The Hidden Epidemic: Geriatric Substance Abuse

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The Hidden Epidemic: Geriatric Substance Abuse

Outline

- Overview
- Physical Changes Assoc w/ Aging
- Alcohol
- Prescription & OTC Drug Abuse
- Illicit Drugs Abuse
- Assessment
- Treatment
Overview
Growth of the Geriatric Population

1900 - 2030

Source: U.S. Bureau of the Census
And Here Come the Boomers!!!

- Those born between (and including) 1946 and 1964 (49-67 yrs old)
- Currently represent ~29% of the U.S. population
Best Statistics I Could Find

- 17% - Incidence for alcohol & prescription drug abuse

- Alcohol > Rx abuse > illicit drug usage (>age 65)
  Illicit drug usage > Alcohol > Rx abuse (>age 50)

- Definite alcohol abuse was 8.9% & questionable alcohol abuse was 3.7% *

- National Survey on Drug Use & Health, Sept 2011 said 5.2% (4.8 million adults aged 50 or older) used an illicit drug in the past year

- Marijuana use was more common than prescription drug abuse in adults 50 to 59 (5.9 vs. 3.6 percent) per above reference

*Journal of the American Geriatrics Society, Vol 49, #4, April 2001
Geriatric Alcohol & Other Rx Drug Problem Prevalence

- General population: 2 - 10%
- Medical inpatients: 18%
- Psychiatric inpatients: 37 - 44%
- Nursing home patients: Up to 20%
And They are
Difficult to Identify

- Tend to overlook substance abuse in the elderly → hidden epidemic

- Mistake signs/symptoms of chemical dependance for age, health problems, dementia, depression

- Seniors more likely to hide substance abuse

- Vast majority are not diagnosed & the consequences for missing can be dire (complications of medical illness, MVAs, falls, etc)
Barriers To Identifying & Treating Older Adults with Substance Abuse

• Ageism
  • Explain away their problems a function of being old rather than medical, social or psychological
  • Older patients with a diagnosis of substance abuse are far less likely to have treatment recommended
  • Therapeutic nihilism
• Lack of Awareness
  • Medical community, individuals, loved ones & society lack awareness
  • Many elderly who grew up prior to the 50s view substance abuse a moral failing
  • View problems as secondary to age & reluctant to complain
  • Younger adults have problem conceiving of older adults as having problems with substance abuse (especially older women)
Clinician’s Behavior

- Low index of suspicion
- Difficulty applying the diagnostic criteria
- S/S of fatigue, irritability, insomnia, chronic pain, etc might be secondary to substance abuse, physical or psychological problems
- Too much to cover during office visits and substance abuse tends to end up at bottom of list
- Belief that older substance abusers do not benefit from treatment.
Comorbidity

- Sensory deficits, lack of mobility, physical, cognitive & psychological problems complicate the diagnosis of substance abuse
- Older individuals may be screened out of treatment programs due to cognitive or physical limitations
- While inpatient facilities typically have staff trained to deal with medical, cognitive & psychological problems, outpatient programs typically do not
Physical Changes Associated w/ Aging
Sensory Changes

5 Senses

- Sight
- Hearing
- Taste
- Touch
- Smell
Musculoskeletal Changes

- Decreased muscle mass/strength
- Decreased bone mass
- Slowed response to postural changes
- Tend to fall more easily
Examples of Brain Changes

- Decreased CNS tissue/weight
- Decreases in neurotransmitter concentration
- Decreased CNS blood flow
- Changes in receptor densities
- Increased sensitivity to psychoactive medications (i.e. pharmacodynamic changes)
Brain Changes Across the Lifespan

Age-Related Reductions in D2 Receptor Binding in Striatum

24 years

44 years

86 years

[11C]Raclopride

\[ r = 0.69, p < 0.0001 \]
\[ (n = 25) \]

Volkow, N.D. et al., Brookhaven National Laboratory.
Changes in how the Body Handles Drugs

Pharmacokinetic Changes

- Absorption
- Distribution
- Metabolism
- Excretion
- Protein Binding
Absorption

- Decreased surface area
- Decreased GI motility
- Decreased Alcohol Dehydrogenase
- Higher alcohol blood levels
- Delayed absorption of medications (e.g. tranquilizers, sedatives, opiates)
Increased Body Fat (roughly doubles to 30%)

Decreased total body water, inc alcohol concentration

Along with decreased perception of thirst can be hyponatremic and dehydrated

Volume of Distribution
Metabolism

• Decreased phase I metabolism (oxidation/reduction)
• Unchanged phase II metabolism (conjugation)
• Decreased hepatic blood flow which limits first pass metabolism
• Leads to increased blood levels with potential for toxicity
Excretion

- Significant decrease in renal mass (20-30%)
- Increased likelihood of specific renal pathology with age further compromising renal function
- Increased blood levels of drugs dependant on renal excretion (most drugs)
Changes in Protein Binding

- Decreased albumin
- Decreased globulins
- Decreases protein binding leads to increased active drug in bloodstream
Alcohol Abuse & Dependance
A Few Interesting Numbers

- 2.5 million elderly w/ alcohol problems
- 21% of hospitalized adults over 40 diagnosed alcoholic w/ > 60 billion in associated cost.
- Rates of hospitalization for geriatric alcohol-related issues comparable to that for heart attacks
- Medical Residents diagnosed 60% of younger alcoholics but only 37% of older alcoholics
Alcohol Related Illnesses

- Hypertension
- Hemorrhagic stroke
- Impaired Immune functioning
- Cirrhosis & other liver diseases
- GI Bleeds
- Decreased bone density
- Malnutrition
- Exacerbation of psychiatric illness
- Wernicke-Korsakoff & alcohol related dementia
Positive Effects of Alcohol

• Increase in HDL with small doses
• Antioxidants with red wines
• Effect is only for moderate consumption (≤ 2 drinks for adult males, ≤ one drink for elderly men)
• Dramatically higher cardiac morbidity/mortality for heavy drinkers (negative effects > for women)
## Applying DSM IV Criteria to Older Adults w/ Alcohol Problems

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<thead>
<tr>
<th>Criteria</th>
<th>Special Considerations for Older Adults</th>
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<tr>
<td>1. Tolerance</td>
<td>May have problems with even low intake due to increased sensitivity to alcohol and higher blood alcohol levels</td>
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<td>2. Withdrawal</td>
<td>Many late onset alcoholics do not develop physiological dependence</td>
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<td>3. Taking larger amounts or over a longer period than was intended</td>
<td>Increased cognitive impairment can interfere with self-monitoring; drinking can exacerbate cognitive impairment and monitoring</td>
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<td>4. Unsuccessful efforts to cut down or control use</td>
<td>Same issues across life span</td>
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<td>5. Spending much time to obtain and use alcohol and to recover from effects</td>
<td>Negative effects can occur with relatively low use</td>
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<tr>
<td>6. Giving up activities due to use</td>
<td>May have fewer activities, making detection of problems more difficult</td>
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<tr>
<td>7. Continuing use despite physical or psychological problem caused by use</td>
<td>May not know or understand that problems are related to use, even after medical advice</td>
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*Treatment Improvement Protocol 26: Substance Abuse Among Older Adults, SAMHSA, 2012*
DSM V Changes for Substance Abuse Disorders

- Eliminate abuse/dependance dichotomy in favor of ‘disorder’ (e.g., alcohol use disorder)
- Term dependance eliminated due to its dual meanings
- Removal of ‘committing illegal acts’ criteria
- Tolerance & withdrawal no longer counted toward diagnosis when patient taking appropriate doses of medications which have physical dependence
- Addition of a ‘craving’ criteria

(SAMHSA recommended use of terms ‘at-risk’ & ‘problem drinker’ only.)
Two Major Categories of Older Problem Drinkers

- **Early Onset**
  - Continuing > 65 (Still alive)
  - 2/3 elders with alcohol abuse, men > women
  - Psychiatric comorbidity common

- **Late Onset**
  - Mostly previous users
  - Women > men
  - Usually following a major stressor

Treatment Improvement Protocol 26: Substance Abuse Among Older Adults, SAMHSA, 2012
Risk Factors for Alcohol Abuse

- Gender (males > females)
- Loss of spouse
- Other losses
- Substance abuse early in life
- Family history of alcohol problems
- Comorbid psychiatric problems
Prescription & OTC Drug Abuse
A Few Interesting Facts

- Older adults comprise 13% of the population but receive 25-30% of the prescription drugs.
- Half of the adverse drug reactions leading to hospitalization occur in the elderly.
- 25-28% of the elderly reported using psychotropic medications with the last year.
- 20% use tranquilizers daily; 27% of all tranquilizers & 38% of the hypnotic Rxs are taken by the elderly.
Most Commonly Prescribed Mood Altering Drugs

- **BENZODIAZEPENES** (17 to 23% of Rx's in elderly)
  - Ativan, Librium, Serax, Valium, Xanax
  - Rx'd for anxiety, insomnia & alcohol withdrawal
  - Physiological dependence can occur even when taken at therapeutic dosage
  - Avoid use for more than 4 months

- **SEDATIVE / HYPNOTICS**
  - Ambien, Sonata, Dalmane, Halcion, and Restoril
  - Rx'd for insomnia
  - Physically addictive
  - Avoid Sedative/hypnotic use for more than 30 days

- **OPIOIDS**
  - Codeine, Demerol, Lortab, Percodan/Percocet
  - Rx'd for pain control
  - Physiological dependence and tolerance develop rapidly

Adapted from New York State Office of Alcoholism & Substance Abuse Services PowerPoint Presentation
Over-the-Counter Medications With High Abuse Potential

- **ANTIHISTAMINES (taken as a sleeping aid)**
  - Benadryl, Unisom
  - Tolerance develops within weeks

- **COLD/COUGH REMEDIES**
  - Often contain alcohol or other sedating agents (e.g., Nyquil)

- **ANALGESICS**
  - Tylenol, Aspirin, Advil, Motrin
  - NSAIDS increase BP, GI bleeds, renal damage

Adapted from New York State Office of Alcoholism & Substance Abuse Services PowerPoint Presentation
Adverse Effects of Psychoactive Medications

- Diminished psychomotor performance including decreased reaction time, decreased coordination, ataxia & falls
- Excessive daytime drowsiness & confusion
- Can cause agitation
- Memory Problems
- Tolerance & withdrawal
Comments Regarding 3 Key Classes of Prescription Medications

**Anxiolytics**

- As anxiety disorders are the most common psychiatric diagnosis in elderly, these meds clearly have a place in geriatrics.
- Significant potential for memory problems, excessive sedation, falls & dependance issues.
- Treat underlying causes of anxiety disorders with SSRIs, etc to minimize need for tranquilizers.
- Avoid use of tranquilizers with long half-lives or complex metabolism (e.g. diazepam).
- Use short term whenever possible.
Sedative/Hypnotics

- Sleep disorders occur in 1/2 of elderly living at home & 2/3 of those in long-term care → frequently Rx’d medications
- Same side effects as associated with anxiolytics but more sedation
- Carefully assess if problem is initial insomnia or awakenings & choose medication accordingly
- As sleep problems are frequently associated w/ psychiatric pathology be sure & treat underlying cause to minimize use of sedatives; watch for medications which exacerbate insomnia
- For chronic insomnia problems consider trazodone but be careful of dizziness from $\alpha_1$ blockade & daytime sedation
Pain remains an undertreated condition in many elderly, leading to lower quality of life, limited physical activity, self-medication, increased depression & in some cases, suicide so long term use of opiates is often justified.

- Use non addicting medications such like Cymbalta, Savella (milnaciprin), Lyrica, Neurontin, Tegretol, etc when appropriate to minimize the need for opiates.
- Pharmacodynamic interaction with alcohol & sedatives can lead to dangerous CNS depression.
- Delayed GI absorption leads to taking higher dose than needed.

Opiate/Opioid Analgesics
Illicit Drug Usage
Use of Illicit Drugs During the Past Year

By Age Group
National Surveys on Drug Use and Health (2007-2009)

Any Illicit Drug*: 9.0 (Aged 50 to 59), 2.3 (Aged 60 or Older)
Marijuana*: 5.9 (Aged 50 to 59), 1.1 (Aged 60 or Older)
Non-medical Use of Prescription-Type Drugs*: 3.6 (Aged 50 to 59), 1.2 (Aged 60 or Older)

* Difference between the estimates for age groups is statistically significant at the .05 level.

Source: 2007 to 2009 SAMHSA National Surveys on Drug Use and Health (NSDUHs)
Male vs Female

Aged 50 and Older

- Any Illicit Drug Use*: Male 6.9%, Female 3.8%
- Marijuana Use*: Male 4.7%, Female 1.9%
- Non-medical Use of Prescription-Type Drugs*: Male 2.5%, Female 2.1%

* Difference between the estimates for age groups is statistically significant at the .05 level.

Source: 2007 to 2009 SAMHSA National Surveys on Drug Use and Health (NSDUHs)
Past Year Illicit Drug Use among Adults Aged 50 or Older by Age Group and Gender (2007 to 2009)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Marijuana Use</th>
<th>Nonmedical Use of Prescription-Type Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged 50 to 59*</td>
<td>8.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Aged 60 or Older</td>
<td>1.9</td>
<td>3.4</td>
</tr>
<tr>
<td>Aged 50 to 59*</td>
<td>1.3</td>
<td>1.1</td>
</tr>
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</table>

* Difference between the estimates for age groups is statistically significant at the .05 level.

Source: 2007 to 2009 SAMHSA National Surveys on Drug Use and Health (NSDUHs)
Type of Illicit Drug Combinations Used in the Past Year among Adults Aged 50 or Older Who Used Illicit Drugs in the Past Year, by Gender: 2007 to 2009

Males

- Marijuana Use Only: 49.2%
- Nonmedical Use of Prescription-Type Drugs Only: 7.0%
- Marijuana Use with Nonmedical Use of Prescription-Type Drugs Only: 7.4%
- Marijuana with Other Illicit Drug Use Only: 7.9%
- Other Illicit Drug Use Only: 23.4%
- Other Combinations: 5.0%

Females

- Marijuana Use Only: 44.4%
- Nonmedical Use of Prescription-Type Drugs Only: 6.8%
- Marijuana Use with Nonmedical Use of Prescription-Type Drugs Only: 3.6%
- Marijuana with Other Illicit Drug Use Only: 3.6%
- Other Illicit Drug Use Only: 38.8%
- Other Combinations: 3.1%

Source: 2007 to 2009 SAMHSA National Surveys on Drug Use and Health (NSDUHs)
Assessment
Geriatric Substance Abuse Red Flags

- Falls or Bruising
- Poor Hygiene or Neglect
- Cognitive Problems
- Somatization or unexplained pain
- Irritability, Mood Changes, Agitation, Sleep Disturbance
• Slurred speech
• Gait problems
• Urinary incontinence or retention
• Abnormal labs (e.g. LFTs, RBC indices)
• Malnutrition/GI disturbance
• Tremor or Seizures
Importance of Collateral History

• Collateral History is important in anyone with substance abuse but especially important in the elderly with cognitive impairment
• Always get permission
• People to talk with:
  • Spouse
  • Adult children
  • Friends
  • Others having contact w/ patient
How to Approach Elderly Patients w/ Substance Abuse

• Medical approach: “The alcohol may be affecting your glucose levels.”
• Collaborative: Doctor and patient against the problems
• Assure confidentiality
• Go slow
• Non-judgmental
Alcohol Screening for Geriatric Patients

- CAGE (both drug & alcohol)
- RAPS 4
- GMAST
- GMAST (Short Form)
- AUDIT

CAGE & RAPS on next 2 slides; GMAST (short form) & AUDIT available at back of the PowerPoints
C.A.G.E. Screening

• Have you ever felt you should Cut down on your drinking (or use of medication)?
• Have people Annoyed you by criticizing your drinking (or medication use)?
• Have you ever felt “bad” or Guilty about your drinking (or medication) use?
• Have you ever had an Eye opener to steady your nerves or get rid of a hangover?

YES to 2 or more is positive in general
YES to 1 is positive for an elderly person
Rapid Alcohol Problems Screen (RAPS)

• Remorse - During the last year have you had a feeling or guilt or remorse after drinking?

• Amnesia - During the last year has a friend or family member ever told you about things you did while you were drinking that you could not remember?

• Performance - During the last year have you failed to do what was normally expected of you because of drinking?

• Start - Do you sometimes take a drink in the morning when you first get up?

YES to 1 is considered a positive
Treatment
Concerns & Fears the Elderly Have About Treatment

• Some of the concerns and fears seniors report when thinking about treatment:
  • Treatment takes too long
  • It’s embarrassing to tell people
  • Treatment is just for kids
  • Treatment is just for “hard core addicts”
  • Treatment is too expensive
  • Being away from home
Concerns & Fears (cont)

- Some of the concerns and fears seniors report regarding “12-Step” and “self-help” meeting attendance:
  - Being uncomfortable going out at night
  - Type of language used by some people at meetings (e.g. swearing, slang)
  - Appearance or location of the place where the meeting is held (e.g. having to walk through a crowd of people smoking outside the entrance to the meeting room; up/down stairs; loud sounds; hearing problems)
  - Not comfortable or used to talking about themselves
  - Some of the issues discussed at meetings (abuse, same-sex relationships, violence, etc.)
  - Afraid they might see or be seen by someone they know
10-30% of nondependent problem drinkers reduce drinking to moderate levels with a brief intervention by a clinician.
FRAMES (for brief intervention)

- Feedback of personal risk or impairment
- Personal responsibility for change
- Clear advice to change
- A menu of change options (i.e. treatment options)
- An empathic counseling style
- Enhanced client self-efficacy and ongoing followup
Intervention & Motivational Counseling

• Intervention
  • A few significant people (educate ahead of time)
  • No more than one or two relatives or close friends
  • Address behavior in caring, non-confrontational but factual manner
  • No grandchildren involved
  • Proposed plan which may have more than one option
• Motivational Counseling
  • Accepts where they are at: pre-contemplation, contemplation, ready for action, action, maintenance & relapse)
  • Avoids labels & confrontation
  • Acknowledges ambivalence about need to change
  • Inviting consideration of alternative ways of solving problems
  • Places responsibility for change on patient
Levels of Treatment Services

- Inpatient/Outpatient Detoxification
- Inpatient rehabilitation
- Residential Rehabilitation
- Outpatient Services
  - Partial hospitalization/day patient treatment
  - Intensive outpatient treatment
  - Routine outpatient treatment
Philosophy & Basic Principles in Treating Elderly Substance Abusers

- Non-confrontational, supportive, age-specific treatment
- Address coping with depression, loneliness & loss
- Focus on rebuilding patient’s social support system
- Utilize pace & content appropriate for older individuals
- Use staff interested in and trained to work with the elderly
- Have linkages with services for the aging, medical services, etc.

Treatment Improvement Protocol 26: Substance Abuse Among Older Adults, SAMHSA, 2012)
Questions
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