LATE LIFE SUBSTANCE USE DISORDERS IN COGNITIVE IMPAIRMENT AND DEMENTIA

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DISCLOSURES

I HAVE NO FINANCIAL DISCLOSURES TO MAKE

I WILL DISCUSS OFF-LABEL USE OF PSYCHIATRIC MEDICATIONS FOR SUBSTANCE USE DISORDERS TREATMENT IN OLDER ADULTS

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LEARNING OBJECTIVES

01

Describe the prevalence of substance use disorders among older adults in the United States and the impact of substance use on cognition.

02

Appreciate the complexities of identification and treatment of substance use disorders in older adults with cognitive impairment

03

Apply evidence-based recommendations for treatment of substance use disorders in older adults with cognitive impairment

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SUBSTANCE USE IS A GROWING PROBLEM AMONG OLDER ADULTS IN THE US

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SUBSTANCE USE DISORDERS IN OLDER ADULTS (OA)

2018 National Survey on Drug Use and Health*

- Nearly 1 million OA with SUD
- SUDs in OA increasing compared to prior years
- ~65% of OA report exceeding alcohol intake recs weekly
- ~10% report bingeing 5+ drinks/sitting

2013-2015*

- 55+ grew ~6%
- 55+ tx for OUD grew ~54%

SAMHSA 2019; Grant et al, JAMA Psychiat, 74(9), 2017; Han et al JAGS, 67(10), 2019; Huhn et al, Drug Alcohol Depend, 193, 2018

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CAREGIVING AND SUDS

Caregiving is a risk factor for development of a late life SUD, also at risk for burnout, depression, earlier mortality

Caregivers of those with late life SUDs also face unique challenges and stresses and yet may have resiliently survived decades with this loved one's addiction

IPV, elder abuse, and family dynamics can be at play

Cognitive impairment can further complicate things

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ALCOHOL USE DISORDER (AUD) IS THE MOST PREVALENT SUBSTANCE USE DISORDER IN LATER LIFE.

Arndt et al. Am J of Geriatr Psychiatry Aug 2011

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RISKY ALCOHOL USE AMONG OLDER ADULTS IS A GROWING PROBLEM!

- High risk drinking in OA in the US grew 65% from 2001-2013!
- Older men more likely to be engaging in risky drinking
- Risky drinking is growing FASTER AMONG OLDER WOMEN

Grant et al. JAMA Psychiatry Sept 2017; Moss et al. Addiction Aug 2009; Breslow et al. Alcohol Clin Exp Res May 2017

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ALCOHOL WITHDRAWAL IN OA

- Onset of alcohol withdrawal symptoms may occur several days after cessation of drinking
- **Confusion = predominant clinical sign** (rather than tachycardia or tremor)
- Direct relationship between duration of withdrawal and the level of alcohol consumption

OA are at greater risk of complications

Lehmann et al. N Engl J Med Dec 2018
Caputo et al. Exp Gerontol. Jun 2012

TABLE 1

Symptoms of alcohol withdrawal syndrome

Time of appearance after cessation	Symptoms
6–12 hours	Minor withdrawal symptoms: insomnia, tremulousness, mild anxiety, gastrointestinal upset, headache, diaphoresis, palpitations, anorexia
12–24 hours[a]	Alcoholic hallucinosis: visual, auditory, or tactile hallucinations
24–48 hours[b]	Withdrawal seizures: generalized tonic-clonic seizures
48–72 hours[c]	Alcohol withdrawal delirium (delirium tremens): hallucinations (mainly visual), disorientation, tachycardia, hypertension, low-grade fever, agitation, diaphoresis

[a] Symptoms generally resolve within 48 hours.
[b] Symptoms reported as early as 2 hours after cessation.
[c] Symptoms as late as 5 days.

From Bayard M, McIntyre J, Hill KR, Woodside J, Jr. Alcohol withdrawal syndrome. Am Fam Physician 2004; 69:1443–1450.
Reproduced with permission from the American Academy of Family Physicians.

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OA, OPIOID USE, AND RX ABUSE

- Prescription drug misuse includes any prescription medication
  - OA are the population at greatest risk
  - Not just traditional drugs of abuse
  - Opioids, benzodiazepines, muscle relaxers, gabapentin, pregabalin, antihistamines…
  - Can be intentional or unintentional
  - OA also at risk for diversion and/or exploitation

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OPIOID MISUSE IS A GROWING PROBLEM AMONG OLDER ADULTS ⇒ 2000-2012

HEROIN USE INCREASED BY 26% IN OLDER ADULTS

NON-PRESCRIPTION METHADONE INCREASED BY 200%

OTHER OPIATES AND SYNTHETICS INCREASED BY 221%

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OA AND CANNABIS USE

- Older adults are using cannabis in greater numbers

Those 65+ are the fastest growing group of cannabis users

- OTC CBD products are not regulated, and many do contain THC
- Older adults may be more susceptible to side effects ⇒ sedation, confusion, lung issues

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SUBSTANCE USE CAN BE ASSOCIATED WITH COGNITIVE IMPAIRMENT AND CAN BE A RISK FACTOR FOR DEVELOPMENT OF A NEUROCOGNITIVE DISORDER

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SUBSTANCE USE & COGNITIVE IMPAIRMENT

Cognitive deficits associated with withdrawal or intoxication of drugs are often temporary

Advancing age increases vulnerability to the negative cognitive effects of substance use.

- The cognitive effects of chronic use may…
  - Resolve relatively quickly with abstinence
  - Resolve after weeks or months of abstinence
  - Only resolve with extended abstinence
  - Not resolve at all with abstinence

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SUBSTANCE USE & COGNITIVE IMPAIRMENT

- The impact substance use has on the brain depends on:
  - Length of time a person has been using the substance
  - Frequency of use
  - Typical amount used
  - Route of administration
- **The longer and heavier the use, the more likely it is that a substance will have negative effects on the brain.**
- Cognitive effects may make it more difficult for patients to engage in and benefit from health care and other services
- Effects on executive function may make patients in recovery vulnerable to relapse

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AUD AND COGNITIVE IMPAIRMENT

- Most common scenario for consult
- AUD is associated with alcohol related dementias (ARD) but…
- Alcohol also increases the risk of Alzheimer's and vascular dementia
- ARD can show improvement with sustained sobriety

Any harm reduction can be beneficial!

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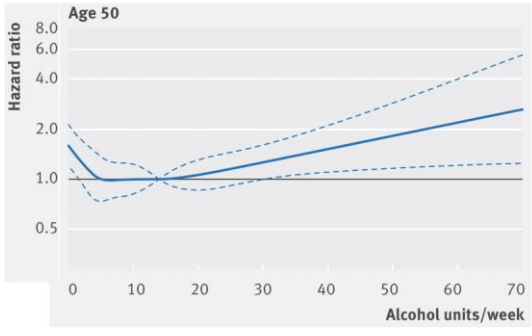
ALCOHOL & RISK OF DEMENTIA

High alcohol use increases risk of dementia and results in smaller hippocampal volume



10 units = five 12-oz beers

Courtesy of Art Walaszek, MD -- Sabia et al., *BMJ* 2018; Topiwala et al, *BMJ* 2017

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TYPES OF DEMENTIA

Most common types for late-onset

1. Alzheimer's Disease (AD)
2. Vascular Dementia
3. Lewy Body Dementia
4. Mix of the above
5. Frontotemporal Dementia (FTD)
6. Others: **includes Alcohol-Related Dementias (ARD)**

Most common types for early-onset

1. AD
2. Vascular
3. FTD
4. **ARD**
5. Lewy Body Dementia
6. Huntington's Disease
7. Multiple Sclerosis
8. Others

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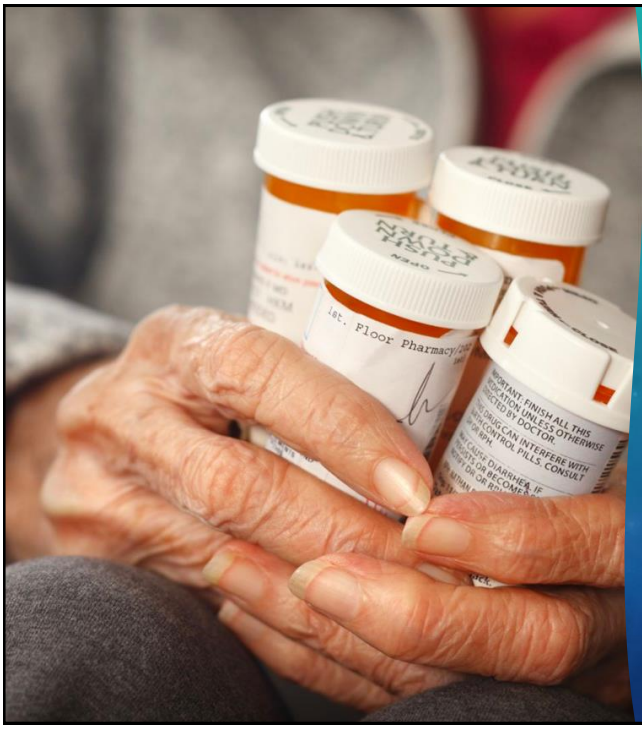

BENZODIAZEPINES & COGNITIVE IMPAIRMENT

- **Intoxication & withdrawal:** confusion and disorientation
  - Longer acting benzodiazepines (diazepam) are more commonly associated with cognitive impairment
- Benzodiazepine use is associated with an increased risk of Alzheimer's disease.
  - Risk increased by **43-51%** among those who had used benzodiazepines in the past
  - The association was slightly stronger for long-acting benzodiazepines.

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COCAINE USE & COGNITIVE IMPAIRMENT

- A pilot study that included age-matched controls found that older participants who were dependent on cocaine demonstrated greater impairment in psychomotor speed, attention, and short-term memory compared with younger participants.
- Studies have shown deficits in attention, working memory, and declarative memory
- Cocaine associated with several mechanisms of brain injury
- Cocaine-induced leukoencephalopathy

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CANNABIS USE & COGNITIVE IMPAIRMENT

- **Intoxication**:
  - Slows reaction time
  - Impairs attention and concentration
  - Impairs motor coordination
- **Withdrawal**: irritability, anger, anxiety, depression, and disturbed sleep
- **Long-term cannabis use**: impaired learning, retention, and retrieval of dictated words, and time estimation
  BUT how long these deficits persist is not yet known
- Cannabis' link to dementia is unknown
  - One study did find lower perfusion to hippocampus in cannabis users

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OPIOID USE & COGNITIVE IMPAIRMENT

Intoxication:
altered mental status ⇒ euphoria, lethargy, confusion, coma

Withdrawal:
electrolyte abnormalities from fluid loss ⇒ dangerous!

Chronic opioid exposure: linked with neurocognitive impairments.

- One meta-analysis showed dysfunctions in three cognitive domains: impulsivity (risk-taking), cognitive flexibility, and verbal working memory
- Long-term opioid use might contribute to cognitive decline, still under investigation

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NEUROPSYCHOLOGICAL TESTING IN SUDS

- Can be very helpful in identifying impairment and relative strengths by cognitive domain, pointing to etiologies of impairment
- Usually try to optimize cognitive risks (like substance use) before testing
- Sometimes can be helpful to demonstrate the effects of use on cognition

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SCREEN ALL ADULTS AGE 60+ FOR SUBSTANCE MISUSE ANNUALLY AND WHEN LIFE CHANGES OCCUR

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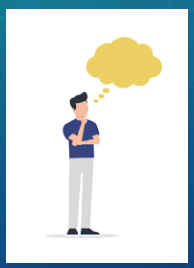
AN "INVISIBLE" POPULATION

- Older adults less likely self-report a problem with substance use and less likely to ask for treatment than younger patients
- Provider beliefs/attitudes towards older adults can lead them to NOT screen for substance misuse:



"They are never going to change"

"It's not causing them issues"

"Not enough time"

"I don't want to be disrespectful given his age"

"At his age it's normal to forget things"

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OLDER ADULTS WITH SUDS ARE *LESS LIKELY TO BE SCREENED, IDENTIFIED, AND REFERRED FOR TREATMENT*

BUT OLDER ADULTS ARE **JUST AS LIKELY TO BENEFIT** FROM TREATMENT AS YOUNGER ADULTS!

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BARRIERS TO CARE FOR OLDER ADULTS

- Stigma can be high
- Most treatment programs not tailored to older adults
- Can be uncomfortable attending therapies with predominantly younger focus

- Sensory impairments
- Transportation can be an issue
- Mobility and other medical issues can interfere
- Financial concerns are barriers to access and afford care

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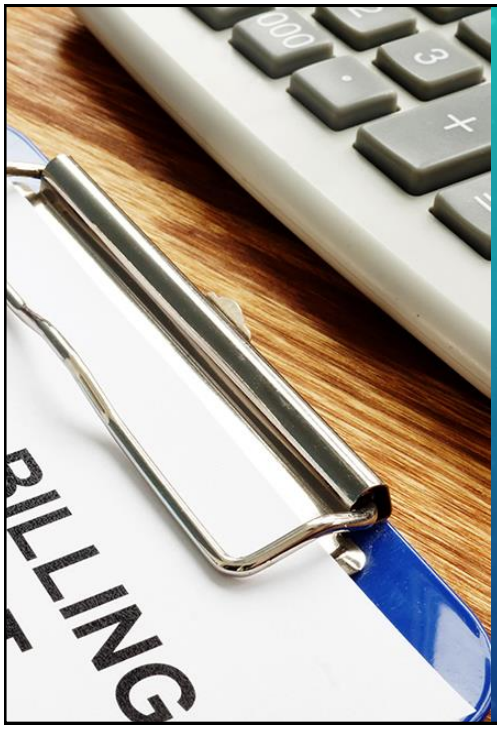

BARRIERS TO CARE FOR OLDER ADULTS

- Medicare
  - Not subject to federal parity law
  - But, as of 2020
    - Comprehensive addictions treatment is covered
- Medicare Advantage Plans
  - Coverage varies widely
  - Studies have shown deliberate
    - Decreased reimbursement
    - Restriction of provider pools
- Medicaid
  - Varies state to state
  - Wisconsin explicitly covers addictions treatment
- Many local programs DO take Medicaid, but many DON'T take Medicare

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TREATING SUDS IN OA, LET ALONE OA WITH COGNITIVE IMPAIRMENT: A DEARTH OF DATA

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STILL ONLY TWO RTCS EVALUATING PHARMACOLOGIC TREATMENT OF SUDS FOR OLDER ADULTS

- 1997: Naltrexone v. Placebo for adults 50-70 with AUD
- 2005: Naltrexone v. Placebo as adjuncts for sertraline to treat DEPRESSION in 55+ with AUD
- Both were positive favoring naltrexone
- Limitations: small sample sizes, mostly men

Tampi et al, World J Psychiatry, 9(5), 2019

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1992 RANDOMIZED CONTROL TRIAL

- Residential rehabilitation program that was adapted to treating older adults (50+) was more successful than standard program
- Abstinence rates increased with age: every 10 years, 2.5x more likely to report abstinence at 12 months

Kashner et al. 1992

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WE NEED TO TAILOR OUR TREATMENTS TO OLDER ADULT POPULATIONS

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PHARMACOLOGIC TREATMENTS FOR AUD IN OA

FDA approved medications for AUD have not been studied adequately in OA but they should be considered:

- **Naltrexone**
- **Acamprosate**
- Disulfiram*

- **Topiramate**, gabapentin
- Consider baclofen for those with significant muscle tension and anxiety as a precipitant to drinking

Lehmann et al. N Engl J Med Dec 2018; Soyka et al. Expert opinion on pharmacotherapy Aug 2017; Kim et al Drugs in Context Feb 2018

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CANADIAN GUIDELINES ON OPIOID USE DISORDER AMONG OLDER ADULTS (2020)

- ✓ Older adults should be screened for Opioid Use Disorder
- ✓ Threshold to admit older adult for opioid withdrawal management lower than for younger adult
  - →opioid withdrawal CAN be life threatening in older adult
  - →withdrawal management: opioid agonist >>non-opioid treatment withdrawal management in older adults with an OUD
- ✓ First line MAT: Buprenorphine-naloxone maintenance

Rieb et al. Can Geriatr J. 2020 Mar 30;23(1):123-134.

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BUPRENORPHINE > METHADONE (FOR PAIN CONTROL AND/OR MAT IN OLDER ADULTS)

- Generally less sedating → less fall risk
- Less respiratory depression
- Metabolism stable (no ↑ in $t_{1/2}$) with aging
- Less cardiac risk than methadone (still some QT ↑)
- More readily available for LTC/homebound

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CANADIAN GUIDELINES ON OPIOID USE DISORDER AMONG OLDER ADULTS (2020)

- ✓ Older adults should be screened for Opioid Use Disorder
- ✓ Threshold to admit older adult for opioid withdrawal management lower than for younger adult
- ✓ First line MAT: Buprenorphine-naloxone maintenance
- ✔ Second line MAT: Methadone if bup-naloxone is not tolerated
- ✔ If opioid agonist treatment contraindicated may offer naltrexone
- ✔ Go slow, use lowest dose, and monitor closely

Rieb et al. Can Geriatr J. 2020 Mar 30;23(1):123-134.

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MOST COMMON CONSULT QUESTIONS FOR AN INTERDISCIPLINARY GERIATRIC CONSULTATION SERVICE (VIRTUAL GERIATRICS) INVOLVING SUBSTANCE USE DISORDERS (SUDS)

- **Does this patient with a SUD have a neurocognitive disorder?**
- Does this patient with a SUD have capacity to make medical decisions?
- **How can we manage behavioral disturbance in this patient with dementia and a SUD?**

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DOES THIS PATIENT WITH A SUD HAVE A NEUROCOGNITIVE DISORDER?

Mr. Y is a 73 yo widow who lives alone and has a longstanding history of AUD. PCP gets a call from his daughter who lives out of state, she is concerned her dad seems more forgetful and is sometimes confused when she calls. The Veteran agrees to come to clinic for evaluation.

Visit information includes:

- SLUMS = 26/30 on the SLUMS
- EtOH Use: 6-8 beers a night

Mr. Y *does not want treatment for his alcohol use disorder* but he agrees to referral to our geriatrics consultation team for further care.

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DOES THIS PATIENT WITH A SUD HAVE A NEUROCOGNITIVE DISORDER?

- Triage by the team:
  - Labs: no abnormalities, exception of ↑MCV.
  - Reasonable to proceed with neuropsychological testing.
- SW completed comprehensive psycho-social assessment
  - The declines have been gradual, over the last 1-2 years, per his daughter's report.
- Neuropsychological testing findings:
  - Major amnestic and executive function deficits
  - Clear functional decline per pt and dau (getting lost while driving, mismanagement of finances)
  - Diagnosis - major neurocognitive disorder

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DOES MR. Y HAVE A NEUROCOGNITIVE DISORDER?

- The team reviews the NP testing results:
  - Etiology unclear with single data point & actively drinking (consider further testing & imaging)
  - Utilize MI techniques in the team visit towards accepting treatment
  - SUDs treatment is available at Mr. Y's rural clinic → OFFER CONNECTION IF AGREEABLE
  - Consider pharmacologic tx for AUD
    - Recommendations provided to PACT PCP a/o SUDs Tx prescriber
- Follow-up team visit (daughter and Mr. Y present)
  - Diagnosis reviewed, along with strong recommendation/rationale to cease drinking
  - Mr. Y agrees to an intake with SUD treatment program
  - Geriatric psychiatrist discusses treatment options:
    - Reviews appropriate labs
    - Recommends trial of naltrexone PO (IM consideration)

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HOW CAN WE MANAGE BEHAVIORAL DISTURBANCE IN THIS PATIENT WITH DEMENTIA AND A SUD?

Mrs. G is an 83 yo Veteran who lives with her husband in rural IL. They moved to be closer to their daughter. Mrs. G establishes with new primary care team, visit details include:

- Significant cognitive impairment (SLUMS = 6/30)
- Previously activated HCPOA, husband = agent
- HCPOA reveals that she "can get angry" in the evenings, and that it's worse after she's "had a few." He says she sometimes accuses him of trying to poison her, and for this reason refuses to take her nighttime medications. Admits that he purchases EtOH for Mrs. G.
- EtOH intake – at least 1 bottle of wine per night.

The PCP places consult for VIRTUAL Geriatrics

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HOW CAN WE MANAGE BEHAVIORAL DISTURBANCE IN THIS PATIENT WITH DEMENTIA AND A SUD?

- The Team Triage Meeting:
  - Considers case may better be served through geriatric psychiatry within mental health clinic
  - However, televisit with our team may be better approach → get them in faster!
- SW completes phone comprehensive assessment with husband and daughter
- Geriatric psychiatrist meets with Mr. and Mrs. W & daughter.
  - Performs NPI-Q to determine full scope of BPSD
  - Best option for detox? Family opts for gradual detox by gradually replacing wine with NA wine
  - Behavioral strategies reviewed for prevention and de-escalation of agitation
  - Pharmacologic treatment for BPSD

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HOW TO "ROLL WITH RESISTANCE" AND FOCUS ON HARM REDUCTION

- Mr. J is an 81 yo Veteran who is seen by VIRTUAL Geriatrics for consultation on cognitive concerns.
- PMH: severe COPD and RA with significant chronic pain.
- SH: lives in rural IL and smokes cannabis multiple times a day to help him cope with his pain
- His neuropsychological testing shows severe deficits in attention.
- The team discuss options:
  - CBD-only preparations
  - Review some evidence for treatment of chronic pain with him, and he's open to trying this.

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THANK YOU!

QUESTIONS?

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