Primary Care Guide: Medication Management of Alcohol Use Disorder

Overview and Scope of the Problem

Alcohol use disorder (AUD) represents a significant public health crisis in the United States, affecting more than 28.3 million people aged 12 years or older. Despite contributing to approximately 140,000 deaths annually—making it the third leading preventable cause of death—AUD remains dramatically undertreated. Only about 2% of Americans with AUD received pharmacotherapy in 2021, highlighting a critical treatment gap that primary care physicians are uniquely positioned to address.

Treatment for AUD typically combines behavioral interventions with pharmacotherapy. While psychosocial treatments such as motivational interviewing, cognitive behavioral therapy, and mutual self-help groups like Alcoholics Anonymous remain important, this guide focuses specifically on the medication management aspects that primary care physicians can readily implement.

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Initial Assessment for AUD

Key Assessment Components

Assessment in primary care should include:

- **Screening questions** about alcohol use patterns and negative consequences
- **Consumption patterns** and drinking history
- **Longest periods of abstinence** and previous quit attempts
- **History of withdrawal symptoms** or complications
- **Previous treatment attempts** and their outcomes
- **Relevant laboratory findings** and medical complications
- **Review of medical issues** linked to alcohol use

While comprehensive DSM-5 criteria assessment can be performed, brief screening questions are often more practical in busy primary care settings. Identifying significant medical complications linked to alcohol use can serve as a powerful motivator for patients to consider treatment.

Pharmacotherapy Options

Evidence-Based Approach

Based on systematic review and meta-analysis, oral naltrexone (50 mg/day) and acamprosate are supported as first-line pharmacotherapies for alcohol use disorder, used in conjunction with psychosocial interventions.

First-Line Medications

Naltrexone (ReVia, Vivitrol) [Generic Available]

Mechanism of Action: Blocks opioid receptors, reducing the rewarding effects and cravings associated with drinking by decreasing endorphin-mediated euphoria. Helps prevent the first drink from leading to heavier consumption.

Formulations and Dosing:

- **Oral (ReVia):**
  - Start: 25 mg daily for 1-2 days
  - Maintenance: 50 mg daily
  - Higher doses: 75-100 mg daily if no response after 4 weeks
  - Available as 50 mg scored tablets
  - Cost: Inexpensive ($)
- **Injectable (Vivitrol):**
  - Dose: 380 mg intramuscularly (gluteal muscle) every 4 weeks
  - Particularly useful for adherence concerns
  - Cost: Very expensive ($$$$$)

Initiation Guidelines:

- Oral naltrexone can be started while the patient is still drinking
- Injectable naltrexone requires 7-10 days opioid-free before initiation

Monitoring Requirements:

- Baseline liver function tests (ALT/AST), especially if liver disease suspected
- May be used cautiously with mild-to-moderate liver enzyme elevations
- **Contraindicated** in acute hepatitis or hepatic failure (black box warning for dose-related hepatocellular injury)

Common Side Effects:

- Headache, nausea, somnolence, vomiting
- Injection site reactions with Vivitrol (bruising, swelling, tenderness)
- *Tip: Taking with food or reducing dose may lessen nausea*

Contraindications and Precautions:

- **Avoid in:** Hepatic impairment, current opioid use, anticipated need for opioid pain management
- Can precipitate severe withdrawal in opioid-dependent patients
- Patients should carry identification stating naltrexone use

Efficacy Evidence:

- Compared to placebo: Lower rates of return to heavy drinking (NNT = 11)
- Prevents return to any drinking (NNT = 18)
- Injectable form associated with fewer drinking days and heavy drinking days

Clinical Pearls:

- Generally first choice due to tolerability and ease of use
- Injectable form addresses adherence concerns
- Can be combined with other AUD medications
- Combining with gabapentin may augment efficacy

Acamprosate (Campral) [Generic Available]

Mechanism of Action: Promotes balance between excitatory (glutamate) and inhibitory (GABA) neurotransmitters, which are disrupted in alcohol dependence. Decreases cravings.

Dosing:

- **Standard:** 666 mg three times daily (two 333 mg tablets per dose)
- **Alternative:** 999 mg twice daily for improved adherence
- **Renal impairment:** 333 mg three times daily
- Take with meals to improve compliance
- Swallow tablets whole (do not cut or crush)
- Cost: Moderately expensive ($$)

Initiation Guidelines:

- Best for patients who have already achieved abstinence
- May be continued even if patient relapses

Monitoring:

- No routine monitoring required unless clinically warranted
- Monitor for rare but serious effects: acute renal failure, suicidal ideation
- Lower dose and monitoring needed in kidney problems

Common Side Effects:

- Diarrhea (dose-related, usually transient)
- Weakness, peripheral edema, insomnia, anxiety

Contraindications and Precautions:

- **Contraindicated:** Severe kidney impairment
- **Requires dose adjustment:** Moderate kidney impairment
- Generally safe in liver disease (not metabolized by liver)

Efficacy Evidence:

- NNT = 11 to prevent return to any drinking
- Moderate evidence for reducing return to drinking and drinking days
- Less compelling evidence for reducing heavy drinking compared to naltrexone

Clinical Pearls:

- Second choice after naltrexone
- Preferred in patients with hepatic impairment
- May reduce anxiety symptoms
- Direct comparisons with naltrexone show similar efficacy with lower rates of nausea/vomiting

Second-Line and Off-Label Options

Disulfiram (Antabuse) [Generic Available]

Mechanism of Action: Inhibits aldehyde dehydrogenase, causing acetaldehyde buildup when alcohol is consumed. Results in unpleasant reaction (flushing, headache, nausea, vomiting, tachycardia). **Does NOT reduce cravings—purely aversive treatment.**

Dosing:

- Start: 125 mg nightly
- Increase to: 250 mg nightly after several days
- Some patients may need: 500 mg daily for adequate reaction
- Must be abstinent >12 hours before starting
- Cost: Inexpensive ($)

Patient Selection:

- Best for abstinent, highly motivated patients
- Requires caretakers for direct observation of adherence
- **Not suitable for impulsive patients** who may drink despite medication

Monitoring:

- Liver function tests if liver disease suspected

Side Effects:

- Common: Skin eruptions, drowsiness, fatigue, impotence, headache, metallic taste
- Serious but rare: Severe hepatitis (rarely fatal), psychotic episodes, peripheral neuropathy

Contraindications and Precautions:

- **Contraindicated:** Cardiac disease (due to stress of alcohol reaction)
- May worsen psychotic symptoms
- Patients must avoid ALL alcohol forms (topical, oral products, extracts, foods) for 1-2 weeks after stopping
- Patients should carry identification stating disulfiram use

Clinical Pearls:

- Reserved for specific, highly motivated patients with good social supports
- Requires supervised dosing

- Therapy may be needed for months or years
- Limited evidence for efficacy in unsupervised settings

Gabapentin (Off-label for AUD) [Generic Available]

Mechanism of Action: May blunt neuronal hyperexcitability by boosting central GABA.

Dosing:

- Start: 300 mg nightly
- Titrate: Increase to 300 mg BID, then TID over several days
- Continue: Increase by 300 mg increments every few days
- Target: 1200-1800 mg daily divided TID
- Maximum: Up to 3600 mg daily
- Cost: Inexpensive immediate release ($), expensive extended release ($$$$$)

Clinical Uses:

- Effective for mild withdrawal management
- Can continue for long-term AUD treatment
- Helpful for patients with anxiety symptoms

Side Effects:

- Common: Dizziness, somnolence, ataxia, weight gain, dependence potential
- Can cause cognitive dysfunction
- Rare: Multi-organ hypersensitivity, respiratory depression (especially with opioids)

Precautions:

- Can be misused recreationally—risky in patients with opioid use disorder
- Safer in liver disease (not metabolized by liver)

Efficacy:

- Low strength evidence for benefit
- Higher doses (1800 mg/day) more effective than lower doses (900 mg/day)
- Can be combined with naltrexone

Topiramate (Off-label for AUD) [Generic Available]

Mechanism of Action: Blocks glutamate and reduces dopamine, dampening alcohol's reinforcing effects.

Dosing:

- Start: 25 mg nightly
- Titrate: Increase by 25 mg weekly (slower 6-8 week titration recommended)
- Target: Around 300 mg daily divided BID
- Administration: Can give all at night or split BID
- Cost: Inexpensive immediate release ($), expensive extended release ($$$)

Monitoring:

- Baseline and periodic serum bicarbonate (risk of metabolic acidosis)
- Watch for kidney stones, osteomalacia, acute closed-angle glaucoma

Side Effects:

- Common: Somnolence, dizziness, nervousness, ataxia, speech/memory difficulties
- Cognitive effects ("Dopamax"): confusion, cognitive slowing
- Other: Paresthesias, taste abnormalities, anorexia

Drug Interactions:

- Avoid with hydrochlorothiazide (hypokalemia risk)
- Avoid with metformin in metabolic acidosis
- Additive effects with sedatives/alcohol
- May decrease contraceptive levels at higher doses

Efficacy:

- Moderate evidence for reducing drinking days, heavy drinking days, and drinks per drinking day
- Effective in patients still drinking
- Reduces alcohol use regardless of prescription reason

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Medication Selection Strategy

Patient-Specific Factors

Drinking Pattern Considerations:

- **Still drinking:** Oral naltrexone (can start while drinking)
- **Achieved abstinence:** Acamprosate preferred
- **Requires supervised administration:** Disulfiram with motivated patient/caregiver

Comorbidity Considerations:

Liver Disease:

- **Preferred:** Acamprosate, gabapentin (not primarily liver-metabolized)
- **Contraindicated:** Naltrexone (acute hepatitis/failure), disulfiram (rare hepatic failure risk)

Kidney Impairment:

- **Requires dose adjustment:** Acamprosate, gabapentin
- **Use caution:** Naltrexone in severe impairment
- **Contraindicated:** Acamprosate in severe impairment

Anxiety Symptoms:

- **Helpful:** Gabapentin, acamprosate

Opioid Use/Pain Management:

- **Contraindicated:** Naltrexone
- **Risky:** Gabapentin (misuse potential in opioid use disorder)

Psychotic Symptoms:

- **May worsen:** Disulfiram

Adherence Concerns:

- **Injectable option:** Naltrexone (Vivitrol)
- **Supervised administration:** Disulfiram

Distinguishing Withdrawal Management from Long-term Treatment

Acute Alcohol Withdrawal

- **Standard treatment:** Benzodiazepines
- **Alternative:** Phenobarbital
- **Mild outpatient withdrawal:** Gabapentin (can continue for long-term AUD treatment)
- **Assessment tool:** CIWA-Ar scale
- **Setting determination:** Outpatient vs. inpatient based on severity prediction

Note: Withdrawal management is distinct from long-term AUD medication management

Integration with Psychosocial Treatment

Medications are most effective when combined with psychosocial interventions:

- Encourage therapy and counseling sessions
- Support participation in mutual self-help groups (AA, SMART Recovery)
- Help develop personal recovery plans identifying triggers, coping skills, and support systems
- Maintain regular follow-up and monitoring

Addressing MAUD Underuse

Systemic Approaches

- **Recognize opportunities:** Hospitalization as a window for MAUD initiation
- **Reframe AUD:** As chronic disease requiring evidence-based treatment
- **Overcome barriers:** Limited knowledge, risk overestimation, follow-up concerns, stigma
- **Develop protocols:** Especially for hospital discharge
- **Utilize education:** Academic detailing to increase prescriber comfort

Clinical Implementation

- Offer MAUD to all eligible patients
- Consider MAUD initiation during hospitalization (associated with lower readmission risk)
- Use patient education materials and handouts for key medications
- Maintain follow-up protocols for monitoring and support

Key Takeaways

1. **First-line options:** Oral naltrexone (50 mg/day) and acamprosate are evidence-based first choices
2. **Patient-specific selection:** Base medication choice on drinking pattern, comorbidities, and individual factors
3. **Combination approach:** Always integrate with psychosocial interventions
4. **Address barriers:** System-level changes needed to improve MAUD utilization
5. **Chronic disease model:** Treat AUD as a chronic condition requiring ongoing management

Patient education handouts for acamprosate, disulfiram, and naltrexone are available to support clinical implementation.

Bibliography

Carlat DJ, Weaver M, Puzantian T. *Treating Alcohol Use Disorder: A Fact Book.* Carlat Publishing, LLC; 2023.12

McPheeters M, O'Connor EA, Riley S, et al. Pharmacotherapy for alcohol use disorder: a systematic review and meta-analysis. *JAMA*. 2023;330(17):1653-1665. doi:10.1001/jama.2023.1976134

Yaseen W, Mong J, Zipursky J. Sobering perspectives on the treatment of alcohol use disorder. *JAMA Netw Open*. 2024;7(3):e243340. doi:10.1001/jamanetworkopen.2024.33405.