AETC AIDS Education & Training Center Program Mountain West

September 2025
AIDS Clinical Conference
Building Blocks for Healthy Aging:
Key Components of Care Models for Older People with HIV

Tuesday, September 16, 2025

Presented by:

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Building Blocks for Healthy Aging: Key Components of Care Models for Older People with HIV

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EMORY UNIVERSITY SCHOOL OF MEDICINE

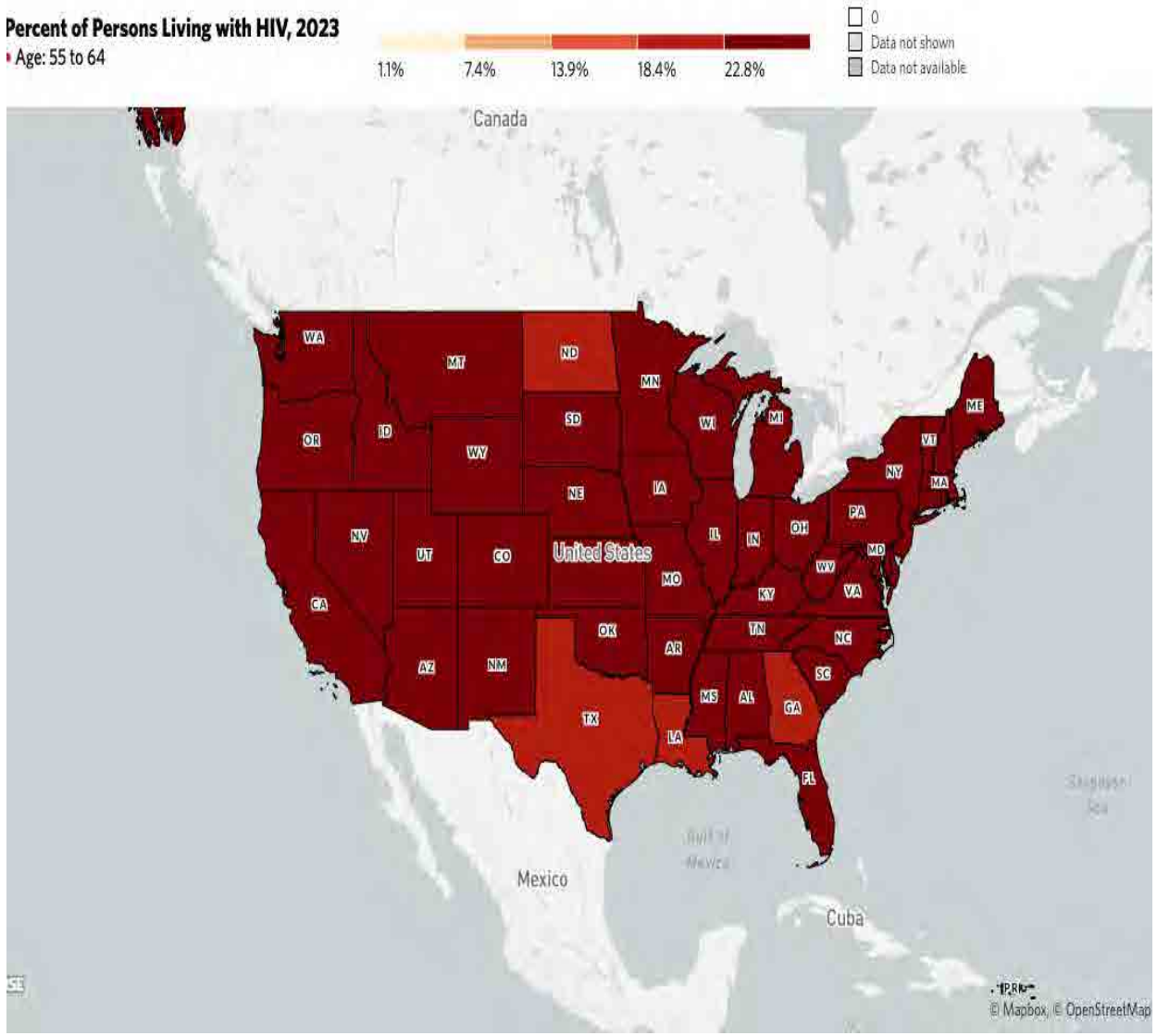
Financial Disclosures

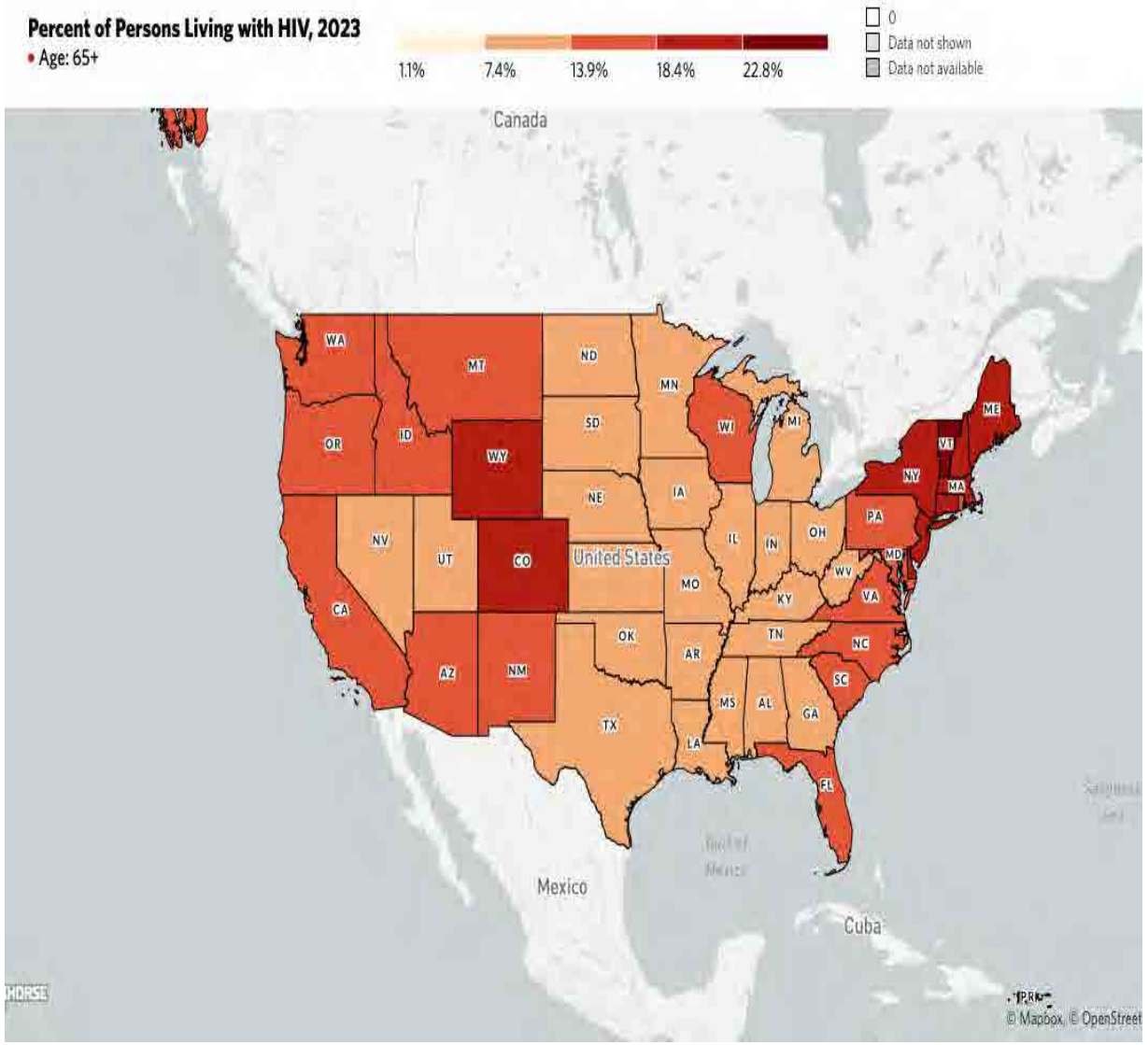
- None

Learning Objectives

- Describe the epidemiology and demographic trends of HIV among older adults
- Identify 7 key components of care for older adults living with HIV
- Recognize limitations, challenges, and controversies in the available evidence for the care of older adults living with HIV
- Examine case examples of innovative models of care for older adults with HIV

PWH are living longer *and* aging





Source: https://aidsvu.org/

Is there a framework for HIV and aging care?

HIV & Aging: Key Needs for Health & Quality of Life

BIOMEDICAL

HIV

Co/multi-morbidity

Polypharmacy

SOCIAL

Stigma

Isolation

Loneliness

SYSTEMIC

Poverty

Food

Housing

Insurance

Transportation

PSYCHOLOGICAL

Depression

Anxiety

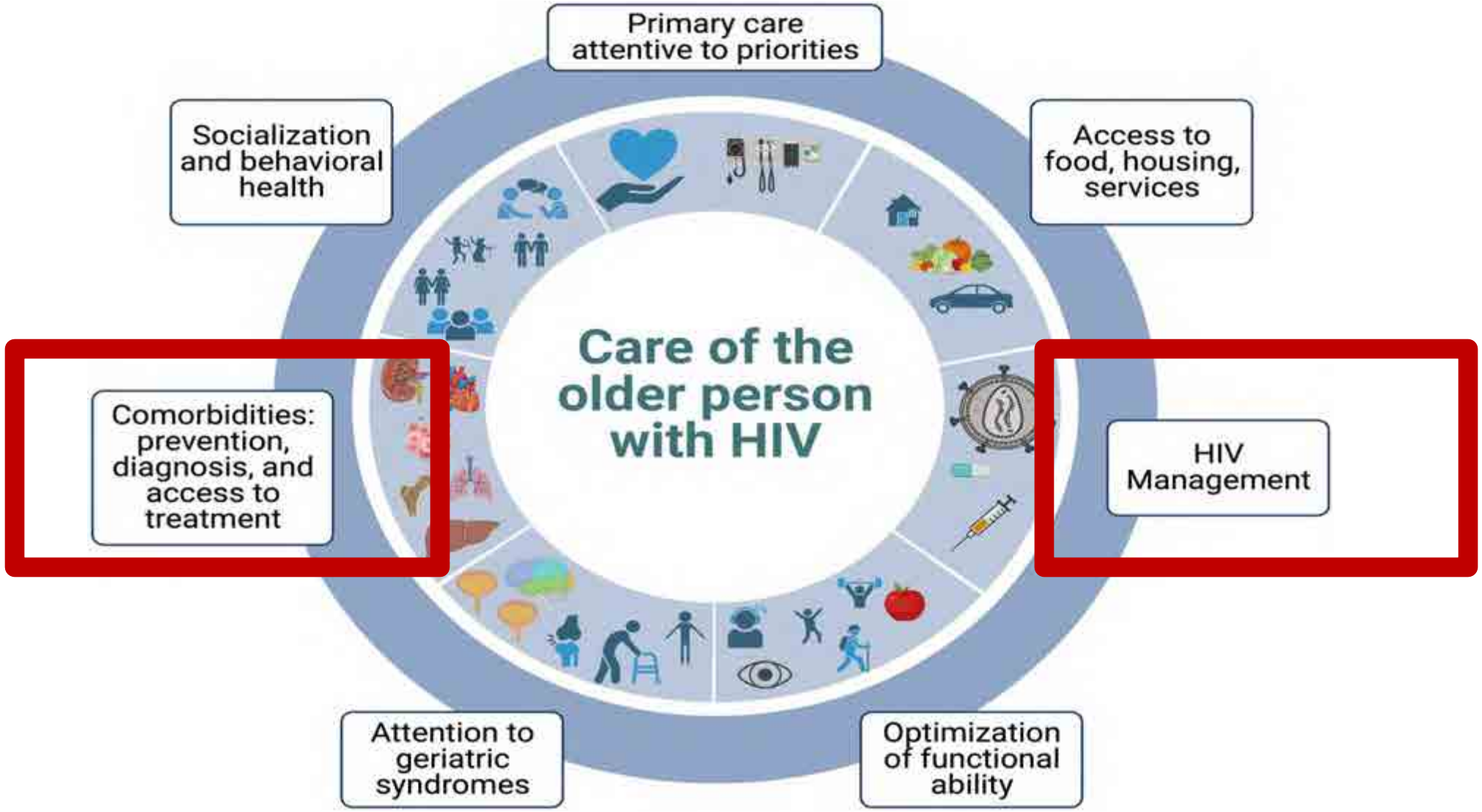
PTSD

Cognitive Decline

Substance use disorder

Adapted from: Ruiz et al, Curr Opin HIV AIDS; 2022 Mar 1;17(2):55-64.

Essential Domains of Care for Older PWH: Building an Effective Delivery Model



Source: Frey et al, HIV/AIDS - Research and Palliative Care 2023:15 191–208

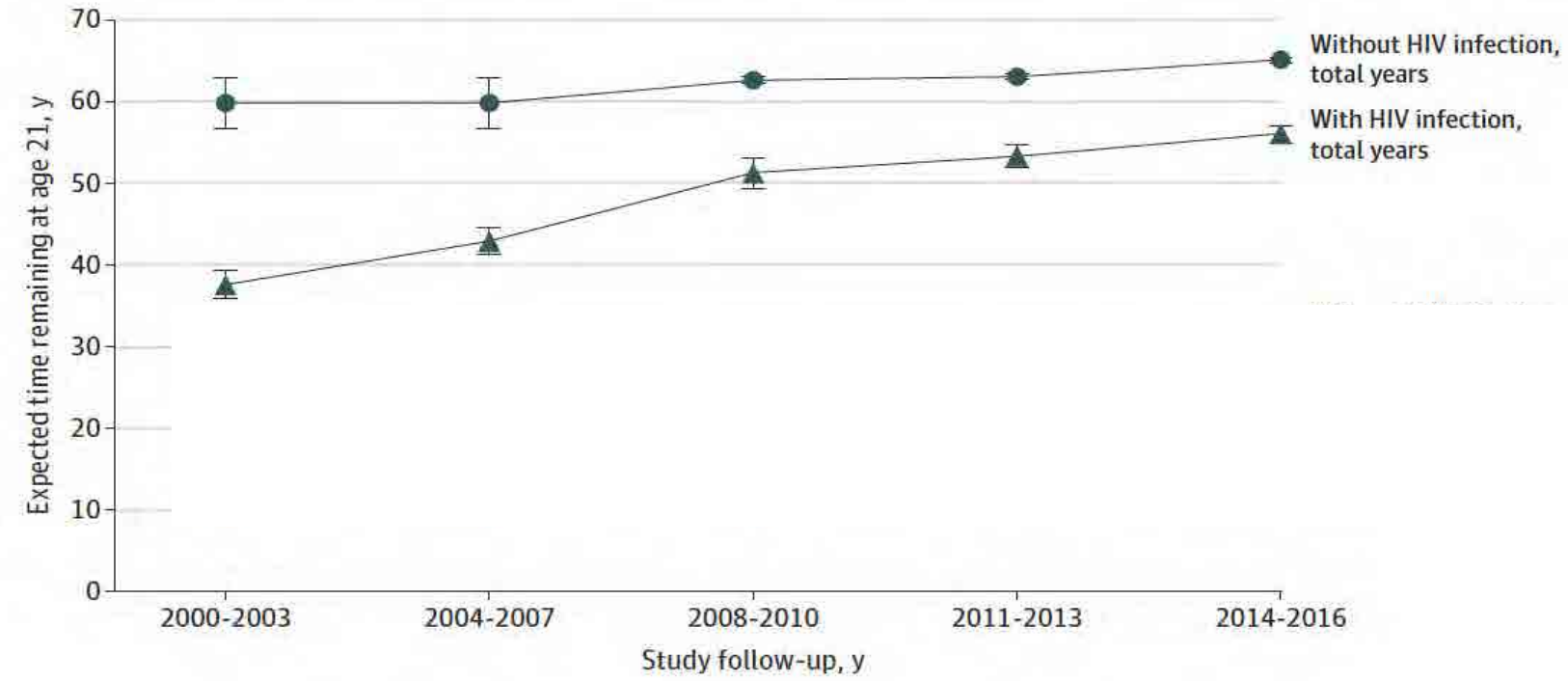
HIV Management: Considerations & Challenges

- ART recommended for all
- Older PWH on ART = ↑ survival benefit + ↓ all-cause and non AIDS mortality
- Many, well tolerated oral & injectable ART options

- Not one size fits all
- Older PWH are under-represented in clinical trials
- Injectables pose new challenges for older PWH (egs: limited PK data, sarcopenia, etc)

Yet despite effective ART and increasing life expectancy, years gained are *not* comorbidity-free

Figure 1. Overall and Comorbidity-Free Life Expectancy at Age 21 Years for Individuals With and Without HIV Infection, Kaiser Permanente, 2000-2016



PWH live ~16 fewer healthy years than persons without HIV

Marcus JL et al. JAMA Network Open. 2020;3(6):e207954

MWCCS

MACS/WIHS COMBINED COHORT STUDY

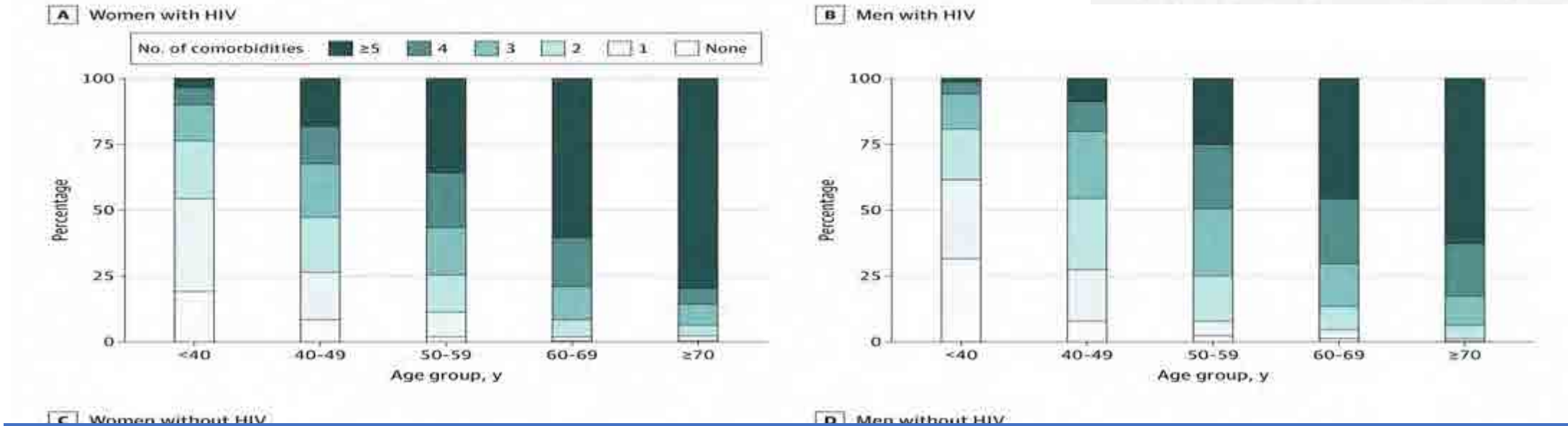
Lauren Collins, MD

Igho Ofotokun MD / Anandi Sheth MD /
MPIs of Atlanta MWCCS

JAMA Network Open.

Original Investigation | Infectious Diseases

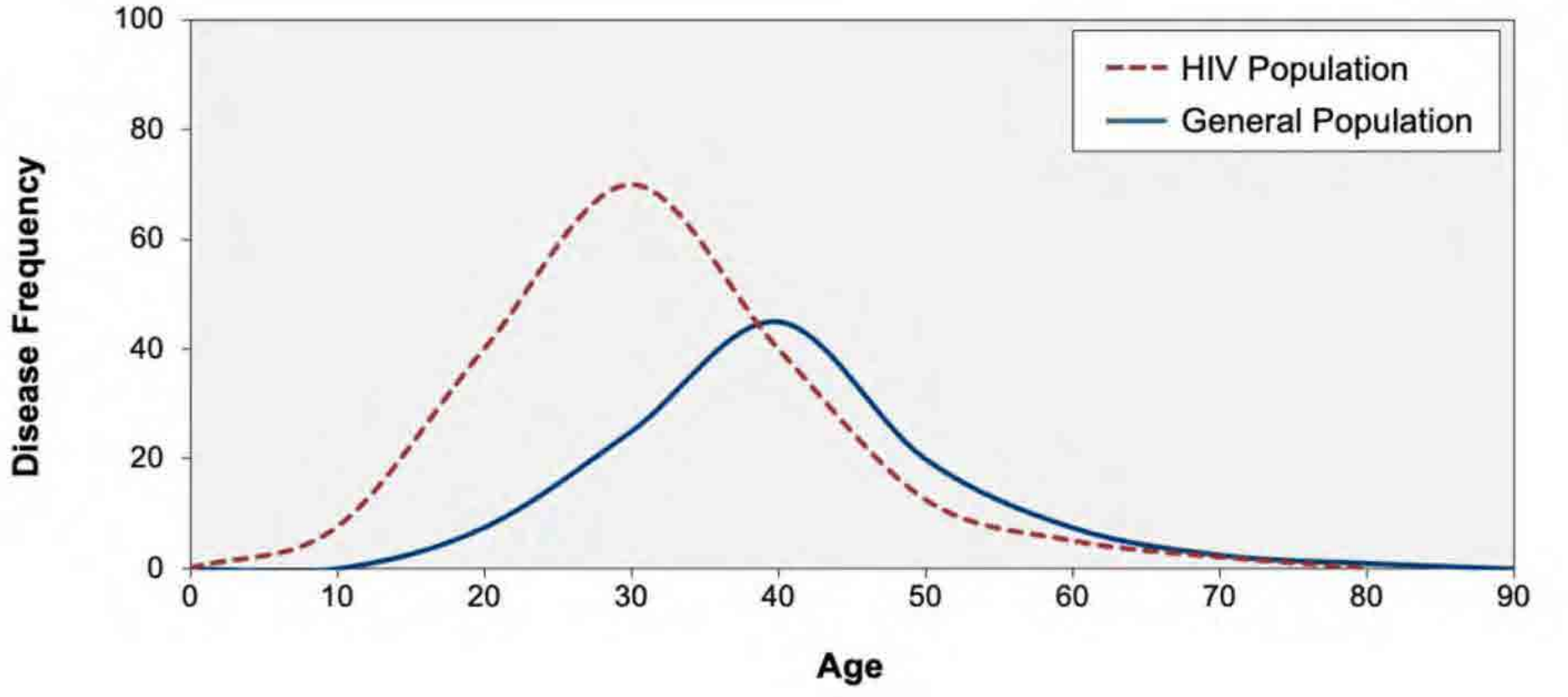
Aging-Related Comorbidity Burden Among Women and Men With or At-Risk for HIV in the US, 2008-2019



- Non-AIDS co-morbidity (NACM) burden was higher for PWH
- Distribution of prevalent NACM differed by sex/gender
- Among women with versus without HIV, NACM burden, and the prevalence of most NACM, was higher;

Source: Collins et al, JAMA Network Open. 2023 Aug 7;6(8):e2327584

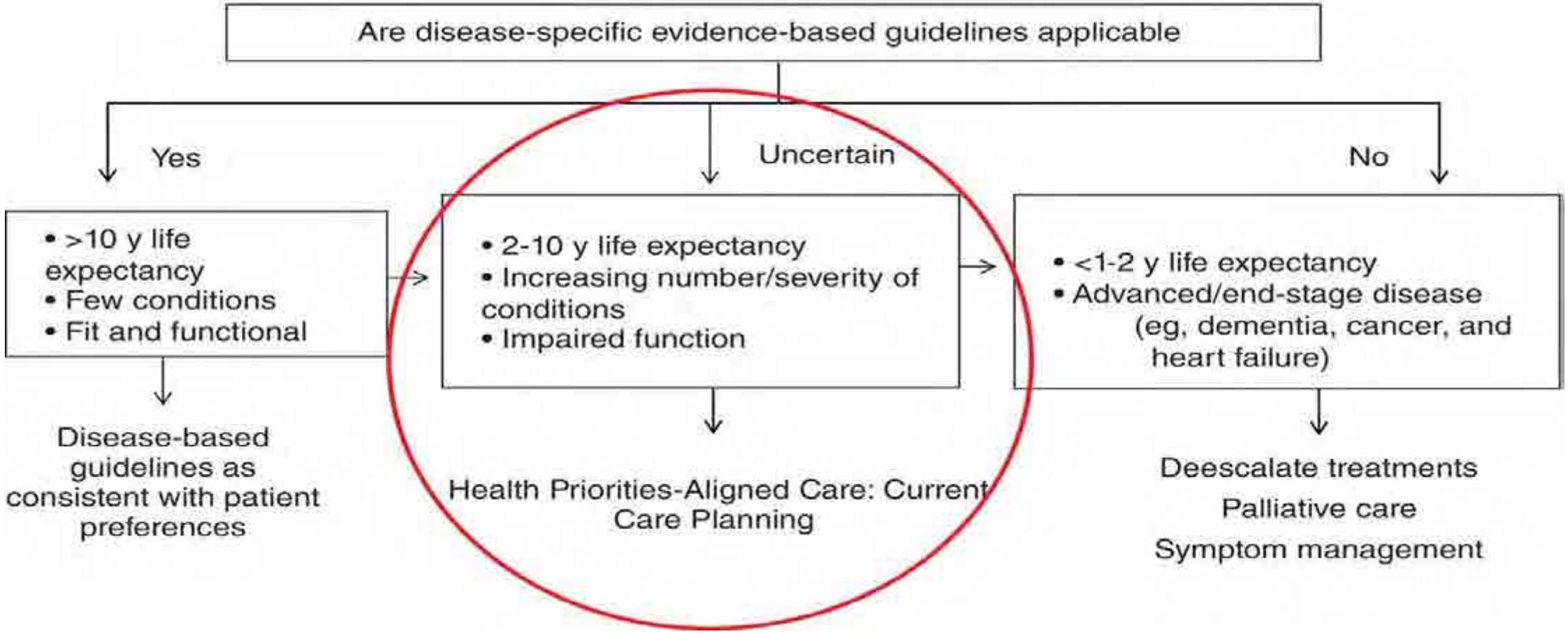
HIV is associated with accelerated AND accentuated aging



Source: Image from: https://www.hiv.uw.edu/go/key-populations/hiv-older-patients/core-concept/all
Based on model from: Pathai *et al*. J Gerontol A Biol Sci Med Sci. 2014;69:833-42.

The limits of single disease guidelines in multi-morbidity

Decision Making for Older Adults With Multiple Chronic Conditions: Executive Summary for the American Geriatrics Society Guiding Principles on the Care of Older Adults With Multimorbidity



J American Geriatrics Society, Volume: 67, Issue: 4, Pages: 665-673, First published: 21 January 2019, DOI: (10.1111/jgs.15809)

Co/Multi-morbidity management: Challenges

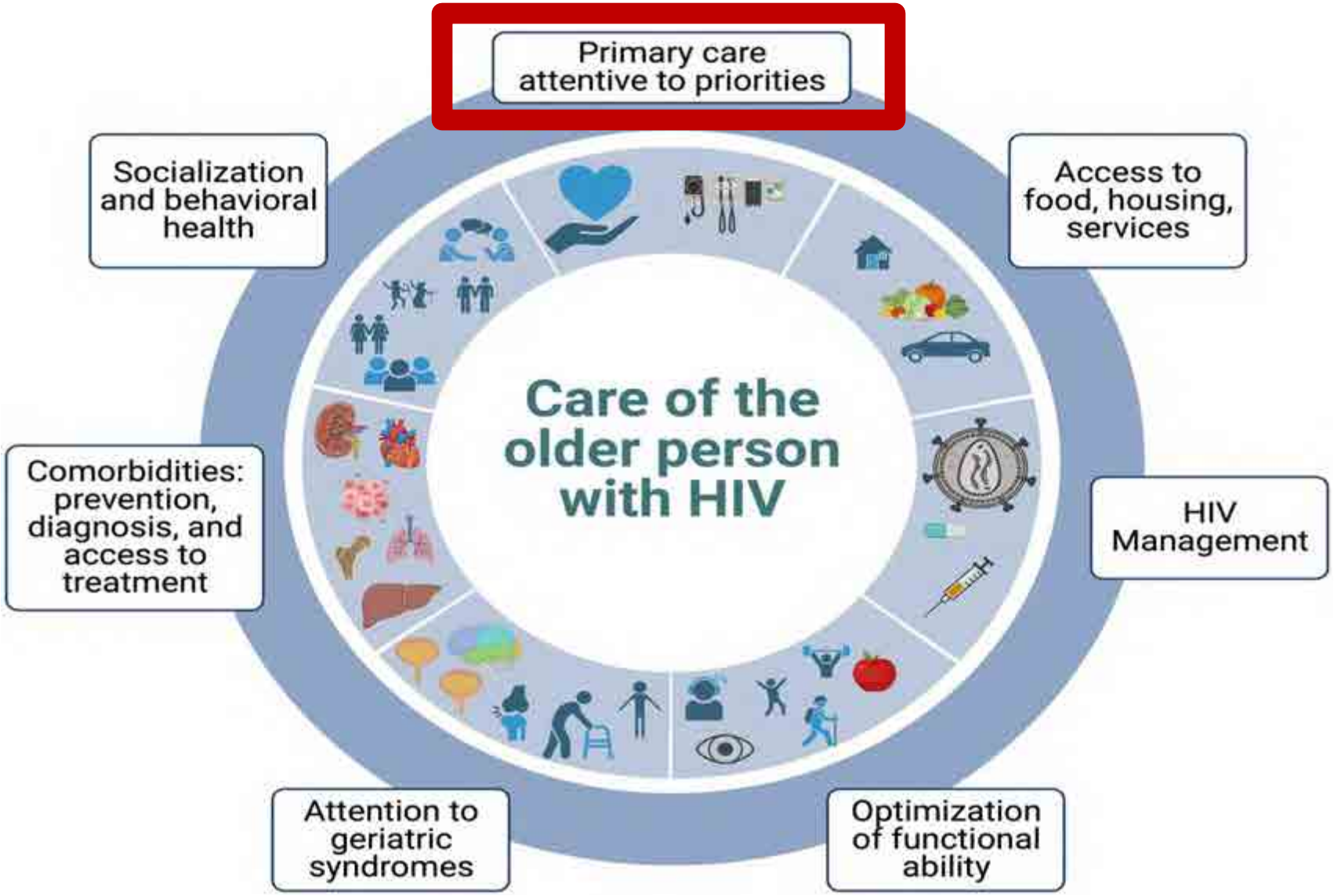
Complex care coordination across providers and conditions

Polypharmacy is common and complicates management

Many screening guidelines for NACM may underestimate disease risk in PWH

Evidence-based clinical practice guidelines are often single disease focused

HIV & Aging: Care Domains



Source: Frey et al, HIV/AIDS - Research and Palliative Care 2023:15 191–208

Primary care: Considerations & Challenges

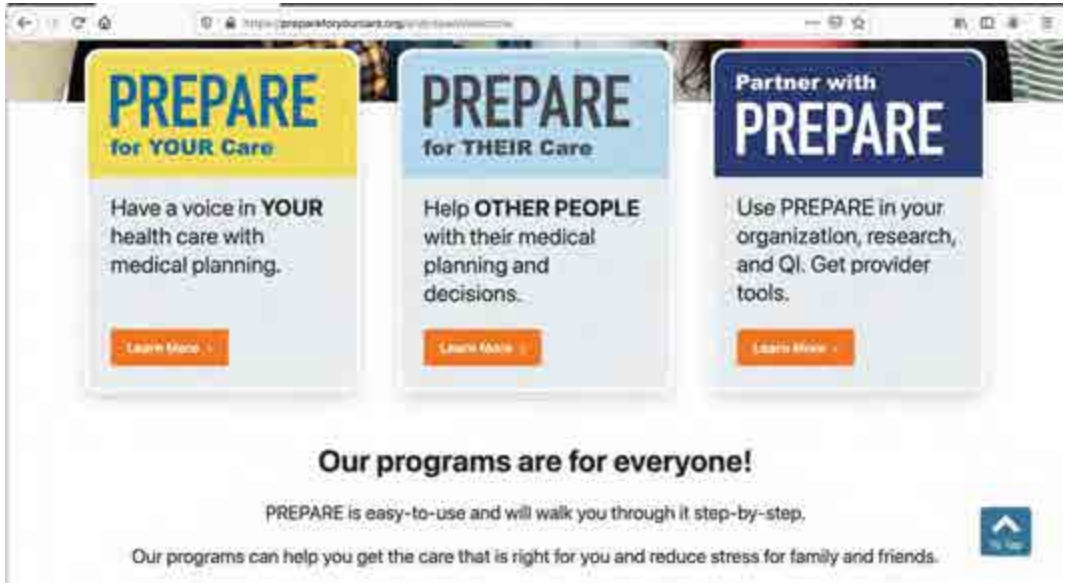
- **HIV Provider = Primary Care provider** (usually)
- **Managing aging is challenging** :
  - Complex HIV
  - Complex and multiple comorbidities
  - Complications due to aging-related syndromes,
  - Complex social and behavioral needs.
- **Advance Care Planning is an integral part of primary care for older PWH, BUT:**
  - Often underutilized (only 10–50% documented).
  - Barriers include self image as ‘survivors’, stigma, low income, education, substance use

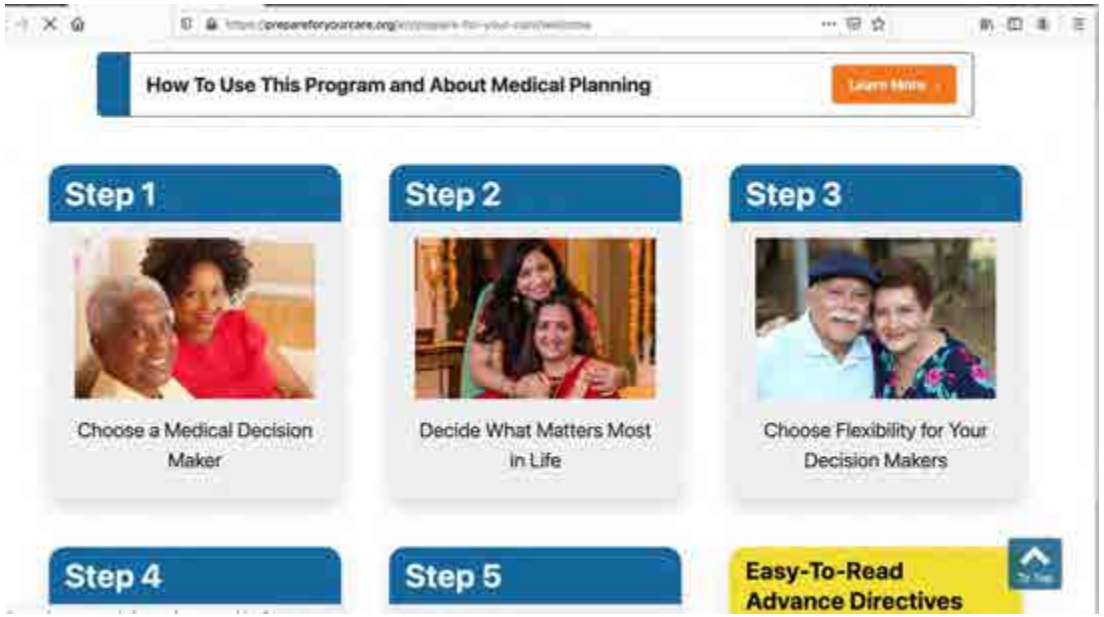
Original Article

A Novel Website to Prepare Diverse Older Adults for Decision Making and Advance Care Planning: A Pilot Study

Rebecca L. Sudore, MD, Sara J. Knight, PhD, Ryan D. McMahan, BS, BA, Mariko Feuz, BS, David Farrell, MPH, Yinghui Miao, MPH, and Deborah E. Barnes, PhD, MPH

San Francisco Veterans Affairs Medical Center (R.L.S., R.D.M., M.F., Y.M., D.E.B.), San Francisco, California; Division of Geriatrics (R.L.S., R.D.M., M.F., Y.M.), Department of Psychiatry (S.J.K., D.E.B.), and Department of Epidemiology & Biostatistics (D.E.B.), University of California, San Francisco, California; Health Services Research & Development Service (S.J.K.), Veterans Administration, Washington, D.C.; and People Designs, Inc. (D.F.), Durham, North Carolina, USA





From: **Engaging Diverse English- and Spanish-Speaking Older Adults in Advance Care Planning: The PREPARE Randomized Clinical Trial**

JAMA Intern Med. 2018;178(12):1616-1625. doi:10.1001/jamainternmed.2018.4657

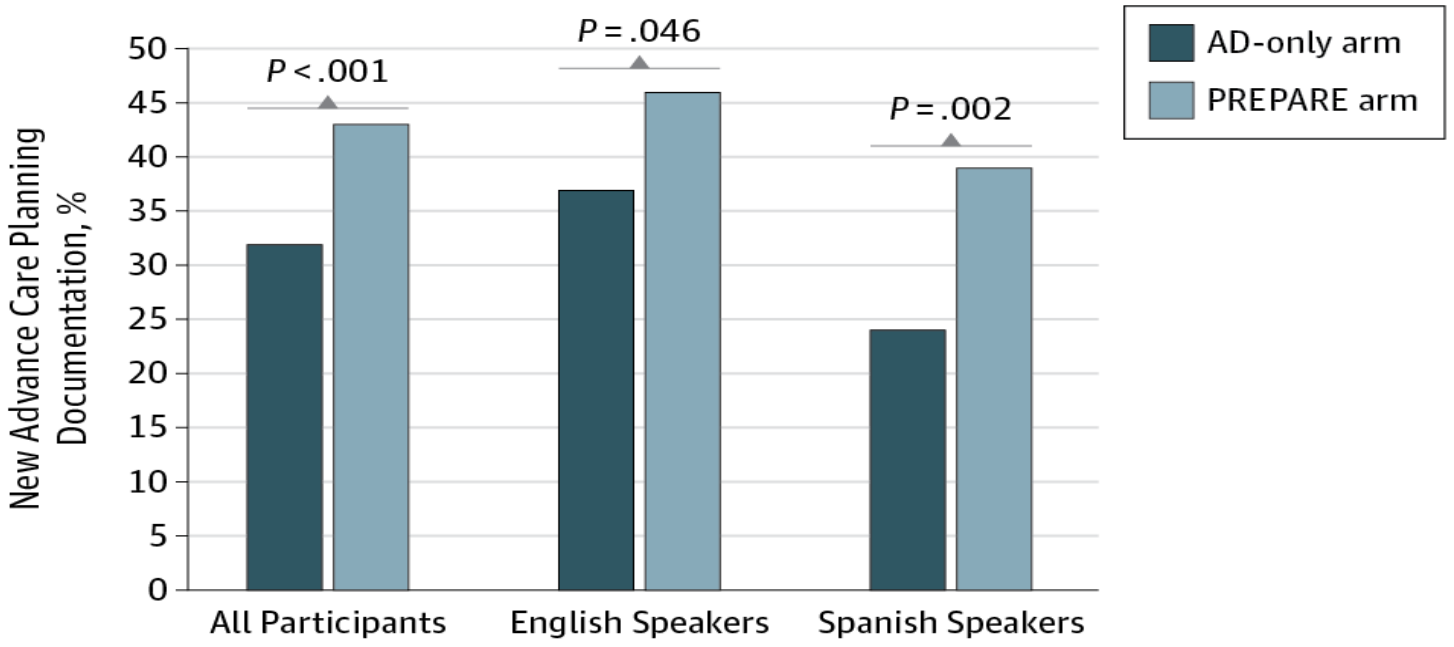
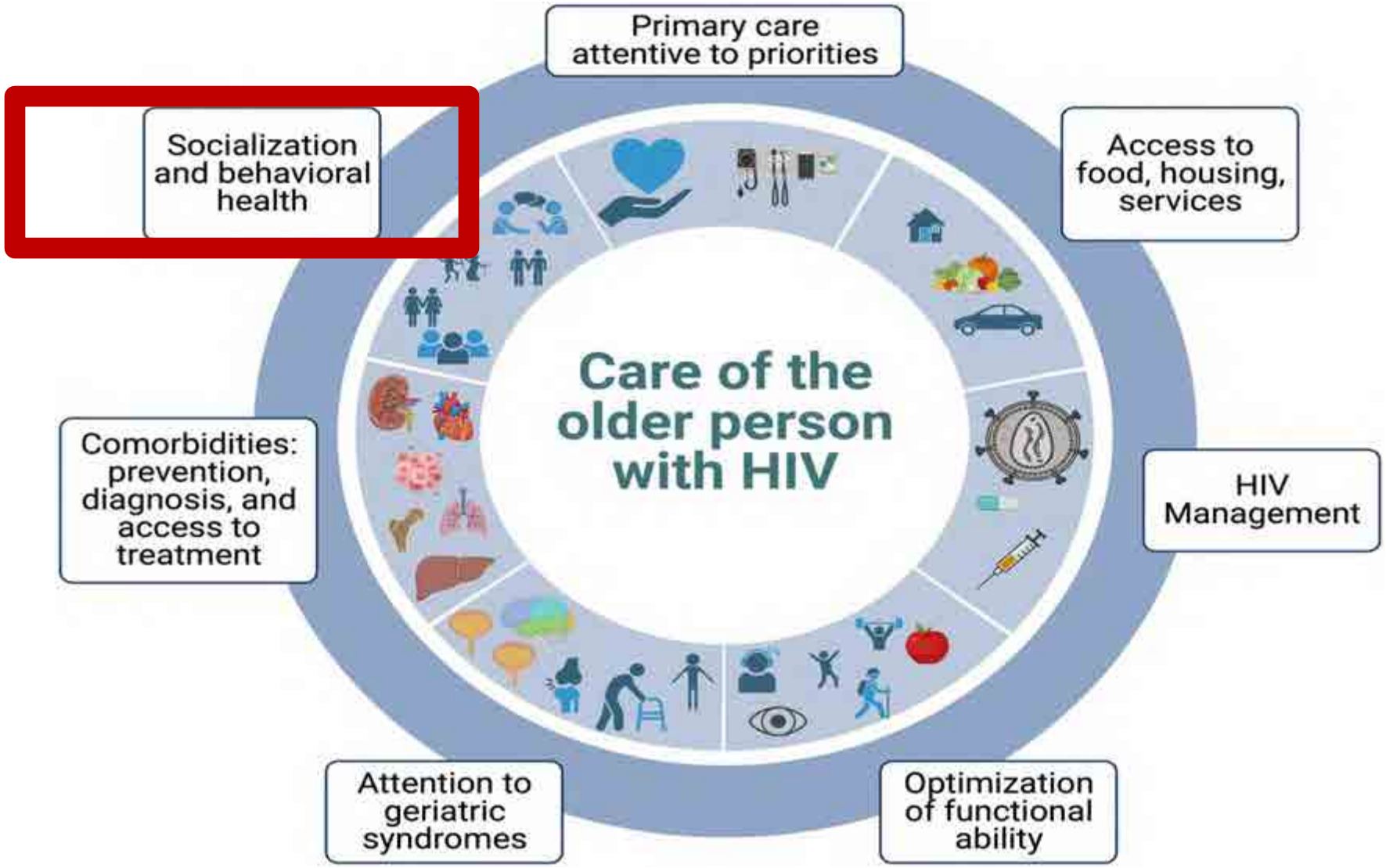


Figure Legend:

New Advance Care Planning Documentation in the Medical RecordThe PREPARE For Your Care (PREPARE) arm included the website (http://www.prepareforyourcare.org) plus an easy-to-read advance directive (AD). The AD-only arm included only the easy-to-read AD.

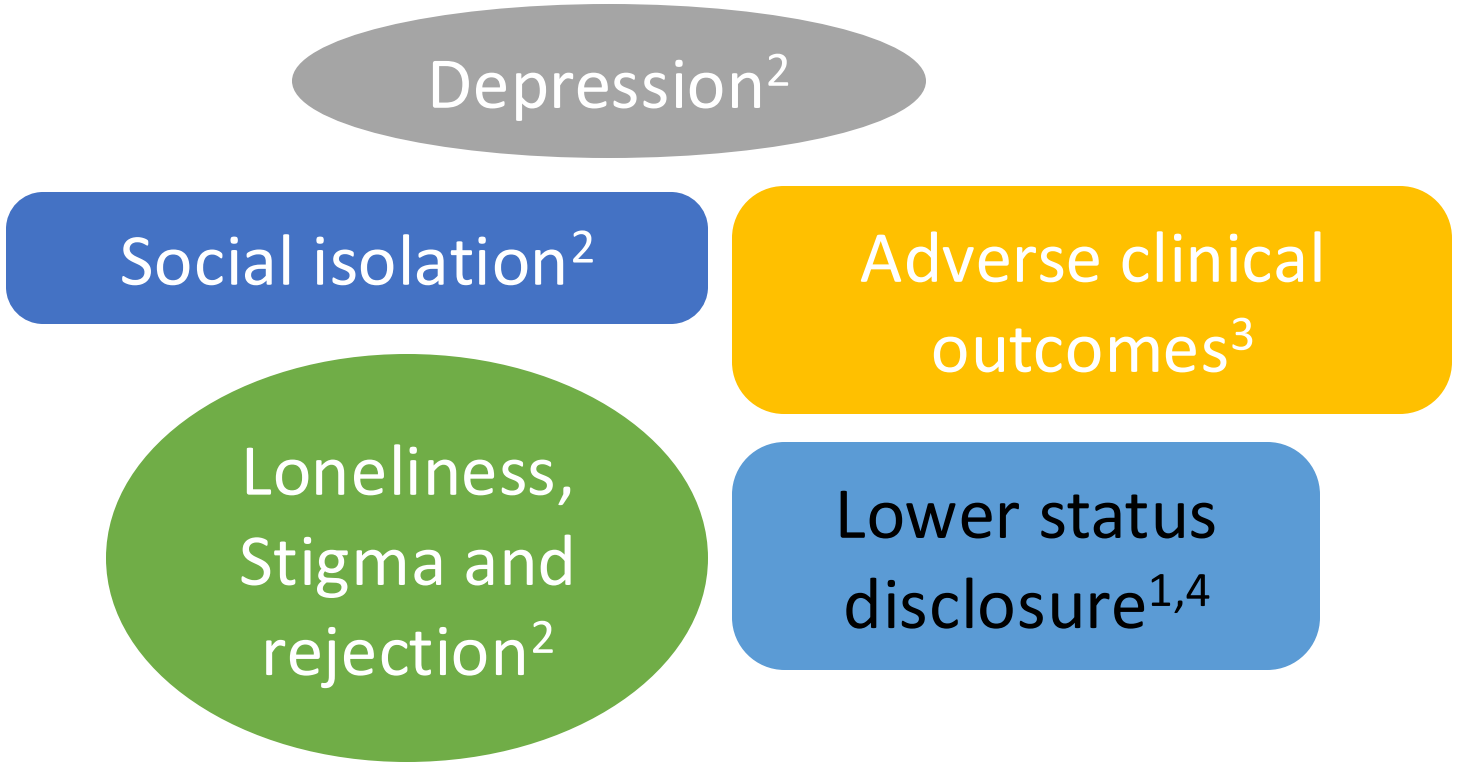
HIV & Aging: Care Domains



Source: Frey et al, HIV/AIDS - Research and Palliative Care 2023:15 191–208

Socialization and Behavioral health in Older PWH: Considerations & Challenges

Aging PWH are more likely than younger PWH to experience:



Challenges include:

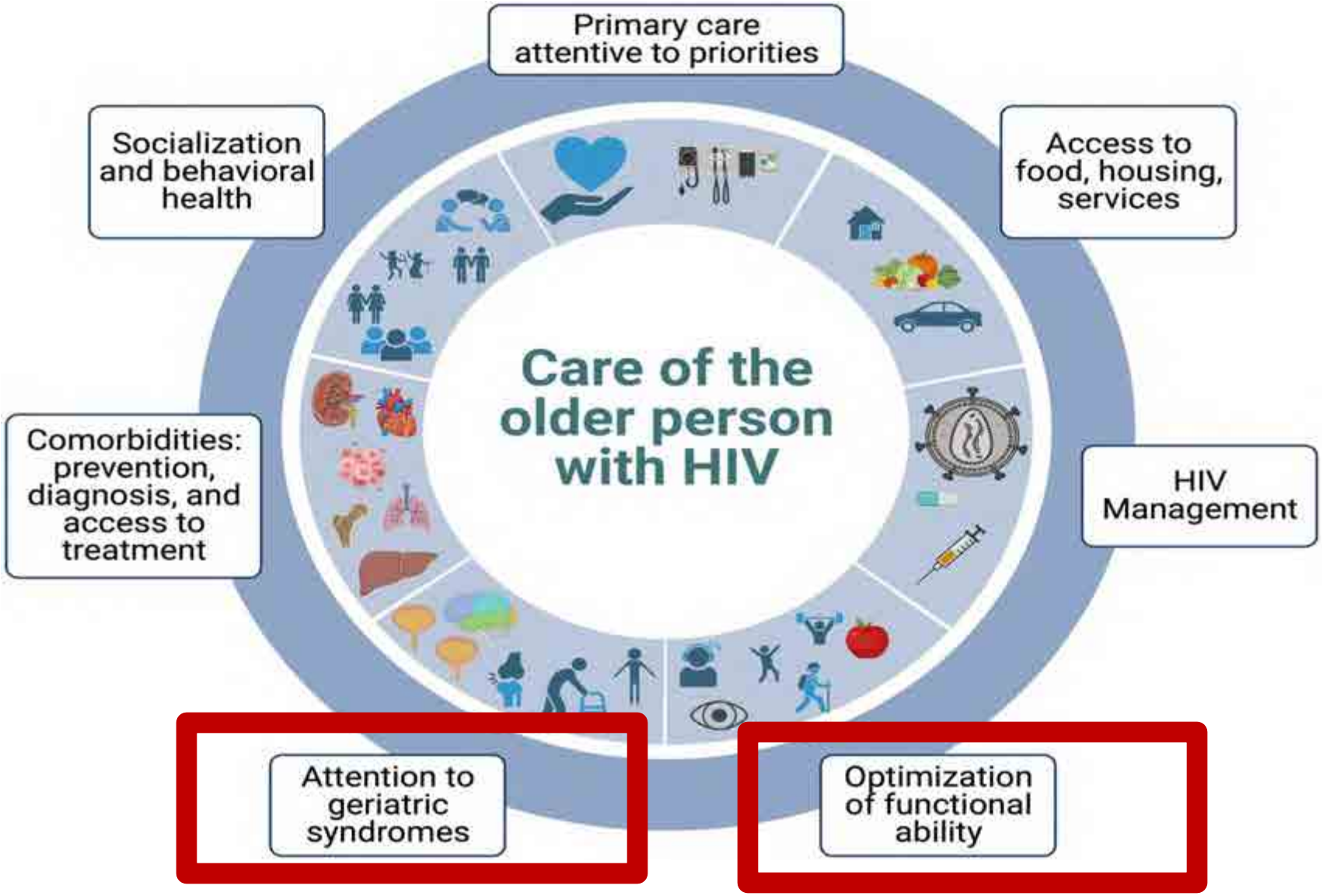
- Inadequate resources
- Stigma of mental health itself
- Few programs geared toward older PWH
- Systemic limitations: Lack of funding for non-medical interventions (e.g. social activities)

1. Emlet. Gerontologist. 2013;53:963. 2. Bogart. AIDS Behav. 2008;12:244. 3. Logie. AIDS Care. 2009;21:742. 4. Emlet. AIDS Patient Care and STDs. 2006;20:350.

Socialization and Behavioral health: Screening Tools

MENTAL HEALTH	SCREENING TOOLS
Cognition	MoCA Test (Registration and training are required) Alzheimer's Association Alzheimer's Disease Pocketcard app (available for download through the Apple App Store or Google Play) Mini-Cog© Quick Screening for Early Dementia Detection International HIV Dementia Scale
Social Isolation & loneliness	Multiple screening tools and interventions are available through: Campaign to End Loneliness UCSF Stress Measurement Network
Misc (Depression, anxiety, stigma etc)	Patient Health Questionnaire-4 (PHQ-4): Ultra-Brief Screening for Anxiety and Depression SAMHSA Growing Older: Providing Integrated Care for an Aging Population Berger HIV Stigma Scale HIV and intersectional stigma toolkit

HIV & Aging: Care Domains



Source: Frey et al, HIV/AIDS - Research and Palliative Care 2023:15 191–208

The Aging Phenotype and the Genesis of Geriatric Syndromes

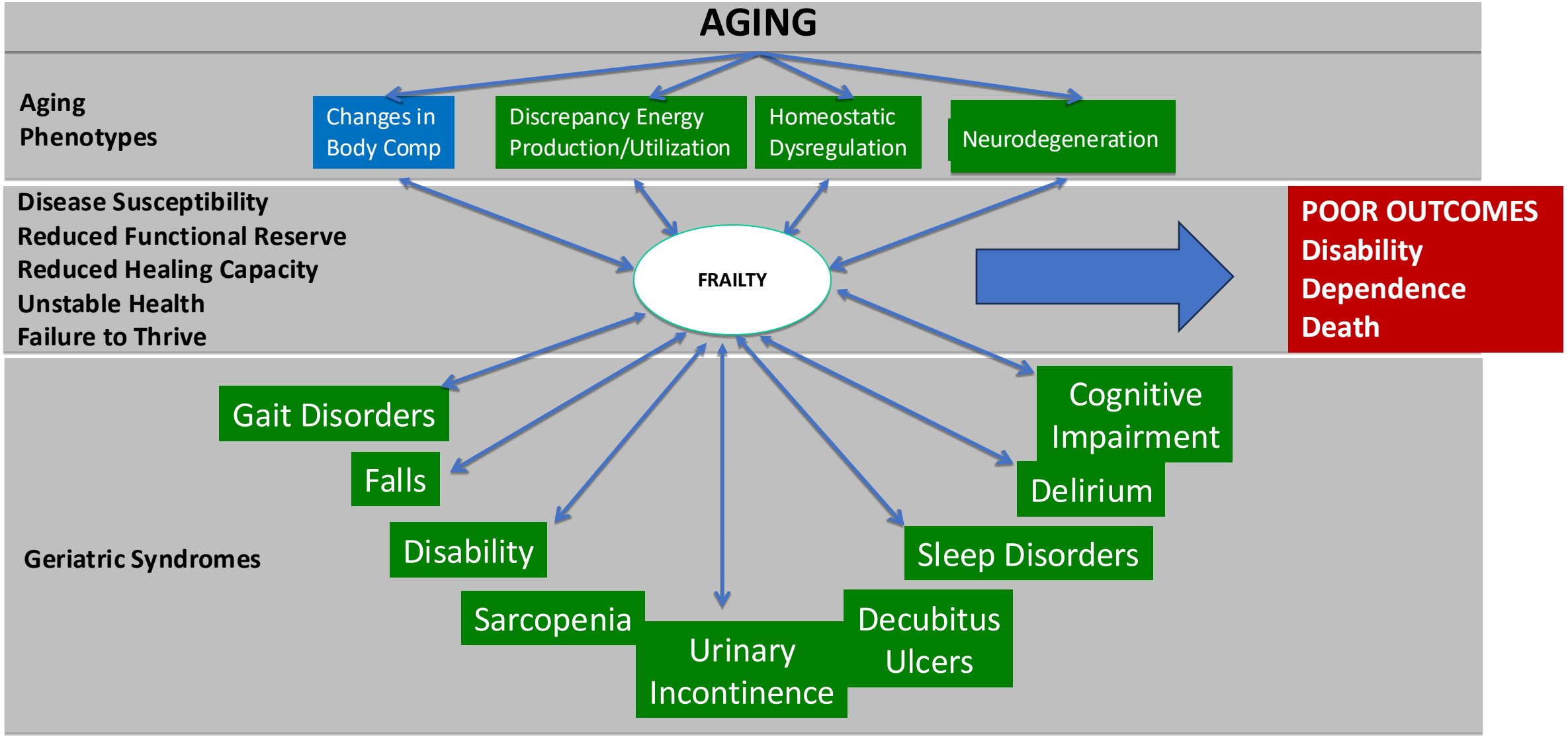


Figure adapted from: Inouye et a; J Am Geriatr Soc. 2007 May ; 55(5): 780–791.

Frailty / Functional Limitations / Geriatric Syndromes: Considerations

Higher Risk in PWH: Older PWH are more prone to frailty, functional limitations, geriatric syndromes and related adverse outcomes (falls, hospitalization, mortality).

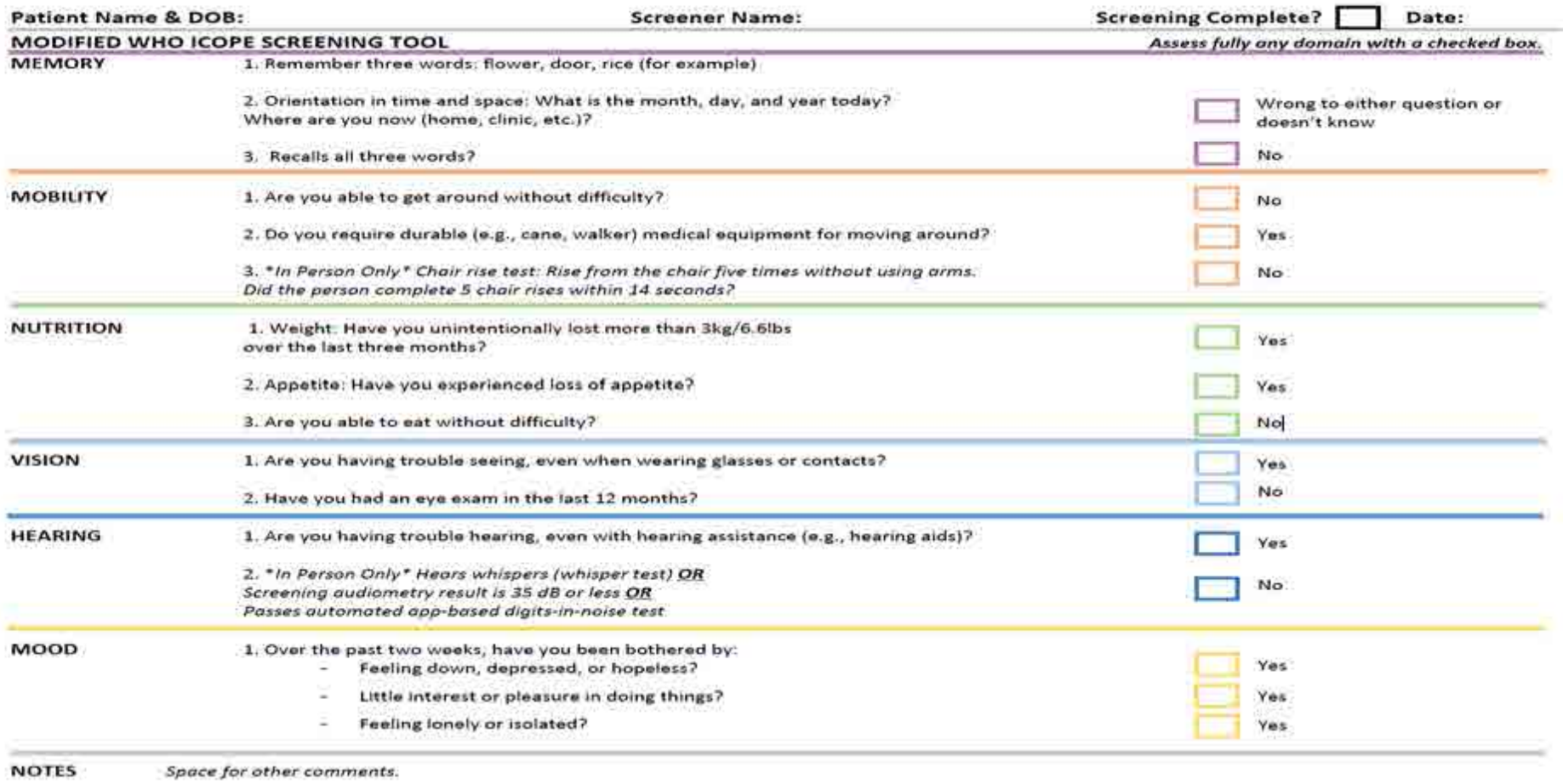
Modifiable & Reversible: Some risk factors can be addressed; early screening and intervention are key.

Screening Guidelines: HIVMA (primary care guidance) and EACS recommends annual frailty screening from age 50 in PWH

Screening tools for Functional Capacity: WHO ICOPE

Source: WHO ICOPE

Start with general screening tool: Modified WHO ICOPE



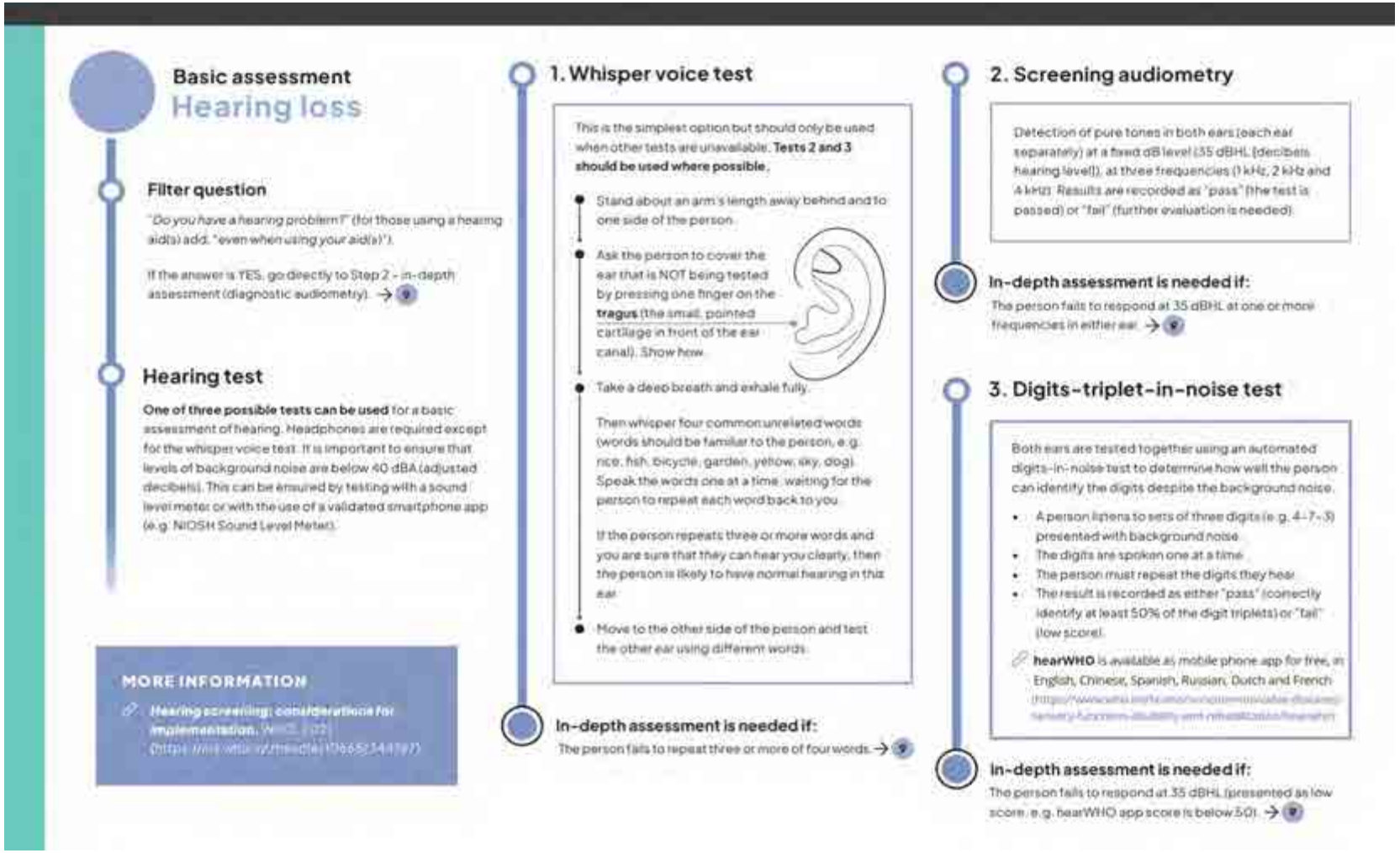
Patient Name & DOB: **Screener Name:** **Screening Complete?** ☐ **Date:**

MODIFIED WHO ICOPE SCREENING TOOL *Assess fully any domain with a checked box.*

MEMORY	1. Remember three words: flower, door, rice (for example)	
	2. Orientation in time and space: What is the month, day, and year today? Where are you now (home, clinic, etc.)?	☐ Wrong to either question or doesn't know
	3. Recalls all three words?	☐ No
MOBILITY	1. Are you able to get around without difficulty?	☐ No
	2. Do you require durable (e.g., cane, walker) medical equipment for moving around?	☐ Yes
	3. **In Person Only* Chair rise test: Rise from the chair five times without using arms. Did the person complete 5 chair rises within 14 seconds?*	☐ No
NUTRITION	1. Weight: Have you unintentionally lost more than 3kg/6.6lbs over the last three months?	☐ Yes
	2. Appetite: Have you experienced loss of appetite?	☐ Yes
	3. Are you able to eat without difficulty?	☐ No
VISION	1. Are you having trouble seeing, even when wearing glasses or contacts?	☐ Yes
	2. Have you had an eye exam in the last 12 months?	☐ No
HEARING	1. Are you having trouble hearing, even with hearing assistance (e.g., hearing aids)?	☐ Yes
	2. **In Person Only* Hears whispers (whisper test)* ***OR*** *Screening audiometry result is 35 dB or less* ***OR*** *Passes automated app-based digits-in-noise test*	☐ No
MOOD	1. Over the past two weeks, have you been bothered by: - Feeling down, depressed, or hopeless? - Little interest or pleasure in doing things? - Feeling lonely or isolated?	☐ Yes ☐ Yes ☐ Yes
NOTES	*Space for other comments.*	

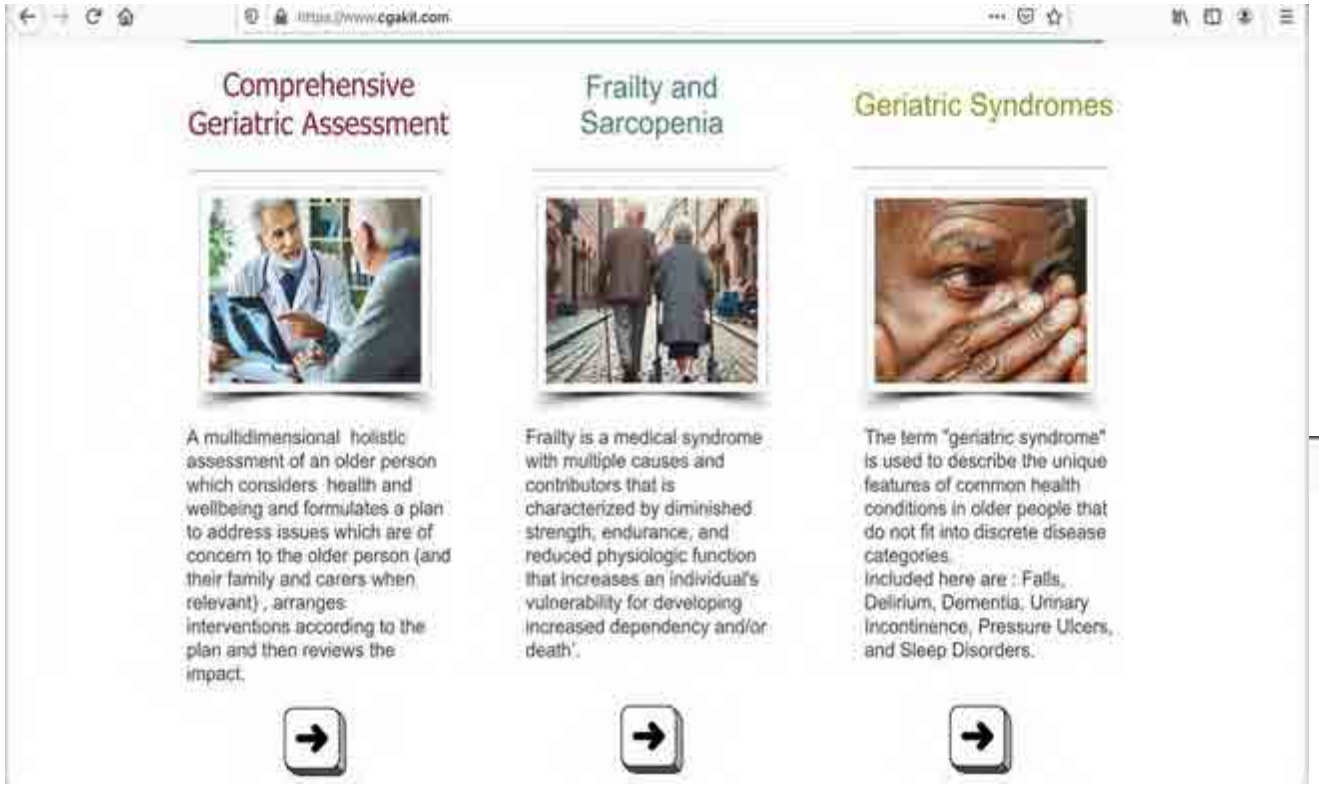
Source: https://quality.aidsinstituteny.org/QualManage/QualManage/QM_Aging_and_Long_term_Survivors_En

In-depth screening for problematic domains

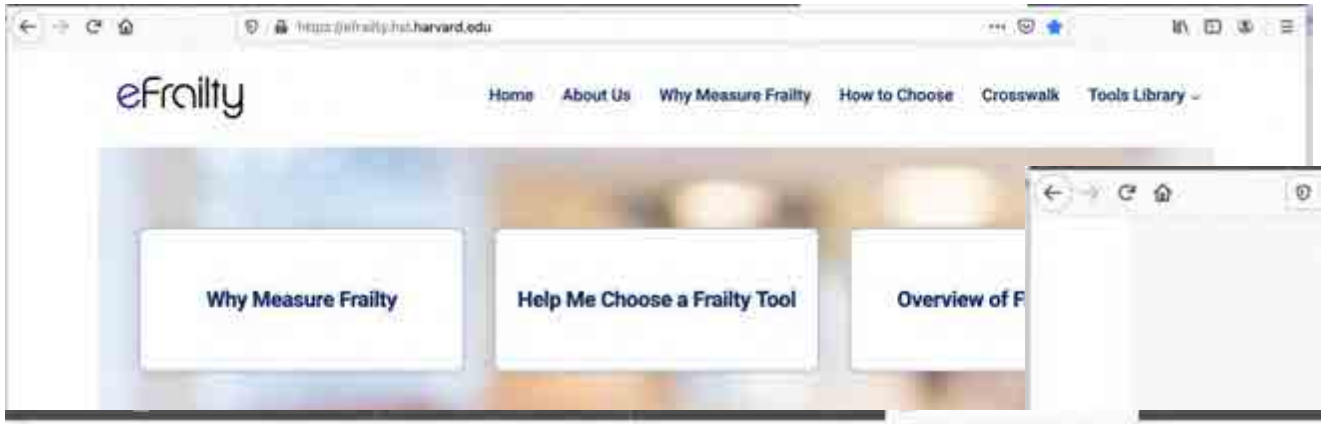


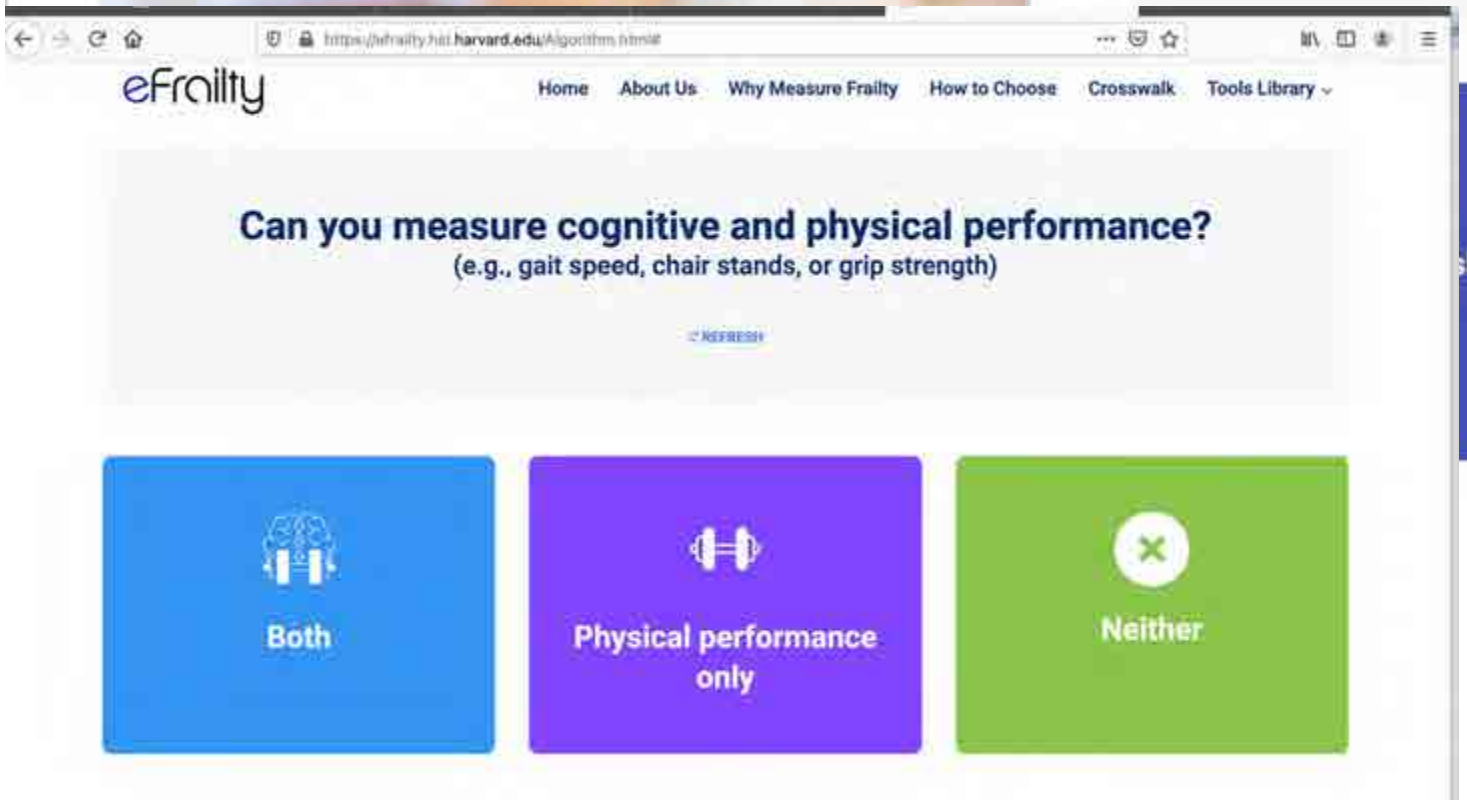
Source: [WHO ICOPE]

Geriatric syndrome screening: CGA Toolkit



Screening tools for Frailty: efrailty.org





Approach to Clinical Management of Older Patients Based on the Degree of Frailty

Frailty Score	Fit	Pre-frail	Frail	End stage frailty
Goal	Increase physiologic reserve	Increase physiologic reserve	Preserve physiologic reserve and prevent avoidable stressors	Provide comfort
Lifestyle	Exercise and physical activity	Exercise and physical activity	Less intense exercise may be better tolerated	Physical activity as tolerated
	High-quality diet	High-quality diet (protein intake)	High-quality diet (protein intake)	Diet as tolerated
	Social engagement	Social engagement	Social engagement	Social engagement as tolerated
Disease management	Apply disease-based guidelines	Apply disease-based guidelines	Consider trade-off among diseases and treatment burden	De-escalation of treatments
Preventive care	Vaccination	Vaccination	Vaccination	Vaccination
	Cancer screening	Cancer screening	Individualize cancer screening (time to benefit vs. life expectancy)	Stop cancer screening
Interventions for frailty		Treat reversible causes of frailty	Treat reversible causes of frailty	
		Exercise and physical activity	Rehabilitation (PT and OT)	
		Nutrition counseling and supplement	Nutrition counseling and supplement	Comprehensive medication review
		CGA and multidisciplinary intervention	CGA and multidisciplinary intervention	
		Comprehensive medication review	Comprehensive medication review	
Patient engagement	Patient-centered goal	Patient-centered goal	Patient-centered goal	Patient-centered goal
Social support	Social support (family and caregiver)	Social support (family and caregiver)	Social support (family and caregiver)	Social support (family and caregiver)

Source: Kim & Rockwood, N Engl J Med. 2024 August 08; 391(6): 538–548

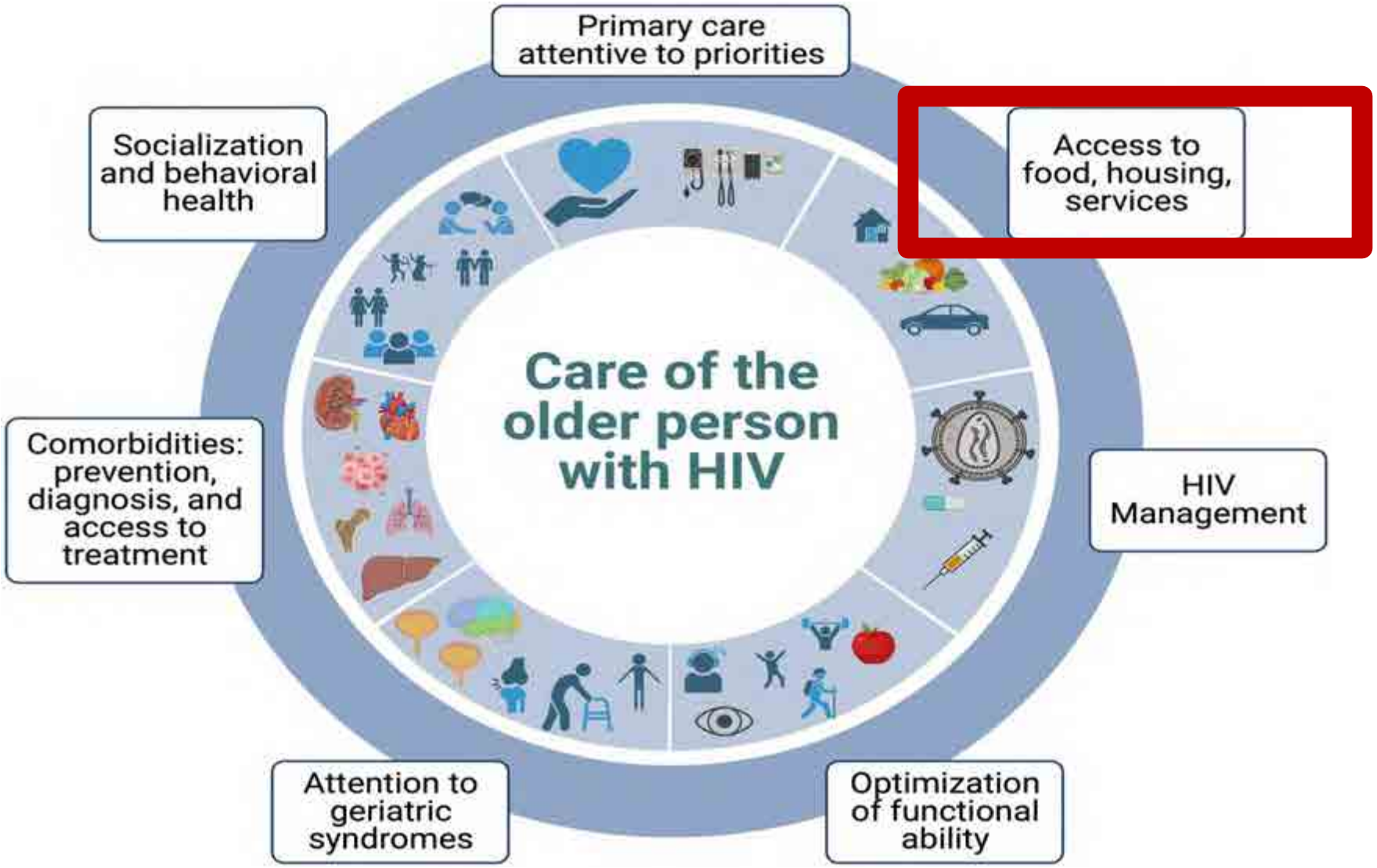
Functional ability, frailty and geriatric syndromes - Challenges

- Screening is recommended BUT:
  - No consensus on best tools, timing, or targets
  - Time- and labor-intensive
  - Limited access to advanced evaluations, rehab, or home services
  - Value reduced if no follow-up interventions available

- Workforce gaps: shortage of geriatricians, few trained in HIV care, mostly concentrated in large academic centers

- Patient barriers: reluctance to accept “geriatric” label at younger ages

HIV & Aging: Care Domains



Source: Frey et al, HIV/AIDS - Research and Palliative Care 2023:15 191–208

Access to food / housing/social services

- Basic needs must be prioritized, not overshadowed by clinical care alone
- Food insecurity affects up to 50% of PWH in the U.S.
- Over 10% of PWH have unmet housing needs; improving housing improves health outcomes.
- Aging adds complexity through reduced income, isolation, and cognitive/functional decline.
- Resources to manage are finite

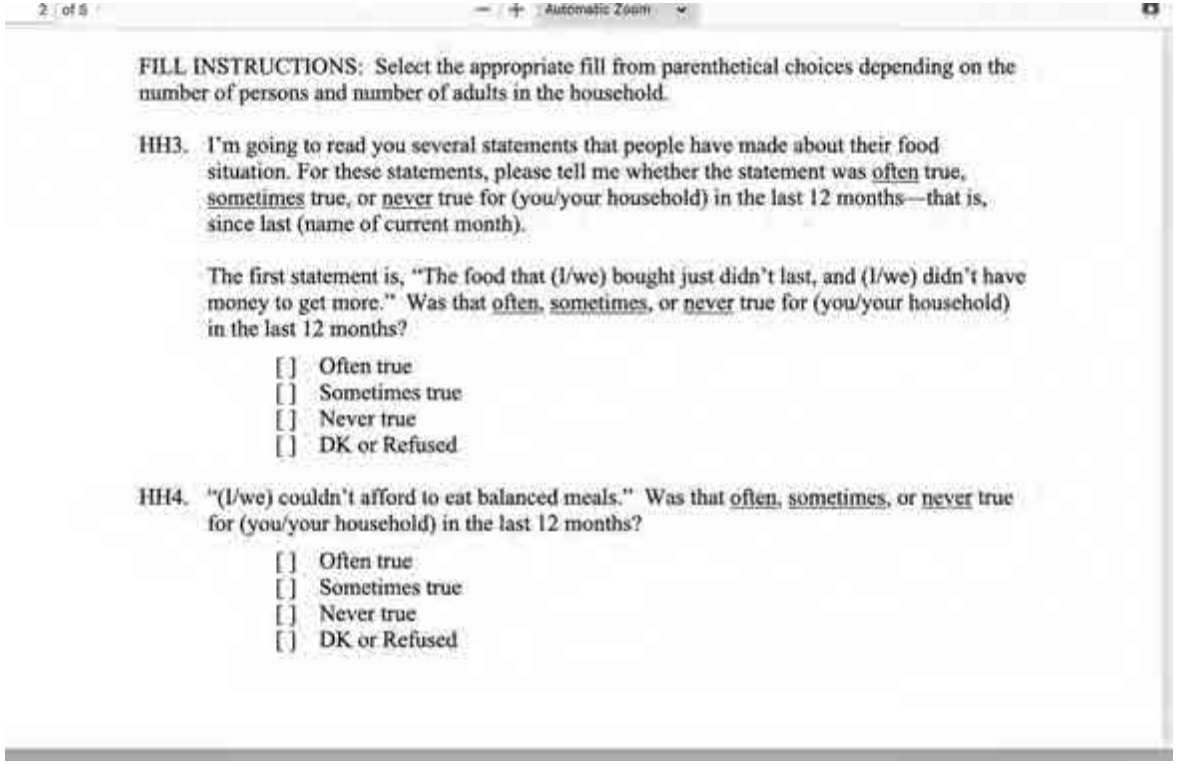
Screening tools for Food Insecurity

USDA Food Security Survey Tools

The Food Insecurity Experience Scale

Screening tools for Food insecurity

USDA Food Security Survey Tools



2 of 5 — Automatic Zoom

FILL INSTRUCTIONS: Select the appropriate fill from parenthetical choices depending on the number of persons and number of adults in the household.

HH3. I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is, "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

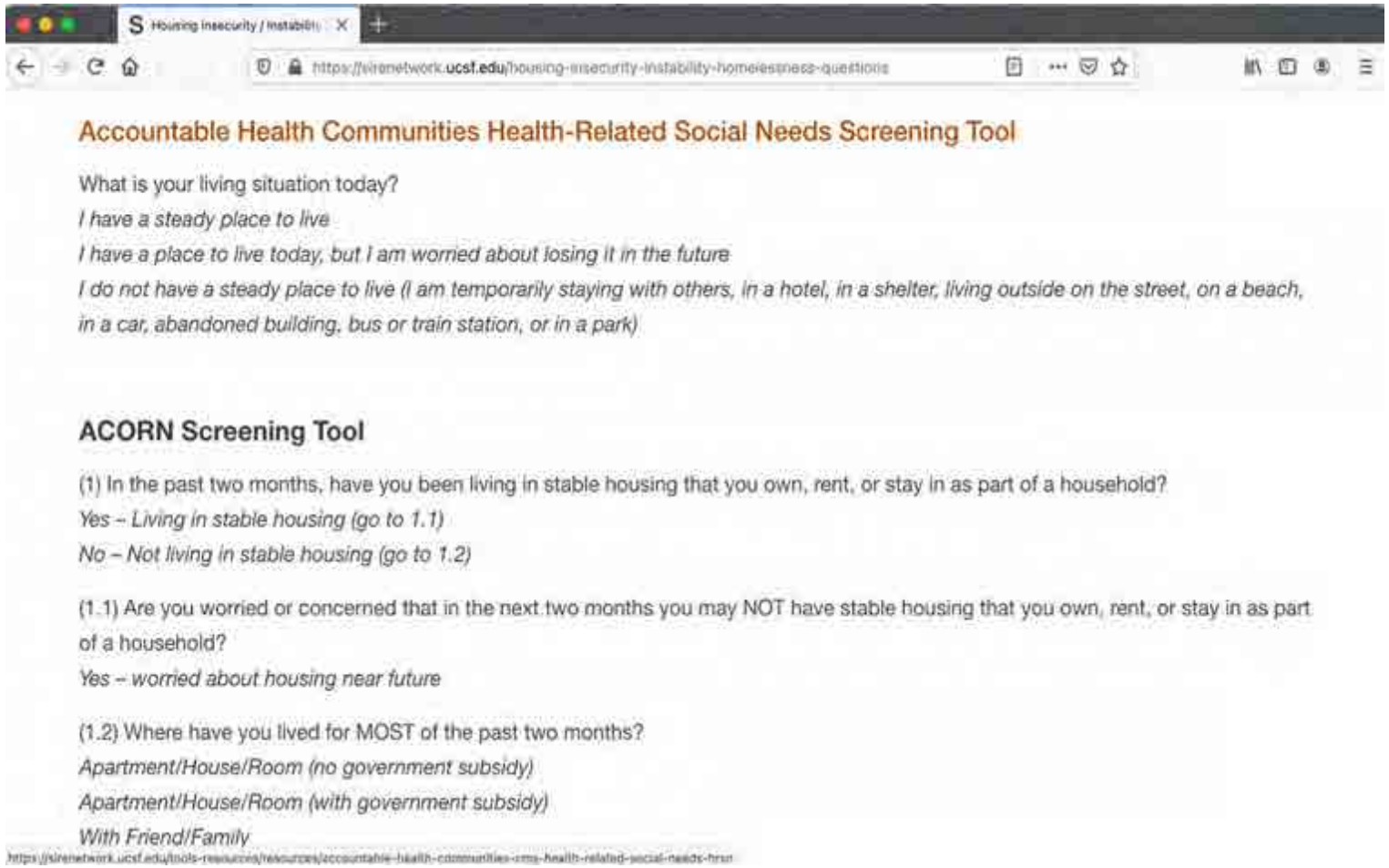
[ ] Often true
[ ] Sometimes true
[ ] Never true
[ ] DK or Refused

HH4. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

[ ] Often true
[ ] Sometimes true
[ ] Never true
[ ] DK or Refused

Screening tools for Housing insecurity

[UCSF SIREN Network]



Accountable Health Communities Health-Related Social Needs Screening Tool

What is your living situation today?

I have a steady place to live

I have a place to live today, but I am worried about losing it in the future

I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)

ACORN Screening Tool

(1) In the past two months, have you been living in stable housing that you own, rent, or stay in as part of a household?

Yes – Living in stable housing (go to 1.1)

No – Not living in stable housing (go to 1.2)

(1.1) Are you worried or concerned that in the next two months you may NOT have stable housing that you own, rent, or stay in as part of a household?

Yes – worried about housing near future

(1.2) Where have you lived for MOST of the past two months?

Apartment/House/Room (no government subsidy)

Apartment/House/Room (with government subsidy)

With Friend/Family

No One Can Do It Alone: How do we effectively care for older adults with HIV?

Image from: https://beyondbetter.io/cant_say_no/

Models of Care for Older PWH: Collaboration and Integration are KEY

CARE MODELS	EXAMPLES
Co-morbidity-Focused Clinic Within HIV Primary Care Setting	Chelsea & Westminster Hospital NHS Foundation Trust Clinic (UK) • Co-specialty clinics : cardiology, nephrology, menopause, etc • Single-visit model with HIV provider + specialist • Collaborative “one stop shop” care approach Newlands Clinic (Harare, Zimbabwe) • Integrated HIV–geriatric clinic based on WHO guidance • Comprehensive comorbidity & geriatric screening • On-site referrals: psychologist, social worker, audiologist, PT , etc
Consultative Clinic External to Primary Care	Silver Clinic (Brighton, UK) embedded in HIV clinic • PCP refers older PWH who screen positive for aging/geriatric concerns • Evaluated by a multidisciplinary team • Provides CGA and individualized care plan shared with PCP
Metabolic Clinic	Modena Metabolic Clinic (Italy) • Multidisciplinary team (ID, endocrine, cardiology, geriatrics, nutrition, PT, surgery, psych, etc) • Comprehensive, integrated care for metabolic disease
Combining Socialization and Medical Care	Golden Compass (San Francisco, USA) • Based at Ward 86, safety-net HIV clinic • Multidisciplinary Team: HIV geriatrician, cardiologist, pharmacist, social workers • Services: classes on aging, functional assessments, social connection, specialty referrals

Summary

- PWH are living longer and aging
- As PWH age, their care requires a structured, holistic approach addressing physical, mental, and psychosocial needs
- Care Models should:
  - Assess Needs
  - Build Networks
  - Adapt Care tools
  - Coordinate Care
  - Sustain & Evolve
- Integrated and multidisciplinary care models are ideal

Image from: https://philosophersguild.com/products/spock-pill-box?srsltid=AfmBOorKaGTxuNRDIdEDPO3UTTaclrizqI92HTMWoRU1L4a6luQk0hCW

Questions?

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