OBJECTIVES

- Recognize risky drinking
- Screen for alcohol use disorder
- Identify inpatient vs outpatient management criteria
- Discuss management of withdrawal syndrome
- management of AUD with medications and behavioral therapies
ALCOHOL USE DISORDERS

BEHAVIORAL HEALTH TRENDS IN THE UNITED STATES: RESULTS FROM THE 2014 NATIONAL SURVEY ON DRUG USE AND HEALTH

8.7 Million Current Alcohol Users

5.3 Million Binge Alcohol Users
(60.6% of Current Alcohol Users)

1.3 Million Heavy Alcohol Users
(24.8% of Binge Alcohol Users and 15.0% of Current Alcohol Users)
What Is a Standard Drink?

12 fl oz of regular beer = 8–9 fl oz of malt liquor
(shown in a 12 oz glass) = 5 fl oz of table wine = 1.5 fl oz shot of distilled spirits
(gin, rum, tequila, vodka, whiskey, etc.)

Each beverage portrayed above represents one standard drink of “pure” alcohol, defined in the United States as 0.6 fl oz or 14 grams. The percent of pure alcohol, expressed here as alcohol by volume (alc/vol), varies within and across beverage types. Although the standard drink amounts are helpful for following health guidelines, they may not reflect customary serving sizes.
# Low-risk drinking limits

<table>
<thead>
<tr>
<th>On any single DAY</th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No more than</strong></td>
<td><strong>No more than</strong></td>
<td><strong>No more than</strong></td>
</tr>
<tr>
<td>4 drinks on any day** AND **</td>
<td>3 drinks on any day** AND **</td>
<td></td>
</tr>
<tr>
<td><strong>No more than</strong></td>
<td><strong>No more than</strong></td>
<td></td>
</tr>
<tr>
<td>14 drinks per week</td>
<td>7 drinks per week</td>
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To stay low risk, keep within BOTH the single-day AND weekly limits.
Helping Patients Who Drink Too Much

A CLINICIAN’S GUIDE
Updated 2005 Edition

Introduction

What's the Same, What's New in This Update

Before You Begin

How to Help Patients Who Drink Too Much: A Clinical Approach

Step 1: Ask About Alcohol Use
Step 2: Assess for Alcohol Use Disorders
Step 3: Advise and Assist

At-Risk Drinking
Alcohol Use Disorders

Step 4: At Followup: Continue Support
AUDIT-C Questionnaire

Patient Name ________________________________ Date of Visit ________________

1. How often do you have a drink containing alcohol?
   □ a. Never
   □ b. Monthly or less
   □ c. 2-4 times a month
   □ d. 2-3 times a week
   □ e. 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day?
   □ a. 1 or 2
   □ b. 3 or 4
   □ c. 5 or 6
   □ d. 7 to 9
   □ e. 10 or more

3. How often do you have six or more drinks on one occasion?
   □ a. Never
   □ b. Less than monthly
   □ c. Monthly
   □ d. Weekly
   □ e. Daily or almost daily
**Scoring**

The AUDIT-C is scored on a scale of 0-12.

Each AUDIT-C question has 5 answer choices. Points allotted are:

- a = 0 points, b = 1 point, c = 2 points, d = 3 points, e = 4 points

- **In men**, a score of 4 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.

- **In women**, a score of 3 or more is considered positive (same as above).

- However, when the points are all from Question #1 alone (#2 & #3 are zero), it can be assumed that the patient is drinking below recommended limits and it is suggested that the provider review the patient’s alcohol intake over the past few months to confirm accuracy.\(^3\)

- Generally, the higher the score, the more likely it is that the patient’s drinking is affecting his or her safety.

**Psychometric Properties**

For identifying patients with heavy/hazardous drinking and/or Active-DSM alcohol abuse or dependence

<table>
<thead>
<tr>
<th></th>
<th>Men(^1)</th>
<th>Women(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥3</td>
<td>Sens: 0.95 / Spec. 0.60</td>
<td>Sens: 0.66 / Spec. 0.94</td>
</tr>
<tr>
<td>≥4</td>
<td>Sens: 0.86 / Spec. 0.72</td>
<td>Sens: 0.48 / Spec. 0.99</td>
</tr>
</tbody>
</table>

For identifying patients with active alcohol abuse or dependence

<table>
<thead>
<tr>
<th></th>
<th>Men(^1)</th>
<th>Women(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 3</td>
<td>Sens: 0.90 / Spec. 0.45</td>
<td>Sens: 0.80 / Spec. 0.87</td>
</tr>
<tr>
<td>≥ 4</td>
<td>Sens: 0.79 / Spec. 0.56</td>
<td>Sens: 0.67 / Spec. 0.94</td>
</tr>
</tbody>
</table>
**AUDIT**

**PATIENT:** Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential, so please be honest.

For each question in the chart below, place an X in one box that best describes your answer.

**NOTE:** In the U.S., a single drink serving contains about 14 grams of ethanol or “pure” alcohol. Although the drinks below are different sizes, each one contains the same amount of pure alcohol and counts as a single drink:

<table>
<thead>
<tr>
<th>12 oz. of beer (about 5% alcohol)</th>
<th>8-9 oz. of malt liquor (about 7% alcohol)</th>
<th>5 oz. of wine (about 12% alcohol)</th>
<th>1.5 oz. of hard liquor (about 40% alcohol)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Questions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you have a drink containing alcohol?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2 to 4 times a month</td>
<td>2 to 3 times a week</td>
<td>4 or more times a week</td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
</tr>
<tr>
<td>3. How often do you have 5 or more drinks on one occasion?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>4. How often during the last year have you found that you were not able to stop drinking once you had started?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>5. How often during the last year have you failed to do what was normally expected of you because of drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>8. How often during the last year have you been unable to remember what happened the night before because of your drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>9. Have you or someone else been injured because of your drinking?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DIAGNOSIS: DSM-V

• Alcohol use disorder
  - Mild (2-3 criteria)
  - Moderate (4-5)
  - Severe (6+)
INPATIENT VS OUTPATIENT MANAGEMENT OF WITHDRAWAL

• Use PAWSS (Prediction of alcohol withdrawal severity scale)
• H/o complicated withdrawal
• CIWA >10
• Medical or psychiatric co-morbidities
• Dehydration/Inability to tolerate oral hydration, electrolyte disturbance,
• Other substance use
• Age
INPATIENT MANAGEMENT

- Benzodiazepines
- Thiamine (before glucose)
- Vital sign monitoring
- Electrolyte repletion, esp. K, Mag and Phos
- Fluid resuscitation
- Adjuncts
OUTPATIENT MANAGEMENT

- No Benzodiazepines
- Anti-convulsants reduce GABA activity
- Gabapentin, valproic acid and carbamazepine
- Gabapentin and CBZ shown to reduce post-withdrawal drinking relative to lorazepam (Malcolm 2002, Myrick 2009)
GABAPENTIN FOR OUTPATIENT MANAGEMENT

- 400mg tid x 2 days
- 300mg tid x 2 days
- 200mg tid x 2 days
- 100mg tid x 2 days

- Can maintain gabapentin 300-400mg tid for 1-2 months
BEYOND “DETOX”

• Alcohol is a messy drug
  – Serotonin
  – Dopamine
  – GABA
  – Glutamate
  – Opioid
NEUROBIOLOGY = OPPORTUNITY

The Cycle of Addiction

- Binge/Intoxication
  - Dorsal Striatum
  - Ventral Tegmental Area
  - Cerebellum

- Preoccupation/Anticipation
  - Prefrontal Cortex (PFC)
  - Hippocampus

- Withdrawal/Negative Affect
  - Basolateral Amygdala (BLA)
  - Central Amygdala (CeA)
PHARMACOTHERAPY FOR ALCOHOL USE DISORDERS

- FDA approved:
  - Naltrexone (Vivitrol)
  - Acamprosate (Campral)
  - Disulfiram (Antabuse)

- AHQR review of 135 studies show naltrexone and acamprosate to be helpful, insufficient evidence to support the use of disulfiram.
- The COMBINE study shows use of both naltrexone and acamprosate are better than one.

- There are several medications used off-label which are helpful
NALTREXONE

• Opioid antagonist
• Blocks the endogenous opioid response and pleasurable effects of alcohol
• Helps with cravings
• Cochrane review of 7,793 patients show it decreases heavy drinking (**NNT=10**) and decreases daily drinking (**NNT=25**)  
• Decreases amount of alcohol consumed
NALTREXONE

- Oral: 50mg daily or 100mg M,W,S
- Injectable: 380mg IM every 4 weeks
- Start 3 days after last drink
- Adverse effects: site reactions, depression (rare), nausea, vomiting, headache, dizziness, fatigue, insomnia
- Contraindications: opioid use or withdrawal, acute hepatitis or liver failure
ACAMPROSATE

- Maintains abstinence in non-drinking patients
- Interferes with glutamate at the NMDA receptor
- Review study of 7,519 patients show NNT=12 for abstinence
ACAMPROSATE

- Oral: 666mg (2x333mg tabs) tid

- Adverse effects: diarrhea, insomnia, anxiety, depression, asthenia, anorexia

- Safe in hepatically impaired patients, reduced dosing in renal patients with a Cr Cl 30-50 and contraindicated in <30
DISULFIRAM

• Inhibits aldehyde dehydrogenase - build up of acetaldehyde causes unpleasant effects
• Does not reduce cravings
• Insufficient evidence to support efficacy but studies show reduced drinking days
• May be more effective with observed consumption
• May be helpful for socially risky situations
• Black box warning
ANTICONVULSANTS

- **Topirimate**: AHQR review shows this decreases number of drinking days, heavy drinking days and amount consumed. Helps with depression and anxiety. + AE
- Dosing: start with 25mg qhs and titrate up to 50-100mg bid
- **Gabapentin**: NNT=8 for return to drinking as well as lower cravings, improved mood and sleep. Dose 1,200-1,800mg day, effects tend to be dose dependent

ANTIDEPRESSANTS

- Helpful in patients with comorbid depression with CBT

- **Fluoxetine** (20-40mg) and sertraline have been studied

- **Sertraline** (200mg) and naltrexone in combination were more effective in sustaining abstinence than either alone
• **Baclofen**: GABA-B receptor agonist; possibly promotes abstinence in more severe UD especially those w/ liver disease (cirrhotic patients?) Dose: 10mg bid

• **Doxazosin and clonidine**: can reduce drinking and craving by stabilizing CNS response to protracted withdrawal and activation. Good for PTSD comorbidity.
PSYCHOSOCIAL TREATMENT

- Project MATCH:
  - Compared CBT, MET and 12 step facilitation for 12 weeks (follow up for 8 years) and all methods were equal and efficacious.

- Low psychiatric co-morbidity and 12 Step facilitation -> higher sobriety
REFERENCES

• NIAAA: drugabuse.gov
• ASAM 2017 Addiction Medicine Review Conference
• https://medicine.med.ubc.ca/files/2015/06/Alcohol-2015.pdf
• Principles of Addiction Medicine.
Thank you!
Join our next session on October 17th on Complementary & Alternative Approaches to Addiction with Dr. Amy de la Garza