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## Learning Objectives

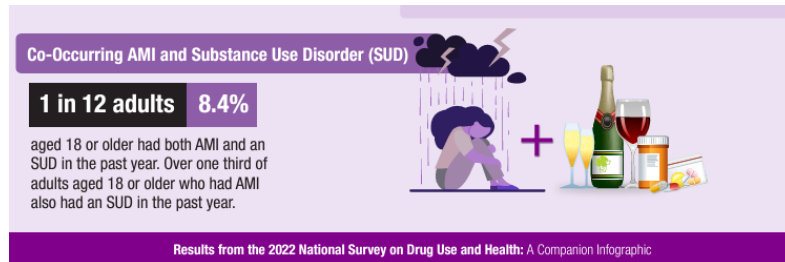
1. Describe the clinical assessment of persons with substance use disorders and other co-occurring mental health disorders.
2. Discuss evidenced based pharmacologic treatment of substance use disorders in persons with co-occurring mental health disorders through the integrated care, chronic disease management models.

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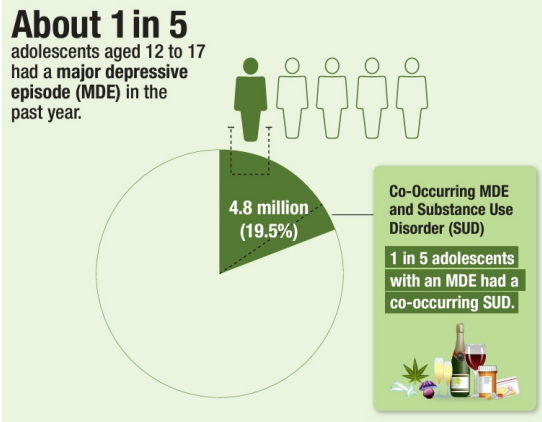
## Epidemiology of Co-Occurring Disorders

7.4 million adults with SMI+SUD:  
 29% received NO treatment  
 71% received ANY treatment  
 63.1% received ONLY mental health treatment



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## Epidemiology of Co-Occurring Disorders



922K adolescents with MDE+SUD

28% received NO treatment

72% received ANY treatment

-69% received ONLY mental health treatment

2022 NSDUH

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## SUD and other CODs

### Etiology

The diagram illustrates the etiologies of Substance Use Disorders (SUD) and other Co-Occurring Disorders (CODs). It is organized into five categories, each with associated icons:

- SELF MEDICATION:** Represented by a sad face icon and a martini glass icon.
- SUBSTANCE INDUCED:** Represented by a happy face icon, a martini glass icon, and a sad face icon.
- TRAUMA:** Represented by an icon of a person sitting at a desk, a DNA double helix icon, an icon of a person with a child, a house with a first aid kit icon, and an icon of three people.
- GENETICS:** Represented by a DNA double helix icon.
- ENVIRONMENT:** Represented by a house with a first aid kit icon and an icon of three people.

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## Four Quadrant Model of Care for Co-Occurring Disorders

The diagram shows a 2x2 matrix for care based on the severity of Alcohol Use Disorder (AUD) and Mental Health Disorders (MHD).

- X-axis (AUD Severity):** Ranges from lower to higher.
- Y-axis (Mental Health Disorder Severity):** Ranges from lower to higher.

lower	Primary Care	Addiction Specialist
higher	Mental Health Specialist	Mental Health and Addiction Specialists

<https://www.niaaa.nih.gov/health-professionals-communities/core-resource-on-alcohol/mental-health-issues-alcohol-use-disorder-and-common-co-occurring-conditions#:~:text=By%20far%2C%20the%20most%20common,use%20disorders%2C%20and%20sleep%20disorders.>

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## Assessment of Substance Use Disorder

DSM-5 Diagnosis

- 2 – 3 of the following criteria for > 1 year = mild SUD
- 4 – 5 of the following criteria for > 1 year = moderate SUD
- 6+ of the following criteria for > 1 year = severe SUD

DSM-5 Criteria

- Role impairment
- Hazardous use (e.g. driving while intoxicated)
- Cravings for substance
- Social or interpersonal problems due to substance
- Tolerance
- Withdrawal symptoms
- Using the substance more than intended
- Unsuccessful attempts to cut down
- Excessive time related to substance
- Impaired social or work activities
- Use despite physical/ psychological consequences

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## Assessment of Substance Use Disorder

- Substances: Quantity, Frequency, Route of Administration, Where/how used, First Use, Last Use
- Substance/s of choice
- Prior treatment: level of care, medications, length of treatment episode, time to return to use
- Other periods of abstinence/decreased use
- Overdose: prior intentional/unintentional, substances involved, naloxone availability, witnessed overdose/s
- History of substance related seizures
- History of delirium tremens
- History of precipitated withdrawal
- Consequences of use
- Use over time
- Family history of SUD
- Trauma history

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## Assessment of Co-Occurring Disorders

- Onset of symptoms (lifetime)
- Symptoms prior to substance use initiation and/or during periods of abstinence
- Current and prior suicidality/homicidality/hallucinations
- Current and prior diagnoses
- Prior hospitalizations
- Current and prior behavioral and medication treatments and effectiveness/side effects
- Family history of mental illness
- Trauma history

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## Medications for AUD Treatment

### Withdrawal Management

- Benzodiazepine
  - Chlordiazepoxide (Librium)
  - Diazepam (Valium)
  - Lorazepam (Ativan)
- GABA-ergics
  - Carbamazepine (Tegretol)
  - Gabapentin (Neurontin)
  - Valproic acid (Depakote)

### Relapse Prevention

- On-Label
  - Acamprosate (Campral)
  - Disulfiram (Antibuse)
  - Naltrexone (ReVia & Vivitrol)
- Off-Label
  - Gabapentin (Neurontin)
  - Topiramate (Topamax)
  - Baclofen (Gablofen, Lioresal)

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## On-Label Relapse Prevention

Acamprosate (Campral)

Route	• Oral
Formulation	• 333 mg
Daily Dose	• 2 x 333mg tab po TID or 3 x 333mg tab po BID
Half-Life	• 20-33 hours
Cost	• \$70-200/month

Relapse Prevention
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## On-Label Relapse Prevention

Acamprosate (Campral)

Common Side Effects	Precautions	Other
<ul style="list-style-type: none"> <li>Diarrhea</li> <li>Nausea</li> <li>Depression</li> <li>Anxiety</li> </ul>	<ul style="list-style-type: none"> <li>Dose adjustment for CrCl 30-50ml/min</li> <li><b>Unstable depression or suicidality</b></li> </ul>	<ul style="list-style-type: none"> <li>Patient selection: Impulsivity issues or protracted withdrawal symptoms</li> </ul>

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## On-Label Relapse Prevention

Disulfiram (Antibuse)

Route	• Oral
Formulation	• 125mg, 250mg, 500mg
Daily Dose	• 250 mg once daily
Half-Life	• 60-120 hours
Cost	• \$54.90/month

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## On-Label Relapse Prevention

Disulfiram (Antibuse)

Common Side Effects	Precautions	Other
<ul style="list-style-type: none"> <li>Metallic taste</li> <li>Dermatitis</li> </ul>	<ul style="list-style-type: none"> <li>Psychosis</li> <li>DM</li> <li>Epilepsy</li> <li>Hepatic dysfunction</li> <li>Thyroid disease</li> <li>Renal impairment</li> <li>Dermatitis</li> </ul>	<ul style="list-style-type: none"> <li>Patient should be highly motivated and monitored</li> </ul>

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## On-Label Relapse Prevention

Naltrexone (ReVia – oral) (Vivitrol – IM)

<b>Route</b>	<ul style="list-style-type: none"> <li>Oral, IM</li> </ul>
<b>Formulation</b>	<ul style="list-style-type: none"> <li>50mg tab</li> <li>380mg IM</li> </ul>
<b>Daily Dose</b>	<ul style="list-style-type: none"> <li>50mg tab po q day</li> <li>380mg IM q month</li> </ul>
<b>Half-Life</b>	<ul style="list-style-type: none"> <li>4-13 hours</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>Tabs: \$130-300+/month</li> <li>Single dose vial: \$700-800 /month</li> </ul>

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## On-Label Relapse Prevention

Naltrexone (ReVia – oral) (Vivitrol – IM)

<b>Common Side Effects</b>	<b>Precautions</b>	<b>Other</b>
<ul style="list-style-type: none"> <li>Nausea</li> <li>Abdominal pain</li> <li>Constipation</li> <li>Dizziness</li> <li>Headache</li> <li>Anxiety</li> <li>Fatigue</li> </ul>	<ul style="list-style-type: none"> <li>Liver disease</li> <li>Renal impairment</li> <li>History of suicide attempts</li> </ul>	<ul style="list-style-type: none"> <li>Patient selection:                             <ul style="list-style-type: none"> <li>Family history of alcohol dependency or</li> <li>Concurrent Cognitive Behavioral Therapy (CBT)</li> </ul> </li> </ul>

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## Off-Label Relapse Prevention

Gabapentin (Neurontin)

<b>Route</b>	<ul style="list-style-type: none"><li>• Oral</li></ul>
<b>Formulation</b>	<ul style="list-style-type: none"><li>• 100mg, 300mg, 400mg capsules</li><li>• 600mg, 800mg tablets</li></ul>
<b>Daily Dose</b>	<ul style="list-style-type: none"><li>• 900-1800mg divided into 2 to 3 doses daily</li></ul>
<b>Half-Life</b>	<ul style="list-style-type: none"><li>• 5-7 hours</li></ul>
<b>Cost</b>	<ul style="list-style-type: none"><li>• \$8-250/month</li></ul>

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## Off-Label Relapse Prevention

Gabapentin (Neurontin)

<b>Common Side Effects</b>	<b>Precautions</b>	<b>Other</b>
<ul style="list-style-type: none"><li>• Ataxia</li><li>• Dizziness</li><li>• Drowsiness</li><li>• Fatigue</li></ul>	<ul style="list-style-type: none"><li>• Mental illness</li><li>• Seizures</li><li>• Pregnancy</li></ul>	<ul style="list-style-type: none"><li>• Physical dependence</li></ul>

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## Off-Label Relapse Prevention

Topiramate (Topamax)

<b>Route</b>	• Oral
<b>Formulation</b>	• 25mg, 50mg, 100mg tabs
<b>Daily Dose</b>	• 300mg/day po max
<b>Half-Life</b>	• 19-23 hours
<b>Cost</b>	• \$9-500/month

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## Off-Label Relapse Prevention

Topiramate (Topamax)

<b>Common Side Effects</b>	<b>Precautions</b>	<b>Other</b>
<ul style="list-style-type: none"> <li>Numbness and tingling</li> <li>Change in taste</li> <li>Decreased appetite</li> <li>Concentration</li> </ul>	<ul style="list-style-type: none"> <li>Renal impairment with dose adjustment for CrCl &lt; 70ml/min</li> <li>Depression</li> <li>Glaucoma</li> </ul>	<ul style="list-style-type: none"> <li>Patient selection: Can start non sober</li> </ul>

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## Off-Label Relapse Prevention

Baclofen (Gablofen, Lioresal)

Route	• Oral
Formulation	• 5mg, 10mg, 20mg tabs
Daily Dose	• 60mg-180+mg daily, in divided doses
Half-Life	• 2-6 hours
Cost	• \$60-300/month

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## Off-Label Relapse Prevention

Baclofen (Gablofen, Lioresal)

Common Side Effects	Precautions	Other
<ul style="list-style-type: none"> <li>Drowsiness</li> <li>Dizziness</li> <li>Weakness</li> <li>Nausea</li> <li>Confusion</li> <li>Urinary retention</li> </ul>	<ul style="list-style-type: none"> <li>Renal impairment (cleared renally)</li> <li>H/o seizure disorder</li> <li>Avoid abrupt discontinuation</li> <li>Peptic ulcer disease</li> <li>Decreases GI motility</li> <li>H/o anxiety, psychosis</li> </ul>	<ul style="list-style-type: none"> <li>Typically reserved for patients non-responsive to or with contraindications to other medications, ie not used first-line</li> <li>Non sober start ok</li> <li>Titrate by 10mg q3 days to effective dose</li> </ul>

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## Alcohol Use Disorder treatment involves 2 phases

Withdrawal Management

- Setting
- Symptom driven vs. fixed-dose-and-taper protocols

Relapse Prevention

- Behavioral therapies
- Mutual-aid fellowships

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## Determining the safety of ambulatory, medically managed alcohol withdrawal

Ambulatory Setting Safer	Inpatient/Residential Treatment Safer
<b>What is the patient's home environment?</b>	
<ul style="list-style-type: none"> <li>Patient has a safe, sober, supportive home environment</li> </ul>	<ul style="list-style-type: none"> <li>Patient lives alone</li> <li>Unstable housing</li> <li>Experiencing ongoing trauma</li> <li>Substance use by others in home</li> </ul>
<b>What is the patient's cognitive status?</b>	
<ul style="list-style-type: none"> <li>Cognitively intact</li> <li>Individually manage medication or has someone who can help them manage medication</li> </ul>	<ul style="list-style-type: none"> <li>Patients with cognitive impairment</li> <li>Doesn't have anyone who is able and willing to manage their medications for them</li> </ul>

Withdrawal Management

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## Medically Managed Alcohol Withdrawal Protocols

Sample fixed-dose and taper protocols

- GABAergic oral dosing
  - **Carbamazepine 200 mg:**
    - Day 1: Take one every 6 hours
    - Day 2: Take one every 8 hours
    - Day 3: Take one every 12 hours
    - Day 4: Take one at bedtime
  - **Valproic acid 500mg:**
    - Take one twice daily for 5 to 7 days
- If withdrawal symptoms or cravings intolerable, notify clinician and/or seek emergency care immediately.
- Oral adjuncts: folic acid 1mg daily, thiamine 100mg daily, ondansetron 8mg every 8 hours as needed for nausea/vomiting, trazadone 100mg or melatonin 6 mg as needed for sleep

Withdrawal Management
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## Alcohol Use Disorder treatment involves 2 phases

Withdrawal  
Management

→

Relapse Prevention

- Behavioral therapies
- Mutual-aid fellowships

- Setting
- Symptom driven vs. fixed-dose-and-taper protocols

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## AUD and COD

### Anxiety Disorders

20-40% prevalence rate of AUD

- General Anxiety Disorder, Social Anxiety Disorder, Panic Disorder
- Symptoms can overlap with AUD withdrawal symptoms, 'hangxiety'
- Treat anxiety disorders concurrently with AUD treatment:
  - eg: SSRI or SNRI + naltrexone or acamprosate + CBT
  - avoid benzodiazepines except for alcohol withdrawal management
  - buspirone, hydroxyzine
  - gabapentinoids (eg gabapentin, pregabalin) off label for AUD/GAD

<https://doi.org/10.1002/cadd.446>

<https://www.niaaa.nih.gov/health-professionals-communities/core-resource-on-alcohol/mental-health-issues-alcohol-use-disorder-and-common-co-occurring-conditions#:~:text=By%20far%2C%20the%20most%20common,use%20disorders%2C%20and%20sleep%20disorders.>

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## AUD and COD

### Mood Disorders

27%-42% prevalence rate for AUD

- Major Depressive Disorder (MDD), Bipolar Disorder (highest prevalence)
- Symptoms can overlap with AUD intoxication and withdrawal symptoms
  - Alcohol is a CNS depressant
- Assess suicidality esp in untreated Bipolar (BD) (highest rate of suicide)
- Treat concurrently with AUD treatment:
  - MDD:: SSRI or SNRI + naltrexone + CBT
  - BD: mood stabilizer/s\* +/- SSRI + naltrexone + psychoeducation + CBT
    - \*lithium, atypical antipsychotics, anticonvulsants
  - Topiramate off label for AUD/BD

<https://www.niaaa.nih.gov/health-professionals-communities/core-resource-on-alcohol/mental-health-issues-alcohol-use-disorder-and-common-co-occurring-conditions#:~:text=By%20far%2C%20the%20most%20common,use%20disorders%2C%20and%20sleep%20disorders.>

<https://doi.org/10.3389/fpsyt.2021.660432>

<https://www.healthquality.va.gov/guidelines/MH/bd/index.asp>

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## AUD and COD

### Post Traumatic Stress Disorder

15-30% prevalence in AUD, 50-60% in veterans with AUD

- AUD increases risk of traumatic events
- Self-medication with alcohol common in persons with PTSD
- Common mediators of both (ACEs, prior depressive symptoms)
- Treat PTSD concurrently with AUD treatment:
  - trauma-focused therapy + disulfiram
  - prazosin off-label for sleep/nightmares

[https://www.ptsd.va.gov/professional/treat/cooccurring/tx\\_sud\\_va.asp](https://www.ptsd.va.gov/professional/treat/cooccurring/tx_sud_va.asp)

<https://www.niaaa.nih.gov/health-professionals-communities/core-resource-on-alcohol/mental-health-issues-alcohol-use-disorder-and-common-co-occurring-conditions#:~:text=By%20far%2C%20the%20most%20common,use%20disorders%2C%20and%20sleep%20disorders.>

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## AUD and COD

### Psychotic Disorders

11% current, 21% lifetime AUD prevalence in persons with schizophrenia

- Alcohol withdrawal symptoms and other medical sequelae from alcohol use (eg head injury/bleed, Wernicke-Korsakoff) can mimic and/or overlap with symptoms of psychotic disorders
- concurrent treatment once diagnoses established

<https://www.niaaa.nih.gov/health-professionals-communities/core-resource-on-alcohol/mental-health-issues-alcohol-use-disorder-and-common-co-occurring-conditions#:~:text=By%20far%2C%20the%20most%20common,use%20disorders%2C%20and%20sleep%20disorders.>

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## Pharmacologic Treatment of SUD

### Opioids

Agonist (Fully activates opioid receptors)	Partial Agonist (Activates opioid receptor but produces a diminished response even with full receptor saturation)	Antagonist (Competitively blocks opioid receptors, interfering with the reward and analgesic effects of opioids)
Methadone (Dolophine, Methadose)	Buprenorphine (Subutex, Suboxone, Zubsolv)	Naltrexone (Vivitrol)
Reduces opioid cravings and withdrawal and blunts or blocks the effects of other opioids	Suppresses withdrawal and reduces cravings for opioids	Blocks the euphoric and sedative effects of opioids and may reduce cravings

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## Pharmacologic Treatment of OUD

### with CoDs

- Clonidine can be helpful as an adjunct to buprenorphine in MOUD and induction/withdrawal management and can also be useful adjunct in anxiety disorders
- For MDD, increasing dose of buprenorphine or methadone can be helpful
- Close monitoring, slow dose escalation when using gabapentinoids with buprenorphine or methadone
- Avoid benzodiazepines when possible (and monitor QTc if used): risks include oversedation and arrhythmia (Torsades)

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## Pharmacologic Treatment of SUD

### Nicotine

Adults with SMI have **DOUBLE** the rate of nicotine use (~25%) as the general population with rates at or over 70% for those with some disorders eg Bipolar disorders, schizophrenia

Nicotine Use Disorder commonly co-occurs with other substance use and SUDs eg AUD, psychedelics (route of administration)

~Half of mental health facilities screen for nicotine use, 38% offer nicotine cessation counseling, 49% are smoke free

64% of SUD treatment centers screen for nicotine use, 47% offer nicotine cessation counseling, 35% are smoke free, **25% offer pharmacotherapy (includes NRP)**

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://store.samhsa.gov/sites/default/files/sma18-5069ag.pdf

Marynak K, VanFrank B, Tietlow S, et al. Tobacco Cessation Interventions and Smoke-Free Policies in Mental Health and Substance Abuse Treatment Facilities — United States, 2016. MMWR Morb Mortal Wkly Rep 2018;67:519-523. DOI: <https://dx.doi.org/10.15585/mmwr.mm6718a3>

<http://dx.doi.org/10.5888/ncd19.220184>

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## Pharmacologic Treatment of SUD

### Nicotine

Nicotine Receptor  
Agonists

Nicotine Receptor  
Antagonist

Nicotine Receptor  
Partial Agonist

Nicotine Replacement  
(Patch, Gum, Lozenge,  
Inhaler, Spray)

Bupropion-SR

Varenicline

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## Pharmacologic Treatment of SUD

### Nicotine

Medication	OTC/Rx	Use	Cost per dose
Nicotine patch	OTC	Daily Steady state	2.00\$-2.92\$ (daily dose)
Nicotine gum	OTC	PRN Craving rescue	0.27\$-0.82\$ per piece (1.35-16.40\$ for 5 to 20 pieces daily dose)
Nicotine lozenge	OTC	PRN Craving rescue	0.39\$-0.40\$ (1.95-8.00\$ for 5 to 20 pieces daily dose)
Nicotine inhaler	Rx	PRN Craving rescue	2.77\$ per cartridge, recommended 6-16 cartridges daily (16.62-44.32\$/day)
Nicotine nasal spray	Rx	PRN Craving rescue	6.11\$ per 40mg or 80 sprays average daily dose
Bupropion SR 150	Rx	Daily Steady state	0.99-1.13\$ (daily dose)
Varenicline	Rx	Daily Steady state	8.42\$ (daily dose)

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## Pharmacologic Treatment of NUD

### Nicotine Replacement Treatment - Over-the-Counter Products

#### Nicotine Patch

- 21 mcg patch = 1 PPD
- Easiest to use
- Cannot rapidly adjust for cravings
- Remove for sleep otw insomnia and vivid dreams
- Rotate site/OTC steroid cream for skin irritation
- Avoid if psoriasis, eczema



#### Nicotine Gum



- 2mg if first nicotine use >30 minutes in am
- 4mg if < 30 minutes
- Max dose: 24 pieces/day or 1 per hour
- Avoid food/drink 5-15 minutes before/after
- Chew and cheek
- One piece lasts ~30 min
- Easy to titrate dose, use when needed
- Mouth feel
- Sticks to dental work, may aggravate dental pain

#### Nicotine Lozenge

- 2mg if first nicotine use >30 minutes in am
- 4mg if < 30 minutes
- Max dose: 5 in 6 hours or 20 lozenges/day
- Avoid food/drink 5-15 minutes before/after
- Better than gum for those with dental work/ active dental disease
- Unpleasant taste



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## Pharmacologic Treatment of NUD

### Prescription Medications

#### Bupropion

- 150mg pill, once daily for 3 days then twice daily
- Start 1-2 weeks before quit date
- Abrupt cessation (preferred) OR
- 50% decrease by week 4>>>
- Additional 50% decrease by week 8>>>
- Quit by week 12
- Insomnia/dry mouth/constipation/agitation
- Blunts post-cessation weight gain
- NOT if seizure history or eating disorder
- Monitor for suicidality

#### Varenicline

- 0.5mg pill daily x 3 days, then 0.5mg pill twice daily x 4 days, then 1mg pill twice daily
- Start 1-2 weeks before quit date OR
- 50% decrease by week 4>>>
- Additional 50% decrease by week 8>>>
- Quit by week 12
- Duration of treatment = 12 weeks
- Insomnia/nausea/vivid dreams/headache
- Relieves nicotine withdrawal AND blunts rewards
- Caution in severe renal disease
- Avoid if unstable psych/PTSD/suicidal ideation
- Monitor for suicidality

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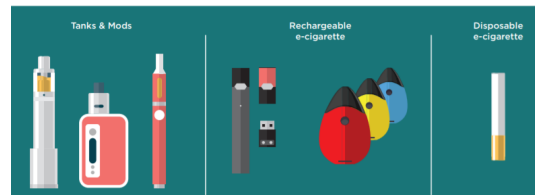
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## Pharmacological Treatment of NUD

### Electronic Nicotine Delivery Systems (ENDS)

#### Using ENDS to Quit Tobacco Products

- Not FDA approved
- Evidence mixed but leaning positive
- Taper nicotine concentration, until using nicotine-free product, then stop cold-turkey or by tapering frequency of use



#### Using FDA-approved NUD medications for ENDS Cessation

- Off-label, but commonly used

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## Pharmacologic Treatment of NUD

### Combination Treatment

Some studies suggest that combining NRT with other medications may facilitate cessation. For example, a meta-analysis found that a combination of varenicline and NRT (especially, providing a nicotine patch prior to cessation) was more effective than varenicline alone.

Similarly, adding bupropion to NRT also improved cessation rates.

For smokers who could not cut down significantly by using the NRT patch, combining extended-release bupropion and varenicline was more effective than placebo, particularly for men and those who were severely nicotine dependent.

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## Pharmacologic Treatment of SUD

### Other

#### Stimulant Use Disorder

- Depot naltrexone (380mg q3w) AND bupropion ER (450mg po qd)
- 1 double-blind, placebo-controlled 12-week RCT: n=628
- Response rates (3 out of 4 UDS negative for methamphetamine):
  - 13.6% (active) vs 2.5% (placebo)

Trivedi MH, Walker R, Ling W, Dela Cruz A, Sharma G, Carmody T, Ghitzza UE, Wahle A, Kim M, Shores-Wilson K, Sparenborg S, Coffin P, Schmitz J, Wiest K, Bart G, Sonne SC, Wakhlu S, Rush AJ, Nunes EV, Shoptaw S. Bupropion and Naltrexone in Methamphetamine Use Disorder. *N Engl J Med.* 2021 Jan 14;384(2):140-153. doi: 10.1056/NEJMoa2020214. PMID: 33497547; PMCID: PMC8111570.



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## Pharmacologic Treatment of COD

### Attention Deficit Hyperactivity Disorder

- 38% of adolescents with Cannabis Use Disorder
- 23-40% of adults seeking SUD treatment
- Effective medication treatment helpful in prevention of SUD in youth with ADHD
- Effective medication treatment helpful in SUD treatment adherence and outcomes for adults with ADHD
- Can try non stimulants first: atomoxetine, clonidine, guanfacine, viloxazine all FDA approved
- Avoiding stimulants in setting of well-controlled SUD not warranted solely due to history of SUD

Zulauf CA, Sprich SE, Safren SA, Wilens TE. The complicated relationship between attention deficit/hyperactivity disorder and substance use disorders. *Curr Psychiatry Rep.* 2014 Mar;16(3):436. doi: 10.1007/s11920-013-0436-6. PMID: 24526271; PMCID: PMC4414493.

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## Insomnia Pharmacotherapy

- Insomnia frequent symptom of SUDs: intoxication and/or withdrawal and post-acute withdrawal ie prolonged 3 to 6+ months in early recovery
- Insomnia frequent symptom of SMI: anxiety disorders, mood disorders, psychotic disorders, PTSD
- Anticipate: ask about initially and every visit until in stable, long term recovery
- Untreated: return to use (self-medication, impaired impulse control/decision making when fatigued), decreased treatment adherence, worsening of COD
- Avoid Z-drugs eg zolpidem
- Look for synergies: eg prazosin if co-occurring PTSD, quetiapine if co-occurring BD/psychotic disorder, hydroxyzine if co-occurring anxiety disorder
- Cautions beyond the Z drugs, eg quetiapine

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## Integrated Care

What would, could, should, does 'ideal' look like?

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## Chronic Care Management

### CORE ELEMENTS

- Healthcare Delivery System: geared toward facilitating preventive care
- Organizational Support: leadership champion and resource commitment
- Expert-Informed Decisional Support: standardized protocols, real-time consultative input
- Clinical Information System: track and coordinate care, share information among team/s and with patients/clients
- Fostering Patient Self-Management: coaching and shared clinical decision making
- Linkage to Community: needed non-clinical resources (eg SDoH), peer support groups

McLellan AT, Starrels JL, Tai B, Gordon AJ, Brown R, Ghitza U, Gourevitch M, Stein J, Oros M, Horton T, Lindblad R, McNeely J. Can Substance Use Disorders be Managed Using the Chronic Care Model? Review and Recommendations from a NIDA Consensus Group. Public Health Rev. 2014 Jan;35(2):http://www.journalindex.net/visit.php?j=6676. doi: 10.1007/BF03391707. PMID: 26568649; PMCID: PMC4643942.

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## Chronic Care Management

For SUD in Primary Care, other non specialty care settings

- Implement SBIRT: early intervention before diagnosable SUD
- Expand/restructure healthcare team:
  - Behavioral care manager: nurse, social worker, health educator
- Collaboration with non-integrated specialty care services

McLellan AT, Starrels JL, Tai B, Gordon AJ, Brown R, Ghitza U, Gourevitch M, Stein J, Oros M, Horton T, Lindblad R, McNeely J. Can Substance Use Disorders be Managed Using the Chronic Care Model? Review and Recommendations from a NIDA Consensus Group. Public Health Rev. 2014 Jan;35(2):http://www.journalindex.net/visit.php?j=6676. doi: 10.1007/BF03391707. PMID: 26568649, PMCID: PMC4643942.

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## Screening for Alcohol Use (and other substance use)

Grade B Recommendation of the USPSTF for adult patients  
(United States Preventive Services Task Force)

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Excessive drinking levels for healthy adults are defined as:

Persons	Per Occasion	Per Week
Men (21+)	> 4 drinks	> 14 drinks
Women (21+)	> 3 drinks	> 7 drinks
Men (65+)	> 3 drinks	> 7 drinks
In pregnancy	> 0 drinks	> 0 drinks
All < 21	> 0 drinks	> 0 drinks

The excessive drinking levels are based on counting **Standard Drinks**, defined as:

<b>12 oz. of beer or cooler</b>	<b>8-9 oz. of malt liquor</b> 8.5 oz. shown in a 12-oz. glass that, if full, would hold about 1.5 standard drinks of malt liquor	<b>5 oz. of table wine</b>	<b>3-4 oz. of fortified wine</b> (such as sherry or port) 3.5 oz. shown	<b>2-3 oz. of cordial, liqueur, or aperitif</b> 2.5 oz. shown	<b>1.5 oz. of brandy</b> (a single jigger)	<b>1.5 oz. of spirits</b> (a single jigger of 80-proof gin, vodka, whiskey, etc.) Shown straight and in a highball glass with ice to show level before adding mixer*
						
<b>12 oz.</b>	<b>8.5 oz.</b>	<b>5 oz.</b>	<b>3.5 oz.</b>	<b>2.5 oz.</b>	<b>1.5 oz.</b>	<b>1.5 oz.</b>

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## Evidence-based Screening Tools for SUD

Name	Substances	Number of items	Time to administer	Administers	Additional Notes
ASSIST	Nicotine, Alcohol, & common drug of misuse (CDM)	(2-8) – multiple questions per substance patient using	10 min.	Patient and Staff (Staff scores)	Built-in feedback, patient ed
AUDIT/ AUDIT-C	Alcohol only Alcohol only	10 3	5 min. 3 min.	Patient or Staff Patient or Staff	AUDIT-C for initial screen, full AUDIT if positive
CAGE/ CAGE-AID	Alcohol only Alcohol and CDM	4 4	2 min. 2 min.	Patient or Staff Patient or Staff	Doesn't distinguish between lifetime/current problem

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## Screening Tools for SUD

Screening Name	Substances	Number of items	Time to administer	Administers	Additional Notes
CRAFT/ CRAFT+ N	Alcohol and CDM Nicotine, Alcohol, CDM	4-9 items 5-10 items	2-5 min. 2-5 min.	Patient preferred Patient preferred	Only validated screen for adolescents
DAST-10	CDM only	10	5 min.	Patient or Staff	Often used with AUDIT
SQAS SQDS	Alcohol only CDM only	1 1	1 min. 1 min.	Patient or Staff Patient or Staff	Rapid screens, distinguish excessive use and SUD
TAPS tool	Nicotine, Alcohol, CDM	(4+) – questions per substance patient using	5-10 min.	Patient or Staff (auto scores)	Derived from ASSIST, briefer, online tool

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## ASSIST: Alcohol, Smoking and Substance Involvement Screening Test

- Complex to administer and score
- Developed by World Health Organization
- Available in numerous languages
- Cross-culturally validated
- Median sensitivity and specificity: 80% and 71%



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## AUDIT/AUDIT-C: Alcohol Use Disorders Identification Test

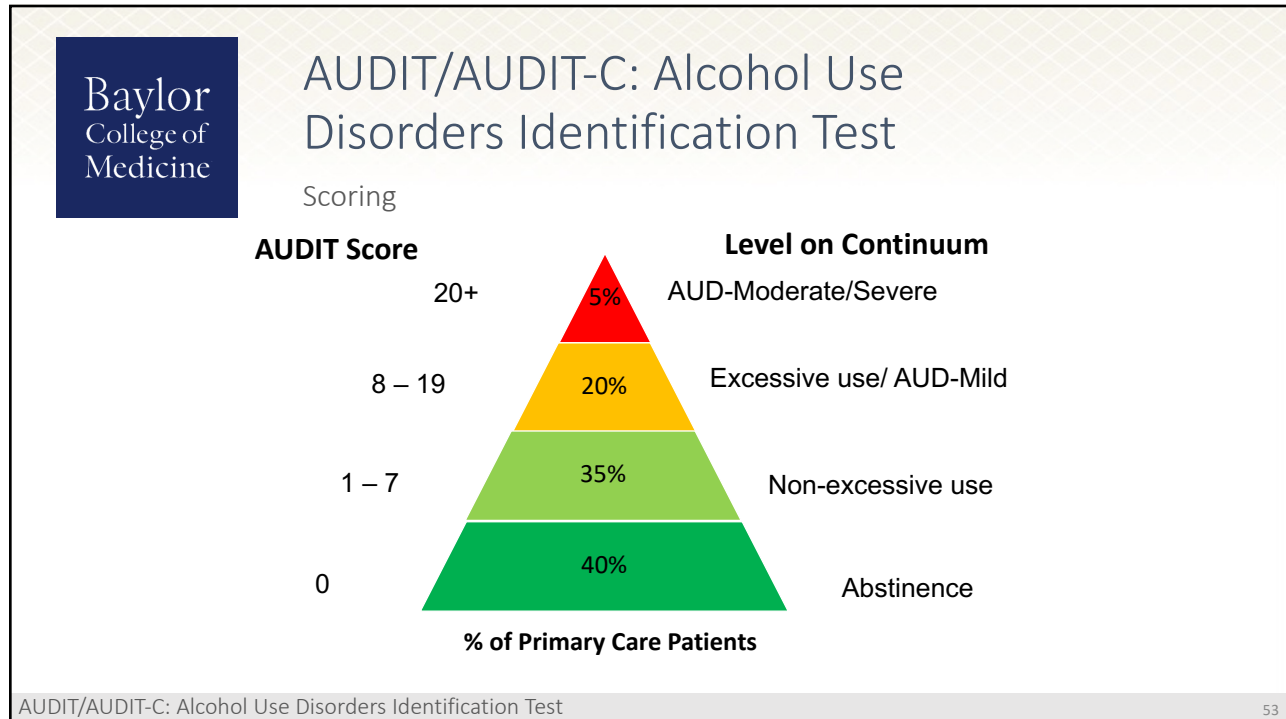
Instrument

Instructions: Alcohol can affect your health, medications, and treatments, so we ask patients the following questions. Your answers will remain confidential. Place an X in one box to answer. Think about your drinking in the past year. A drink means one beer, one small glass of wine (5 oz.), or one mixed drink containing one shot (1.5 oz.) of spirits.

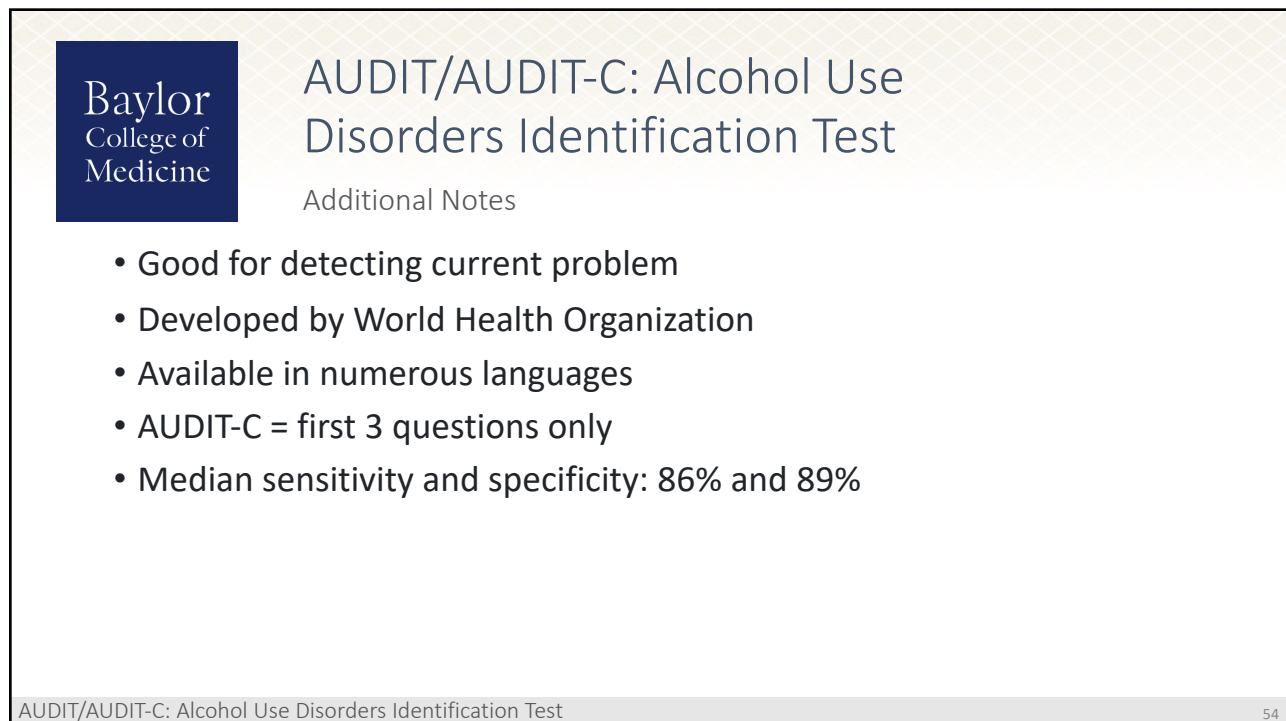
Questions	0	1	2	3	4	5	6	Score
1. How often do you have a drink containing alcohol?	Never	Less than Monthly	Monthly	Weekly	2-3 times a week	4-6 times a week	Daily	
2. How many drinks containing alcohol do you have on a typical day you are drinking?	1 drink	2 drinks	3 drinks	4 drinks	5-6 drinks	7-9 drinks	10 or more drinks	
3. How often do you have X (5 for men; 4 for women & men over age 65) or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	2-3 times a week	4-6 times a week	Daily	

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## SQAS/SQDS: Single Question Alcohol/Drug Screens

### Instrument

- **SQAS:**
  - How many times in the last 12 months have you had x or more drinks in a day? ” (where x is 5 for men and 4 for women)
- **SQDS:**
  - How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons (such as to get high)?

## SQAS/SQDS: Single Question Alcohol/Drug Screens

### Score Interpretation

Screen	Excessive Use	Use Disorder
SQAS	1-7	8+
SQDS	1-2	8+



## SQAS/SQDS: Single Question Alcohol/Drug Screens

### Additional Notes

- Short to administer, score and interpret
- Not as robust validation data for cutoffs or across populations
- Sensitivity / specificity:
  - SQAS: 88% / 84%
  - SQDS: 97% / 99%

## TAPS Tool: Tobacco, Alcohol, Prescription medication and other Substance use

- For tobacco, alcohol, illicit drugs, lower for prescription drugs
- Developed through NIDA (National Institute on Drug Abuse)
- Available as an online tool that can be integrated into EHR
- Sensitivity: 80%-90%
- Specificity: 77%-92%





## Common Questions about Screening

What about urine drug screening (UDS)?

- UDS are a **POOR SCREEN** for SUDs
  - Gives information at one specific point in time
  - SUDs are about patterns of use & consequences of use *over time*
- Useful for:
  - Nonverbal patients, emergent/tox syndromes
  - Confirming, monitoring, and accountability during SUD treatment
- Chain of custody of specimen issues should be addressed
- Know lab cutoffs and what can cause false positives
- Privacy issues

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## Common Questions about Screening

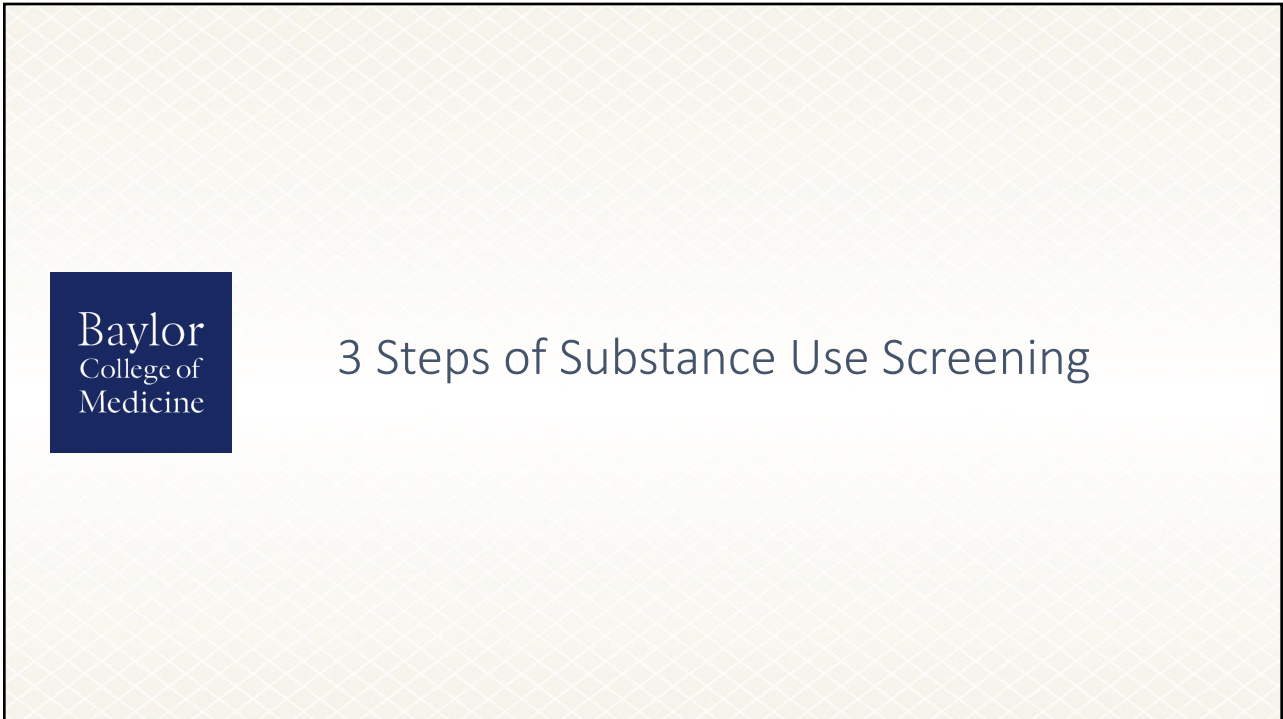
How accurate is self report? Is self report reliable?

- Interview is the most accurate source of information
- Accurate assessment is achievable even with minimization
- All the evidence-based screening tools have been validated
- Avoid stigmatizing substance
  - Builds rapport
  - Increases the accuracy of the assessment.

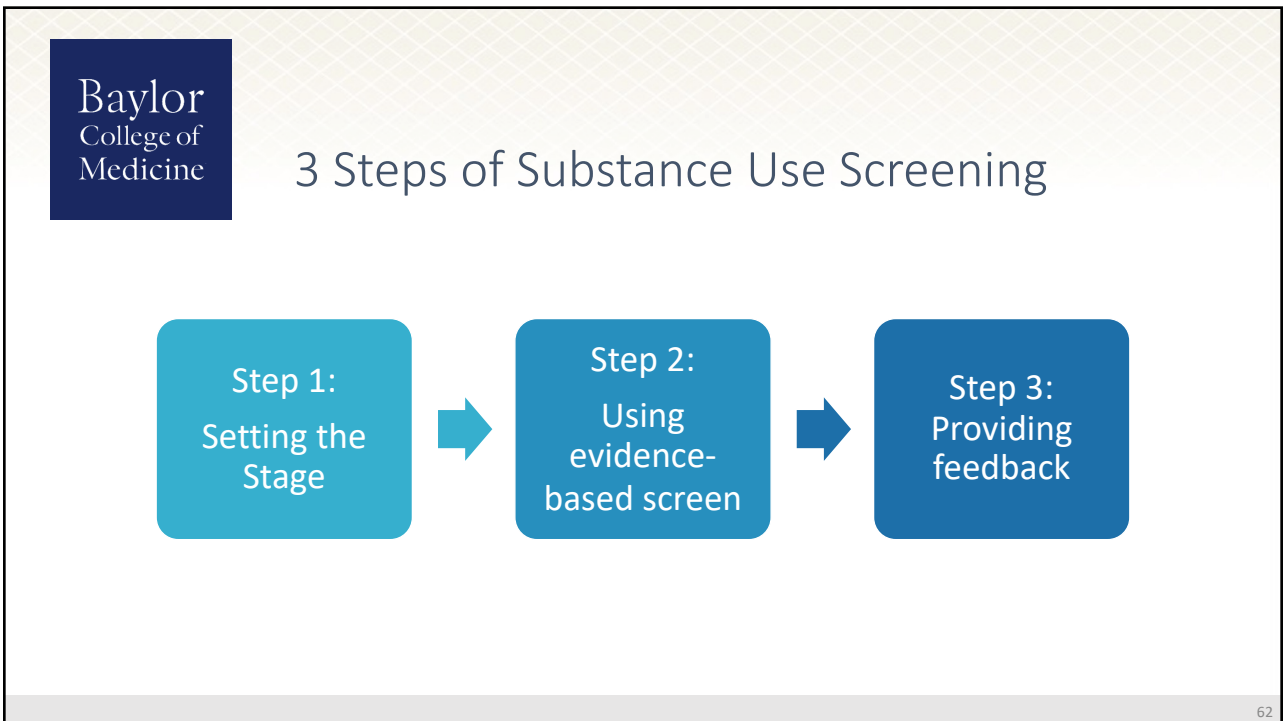
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## Step 1: Setting the Stage for Screening

Scripts Can Help

- **Non pregnant adult: NORMALIZE**
  - “Substance use can affect health, so I ask all my patients yearly about their use of nicotine, alcohol and other drugs.”
- **Pregnant adult: ADDRESS STIGMA**
  - “My pregnant patients often have questions or concerns about using nicotine, alcohol or other substances during pregnancy or before realizing they were pregnant. How about you?”
- **Adolescent: CONFIDENTIALITY**
  - Speaking with patient alone: “Use of nicotine, alcohol, marijuana and other drugs , if any, during adolescence can affect health and development. What you tell me about that is confidential unless it would endanger yourself or someone else. Do you have any questions about that?”

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## Step 2: Use Evidence-Based Screens

Such as:

- Do you smoke or use other nicotine products?
- **SQAS (Adolescent and Adults)**
  - Age 12-17: How many times in the past 12 months did you drink any alcohol (> a few sips)?
  - Adults: How many times in the past 12 months have you had more than [4(men),3(women)] drinks in one day?
- **SQDS**
  - How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons (like to get high)?

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## Step 3: Give targeted feedback that's brief and relevant to the patient's level of use

### Abstinent/Non-excessive Use:

- Reinforce healthy choices and leave door open

### Excessive Use/SUD mild/moderate/SUD severe:

- Express concern, connect substance use to patient's health (when possible) and seek patient perspective
- Share excessive drinking limits, if applicable, and seek patient perspective
- Ask permission to continue discussion (transition to BI)

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## Challenges to Providing Integrated CCM

Cost, reimbursement, 'ownership' ie siloes

Privacy and liability concerns

Medical team:

- lack of training on trauma-informed/non-stigmatizing care and experience working in trauma-informed/non-stigmatizing systems
- understanding of SUD as chronic disease
- lack of training on SUD treatment including behavioral and medication treatments and levels of care
- lack of self-care

Behavioral health team:

- lack of experience working directly with/in general medical clinicians and settings
- understanding importance of role within integrated team
- lack of self-care

Lack of community engagement

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## Facilitators to Providing Integrated CCM

Payment/Reimbursement models:

- follows the patient
- reimbursement sufficient to cover integrated care costs if capitated

Signed releases for CFR 42 and minimally co-located services

Medical team:

- training and experience in trauma-informed care and systems
- training in chronic disease model of SUD and stigma
- training and experience in SUD treatments and levels of care
- active self-care supported by system

Behavioral health team:

- training and experience working with/in general healthcare clinicians and settings
- active self-care supported by system

Community engagement



## Q&A

THANKS!

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