Substance Use and Treatment in Older Adults

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National Council for Behavioral Health

Welcoming Remarks & Strategic Overview
Webinar Learning Objectives

• Identify national and state trends on substance use disorders amongst older adults.
• Gain an understanding of two (2) effective evidence based treatments for substance use disorders in older adults.
• Participants will gain a better understanding about the life transitions that occur with aging, and that it may cause older adults to be at risk for problems with substance use.

Quality life and health outcomes is a right for all
National & State Trends

Background & Prevalence

• Estimates of problematic substance use by older adults vary widely
• 20-25% of older adults have substance abuse problems
• 3% have a diagnosable substance use disorder including addiction to alcohol and other drugs
• This is similar to prevalence of serious mental illness among older adults

Changing Landscape

Among treatment facilities that receive some public funding, the proportion of treatment admissions for people aged 50 and older nearly doubled between 1992 and 2008 (6.6% of all admissions for people aged 12 and older vs. 12.2%)

Source: http://oas.samhsa.gov

Changing Landscape cont.

• Number of adults aged 50 or older with substance use disorder is projected to double from 2.8 million (annual average) in 2002-2006 to 5.7 million in 2020.

• According to the 2015 National Survey on Drug Use and Health:
  – 1.9% of individuals 65 or older (866,000) used an illicit drug in the past month
  – 6.2% of individuals 60-64 (1,967,000) used an illicit drug in the past month

Note! Trends are meaningful to our state!!

Source: https://www.census.gov
(Source: U.S. Census Bureau, Population Estimates)

Florida Trends

Source: edr.state.fl.us
(Source: U.S. Census Bureau Projections, 2009)
Exhibit 5. Binge Drinking Rates in Florida by Age Group and Sex, 2013

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2013
Exhibit 7. SUD Treatment Admissions of Adults Ages 50+ in Florida, Region 4, and the United States by Sex, 2012

Source: Treatment Episode Data Set (TEDS), 2012
Data include only those clients reported to SAMHSA.


Source: Behavioral Risk Factor Surveillance System (BRFSS), 2013
Defining Substance Use Disorders (SUDs)

Addiction is a primary, chronic and relapsing brain disease characterized by an individual pathologically pursuing reward and/or relief by substance use and other behaviors

- ASAM

- Biological
- Psychological
- Social Components

SUD Services Save Medicaid Money

Wickizer et al. (2012) examined whether adult Medicaid beneficiaries receiving SUD treatment had decreased health care expenditures compared with clients who needed treatment but did not receive care.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Adult Medicaid Disabled (n=26,520)</th>
<th>General Assistance Unemployable (n=8,235)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Period</td>
<td>Treatment Group</td>
<td>Comparison Group</td>
</tr>
<tr>
<td>Baseline 24-month period</td>
<td>$880</td>
<td>$1,246*</td>
</tr>
<tr>
<td>Post-treatment 24-month period</td>
<td>$915</td>
<td>$1,999*</td>
</tr>
<tr>
<td>Difference baseline – post-treatment</td>
<td>$35</td>
<td>$753*</td>
</tr>
</tbody>
</table>

*p<0.01 for within year differences

Universal Changes in Aging

- Physiological Changes
  - Cognitive Changes
  - Shift in muscle-to-fat ratio (sarcopenia)
- Metabolic changes
  - Slower metabolism
- Cell changes over time impacting every major organ
  - Cardiovascular
    - SA node cell loss (slower heart rate), cardiomyopathy, atherosclerosis
- Sensory declines
  - Visual (presbyopia)
  - Hearing (presbycusis)

Source: http://sphweb.bumc.bu.edu

Chronic conditions in older adults

Disease-related complications increase risk for older adults universal changes

**Musculoskeletal** → Osteoporosis, falls, fractures, arthritis, degenerative joint disease

**Cardiovascular** → Hypertension, arteriosclerosis, coronary heart disease, arrhythmias, heart failure

**Nervous system** → Dementia, delirium, depression, Parkinson’s

Source: https://uiowa.edu
Consequences

• **Universal changes** increase older adult’s **sensitivity to drinking**

• Increased sensitivity in older adults means, consuming the same amount they did when they were younger has very different impact…
  
  – Higher blood alcohol levels, AND
  – Associated adverse effects
    • Confusion
    • Slurred speech
    • Impaired coordination/fall risks

Consequence of alcohol use

Health consequences of alcohol use →

  **Cardiac**: Cardiomyopathy, arrhythmias, atrial fibrillation, ventricular tachycardia, strokes, hypertension
  **Liver**: Alcoholic hepatitis, cirrhosis
  **Pancreas**: Pancreatitis
  **Cancer**: Mouth, esophagus, pharynx, larynx, liver, breast, colon/rectal
  **Immune system**: Suppress innate (WBCs, Natural Killer cells cytokines) and adaptive (T- and B-lymphocytes, antibodies) responses
Consequences

Excessive drinking can . . .
- Lead to → Cancer, liver damage, brain damage (memory problems)
- Worsen other problems → Osteoporosis, diabetes, hypertension/CV problems, ulcers
- Increase risks of accidents → Falls, driving, misjudgments
- Make some health problems more difficult to identify/treat → Pain may be masked by alcohol
- Result in misdiagnosis → Confusion, forgetfulness may be mistaken as dementia

Psychiatric diagnosis & substance use

Depression & drinking is the most common comorbid problem in late life.

New onset psychiatric problems are associated with substance use risks
- Cognitive disorders → 10%
- Anxiety disorders → 15%
- Depression* → 21% to 66%

Source: https://uiowa.edu
Consequences

- Sheer number of chronic illnesses in late life AND medications used to treat them puts older adults at risk!
  - Additive effects of chronic illness & alcohol-related changes
  - Disease/drug & alcohol interactions
- Social and health-related distress “treated” with alcohol
  - Fear of disability, death, role changes, uncertainty
  - Depression, anxiety
  - Isolation, boredom

Medications

Older adults are more likely to be prescribed long-term and multiple prescriptions, putting them at higher risk for improper use of medications.

- 1/3 of total outpatient spending in prescription medications in the US are prescribed to individuals 65 and older, yet those 65 and older is only 13% of the population.
- High rates of comorbid illnesses in older adults, changes in metabolism, and potential for drug interactions significantly increase risk in this population when compared to younger cohorts.
- A large percentage of older adults also use OTC medicines and dietary supplements which in addition to alcohol may compound any adverse health consequence resulting from prescription drug use.
- About 81,000 Medicare enrollees are receiving buprenorphine-naloxone therapy
- More than 1/3 of Part D enrollees fill at least 1 prescription for an opioid in any given year

Medications

- **Typical Adverse reactions:**
  - **Common:** Nausea & vomiting, headaches, drowsiness, fainting, loss of coordination, abnormal behavior, confusion, accidents (& latter increase fall risk)
  - **More severe:** liver damage, Internal bleeding, heart problems, impaired breathing, depression.
  - **Impact** prescription medications action (less/more potent), may even be toxic

Source: [www.drugabuse.gov](http://www.drugabuse.gov)

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Examples of mixing alcohol with medications

- Aspirin or NSAIDS = Bleeding stomach
- Acetaminophen = Liver damage
- Cold/allergy meds = Drowsiness, impaired coordination (fall risk increases)
- Hypnotics, analgesics, anxiolytics = Sleepiness, poor coordination, difficulty breathing, tachycardia, memory impairment
- Hypertension, diabetes, ulcers, gout, heart failure meds worsen conditions

Source: [https://pubs.niaaa.nih.gov](https://pubs.niaaa.nih.gov)
Life changes in older adults

**Retirement** → More time and fewer responsibilities, boredom, financial changes – fixed income

**Chronic Illness/disability** → pain management, loss of independence, comorbid chronic complex disease management

**Loneliness/social isolation** → Social changes that lead to boredom, sadness, anxiety, comfort-seeking

**Loss/Widowhood** → Death of a spouse, close friend, even a pet

Source: [https://www.novanthealth.org](https://www.novanthealth.org)

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Declining health and function

- **Health-related changes**
  - Hip fracture → social changes
    - Unable to drive to shop, care for home, participate in leisure activities
    - Increased isolation, unwanted dependency
    - Risk of drinking/drug misuse to treat distress

- **Disabilities** → Pain, depression, fear related to loss of abilities, impending death

- **Sleep disturbances** → Typical/universal sleep pattern changes “treated” with alcohol
Changes in living arrangements

- Community, Residence Changes
  - Marital status
    - 70% men and 45% women married
    - 12% men and 34% women widowed
  - Living arrangements
    - 29% live alone: 36% women, 20% men
    - 46% women ≥ 75 years live alone
    - Stress caused by both relocation AND isolation

Source: https://www.giaging.org

Impact of stress on older adults

- Long term stress can damage brain cells, leading to depression
- Depression is one of the most dangerous effects of stress in older adults
- 2 million Americans over 65 suffer from depression
- 16% of all suicides in 2004 were adults 65 and older.

Source: https://www.novanthealth.org
Slides 30-36 provide information about mental health/co-occurring disorders in this population. However, information is missing on how this inter-relates, corresponds or affects assessment and treatment for substance use in older adults. Need additional slides to relate back to learning objectives of webinar.
Cynthia Craig I, 11/3/2017

I added slides to demonstrate the impact of depression on older adults and the significance of co-occurance with depression. We can remove these slides if necessary. It was just informational.
Nicole Cadovius, 11/13/2017

Thank you! Prefer not to remove as it is important information to tie into co-occurring discussion.
Cynthia Craig I, 11/14/2017
Geriatric Depression and Health Care Costs

Unutzer, et al., 1997; JAMA

Depression Kills Older Women
7 Years After Hip Fracture

https://www.integration.samhsa.gov
Depression Kills After Heart Attack

- Depressed
- Nondepressed

Source: https://www.integration.samhsa.gov

Depression Kills Older Men

Source: https://www.integration.samhsa.gov
Lethality of Late Life Suicide

• Older people are
  – More frail (more likely to die)
  – More isolated (less likely to be rescued)
  – More determined

➔ Implying that:
  • Interventions must be aggressive
  • Primary and secondary prevention are key

Source: Van Orden & Conwell, March 2012 SAMHSA webinar

Signs of substance use problems OR issues often found in Older Adults?

• Increasing fatigue
• Diminished cognitive capacities
• Balance problems
• What are some others you can think of?
Health issues exacerbated

- Issues around half-life and metabolism of substances in older adults
- Can precipitate or exacerbate a number of chronic health conditions that are common amongst older adults
- Individuals living with SUD have:
  - 9x greater risk of congestive heart failure
  - 12x greater risk of liver cirrhosis
  - 12x the risk of developing pneumonia.

Source: https://www.integration.samhsa.gov
CCI13  Cynthia Craig I, 11/3/2017

CCI37  Is there any way to enlarge the font on this document?
        Cynthia Craig I, 11/3/2017

NC2    no
        Nicole Cadovius, 11/13/2017

CCI42  O.k. Thank you
        Cynthia Craig I, 11/14/2017
Healthy Aging

• Social Circle & Support Systems
  – Regular engagement in social and productive activities is associated with decrease risk in cognitive and physical decline

• Smoking
  – Decreases life span by an average of 14 years
  – Quitting smoking at any time provides serious and immediate health benefits. Cessation brings rapid reduction in risk of stroke and myocardial infection and slower reduction of risk of cancer

• Leisure Activities
  – Regular participation reduces risk of dementia, engagement in cognitive task improve and maintain currently levels as does sensory activities.

Source: [http://sphweb.bumc.bu.edu](http://sphweb.bumc.bu.edu)

Healthy Aging

• Diet
  – Plays a major role in prevention and management of debilitating cognitive and physical conditions. Both consuming too much or too little dietary substance can have detrimental effects.

• Exercises
  – Effects on physical health – increase survival, delay in disability, delay in loss of function, improved balance and strength, higher quality of life, mood improvement.
  – Effects on Cognitive Health – 38% less likely to show signs of cognitive decline compared to those with low activity.

Source: [http://sphweb.bumc.bu.edu](http://sphweb.bumc.bu.edu)
What is wellness...

Source: https://www.samhsa.gov

Screening Older Adults for SUD
SBIRT

• Screening

• Brief Intervention

• Referral to Treatment
<table>
<thead>
<tr>
<th>CCI28</th>
<th>Organizationally, this slide might make more sense as an introduction to the EBPS for treatment.</th>
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<tr>
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<td>NC9</td>
<td>Thank you for the recommendation</td>
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<td>NC10</td>
<td>we moved the slide - resolved</td>
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<tr>
<td>CCI43</td>
<td>O.k. Thank you!</td>
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<tr>
<td></td>
<td>Cynthia Craig I, 11/14/2017</td>
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</tbody>
</table>
Are You Opening the Floodgates?

Impact of Screening for Substance Use

Source: Dawson, Alcohol Clin Exp Res 2004
Impact of Screening for Substance Use

• According to the SAMHSA-CSAT Treatment Improvement Protocol Series on Substance Abuse Among Older Adults, it is recommended that every 60-year-old should be screened for alcohol and prescription drug abuse as part of his or her regular physical examination.
• “I’m wondering if alcohol may be the reason why your diabetes isn’t responding as it should”

Screening Tools

CCI39
NC3
NC4
CCI6
CCI44
Target audience is not doctors or physicians as demonstrated in examples, some may be clinicians, counselors, nurses

We changed the transition slide

Renamed to “Screening Tool”

deleted Florida Brite

O.K. Thank you.
Screening Tools

• CAGE

• AUDIT C

CAGE

1. Have you ever felt you should Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt bad or Guilty about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (Eye opener)?

Scoring:
Item responses on the CAGE are scored 0 or 1, with a higher score an indication of alcohol problems. A total score of 2 or greater is considered clinically significant.

Source: https://www.hopkinsmedicine.org
How to Have a 30-60 Second Conversation about SUDs

- Discuss with individual that their substance use is a health problem:
  "Based on your survey answers, it looks like your alcohol use may be a risk to your health."

- Relate use to its impact on a current complaint:
  "And it may be related to some of the complaints you are presenting with today."

- Offer resources and tools

- Use exit strategies, reschedule as necessary.
If the individual gets upset about you addressing his/her substance use: “...are you calling me an addict?”

“It’s your choice to work on this or not, but I wouldn’t be the primary care provider you deserved if I didn’t bring this up, since reducing substance use is the single most important change you could make to improve your health.”

If the individual wants to talk more about substance use at this visit: “…what’s the best way for me to reduce my use?” or “I’ve tried everything, let me tell you about what I’ve done.”

“You came in today because of [___], let’s take care of that now, then get an appointment to me/my MA/a BHP/[___] in several weeks so we can talk more about this.”
• If the individual does not want to work on reducing their substance use: “I have zero interest in stopping use!”

• “This is your choice; just know that if and when you want to work on your use, we can help you here at our health center.”

Questions?
National Opioid Overdose Epidemic as of 2016

- Drug overdose is the leading cause of accidental death in the US, with **64,070 lethal drug overdoses** in 2016 (21% increase from 2015); an estimated 53,332 have been linked to opioids of some type (an increase of 61% from 2015)
- In 2016 an estimated **21 million people** aged 12 or older needed treatment for a substance use disorder, and only 3.8 million people aged 12 or older received specialized treatment

Source: [https://www.cdc.gov](https://www.cdc.gov); [https://www.samhsa.gov/data](https://www.samhsa.gov/data)

National Opioid Overdose Epidemic as of 2015

- In 2012, 259 million prescriptions were written for opioids, which is more than enough to give every American adult their own bottle of pills.

- 80% of current heroin users started out misusing prescription painkillers.

- 94% of respondents in a 2014 survey of people in treatment for opioid use/abuse issues said they chose to use heroin because prescription opioids were “far more expensive and harder to obtain.”

Source: [https://www.asam.org](https://www.asam.org)
CCI18  We are discussing aging population, do these figures include them? Do we have any?
Cynthia Craig I, 11/3/2017

NC12  We don't have older adult specific data - if we need to remove we can. The intent was to give folks the overall impact of the epidemic.
Nicole Cadovius, 11/13/2017

CCI45  O.k., may need to make a statement to that effect during the presentation.
Cynthia Craig I, 11/14/2017

CCI19  Again, we are talking about older adults in this presentation. Explain how opioid epidemic affects them specifically - over prescription, likelihood of dependence or misuse, overdose, mis diagnosis because of other health issues, contraindicated medications - or provide statistics that demonstrate our older adults are likely to become heroin addicts if they can't get pills.
Cynthia Craig I, 11/3/2017
Overdose Deaths

Conclusion: Rising rate of overdose deaths is driven largely by Heroin and Fentanyl


Integration and Collaborative Care

- Increase our access to patients
- Provide more EBP to our communities
- More effective
- Reduces stigma
- Individual Centered – The individual’s treatment plan

Collaborative Care for Opioid and Alcohol Use Disorders in Primary Care

At 6 months, the proportion of participants who received any OAUD treatment was higher in the CC group compared with usual care 39.0% vs 16.8%

A higher proportion of CC participants reported abstinence from opioids or alcohol at 6 months 32.8% vs 22.3%

Source: https://jamanetwork.com
Age-adjusted? is this for older adults or general population?

Cynthia Craig I, 11/3/2017
Science-based Definition

“Well-supported scientific evidence shows that addiction to alcohol or drugs is a chronic brain disease that has potential for recurrence and recovery.”

Source: surgeongeneral.gov

Advances in Medication

“We have highly effective medications, when combined with other behavioral supports, that are the standard of care for the treatment of opiate abuse.”

Michael Botticelli, Former Director, ONDCP
Medication Assisted Treatment (MAT)

Medications

Recovery Support

Intensive Psycho, Social and Behavioral Evidenced Based

OUD Drugs: Distinct Pharmacology and Roles in Treatment

• **Methadone** is a full agonist. By fully occupying the mu-opioid receptor, methadone lessens the painful symptoms of opiate withdrawal and blocks the euphoric effects of other opioid drugs.

Source: [www.pewtrusts.org](http://www.pewtrusts.org)
It is Medication, not Medicated. Previously overlooked - please correct. Thank you.

Cynthia Craig, 11/14/2017
• **Buprenorphine** is a partial agonist, meaning it does not completely bind to the mu-opioid receptor. As a result, buprenorphine has a ceiling effect, meaning that its effects will plateau and will not increase even with repeated dosing.

Source: [www.pewtrusts.org](http://www.pewtrusts.org)

• **Naltrexone** is an opioid antagonist, meaning that it covers, rather than activates, the mu-opioid receptor, effectively blocking the effects of opioids if they are used.

Source: [www.pewtrusts.org](http://www.pewtrusts.org)
Medication Assisted Treatment

• MAT is the gold standard for opioid use disorder (OUD) treatment:
  ➢ Reduces drug use
  ➢ Reduces risk of overdose
  ➢ Prevents injection behaviors
  ➢ Reduces criminal behavior

• 20.2 Million People Have SUD
• Only a fraction of those that get treatment get MAT
  ▪ 300,000-400,000 people on methadone in a given year
  ▪ 40,000 on buprenorphine
  ▪ 5-10,000 on Naltrexone

Only 10% of the prospective MAT patients for (OUD) are receiving it


Medications to Treat Opioid Use Disorder

Goals:
• Alleviate signs/symptoms of physical withdrawal
• Feed or block opioid receptors
• Diminish and alleviate drug craving
• Normalize and stabilize perturbed brain neurochemistry
Shared Decisions between individual and Professional

- Is medication right for me?
- Which medication is best?
- What is the appropriate dosage for me?
- What is a suitable duration of the medication plan?
- What psychosocial services are available?
- What recovery supports may be helpful?

Source: Samhsa.gov

Source: nejm.org
8 Steps to reach a SUD

1. Addictive Substances disrupt the function of the brain circuits that mediate a complex array of functions (motivation, decision making, memory) involved in obtaining natural rewards such as food and water.

2. Addictive Substances can mimic, interfere (both) the brain’s regulation of its natural chemicals - this CHANGES the reward system.
   - Normal brain - the mesolimbic dopamine pathway allows a person to experience pleasure in response to stimuli such as food and social interactions, and therefore encourages and motivates an individual to seek out these stimuli.

3. Connections between mesolimbic dopamine and memory circuits enable a person to remember the people, places, and things associated with the reward.

All that and a bag of chips……

CRINKLE... CRINKLE people, places, and things associated with the reward.
4. Addicting substances activate mesolimbic dopamine pathways more powerfully than natural rewards.

Repeated use=SUD
5. In patients with SUD, the mesolimbic pathway responds to cues that addictive substances are available, while its response to the drug itself and to natural rewards diminishes.
6. Simultaneously, repeated substance use erodes the ability to exert inhibitory control.

7. Over time, substance-related cues become more salient, drug craving becomes more compelling, and the individual is less able to inhibit impulses to use substances even as the “high” experienced is diminished.
8. This leads to impairment and erosion in substance-related decision making that leads to many of the DSM-5 symptoms of an SUD

Addiction now defined as **Erosion** of Voluntary Control
How has addiction treatment changed?

- **Short-term acute** interventions vs. **chronic disease management model**
- **DETOX** – NO!
- Relapse is a part of the disease, **NOT** a failure
  - Similar to other chronic diseases, addiction often involves cycles of relapse and remission
  - Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death

The Case for MAT

- MAT is “the use of medications, in combination with counseling and behavioral therapies, to provide a whole-patient approach to the treatment of substance use disorders.”—SAMHSA
- Research indicates that methadone and buprenorphine have a strong evidence base supporting their clinical effectiveness. Strong support for Vivitrol.
- MAT is the **gold standard** for opioid use disorder (OUD) treatment:
  - Reduces overdose death
  - Reduces risk of overdose
  - Reduces drug use
  - Prevents injection behaviors
  - Reduces criminal behavior
CCI27  How has treatment for SUDs changed?
Cynthia Craig I, 11/3/2017

NC7  Nicole Cadovius, 11/13/2017
MAT Supports Recovery

- persistent intentional abstinence from intoxication
- engagement in daily life
- gaining employment
- reestablish family and social ties
- being present in everyday life
- being able to weather the challenges, daily lows and highs of life without using substances as an external coping skill that has negative side effects and consequences
The Bias against MAT
Assumptions that the individual is:
• Using a crutch
• Substituting one drug for another
• Still getting high
• Not abstinent
• Not in recovery

There is no evidence to support stopping MAT
- 95% of methadone patients do not achieve abstinence when attempting to taper off
- Over 90% of buprenorphine patients relapse within 8 weeks of taper completion

MAT: Tapering and Stopping

- Successful patients are commonly maintained on Methadone for 24+ months, Buprenorphine for 18+ months
- Typically patients with continuous recovery for 1-2+ years have the best outcomes; Treatment <6 months has worse outcomes


Treatment Works, People Recover

- More and more individuals are engaged in MAT
- Over 23 million Americans are in recovery from addiction to alcohol and other drugs
CCI30  Wrap up slide should tie up discussion of using these EBPs with older adults as trends demonstrate increasing need to address possible SUDs and consequences for these individuals. Comments refer to teen drug use
Cynthia Craig I, 11/3/2017

NC11  deleted comment - will wrap up with older adult conclusion
Nicole Cadovius, 11/13/2017

CCI48  o.k. thank you very much
Cynthia Craig I, 11/14/2017
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