One in five individuals with a serious mental illness has a co-occurring substance use disorder. Similar to persons with SMI, individuals with substance use disorders are at risk for physical health problems such as cardiovascular disease, lung disease, hepatitis, HIV/AIDS, and cancer. The management of chronic disease is often complicated and more challenging in individuals with co-occurring disorders. For example, individuals who have depression, a substance use disorder, and medical comorbities are less likely to adhere to their treatment plan and medications for type 2 diabetes. Improvement of the health and functioning of these individuals requires the integration of care across primary care, mental health care, and substance use services. Many of the FDA-approved medications to help patients reduce alcohol or drug use, avoid relapse, and support abstinence (e.g., buprenorphine, naltrexone, and acamprosate) can be used in primary care settings which increases patient choice in being treated in the setting they are most comfortable.

Conduct a comprehensive assessment. Refer to Principles of Practice.

Note: Strongly recommend coordination of care between all providers to facilitate optimal outcomes.

Check E-FORCSE as required by law (the Electronic-Florida Online Reporting of Controlled Substance Evaluation Program, Florida's state prescription monitoring program), ideally prior to prescribing any medications, but at a minimum when prescribing any controlled substance. Checking E-FORCSE is also recommended for all new patients, with follow-up E-FORCSE monitoring at least once per year for each patient.

Concurrent Prescribing of Opioids and Benzodiazepines

Epidemiologic studies suggest that concurrent use of benzodiazepines and opioids increase the risk for potentially fatal overdose, as both classes of medications cause central nervous system depression, decrease respiratory drive, and will act synergistically. In the CDC Guideline for Prescribing Opioids for Chronic Pain — United States, published in 2016, the CDC emphasized evidence in which a case-cohort study found concurrent benzodiazepine prescription with opioid prescription to be associated with a near quadrupling of risk for overdose death compared with opioid prescription alone. Among the CDC recommendations is: **"Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible."** When presented with a patient currently prescribed both benzodiazepines and opioids, in many instances it may be safer and more practical to taper the opioids first. Opioid withdrawal is often associated with an increase in anxiety, and benzodiazepine withdrawal can be relatively medically more complicated. Consultation with a pharmacist and a pain management specialist may be needed for optimal outcome.

Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. MMWR Recomm Rep 2016;65(No. RR-1):1–49. DOI: ***http://dx.doi.org/10.15585/mmwr.rr6501e1external icon****.*

Older Adults

The 2019 American Geriatrics Society Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults identified benzodiazepines as medications to "avoid" in the older adult population. Benzodiazepines can increase the risk of cognitive impairment, delirium, falls and fractures, and motor vehicle accidents. A similar recommendation to avoid was made for the non-benzodiazepine, benzodiazepine receptor agonist hypnotics (the "z-drugs") eszopiclone, zaleplon, and zolpidem.

Highly anticholinergic antidepressants (typically tricyclic and tetracyclic antidepressants) are recommended to be avoided in the older adult population.

As a rule, clinicians should be especially aware of drug-drug interactions and increased risk of adverse side-effects in the older adult population.

American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc, 67: 674-694. doi:10.1111/jgs.15767

Screening, Brief Intervention, and Referral to Treatment (SBIRT)

SBIRT is a model to assess and deliver early intervention and treatment to individuals with substance use disorders and those that are at risk of developing substance use disorders.

- Screening quickly assesses the severity of substance use and identifies the appropriate level of treatment
- Brief intervention focuses on increasing insight and awareness of substance use and motivation towards behavioral change
- Referral provides those needing treatment access to specialty care services

Recommend screening for substance use disorders using validated questionnaires (see table in Principles of Practice) prior to patient visits. Obtain history of prescription, over-the-counter, and herbal medication use.

Pre-Screening for Substance Use Disorders

NIAAA/NIDA Pre-Screening Questions:

- "How many times in the past year have you had 4 or more drinks in a day?" (NIAAA)
- "How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?" (NIDA)

Alcohol Use Disorders Identification Test (AUDIT): The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item screening tool developed by the World Health Organization (WHO) to assess alcohol consumption, drinking behaviors, and alcohol-related problems. The AUDIT is available at: ***https://www.drugabuse.gov/sites/default/files/files/AUDIT.pdf***.

Box 5.

Behaviors that Increase Suspicion for Drug Misuse and Substance Use Disorders

- Taking a controlled substance for a long time period
- Refusing to grant permission to obtain old records or communicate with previous providers
- Reluctance to undergo a comprehensive history, physical examination, or diagnostic testing (especially urine drug screens)
- Requesting a specific drug
- Professing multiple allergies to recommended medications
- Resisting other treatment options

Other behaviors suggesting further screening for substance use:

- Issuing threats or displaying anger
- Targeting appointments at the end of the day or during off hours (nights or weekends)
- Excessive flattery
- Calling and visiting a physician's associates
- Repeatedly losing a prescription
- Requesting dose escalation
- Demonstrating noncompliance with prescription instructions
- Demonstrating other evidence of alcohol or illicit drug misuse

**Adapted from Standridge JB, et al (2010). Urine Drug Screening: A valuable office procedure*

For a list of screening tools for substance use disorders, refer to Principles of Practice.

Laboratory Drug Screening and Confirmatory Testing

Laboratory drug testing typically involves a two-step process: the initial drug screen for potentially positive specimens, followed by confirmatory testing of screened positive assays.

Screen Tests

Screening tests can be done in the laboratory or onsite and usually use an immunoassay of urine or saliva. Screening tests indicate the presence or absence of a substance or its metabolite, but can also indicate the presence of a cross-reacting, chemically similar substance. Screening tests are either positive or negative and generally do not measure the specific levels of drugs, alcohol, or metabolites present.

Box 6.

When Urine Drug Screening Should be Obtained

Drug testing may be useful for:

- New patients as part of regular care to identify use of illicit or non-prescribed drugs
- Patients being prescribed a controlled substance
- Aberrant patient behavior or high-risk patterns:
  - Patients who present with a condition that warrants prescription for a controlled substance but who resist full evaluation or who request a specific medication with addictive potential
  - Patients who consistently want appointments toward the end of office hours, arrive after office hours, insist on being seen immediately, repeatedly report losing prescriptions or medications, are reluctant to change medication, or do not adhere to the treatment plan
- Patients who are suspected of diversion
- Patients in recovery from substance use disorders
- Patients who need advocacy to verify their abstinence
- Pain management patients
- Patients who need a change in treatment
- Monitoring of adherence with treatment
- Patients who present with atypical or unusual clinical history of symptoms

Adapted from Standridge JB, et al (2010). Urine drug screening: A valuable office procedure; and SAMHSA (2012). Clinical Drug Testing in Primary Care.

Table 11.

Drugs that May Cause False-Positive Results in Screening (Immunoassay) Testing		
Drug Category Being Tested	**Duration of Detection**	**Medications that May Cause False-Positive Results**
Amphetamines	2–3 days	Amantadine; bupropion; chlorpromazine; desipramine; fluoxetine; L-methamphetamine (in nasal decongestants), labetalol, methylphenidate, phenteramine, phenylephrine, pseudoephedrine, ranitidine, thioridazine, trazodone
Benzodiazepines	Short-acting benzodiazepines (e.g., lorazepam): 3 days Long-acting benzodiazepines (e.g., diazepam): Up to 30 days	Sertraline, oxaprozin
Cocaine	2–3 days with occasional use; Up to 8 days with heavy use	Topical anesthetics containing cocaine
Opiates	1–3 days	Dextromethorphan, diphenhydramine, poppy seeds, quinine, rifampin, verapamil
Phencyclidine	7–14 days	Dextromethorphan, diphenhydramine, ibuprofen, imipramine, ketamine, meperidine, thioridazine, tramadol, venlafaxine
Tetrohydrocannabinol (Marijuana)	3 days (with single use) up to 30 days (with long-term, heavy use)	Dronabinol, nonsteroidal anti-inflammatory drugs (ibuprofen, naproxen, suldinac), proton pump inhibitor (e.g., protonix)

Adapted from Standridge JB, et al (2010). Urine drug screening: A valuable office procedure.

Confirmatory Testing

Confirmatory tests include gas chromatography-mass spectrometry or high-performance liquid chromatography to confirm or refute the results of screening assays. These tests provide quantitative concentrations of specific substances or their metabolites present in the specimen, have a high specificity and sensitivity, and can identify specific drugs within the drug class.

In individuals with a positive urine drug screen, obtain confirmatory drug testing if clinically warranted.

Behavioral Therapies for Substance Use Disorders

Behavioral therapies for substance use disorders include brief interventions, motivational enhancement therapy (MET)/motivational interviewing (MI), cognitive-behavioral therapy (CBT), contingency management, community reinforcement, coping skills training, couples therapy, individual and group counseling, brief family therapy, multi-dimensional family therapy, psychodynamic (supportive-expressive) therapy, and mutual help groups such as 12-step facilitation.

Brief Interventions

The goal of providing brief interventions is to reduce the risk of harm from continued use of substances providing clients with tools to change basic attitudes leading to substance use and addressing underlying problems. Brief interventions differ from long-term therapy by focusing on the present, emphasizing effect use of therapeutic tools over the short-term, and focusing on specific behavioral changes.

When to Use Brief Intervention

Criteria to consider when selecting individuals to participate in brief intervention include: dual diagnosis issues; range and severity of presenting problems; duration of substance dependence; availability of family and community support; influence from peers, family and community; previous treatment or attempts at recovery; level of client motivation; and short and long-term treatment goals.

Brief intervention is recommended for:

- Clients with less severe substance dependence, as measured by instruments such as the Addiction Severity Index (ASI)
- Level of past trauma affecting current substance use
- Insufficient time or resources available for more prolonged therapy/treatment
- Presence of coexisting medical or mental health diagnoses
- Inaccessibility of specialized treatment services due to logistical concerns (e.g., long waiting lists)

Brief interventions are most effective for clients with short-term problems with strong family and community support. It is essential to assess the patients' perceived obstacles to treatment engagement and identify beliefs that may hinder engagement in treatment.

Selected Brief Intervention Models

- **The FLO Model:** Includes providing feedback, listening and understanding, and exploring options.
- **The FRAMES Model:** Involves feedback, responsibility, advice, menu of strategies, empathy, and self-efficacy.

Selected Behavioral Therapies for Substance Use Disorders

- **Motivational Enhancement Therapy (MET)/Motivational Interviewing (MI)**

  Time-limited, evidence-based intervention that involves examining ambivalence to change, begins the process of change, enhances confidence in taking action, and strengthens individuals' commitment to change.

- **Contingency Management**

  Contingency management involves reinforcing abstinence through a voucher system, where vouchers are exchanged for goods or services compatible with a drug-free lifestyle.

- **Cognitive Behavioral Therapy (CBT)**

  CBT focuses on developing skills to cope with problematic substance use by exploring positive and negative consequences of continued substance use, self-monitoring to recognize cravings, identifying situations that put one at risk for substance use, developing strategies to cope with cravings, and avoiding high-risk situations.

- **Mutual Help Groups (e.g., 12-Step Facilitation)**

  Mutual help groups include 12-step facilitation through organizations such as Alcoholics Anonymous. Through mutual help groups, individuals who share a common experience or problem come together to share their experiences and provide help/support to one another.

Adolescents

Multiple approaches exist for treating adolescent substance use disorders (SUDs). Strong evidence exists for the efficacy of psychosocial or behavioral interventions in the treatment of adolescent SUDs. These interventions should be considered the primary treatment modality for youth with substance use problems. Working with parents and families typically improves treatment outcomes. Pharmacotherapy should be reserved for patients who have not been able to achieve abstinence or improvements in functioning with primary behavioral interventions. Examples of evidence-based behavioral interventions for adolescent substance use disorders include:

- Motivational Interviewing (MI) and Motivational Enhancement Therapy (MET)
- Multisystemic Therapy (MST)
- CBT
- Adolescent-Community Reinforcement (A-CRA)
- Contingency Management

Table 12.

Medications for Maintenance of Abstinence in Alcohol Use Disorders			
Medication	**Mechanism of Action**	**Dosing Recommendations**	**Notes**
Acamprosate (Campral®)	Exact mechanism not completely understood; possible blockage of glutaminergic N-methyl-D-aspartate (NMDA) receptors and activation of glamma-aminobutyric acid type A (GABA) receptors	Two 333 mg tablets by mouth three times per day. Dose adjustment recommended to one 333 mg tablet by mouth three times per day in patients with moderate renal impairment (CrCl 30–50 mL/min).	Contraindicated in individuals with severe renal impairment. Contraindicated if history of hypersensitivity reactions.
Disulfiram (Antabuse®)	Aldehyde dehydrogenase inhibition	500 mg by mouth every morning for 1–2 weeks, then reduce to 250 mg by mouth daily. Maintenance doses range from 125 mg to 500 mg once daily and should not exceed 500 mg/day.	After initiation, monitor every 2 weeks for first two months, then monthly for four months, and every 6 months thereafter. Contraindicated in patients with severe cardiovascular (heart failure, coronary artery disease, history of stroke, hypertension), suicidal risk, psychosis, active alcohol consumption, pregnant and breastfeeding patients. Contraindicated with concomitant use of metronidazole, paraldehyde, or alcohol-containing products. Contraindicated if hypersensitivity reactions, or with allergies to thiuram (found in pesticides and rubber).

Table 12. ***(continued)***

Medications for Maintenance of Abstinence in Alcohol Use Disorders *(continued)*			
Medication	**Mechanism of Action**	**Dosing Recommendations**	**Notes**
Naltrexone (Revia®)	Mu opioid receptor antagonist	50 mg/day orally starting 4–7 days after last drink; may begin at 25 mg po daily for first 3–5 day to minimize adverse effects	Contraindicated in patients receiving long-term opioid therapy Contraindicated in acute hepatitis or liver failure Monitor liver dysfunction. Contraindicated if history of hypersensitivity reactions.
Naltrexone, extended-release (Vivitrol®)	Mu opioid receptor antagonist	380 mg intramuscularly (IM) one time per month	Contraindicated in patients receiving long-term opioid therapy Contraindicated in acute hepatitis or liver failure Monitor liver dysfunction. Contraindicated if history of hypersensitivity reactions.

Note: Studies on the use of medications for maintenance of abstinence from alcohol use disorders are lacking in women who are pregnant; therefore, no definitive evidence-based recommendations can be provided. Disulfiram is contraindicated during pregnancy for maintenance of abstinence in alcohol use disorders.

Table 13.

Medication Assisted Therapy for Opioid Use Disorders: Methadone versus Buprenorphine		
	Methadone	**Buprenorphine**
Mechanism	Full mu receptor agonist	Partial mu receptor agonist
Use	More effective for severe dependence	Used for mild to moderate dependence
Half life	24–36 hours	36–48 hours
Route	Oral	Sublingual
Dosing	Daily dose	Daily to 3 times per week
Accessibility	Opioid treatment program	Physician's office or opioid treatment program
Abuse potential	More abuse potential Less risk of injection misuse with oral liquid	Less abuse potential Risk of injection misuse with sublingual tablet preparation
Overdose risk	No protective overdose factors	Ceiling effect limits risk of overdose
Withdrawal	Moderate to severe, prolonged withdrawal	Mild withdrawal symptoms
Common side-effects	Cardiac dysrhythmia, hypotension, diaphoresis, constipation, nausea, vomiting, dizziness, sedation	Headache, nausea, sweating, rhinitis, constipation
Use in pregnancy	Current standard of care in pregnancy	Combination buprenorphine/naloxone not recommended in pregnancy; use methadone or buprenorphine alone

Notes: For individuals receiving opioid medications requesting benzodiazepines from another provider, carefully assess benefits and risks of concomitant use of opioids and benzodiazepines. Ensure clear communication between providers, for example, through use of standardized letters. For a sample agreement on controlled substance therapy for chronic pain treatment by the American Academy of Pain Medicine, visit ***http://www.painmed.org/files/agreement-on-controlled-substances-therapy pdf****. Frequently monitor older adults prescribed benzodiazepine medications. Assess indications for which benzodiazepines are prescribed, potential drug-drug interactions, and presence of side-effects such as somnolence.*

Nicotine Dependence and Tobacco Use Disorder

According to the Centers for Disease Control (CDC), tobacco use alone accounts for 1 in 5 deaths each year. Individuals with mental illness have a higher risk of co-occurring tobacco use disorders.

Tobacco Cessation: 5 A's to Assess and Manage Tobacco/Nicotine Use

Ask: Quantify tobacco use

Advise: Recommend against initiation, or if smoking, recommend quitting

Assess: Determine state of change (precontemplative, contemplative, preparation, active)

Assist: Counsel, set quit date, offer support

Arrange: Arrange follow-up, offer additional encouragement, monitor for relapse

Table 14.

Nicotine Replacement Therapies and Other Medication-Assisted Treatment for Tobacco Use Disorders			
Nicotine Replacement Therapy (First-Line)			
Medication	**Mechanism of Action**	**Dosing Recommendations**	**Notes**
Patch	7, 14, or 21 mg/day	Skin reactions, vivid dreams, insomnia	Patch placed on skin; dose reduced over time
Gum	2 mg or 4 mg every 1–2 hours	Hiccups, nausea, jaw pain	Chew gum until it produces tingling feeling, then keep gum between cheek and gum and chew with cravings
Lozenges	2 or 4 mg lozenges as needed with cravings	Hiccups, nausea	Allow lozenge to dissolve slowly
Inhaler	4 mg/cartridge, up to 6–16 cartridges/day	Throat irritation, mouth irritation, nasal congestion, cough	Inhale through mouthpiece to deliver nicotine
Nasal spray	0.5 mg/spray; Use one spray per nostril as needed with cravings	Nasal irritation, nasal congestion, changes in taste and smell	Insert and spray into each nostril

Table 14. ***(continued)***

Nicotine Replacement Therapies and Other Medication-Assisted Treatment for Tobacco Use Disorders *(continued)*			
Nicotine Replacement Therapy (First-Line)			
Medication	**Mechanism of Action**	**Dosing Recommendations**	**Notes**
Bupropion (Zyban®)	150 mg/day for 3 days, then increase to 150 mg q12 hours; continue for 7–12 weeks. For moderate to severe hepatic impairment, max dose recommended is 150 mg every other day.	Dry mouth, insomnia, agitation, headache, nausea/vomiting, constipation, tremor, dizziness, tachycardia, confusion, blurred vision, rash, auditory disturbances lowers seizure threshold. Boxed warning that antidepressants increase the risk compared to placebo of suicidal thinking in children/adolescents <24 years. Patients should stop bupropion and seek care immediately if they notice any changes in mood, behavior, or thinking.	Mechanism: dopamine/norepinephrine reuptake inhibitor Begin 1 week before target quit date. May be used in combination with nicotine patch. Consider maintenance therapy if successfully quit after 7–12 weeks. Use caution with mild hepatic impairment.
Varenicline (Chantix®)	Days 1–3: 0.5 mg once daily Days 4–7: 0.5 mg twice per day Day 8–end of treatment: 1 mg twice per day In patients who may not be able to quit smoking abruptly, consider gradual approach: reduce tobacco use by 50% from baseline within first four weeks, additional 50% in next four weeks, and continue reduction with goal of complete abstinence by 12 weeks. For severe renal impairment, max dose recommended is 0.5 mg daily.	Nausea/vomiting, dry mouth, indigestion, constipation, unusual dreams, insomnia, headache, unpleasant taste in mouth. Rare but serious adverse effects include chest pain, difficulty breathing, depression/suicidal thoughts, paranoia, and seizures. Boxed warning regarding serious neuropsychiatric effects was removed by the FDA based on EAGLES trial; however, patients should stop taking varenicline and seek care immediately if they notice any changes in mood, behavior, or thinking.	Mechanism: Nicotine partial agonist. No dosage adjustment necessary for patients with mild to moderate renal impairment. No dose adjustment for hepatic impairment.

For more information on treatment considerations in women of reproductive age with severe mental illness and substance use disorders, view the online *Florida Medicaid Best Practice Psychotherapeutic Medications Guidelines* at ***floridamedicaidmentalhealth.org***.