Prevalence of Substance Use and Substance Use Disorder among Middle-aged and Older Adults with Multiple Chronic Conditions in the United States
Substance Use and Substance Use Disorder

- Substance Use Disorder: When recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment.

- Prescription Misuse: Is the use of prescription medication in a way that is not intended by the prescribing doctor.
Substance Use and Older Adults

- Baby Boomers have shifting attitudes towards alcohol and drug use.

- This cohort is much larger and more likely to use drugs than older generations.

- Due to these changes, the population of adults ≥ 50 years old that use drugs is expected to double in the next decade.
Multiple Chronic Conditions

- As we age, we are more likely to develop chronic conditions, often more than one.

- Suffering from multiple chronic conditions is called Multimorbidity. It is estimated that 1 out of 4 Americans suffer from multimorbidity and 3 out of 4 Americans ≥ 65 years old suffer from multimorbidity.

- Multimorbid patients require coordinated, complex care and have worse prognoses.
## Multiple Chronic Conditions

<table>
<thead>
<tr>
<th>Time</th>
<th>Medications</th>
<th>Non-pharmacologic Therapy</th>
<th>All Day</th>
<th>Periodic</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 AM</td>
<td>Ipratropium MDI</td>
<td>Check feet</td>
<td>Joint protection</td>
<td>Pneumonia vaccine, Yearly influenza vaccine</td>
</tr>
<tr>
<td></td>
<td>Alendronate 70mg weekly</td>
<td>Sit upright 30 min.</td>
<td>Energy conservation</td>
<td>All provider visits: Evaluate Self-monitoring blood glucose, foot exam and BP</td>
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<td></td>
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<td>Check blood sugar</td>
<td>Exercise (non-weight bearing if severe foot disease, weight bearing for osteoporosis) Muscle strengthening exercises, Aerobic Exercise ROM exercises</td>
<td>Quarterly HbA1c, biannual LFTs</td>
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<tr>
<td>8 AM</td>
<td>Eat Breakfast</td>
<td>2.4gm Na, 90mm K, Adequate Mg, ↓ cholesterol &amp; saturated fat, medical nutrition therapy for diabetes, DASH</td>
<td>Avoid environmental exposures that might exacerbate COPD</td>
<td>Yearly creatinine, electrolytes, microalbuminuria, cholesterol</td>
</tr>
<tr>
<td></td>
<td>HCTZ 12.5 mg Lisinopril 40mg</td>
<td></td>
<td>Wear appropriate footwear</td>
<td>Referrals: Pulmonary rehabilitation</td>
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<td></td>
<td>Glyburide 10 mg ECASA 81 mg</td>
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<td>Metformin 850mg</td>
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<td>Limit Alcohol</td>
<td>DEXA scan every 2 years</td>
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<td>Patient Education: High-risk foot conditions, foot care, foot wear</td>
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<td>12 PM</td>
<td>Eat Lunch</td>
<td>Diet as above</td>
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Study Focus

1. To estimate the national prevalence of substance use and substance use disorder in adults ≥ 50 years old who have 0, 1 or ≥ 2 chronic conditions.

2. To determine the demographics of substance-using adults ≥ 50 years old who suffer from ≥ 2 chronic conditions.
Methods

• Study Population:
  – Data were utilized from the 2015-2016, National Survey on Drug Use and Health (NSDUH), an annual cross-sectional survey of non-institutionalized individuals in the 50 US states and the District of Columbia administered by the Substance Abuse and Mental Health Services Administration (SAMHSA).
Methods

• Measures:
  – Participants were assessed for:
    • past-year use of and meeting criteria of substance use disorder for cannabis, cocaine, methamphetamine, heroin, inhalants, hallucinogens, and nonmedical use of prescription medications (opioids, tranquilizers, stimulants, and sedatives).
    • 10 self-reported lifetime, chronic medical conditions, including: asthma, bronchitis, cirrhosis, diabetes, heart conditions, hepatitis, high blood pressure, cancer, kidney disease and HIV/AIDS.
Methods

• Statistical Analyses:
  – Cross-sectional aggregated prevalence of the presence of 0, 1, and ≥ 2 chronic conditions among older adults with past-year drug use and diagnosed substance use disorder.

  – Logistic regression models were used to examine correlates of multiple chronic conditions among adults reporting past year drug use.
Results

Percentage of Adults ≥ 50 Years Old Using Any Illicit Drug, 2015-2016

Population, n = 17,571

P value = 0.208
Results

Percentage of Adults ≥ 50 Years Old Using Various Illicit Substances, 2015-2016

- **Cannabis:** 6% (P = 0.044)
- **Cocaine:** 0%
- **Methamphetamine:** 0%
- **Inhalants:** 0%
- **Heroin:** 0%
- **Prescription Opioids:** 0%
- **Hallucinogens:** 0%
- **Tranquilizers:** 0%
- **Sedatives:** 0%
- **Stimulants:** 1.5%

**Notes:**
- 0 Chronic Conditions: 6%
- 1 Chronic Condition: 0%
- ≥ 2 Chronic Conditions: 1.5%

*P-values reflect statistical significance.*
Results

Percentage of Adults ≥ 50 Years Old Diagnosed with Any Substance Use Disorder, 2015-2016

Population = 17,571

P value = 0.075
Results

Percentage of Adults ≥ 50 Years Old With Various Substance Use Disorders, 2015-2016

- Cannabis: P = 0.559
- Cocaine: P = 0.150
- Methamphetamine: P = 0.030
- Inhalants
- Heroin
- Prescription Opioid: P = 0.039
- Hallucinogens: P = 0.053
- Tranquilizers
- Sedatives
- Stimulants

0 Chronic Conditions
1 Chronic Condition
≥ 2 Chronic Conditions
Results

• Substance-using adults ≥ 50 years old, who suffer from ≥ 2 chronic conditions are more likely to be:

  • Male
  • Divorced/separated (AOR = 1.74) or never married (AOR = 2.44)
  • Smoke tobacco (AOR = 2.54)
  • Have concurrent alcohol use disorder (AOR = 2.67)

• There was no significant difference between: race, income or health care use
Results: Summary

• Nationally, adults ≥ 50 years old are using illicit substances at a rate of approximately 10% and about 1% of them have been diagnosed with substance use disorder.

• Nationally, adults ≥ 50 years old are using all types of different illicit substances, cannabis and prescription drugs misused being the highest.

• THE SAME NUMBER OF ADULTS ≥ 50 USE ILLICIT DRUGS, WHETHER OR NOT THEY HAVE CHRONIC CONDITIONS.
Limitations

• The survey is based on self-report, so it is subject to recall and social-desirability bias.
• The chronic medical diseases studied were predetermined and often vague, for example, “heart conditions”. We were limited to the choices of NSDUH.
• There was no distinction between frequent use of an illicit drug in the past year and one time use.
• This data does not capture institutionalized individuals; including those in jail or in nursing homes; ignoring a potentially large portion of the population of interest.
Results: Significance

• Geriatric population using drugs is expected to increase:
  – 2016 → 8.5% of the world was ≥ 65 years old
  – 2050 → 17% of the world is projected to be ≥ 65 years old
  – Younger-aging generations are more likely to use illicit substances.

• Older adults who use drugs are not getting the care they need:
  – Many geriatricians claim difficulty in addressing substance use in their older patients.
  – Short term and long term care facilities are rejecting patients with a history of substance use and/or not addressing substance use upon admission.
Discussion

• Screen older adults for substance use and develop age-specific screening criteria.

• Increase awareness of the dangers of substance use in patients with multiple chronic conditions.

• Provide rehabilitation programs focused on older adults.

• Increase training on substance use for physicians, nurses, and other healthcare staff.
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