Alcohol use disorder: Treatment overview

AUTHOR: Stephen R Holt, MD, MS, FACP
SECTION EDITOR: Andrew J Saxon, MD
DEPUTY EDITOR: Michael Friedman, MD

All topics are updated as new evidence becomes available and our peer review process is complete.

Literature review current through: **Oct 2023.**
This topic last updated: **Mar 22, 2022.**

INTRODUCTION

Alcohol use disorders are the most prevalent of all substance use disorders worldwide. The single year prevalence globally has been estimated to be over 100 million individuals [1]. Additionally, nearly 3 million deaths (5.3 percent of all deaths globally) have been attributed to alcohol-related mortality in a single year [2].

Psychosocial interventions are effective in the treatment of alcohol use disorder; however, as many as 70 percent of individuals return to heavy drinking after psychosocial treatment alone [3-6]. Several medications can be used to treat alcohol use disorder, leading to reduced heavy drinking and increased days of abstinence [7].

This topic describes our approach to selecting treatment for alcohol use disorder. The epidemiology, pathogenesis, clinical manifestations, course, assessment, and diagnosis of risky drinking and alcohol use disorder are reviewed elsewhere. The pharmacologic and psychosocial interventions for alcohol use disorder are also reviewed elsewhere.

- (See "Risky drinking and alcohol use disorder: Epidemiology, clinical features, adverse consequences, screening, and assessment".)
- (See "Alcohol use disorder: Psychosocial management".)
- (See "Substance use disorders: Training, implementation, and efficacy of treatment with contingency management" and "Substance use disorders: Principles, components, and monitoring during treatment with contingency management".)
- (See "Alcohol use disorder: Pharmacologic management".)

BEFORE INITIATING TREATMENT

Establish treatment goals — Abstinence remains the primary goal of treatment of alcohol use disorder and is associated with better treatment outcomes. Reduction of heavy drinking (fewer episodes of five or more drinks on any day for men and four or more drinks for women) or of higher to lower risk levels of use may be acceptable alternatives for patients who lack readiness to quit [8,9]. However, even lower levels of consumption can be problematic for some individuals.

Individuals not motivated for change — Some patients may not be ready to change or to begin treatment. The care team should expect and address this circumstance as normal, and address it with ongoing contact and motivational interviewing. (See 'Selecting psychosocial interventions' below and "Substance use disorders: Motivational interviewing".)

Evaluate for and treat alcohol withdrawal — Evaluation for the potential of alcohol withdrawal or symptoms of alcohol withdrawal is important as very few individuals who are experiencing withdrawal symptoms will carry through with treatment of alcohol use disorder. In some cases, either patient history suggesting a high risk (eg, history of withdrawal), or signs and symptoms of withdrawal may be evident. In these cases, treatment of withdrawal is necessary prior to addressing alcohol use disorder. Even mild symptoms of withdrawal, or fear of them, may be a driving force in keeping the patient from cutting down or quitting.

Individuals who are drinking daily are at risk for alcohol withdrawal upon cutting down their use of alcohol. Individuals who have recently stopped alcohol use are also at risk for alcohol withdrawal. A full assessment and, if indicated, subsequent treatment of alcohol withdrawal should be done prior to further treatment of alcohol use disorder. (See "Alcohol withdrawal: Epidemiology, clinical manifestations, course, assessment, and diagnosis", section on 'Assessment' and "Alcohol withdrawal: Epidemiology, clinical manifestations, course, assessment, and diagnosis", section on 'Clinical presentation and course'.)

Evaluate severity of alcohol use disorder — The treatment of alcohol use disorder is driven by severity of the disorder. In the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), patients are assigned to a severity subtype (mild, moderate, severe) based on the number of symptoms present (table 1). Individuals with two to three symptoms are considered to have mild alcohol use disorder, individuals with four or five symptoms are considered to have moderate alcohol use disorder, and in individuals with six or more symptoms, severe alcohol use disorder is diagnosed. (See "Risky drinking and alcohol use disorder: Epidemiology, clinical features, adverse consequences, screening, and

assessment", section on 'Diagnosis' and "Alcohol use disorder: Psychosocial management" and 'Initial treatment' below and "Alcohol use disorder: Pharmacologic management", section on 'Indication for pharmacotherapy'.)

Comorbid conditions and specific patient populations — In addition to severity of the alcohol use disorder and treatment goals, patient comorbidity can influence the initial choice of treatment for patients with alcohol use disorder. For example, in an individual with hepatic disease the initial choice of medication will be affected if liver enzymes are elevated. In a patient taking clinically indicated, prescribed opioids, the initial choice of medication will take into account the presence of opioids. (See "Alcohol use disorder: Pharmacologic management", section on 'Specific patient populations'.)

INITIAL TREATMENT

Limited research data are available on comparative effectiveness and predictors of response to inform clinicians' selection among treatments for alcohol use disorder. The suggestions that follow are based on these data, our clinical experience, and are consistent with 2018 practice guidelines developed by the American Psychiatric Association in the United States [10].

Mild disorder — For patients with mild alcohol use disorder, we suggest initial treatment with one or more psychosocial interventions such as brief motivational counseling and mutual help groups rather than with medication. Clinical trials have not adequately determined the efficacy of medication for a mild disorder. (See 'Selecting psychosocial interventions' below.)

Moderate or severe disorder — For patients with a moderate or severe alcohol use disorder, we favor first-line treatment with a combination of medication and structured, evidence-based psychosocial interventions rather than either treatment individually. In our clinical experience the combination can improve outcomes beyond those of either intervention alone.

While clinical trials support the efficacy of psychosocial interventions compared with controls [11] and medications compared with placebo [10,12], the evidence is mixed from clinical trials as to whether combining medication with a structured psychosocial intervention leads to better outcomes for alcohol use disorder compared with either modality as monotherapy [13,14].

In patients with moderate or severe disorder who do not want to pursue medication treatment we suggest initial treatment with a structured, evidence-based psychosocial intervention. Additionally, medication should not be withheld for individuals who prefer, despite clinician recommendations to the contrary, to receive “medication only” for alcohol use disorder [13].

Selecting psychosocial interventions — All patients with alcohol use disorder should be encouraged to participate in some type of psychosocial treatment, most commonly, alcohol counseling, and in addition to treatment, participation in a mutual help group. Clinical trials have not found any one intervention to be superior to the others. However, we favor structured evidence-based psychosocial interventions over psychoeducation for people with a moderate to severe disorder; brief, less structured (but also evidence-based) interventions may be sufficient for a mild disorder.

The efficacy of these interventions in alcohol use disorder is unclear; randomized trials have multiple methodologic problems, and heterogeneous outcomes [15]. In addition, the contents of the interventions can vary. These interventions and studies regarding their efficacy are discussed separately. (See "Alcohol use disorder: Psychosocial management".)

In selecting psychosocial interventions, the clinician should make the patient aware of the options and their best clinical advice and allow the patient to choose among them. Typically, individuals will choose among these treatments based on availability and cost. In our clinical experience, however, these interventions can help many patients maintain abstinence. An algorithm describes our approach to psychosocial treatment of alcohol use disorder (algorithm 1).

In our clinical experience, individual patient factors may also favor a certain approach, such as:

- For patients who lack motivation for treatment or change, motivational interviewing can be a useful initial intervention. Alcohol use disorder directly affects the part of the brain involved in reward and decision making related to those rewards. As a result, counseling that addresses motivation to change drinking and to engage in treatment is particularly important for those assessed as having low motivation to change. Brief motivational alcohol counseling can offer a starting point for patients with a mild alcohol use disorder. For patients with unhealthy drinking that falls short of an alcohol use disorder, brief talks with a clinician can increase motivation. (See "Alcohol use disorder: Psychosocial management", section on 'Motivational interviewing' and "Substance use disorders: Psychosocial management", section on 'Motivational interviewing' and "Alcohol use disorder: Psychosocial management", section on 'Brief intervention'.)

- For patients with the capability and motivation, we favor interventions known as medical management, combined behavioral intervention, or a combination of both. Medical management is a manual-based therapy that combines brief education about alcohol use disorder, discussion of medication adherence, encouragement to participate in mutual help groups, and follow-up checks on drinking and its consequences. Combined

behavioral intervention combines elements of cognitive-behavioral therapy, 12-step facilitation, motivational interviewing, and support system involvement. (See "Alcohol use disorder: Psychosocial management".)

- For patients with limited cognitive abilities, 12-step facilitation encouraging the use of mutual help groups or contingency management approaches may be more useful. (See "Alcohol use disorder: Psychosocial management", section on 'Interventions'.)

- For patients with substantial social needs, a multimodal substance use disorder (SUD) intervention that includes the provision of social services can be helpful. An example is the community reinforcement approach. (See "Alcohol use disorder: Psychosocial management".)

- For patients with alcohol use disorder who have an involved partner or family member, couples or family therapy can address relationship and family problems stemming from the alcohol use disorder. Additionally, a family member can provide direct support to the patient, for example, by supervising the patient's taking of medication. Behavioral couples therapy (with an individual who has an SUD and a significant other without an SUD) has been shown to reduce drinking in multiple clinical trials [16-20]. (See "Alcohol use disorder: Psychosocial management" and "Substance use disorders: Psychosocial management", section on 'Couples and family therapies'.)

Medication treatment — For patients with a moderate or severe alcohol use disorder we favor treatment with a combination of medication and evidence based psychosocial interventions. (See "Substance use disorders: Psychosocial management", section on 'Behavioral medical management' and "Alcohol use disorder: Pharmacologic management", section on 'Indication for pharmacotherapy'.)

For most newly diagnosed patients with moderate or severe alcohol use disorder we suggest first-line treatment with naltrexone. Naltrexone is our preferred choice due to its once daily dosing and the ability to begin treatment for alcohol use disorder while the individual is still actively drinking. Naltrexone should be avoided in individuals using opioids or prescribed opioids for pain management as well as for patients with acute hepatitis or hepatic failure. (See "Opioid use disorder: Pharmacologic management" and "Alcohol use disorder: Pharmacologic management", section on 'First-line treatment'.)

Acamprosate is a reasonable alternative first-line treatment in patients who have a contraindication to naltrexone.

Medications used in the treatment of alcohol use disorder can be found on the associated table (table 2).

An algorithm describes our approach to medication management of alcohol use disorder (algorithm 2).

EVALUATING RESPONSE TO TREATMENT

Evaluation of response to treatment is an important component of the follow-up assessment. The assessment of treatment response or failure is, in most cases, a process that requires monitoring over a period of weeks to months.

Defining response — Response to treatment is based on goals initially established. If the goal of treatment is reduction of alcohol frequency, the pattern of reduction may not be seen for several weeks. This is particularly relevant when the baseline pattern of drinking is less than daily. Additionally, if the goal of treatment is sustained abstinence, one would not conclude that a treatment has failed based on one use of alcohol ("lapse").

However, in an individual whose goal is abstinence, a pattern of repetitive lapses signals that the current treatment is ineffective and needs to be re-evaluated. In another individual whose goal is to lessen the weekly frequency of drinking three drinks per night to two, improvement in the frequency that falls short of the goal (ie, cutting back from six nights per week to four nights per week repetitively instead of two nights per week) is a sign of inadequate response. In this case, reassessment of the treatment and consideration of increasing psychosocial support or changing medication is indicated.

Monitoring — Toxicology testing is less commonly done in treatment of alcohol use disorder than it is when treating patients with other substance use disorders. However, in some cases, for example in an individual who drinks daily and has a goal of abstinence, it can be done weekly. The testing interval can be lengthened as the treatment progresses if response to treatment is favorable. Testing can be skipped if the patient reports use or heavy drinking. Tests we use to assess treatment progress include:

- Urine ethyl glucuronide testing can identify recent consumption, though there are false positives related to other exposures to alcohol (eg, hand sanitizer) [21,22]. We typically use this test on a weekly basis for individuals who have abstinent goals.

- Phosphatidylethanol testing [23] is a whole blood alcohol biomarker, highly specific for recent alcohol use, purported to measure alcohol consumption over the preceding two to

three weeks. While it correlates well with self-reported alcohol use, it is probably best used to confirm abstinence over a period of several weeks, rather than as a measure of changes in alcohol consumption.

- Carbohydrate deficient transferrin and gamma-glutamyl-transferase can be useful for detecting changes in heavy drinking in patients who have elevated values at baseline. In these individuals, levels can be monitored during treatment; a decrease in level represents a decrease in regular heavy drinking. While gamma-glutamyl transferase is nonspecific, carbohydrate deficient transferrin is specific. However, neither test is particularly sensitive and neither can be used to definitively confirm the absence of drinking. Gamma-glutamyl-transferase is less expensive and more widely available [21].

- Urine toxicology testing can only detect recent use (ie, in the last 72 hours); it cannot distinguish heavy from light use nor does it provide information about symptoms of alcohol use disorder.

Laboratory tests and devices used to detect alcohol consumption are reviewed separately. (See "Risky drinking and alcohol use disorder: Epidemiology, clinical features, adverse consequences, screening, and assessment", section on 'Laboratory evaluation'.)

MANAGEMENT OF PATIENTS WITH ROBUST RESPONSE OR IN REMISSION

Individuals with alcohol use disorder who maintain abstinence or experience an adequate reduction in heavy drinking should continue psychosocial treatments for at least six months and ideally for 12 months. Medication treatment should ideally be continued for at least a year, as this is a duration of time associated with a lower risk of recurrence.

We typically follow individuals on a weekly basis for the first month in order to monitor adherence to and response to medications and review side effects of medications. If the patient continues to meet the stated treatment goal at that point, we usually see patients every two weeks and eventually monthly while advising the individual to continue with prescribed medication and attending psychosocial treatments.

Individual factors to consider when deciding on treatment duration include the patient's risk of recurrence, experience of side effects, and their perceived risk and preferences regarding the decision. Treatments can be made less frequent or medications removed as per patient preference with monitoring for any craving or return to use.

The longer remission (abstinence or reduction to low-risk use) is maintained, the lower the risk of returning to heavy drinking or recurrence of alcohol use disorder. Studies have found greater stability after one, three, and five years or more.

Just as for any chronic or recurring condition, clinician-patient communication should continue after acute treatment for alcohol use disorder has been completed, even during prolonged periods of abstinence, with its frequency and intensity adjusted in accord with the patient's clinical status. (See "Continuing care for addiction: Components and efficacy".)

STRATEGIES FOR INADEQUATE RESPONSE

The general strategy for patients who do not maintain abstinence or an adequate reduction in heavy drinking with initial treatment for alcohol use disorder is to increase the intensity of existing psychosocial interventions and change in medications or dosing may be appropriate.

Psychosocial strategies — For a patient participating in a 12-step group and psychoeducational alcohol counseling, for example, current psychosocial treatment and 12-step involvement, subject to availability, can be:

- Increased in frequency (eg, the number of groups per week)
- Increased in level of care (eg, from outpatient to day treatment)
- Supplemented with a structured, evidenced based psychosocial intervention (if not already participating) or addition of a different modality (eg, contingency management, couples therapy)

For example, if an individual with alcohol use disorder is initially treated with outpatient weekly group and individual alcohol counseling (with participation in a mutual help group) but continues to drink regularly, the patient can be stepped up to an intensive outpatient program. If the increased counseling and support groups are not effective in reaching the goals, a partial hospital program should be considered. Additionally, other evidence-based interventions such as contingency management, where available, can be added to preexisting group treatment. (See "Substance use disorders: Principles, components, and monitoring during treatment with contingency management" and "Substance use disorders: Training, implementation, and efficacy of treatment with contingency management".)

As with the selection of initial treatment, there are few efficacy data to guide the choice of subsequent treatment, among specific interventions or general categories of intervention (psychosocial treatments, medication, or combined modalities). The choice among them can be made on the basis of treatment availability and patient preference.

Medication strategies — For patients who haven't responded adequately to initial medical therapy, options include dose adjustments and adding or switching medications.

Dosing changes — Clinicians will often try a higher dose of medication if a lower dose does not reduce drinking sufficiently. A plausible rationale for this practice is that a higher dose might compensate for missed doses. Additionally, a higher dose may have a greater perceived effect by an individual patient. However, trials have not found that higher doses have superior efficacy. In one small study, a higher level of beta-naltrexol (a metabolite of naltrexone) correlated with less alcohol craving [24]. This finding provides a rationale for using higher dose of naltrexone in patients with persistent craving. (See "Alcohol use disorder: Pharmacologic management", section on 'Dose adjustments'.)

Medication changes — In patients who have an inadequate response to the first-line treatment for alcohol use disorder, or in individuals who have a contraindication to naltrexone (eg, actively using opioids or prescribed opioids for pain management, individuals with acute hepatitis or hepatic failure) as the first line of treatment, we suggest acamprosate as the next choice of treatment (table 2). (See 'Medication treatment' above.)

In individuals who have had inadequate response to acamprosate and naltrexone our next pharmacologic choice would be either disulfiram or topiramate depending on comorbidity and availability of psychosocial support. Other medications with evidence of benefit in the treatment of moderate to severe alcohol use disorder are discussed elsewhere. (See "Alcohol use disorder: Pharmacologic management", section on 'Patients requiring additional therapy'.)

Combining medications, particularly those with different mechanisms of action, theoretically offers the possibility of more effective treatment for patients who do not respond adequately to an individual agent. However, empirical data do not support this approach. Medication combinations and augmentation in the treatment of alcohol use disorder are discussed elsewhere. (See "Alcohol use disorder: Pharmacologic management", section on 'Subsequent medication trials'.)

Specific factors and patient populations — A number of clinical factors, including co-occurring conditions, patient motivation and adherence, and treatment goals, can influence the initial and subsequent choice of medication for alcohol use disorder. These factors are discussed in detail elsewhere. (See "Alcohol use disorder: Pharmacologic management", section on 'Specific patient populations'.)

SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Alcohol use disorders and withdrawal".)

SUMMARY AND RECOMMENDATIONS

- **Before initiating treatment** – We typically complete a full assessment and, if indicated, treatment for alcohol withdrawal prior to further treatment of alcohol use disorder. Even mild symptoms of withdrawal, or fear of them, may be a driving force in keeping individuals from cutting down or quitting. (See 'Before initiating treatment' above.)

- **Initial treatment**

  - **For all individuals** – For all patients with alcohol use disorder, regardless of disorder severity or modality of their primary treatment, we suggest alcohol counseling and participation in a mutual help group (**Grade 2C**). These interventions may be sufficient treatment for a patient with a mild alcohol use disorder (algorithm 1). (See 'Selecting psychosocial interventions' above.)

  - **Moderate or severe disorder** – For patients with a moderate or severe alcohol use disorder, we suggest first-line treatment with a combination of medication, structured, evidence-based psychosocial interventions, social services when needed, and mutual help groups rather than any of these modalities individually (**Grade 2C**). Patient access to these interventions can vary and patients differ widely in their preferences. Patients may agree to some, one, or none of these options. (See 'Moderate or severe disorder' above.)

- **Medication treatment** – For most patients treated with medication for moderate to severe alcohol use disorder, we suggest initial treatment with naltrexone versus other medications available. (**Grade 2C**). Acamprosate is a reasonable alternative and is our first choice when there are contraindications to naltrexone (algorithm 2). (See 'Medication treatment' above.)

- **Evaluating response to treatment** – We schedule follow-up visits at regular intervals in order to provide the patient with encouragement and support, to engage family members if helpful, and to monitor the patients for treatment response, side effects, medication adherence, and early signs of relapse, which can lead to serious complications. (See 'Evaluating response to treatment' above.)

- **Management of robust response** – We continue psychosocial treatment for at least six months and ideally for 12 months in all individuals with alcohol use disorder who maintain abstinence or experience an adequate reduction in heavy drinking. We continue medication treatment for at least a year as this is a duration of time associated with a lower risk of recurrence. (See 'Strategies for inadequate response' above.)

- **Strategies for inadequate response** – For individuals who experience an inadequate response to treatment with combined medication and psychosocial interventions, further treatment options include (see 'Strategies for inadequate response' above):

  - An increased frequency or intensity of psychosocial treatment and/or addition of another modality.

  - Changing medication to an alternative agent.

  - Combining psychosocial intervention and medications (if not already done).

ACKNOWLEDGMENT

The UpToDate editorial staff acknowledges Richard Saitz, MD, MPH, FACP, DFASAM (deceased), who contributed to an earlier version of this topic review.

Topic 108891 Version 23.0

→