Harm reduction among at-risk elderly

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روند سالمندی جمعیت ایران تا سال ۱۴۲۰

تعریف سالمند

فرد ۶۵ ساله و بزرگتر

علت ایجاد پدیده سالمندی

کاهش میزان باروری

بازنشستگی

ابعاد اجتماعی پدیده سالمندی

زلزل جایگاه اجتماعی

اهنگ سریع دگرگونی‌های تکنولوژیک

میزان دوری و نزدیکی با فرزندان

قوت برخی از اعضای خانواده

ابعاد اقتصادی پدیده سالمندی

بیمه اجتماعی

مراقبت‌های پزشکی

گسترش فرصتهای شغلی

پیامدهای پدیده سالمندی

۱) کاهش نیروی کار

کاهش تولیدات داخلی

کاهش صادرات محصولات صنعتی

۲) افزایش بار تکفل

افزایش بار مالی صندوق ها

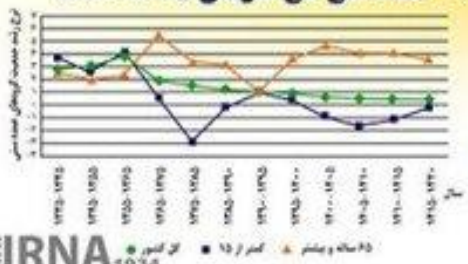
کاهش شمار پرداخت کنندگان حق بیمه

راهکارهای تاخیر در سالمندی جمعیت

ایجاد هرم متلثی سنی جمعیت با افزایش باروری تا سطح جانشینی

حفظ نرخ رشد مثبت و جمعیت در سن کار

روند تغییرات نرخ رشد جمعیت گروه‌های عمده سنی طی سال‌های ۱۳۳۵-۱۴۲۰

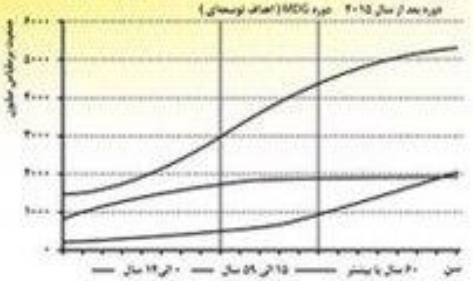


پیش‌بینی رشد ۳۲ درصدی سالمندی در جمعیت جهان تا سال ۲۰۵۰

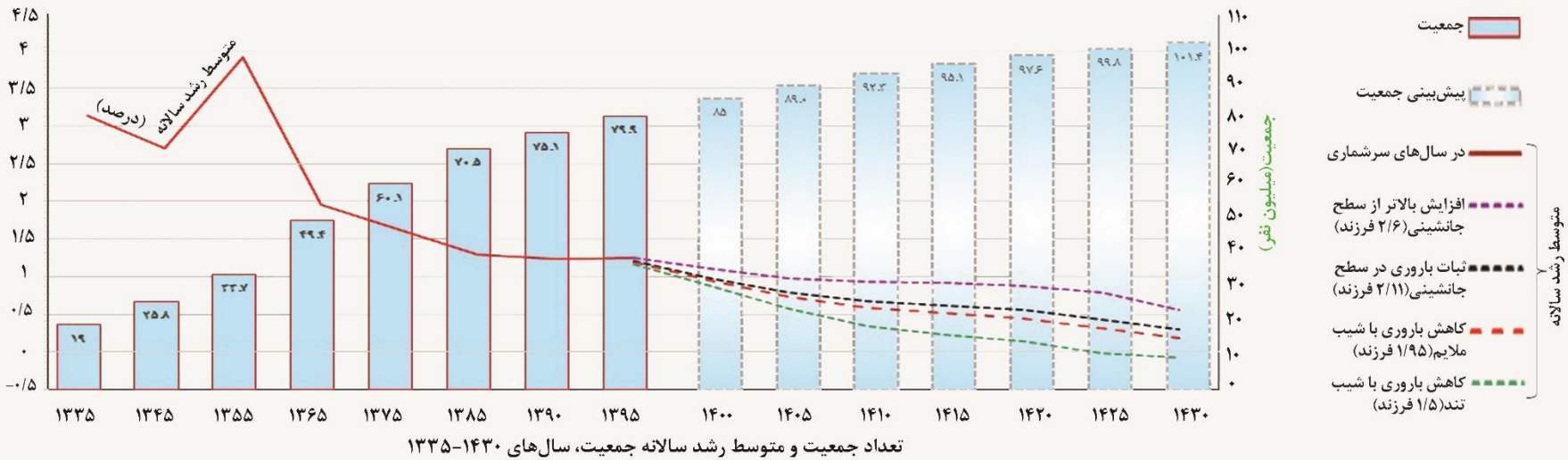
افزایش ۵/۶ برابری تعداد جمعیت سالمندی ایران در نیم قرن اخیر

پیش‌بینی کاهش ۰/۲ - نرخ رشد جمعیت در دوره ۱۴۱۵ تا ۱۴۲۰

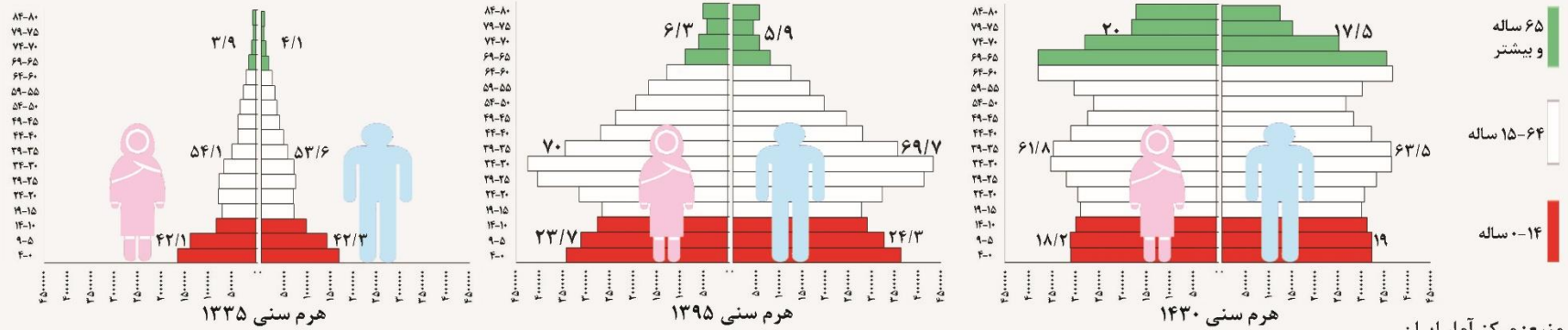
روند سالمندی جمعیت در جهان



جمعیت ایران طی یک قرن



تعداد جمعیت و متوسط رشد سالانه جمعیت، سال‌های ۱۴۳۰-۱۳۳۵



منبع: مرکز آمار ایران
دفتر جمعیت، نیروی کار و سرشماری، گروه جمعیت و سلامت

Opioid misuse

- Opioid misuse is a growing problem among older adults. One study found that **7% of adults aged 50 and up admitted to misusing their prescription opioid.**

- As the younger population cohorts age, prevalence of substance use will increase

WHO

- Over the age of 50 accounted for 27% of deaths from drug use disorders in 2000, a figure that rose to 39% by 2015.
- Of those deaths in older adults (age ≥ 65), approximately 75% were linked to the use of opioids

Substance abuse

- Some estimates indicate about
- 60% use of alcohol,
- 2.6% use of marijuana,
- 0.41% use of cocaine in those above the age of 50

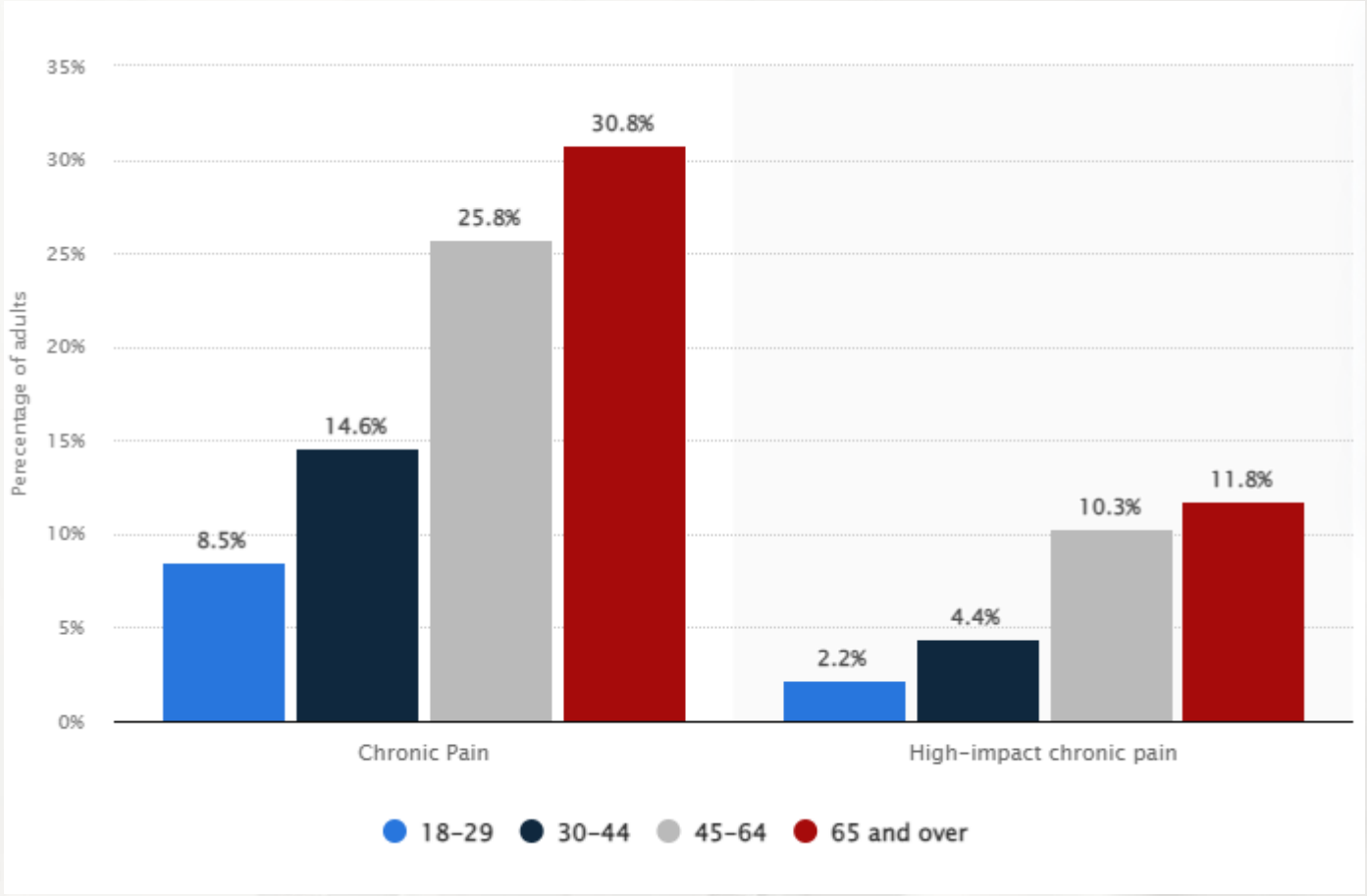
- Over **11% of older adults** use opiates on regular basis and opiate use accounts for 22% of inpatient admissions

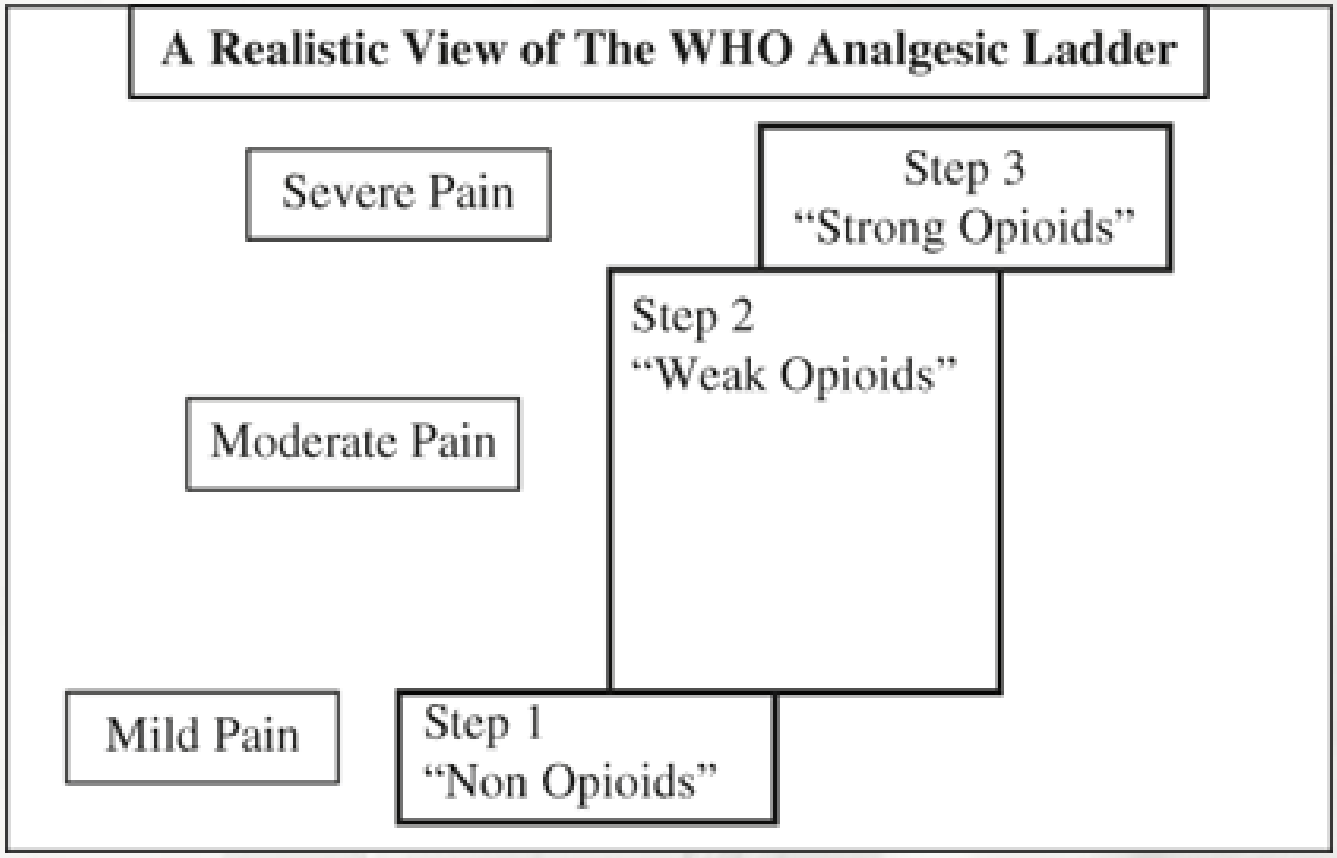
Opiate Misuse

- A disturbing trend in the United States is opiate **pain medication** misuse.

- The best treatment for opiate misuse is **prevention** by utilizing **alternative treatments for pain** in older adults

- Prevalence statistics for persistent pain in older adults range from **25% to 80%**


35%
30%
25%
20%
15%
10%
5%
0%
Perecentage of adults
8.5%
14.6%
25.8%
30.8%
2.2%
4.4%
10.3%
11.8%
Chronic Pain
High-impact chronic pain
18-29
30-44
45-64
65 and over


A Realistic View of The WHO Analgesic Ladder
Severe Pain
Step 3
"Strong Opioids"
Step 2
"Weak Opioids"
Moderate Pain
Mild Pain
Step 1
"Non Opioids"

Role of acetaminophen

- Max Dosage allowed

- Acetaminophen as the **first-line agent** for pain control is recommended.

- Although **undertreatment** of pain continues to be problem for older adults, there is no evidence that sustained, long-term use of opiate family pain medications lead to better outcomes.

- Older adults are very sensitive to medications

Treatments for chronic pain

- SNRIs,
- Gabapentin,
- Pregabalin

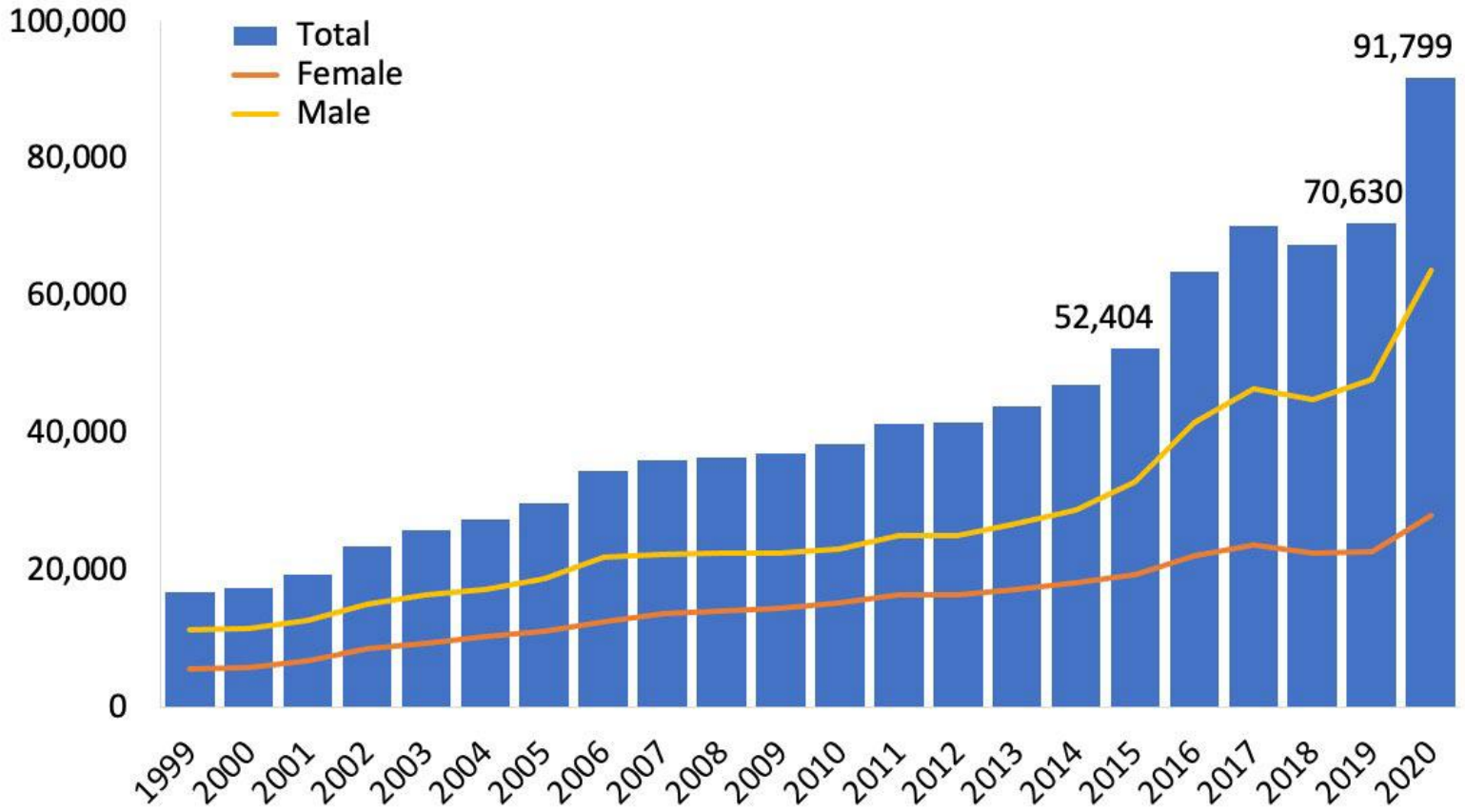
- The use of **methadone, naltrexone,** and **buprenorphine** as treatment for opiate dependence has not been well studied in the older population.

Geriatric

- Old people are at higher risk for negative opioid-related outcomes due to :

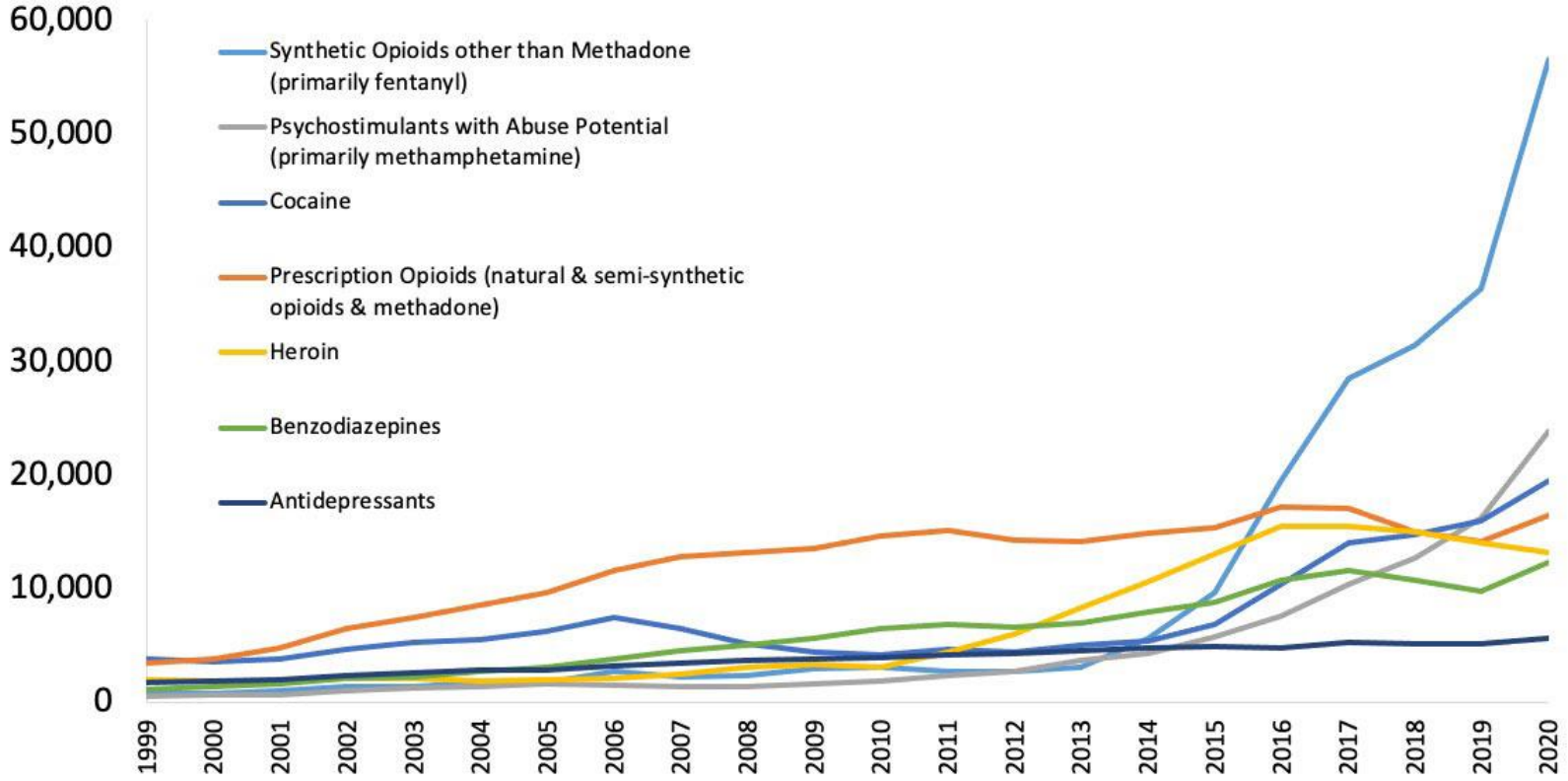
- High prevalence of pain,
- Multimorbidity,
- Polypharmacy,
- Age-changes in metabolism

Figure 1. National Drug-Involved Overdose Deaths*
Number Among All Ages, by Gender, 1999-2020



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

Figure 2. National Drug-Involved Overdose Deaths*, Number Among All Ages, 1999-2020



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Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

- In 2015–2016, 19.3% of older adults (aged 65 years and above), on average, filled at least one outpatient opioid prescription, and 7.1% obtained four or more prescription fills during the year

- 25.4% of long-term users of opioids were indeed adults aged 65 years and above

- Recent opioid use is associated with increased risk of **fall** and an increased likelihood of **death** in older adults

- Some evidence-based approaches exist for screening and treating of opioid misuse among older adults

Pain

- Pain treatment is attributed as a major cause for increased opioid use in older adults

- About 40% of older adults report pain, compared with 30% of the general population

Canadian Guidelines on Opioid Use Disorder Among Older Adults

- RECOMMENDATION #1:
- In order to avoid the risk of developing an OUD, older adults with acute pain in whom opioids are being considered should receive the **lowest effective dose of the least potent immediate release opioid** for a duration of ≤ 3 days and rarely > 7 days.
- [GRADE Quality: Moderate; Strength: Strong]

- RECOMMENDATION #2:
- In most circumstances, avoid prescribing opioids for older adults with CNCP.

- RECOMMENDATION #5:
- In older adults with polypharmacy or comorbidities that increase the risk of opioid overdose (e.g., benzodiazepine use, renal failure, sleep apnea), the **lowest effective opioid dose** should be used and tapering the opioid and/or other medications should be considered.
- [GRADE Quality: Moderate; Strength: Strong]

- RECOMMENDATION #6:
- Once the decision is made to reduce the opioid dose, a slow outpatient tapering schedule (e.g., 5% drop every 2-8 weeks with rest periods) is preferable to more rapid tapering.

- RECOMMENDATION #7:
- Dispense naloxone kits to anyone using opioids regularly for any reason (CNCP, OUD, etc.), and train household members and support staff on use.

- Older adults should be **screened** for an OUD using validated tools, if appropriate (e.g., CAGE-AID, ASSIST, PDUQp, ORT, POMI, COMM).
- **Medication reviews** and **urine drug screens** should be utilized if the patient is taking opioids for CNCP or an OUD.

- RECOMMENDATION #15:
- **Buprenorphine-naloxone** should be considered **first line** for opioid withdrawal management in older adults.
- **Methadone is an alternative** that may be used, however consider the added risk of adverse events.

- RECOMMENDATION #17:
- **Buprenorphine** maintenance should be considered a first-line treatment for an OUD in older adults.

- RECOMMENDATION #24:
- Reduce initial doses of medications for treatment of an OUD (e.g., by 25%-50%); **slow dose escalation frequency** (e.g., by **25%-50%);** use the lowest effective dose to suppress craving, withdrawal symptoms; and drug use; and monitor closely (especially for **sleep apnea, sedation, cognitive impairment, and falls** with opioid agonists).

- However, older adults are more likely to be exposed to high-dose opioids,
- Coprescriptions with benzodiazepines,
- Multiple opioid prescribers,
- Multiple opioid-dispensing pharmacies,
- and continuous opioid therapy even without a pain diagnosis

Benzodiazepines

Benzodiazepines

- Anxiolytic,
- Sedative,
- Hypnotic,
- Anticonvulsant,
- Amnesic properties
- owing to their action on the gamma amino butyric acid (GABA) receptors in the central nervous system

- The propensity for development of dependence, especially on prescription benzodiazepines, coupled with the risk of ***falls and cognitive impairment*** due to benzodiazepines makes the elderly population susceptible to adverse outcomes with the use of benzodiazepines,
- cautious use is desired in this population.

Assessment and treatment of an elderly patient with benzodiazepine abuse/dependence

History taking: Duration of benzodiazepine use, use of other psychoactive substances, psychiatric symptoms, comorbid physical disorders

↓

Treatment history: medications being used, previous treatment attempts, treatment of major illness

↓

Examination: Detailed physical examination, mental state examination, specific focus on presence of withdrawal symptoms and recording their severity

↓

Investigations: Laboratory investigations as indicated: Blood and urine, imaging studies, and EEG in case of seizures

↓

Determining treatment setting: inpatient or outpatient

↓

Pharmacological management of withdrawal symptoms

↓

Nonpharmacological measures to manage withdrawals, enhance motivation, prevent relapse, and manage psychiatric symptoms

↓

Long-term pharmacological and nonpharmacological measures

Benzodiazepines in elderly

	Half-life (h)
High potency benzodiazepines	
Short half-life	
Alprazolam	12-15
Lorazepam	10-20
Triazolam	2-4
Etizolam (benzodiazepine analog)	2-4
Long half-life	
Clonazepam	19-60
Low potency benzodiazepines	
Short half-life	5-10
Oxazepam	
Temazepam	5-10
Long half-life	
Chlordiazepoxide	10-30
Nitrazepam	18-57
Clorazepate	50-180
Diazepam	20-70
Flurazepam	74

Age-related pharmacokinetic changes in the body and their effect on benzodiazepine metabolism

Changes	Implications
Increased body fat, decreased lean muscle mass, and decreased total body water	Increased volume of distribution and prolonged half-life of the most lipophilic benzodiazepines (such as diazepam). Decreased volume of distribution of the most hydrophilic benzodiazepines
Reduced activity of cytochrome P450	Reduced metabolism of benzodiazepines
Decrease in albumin plasma levels	Higher free fraction of benzodiazepines
Hepatic and/or renal malfunction	Increased elimination half-life

System involved	Signs and symptoms
Cognitive	Poor attention and concentration, delayed recall, episodic (long-term) memory loss, drowsiness, mental confusion, deficits in visuospatial ability, worsening of dementia, and age-related cognitive decline
Motor	Motor incoordination, accidental injuries, frequent falls, weakness in limbs, gait disturbances, arthralgia, myalgia, dysarthria
Neurological	Diplopia, vertigo, dizziness, headache, tremor, gait disturbances, delirium
Autonomic	Dry mouth, hypertension
Gastrointestinal	Nausea, diarrhea, constipation
Psychological	Emotional blunting, rebound anxiety, depression, insomnia, lethargy, paradoxical disinhibition, tolerance, and dependence

Do's

- Obtain full history including information about substance abuse disorders, psychiatric disorders, personality disorders, chronic medical disorders, falls, chronic insomnia, and chronic pain conditions
- Give information regarding adverse outcomes associated with short-term and long-term benzodiazepine use
- Consider alternative therapies before prescribing benzodiazepines
- Encourage use of nonpharmacological methods to manage symptoms requiring benzodiazepines
- Start low dose and escalate dose as slowly as possible, advise intermittent use as far as possible
- Review regularly for adverse events and development of dependence

Don'ts

- Avoid prescribing for purely symptom-oriented management of sleep and anxiety related problems
- Avoid prescribing for longer than a month
- Do not abruptly taper off benzodiazepines following regular use
- Avoid use in those who drive and operate heavy machinery
- Attempt measures to prevent misuse and to avoid diversion
- Avoid prescription of longer acting benzodiazepines with active metabolites

سپاس از توجه شما