



# Alcohol Use Disorder (AUD)

## Leading the Charge in the Treatment of AUD

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**VA**

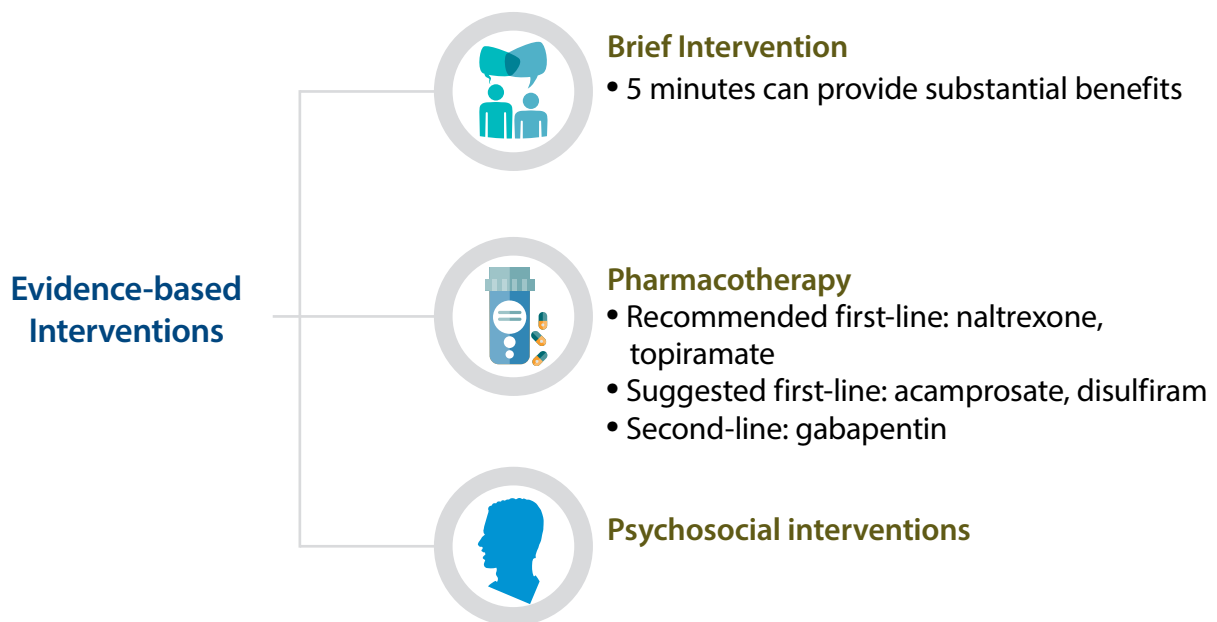


**U.S. Department of Veterans Affairs**

Veterans Health Administration  
*PBM Academic Detailing Services*

# Key Takeaways

There are a variety of effective evidence-based pharmacotherapy and psychosocial interventions available to treat AUD.



All VA clinicians have the opportunity to be advocates for our Veterans' recovery from unhealthy alcohol use. Identifying alcohol-related risk and encouraging Veterans to obtain treatment for AUD is the right investment of VA resources.

# **Alcohol Use Disorder (AUD)**

## **Leading the Charge in the Treatment of AUD**

A VA Clinician's Guide



**VA Pharmacy Benefits Management**  
**Academic Detailing Services**

**Real Provider Resources**

**Real Patient Results**

Your Partner in Enhancing Veteran Health Outcomes

**VA PBM Academic Detailing Services Email Group**

[PharmacyAcademicDetailingProgram@va.gov](mailto:PharmacyAcademicDetailingProgram@va.gov)

**VA PBM Academic Detailing Services SharePoint Site**

<https://dvagov.sharepoint.com/sites/vhaacademicdetailing/>

**VA PBM Academic Detailing Services Public Website**

<http://www.pbm.va.gov/PBM/academicdetailingservicehome.asp>

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# Risks of Excessive Alcohol

Alcohol consumption is one of the leading preventable causes of death in the U.S.<sup>1</sup>

Rates of heavy drinking and binge drinking are increasing in the U.S. correlating with increasing alcohol related death rates.

Alcohol related deaths increased by 49% between 2006 and 2019.<sup>2,3</sup>

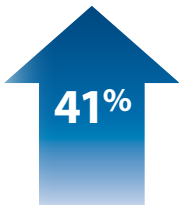
- Males by 35% (2005-2018) 
- Females by 76% (2000-2018) 

There are **261** deaths each day in the U.S. due to excessive alcohol use.

[cdc.gov/alcohol](https://cdc.gov/alcohol)

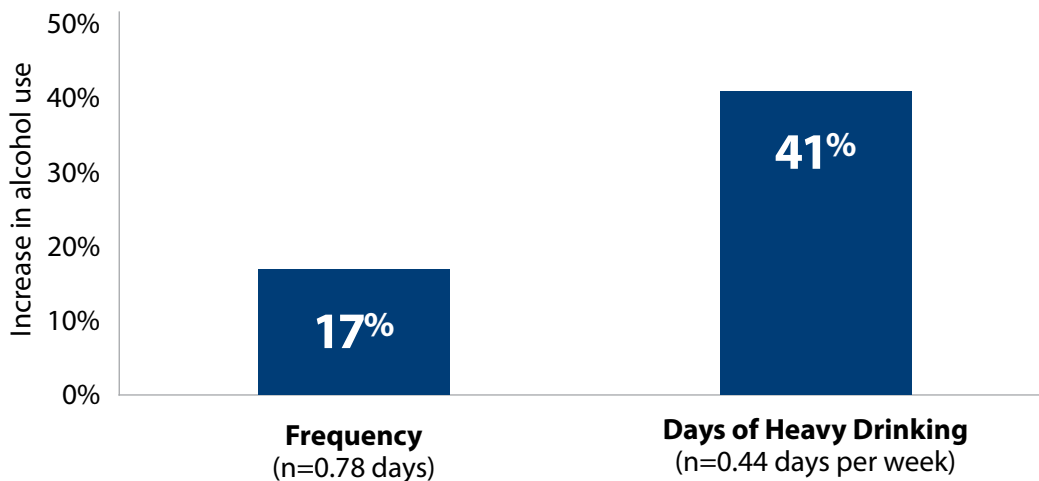


## Alcohol Use Among Women is Increasing!



Studies show that among U.S. women who drink, about **one in four has engaged in binge drinking in the last month**, averaging about three binge episodes per month and five drinks per binge episode.<sup>4</sup>

Figure 1. Significant Increase in Alcohol Use Among Women 2019 – 2020<sup>5</sup>



Overall, in 2020 frequency of alcohol use increased by 0.74 days (14%) over the 2019 baseline of 5.48 days per week. Several subgroups showed significant increases: women (0.78 days, 17% increase), adults aged 30 to 59 (0.93 days, 19% increase), non-Hispanic whites (0.66 days, 10% increase). Among women, days of heavy drinking increased 0.18 days from a baseline of 0.44 days per week in 2019 (41% increase); alcohol-related problems measured on a validated, commonly used scale also grew (39% increase).<sup>5</sup>

**Table 1. Drinking Levels<sup>6</sup>**

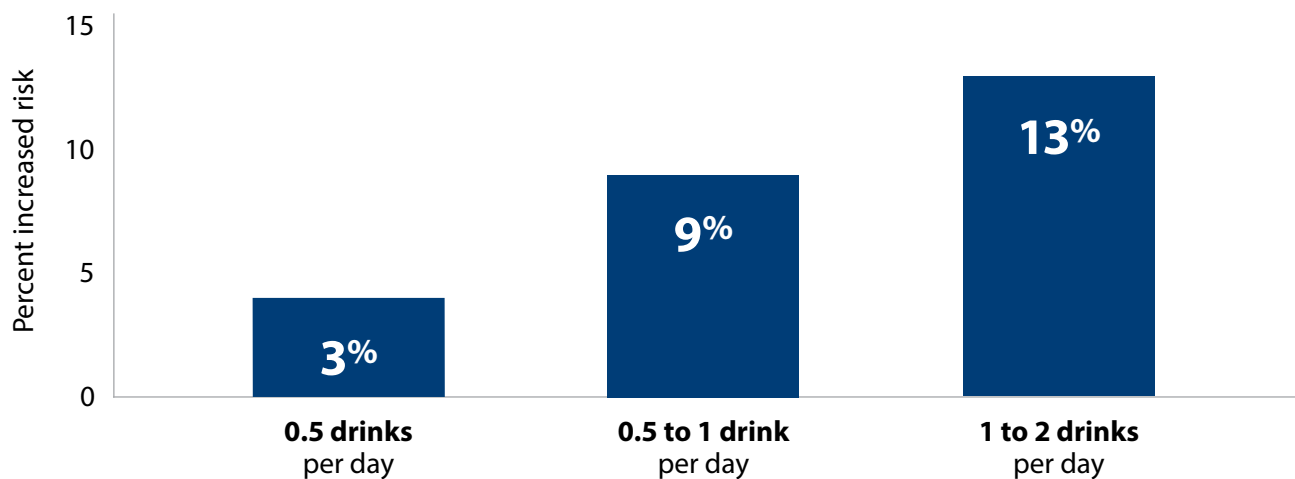
	<b>Drinking in moderation</b>	<b>Binge drinking*</b>	<b>Heavy/Excessive alcohol use</b>
<b>Males</b>	0 – 2 drinks per day	≥ 5 drinks at the same time or within a couple of hours of each other	> 4 drinks on any day <b>or</b> > 14 drinks per week
<b>Females and/or Age &gt; 65</b>	0 – 1 drink per day	≥ 4 drinks at the same time or within a couple of hours of each other	> 3 drinks on any day <b>or</b> > 7 drinks per week

\*In the past month. Older adults and women have increased sensitivity to alcohol because they typically metabolize it at a slower rate. This makes them more susceptible to the adverse consequences associated with alcohol consumption.

## **Alcohol use is a modifiable risk factor for many medical and mental health conditions**

For example, breast cancer risk is associated with even low levels of consumption and increases as consumption increases.<sup>7</sup>

**Figure 2. Risk of Breast Cancer Increases as Alcohol Consumption Increases<sup>7</sup>**



Excessive or heavy drinking (table 1) accounts for most of the morbidity and mortality seen and has immediate and long-term effects that increase the risk of many harmful health conditions.<sup>8</sup>

**Figure 3. Health Risks Associated with Heavy or Excessive Alcohol Use<sup>9–14</sup>**

**Cancer**

- Breast
- Colorectal
- Esophagus
- Liver
- Larynx
- Pancreatic
- Oropharynx



**Vulnerability to infections**

- Upper respiratory
- Pneumonia
- Tuberculosis



**Neuropsychiatric disorders**

- Anxiety
- Depression
- Insomnia
- Dementia
- Neurocognitive impairment
- Suicide risk



**Other chronic diseases**

- High blood pressure
- Cardiovascular diseases (e.g., stroke, cardiomyopathy, atrial fibrillation)
- Neuropathy



**Gastrointestinal diseases**

- Digestive issues
- Liver cirrhosis
- Pancreatitis



**Increased reproductive problems**

- Male: Erectile dysfunction, decreased fertility
- Female: Risk of birth defects

**Cause for concern**



Women are:

- The fastest-growing segment of alcohol consumers in the United States<sup>5</sup>
- At greater risk for adverse health outcomes associated with excessive alcohol use<sup>15</sup>
  - Liver: risk of cirrhosis in women is greater than in men and increases with as little as one drink a day and increases exponentially with the number of drinks consumed per day<sup>7,16</sup>
  - Brain: faster onset of alcohol-related cognitive decline and shrinkage of the brain<sup>7,17</sup>
  - Heart: increased risk for cardiomyopathy at lower levels of consumption and over fewer years of drinking<sup>7</sup>
  - Breast Cancers: increased risk associated with even low levels of consumption<sup>7</sup>

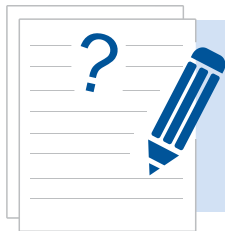
# Addressing Implicit Bias and Stigma

Society often views substance use disorders as a moral weakness. As a result, people facing these issues are often plagued with shame. If stigma is experienced individuals are less likely to seek out treatment or remain engaged in treatment.<sup>18,19</sup>

Societal views can shape the values and beliefs of healthcare professionals, leading to stigma and stereotyping. Stereotyping often occurs without our conscious knowledge and is known as implicit bias.

Stigma towards substance use disorders is common amongst healthcare professionals.<sup>20</sup> To provide the best care, become aware of your own biases and seek ways to mitigate them.<sup>21</sup>

***Start by thinking of AUD as a disease like any other chronic illness with physical components, such as diabetes. This helps to shift the focus from the behavior of a person to the disease.***



## Did you know?

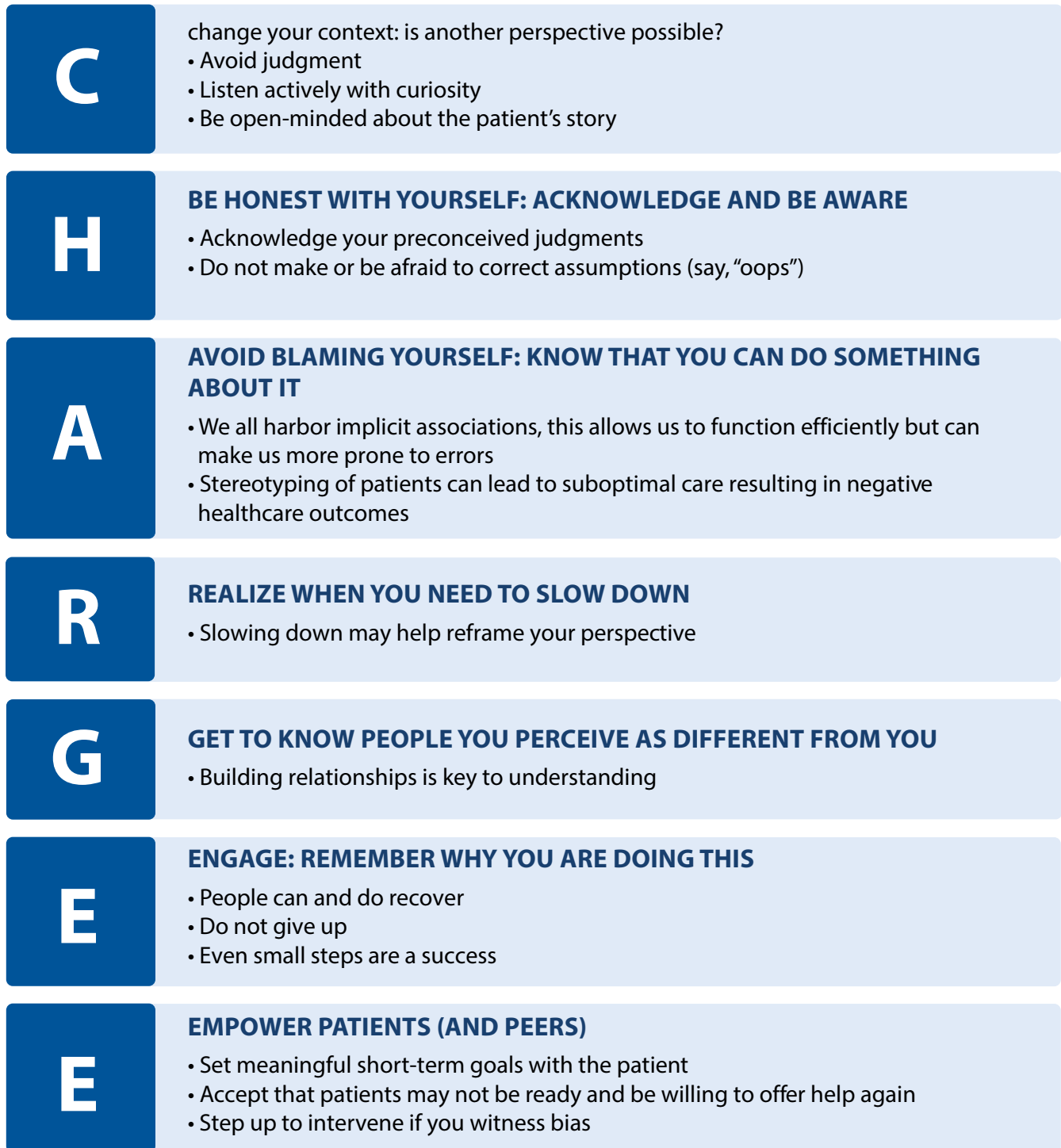
Implicit biases exist in all of us, even in those who are committed to being fair and impartial.





Use the following steps to mitigate the effects of your own unconscious bias and model behaviors that set the tone and expectations of others.<sup>22</sup>

Figure 4. Take **CHARGE<sup>2</sup>** To Mitigate Your Own Bias<sup>22</sup>

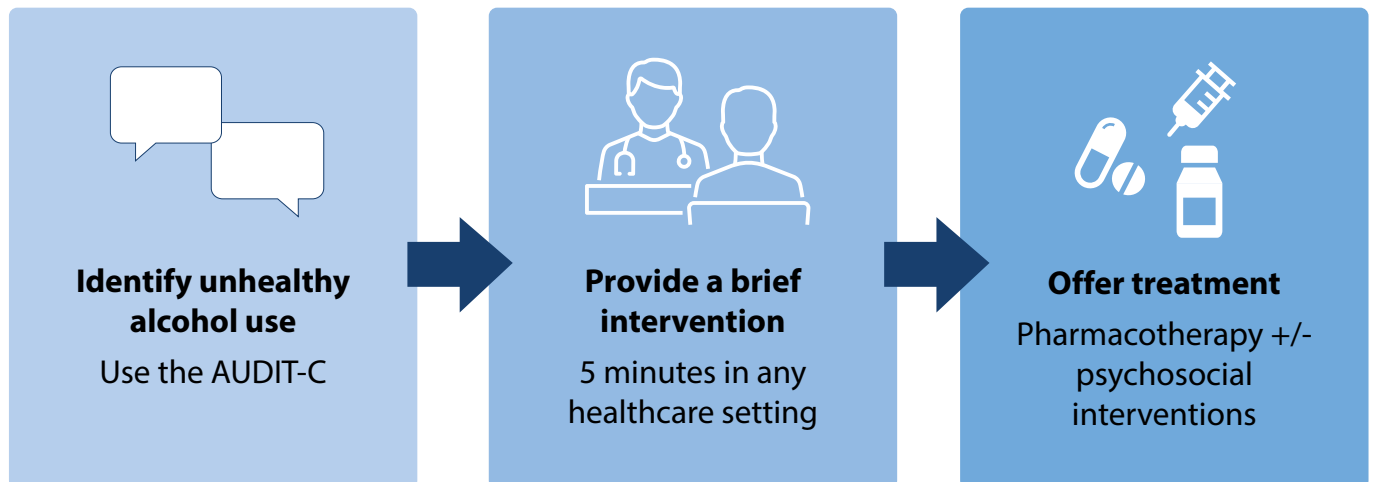


Language used to describe Veterans with substance use disorders can perpetuate stigma and stereotypes. You can counter stigma by using accurate, nonjudgmental, person-centered, language to describe AUD, those it affects, and its treatment.<sup>19,23</sup>

**Table 2. Changing the Conversation**<sup>19,23</sup>

Instead of...	Use...	Why...
<b>Alcoholic Drunk User</b>	<ul style="list-style-type: none"> <li>• Person with alcohol use disorder</li> <li>• Person who misuses alcohol</li> <li>• Person who engages in unhealthy and/or hazardous alcohol use</li> </ul>	Person-first language: <ul style="list-style-type: none"> <li>• Indicates that the person has an illness vs. them being the illness</li> <li>• Indicates that the disease is not permanent</li> <li>• Avoids negative associations, punitive attitudes, and individual blame</li> </ul>
<b>Abuse</b>	<ul style="list-style-type: none"> <li>• Misuse</li> <li>• Harmful use</li> <li>• Unhealthy use</li> <li>• Hazardous use</li> <li>• Problem use</li> <li>• Risky use</li> </ul>	The word abuse is associated with negative judgments and punishments
<b>Habit</b>	<ul style="list-style-type: none"> <li>• Active addiction</li> <li>• Substance use disorder</li> </ul>	Habit signifies that resolution of the disorder is a matter of willpower and being able to stop the habitual behavior  May undermine the seriousness of the disorder

**Make a difference in the lives of Veterans**

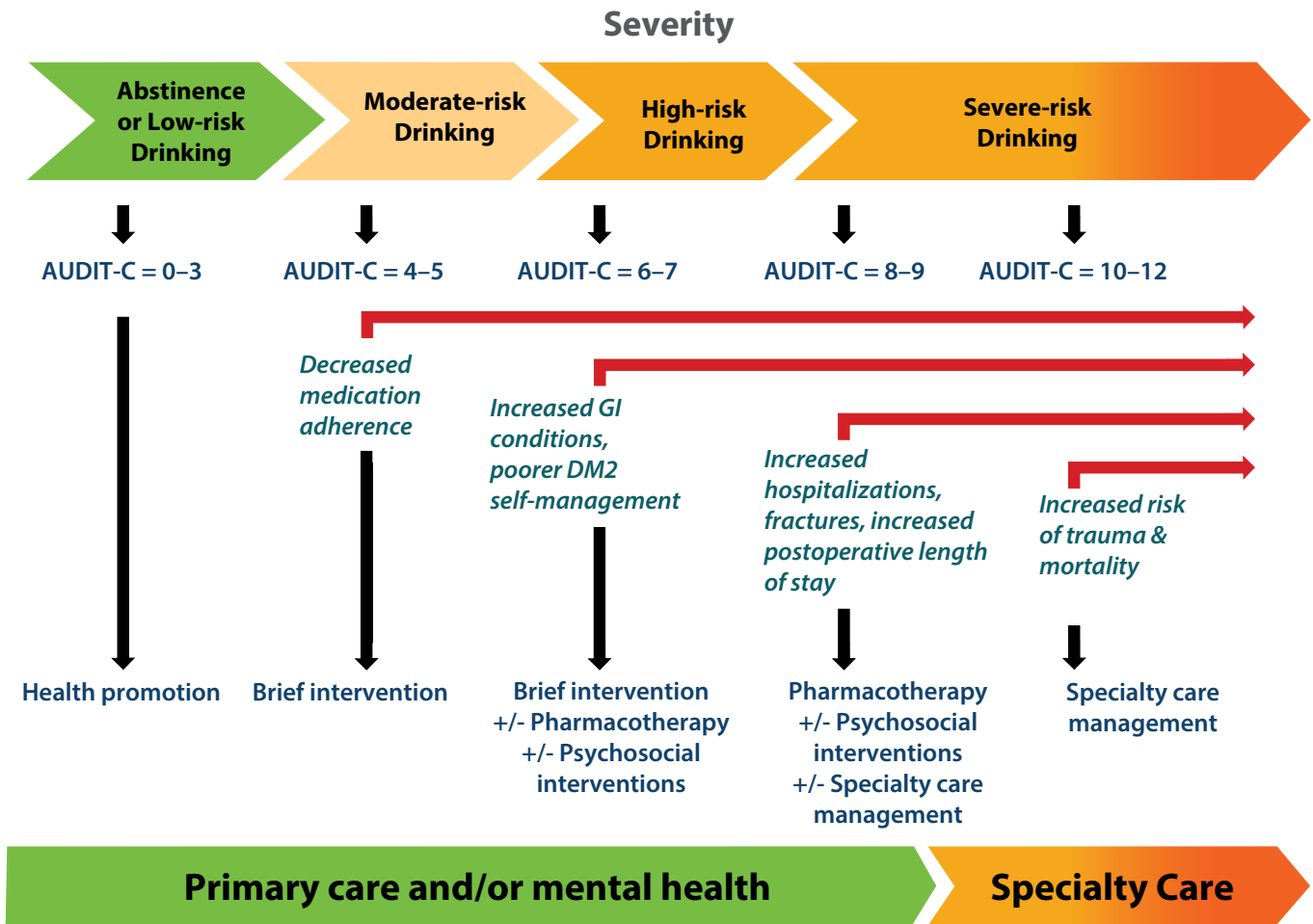


# Identifying Unhealthy Alcohol Use

## Screening

The Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) is an alcohol screening assessment that can identify patients who are hazardous drinkers or have active alcohol use disorder.<sup>24,25</sup> AUDIT-C scores have been correlated with rates of morbidity and mortality and can also be used as a tool to guide treatment.<sup>26,27</sup>

**Figure 5. Spectrum of Unhealthy Alcohol Use with AUDIT-C Score and Recommended Treatment and Setting Based on Severity**<sup>28-41</sup>



For VA, AUDIT-C score of 5 or more is considered positive for both men and women, and documentation of brief alcohol counseling is required. To better account for safer drinking levels in females, AUDIT-C item #3 is automatically tailored to the sex assigned at birth in the clinical reminder. This helps differentiate binge-drinking patterns in female Veterans and may improve detection of unhealthy drinking patterns. For males, item #3 queries consumption of  $\geq 6$  drinks a day, and for females, it queries consumption of  $\geq 4$  drinks.

DM2 = diabetes mellitus type II; GI = gastrointestinal.

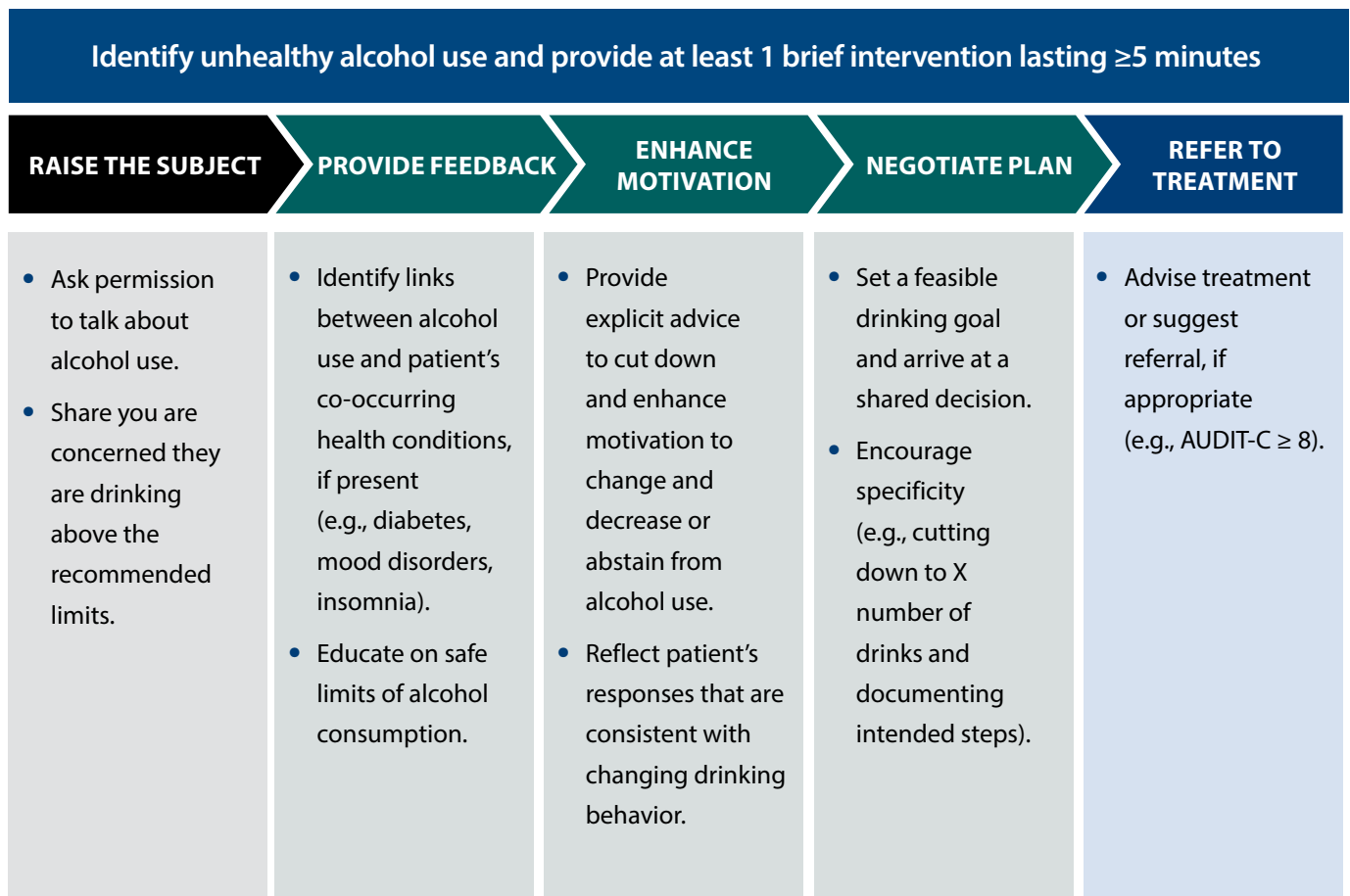
Use the AUDIT-C to identify unhealthy alcohol use in our Veterans.

# Brief Alcohol Interventions

Screening for unhealthy alcohol use, followed by advice and education regarding alcohol-related risks, is effective at reducing drinking among individuals who have unhealthy drinking but do not have full-fledged AUD.<sup>24,42</sup> For patients with an AUDIT-C of 4-7, offering a brief intervention has shown to:<sup>24,42,43</sup>

- Decrease mean number of drinks per week
- Decrease number of heavy drinking episodes
- Increase the percentage of patients whose alcohol consumption is within recommended drinking limits
- Improve outcomes for all-cause mortality, hospitalization rates, and systolic blood pressure

**Figure 6. Brief Interventions**<sup>24,42,43</sup>



Provide at least one 5-minute brief intervention to all Veterans with unhealthy drinking (AUDIT C 4-7) .

## Making the Diagnosis

Most Veterans who drink above the recommended limits (e.g., AUDT-C 4-7) will not have AUD. However, Veterans with AUDIT-C scores  $\geq 8$  (>95% specificity DSM-5 severe AUD) are at a higher risk of AUD and need evaluation for diagnosis and management.<sup>43,44,45</sup>

**Table 3. Making the Diagnosis**

ICD-10 Alcohol Dependence (3 or more criteria)	DSM-5 AUD Mild AUD = 2-3 symptoms, Moderate AUD = 4-5; Severe AUD = 6 or more
A. Persisting with drinking alcohol despite harmful consequences	1. Continued use despite social or interpersonal problems related to alcohol
	2. Continued use despite physical or psychological problem(s) related to alcohol
	3. Recurrent alcohol use in situations in which it is physically hazardous
B. Tolerance	4. Tolerance
C. Withdrawal symptoms or use of alcohol (or closely related substance) to relieve or avoid withdrawal symptoms	5. Withdrawal symptoms <b>OR</b> alcohol (or closely related substance – benzo) is taken to relieve or avoid withdrawal symptoms
D. Difficulties in controlling alcohol use; or a persistent desire or unsuccessful efforts to reduce or control drinking	6. Alcohol is often taken in larger amounts or over a longer period than was intended
	7. Persistent desire or unsuccessful efforts to cut down or control alcohol use
E. Higher priority given to alcohol use than other activities and obligations  <b>OR</b> A large amount of time spent in alcohol, related activity, or recovery	8. Recurrent alcohol use resulting in a failure to fulfill obligations at home, school and work
	9. Large amount of time is spent obtaining alcohol, using alcohol, or recovering from its effects
	10. Activities given up because of alcohol use
F. Craving or compulsion	11. Craving or compulsion

ICD-10 Alcohol Abuse: Alcohol use that has clearly contributed to physical or psychological harm. ICD-10 Abuse = DSM-5 mild AUD; ICD-10 dependence = DSM-5 moderate and severe AUD

# Alcohol Use Disorder Pharmacotherapy

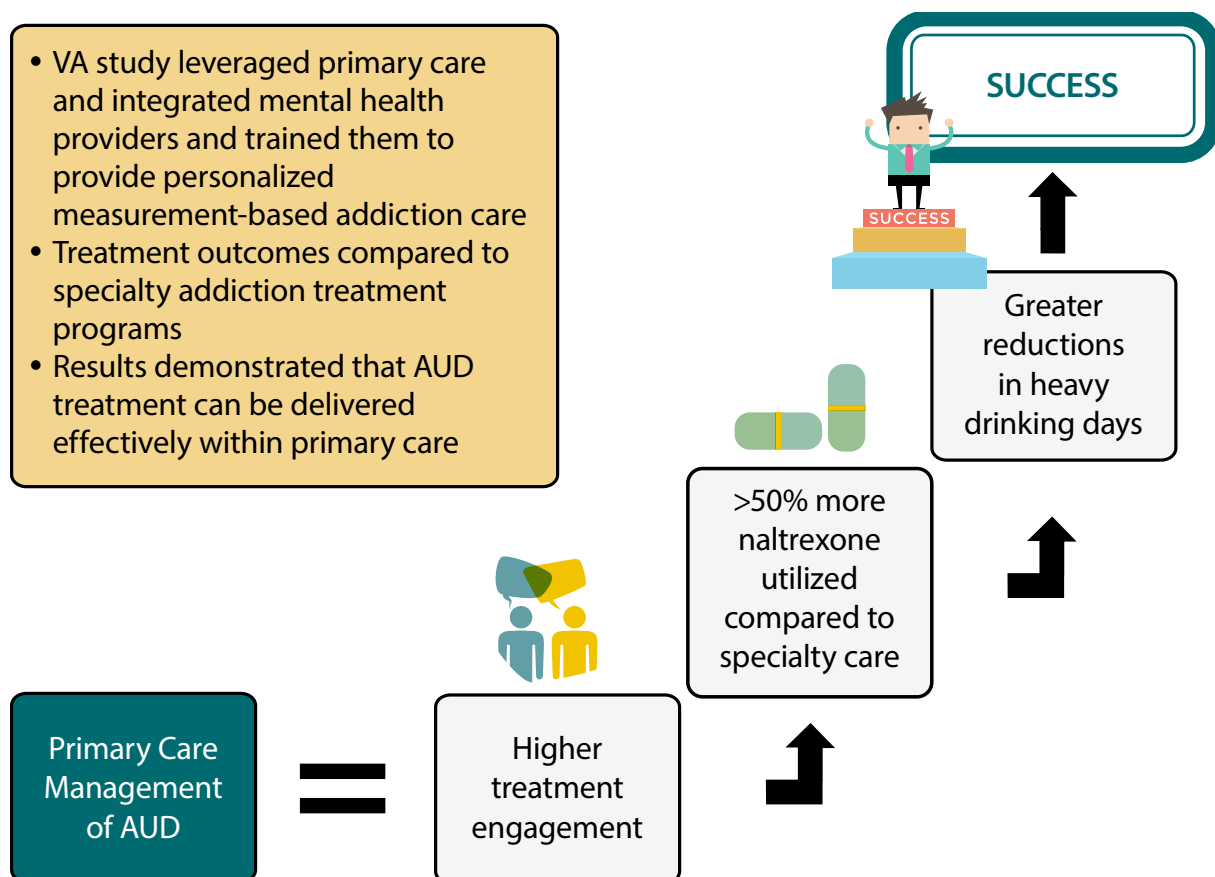
Medications to treat AUD are an effective treatment modality that can be utilized to reduce heavy drinking days, frequency of alcohol consumption, improve abstinence, and decrease cravings for alcohol.<sup>43</sup> They are often underutilized despite having greater efficacies than other medications used routinely as standards of care in other medical illnesses.<sup>46,47</sup>

## Offer Pharmacotherapy to patients with

- Moderate to severe AUD (AUDIT-C  $\geq 8$ ) OR
- AUDIT-C  $\geq 6$  and current alcohol use when contraindicated (e.g., previously diagnosed with AUD, presence of medical contraindications)

Medication treatment can be provided in primary care, general mental health, and specialty care settings.<sup>48-53</sup> Primary care is the entry point for most people with AUD and is also the place where most clinical interventions should take place.<sup>48-53</sup>

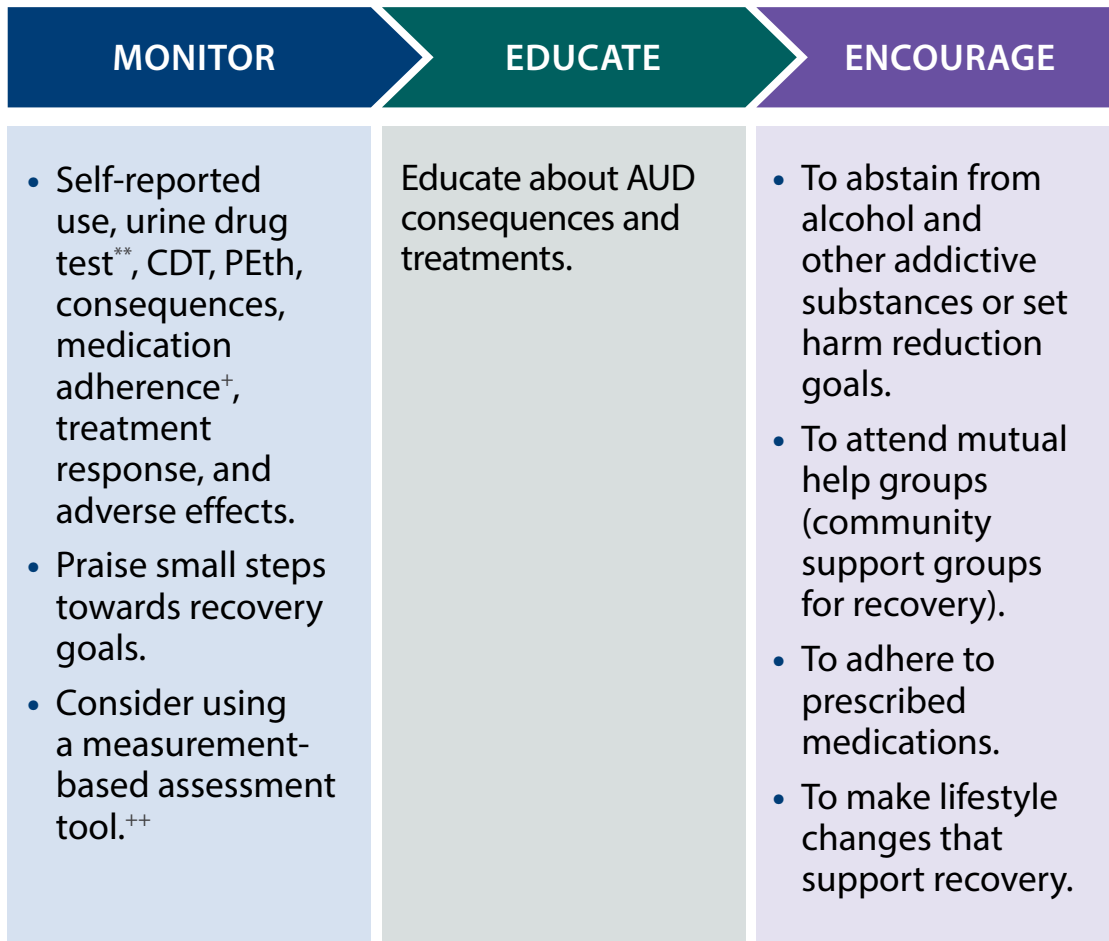
**Figure 7. AUD Treatment in Primary Care Leads to Greater Rates of Treatment Engagement and Reductions in Heavy Drinking<sup>51</sup>**



Management of AUD with pharmacotherapy in the primary care or general mental health setting should include medical management.

- Structured psychosocial intervention designed to be delivered by a medical professional (e.g., physician, nurse, physician assistant, clinical pharmacist practitioner) and is designed to support evidence-based medication treatment.<sup>24,43,49</sup>

**Figure 8. Components of Medical Management**<sup>24,49\*</sup>



\*Session structure varies according to the patient’s substance use status and treatment adherence; \*\*Ethyl glucuronide, ethyl sulfate (alcohol analytes) can be detected in the urine for 72 hours; +When adherence is inadequate develop a mutually agreed upon adherence plan; ++Example: Brief Addiction Monitor (BAM); CDT = carbohydrate-deficient transferrin; PEth = phosphatidyl ethanol.

Not all patients will agree to stop drinking completely. If they are willing to reduce the amount of alcohol consumed this is a WIN and a positive step towards reducing alcohol-related problems



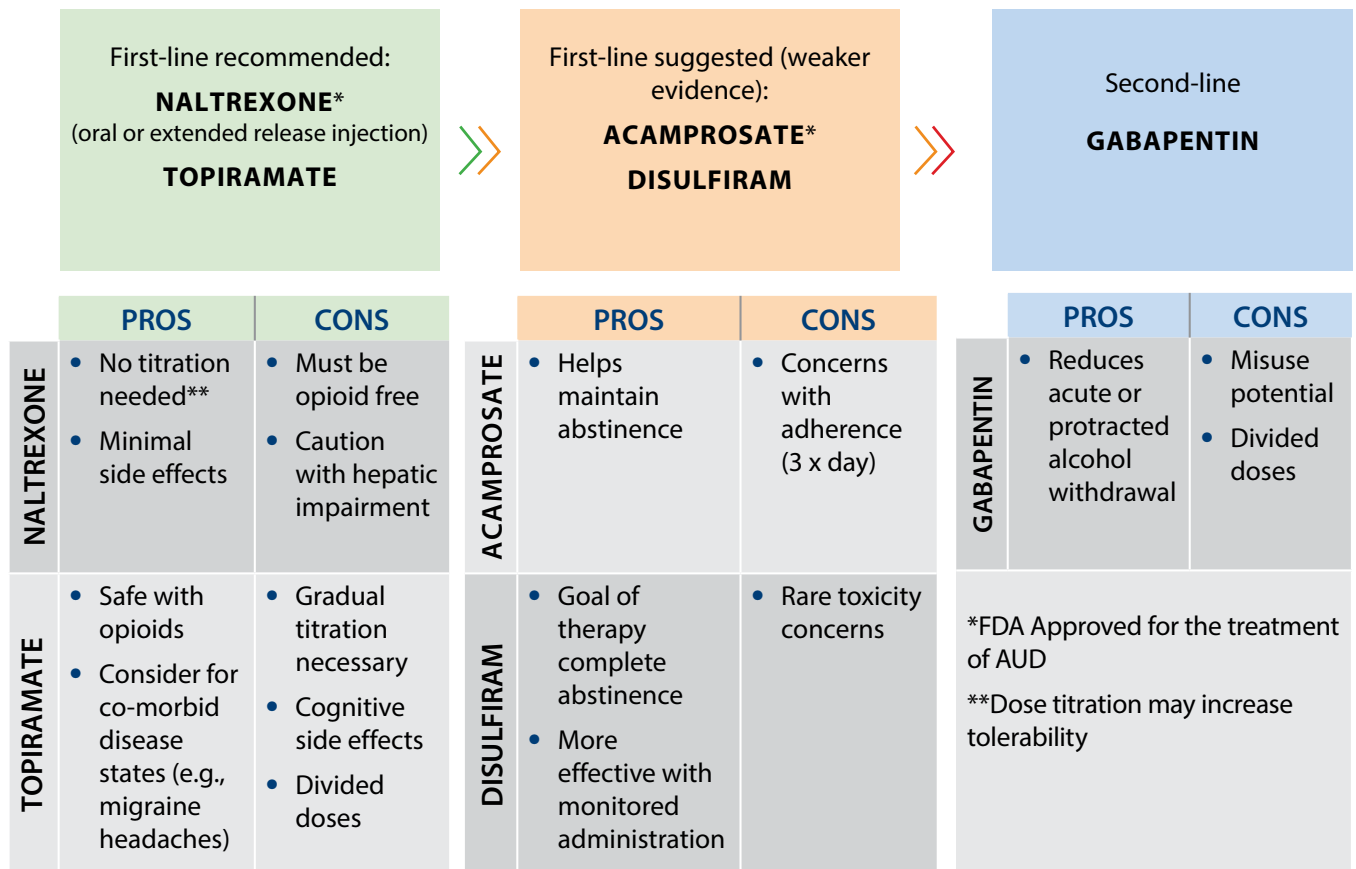
Harm reduction focuses on strategies to reduce negative consequences of substance use. Consequences of substance use can be placed on a continuum from most to least harmful, and the goal is to move along this continuum by actions to reduce harm. Consider a harm reduction approach in individuals with fewer alcohol-related problems.

Work with the Veteran to develop alcohol consumption goals that focus on harm reduction strategies.

**Example strategies:**

- Have a plan to avoid or reduce intoxication
- Measure and document amount of alcohol consumed
- Arrange transportation to avoid driving intoxicated
- Carry condoms to facilitate safer sex

**Figure 9. AUD Pharmacotherapy**<sup>24,49,54</sup>



Offer pharmacotherapy along with addiction-focused medical management to your Veterans with AUD.



## Length of Treatment

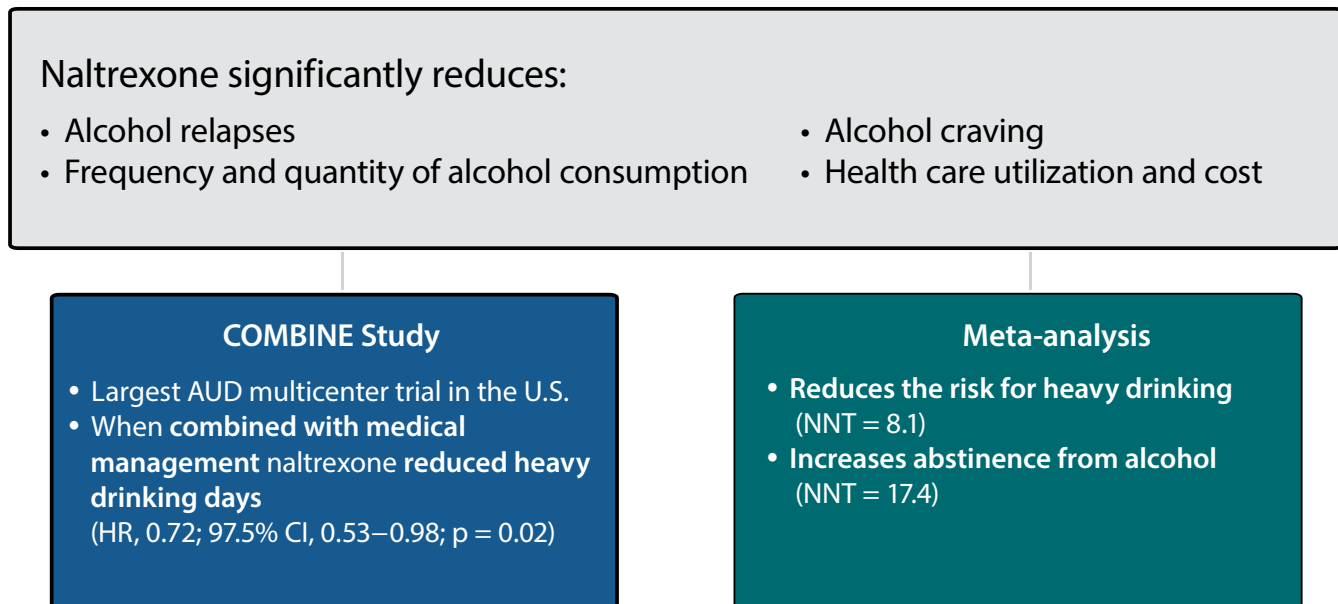
- $\geq 6$  months; continuing pharmacotherapy up to and beyond one year may be necessary<sup>54</sup>
- Greatest risk to return to drinking is during the first 90 days

## First-line recommended pharmacotherapy for AUD

### Naltrexone

Naltrexone is FDA approved and has the largest body of evidence to support its use.<sup>43,49,54–60</sup>

### Figure 10. Naltrexone



Naltrexone is also available as an monthly extended-release injection.

Naltrexone has real-world efficacy, is easy to use, and well tolerated. This medication should be considered the preferred first-line treatment for Veterans with AUD who are not on opioids and do not have severe liver disease.



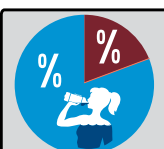


## Topiramate

Topiramate is not FDA approved for AUD but is well-supported by evidence and may reduce heavy drinking and promote abstinence.<sup>43,62</sup> One study found that for reducing heavy drinking days topiramate had a NNT = 5 and when adjusted for adverse events the NNT increased to 7.<sup>63</sup>

Topiramate is at least as effective as naltrexone and acamprosate, and evidence suggests that it may have a greater magnitude of effect.<sup>56,64–68</sup>

Figure 11. Evidence Supports Topiramate Effectiveness at:

	Reducing heavy drinking days
	Promoting abstinence
	Reducing cravings for alcohol

In patients with co-occurring Posttraumatic Stress Disorder (PTSD) and AUD, a small pilot trial found that topiramate:<sup>69</sup>

- Reduced alcohol consumption, alcohol craving
- Reduced PTSD symptom severity—particularly hyperarousal symptoms

**While traditionally the goal of treating AUD was abstinence, medications like naltrexone and topiramate that reduce the amount of alcohol consumed can lead to substantial reduction in alcohol-related problems.**<sup>70</sup>



## First-line suggested pharmacotherapy for AUD

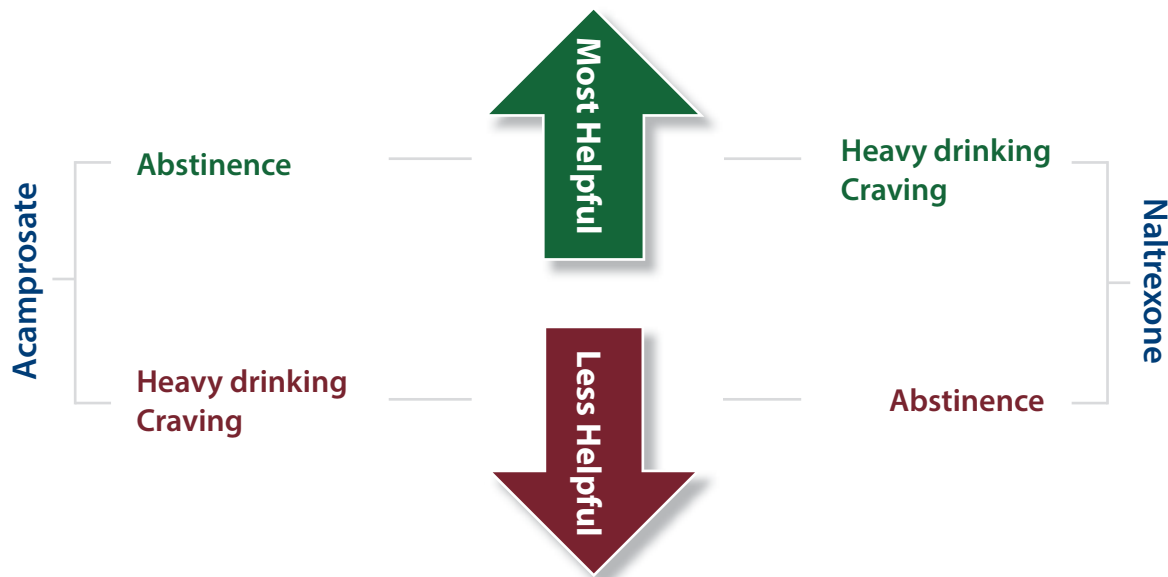
### Acamprosate

An effective option for maintaining abstinence.<sup>43,56,58,71-74</sup>

- Improved abstinence rates when used in combination with psychotherapy (NNT = 9)<sup>74,75</sup>
- The risk of individuals returning to any drinking at 6 months is significantly lower than placebo (RR = 0.83, 95% CI = 0.78–0.89)<sup>58</sup>

### Naltrexone vs. Acamprosate

Figure 12. When are These Medications Most Helpful?<sup>56</sup>



Naltrexone has a significant effect on the prevention of heavy drinking and to a lesser extent the maintenance of abstinence. Acamprosate supports abstinence; it does not influence alcohol consumption after the first drink.

### Disulfiram

Disulfiram supports abstinence by creating an adverse physical reaction in which alcohol consumption is quickly followed by adverse effects (e.g., nausea, vomiting, headache, flushing). Disulfiram has been found to be most effective with **monitored administration**.<sup>76-79</sup>

Disulfiram should only be used if:<sup>43,80</sup>

- The patient is committed to a goal of complete abstinence from alcohol and is highly motivated and cognitively intact
- Veteran must be abstinent at least 24 to 48 hours before disulfiram is started



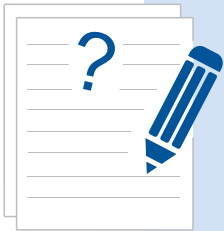
For motivated and informed patients, disulfiram can be an effective part of their recovery program, especially if there is monitored administration.<sup>43,76,81</sup>

## Second-line pharmacotherapy for AUD

### Gabapentin

When first-line pharmacotherapy for AUD is not effective or is contraindicated then Gabapentin can be considered as second-line treatment option for patients with AUD.<sup>43</sup> It has been shown to:<sup>43,82-88</sup>

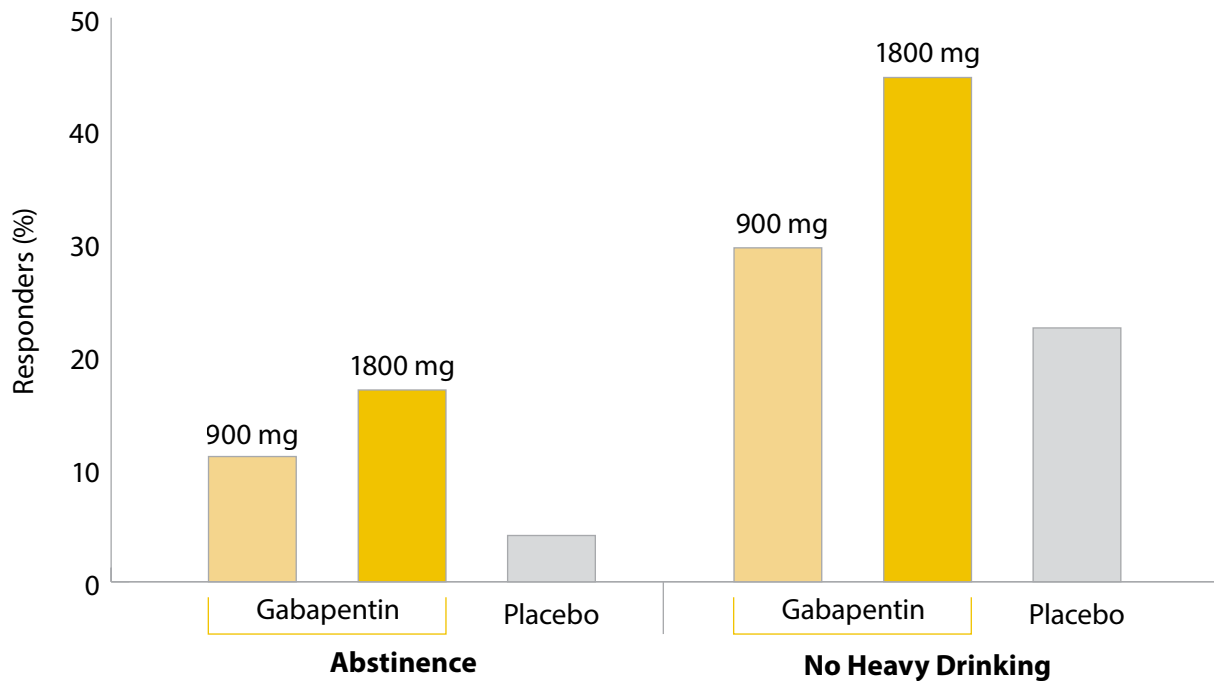
- Reduce heavy drinking
- Improve abstinence to a lesser extent
- Improve sleep
- Reduce acute or protracted alcohol withdrawal symptoms



#### Did you know?

Gabapentin may be more effective in patients with a history of or current alcohol withdrawal symptoms.<sup>87</sup> A recent study found that individuals with high self-reported alcohol withdrawal symptoms had less relapse to heavy drinking (NNT = 3.1) and more total abstinence (NNT = 2.7) and for those who reported minimal withdrawal symptoms, gabapentin was no different than placebo.<sup>87</sup>

**Figure 13. Gabapentin in a Linear Dose Effect Improved Abstinence and Reduced Drinking<sup>83</sup>**



In this 12-week, double-blind trial (n = 150) significant linear dose effects were reported with abstinence rate, no heavy drinking, cravings, mood, and sleep. These effects were more pronounced in the gabapentin 1800 mg group (abstinence: NNT = 8; no heavy drinking: NNT = 5).

**Table 4. AUD Pharmacotherapy Pearls and Clinical Precautions**

**Recommended First-line Treatment Options<sup>43,69,89,90</sup>**

Drug Name	Usual Dose	Benefits	Contraindications/ Precautions/ Limitations	Side Effects
<b>Naltrexone hydrochloride</b>	<ul style="list-style-type: none"> <li>• 50 mg orally once daily</li> <li>• Starting at 25 mg daily may increase tolerability</li> </ul>	<ul style="list-style-type: none"> <li>• Reducing heavy drinking</li> <li>• Supports abstinence</li> <li>• Abstinence <math>\geq 4</math> days prior to initiation may improve results</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Cannot be used in patients on opioids</b></li> <li>• Patients with physiologic opioid dependence should be opioid-free (including tramadol) a minimum of 7-10 days</li> <li>• Do not use in severe hepatic impairment or acute hepatitis</li> <li>• Should be stopped 48 to 72 hours prior to surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Abdominal cramps</li> <li>• Abdominal pain</li> <li>• Nausea</li> <li>• Headache</li> </ul> <p>(Generally subsides with continued use)</p>
<b>Naltrexone Injectable suspension</b>	<ul style="list-style-type: none"> <li>• 380 mg intramuscular gluteal injection every 4 weeks or once a month</li> </ul>	<ul style="list-style-type: none"> <li>• Same as oral</li> <li>• Injectable suspension</li> </ul>	<ul style="list-style-type: none"> <li>• Same as oral</li> <li>• Clinic administration by nurse</li> <li>• CrCl &lt; 50 mL/min use with caution, no dose adjustment recommended</li> <li>• Kept refrigerated. Allow drug to reach room temperature (about 45 minutes) prior to preparation</li> </ul>	<ul style="list-style-type: none"> <li>• Same as oral</li> <li>• Injection site reactions</li> </ul>

Despite early reports, research has not found increased hepatotoxicity associated with naltrexone when provided at usual doses.<sup>91</sup> CrCl = creatinine clearance; See [Clinical Pearls for Treatment of Alcohol Use Disorder](#) for specific monitoring recommendations.

Drug Name	Usual Dose	Benefits	Contraindications/ Precautions/ Limitations	Side Effects
<b>Topiramate</b>	<ul style="list-style-type: none"> <li>• Initiate: 25 mg/day</li> <li>• Max/target dose: 200 to 300 mg/day divided doses</li> <li>• 5-6 week titration recommended</li> <li>• Do not abruptly discontinue</li> </ul>	<ul style="list-style-type: none"> <li>• Reduces heavy drinking</li> <li>• Promotes abstinence</li> <li>• Concomitantly treat seizure disorder or migraine prophylaxis</li> <li>• Potential benefit in Veterans with AUD and co-occurring PTSD</li> </ul>	<ul style="list-style-type: none"> <li>• Renal impairment and geriatric dosing: CrCl &lt;70 mL/min, use 50% of the usual adult dosage</li> <li>• Caution in patients with history of kidney stones</li> <li>• Caution in use with metformin (increased metabolic acidosis risk)</li> <li>• Use during pregnancy can cause cleft lip or palate</li> <li>• May decrease the serum concentrations of contraceptives and reduce their effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Cognitive/memory impairment</li> <li>• Paresthesia</li> <li>• Weight loss</li> <li>• Headache</li> <li>• Fatigue</li> <li>• Dizziness</li> </ul> <p>(Most side effects are dose dependent and may dissipate over time. If side effects don't improve after 4-6 weeks dose reduction is recommended to improve adherence.)<sup>90</sup></p>

Despite early reports, research has not found increased hepatotoxicity associated with naltrexone when provided at usual doses.<sup>91</sup> CrCl = creatinine clearance; See [Clinical Pearls for Treatment of Alcohol Use Disorder](#) for specific monitoring recommendations.

## Suggested (Weaker Evidence) First-Line Treatment Options<sup>43,89</sup>

Drug Name	Usual Dose	Benefits	Contraindications/ Precautions/ Limitations	Side Effects
<b>Acamprosate</b>	<ul style="list-style-type: none"> <li>• 666 mg orally three times daily</li> </ul>	<ul style="list-style-type: none"> <li>• Increases abstinence</li> <li>• Abstinence <math>\geq</math>4 days prior to initiation may improve results</li> <li>• Can be used safely in liver disease</li> </ul>	<ul style="list-style-type: none"> <li>• Higher pill burden, multiple daily dosing</li> <li>• Renal impairment dosing: <ul style="list-style-type: none"> <li>• CrCl 30-50 mL/min: 333 mg orally 3 times daily</li> <li>• CrCl &lt; 30 mL/min: do not use; Contraindicated</li> </ul> </li> <li>• Reduce dose in patients with low body weight &lt; 60kg</li> </ul>	<ul style="list-style-type: none"> <li>• Diarrhea</li> <li>• Nervousness</li> <li>• Fatigue</li> </ul> <p>(Generally subsides with continued use)</p>
<b>Disulfiram</b>	<ul style="list-style-type: none"> <li>• 250 mg once daily (125-500 mg range; maximum daily dose 500 mg)</li> </ul>	<ul style="list-style-type: none"> <li>• Discourages drinking by causing unpleasant physiologic reaction</li> <li>• May be more effective with monitored administration</li> </ul>	<ul style="list-style-type: none"> <li>• Patient must be abstinent prior to therapy and committed to staying sober</li> <li>• Reaction with alcohol can occur for up to 14 days after last dose</li> <li>• Contraindicated in severe myocardial disease, psychosis, cognitive disorders, Severe hepatic dysfunction</li> <li>• Products containing ethanol could cause disulfiram reaction (e.g., mouthwash)</li> <li>• Metronidazole (risk of disulfiram-like reaction)</li> </ul>	<ul style="list-style-type: none"> <li>• Somnolence</li> <li>• Metallic taste</li> <li>• Headache</li> <li>• <b>Major:</b> Hepatotoxicity, peripheral neuropathy, psychosis, delirium</li> <li>• If alcohol consumed: nausea, vomiting, sweating, headache, disorientation, dyspnea, hypotension, palpitations</li> </ul>

CrCl = creatinine clearance; See [Clinical Pearls for Treatment of Alcohol Use Disorder](#) for specific monitoring recommendations.

## 2nd Line Treatment Option<sup>43,89</sup>

Drug Name	Usual Dose	Benefits	Contraindications/ Precautions/ Limitations	Side Effects
<b>Gabapentin</b>	Initiated at 300 mg at bedtime and titrate to target dose of 1,800 mg per day in divided doses	<ul style="list-style-type: none"> <li>• Reduces heavy drinking</li> <li>• Improves abstinence</li> <li>• Helps with insomnia, and acute withdrawal symptoms</li> <li>• May be more effective in patients with withdrawal symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• Renal dosing if CrCL = 30 to 59 mL/min, 400 to 1400 mg/day given in two divided doses; 15 to 29ml/min give 200 to 700 mg at bedtime; CrCl 15 mL/min give 100 to 300 mg/day given once daily; CrCL &lt; 15 mL/min reduce daily dose in proportion to CrCL</li> <li>• Misuse potential</li> <li>• Use caution with CNS depressants</li> </ul>	<ul style="list-style-type: none"> <li>• Somnolence/fatigue</li> <li>• Dizziness</li> <li>• Ataxia</li> <li>• Peripheral edema</li> <li>• Weight gain</li> </ul>

CrCl = creatinine clearance; See [Clinical Pearls for Treatment of Alcohol Use Disorder](#) for specific monitoring recommendations.

### Combining Different Pharmacotherapies

There is little evidence to support combination pharmacotherapy. Short-term combinations may be used if patients experience a poor response to adequate trials of monotherapy combined with psychosocial interventions.<sup>49,92-96</sup> In addition, medications like gabapentin may be used to manage residual withdrawal symptoms like insomnia.<sup>92</sup>

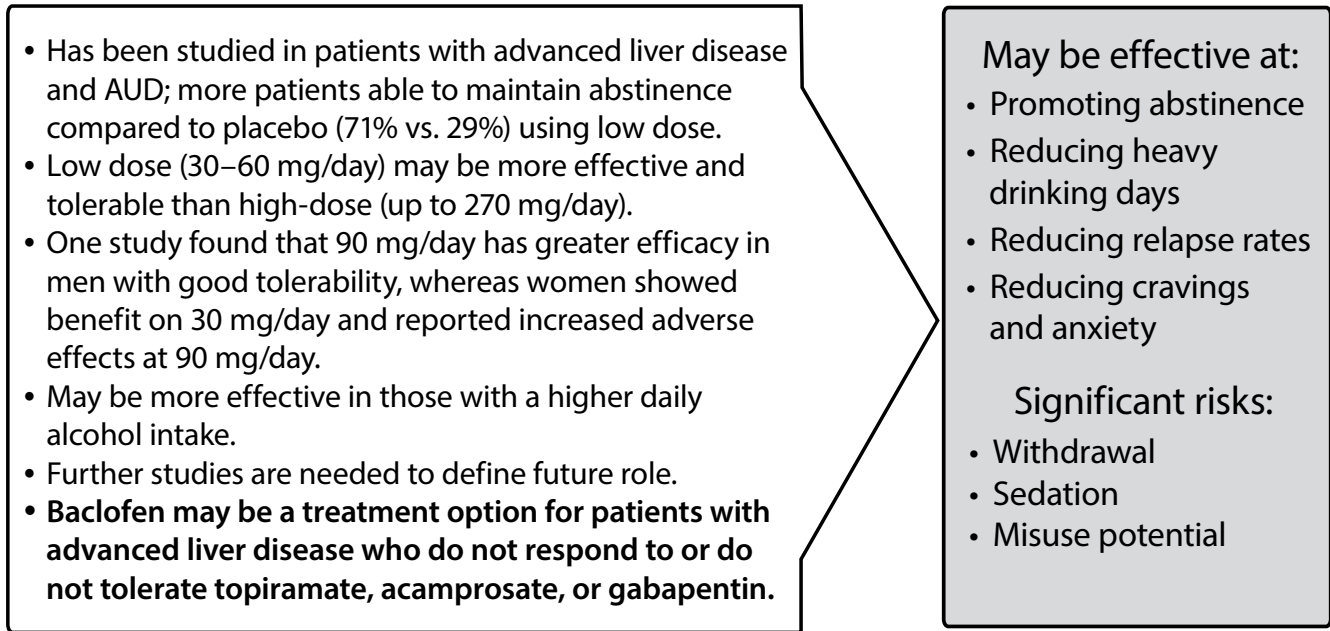
### Other Pharmacotherapy Options Still Under Investigation

Several trials have looked at other pharmacotherapy modalities for the treatment of AUD including: baclofen, ondansetron, and varenicline.

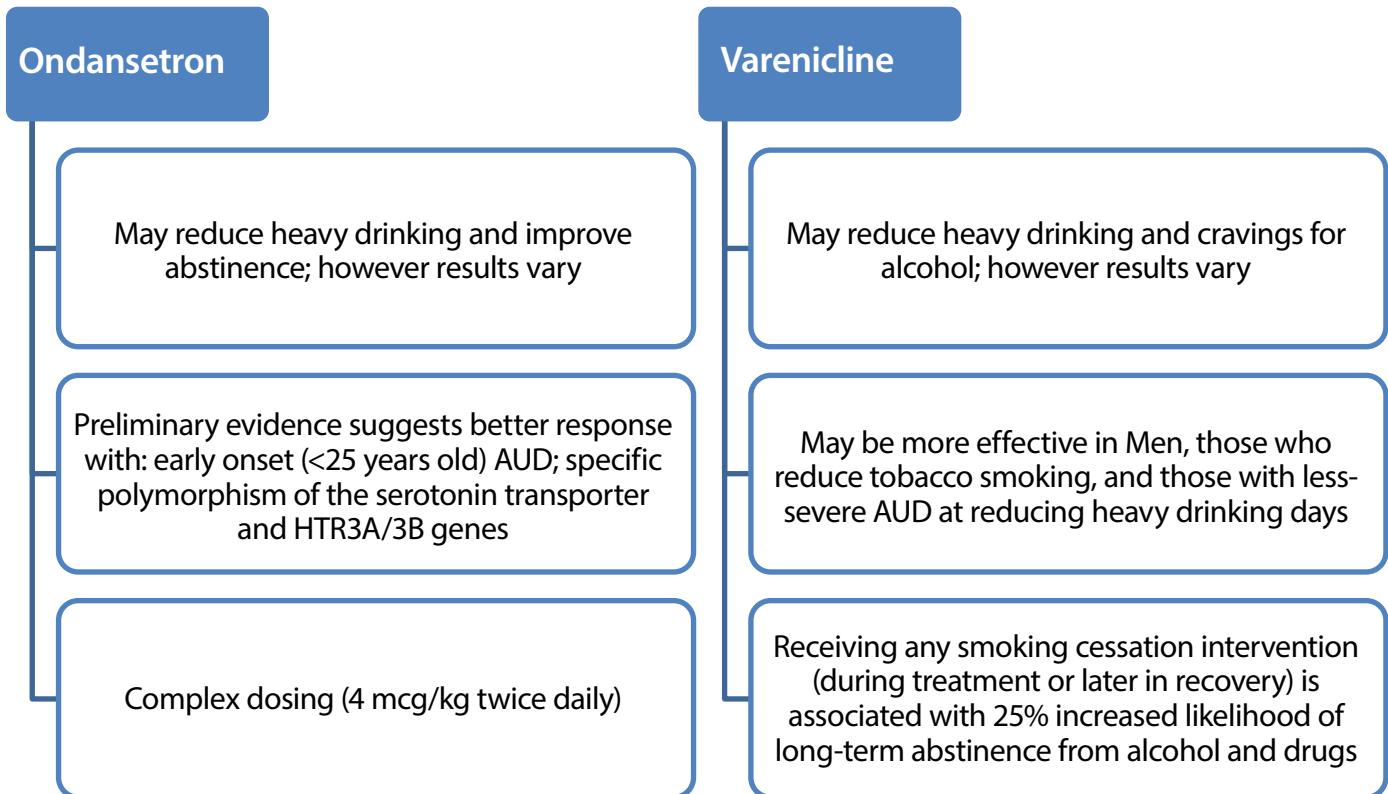
Consideration of these agents should only occur in patients for whom first-line and second-line pharmacotherapy is contraindicated or ineffective. These medications could be useful as adjunct agents in patients with comorbid AUD and disease states for which these agents are FDA-approved.



**Figure 14. Baclofen**<sup>43,97–109</sup>



**Figure 15. Additional Medications Studied**<sup>99, 110–121</sup>



# Psychosocial and Behavioral Interventions

For Veterans with alcohol use disorder it can be useful to offer, when available, one or more time limited psychosocial or behavioral interventions (Figure 16).<sup>43,46</sup>

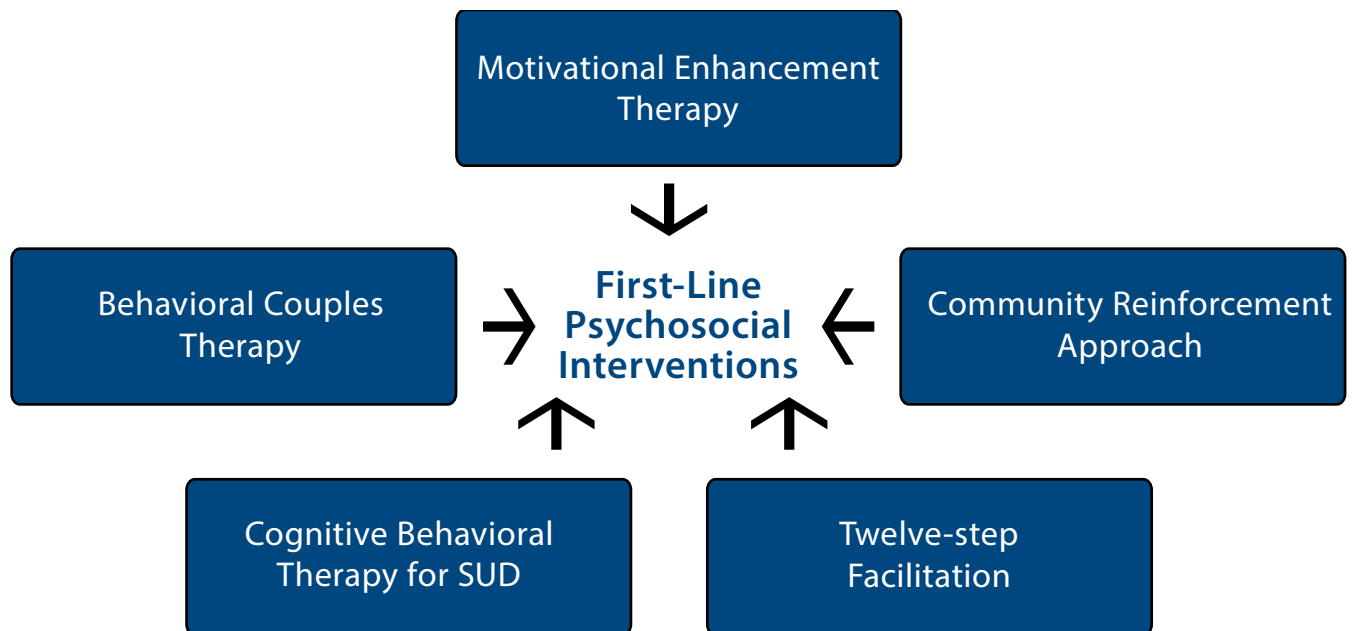
Psychosocial interventions:

- Improve outcomes of consumption, adherence and recovery
- When combined with pharmacotherapy may enhance treatment adherence and address problems (e.g., skills building) that medications won't address<sup>122</sup>

In addition, encourage active involvement in group mutual help programs like Alcoholics Anonymous and SMART recovery.

**Regular contact with the Veteran can positively influence treatment adherence and outcomes.**

**Figure 16. Effective Psychosocial Interventions<sup>43</sup>**



.....  
Encourage Veterans with AUD to engage in available, psychosocial counseling, behavioral interventions, and mutual help programs.  
.....

# Assessing Treatment Effectiveness

Provide periodic monitoring of the Veteran's response to treatment. Ask about alcohol use and discuss Veteran's recovery goals. Consider using standardized and valid measurement instruments (e.g., Brief Addiction Monitor) and alcohol biomarkers (e.g., Carbohydrate-Deficient transferrin), whenever possible.

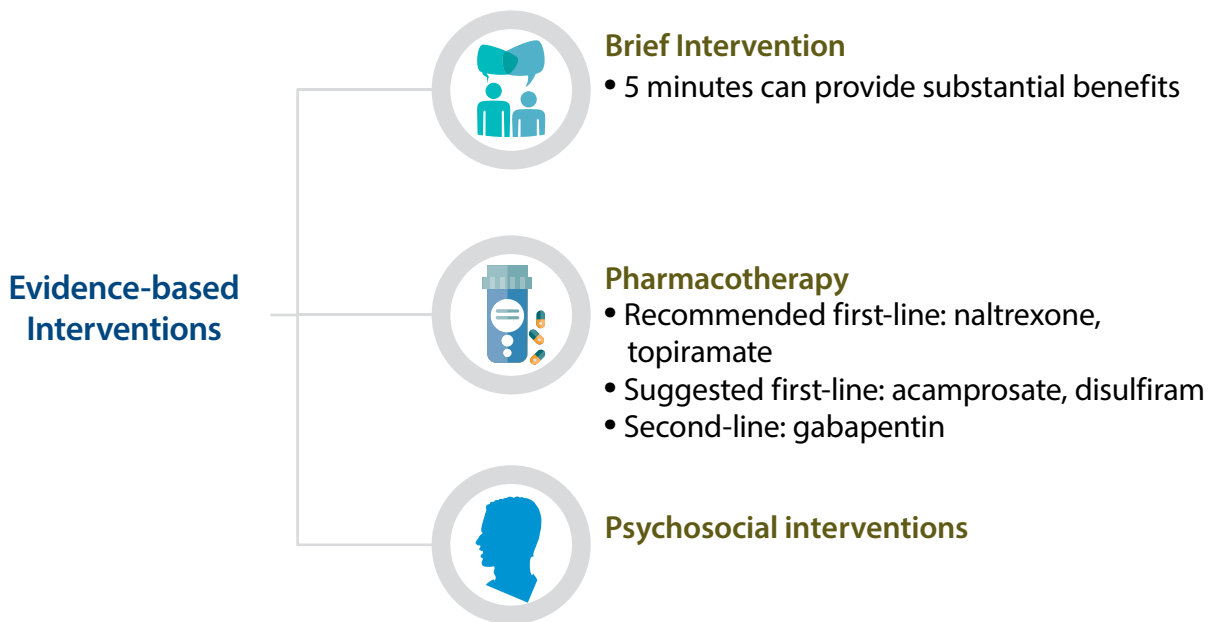
**Monitor alcohol use and recovery goals to optimize treatment outcomes at periodic predetermined intervals.**

## Ask about:

- Current alcohol use
- Cravings
- Medication side effects
- Emerging symptoms
- Alcohol biomarkers

## Summary

There are a variety of effective evidence-based pharmacotherapy and psychosocial interventions available to treat AUD.



All VA clinicians have the opportunity to be advocates for our Veterans' recovery from unhealthy alcohol use. Identifying alcohol-related risk and encouraging Veterans to obtain treatment for AUD is the right investment of VA resources.

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## We thank our expert reviewers:

Veldana Alliu, PharmD, BCPS  
Alison M. Dailey, PharmD  
Dominick DePhilippis, PhD  
Mathew A. Fuller, PharmD, BCPP  
Laura Miller, MD  
Hugh Myrick, MD  
Andrew J. Saxon, MD  
Tracy L. Simpson, PhD

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## Textual Equivalents for Graphic Diagrams

**Figure 5:** This figure presents a brief overview of recommended treatments by AUDIT-C score from low to high risk. Patients who practice abstinence or present a low-risk of drinking, AUDIT-C of 0 to 3, are recommended health promotion.

Patients with a moderate-risk of drinking, AUDIT-C of 4 to 5, are recommended brief intervention. Patients with an AUDIT-C Score greater than or equal to 4 are also at risk of decreased medication adherence.

Patients at high-risk of drinking, AUDIT-C of 6 to 7, are recommended to brief interventions with or without pharmacotherapy and psychosocial interventions.

Patients with an AUDIT-C Score greater than or equal to 6 are also at risk for increased GI conditions and poorer diabetes mellitus self-management.

Patients at severe-risk of drinking fall into two AUDIT C ranges: 8 to 9 and 10 to 12.

Patients with an AUDIT-C range of 8 to 9 are recommended pharmacotherapy with or without psychosocial interventions and specialty care management. Patients with an AUDIT-C Score greater than or equal to 8 are also at increased rates of hospitalizations, fractures, and prolonged postoperative hospital stays.

Lastly, patients in the highest AUDIT-C range of 10-12 are recommended specialty care management. This group is also at increased risk of trauma and mortality.

**Figure 12:** This graphic depicts the differences between acamprosate and naltrexone effectiveness for the treatment of alcohol use disorder. Up arrow shows that naltrexone has a significant effect on the prevention of heavy drinking and cravings and acamprosate is most helpful with abstinence. The down arrow shows that naltrexone is less helpful with maintenance of abstinence and acamprosate does not influence alcohol consumption after the first drink.

## **U.S. Department of Veterans Affairs**

This reference guide was created to be used as a tool for VA providers and is available to use from the Academic Detailing Service SharePoint.

These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

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