AGEING & ADDICTION

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Pain & Addiction Medicine

Learning objectives

- **Develop a diagnostic and contextual approach to formulating a treatment plan to address opioid dependence and poly-substance abuse in older adults.**

- Develop a treatment plan for OAT with the patient
  - Dose initiation and titration
  - Special consideration for take-home doses/missed doses
  - Special considerations for pain management

- Identifying/treating other substance use risk with OAT in the elderly

Epidemiology

Opiates and addiction in older adults

Older adults & mental health/addictions (CMHA, 2010)

- Adults over 65 constituted 13.5 percent of Ontario (1.7 million people)
- By 2036, expected to rise to approximately 23.2 percent (4.1 million)
- Prevalence of mental health problems ranges anywhere from 17 to 30 percent

Prescribing Complications in the Elderly

- Patients aged 60–79 years fill an average of 35 prescriptions per year, which is estimated to increase to 74 per year in patients over the age of 80 years

- Prescribing cascades* (process whereby the side effects of drugs are misdiagnosed as symptoms of another problem resulting in more new medications and new side effects/drug interactions)

Substance complications with aging

- Lower threshold for complication due to Distribution, Metabolism, Excretion
  - Opiates- kidney
  - Benzos- body fat % ⬆
  - Alcohol- body water % ⬇

- Benzodiazepines … Z-drugs, are no longer recommended for treating insomnia in older adults… increased risk by 50% of dementia and double the risk of death (Tannenbaum, 2015)

- Alcohol (CAMH Monitor, 2011)
  - Between 10% and 50% of individuals age 60 or older drank in excess of current guidelines
  - Older Adult Drinking Guidelines (AFP, 2013)

Different approaches

- Opioid safety
  - OAT considerations in the elderly
  - Morphine Equivalent Guidelines (200 mg…90? 50?)
  - Particular opiate considerations in the elderly
  - OAT considerations for pain
- Alcohol identification and treatment
  - SAMI, SMAST…
- Anxiolytics safety
  - Concerns about mild cognitive impairment/dementia
  - Delirium Risk
  - BZD tapering

Consequences go beyond addiction…

- Sustained benzodiazepine usage
  - exacerbated C.O.P.D. / GERD
  - increases length of hospital stay and morbidity
  - UNTREATED ANXIETY
  - Increased risk of delirium
  - Increased fracture risk

- Functional complications
  - higher rates of motor vehicle accidents
  - higher rates of falls in the elderly.

Opioid use disorders

OAT considerations in the Elderly

Case 1: Arthur

- Arthur is a 60-year old part-time bookkeeper living alone in a 3rd floor apartment in Whitby
- His use of prescription opiates first started after experiencing pain secondary to gallstones 10 years ago. A cholecystectomy has been recommended but Arthur has feared taking time off work without pay.
- The intermittent episodes led to the use of hydromorphone as prescribed by his gastroenterologist at the outset.
- His use gradually escalated. His family MD retired a few years ago and he sees different walk-in doctors.

Case 1: Arthur (cont'd)

- He admits to use of 5 tabs of 12 mg hydromorph contin daily now and has been using regular hydromorphone for the last 5 years.
- He first started using in response to stressors in his life but now uses regularly in the morning before going to work to prevent withdrawal. He has gone late for work or missed days because of running out of hydromorphone
- He reviews his psychoactive medications with you and notes the use of illicit diazepam. He has used PRN diazepam through a friend between 3-5 tabs per day (10 mg diazepam) most days per week.
- While he has no identified mobility issues he admits that living on the 3rd floor is worrisome for him when the elevator is out.

DSM 5 Criteria

- Continuing to use opioids despite negative personal consequences
- Repeatedly unable to carry out major obligations due to use
- Recurrent use of opioids in physically hazardous situations
- Continued use despite persistent/recurring social or interpersonal problems Tolerance
  - need for markedly increased amounts to achieve intoxication
  - markedly diminished effect with continued use of the same amount
- Characteristic Withdrawal or the substance is used to avoid withdrawal
- Persistent desire or unsuccessful efforts to control/cut down

- Spending a lot of time obtaining, using, or recovering from using opioids
- Using greater amounts or using over a longer time period than intended
- Stopping or reducing important activities due to opioid use
- Consistent use despite acknowledgment of difficulties from using opioids
- ***Craving or a strong desire to use opioids (New criterion added)***

Substance Use Disorders (DSM 5)

Very similar to those outlined in DSM-IV for abuse and dependence combined

- meeting 2-3 of the criteria indicates Mild substance use disorder
- meeting 4-5 of the criteria indicates Moderate
- meeting 6 or more of the criteria indicates Severe

Case 1: Arthur (cont'd) – Methadone education

- He was eventually referred to an addictions specialist and they have recommended methadone. He has never been on opiate maintenance therapy previously. He would like to know more about methadone .

- What do you focus on in your methadone education for this elderly patient?

Methadone and the elderly

- MMT patients > 55 (Rajaratnam et al. 2009)
  - more likely to remain in treatment
  - less likely to use heroin
  - more likely to report alcohol use
  - quality of life did not improve with aging and length of tenure in MMT
- MMT normally carried out in a focused clinical setting and not in a primary care setting
- MMT carries stigma with it (Conner & Rosen, 2008)

HIGH RISK PATIENTS
Recent benzodiazepine use
Use of other sedating drugs
Alcohol-dependent patients
Over 60 years old
Respiratory Illnesses
Taking drugs that inhibit methadone metabolism
Lower opioid tolerance
Decompensated hepatic disease
Recent discharge from inpatient rehabilitation facility

Case 1: Arthur (cont'd) – Methadone management

- He has decided that he would like to pursue methadone.
- What are points to emphasize before initiation?
- What should you do about his valium (diazepam)?

Management considerations in the elderly

- Initiating in the setting of methadone toxicity
- Special consideration for the time taken to reach steady state (~ 1 week)
- Distribution in elderly may distort this timeline
- Titrating with care

Management considerations in the elderly

- Great care for toxicity during MMT initiation when regarding a significant sedative profile (benzodiazepines, alcohol, and other sedating drugs)
  - Polydrug use in 92% of methadone-related deaths (Zador & Sunjic 2000).
  - [Animal Studies] Benzodiazepine use substantially increases the risk of fatal overdose (Caplehorn & Drummer, 2002.)
- At higher risk for Torsades
  - Patients with known risk factors for Torsades should have an ECG at a dose above 120 mg. (instead of 150 mg) (CPSO MMT 2011)
- No special considerations for missed doses in elderly or amidst benzodiazepine co-administration

Benzodiazepine considerations- managing BZD dose reduction

- Patients on high doses (50 mg of diazepam equivalent per day) should be tapered prior to methadone initiation.

- Supervised benzodiazepine tapering, during initiation should be considered, with monitoring in a medically supervised setting.

- Only small benzodiazepine doses should be used (enough to prevent severe withdrawal)

  CPSO MMT 2011

Benzodiazepine considerations- managing BZD dose reduction

- Observational study documented reduced symptoms of depression in MMT patients who were tapered off benzodiazepines and started on antidepressant therapy (Schreiber et al. 2008).

- Gabapentin/pregabalin co-administration during taper provide for some interim mood stability and withdrawal attenuation (24 weeks) (Sabioni et al. 2015)

Benzodiazepine considerations - take home doses (guidelines)

- Encouraged to attempt taper of benzodiazepines regardless of level of take home doses; particularly if diazepam is high- 50 mg per day
- MMT physician should not provide take-home doses for patients who do not permit contact with the opioid or benzodiazepine prescriber
- Consent isn't required to contact the non-MMT prescriber in cases of imminent risk of harm

Case 2: Ingrid

- Ingrid is a 70-year old woman with Ontario Drug Benefit (ODB) living on ODSP in Rice Lake.
- Past history of use of alcohol, crack, marijuana, IV heroin.
- PTSD diagnosis from previous assault in her adolescence and 20's.
- Previous MMT history coincides with her 20's and initial PTSD experience.
- Walker for mobility (Bilat Hip OA & Lumbar spondylolithesis) and receives PSW support for 1 hr per day.

- Oxycodone IR for migraines
- Running out of her oxycodone early, crushing her pills and often appearing intoxicated to her PSW
- Since found effective preventative migraine management.

Case 2: Ingrid (cont'd)

- Ingrid's PTSD has been managed by her psychiatrist with a combination of anti-depressant and anxiolytics. Despite different anti-psychotic trials, her most effective management appears to involve a twice daily clonazepam regimen.

- She was previously on MMT but finds the initiation arduous because of the burden of daily observed doses in the first 2 months. She lives a distance from the closest methadone pharmacy and fears difficulty with using wheel-trans for this.

1. What factors present obvious challenges to MMT in this case?
2. What could be encouraging for BMT use as an option?

BMT indications

- Buprenorphine is a safer maintenance drug than methadone in the elderly. (Kahan et al., Opioid Fact Sheet 2014)
- PREVIOUS LUC 437 included high risk for methadone toxicity because of
  - Elderly
  - Benzodiazepine use
- Buprenorphine may be prescribed by primary care physicians without a methadone exemption, although training is recommended. Most provincial drug plans only cover Suboxone when it is prescribed by a physician with a methadone license.
- *CAMH is offering "Buprenorphine-assisted treatment of opioid dependence: An online course for front line clinicians". Clinicians can register to the course online by following:*

  http://www.camh.ca/en/education/about/AZCourses/Pages/BUP.aspx

BMT indications

- Higher risk of overdose (especially at initiation)
- Acquires opioids from multiple sources – other doctors, friends and relatives, the street
- Currently misusing alcohol or other sedating drugs
- Injecting or crushing oral tablets

BMT flexibility

- Opportunity for carries early in the initiation period. Beyond level 2 carries in areas of greater clinical stability
- Can resume similar dosing after missed doses on 5 consecutive days. (See table 2). Safety with overdose

Buprenorphine Dose	Number of Consecutive Days Missed	New Starting Dose
> 8 mg	>7 days	4 mg
> 8 mg	6-7 days	8 mg
6-8 mg	6 or more days	4 mg
2-4 mg	6 or more days	2-4 mg

Missed doses in the context of mobility/access

- Logistics appear to allow for accelerated take-home doses in both BMT & MMT
- Adverse events, tricky pharmacology during titration, make observation even more important in the elderly
- Pharmacy delivery with arranged clinical observation at the home (on “observed” days)- CCAC, LHIN, pharmacy?

Case 2: Ingrid (cont'd)

- Ingrid reports notable improvement on suboxone after 6 weeks
- She is using her dose (10 mg) as required on level 3 carries without cravings
- Notes that she appreciates particular benefit with her dose in the morning for her hip and back pain
- However her ongoing mobility issues persist and wonders if there's anything else she can do for her pain

BMT- analgesia

- Despite buprenorphine's partial agonist characterization in vitro, in 23 of the 24 identified studies in a current review, buprenorphine produced the same level of analgesic effect ***or even greater analgesic effect*** than did the generally accepted full agonists morphine, fentanyl, sufentanil and oxycodone. (Raffa et al, 2014)

- Strictly off-label in Canada. In USA, buprenorphine SL and buprenorphine/naloxone managed and studied for analgesia (up to 32 mg)

*Bu-Trans low dose conversion??

BMT- analgesia
Indications for conversion?

- A retrospective chart analysis examined numerical pain levels and quality of life scores before and 2 months after conversion to SL buprenorphine for 35 chronic pain patients on high dose opoids with MEQ 200 mg – 1,370 mg

- Average pain scores decreased from 7.2 to 3.5, and quality of life scores increased from 6.1 to 7.1 for

- Conclusion: Evidence exists for buprenorphine SL conversion for patients on high-dose opioids, particularly patients with severe pain (7–10) unrelieved by their current opioid regimen or for whom the clinician does not feel comfortable prescribing high-dose opioids.

- Referring to a pain and chemical dependency specialist with this question would be a reasonable next step.

Methadone- analgesia

- *"MMT physicians cannot prescribe methadone as an analgesic for non-addicted patients with chronic pain, unless they have a special exemption from Health Canada. This exemption is independent of the exemption for methadone as a treatment of addiction. MMT physicians with the Health Canada addiction exemption can prescribe methadone both as an analgesic and as an opioid substitution therapy for patients who have concurrent addiction and acute pain. However for chronic pain management, where, over time, the treatment of pain, rather than that of opioid dependence, becomes the primary focus of the patient's care, the MMT physician requires an exemption to prescribe methadone for pain and the patient should be taken off from the CPSO MMT Patient Registry for opioid dependence. "*
    - CPSO Methadone 2011

Methadone- analgesia

- "Because of methadone's use on a once-a-day basis for the treatment of addiction, many physicians assume that methadone can be used once daily for pain." ..."Most patients will require a dose interval of 6-8 hours to maintain analgesic effects" (Scimeca et al, 2000)

- Methadone has no active metabolites and hepatic metabolism has no significant effect on methadone concentrations or clearance. Unlike codeine and morphine it has been shown to be safe in renal failure

Opiate Analgesia

- The use of opioids for breakthrough pain should apply short-acting medications
- However the use of particular opioids should be avoided
- Morphine and, especially, Meperidine have particular negative impacts on excretion and could result in increased plasma levels

Managing risk

Co-morbid Substances in the Elderly

Case 3: Gary

- Gary is a 65 year old retired transport worker on BMT
- Lives with his spouse who works as a train engineer. They live in a 2 storey house and he is alone during the day and when she works away for multiple days overnight.
- He has battled with insomnia in work and retirement
  - 1 mg clonazepam PO HS
  - 7.5 mg zopiclone PO HS

- After retirement at 60, Gary‘s idle time increased and was left with little in the way of purposeful activity. He spends a lot of time watching sports on TV. He might have a beer with the game. When you ask about how often he goes to the beer store of LCBO, he responds that it’s rare.

Dial-A-Bottle… Alcohol Screening

- Older adults may have cognitive issues interfering with their insight into the risks of alcohol.
- Short Michigan Alcohol Screening Test – Geriatric Version (SMAST-G) (Blow, 1991): assess alcohol dependence.
- Senior Alcohol Misuse Indicator (SAMI) (Busto, Flower, and Purcell, 2003): exploring the risk of a developing problem along with health impacts.

Alcohol Screening

Table 2. Common alcohol use screening instruments validated for clinical use.

Instrument	Population	Sensitivity	Specificity	Number of items	Time to administer (minutes)
AUDIT Alcohol Use Disorders Identification Test	Adults	81%	86%	10	2
CAGE Questionnaire	Adults and adolescents	75%	92%	4	1
SMAST Self-Administered Michigan Alcoholism Screening Test	Adults and adolescents	90–98%	57–82%	13	8
ARPS Alcohol-Related Problems Survey	Adults >65	82%	82%	18	10

Adapted from Fink A, Tsai MC, Hays RD, et al.[20] National Institute on Alcohol Abuse and Alcoholism,[21] Bradley KA, Bush KR, Epler AJ, et al.,[22] Aertgeerts B, Buntinx F, Kester A,[23] Hoeksema HL, de Bock GH.[24]

BZD - Common clinician perspective

(Cook et al., 2007)

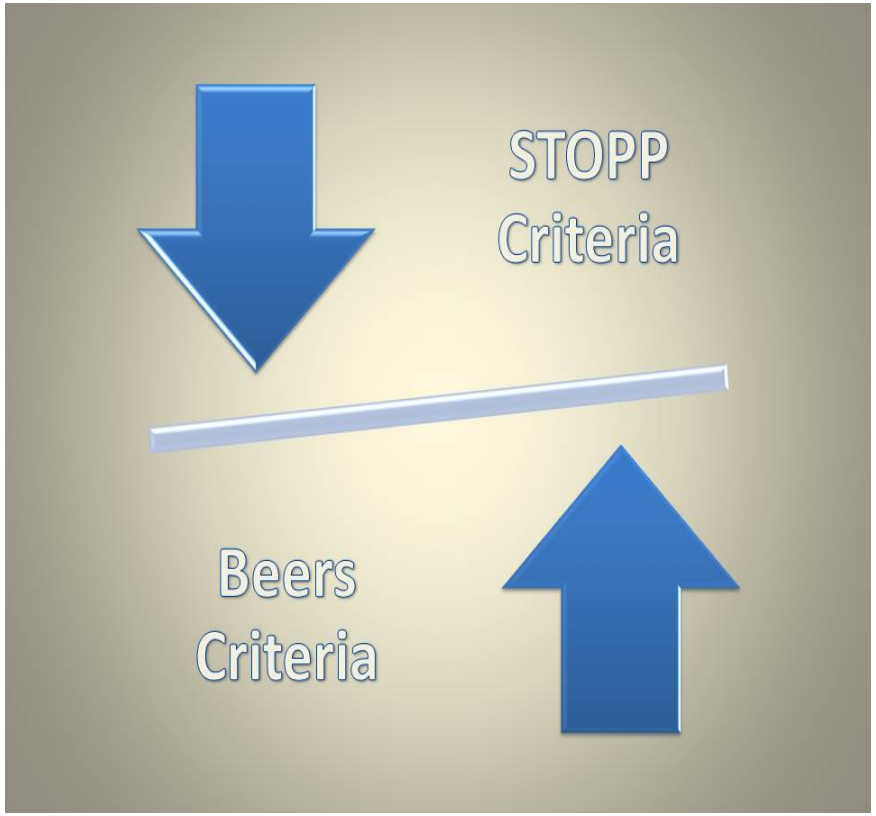
Table 1

Categories Underlying Use of Benzodiazepines in the Elderly

Categories
Physician minimization of benzodiazepine use as a problem
No addiction seen in this population
Little recognition of adverse effects other than addiction
Continuation is compassionate; discontinuation is harsh
Low-priority relative to medical problems
Justification of short- and long-term benzodiazepine use
Effectiveness for anxiety and sleep problems
Belief that stable dosage equals safe and effective
Attempt to discontinue will fail
Anticipated resistance from patients

BENZODIAZEPINE screening tools

- BEERS considered to be the most effective in Canada
- STOPP widely used internationally
- Both tools for general polypharmacy screening
  - Considerable side effects overlap between polypharmacy and CNS medications



Case 3: Gary (cont'd)

- Gary began to experience symptoms of anxiety, sometimes forgetting and has found it increasingly difficult to leave his house.

- Despite increasing his clonazepam use to help during the day and night (2mg BID). He has begun drinking as a result- up to 7 tall boys per day throughout the day

- He is now seeking an increased dose of Buprenorphine because his cravings have increased… and further carries to avoid having to go to the pharmacy…

What is your next step?

W/D Treatment- Alcohol/BZD

- Withdrawal Treatment- prevention of seizure!
  - Physically unstable
  - Inpatient (supervised)
  - Outpatient (ambulatory) must be negotiated very carefully and often NOT an option
  - Diazepam/Lorazepam/Gabapentin

DELIRUM TREMENS

- Immediate Hospitalization
- Should not rely on history to identify risk
- Worsening disorientation, sweating, tremors, (CIWA sx's)
- DT is potentially fatal and can occur in a 3-5 day with special attention to the first 48 hours

Anti-Craving Medications

- Most effective medications in our clinic:
  - ***Revia* 6$ per day BEST EVIDENCE 65 YRS + *CONTRAINDICATED***
  - ***Campral* 6 $ per day (FIRST LINE FOR ABSTINENCE, OFF LABEL FOR REDUCTION)**

- Moderately effective medications in our clinic
  - ***Gabapentin* affordable (SECOND LINE FOR ABSTINENCE & REDUCTION)**
  - ***Topamax* affordable CONCERNING SIDE EFFECTS in ELDERLY**
  - ***Baclofen* affordable CONCERNING SIDE EFFECTS in ELDERLY**
  - *Antabuse* **NOT RECOMMENDED FOR ELDERLY**

Treatment of Benzodiazepine dependence or misuse:

- (1) inpatient detoxification and medicalized aftercare
- (2) outpatient withdrawal taper
  - As effective in elderly as in youth (Schweizer, 1989)
- (3) treat secondary psychiatric problems like anxiety or insomnia
- (4) long-term low dose benzo maintenance
- (5) AA or NA

Reference:

- Bruera, E. and Sweeney, C. (2002). methadone use in cancer patients with pain: a review. *J Palliat Med*. 2002;(1):127-138
- Canadian mental health association, (2010). *Mental health and addictions issues for older adults: Opening the doors to a strategic framework*.
- Caplehorn, J.R., Drummer, O.H. (2002). Fatal methadone toxicity: signs and circumstances, and the role of benzodiazepines. *Aust N Z J Public Health*; 26(4):358-62; discussion 362-3
- College of Physicians and Surgeons of Ontario (2011). *Methadone Maintenance Treatment: Program standards and clinical guidelines*.
- Conner, K.O. and Rosen, D. (2008). "You're Nothing But a Junkie": Multiple Experiences of Stigma in an Aging Methadone Maintenance Population." *Journal Of Social Work Practice in the Addictions*; 8(2), 244-263.
- Cook, J.M., Marshall, R., Masci, C., and Coyne, J.C. (2007). Physicians' Perspectives on Prescribing Benzodiazepines for Older Adults: A Qualitative Study. *J Gen Intern Med*.; 22(3): 303–307
- Kahan, M., Meier, R., White-Campbell, M., and Seaman, G. (2014). *Specialized Geriatric Addictions Community of Interest* Fact Sheet #4. Seniors Health Knowledge Network.
- Kahan, M., Wilson, L., Mailis-Gagnon, A., Srivastava, A. (2011). Canadian guideline for safe and effective use of opioids for chronic noncancer pain: Clinical summary for family physicians. Part 2: special populations. *Can Fam Physician*; 57:1269-76.

Reference:

- Manfredonia, J. (2005). Prescribing Methadone for Pain Management in End-of-Life Care. *J Am Osteopath Assoc* vol. 105 no. 3 suppl 18S-21S
- Manfredonia, J.F. (2007). Using Methadone to Control Pain in Patients During Final Stages of Life. *J Am Osteopath Assoc*;107(suppl 4):ES17-ES21
- Raffa, R. B., Haidery, M., Huang, H.-M., Kalladeen, K., Lockstein, D. E., Ono, H., Shope, M. J., Sowunmi, O. A., Tran, J. K., and Pergolizz, J. V. (2014). The clinical analgesic efficacy of buprenorphine. *Journal of Clinical Pharmacy and Therapeutics*, 39:577–583.
- Rajaratnam, R., Sivesind, D., Todman, M., Roane, D., and Seewald, R. (2009). The aging methadone maintenance patient: treatment adjustment, long-term success, and quality of life. *Journal of Opioid Management*; 5 (1):27-37.
- Ramage-Morin, P. (2009). *Medication use among senior Canadians*. Statistics Canada.
- Ratnasingham, S., Cairney, J., Rehm, J., Manson, H., and Kurdyak, P.A. (2012). *Opening eyes, opening minds: The Ontario burden of mental illness and addictions report*. Institute for Clinical evaluative sciences.
- Ripamonti C, Bianchi M. (2002). The use of methadone for cancer pain. *Hematol Oncol Clin North Am*. ;16:543-555.

Reference:

- Schreiber, S., Peles, E., Adelson, M. (2008). Association between improvement in depression, reduced benzodiazepine (BDZ) abuse, and increased psychotropic medication use in methadone maintenance treatment (MMT) patients. *Drug and Alcohol Dependence*; 92:79–85.
- Scimeca, M.M., Savage, S.R., Portenoy, R., Lowinson, J. (2000). Treatment of pain in methadone-maintained patients. *Mt. Sinai. J. Med*. 67, 412–422.
- Turk, D.C., Swanson, K.S., Gatchel, R.J. (2008). Predicting opioid misuse by chronic pain patients: a systematic review and literature synthesis. *Clin J Pain*; 24(6):497-508
- Zador, D. and Sunjic, A. (2000). Deaths in methadone maintenance treatment in New South Wales, Australia 1990-1995. *Addiction;* 95(1), 77–84.

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MITIGATING POTENTIAL BIAS

- [Explain how potential sources of bias identified in slides 1 and 2 have been mitigated].
- Refer to “Quick Tips” document