Management of Comorbidities in Older Adults with HIV Infection

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IAS–USA
International Antiviral Society–USA

Learning Objectives

After attending this presentation, learners will be able to:

- Describe the current epidemiology of aging among adults with HIV, in the US and abroad
- Recognize high-priority issues among aging adults with HIV
- Discuss new approaches to the care of older adults with HIV

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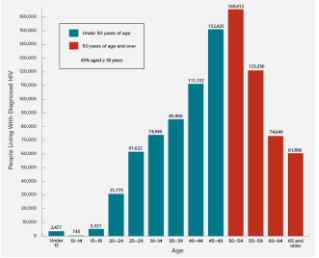
People Aged 50 or Older Living with HIV are Nearing a Majority

- Those infected with HIV at a younger age are successfully growing older
- Thousands of older people become infected with HIV every year
- ≥ 45% of people with HIV in the US are aged 50 or older
- Proportion of people living with HIV ≥ 50 years of age is estimated to reach ~ 75% by 2030



cdc.gov; Smit M, et al. Lancet Infect Dis. 2015;15:810-818

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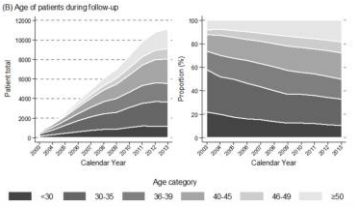
HIV & Aging In Resource-Limited Settings

- Proportion of those 50 years or older with HIV in sub-Saharan Africa has been slower to increase
  - Represents ~ 17% of the population but numerically is a great number than those in the US
  - Estimated tripling by 2040
- Similar trends in Asia



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Negin J and Cumming RG, Bulletin of the WHO 88: 2010: 847-53; De La Mata NL, et al. AIDS Care 2017; 29: 1243-54.

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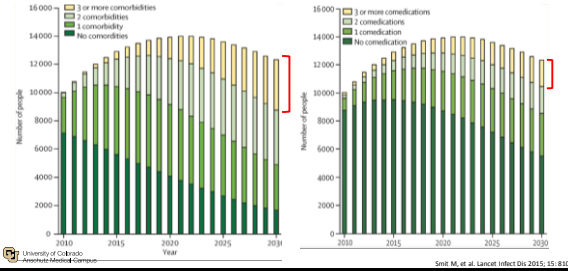
Increasing Burden of Comorbidities & Medications



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Smit M, et al. Lancet Infect Dis 2015; 15: 810-818

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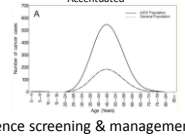
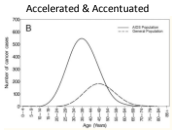
Accelerated or Accentuated Aging?

- *Accentuated*: condition occurs more frequently because of increased risks or exposure (ex smoking)
- *Accelerated*: age-associated condition occurs *earlier* than controls (ex CVD)

Accentuated



Accelerated & Accentuated



- Influence screening & management

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Pathai S et al. J Gerontol A Biol Sci Med Sci 2014; Guaraldi G et al. Clin Infect Dis 2011

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How Do We Decide When to Screen, Test & Treat Among Older Adults with HIV?

- US Preventative Task Force Recommendations
- Society guidelines (often differ from USPTF recommendations)
- Advisory Committee on Immunization Practices (CDC)
- HIV Primary Care Guidelines
- Department of Health and Human Services HIV Treatment Guidelines
- HIV-Age.org (age-specific recommendations)
- Expert opinion (Up-To-Date), expert reviews/consensus guidelines (obesity, bone disease), etc.

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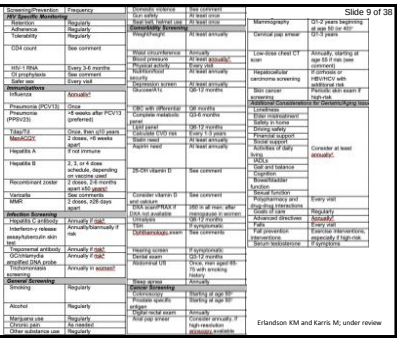
If we adhere to all of these guidelines…

It can be nearly impossible to implement all of these screenings!



Erlandson KM and Karris M; under review

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Are we really meeting the goals and priorities *of our patients*?

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- 61 y/o male seen in consultation with a geriatrician in the HIV clinic.
- HIV, diabetes, hypothyroidism, history of esophageal cancer. Since his prior visit 3 months ago, he had experienced a fall, his HbA1C increased 12.2, his TSH to 67, and his HIV-1 RNA from <20 to 7,820 copies/mL.
- Having difficulty swallowing some of his pills that are too big.
- Has some worsening vision & has chronic hearing loss.
- No family or social support nearby.
- Not showering as he hasn't been able to hang up shower curtain at a new apartment. Sleeping on floor (mattress had bed bugs).

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- Current medications: etravirine, darunavir, ritonavir (liquid), dolutegravir, aspirin, atorvastatin, vitamin D, glipizide, levothyroxine, lisinopril, loratadine, omega-3 fatty acids; additional vitamins that he is unsure of
- Exam: Blood pressure 165/72. Thin, frail man, appearing older than stated age. Very hard of hearing (forgot cochlear implants).
- Unable to rise from chair without using arms. Slightly unsteady on his feet when standing.
- Unable to assess mental status due to hearing difficulties.

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ARS Question #1: What do you address at his clinic visit *today*?

1. Discuss risk/benefit for prostate and lung cancer screening, refer for colonoscopy, obtain a rectal pap smear
2. Focus on his diabetes management: add additional medication; refer for eye exam; check foot exam, A1c, microalbumin; increase statin dose
3. Focus on his HIV: send genotype, consider change in ART, assess absorption of medications, adherence, safe sex behaviors
4. Focus on his fall: Ask about circumstances around falls, review medications, test balance, and referral to physical therapy
5. Refer to social work
6. All of the above

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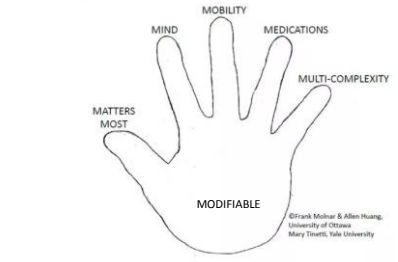
A Team Approach to Care: "The Geriatrics 5M's"



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Tinetti M et al. J Am Geriatr Soc 2017; healthinaging.org; Erlandson KM & Karris MY, under review

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MODIFIABLE

- Not in the original "5 M's" but particularly important in our "younger" older adults
- Prioritize *modifiable and preventable* risk factors to minimize development of comorbidities and maximize health span:
  - Immunizations
  - Smoking/substance abuse
  - Obesity & nutrition
  - Physical activity
  - Social support, meaningful engagement

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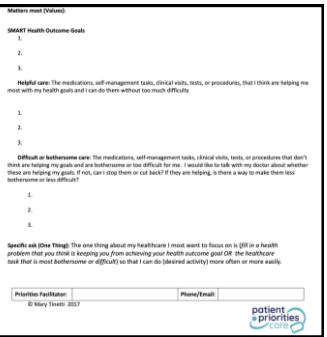
Erlandson KM & Karris MY, under review 2019; Lake et al CID 2018; Abrass CK et al. HIV-age.org; Montoya et al. AIDS 2019.

MATTERS MOST

- Work with patients to align treatment decisions based on what is most important
- Assess current treatment burden and acceptability
  - What is burdensome?
  - What is helpful?
- Case managers or other staff can review & complete with patient



Matters most (Values):

SMART Health Outcome Goals

1.
2.
3.

Helpful care: The medications, self-management tasks, clinical visits, tests, or procedures, that I think are helping me most with my health goals and I can do them without too much difficulty

1.
2.
3.

Difficult or bothersome care: The medications, self-management tasks, clinical visits, tests, or procedures that don't think are helping my goals and are bothersome or too difficult for me. I would like to talk with my doctor about whether these are helping my goals. If not, can I stop them or cut back? If they are helping, is there a way to make them less bothersome or less difficult?

1.
2.
3.

Specific ask (One Thing): The one thing about my healthcare I most want to focus on is *[fill in a health problem that you think is keeping you from achieving your health outcome goal OR the healthcare task that is most bothersome or difficult]* so that I can do (desired activity) more often or more easily.

Priorities Facilitator:		Phone/Email:	

© Mary Tinetti 2017

patient priorities care

Boyd CM, et al. J Am Geriatr Society 2019
Patientprioritiescare.org

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MIND: Cognition & Mood

1) *Assess Cognition*
   - Montreal Cognitive Assessment (MoCA)
   - Is there more impairment than expected?
2) *Assess Mood*
   - Depression may occur in up to 60% of PWH; may be greater risk in older adults and may contribute to cognitive impairments
   - PHQ-2 or 9; Geriatric Depression Scale (less somatic, more loneliness/isolation)
3) *Contributing factors*:
   - Medication side effects, hormone/vitamin deficiencies
   - Hearing & vision impairment
     - Greater high-frequency and low-frequency hearing loss in HIV

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Milanini B & Valcour V; Curr HIV/AIDS Rep 2017; Sangarlangkarn A and Applebaum JS. Sheikh JI, Yesavage JA, Clinical Gerontol 1986; Nasreddine et al. JAGS 2005. Sangarlangkarn A and Applebaum JS. HIV-Age.org, HIV-Associated Neurocognitive Disorders Case Study; Bhatia MS, Munjal S. J Clin Diagn Res 2014; Torre, et al. JAMA Otolaryngol Head Neck Surg 2015[+]; Luque, et al. Ear Hear 2014

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MIND: Management

- Encourage physical activity *throughout lifespan*
- Continue ART: no recommendations to switch to a regimen with greater CNS penetration (CPE score), though likely avoid efavirenz and consider whether worsened on dolutegravir
- Address loneliness: strengthen social supports, health buddy
- Assess impact on independent activities of daily living (meals, driving, finances, medication management)
  - Social work assistance in referrals to home health, PACE (Program of All-Inclusive Care for the Elderly), Adult Day Health programs; pharmacist assistance with medication management

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Sangarlangkarn A and Applebaum JS. HIV-Age.org, HIV-Associated Neurocognitive Disorders Case Study; Bhatia MS, Munjal S. J Clin Diagn Res 2014

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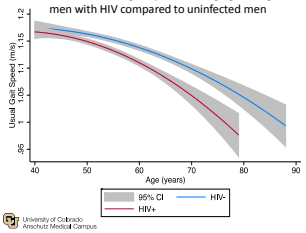
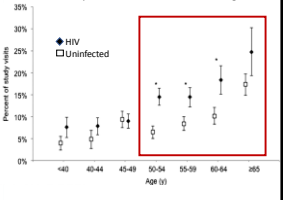
MOBILITY: Gait, Balance, Falls

Faster decline in gait speed with aging among men with HIV compared to uninfected men



Greater % of visits with frailty among men with HIV compared to uninfected men, at age 50+



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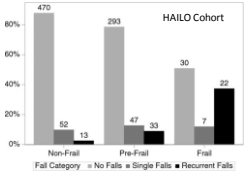
Schrack J, et al. JAIDS 2015; Althoff K J Gerontol A Biol Sci 2014

MOBILITY: Falls are Common & Associated with Frailty or other Functional Impairments



Cohort	Any Fall	Recurrent Falls
HAILO	18%	7%
Colorado	30%	18%
MACS/WIHS	24%	13%
MACS-BOSS	41%	20%
WIHS	41%	25%
San Francisco	26%	--
ARCH 4F	34%	12% with 5+

- Slower time to rise from chair
- Impaired balance

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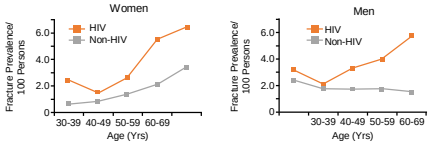
Tassiopoulos K, et al. AIDS 2017; Erlandson, et al. HIV Med 2016; Erlandson, et al. JAIDS 2012; Sharma A, et al. Antivir Ther 2019; Sharma A, et al. Antivir Ther 2018; Kim S, et al. abstract accepted for HIV/Aging CFAR Conference 2019; Greene, M. JAIDS 2015.

MOBILITY: Falls Lead to Fractures

- People living with HIV have a nearly 4-fold increased risk of osteoporosis
- 5% of falls in MACS and 13% of falls in ARCH 4F were associated with fracture



- 8525 PWH vs 2,208,792 uninfected pts in Partners HealthCare System, 1996-2008

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Brown TT, et al. J Infect Dis. 2015;212:1241-1249. Erlandson KM et al, under review; Triant V, et al. J Clin Endocrinol Metab. 2008;93:3499-3504; Kim S, et al. accepted as oral abstract at HIV/Aging CFAR 2019

Slide credit: clinicaloptions.com

MOBILITY: Gait, Balance, Falls

- Early identification & intervention
- Evaluate mobility/balance through tests as simple as a "6th vital sign" at check-in
  - Ask about falls or fear of falling
  - Observe the patient walk to the room
  - Assess time to rise from a chair; balance (heel-to-toe or one leg), gait speed (4-m)
- Interventions:
  - Evaluate & consider treatment for low bone density
  - STEADI (www.cdc.gov/steadi/index.html)
  - Physical therapy for balance training
  - Physical activity
  - Refer to pharmacy

www.cdc.gov/diabetes/prevention/index.html
www.arthritis.org/living-with-arthritis/tools-resources/walk-with-ease/
www.silversneakers.com
http://go4life.nia.nih.gov
www.va.gov/geriatrics/gerofit/gerofit_home.asp

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MEDICATIONS

- Polypharmacy = 5 or more medications
  - Many of our patients are considered high-risk for drug-drug interactions or adverse effects due to polypharmacy
- This is a major problem in HIV!
  - 248 adults with HIV (aged ≥50) underwent a medication review with a pharmacist
  - Average # of medications = 14 (11.6 non-HIV medications)
  - 35% taking ≥ **16 medications;** 63% had at least one inappropriate prescription
- Are additional medications really adding benefit?
  - Decreased adherence, increased risk of side effects or drug-drug interactions
  - More medications were associated with greater mortality in Veterans with HIV

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McNicholl IR, et al. Pharmacotherapy 2017; Hiv-age.org; Edelman Drugs Aging 2013; Dumond JB, et al. HIV Med 2013; Dumond JB, et al. CPT Pharmacometrics Syst Pharmacol 2017;

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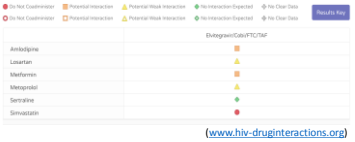
Management of Polypharmacy: Engage your Pharmacist!

- Evaluate for
  - Drug-drug interactions
  - Complexities of dosing
  - Effectiveness
  - Duplication



(www.hiv-druginteractions.org)

- Avoid boosting agents (beware when stopping OR adding)
- Empower your patients to be their own advocate (beware of the consultant!)
- Consider the time-to-benefit of various treatments
  - Explain shifts in prevention with aging (i.e., is aspirin still beneficial?)

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Management of Polypharmacy

- Canadian Deprescribing Network
- Deprescribing.org
  - Patient pamphlets on harms of some medications
  - Help patients identify harm & lack of efficacy
  - Algorithms for providers
  - Tips for tapering

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MULTICOMPLEXITY/MULTIMORBIDITY

- Guidelines focus on disease-specific recommendations
  - Interventions to improve one condition may worsen another
- Consider treatment complexity and feasibility
  - Treatment may fall below "guidelines" but patient may adhere
- Prioritize the *beneficial and essential* interventions to minimize treatment burden
  - Supportive resources, physical rehabilitation, HIV treatment

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Barnett, et al. Lancet 2012; US DHHS Multiple Chronic Conditions 2010; Salisbury Lancet 2012; Boyd CM, et al J Am Geriatr Soc 2012; Boyd CM, et al. J Am Geriatr Society 2019; Smith, et al Cochrane Rev 2016

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ARS Question #2: At what age should you *stop* colon cancer screening in this 61 year old patient?

1. Age 65
2. Age 75
3. Age 85
4. Depends on family history and other risk factors
5. Consider no further screening now

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When should you stop screening for colon cancer?

- US Preventive Services Task Force:
  - Colon cancer screening until age 75
  - No screening in adults 76-85 years

www.uspreventiveservicestaskforce.org; Eprognosis.ucsf.org

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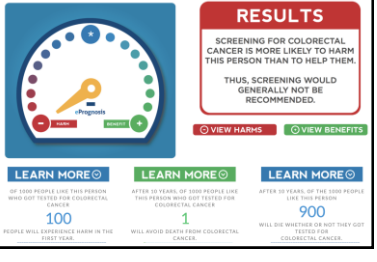
When considering his comorbidity burden, functional capacity, impairments in daily activities…



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Cancer Screening & Comorbidity Management

- Increased rates of cancers reflect longer life expectancy with HIV
  - Some cancers may occur at a greater frequency, but not *earlier*: Hodgkin's, skin, HPV-associated (anal, cervical, head/neck), multiple myeloma, lung
  - Some cancers are associated with higher morbidity/mortality in HIV (e.g., breast), perhaps less likely to be screened or treated?
  - First, do no harm! Consider life expectancy & functional status (rather than age) and when to *stop*
- Management of many comorbidities in older adults should be individualized based on life expectancy
  - Diabetes management in older adults with multi-morbidity and 2+ IADL impairments: A1c goal <8% and SBP 140-150

Older adults: standards of medical care in diabetes. Diabetes Care 2018; Silverberg, et al AIDS 2009; Engels, et al. AIDS 2006; Shiels MS, et al. JAIDS 2009; Althoff KN, et al. CID 2015

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Back to the Case:

- Medication review with ID pharmacist
  - Etravirine & glipizide too big; not able to draw out enough ritonavir with syringe
  - Interventions: Order larger syringes & mark so clear on dosing, change to smaller glipizide dose and take 2, consider a change of etravirine to doravirine, stop omega fatty acids and vitamins; provide pill box
  - No change in other meds pending better adherence
- Refer to community program for balance training
- Bring hearing aids to all appointments
- Consult to home health for med assistance and help with shower curtain and obtaining mattress
- Meet with social worker between physician visits to address health priorities & advanced care planning

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Summary

- The majority of people with HIV are now or soon will be age 50 and older, and are facing an increasing burden of comorbidities and medications.
- Some health issues with aging occur at an accentuated rate, and others may occur at an accelerated rate (earlier than expected).
- Adhering to current recommendations for screening/treatment may be beneficial in well-functioning patients aging with HIV, while others may need a unique approach.
- Using the 5 (or 6) M's approach can prioritize the issues of greatest relevance to a complex, aging population.
- Engage the entire team of resources! Social work, pharmacy, PT, nursing, medical assistants, community resources for HIV and aging

Resources & Acknowledgements

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Question-and-Answer