Effectiveness of Interventions for Substance Use Disorders

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April 3, 2018
Disclosures

• No financial disclosures or other conflicts of interest.
• Reviewing only FDA-approved medications for substance-use disorders.
Objectives

1. Effectively and efficiently screen for substance use disorders
2. Compare and contrast inpatient versus outpatient treatment programs
3. Understand how and when to prescribe first-line pharmacologic agents for substance use disorders
Screening - SBIRT

When provided by primary care physicians:

- Lessens alcohol consumption
- Reduces hospital days
- Reduces health care costs
- Decreases mortality

Equally effective for adolescents, adults, older adults, and pregnant women.

Strobbe. Primary Care: Clinics in Office Practice. 2014.
Screening - Alcohol

Screening Brief Intervention Referral to Treatment

“How many days in the past year have you had 4 or more drinks in a day?”

- >0: 82% sensitivity, 79% specific for unhealthy use
- 8 or more: dependence
“How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?”

- >0: 100% sensitivity, 74% specific for drug use disorder
- 4 or more: dependence
## Brief Negotiated Interview

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Build Rapport</strong></td>
<td>Ask permission Raise the subject</td>
</tr>
<tr>
<td><strong>2. Pros &amp; Cons</strong></td>
<td>Summarize</td>
</tr>
<tr>
<td><strong>3. Provide Information &amp; Feedback</strong></td>
<td>Ask permission Discuss screening findings Link use to behaviors/consequences Elicit a response</td>
</tr>
<tr>
<td><strong>4. Build Readiness to Change</strong></td>
<td>Readiness ruler</td>
</tr>
<tr>
<td><strong>5. Negotiate an Action Plan</strong></td>
<td>Emphasize strengths Identify supports Write down steps Offer appropriate resources Thank the patient</td>
</tr>
</tbody>
</table>

*YouTube videos*
Screening

Screening
Brief
Intervention
Referral to
Treatment

IF:
• CAGE >1
• AUDIT >16
• DSM criteria

Chemical Dependency Consult
Outpatient Treatment
Inpatient Treatment
12-step Programs

*See Attached Slides for CAGE and AUDIT
### Opioids for Chronic Pain: Risk

<table>
<thead>
<tr>
<th>Overdose</th>
<th>Both</th>
<th>Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-acting formulations</td>
<td>Daily dose &gt;100 MME</td>
<td>Adolescence</td>
</tr>
<tr>
<td>Concurrent benzodiazepines</td>
<td>Opioid use &gt;3 months</td>
<td>Genetic vulnerability</td>
</tr>
<tr>
<td>Age &gt;65 years</td>
<td>Depression</td>
<td>Chronic, poorly-defined pain</td>
</tr>
<tr>
<td>Sleep-disordered breathing</td>
<td>Substance-use disorder</td>
<td></td>
</tr>
<tr>
<td>Renal/hepatic impairment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of overdose</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Opioids for Chronic Pain: Risk

Pill

Pain
Treatment Programs

Level of Care Considerations:
• Severity of use disorder
• Risk for severe withdrawal syndrome
• Psychiatric stability
• Current ability to provide basic needs
• Support system
• Patient preference
12-Step Groups

• Fewer drinks and fewer days drinking if attend at least 2 times a week.
• Helps maintain abstinence in first 3 years after treatment.
• Participation better predictor of abstinence at 2 years than formal aftercare.
• At least 10 meetings in 6 months doubles odds of abstinence at 5 years.

**BOTTOM LINE:** AA/NA work if you work the program

12-Step + Provider = 12-Step Facilitation
12-Step Facilitation

• Educate ourselves
• Post meetings

• Behaviors to emphasize at follow-up:
  • Sponsor
  • Home group
  • Participation
  • Step-work
Contingency Management

• **Goal**: Increase the SALIENCE of sober behaviors.

• Used in conjunction with other treatments.

**BOTTOM LINE**: Expensive, Poor long-term outcomes
Comprehensive Care

Medical and Psychiatric Stabilization

Physical Evaluation

Treatment

Risk Mitigation

ASAM National Guidelines

Pharmacologic Treatments

1. Alcohol Use Disorders
2. Opioid Use Disorders
3. Stimulant Use Disorders
4. Cannabis Use Disorders
Alcohol Use Disorders

Effectiveness:
- Increase interval to next use
- Decrease frequency/amount
- Increase abstinence

Indications:
- Moderate to severe use disorders (dependence)
- Patient preference

APA Practice Guidelines for Pharmacological Treatment of Patients with Alcohol Use Disorder. Jan 2018
Alcohol Use Disorders

Naltrexone

• Opioid receptor antagonist
• 50-100 mg PO or 380 mg monthly IM
• LFT monitoring
• Side effects: GI, difficult pain control if needed.

APA Practice Guidelines for Pharmacological Treatment of Patients with Alcohol Use Disorder. Jan 2018
Alcohol Use Disorders

Acamprosate
- Modulates glutamate
- 666 mg TID PO
- No hepatotoxicity
- Dose reduction CrCl <60 and contraindicated CrCl <30.
- Side effects: diarrhea

APA Practice Guidelines for Pharmacological Treatment of Patients with Alcohol Use Disorder. Jan 2018
Alcohol Use Disorders

**Disulfiram**
- Aldehyde dehydrogenase inhibitor
- 250-500 mg daily
- Ability to understand consequences and 3rd party assistance
- Caution with alcohol-containing products and significant heart disease
- LFT monitoring

APA Practice Guidelines for Pharmacological Treatment of Patients with Alcohol Use Disorder. Jan 2018
Opioid Use Disorders

1. Non-opioid therapy
2. Detoxification
3. Opioid-antagonists
4. Opioid-agonists
## Non-Opioid Therapies

<table>
<thead>
<tr>
<th>Medication</th>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clonidine</td>
<td>Diaphoresis, tachycardia</td>
</tr>
<tr>
<td>Ondansetron</td>
<td>Nausea</td>
</tr>
<tr>
<td>Benzodiazepine</td>
<td>Anxiety, Insomnia</td>
</tr>
<tr>
<td>Loperamide</td>
<td>Diarrhea</td>
</tr>
</tbody>
</table>
Detoxification

- Low rates of treatment retention
- High rates of relapse post-treatment
  - < 50% abstinent at 6 months
  - < 15% abstinent at 12 months
- Increased overdoses due to decreased tolerance

**Bottom Line:** DOESN’T WORK

Oral Naltrexone

• Well-tolerated, safe
• Duration of action 24-48 hours
• FDA approved 1984

• Benefit limited to highly motivated patients
  • > 80% of impaired physicians abstinent at 18 months

Cochrane Database of Systematic Reviews 2006.
Injectable Naltrexone (Vivitrol ®)

• IM injection (w/ customized needle) once a month
• Opioid-free for 7-10 days before treatment

• When compared to placebo for 24 weeks:
  • Weeks of confirmed abstinence (90% vs 35%)
  • Patients with confirmed abstinence (36% vs 23%)
  • Reduced cravings

• Potential to be as effective as buprenorphine*

Opioid-Agonist Therapy (OAT)

- Withdrawal
- Normal
- Euphoria

Chronic use

Tolerance & Physical Dependence

OAT Maintenance

Acute use
Methadone

- Synthetic opioid agonist
- Long-acting
- Better pain control

- Side effects:
  - Prolonged QTc
  - Respiratory depression
  - Abuse potential

- Difficult to obtain

Methadone

Figure 1 - Heroin Use in Past 30 Days
407 MM Patients by Current Methadone Dose

Percentage Heroin Use

* Adapted from a study of 407 methadone maintenance patients.

Buprenorphine

• Partial opioid agonist
• High affinity for receptor
• Sublingual tablets, film, implant, monthly subcutaneous injection
• Slow receptor dissociation

• Available as monotherapy or combined with naloxone to prevent diversion.
Buprenorphine Taper vs. Maintenance

Results:
- Completed 52 week trial
  - taper 0%
  - maintenance 75%
- Mean % urine negative
  - maintenance 75%
- Mortality
  - taper 20%

Now PCSS-MAT is offering No Cost 8 Hour MAT waiver trainings at times and days that are more convenient for you.

Take the MAT waiver course at a time that’s right for you.

Pajamas Optional

The American Osteopathic Academy of Addiction Medicine holds two online MAT waiver trainings per month. On weekends or during the week. At different times. Designed for you whether you live on the West or East Coast.

Go to pcssmat.org and see which sessions best suit your needs.
Stimulant Use Disorders

- No FDA-approved pharmacologic treatments.

**BOTTOM LINE:**
- Any treatment program is better than nothing.
- Watch out for severe depression & suicidal ideation with withdrawal.

Cannabis Use Disorders

- No FDA-approved pharmacologic treatments.

- Direct THC and cannabinoid agonists help withdrawal, but don’t seem to alter pattern of use.
Take Home Points:

1. Use SBIRT to screen for high-risk alcohol and substance use disorders.

2. Any treatment program is better than no treatment program, assuming basic needs and safety are being provided.

3. Naltrexone and acamprosate are first line for alcohol use disorders.

4. Opioid agonist therapy is first line for opioid use disorders.
Additional Resources
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
- 3-4 fl oz of fortified wine (such as sherry or port; 3.5 oz shown)
- 2-3 fl oz of cordial, liqueur, or aperitif (2.5 oz shown)
- 1.5 fl oz of brandy or cognac (a single jigger or shot)
- 1.5 fl oz shot of 80-proof distilled spirits

About 5% alcohol
About 7% alcohol
About 12% alcohol
About 17% alcohol
About 24% alcohol
About 40% alcohol
40% alcohol
CAGE Questionnaire

• **Cut down:** Have you ever felt you ought to cut down your drinking?
• **Annoyed:** Have you ever felt annoyed with criticism of your drinking?
• **Guilty:** Have you ever had guilty feelings about your drinking OR things you have done/said while you were drinking?
• **Eye-opener:** Have you ever had a drink first thing in the morning to steady your nerves or get risk of a hangover?

0 positive = high-risk alcohol use
1 positive = sensitive for alcohol use disorder
2 or more positive = specific for alcohol use disorder
# AUDIT Questionnaire

<table>
<thead>
<tr>
<th>AUDIT</th>
<th>Score:</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>
<td></td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>0 to 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
<td></td>
</tr>
<tr>
<td>3. How often do you have five 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>
<td></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>
<td></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>
<td></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>
<td></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>
<td></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>
<td></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, in the last year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, in the last year</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8-16 = At-risk use

16 or more = Alcohol Use Disorder
<table>
<thead>
<tr>
<th>Name</th>
<th>Formulation</th>
<th>Available Doses</th>
<th>Target Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic</td>
<td>Sublingual tab</td>
<td>2, 8 mg</td>
<td>16 mg daily</td>
</tr>
<tr>
<td><strong>Probuphine</strong></td>
<td>Subdermal implant</td>
<td>74.2 mg</td>
<td>4 implants for 6 months</td>
</tr>
<tr>
<td><strong>Sublocade</strong></td>
<td>Monthly subcutaneous</td>
<td>100 mg/0.5 mL 300 mg/1.5 mL</td>
<td>100 mg monthly</td>
</tr>
<tr>
<td>Generic</td>
<td>Sublingual tab</td>
<td>2/0.5 mg 8/2 mg</td>
<td>16/4 mg daily</td>
</tr>
<tr>
<td><strong>Bunavail</strong></td>
<td>Buccal film</td>
<td>2.1/0.3 mg 4.2/0.7 mg 6.3/1 mg</td>
<td>11.4/2.8 mg daily</td>
</tr>
<tr>
<td><strong>Suboxone</strong></td>
<td>Sublingual films</td>
<td>2/0.5 mg 4/1 mg 8/2 mg 12/3 mg</td>
<td>16/4 mg daily</td>
</tr>
<tr>
<td><strong>Zubsolv</strong></td>
<td>Sublingual tab</td>
<td>1.4/0.36 mg 5.7/1.4 mg</td>
<td>11.4/2.8 mg daily</td>
</tr>
</tbody>
</table>