226,162 participants aged 45 years and over. *British journal of cancer*, 124(2), 513–523. <https://doi.org/10.1038/s41416-020-01101-2>



Alcohol & Your Health: What are the Risks?

The Damage You Can't Always See



If you have a long-term health condition, alcohol can make it worse. For example, if you have diabetes, heart disease, or high blood pressure, drinking any amount of alcohol can make your condition worse. Tell your health care providers about your drinking habits. Being open and honest will help them to understand you as a person and recommend the best treatment choices for you.

Cancer

- Alcohol increases your risk of cancer.
- Drinking too much alcohol increases your risk for developing cancers of the:
 - Mouth, Breast, Throat, Liver, Colon

Check out the interactive version of this poster available in 4 languages



Arms & Legs

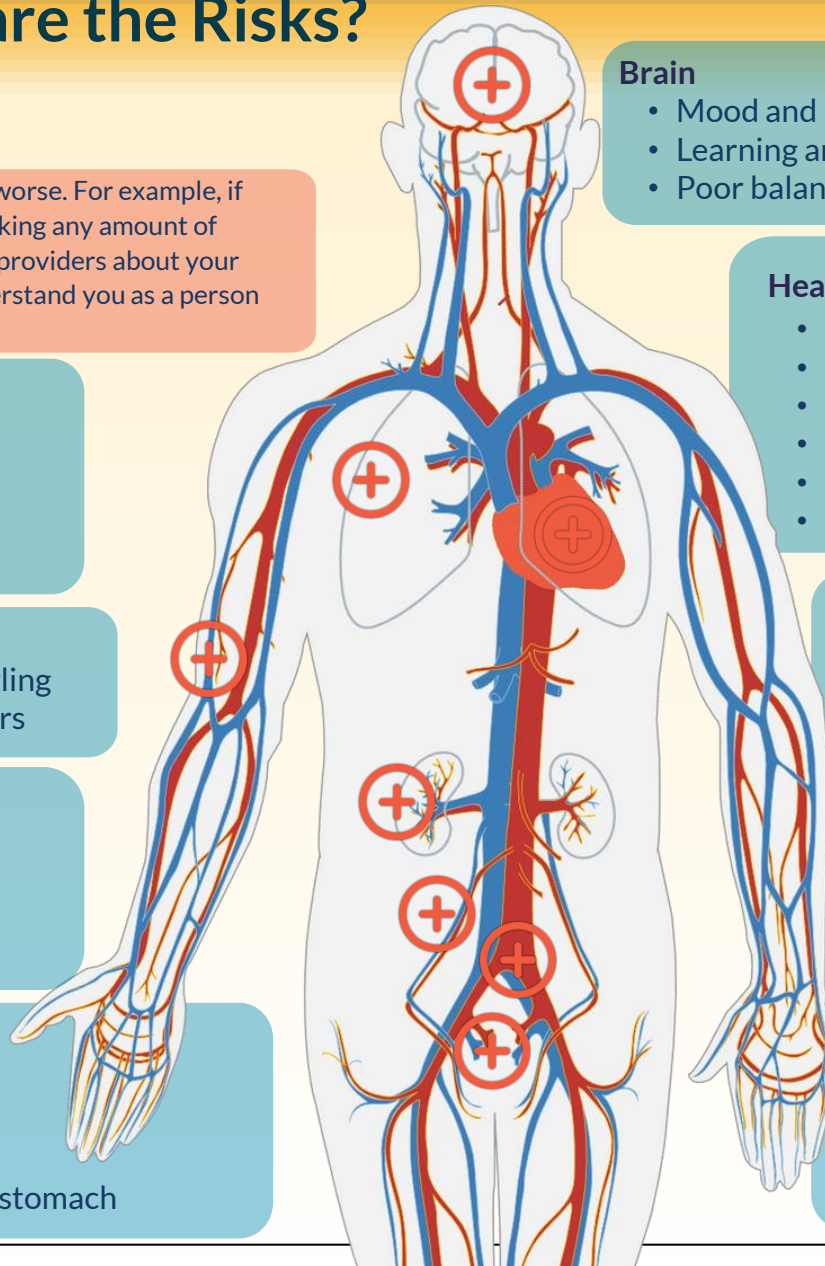
- Swelling Pain and tingling
- Body shakes or tremors

Liver & Pancreas

- Liver disease/failure
- Wasting away of liver (cirrhosis)
- Injury to the pancreas (pancreatitis)

Digestive System

- Heartburn
- Abdominal pain
- Diarrhea
- Bleeding from esophagus or stomach



Brain

- Mood and behavior changes
- Learning and memory problems
- Poor balance and reaction time

Heart & Lungs

- Lung infection (Pneumonia)
- High blood pressure
- Weakening of heart muscle
- Irregular heartbeat
- Heart attack
- Stroke

Sexual & Reproductive Health

Men

- Low sex drive
- Not able to have an erection

Women

- Periods that last longer than normal
- No period at all
- Reduce a couple's chances of getting pregnant
- Risky sexual behaviors, like Unprotected sex
- Sexually transmitted infections, Unplanned pregnancy, Drinking during pregnancy, Birth defects, Miscarriage, Premature birth

What Can Be Done?

- ✓ Engage
- ✓ AUDIT-C or NIAAA
- ✓ Brief Intervention
- ✓ Referral
- ✓ Medication

AUDIT-C

1. How often do you have a drink containing alcohol?

Two To Three Instance Per Week Two To Four Instance Per Month Four Or Greater Than Integer::4 Instance Per Week Monthly or less

Never

2. How many standard drinks containing alcohol do you have on a typical day?

1 or 2 10 or more 3 to 4 5 to 6

7 to 9

3. How often do you have six or more drinks on one occasion?

Two To Three Instance Per Week Two To Four Instance Per Month Four Or Greater Than Integer::4 Instance Per Week Daily

Less Than Monthly Monthly Never Weekly

Practical Applications



How many times in the past year have you had (4 for women, or 5 for men) or more drinks in a day?

AUDIT-C

Q1: How often did you have a drink containing alcohol in the past year?	
Answer	Points
Never	0
Monthly or less	1
Two to four times a month	2
Two to three times a week	3
Four or more times a week	4
Q2: How many drinks did you have on a typical day when you were drinking in the past year?	
Answer	Points
None, I do not drink	0
1 or 2	0
3 or 4	1
5 or 6	2
7 to 9	3
10 or more	4
Q3: How often did you have six or more drinks on one occasion in the past year?	
Answer	Points
Never	0
Less than monthly	1
Monthly	2
Weekly	3
Daily or almost daily	4



RIPTEAR Mnemonic for Substance Use History

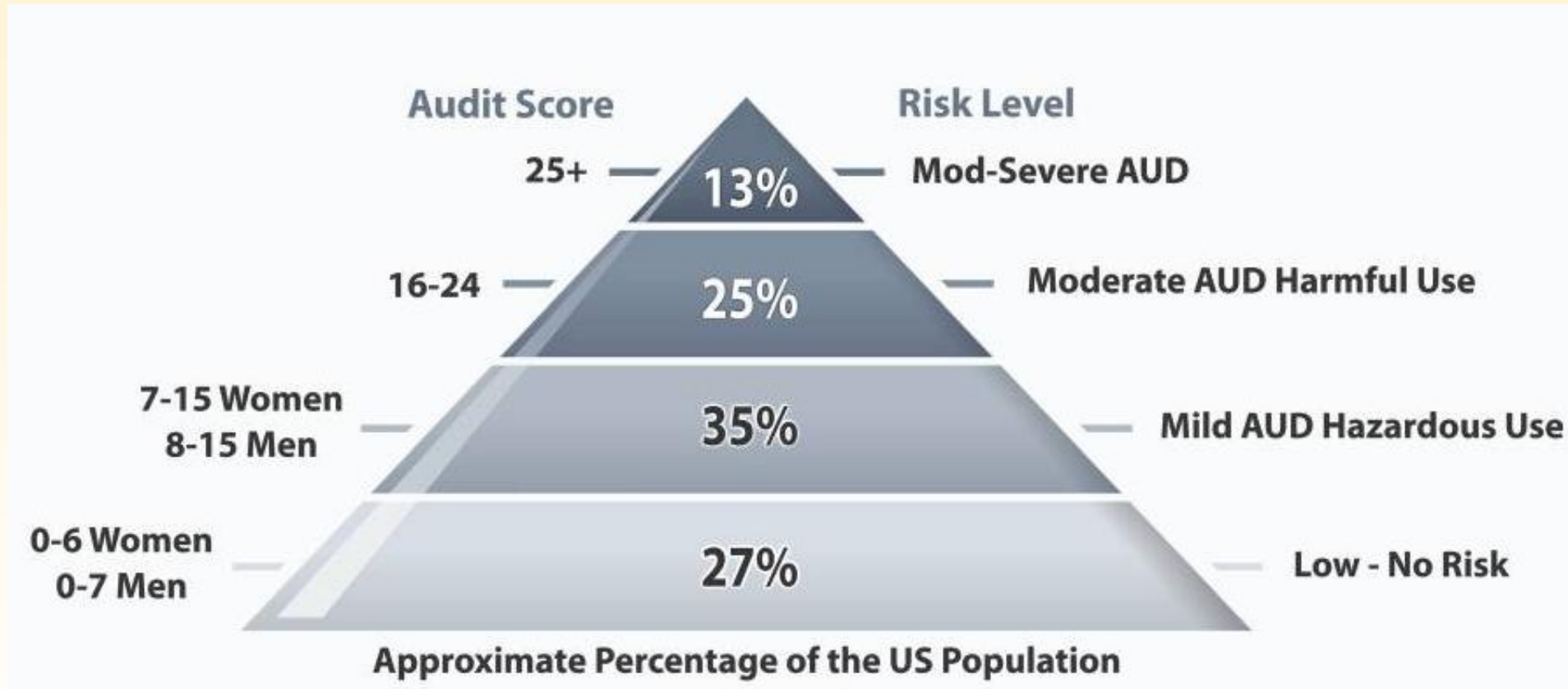
- Risk (any imminent risk?)
- Initiation
- Pattern
- Treatment
- Effect
- Abstinence
- Recurrence (triggers for use?)

Myth Busting & Misconceptions

All patients don't all tell
Everyone needs a
A therapist should be
treatment program
offended on basis of them
that doesn't exist



Considerations



Alcohol Use Disorder (AUD)

Time to Ask Education
Expert Consultation

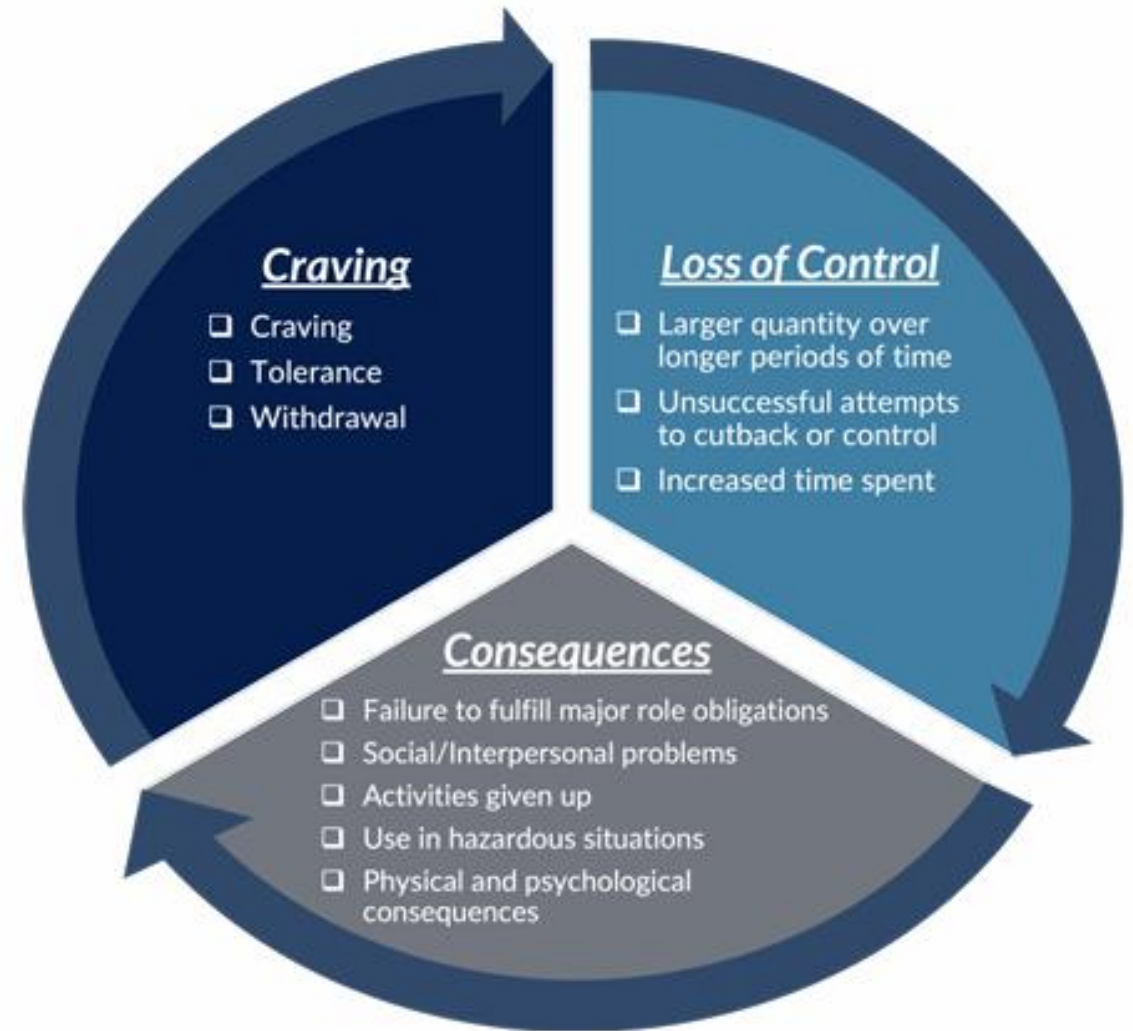
- “Addiction [alcohol use disorder] is a **treatable, chronic medical disease** involving complex interactions among brain circuits, genetics, the environment, and an individual’s life experiences. People with addiction use substances or engage in behaviors that become compulsive and often continue despite harmful consequences. **Prevention efforts and treatment approaches for addiction are generally as successful as those for other chronic diseases.**”- ASAM
- Diagnosed by at least 2 of 11 symptoms and stratified into mild (2–3 sx), moderate (4–5 sx), and severe (6-11 sx)

Alcohol Use Disorder Diagnosis

- The presence of at least 2 of these symptoms indicates **Alcohol Use Disorder (AUD)**.
 - **Mild:** The presence of 2 to 3 symptoms
 - **Moderate:** The presence of 4 to 5 symptoms
 - **Severe:** The presence of 6 or more symptoms
- Had times when you ended up drinking more, or longer, than you intended?
 - More than once wanted to cut down or stop drinking, or tried to, but couldn't?
 - Spent a lot of time drinking, being sick from drinking, or getting over other aftereffects?
 - Wanted a drink so badly you couldn't think of anything else?
 - Found that drinking—or being sick from drinking—often interfered with taking care of your home or family? Or caused job troubles? Or school problems?
 - Continued to drink even though it was causing trouble with your family or friends?
 - Given up or cut back on activities you found important, interesting, or pleasurable so you could drink?
 - More than once gotten into situations while or after drinking that increased your chances of getting hurt (such as driving, swimming, using machinery, walking in a dangerous area, or unsafe sexual behavior)?
 - Continued to drink even though it was making you feel depressed or anxious or adding to another health problem? Or after having had an alcohol-related memory blackout?
 - Had to drink much more than you once did to get the effect you want? Or found that your usual number of drinks had much less effect than before?
 - Found that when the effects of alcohol were wearing off, you had withdrawal symptoms, such as trouble sleeping, shakiness, restlessness, nausea, sweating, a racing heart, dysphoria (feeling uneasy or unhappy), malaise (general sense of being unwell), feeling low, or a seizure? Or sensed things that were not there?



Simplified DSM-5 Criteria for AUD: “The 3 Cs”



Reflections on Alcohol Use in Primary Care Patients





Environmental Scan: What's Out There





Interventions for AUD in Adults

Evidence Based Treatment for AUD

Practice Facilitation

- Like all chronic diseases → Education, prevention, and early intervention via screening
- Levels of care – American Society of Addiction Medicine
 - Outpatient (counseling and/or SUD support)
 - Intensive outpatient coordinated care for complex needs
 - Residential treatment (esp with co-occurring OUD, important to identify ones that allow MSUD)
 - Intensive inpatient



ASAM CONTINUUM OF CARE

▶ ADULT



- .5 Early Intervention
- 1 Outpatient Services
- 2.1 Intensive Outpatient Services
- 2.5 Partial Hospitalization Services
- 3.1 Clinically Managed Low-Intensity Residential Services

- 3.3 Clinically Managed Population-Specific High-Intensity Residential Services
- 3.5 Clinically Managed High-Intensity Residential Services
- 3.7 Medically Monitored Intensive Inpatient Services
- 4 Medically Managed Intensive Inpatient Services

Evidence-based Treatment for AUD

Treatment Modalities

- Behavioral (CBT; MI enhancement; mindfulness based, counseling, DBT)
- Addressing trauma (EMDR, yoga/mindfulness/movement)
- Addressing un/undertreated mental health conditions (esp. depression, anxiety, bipolar disorder)
- Mutual/peer support groups for individuals and loved ones (eg. AA, SMART Recovery, LifeRing)
- Medications (naltrexone, acamprosate, disulfiram, topiramate* gabapentin)

**Off label for AUD but included as a first line recommendation by the VA/DoD SUD guidelines*

Practice Facilitation



ASAM Levels of Care



PCSS MAUD



FDA-Approved Medications for AUD

Naltrexone

- MOA: Opioid antagonist
- FYI: Drug-drug interaction with opioids
- Efficacy: Very effective esp. with binge drinking
- Dosing: Daily oral, or monthly long-acting injectable (LAI) option No dose titration needed
- Adverse Effects: Overall well-tolerated with nausea, vomiting most common but tend to wear off after a few days. Okay to use with mild liver impairment, but not major (decompensated cirrhosis, hepatitis)
- Key facts: FDA approved to decrease bingeing, overall drink total. Contraindicated inpatients with chronic opioid therapy.

Acamprosate

- MOA: NMDA partial co-agonist
- FYI: Renal dose adjustment
- Efficacy: Very effective in maintaining abstinence from alcohol
- Dosing: 666 mg TID
- Adverse Effects: well-tolerated with possible mild dizziness or diarrhea (rare psych)
- Key facts: Initiate after cessation from alcohol, sometimes our supply in Maine runs out (one manufacturer for this region of USA)

Disulfiram

- MOA: Acetaldehyde Dehydrogenase Inhibitor; “super hangover”
- FYI - not first line option (in my opinion)
 - significant medical contraindications and interactions
 - Many DDIs; can be fatal with alcohol
- Efficacy: good option when abstinence required by law or license; can use “pill in the pocket” for high-risk situations in Long-term remission
 - Ideal patient: Strong social support, evidence best with direct observation of dosing
- Dosing: 250 mg daily
- Adverse Effects: serious including CV, hepatic, neurologic

MAUD Overview – PCSS-MAUD Resources

P
C
S
S

Providers
Clinical
Support
System

FDA-approved Medications for Alcohol Use Disorder

Despite the availability of effective treatments and 3 FDA-approved medications, alcohol use disorder (AUD) remains severely under treated.

Alcohol is the most commonly used substance in the US.

<4% of people ages ≥12 years with AUD (29.5 million) received medication treatment in 2022¹

Medications for AUD (MAUD) have unique characteristics and benefits for individuals with AUD.

Healthcare professionals should consider the unique characteristics²⁻³ of each medication to make informed treatment decisions for their patients.

Brand Name	Naltrexone	Acamprosate	Disulfiram
<p style="font-size: 0.8em; margin: 0;">Mechanism of Action</p>	<p style="font-size: 0.8em; margin: 0;">Blocks opioid receptors to reduce the rewarding effects of alcohol and manage cravings</p>	<p style="font-size: 0.8em; margin: 0;">Modulates glutamate and GABA neurotransmitter systems to reduce alcohol cravings and support abstinence</p>	<p style="font-size: 0.8em; margin: 0;">An aversive treatment that inhibits alcohol metabolism, causing unpleasant physical reactions when alcohol is consumed</p>
	<p>Per os (PO)</p> <ul style="list-style-type: none"> 50-100 mg once daily (QD) Most clinicians start with 50 mg QD. This can be continued or 	<p>PO</p> <ul style="list-style-type: none"> 666 mg three times daily (TID) 	<p>PO</p> <ul style="list-style-type: none"> Either 250 mg or 500 mg Most effective when dosing is observed by a support person



Scan QR code to visit
www.learning.pcss-maud.org/resources

Off-Label Medications for AUD

Supported by evidence but these medications are NOT approved by the FDA to treat alcohol use disorder and are used “off-label”

Topiramate

- MOA: Enhances GABA activity, antagonizes glutamate receptors, inhibits neuronal voltage-dependent sodium channels
 - Also used for headaches, seizure disorder, weight loss
- Efficacy: Great at gradual decrease in drinking, decreasing cravings
- Dosing: start at 25mg nightly increase by 25mg per week to maximum dose of 100-150mg BID as tolerated
 - Renal adjustment
- Adverse Effects: Can be effective but has neurological side effects requiring slow titration, AKA “Dopamax” w/ brain fog, headache
- Contraindication: narrow-angle glaucoma, kidney stones

Gabapentin

- MOA: Modulation of excitatory neurotransmitters
- Efficacy: Mixed research, but dual utility.
 - Treats withdrawal and cravings
 - Can transition from withdrawal management to ongoing care
- Dosing: 600-900mg TID
 - Renal adjustment
- Adverse Effects: Sedation, polypharmacy, respiratory depression



Using MAUD to Treat Simulated Patients

Case #1

- 42 yo female
- Diagnosed with moderate AUD
- Would like something to help stop her drinking completely, goal is sobriety
- History of avascular necrosis of hip, prescribed chronic opiate therapy by pain specialist in your area



**What medications would be best here?
What medications would you avoid?**

Case #2

- 62 yo male
- Diagnosed with mild AUD
- Not interested in complete cessation, would like to decrease bingeing
- Alcohol important in relationship with husband and family
- Drinks to help with anxiety as well as social connections
- Has a history of frequent migraine headaches



**What medications would be best here?
What medications would you avoid?**



Ambulatory Withdrawal Management

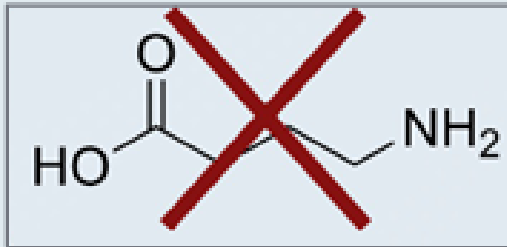
How to identify appropriate patients and initiate treatment

Uncomplicated vs Complicated Withdrawal

Uncomplicated Withdrawal

- Early symptoms
 - Begin early in course of withdrawal
 - Anxiety, diaphoresis, nausea, vomiting, tremor, nystagmus

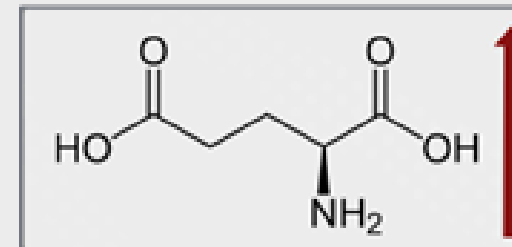
Lack of GABA



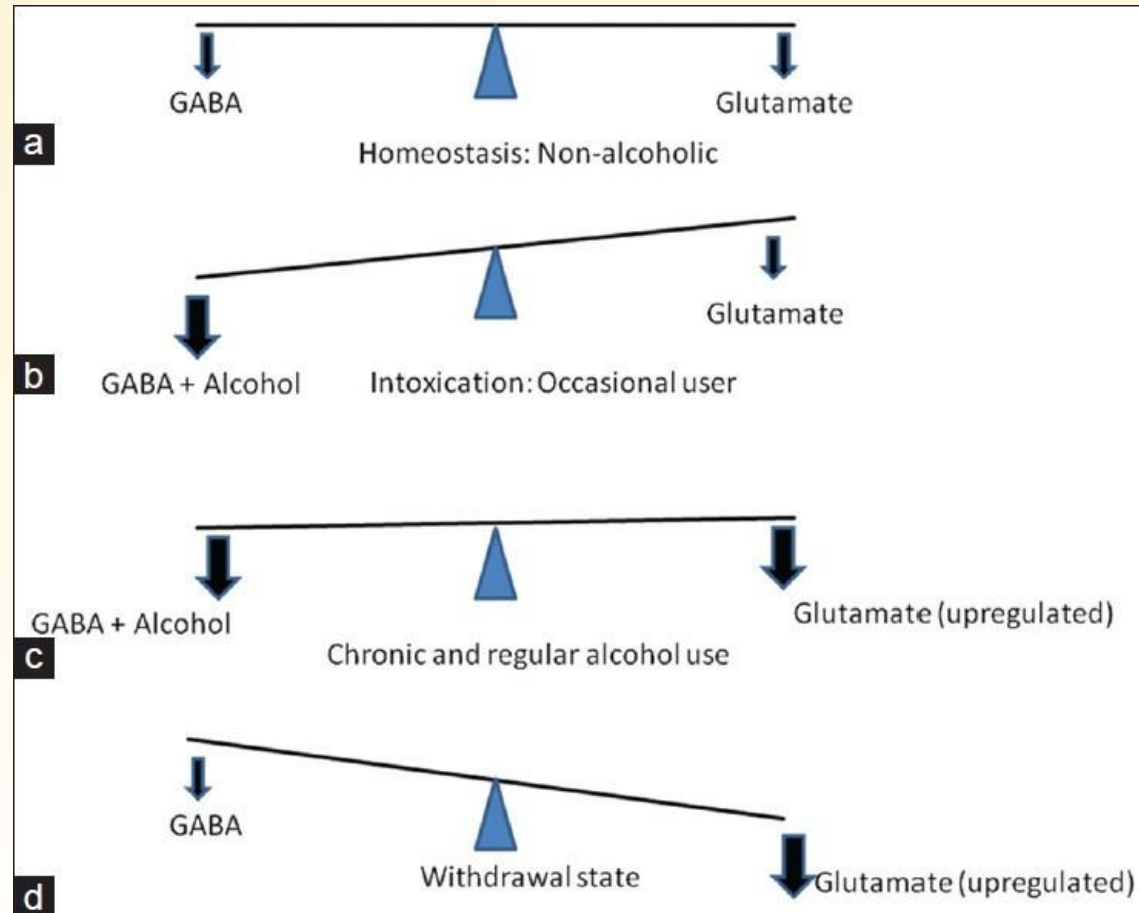
Complicated Withdrawal

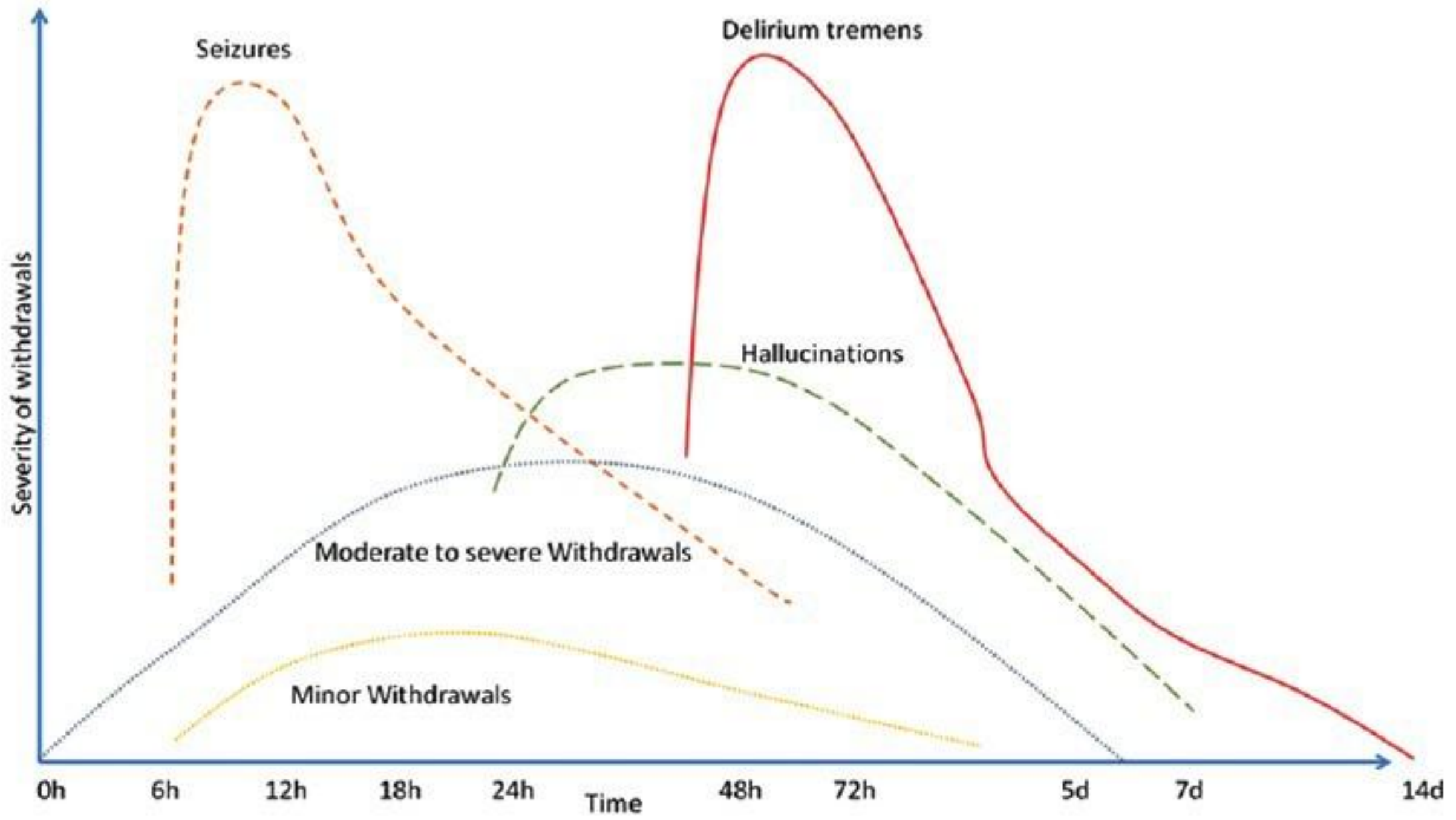
- 5% of withdrawal
- Generally symptoms begin in 3-5 days
 - Autonomic hyperactivity - hypertension, tachycardia
 - Disorientation, paranoia, psychosis
- Seizures peak < 24hrs

Lack of GABA and Excess Glutamate



Alcohol Withdrawal: The Basics





Workflow for Ambulatory Withdrawal Management

- Identify appropriate patients
- Screen for red flags or contraindications
- Predicted Alcohol Withdrawal Severity Scale (PAWSS)
- Assess current withdrawal status – Clinical Institute Withdrawal Assessment (CIWA)
 - Ask about last drink; score can be falsely low if they drank earlier in the day

How to identify patients

- Patient willing to completely stop alcohol
- Patient doesn't have a contraindication to withdrawal management
 - Gabapentin or Benzodiazepines
- Patient is willing to participate in ongoing maintenance treatment
- You are comfortable prescribing medications
- You are able to offer anticipatory guidance and close surveillance
- No **red flags**
 - History of delirium tremens (DTs)
 - History of withdrawal seizure
 - History of hospital admission for complicated withdrawal (Ask about ICU, IV medications, etc)

Prediction of Alcohol Withdrawal Severity Scale (PAWSS)

Maldonado et al., 2014

Part A: Threshold Criteria:

(1 point either)

1. Have you consumed any amount of alcohol (i.e., been drinking) within the last 30 days?

OR did the patient have a "+" BAL upon admission?

IF the answer to either is YES, proceed with test:

Part B: Based on patient interview:

(1 point each)

2. Have you ever experienced previous episodes of alcohol withdrawal?

3. Have you ever experienced alcohol withdrawal seizures?

4. Have you ever experienced delirium tremens or DT's?

5. Have you ever undergone of alcohol rehabilitation treatment?

(i.e., in-patient or out-patient treatment programs or AA attendance)

6. Have you ever experienced blackouts?

7. Have you combined alcohol with other "downers" like benzodiazepines or barbiturates during the last 90 days?

8. Have you combined alcohol with any other substance of abuse during the last 90 days?

Part C: Based on clinical evidence:

(1 point each)

9. Was the patient's blood alcohol level (BAL) on presentation > 200?

10. Is there evidence of increased autonomic activity?

(e.g., HR > 120 bpm, tremor, sweating, agitation, nausea)

Total Score: _____

Notes: Maximum score = 10. This instrument is intended as a SCREENING TOOL. The greater the number of positive findings, the higher the risk for the development of alcohol withdrawal syndromes. A score of ≥ 4 suggests HIGH RISK for moderate to severe AWS; prophylaxis and/or treatment may be indicated.

CIWA Scale – Can use MDCalc

Clinical institute withdrawal assessment scale for alcohol, revised (CIWA-Ar)

Nausea and vomiting (0-7)	Headache (0-7)
Paroxysmal sweats (0-7)	Auditory disturbances (0-7)
Anxiety (0-7)	Visual disturbances (0-7)
Agitation (0-7)	Tactile disturbances (0-7)
Tremor (0-7)	Orientation and clouding of sensorium (0-4)

- Interpretation:
 - 0-7: mild withdrawal, likely does not need medication
 - 8-10: moderate withdrawal
 - 11-18: Moderate-severe withdrawal, requires medication
 - >19: Severe withdrawal, requires inpatient management

Ambulatory Withdrawal Treatment Options

- Again, confirm **no red flags**
 - If red flags, needs inpatient management: either ED, Inpatient, or Inpatient Withdrawal Management Center (“Detox”)
- If no red flags and a good candidate for treatment:
 - Think 4, 3, 2, 1 for dosing, no matter the medication
 - Options:
 - Gabapentin
 - Benzodiazepine: Chlordiazepoxide (Librium) or Diazepam (Valium)
- 4 days of withdrawal management
- Provide anticipatory guidance and have check-in visit

Ambulatory Withdrawal Management

- CIWA 7-10
- Gabapentin - 300 mg tabs
 - Day 1 – 300 mg 4x daily
 - Day 2 - 300 mg 3x daily
 - Day 3 – 300 mg 2x daily
 - Day 4 – 300 mg 1x
 - Give 5 PRN doses of 300 mg for worsening withdrawal
- Educate on anticipated withdrawal symptoms
- If worsening withdrawal symptoms even with medication and PRN, patient needs to go to ED for evaluation and stabilization

Benzodiazepines for Ambulatory Withdrawal (CIWA >10)

- Chlordiazepoxide (Librium)
 - 50 mg (2x 25 mg tabs)
 - Day 1: 50 mg 4x daily
 - Day 2: 50 mg 3x daily
 - Day 3: 50 mg 2x daily
 - Day 4: 50 mg 1x daily
 - Give 5 PRN doses of 50 mg for worsening withdrawal
- Diazepam (Valium)
 - 10 mg tabs
 - Day 1: 10 mg 4x daily
 - Day 2: 10 mg 3x daily
 - Day 3: 10 mg 2x daily
 - Day 4: 10 mg 1x daily
 - Give 5 PRN doses of 10 mg for worsening withdrawal
- Educate on anticipated withdrawal symptoms
- If worsening withdrawal symptoms even with medication and PRN, patient needs to go to ED for evaluation and stabilization

Thank you!

Do you have any questions?
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