Age-Friendly HIV Care: Addressing the 4Ms
Part 1 of 4: Mobility

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Epidemiology

- The population of adults with HIV is aging:
  - of the 1.1 million people with HIV in the US, 441,614 (41%) were 55 years of age or older.
- Older adults suffer a disproportionate amount of harm while in the care of health systems and those from historically marginalized communities suffer from disparate treatment that negatively influences health outcomes.
- In 2017, The John A. Hartford Foundation and the Institute for Healthcare Improvement developed a model to provide high-quality care for older adults.

According to our definition, age-friendly care:

- Follows an essential set of evidence-based practices, known as the 4Ms;
- Causes no harm; and
- Aligns with What Matters to the older adult and their family or other caregivers.

HIV Surveillance Report: Diagnoses of HIV Infection in the United States and Dependent Areas, 2021

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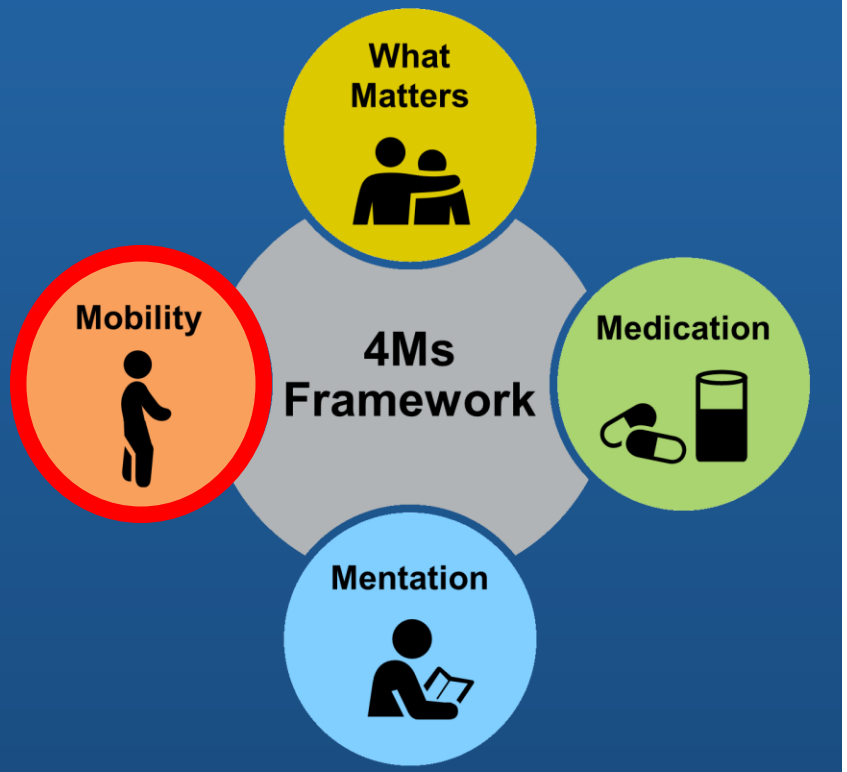
Age Friendly Health Systems



using .MAD4MS at UW Madison Clinic:

Social support:
Lives with *** in ***.
Accompanied to clinic today by ***.
Transportation via ***.
Interpreter: ***

Geriatric ROS:
Functional status:
Basic activities of daily living (BADLs): {*ambulating/transferring, toileting, bathing, dressing/grooming, feeding*}
Instrumental activities of daily living (IADLs): {*managing finances, transportation, shopping/cooking, housecleaning, communication (telephone/mail), medications*}
Clinical Frailty Scale: Clinical Frailty Scale
Mentation: {*patient/family-reported concerns | annual mini-cog, MOCA, or RUDAS score*}
Mood: {*annual PHQ-2/GDS screen | "How often do you feel lonely? Do you feel socially connected?"*}
Mobility: {*most physical daily activity | use of assistive devices | number of falls in past 6-12 mo?*}
What matters most?: {*What is important to you today? What brings you joy? What do you worry about? What are some goals you hope to achieve? What else would you like us to know?*}
POLST/DPOA: ***

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Agenda

- Understand the prevalence and financial burden of falls and fall-related injuries.
- Appreciate the comorbidities and factors that raise the fall risk among those aging with HIV.
- Learn how fall risk is assessed and managed in a Fall Prevention Clinic and how to apply those elements to your practice.
- Drop the idea that a “mechanical ground level fall” is “non-medical” or not worthy of further evaluation or preventive efforts.
- Learn to identify patients who would benefit from a screening DEXA and prevent fall-related injuries.

STEADI Stopping Elderly Accidents, Deaths & Injuries

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Falls & Older Adults

- Falls are the leading cause of fatal and nonfatal injuries in older adults
- In the US, more than **1 in 4 older adults** fall each year, leading to…
  - 3.6 millions ED visits
  - 1.2 million hospital admissions
  - 41,000 deaths
  - $80 billion in medical costs
- 1 in 10 falls result in serious injury

Falls are preventable!

One study showed that that the prevalence of falls among adults with HIV with a mean age of 52 years was similar to that of adults without HIV ≥65 years (Erlandson, 2012).

CDC Fall Prevention: https://www.cdc.gov/falls/about/

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Aging with HIV Increases Fall Risk

- People with HIV manifest “accelerated aging” with an earlier-than-expected occurrence of many diseases of aging

- Patients with HIV have a high prevalence of several comorbidities and physical impairments associated with an elevated fall risk:
  - Frailty
  - Sarcopenia
  - Low BMI
  - Neuropathy
  - Cognitive Impairment

- Approximately 75% of patients with HIV take at least 1 other Rx in addition to ART, and the most common of these are in the high fall risk category (cardiovascular and psychoactive meds)

Effros RB, Fletcher CV, Gebo K, et al. Aging and infectious diseases: workshop on HIV infection and aging: what is known and future research directions. *Clin Infect Dis.* 2008;47:542–553.

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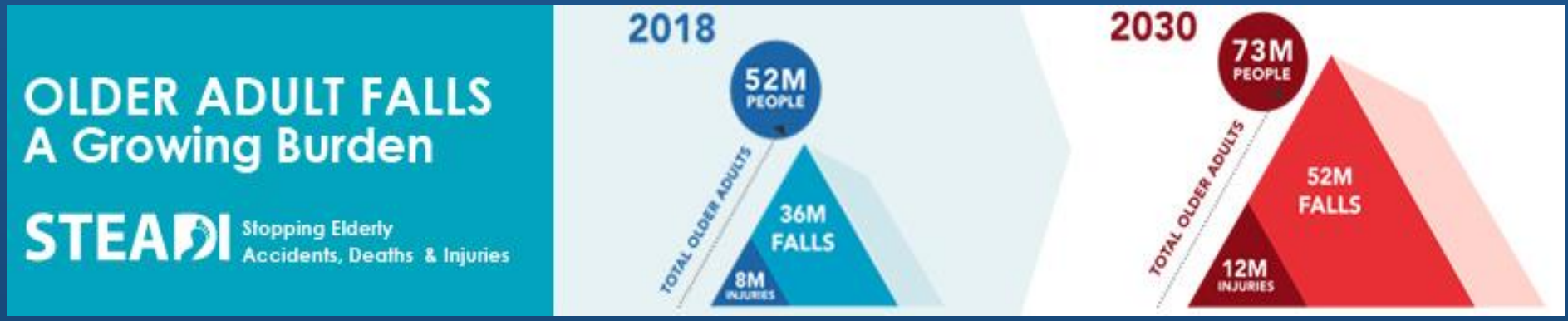
Guidelines for Fall Prevention

- All persons 65+ should be screened for falls and fall risk at least annually
- **Start screening at 50 for those with HIV:**
  "Assessment of mobility and frailty is recommended for patients aged 50 years or older…"
  - 2020 Recommendations of the International Antiviral Society–USA Panel
- Anyone with **gait/balance difficulty**, **2 or more falls** in prior 12 months, or **history of seeking medical attention for a fall** needs further assessment



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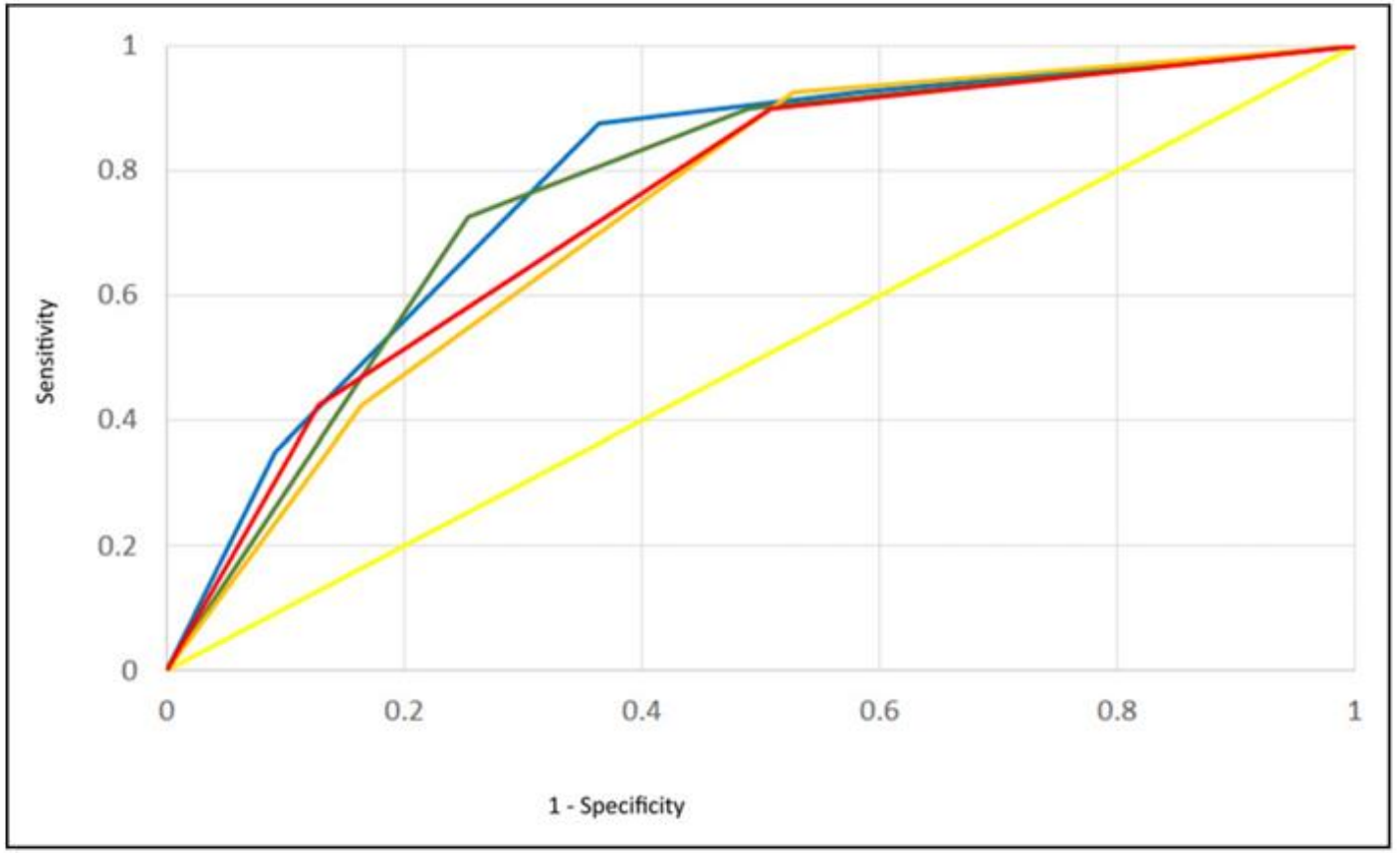
Screening for Falls

How many falls have you had in the past year?

Do you feel unsteady with standing or walking?

Do you use your arms to stand from a chair?

Do you worry about falling?



All three (0.891)
Unsteady and Arms (0.906)
Arms and Hx of Falls (0.889)
Unsteady and Hx of Falls (.871)

Ritchey, K. Olney, A, et al. GGM, 2022

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After the Fall: A Practical Approach

History: think **SPLAT**!

- (S) Symptoms preceding the fall
  - Dizziness, lightheadedness, vision changes, knee laxity, etc.
- (P) Previous falls or near falls
  - How frequent, in what setting
- (L) Location to identify environmental factors
  - At home or in community, on what surface, lighting, tripping hazards, on stairs, etc.
- (A) Activity at the time
  - Multitasking? Hurrying? Turning? Reaching? Just stood up? Using walker/cane?
- (T) Time of fall
  - Time of day, ?cocktail hour, relationship to meds taken, meal eaten, etc.
  - How much time needed to get up from fall?
    - >5min or required assistance → risk of long lie

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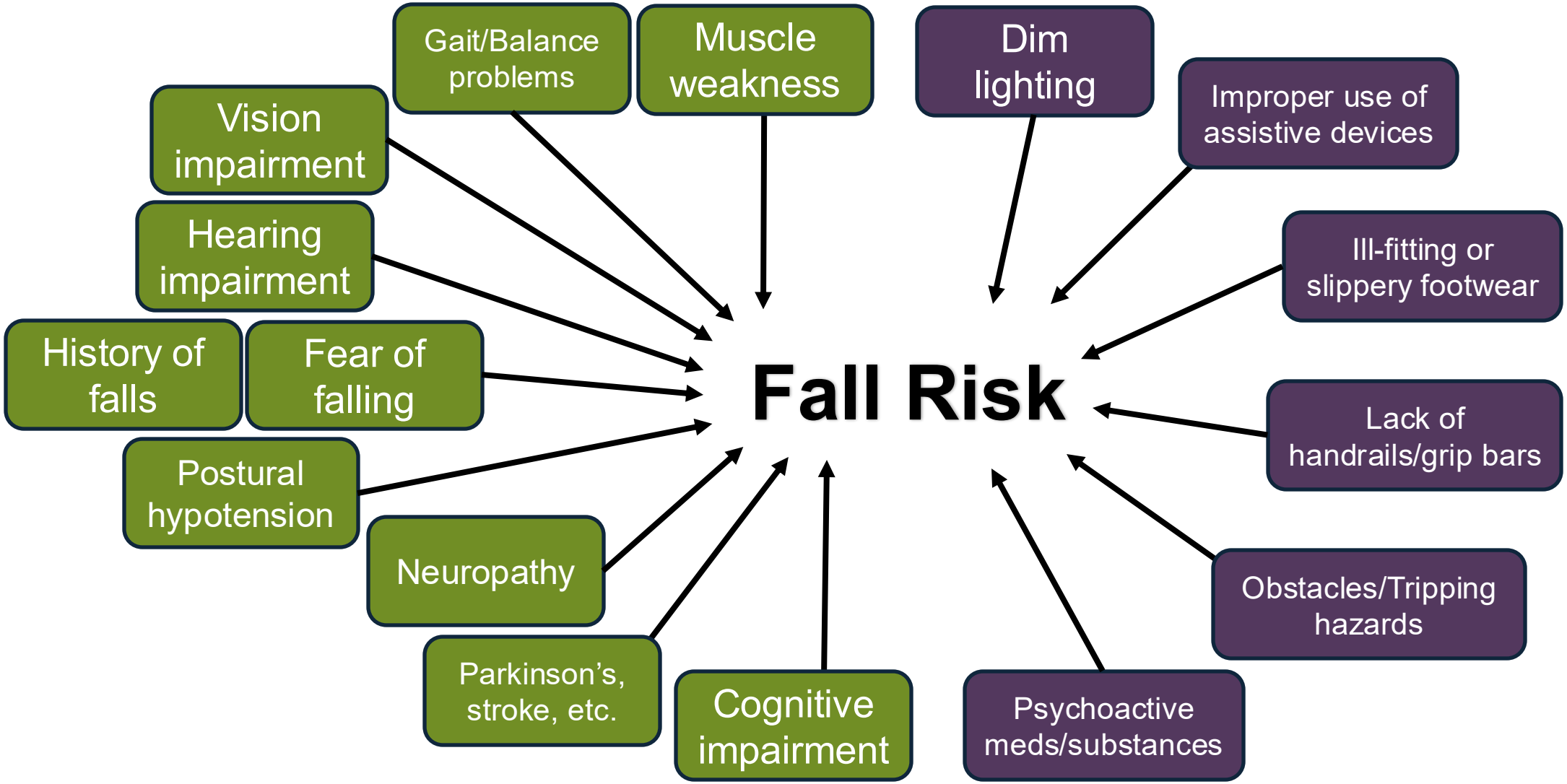
Assessment


Gait/Balance problems
Muscle weakness
Dim lighting
Vision impairment
Improper use of assistive devices
Hearing impairment
Ill-fitting or slippery footwear
History of falls
Fear of falling
Fall Risk
Lack of handrails/grip bars
Postural hypotension
Neuropathy
Obstacles/Tripping hazards
Parkinson's, stroke, etc.
Cognitive impairment
Psychoactive meds/substances

Treatment Goals

- Reduce chances of falling
  - Address modifiable risk factors
- Reduce risk of injury
  - Environmental modifications
  - Counseling about risky behaviors
  - Bone strengthening interventions
- **Preserve highest possible level of mobility**

Use this checklist to find and fix hazards in your home.

STAIRS & STEPS (INDOORS & OUTDOORS)

Are there papers, shoes, books, or other objects on the stairs?

- [ ] Always keep objects off the stairs.

Are some steps broken or uneven?

- [ ] Fix loose or uneven steps.

Is there a light and light switch at the top and bottom of the stairs?

- [ ] Have an electrician put in an overhead light and light switch at the top and bottom of the stairs. You can get light switches that glow.

Has a stairway light bulb burned out?

- [ ] Have a friend or family member change the light bulb.

Is the carpet on the steps loose or torn?

- [ ] Make sure the carpet is firmly attached to every step, or remove the carpet and attach non-slip rubber treads to the stairs.

Are the handrails loose or broken? Is there a handrail on only one side of the stairs?

- [ ] Fix loose handrails, or put in new ones. Make sure handrails are on both sides of the stairs, and are as long as the stairs.

FLOORS

When you walk through a room, do you have to walk around furniture?

- [ ] Ask someone to move the furniture so your path is clear.

Do you have throw rugs on the floor?

- [ ] Remove the rugs, or use double-sided tape or a non-slip backing so the rugs won't slip.

Are there papers, shoes, books, or other objects on the floor?

- [ ] Pick up things that are on the floor. Always keep objects off the floor.

Do you have to walk over or around wires or cords (like lamp, telephone, or extension cords)?

- [ ] Coil or tape cords and wires next to the wall so you can't trip over them. If needed, have an electrician put in another outlet.

KITCHEN

Are the things you use often on high shelves?

- [ ] Keep things you use often on the lower shelves (about waist high).

Is your step stool sturdy?

- [ ] If you must use a step stool, get one with a bar to hold on to. Never use a chair as a step stool.

BEDROOMS

Is the light near the bed hard to reach?

- [ ] Place a lamp close to the bed where it's easy to reach.

Is the path from your bed to the bathroom dark?

- [ ] Put in a nightlight so you can see where you're walking. Some nightlights go on by themselves after dark.

BATHROOMS

Is the tub or shower floor slippery?

- [ ] Put a non-slip rubber mat or self-stick strips on the floor of the tub or shower.

Do you need some support when you get in and out of the tub, or up from the toilet?

- [ ] Have grab bars put in next to and inside the tub, and next to the toilet.

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Fall Prevention

- **Physical Therapy – balance and strength**
- Tai Chi
- Personal alert system (prevent long lie)
- Stop, switch, or reduce the dose of medications that increase fall risk
- Refer for a geriatric/dedicated Falls Clinic assessment

Washington DOH: Fall Prevention

Screening for osteoporosis

Agency	
USPSTF	Women >65, or if fracture risk is equal to/greater than that of a 65yo (B)
	Men: none
National Osteoporosis Foundation (NOF)	Anyone with fragility fracture
	Women >65, men >70
	Postmenopausal women, men >50 with other risk factors

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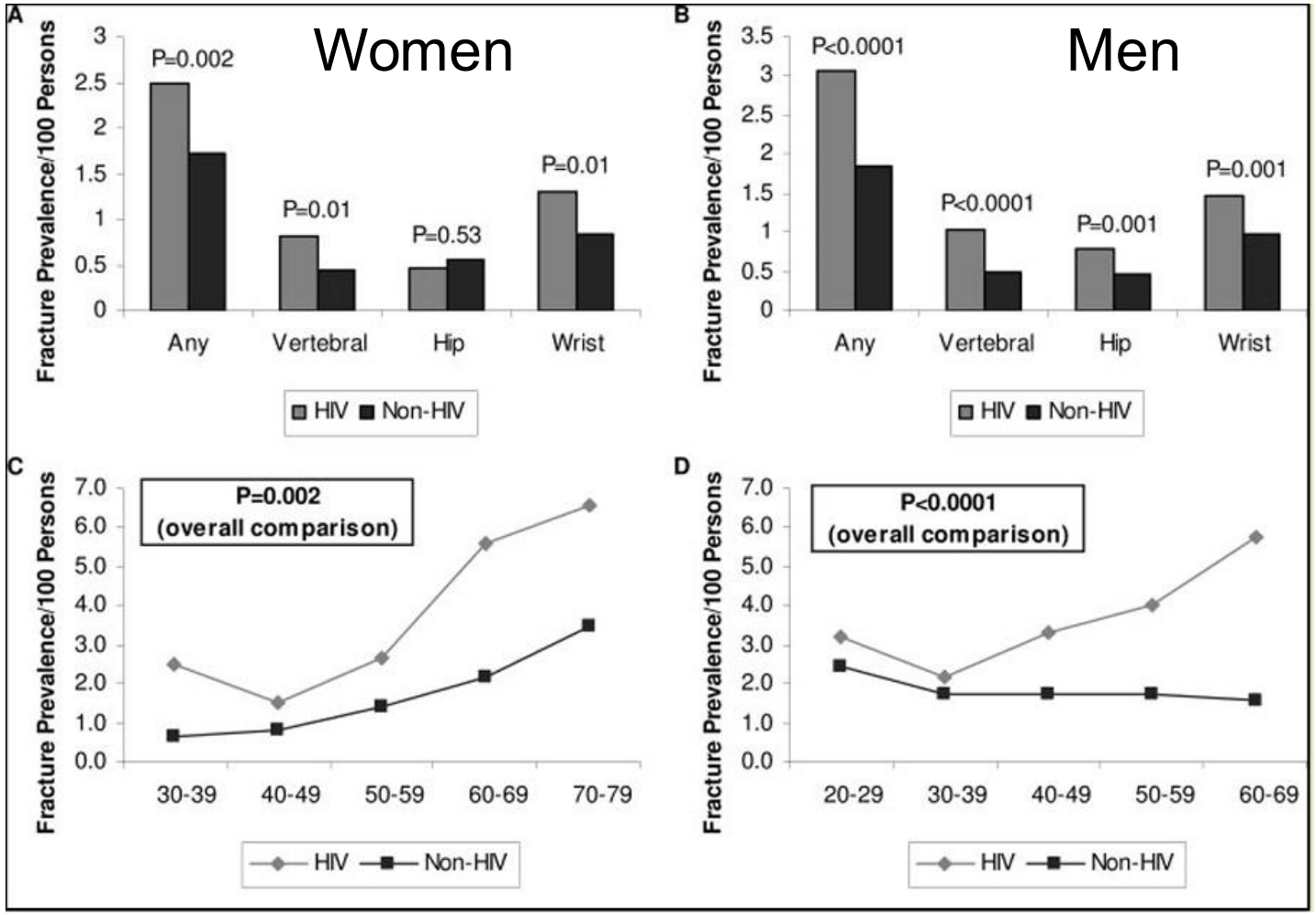
More and more data suggest that age-related changes in bone density are accelerated in PWH compared to age-matched patients without HIV, even in those who are virally suppressed.

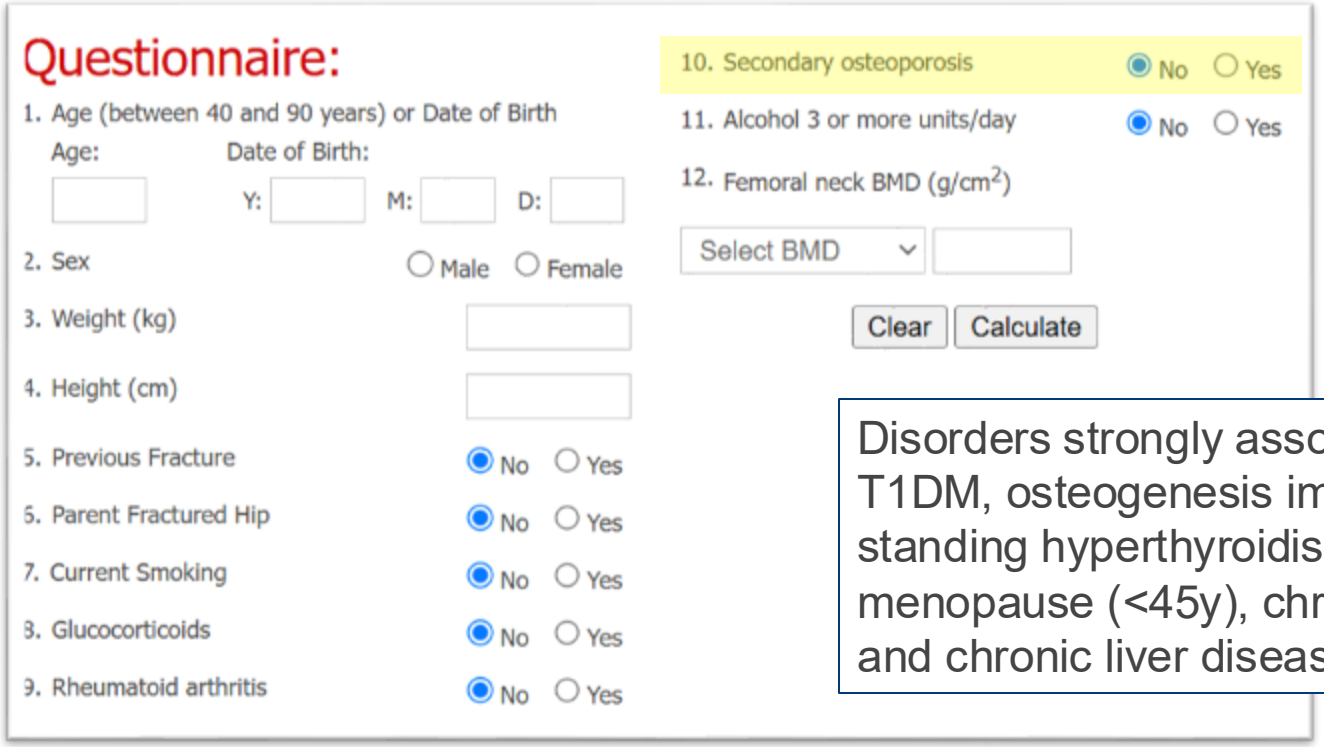
Fracture risk:



Triant et al; J Clin Endocrinol Metab 2008

Bone Mineral Density (BMD) Considerations

- Risk stratification: calculate a FRAX score (you don't even need a DEXA for this!)
- For patients at risk of falls/fracture, ensure that vitamin D is replete (>30 ng/mL)
- Encourage adequate calcium intake (>1200mg/day, or at least 3 servings)
- Consider referral to an osteoporosis specialist (e.g., HMC Healthy Bones Clinic)



Treatment is warranted if T-score is ≤ -2.5 10-year probability of a hip fracture is ≥3% or that of a major osteoporosis-related fracture is ≥20% (FRAX/WHO algorithm)

Disorders strongly associated with osteoporosis such as T1DM, osteogenesis imperfecta in adults, untreated long-standing hyperthyroidism, hypogonadism/premature menopause (<45y), chronic malnutrition or malabsorption, and chronic liver disease

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