NIH OAR Aging/HIV Virtual Meeting

Report 1

the NIH OAR Aging & HIV virtual meeting was held for 6 hours with a series of slide presentations & discussion
The 2nd meeting was a panel on sept 8. There were 500 registered people to participate.

A **virtual** research workshop, “HIV and Aging Research: Current Landscape and Opportunities,” scheduled for **Tuesday, September 5, 10 a.m.–4:30 p.m. ET**, will survey the current landscape of HIV and aging research and explore ways to identify future research directions to address the needs of people aging with HIV. View the agenda, and register here Click here to view a Quick Reference on HIV and aging efforts across NIH. Individuals with disabilities who need reasonable accommodations to participate in this event should contact OARevents@nih.gov by August 29.

A **hybrid** panel discussion, "Current Landscape and Opportunities for Federal HIV and Aging Effort” will take place virtually and in person at the U.S. Conference on HIV/AIDS (USCHA) on **Friday, September 8, 2 p.m.–4 p.m. ET**. The discussion will explore how federal agencies, the HIV community, researchers, and clinicians can work together to prioritize interdisciplinary research and training and implementation strategies to address the needs of people aging with HIV. In-person attendance is open only to individuals registered for USCHA. USCHA registrants who plan to attend in person do not need to register separately for this event. Virtual registration is open to any individual, regardless of their attendance at USCHA. View the agenda and click here to register for the virtual component by **August 25**. Individuals with disabilities who need reasonable accommodations to participate virtually should contact OARevents@nih.gov by August 25.

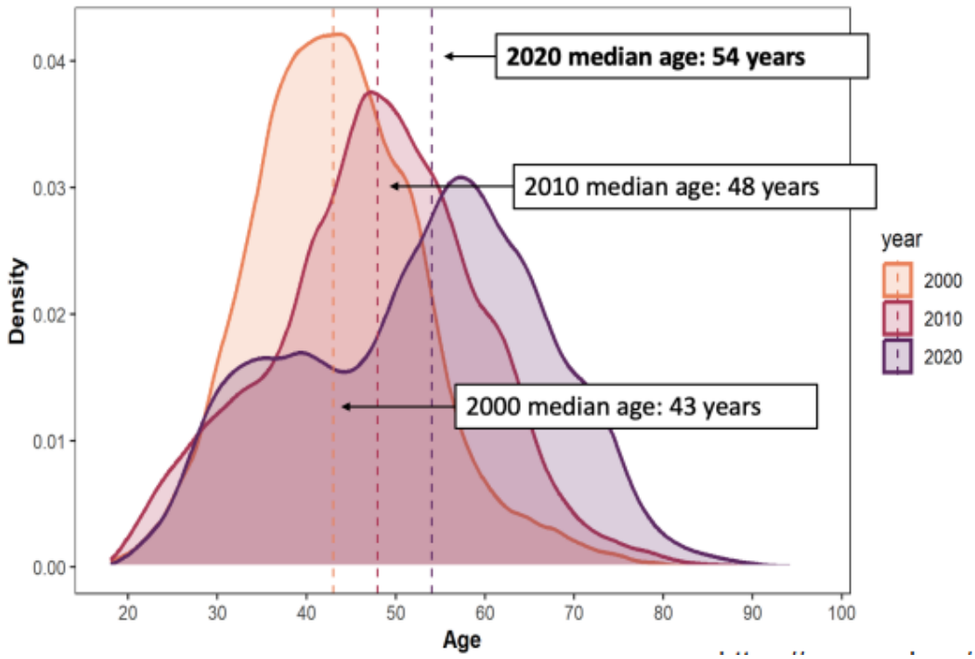
Keynote Talk

Aging With HIV Is and Isn’t Like Aging Without It

Amy C. Justice, MD, PhD, Yale University, New Haven, Connecticut
NIH HIV and Aging Research Workshop, September 5, 2023

(Reported by Mark Mascolini for NATAP)

More people than ever before—over 36 million—are living with HIV, Yale’s Amy Justice told workshop attendees. And they’re getting older. The NA-ACCORD estimates that median age stood at 43 in their North American cohorts in the year 2000, at 48 in 2010, and at 54 in 2020 (**figure**) [1].



The NA-ACCORD cohort consortium graphs an ever-increasing median age of people living with HIV. https://naaccord.org/aging/ Age distribution.

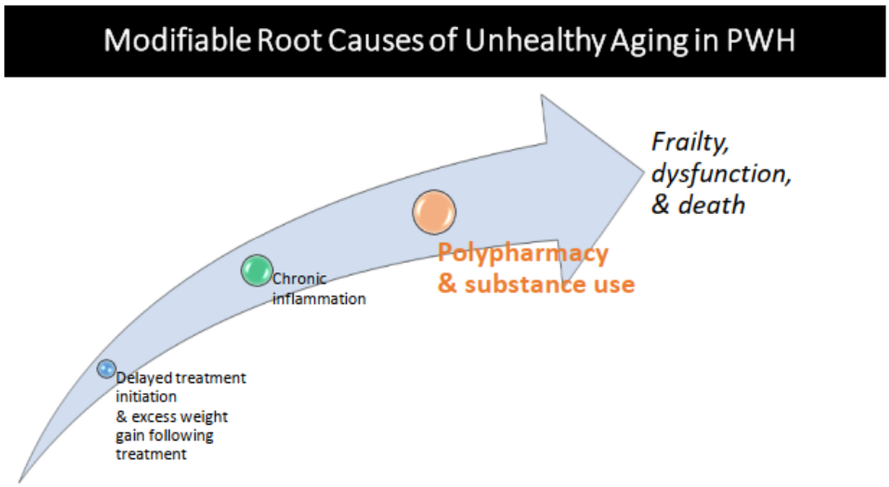
Justice suggested two ways we can compare aging with and without HIV—and both require parallel data on people with HIV and otherwise similar people without HIV:

- Consider specific conditions while controlling statistically for known risk factors.
- Identify general patterns across multiple conditions

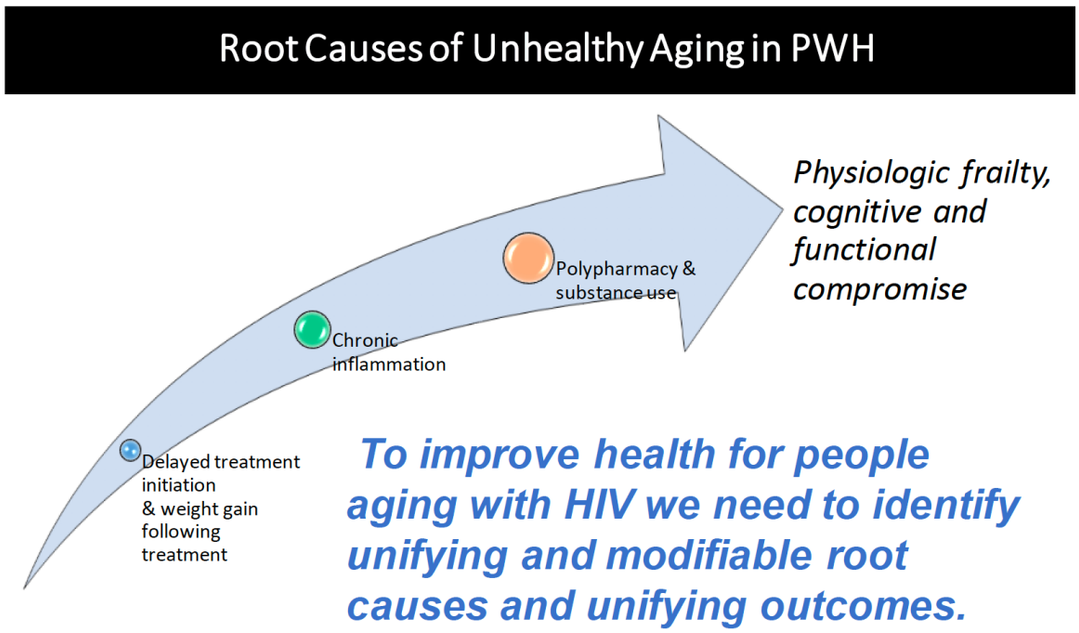
VACS—the Veterans Aging Cohort Study—is one example of a cohort with HIV-positive members (more than 60,000) and similar HIV-negative people without HIV (more than 120,000). Data from the VACS showed, for example, that people with HIV have significantly higher rates of new diagnoses of several lung diseases than vets without HIV [2] and that cardiovascular disease risk runs significantly higher in the HIV group [3]. The same imbalance holds true for liver disease [4] and cancer [5]. VACS has one clear limitation: the vast majority of cohort members are men.

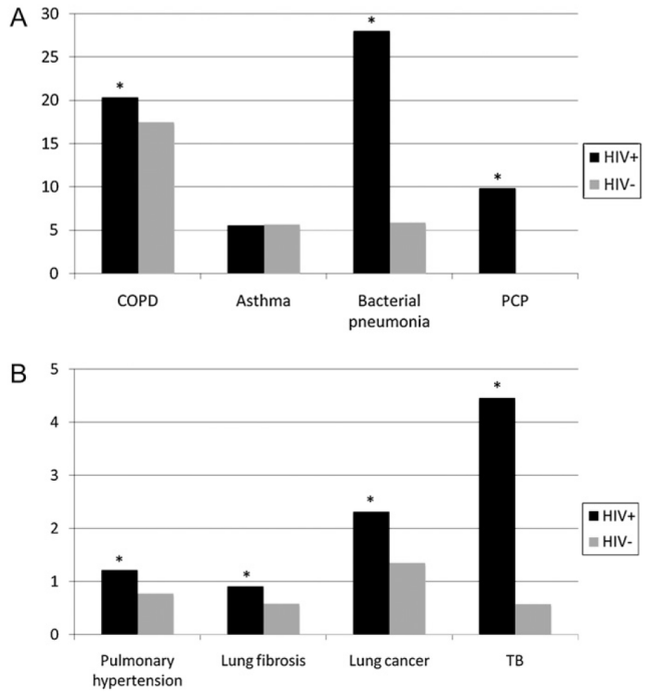
Justice proposed three modifiable root causes of unhealthy aging in people with HIV infection:

1. Delayed antiretroviral treatment and excess weight gain after treatment begins
2. Chronic inflammation
3. Polypharmacy (multiple non-HIV drugs) and substance use



Yale University's Amy Justice explored three modifiable root causes of unhealthy living in people with HIV that can culminate in frailty, dysfunction, and death.





HIV Infection and Risk for Incident Pulmonary Diseases in the Combination Antiretroviral Therapy Era

Kristina Crothers[1,2], Laurence Huang[3], Joseph L. Goulet[2], Matthew Bidwell Goetz[4], Sheldon T. Brown[5], Maria C. Rodriguez-Barradas[6], Krisann K. Oursler[7], David Rimland[8], Cynthia L. Gibert[9], Adeel A. Butt[10], and Amy C. Justice[2,11]

..33,420 HIV-infected veterans and 66,840 age, sex, race and ethnicity, and site-matched HIV-uninfected veterans. Poisson regression to calculate incidence rates…

Am J Respir Crit Care Med Vol 183. pp 388–395, 2011

Cardiovascular Risk Higher Among HIV+ Than Uninfected

Table 2. Rates of AMI by HIV Status and Age Group[a]

Status	Age Group, y							
	<30	30-39	40-49	50-59	60-69	70-79	80-89	>89
Uninfected								
No. of participants	1175	6783	21 866	19 805	4209	1120	148	3
No. of AMI events	0	10	164	218	66	36	14	0
AMI rates per 1000 person-years (95% CI)	. . .	0.3 (0.2-0.6)	1.5 (1.3-1.7)	2.2 (1.9-2.5)	3.3 (2.6-4.2)	6.7 (4.8-9.2)	21.5 (12.7-36.4)	. . .
HIV Infected								
No. of participants	725	3848	10 575	9342	2065	557	56	0
No. of AMI events	0	13	105	171	46	25	3	0
AMI rates per 1000 person-years (95% CI)	. . .	0.7 (0.4-1.2)	2.0 (1.6-2.4)	3.9 (3.3-4.5)	5.0 (3.8-6.7)	10.0 (6.7-14.7)	13.5 (4.3-42.0)	. . .
Incidence rate ratio (95% CI)	. . .	2.19 (0.89-5.58)	1.34 (1.04-1.72)	1.80 (1.47-1.21)	1.53 (1.03-2.26)	1.50 (0.86-2.57)	0.63 (0.12-2.25)	. . .

- After full adjustment for Framingham and other risk factors, HIV associated with a HR of 1.48 (95% CI 1.27-1.72) AMI risk
- HIV biomarkers (CD4 & HIV-1 RNA) indicate a dose response association between severity of HIV and AMI risk

Table 4. Time-Updated Analyses Assessing the Association of HIV-1 RNA and CD4 Cell Count Values and the Risk of AMI in Separate Models[a]

Category	HR (95% CI)	*P* Value[b]
HIV-1 RNA		
Uninfected	1 [Reference]	
≥500	1.75 (1.40-2.18)	.05
<500	1.39 (1.17-1.66)	
CD4 cell count		
Uninfected	1 [Reference]	
<200	1.88 (1.46-2.40)	.04
≥200	1.43 (1.21-169)	

Freiberg M. et al. HIV Infection and the Risk of Acute Myocardial Infarction, JAMA Intern Med 2013; 173(8):614-22

REPRIEVE

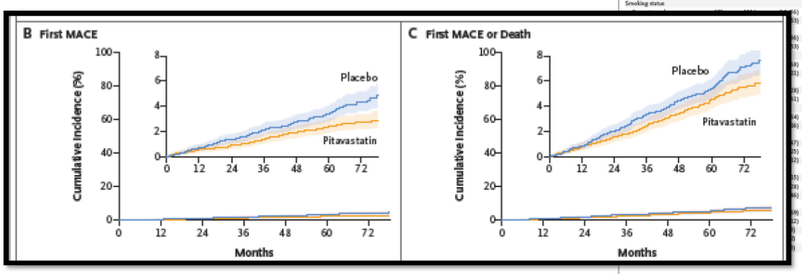
Randomized Trial to Prevent Vascular Events in HIV

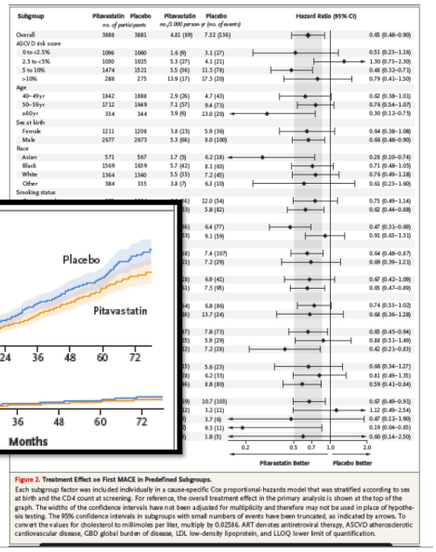
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Pitavastatin to Prevent Cardiovascular Disease in HIV Infection

- 7,769 PWH
  - 88% undetectable virus
  - <9% 60+ yrs
- Treat
  - 106 to prevent an CVD event
  - 21 to cause a new dx of diabetes
- How many medications were used?

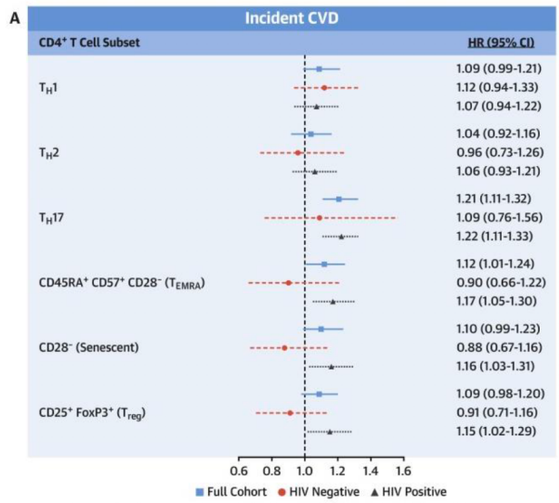




DOI: 10.1056/NEJMoa2304146

CD4+ T Cell Subsets & Incident CVD

Suman Kundu Matt Freiberg



The *P* values of interaction between HIV status and T cell subsets are 0.55 (Th1), 0.45 (Th2), 0.31 (Th17), 0.31 (T_{EMRA}), 0.23 (senescent), and 0.13 (Treg)

Kundu S, et al. J Am Coll Cardiol. 2022;80(17):1633-1644.

Among PWH

- higher proportions of T helper type 17 cells
- T effector memory cells re-expressing CD45RA
- $CD28^{null}$ cells associated with risk for CVD not explained by CVD risk factors

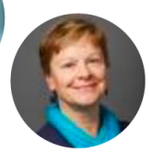
Among PWoH

- no T cell subsets were associated with CVD

VETERANS AGING COHORT STUDY

Statin Exposure & Cancer

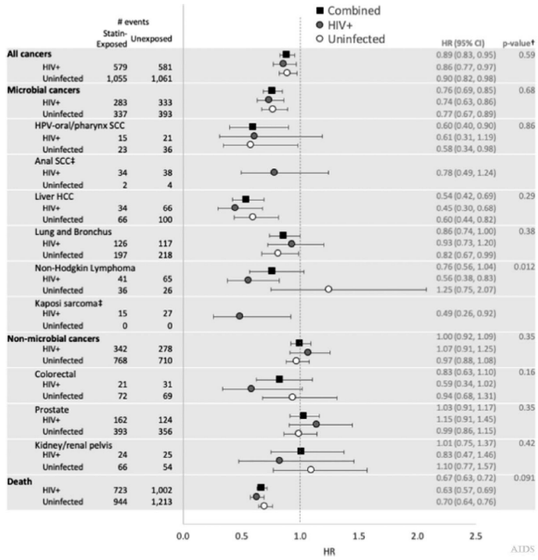
Roger Bedimo



Jan Tate

Lesley Park

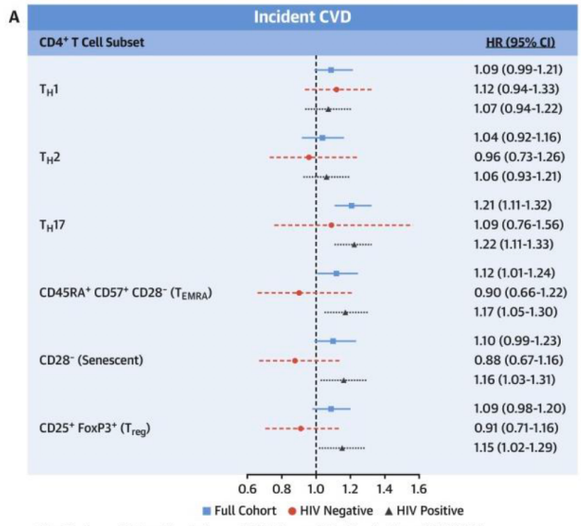
- N=47,940 propensity-matched
- Statins from 1998-2015:
  - 71% simvastatin
  - 54% atorvastatin
  - 34% pravastatin
- Statin use associated with:
  - 24% fewer microbial cancers
  - Strongest for liver & head/neck cancers
  - 33% lower mortality
  - Similar in PWH & PWoH
- Conclusion: In PWH & PWoH, statin use associated with decreased microbial cancer and mortality



Bedimo R, et al. AIDS (2021). PMID: 33181533.

CD4+ T Cell Subsets & Incident CVD

Suman Kundu Matt Freiberg



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Kundu S, et al. J Am Coll Cardiol. 2022;80(17):1633-1644.

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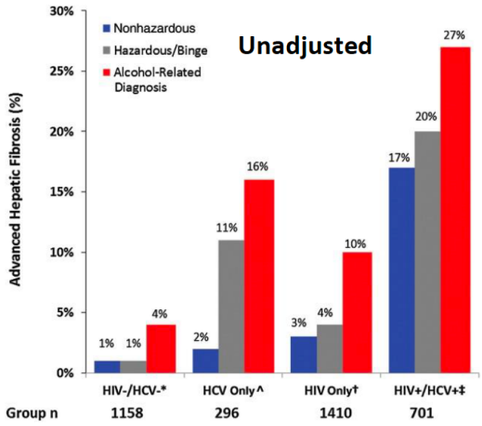
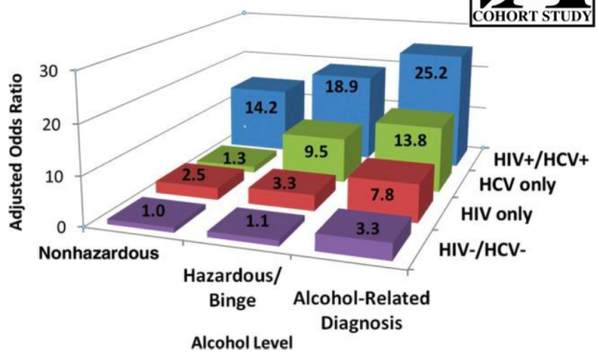
Among PWoH

- no T cell subsets were associated with CVD

VETERANS AGING COHORT STUDY

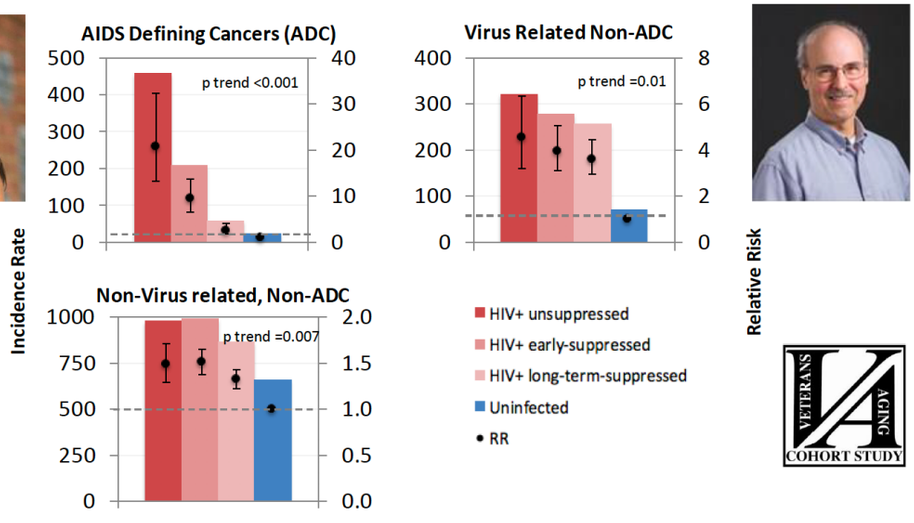
Liver Disease Risk is Higher Among HIV+ than Uninfected





Lim JK. et al, Relationship Between Alcohol Use Categories and Noninvasive Markers of Advanced Hepatic Fibrosis in HIV-Infected, Chronic HCV-Infected, and Uninfected Patients, Clin Infect Dis 2014; 58(10):1449-58

Cancer Risk Higher Among HIV+ than Uninfected



Park LS. et al., Association of Viral Suppression with Lower AIDS-Defining and Non-AIDS Defining Cancer …. Ann Intern Med June 12, 2018.

Patterns of Comorbidity Vary by HIV Status, Age, and HIV Severity

Joseph L. Goulet, Shawn L. Fultz, David Rimland, Adeel Butt, Cynthia Gibert, Maria Rodriguez-Barradas, Kendall Bryant, and Amy C. Justice

1997-2004 Data

Variable	HIV infection OR (95% CI)	*P*	Age ≥50 years OR (95% CI)	*P*	Interaction between HIV infection and age ≥50 years OR (95% CI)	*P*
Medical disease						
Any	0.85 (0.82–0.88)	<.001	3.67 (3.54–3.80)	<.001	0.82 (0.77–0.87)	<.001
Hypertension	0.53 (0.51–0.56)	<.001	3.55 (3.42–3.67)	<.001	1.00 (0.94–1.07)	0.9
Diabetes	0.54 (0.50–0.58)	<.001	3.09 (2.95–3.24)	<.001	1.12 (1.02–1.23)	.02
Vascular disease	0.55 (0.51–0.60)	<.001	4.87 (4.62–5.14)	<.001	1.12 (1.00–1.24)	.04
Pulmonary disease	0.91 (0.85–0.97)	.003	2.00 (1.89–2.11)	<.001	1.07 (0.97–1.18)	.2
Liver disease	3.46 (3.25–3.68)	<.001	1.02 (0.94–1.11)	.6	1.29 (1.16–1.44)	<.001
Renal disease	2.11 (1.85–2.41)	<.001	2.97 (2.61–3.38)	<.001	0.84 (0.70–1.01)	.07
Substance use disorder						
Any	1.28 (1.23–1.32)	<.001	0.52 (0.49–0.54)	<.001	1.24 (1.15–1.33)	<.001
Alcohol abuse and/or dependence	1.05 (1.01–1.09)	.02	0.58 (0.55–0.61)	<.001	1.23 (1.14–1.33)	<.001
Drug abuse and/or dependence	1.49 (1.43–1.55)	<.001	0.32 (0.30–0.34)	<.001	1.56 (1.43–1.71)	<.001
Psychiatric disorder						
Any	0.73 (0.70–0.76)	<.001	0.79 (0.76–0.83)	<.001	1.13 (1.05–1.22)	.001
Depression and /or bipolar	1.02 (0.97–1.07)	.5	0.67 (0.63–0.71)	<.001	1.10 (1.00–1.21)	.05
Schizophrenia	0.52 (0.49–0.56)	<.001	0.56 (0.52–0.60)	<.001	1.29 (1.12–1.47)	.003
PTSD	0.55 (0.52–0.60)	<.001	1.37 (1.29–1.45)	<.001	1.28 (1.14–1.43)	<.001
Comorbid disease	0.78 (0.76–0.81)	<.001	2.29 (2.20–2.38)	<.001	0.84 (0.79–0.89)	<.001
Multimorbidity[a]	1.16 (1.08–1.25)	.001	0.93 (0.85–1.01)	.07	1.17 (1.02–1.33)	.02

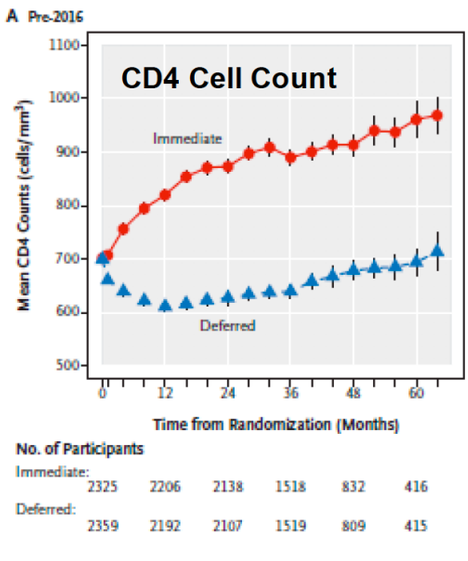
NOTE. Logistic models of presence of comorbid condition. All are also adjusted for race, ethnicity, and sex. PTSD, posttraumatic stress disorder.

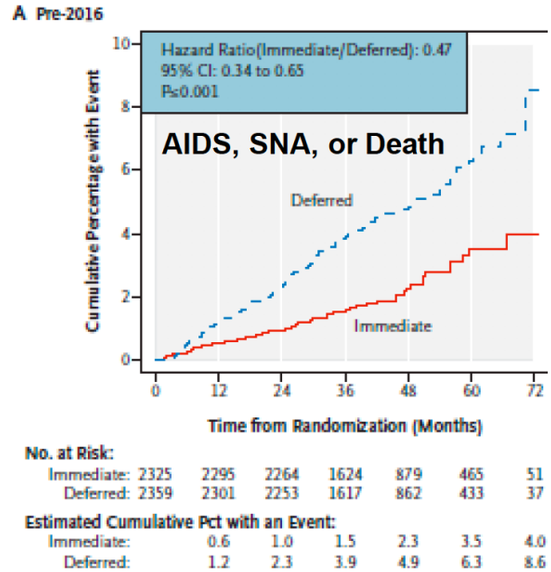
[a] Multimorbidity is defined as the presence of a comorbid condition in all 3 disease clusters.

Clinical Infectious Diseases 2007; 45:1593–1601

The START trial produced stark evidence that starting antiretroviral therapy (ART) at a CD4 count of 500 or more yielded consistently higher CD4 counts even through 6 years of follow-up when compared with delaying ART until CD4s fell below 350 or an AIDS disease developed [6]. At 6 years 97% of the immediate ART group and 94% of the delayed group were taking ART. But the delayed group still had significantly higher rates of AIDS, serious non-AIDS diagnoses, or death. Through 6 years of follow-up, the curve graphing the composite endpoint of AIDS, serious non-AIDS, or death in the delayed-ART group showed no hint of converging with the curve graphing that endpoint in the immediate-ART group.

START: Immediate (CD4≥500) vs. Deferred (CD4≤350) ART --Initial Findings

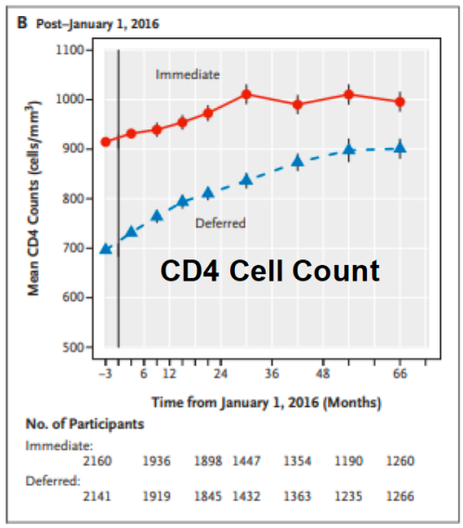


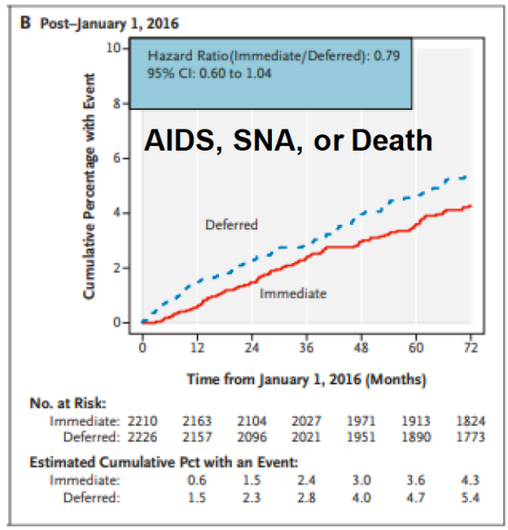


During a median FU of 3.6 yrs, 36% of deferred group started ART 1.6 to 3.5 yrs. later (nearly all achieving suppression).

NEJM Evid 2023;2(3) DOI: 10.1056/EVIDoa2200302 VOL. 2 NO. 3

START: Consequences of Delayed Treatment After Initiation (6 yrs.)





During this 6 yr. period 97% of immediate group and 94% of delayed group on ART.

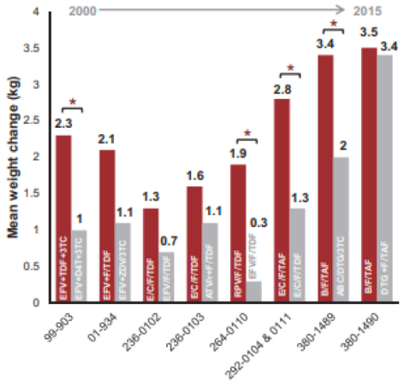
NEJM Evid 2023;2(3) DOI: 10.1056/EVIDoa2200302 VOL. 2 NO. 3

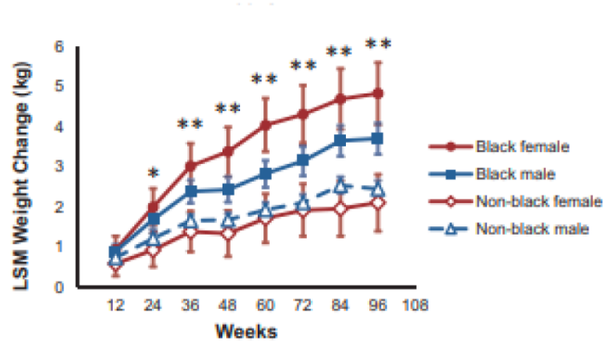
Justice reminded workshop attendees that ART often gets delayed because infected people do not seek care until their infection has crossed into the CD4 danger zone demarcated in START. These delays prove more frequent in people older than 50 than in younger individuals, as her research demonstrated for groups in North America; Central and South America and the Caribbean; Central, East, and West Africa; and the Asia-Pacific region [7].

Three key points emerged from analysis of weight gain after people started ART in randomized trials [8]: (1) Most people are not underweight when they begin ART. (2) Substantial weight gain after ART begins has become more frequent as antiretroviral regimens became more effective and tolerable. (3) Risk of weight gain on ART varies by sex and race, with Black women running the highest risk.

Weight Gain Following Initiation of Antiretroviral Therapy: Risk Factors in Randomized Comparative Clinical Trials

Paul E. Sax, Kristine M. Erlandson, Jordan E. Lake, Grace A. McComsey, Chloe Orkin, Stefan Esser, Todd T. Brown, Jürgen K. Rockstroh, Xuelian Wei, Christoph C. Carter, Lijie Zhong, Diana M. Brainard, Kathleen Melbourne, Moupali Das, Hans-Jürgen Stellbrink, Frank A. Post, Laura Waters, and John R. Koethe

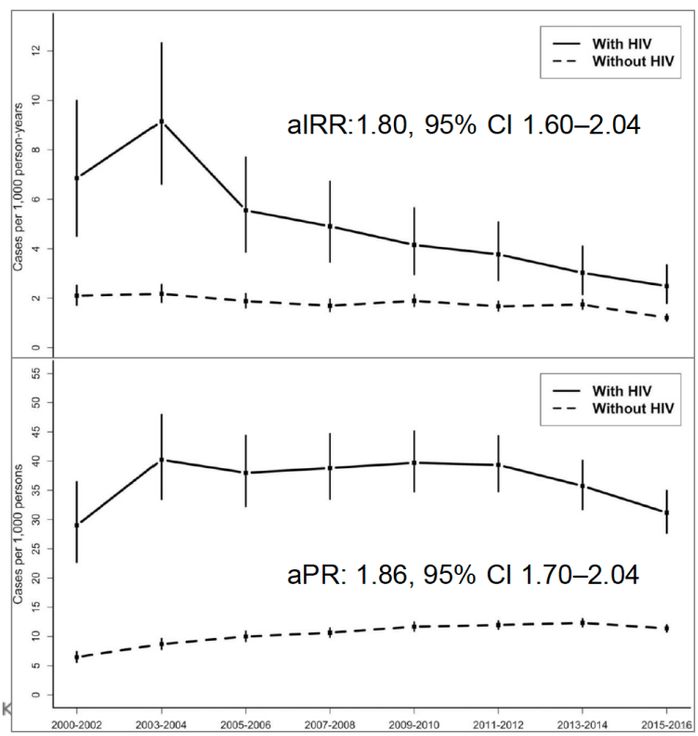




- Most individuals starting ART are not underweight
- Substantial weight gain after ART initiation has increased with more effective & tolerable regimens
- Risk of weight gain is differential with Black women having the highest risk controlling for other factors

CID 2020:71 (15 September) • 1379-1389

Dementia Incidence and Prevalence in 13,296 PWH & 155,354 PWoH 2000-2016



Kaiser Permanente: Northern CA, Southern CA, & Mid-Atlantic

Lam, Jennifer O.; Lee, Catherine; Gilsanz, Paola; Hou, Craig E.; Leyden, Wendy A.; Satre, Derek D.; Flamm, Jason A.; Towner, William J.; Horberg, Michael A.; Silverberg, Michael J.

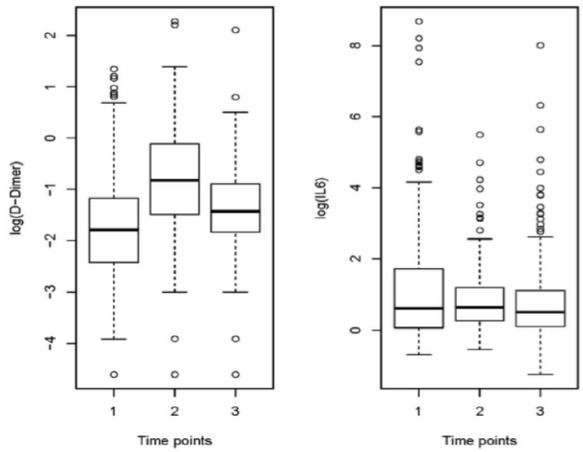
AIDS36(3):437-445, March 1, 2022. doi: 10.1097/QAD.0000000000003134

Turning to the second modifiable cause of unhealthy aging with HIV—chronic inflammation—Justice detailed results of a study of D-dimer [9], the blood-clotting marker that correlates with levels of other inflammatory markers. D-dimer levels rise with HIV seroconversion and remain above pre-HIV levels after viral suppression with ART. And researchers tied this residual D-dimer flare to higher risk of non-AIDS events. This sequence of events, Justice proposed, suggests that “ART alone is inadequate to prevent future non-AIDS events.”

D-Dimer Levels at Seroconversion Remain Elevated after Suppression and Are Associated with Risk of Non-AIDS Events

Brian Agan Matt Freiberg

- HIV seroconversion is associated with an increase in serum D-dimer levels
- After viral suppression, D-dimer remains elevated compared to pre-HIV
- Residual increase in D-dimer is associated with an increased risk of incident non-AIDS events
- HIV suppression does not eliminate elevations in D-dimer associated with seroconversion and suggest that ART alone, is inadequate to prevent future non-AIDS events



VETERANS AGING COHORT STUDY

Freiberg MS *PLoS ONE* 2016. PMID: 27088215

The VACS index, a predictor of mortality and other outcomes in people with HIV, was developed through analysis of the VACS cohort [10]. The index combines clinical tests linked to inflammation and correlates most closely with IL-6, sCD14, and D-dimer. It aims to summarize physiologic frailty in people with HIV [11]. Researchers have validated the VACS index in two big HIV cohort collaborations—ART CC and NA-ACCORD.

Justice began her discussion of the third modifiable cause of unhealthy aging with HIV—polypharmacy and substance abuse—by listing 15 adverse effects of polypharmacy [12]. The list begins with drug-specific adverse events and drug-drug interactions, proceeds through clinical setbacks including cognitive impairment, weight loss, and urinary incontinence, and culminates in reduced treatment adherence, increased healthcare costs, and death. Justice added two adverse effects of her own—provider distraction and patient confusion.

Adverse Effects of Polypharmacy in General

International Group for Reducing Inappropriate Medication Use & Polypharmacy (IGRIMUP) Position Statement*

**I would add provider distraction & patient confusion*

1.	Drug-specific adverse effects
2.	Drug–drug interaction
3.	Drug–disease interaction
4.	Cognitive impairment/delirium [5–8]
5.	Weight loss, malnutrition [9, 10]
6.	Falls [11–15]
7.	Hip fractures [12]
8.	Urinary incontinence [16]
9.	Functional impairment, immobility [17, 18]
10.	Hospitalization [17, 19–26]
11.	Nursing home, long-term care placement [20–24, 27]
12.	Decrease in quality of life [27]
13.	Death [27]
14.	Reduced treatment adherence [28]
15.	Increased cost to the health system and to the individual [17, 20–24, 29–36]

Drugs Aging (2018) 35:575–587
https://doi.org/10.1007/s40266-018-0554-2

Research confirms at least 15 adverse effects of polypharmacy, often defined as prescription of 5 of more nonantiretroviral drugs [12].

Comparing people with and without HIV in the 2006-2010 National Hospital Ambulatory Medical Survey showed that polypharmacy—prescription of 5 or more nonantiretroviral drugs—rose from 16% of outpatient clinic attendees with HIV in 2006 to 35% in 2010 [13]. A bigger proportion of people without HIV took 5 or more drugs in 2006 (24%) but that proportion stayed lower than in people with HIV in 2010 (32%). Older age—both 30 to 49 years and 50 or more years—independently predicted polypharmacy in people with or without HIV, more than doubling the odds in 30 to 49 groups and boosting odds more than 5-fold in the groups 50 and older.

A VACS analysis comparing 9186 veterans with HIV and 45,913 HIV-negative veterans taking at least one drug determined that for each additional drug taken, people with HIV had approximately 2.94 additional known pairwise drug interactions (KPDI), while people without HIV had approximately 2.67 additional KPDIs [14]. After statistical adjustment for demographics, physiological frailty, and KPDI index, medication count independently raised the risk of hospital admission 1.08 times in both the HIV group and the non-HIV group.

A study combining the VACS cohort, Kaiser Permanente Northern California, and the Swiss HIV Cohort Study (still under review at the time of Justice's workshop presentation) found that substance use and polypharmacy routinely occur together in people with HIV infection. Justice cited other work showing that people with HIV are susceptible to alcohol's effects at lower consumptions levels than people without HIV [15], that each higher level of alcohol use was associated with higher risk of medication-mediated delirium, which is more frequent in people with than without HIV [16], and that serious falls were associated with every 5 additional non-ART medications, illicit substance use or abuse, hazardous alcohol use, and an opioid prescription in 13,530 people with HIV and 67,060 matched controls without HIV [17]. In people with HIV (but not without HIV), benzodiazepines and muscle relaxants boosted odds of serious falls.

Looking at the just-reviewed three root causes of unhealthy aging with HIV, Justice proposed that "to improve health for people aging with HIV we need to identify unifying and modifiable root causes and unifying outcomes." She stressed her belief that "only cohorts can tell us what helps or hurts over time in the real world."

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Keynote Talk

Exploring Models of Care for Older People With HIV

Eugenia L. Siegler, MD, Weill Cornell Medicine, New York, New York

NIH HIV and Aging Research Workshop, September 5, 2023

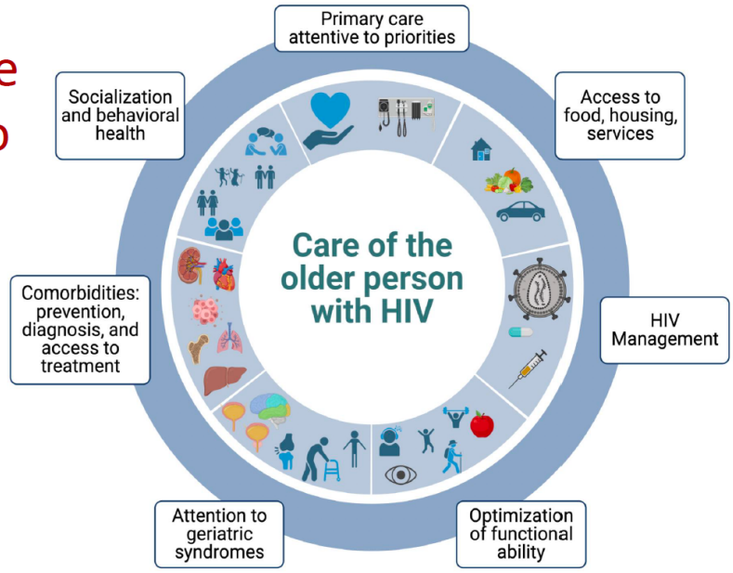
(Reported by Mark Mascolini for NATAP)

Fashioning a model (or models) of care for older people with HIV infection remains a challenge to stakeholders in this endeavor, noted Weill Cornell Medicine's Eugenia L. Siegler. She focused on several key issues: (1) Care models for older people with HIV have been implemented for more than 2 decades, but they are fragile. (2) Models developed for large programs may not work in smaller programs. (3) Implementation strategies in use for older

people with HIV rest on slim evidence. (4) “We will never have enough geriatricians.”

A primary challenge to devising and implementing models of care for older people with HIV, Siegler maintained, is a persisting lack of an evidence base supporting such models. Some implementation strategies for this population are in place, such as New York State’s guidance on addressing the needs of older people with HIV [1]. But so far such strategies are forced to rely on thin evidence. Although some HIV-aging care models are framed on evidence-informed or evidence-based interventions, Siegler added, they have yet to yield evidence of effectiveness, but evidence can come from ongoing HRSA SNS project & NYS 10-aging clinic project .

Needs must be translated into care domains



Frey et al, 2023. PMC10155713

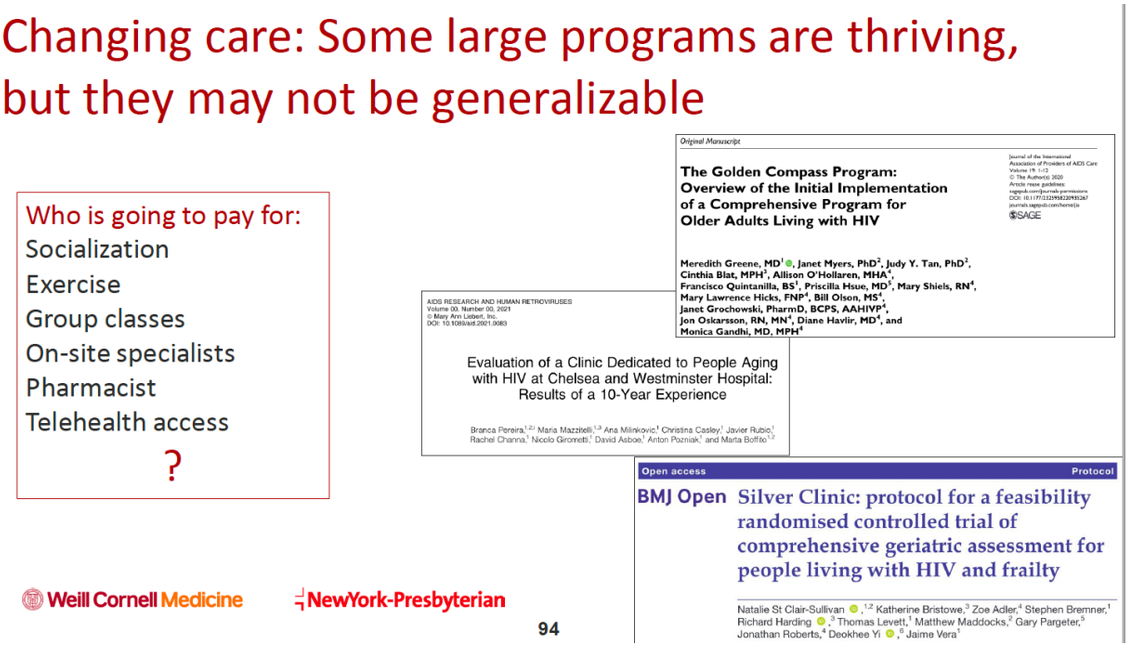
We lack an evidence base supporting care for older PWH

Observations

Comprehensive assessment of OPH

Action

Feasible, useful recommendations



And geriatric HIV programs can be hard to sustain. Clinicians in the Section of Infectious Diseases and Geriatric Medicine at Louisiana State University formulated an annual comorbidity screening plan for HIV-positive people older than 60, criteria for referral, and specific therapy for identified needs; and they reported the yield of early implementation [2]. But the program, Mmuta, ended when these innovators moved on to other jobs. Siegler stressed that this all-too-brief history underlines the difficulty of keeping even well-planned HIV-aging programs running.

Some large geriatric HIV programs are thriving [3-5], Siegler reported, but she worries about whether they can be generalized to other institutions and settings. And all geriatric HIV programs face tough questions about who will pay for program components like exercise classes, socialization, and telehealth access.

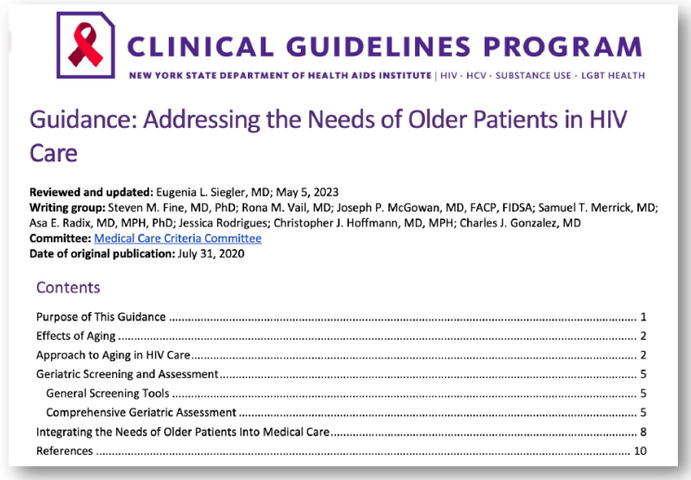
Federal and state authorities are backing further research on caring for older people with HIV. The Health Resources and Services Administration (*HRSA*) is funding a Special Projects of National Significance (SPNS) to build HIV-and-aging programs, Siegler said. And the Department of Health and Human Services (HHS) announced phase 1 winners of two national HIV-and-aging challenges. New York State is funding pilot programs on people aging with HIV and their providers in both urban and rural areas, and in both academic and community settings.

Siegler suggested that authorities looking to create a geriatric HIV model might find fresh insight in two perhaps overlooked places: classic geriatric models of care in the general population and low- and middle-income countries (LMIC). Walter Leutz defined three levels of care integration—linkage, coordination, and full integration [6]. Fully integrated models meet needs in all domains, Siegler explained, including comprehensive assessment, a care plan, and monitoring. Integrated service delivery in LMIC showed they "can meet people where they are and offer what they need" [7]. LMIC have used differentiated service delivery "as an adaptable approach to care integration" [8].

But no model of geriatric HIV care will work for long if a program does not have geriatricians to implement it, and Siegler warned that "we will never have enough geriatricians." As the proportion of elderly people in the US population continues to grow, the number of geriatricians paradoxically shrinks. In 2021, for the first time, more fellowship position in geriatric medicine were created than filled. In contrast, 328 of 441 infectious diseases fellowships were filled. Jerry Gurwitz of the UMass Chan Medical School attributed this drop to factors such as societal attitudes about aging, lower compensation for geriatricians than other medical specialties, and lack of career prestige [9].

Siegler proposed that optimizing clinical care for older people with HIV faces at least four barriers: limited evidence on which models will work, insufficient resources, high medication costs, and threats to sustainability.

Implementation strategies are in use for PWH *JAIDS:* 90(S1)
but the evidence base is slim for care of older PWH



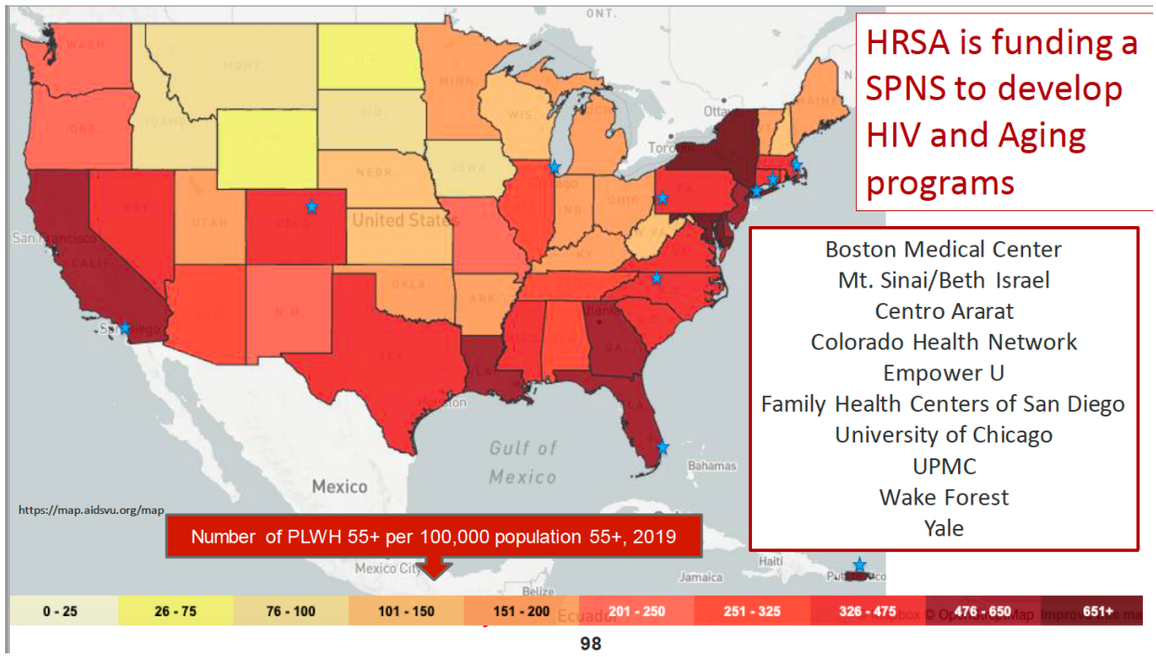
CLINICAL GUIDELINES PROGRAM

NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV · HCV · SUBSTANCE USE · LGBT HEALTH

Guidance: Addressing the Needs of Older Patients in HIV Care

Reviewed and updated: Eugenia L. Siegler, MD; May 5, 2023
Writing group: Steven M. Fine, MD, PhD; Rona M. Vail, MD; Joseph P. McGowan, MD, FACP, FIDSA; Samuel T. Merrick, MD; Asa E. Radix, MD, MPH, PhD; Jessica Rodrigues; Christopher J. Hoffmann, MD, MPH; Charles J. Gonzalez, MD
Committee: Medical Care Criteria Committee
Date of original publication: July 31, 2020

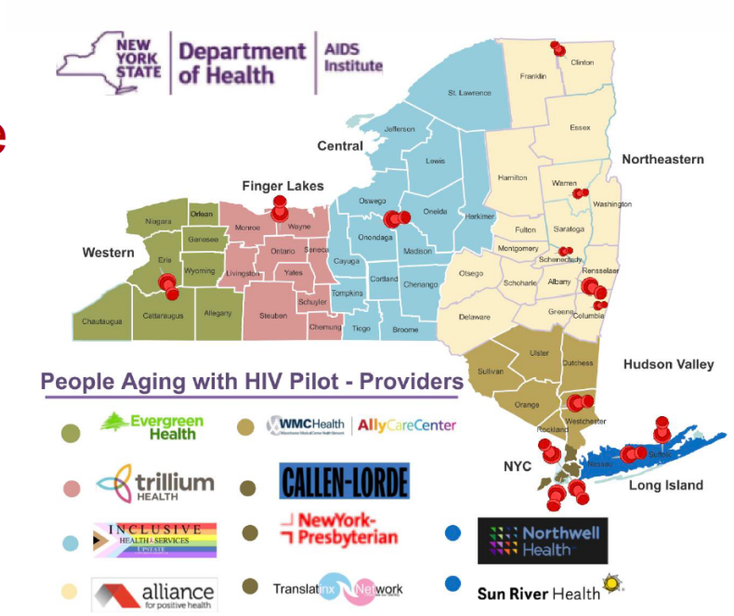
Contents



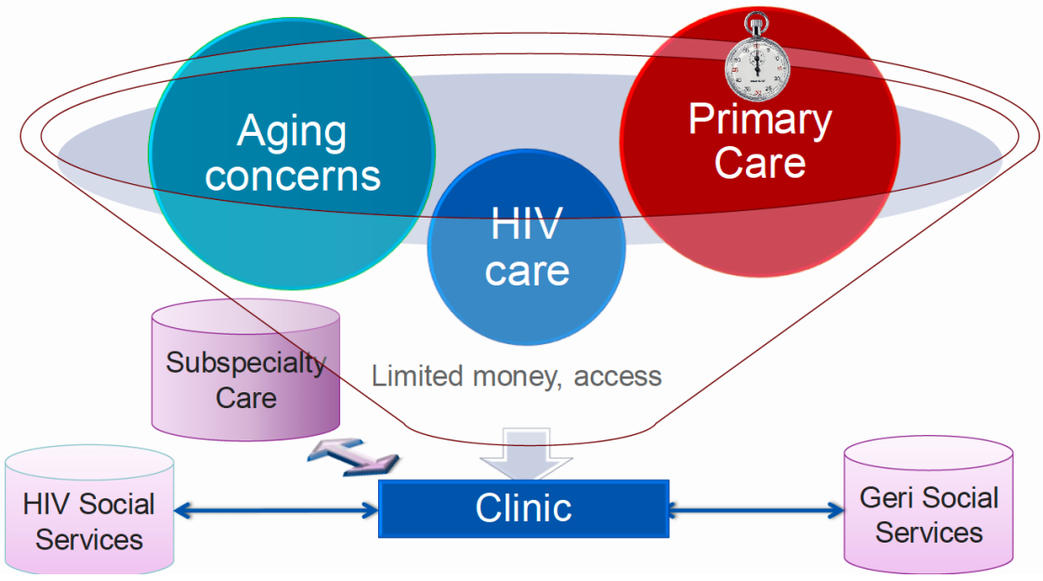
HRSA is funding a SPNS to develop HIV and Aging programs

Boston Medical Center
Mt. Sinai/Beth Israel
Centro Ararat
Colorado Health Network
Empower U
Family Health Centers of San Diego
University of Chicago
UPMC
Wake Forest
Yale

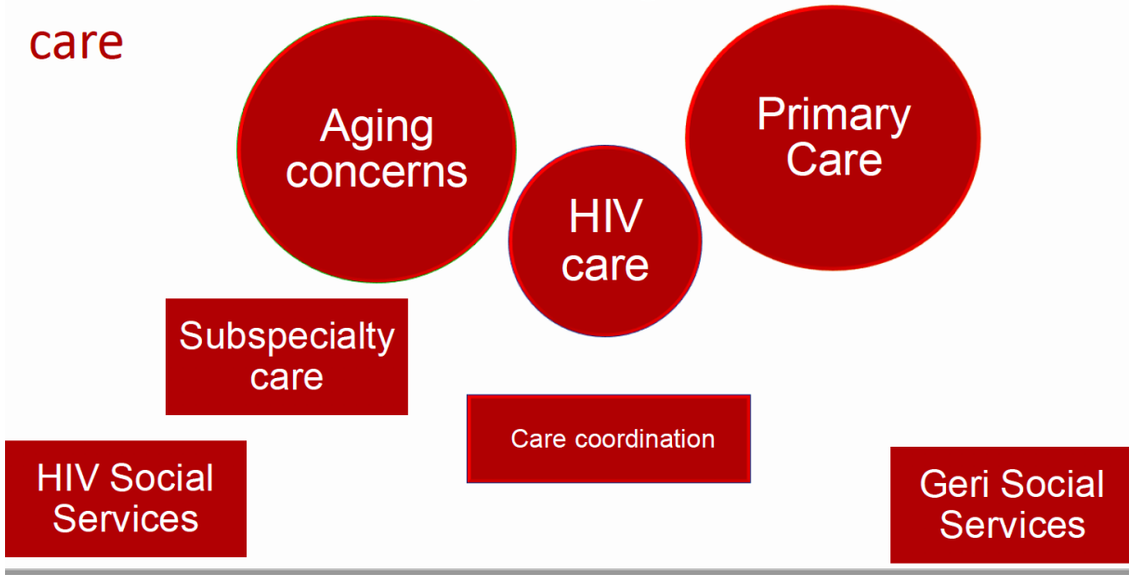
New York State is funding pilot programs



The clinic has usually been the central hub of care

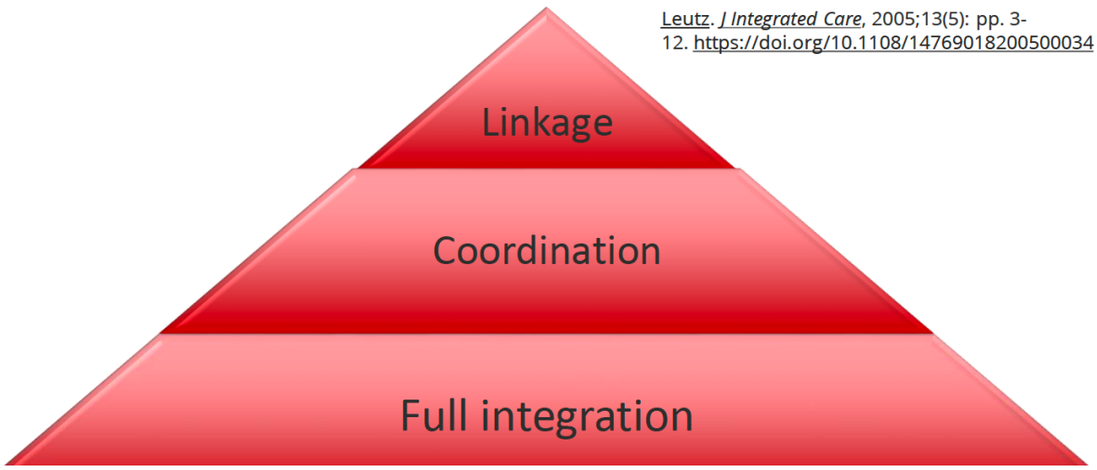


There are other ways to organize and provide care



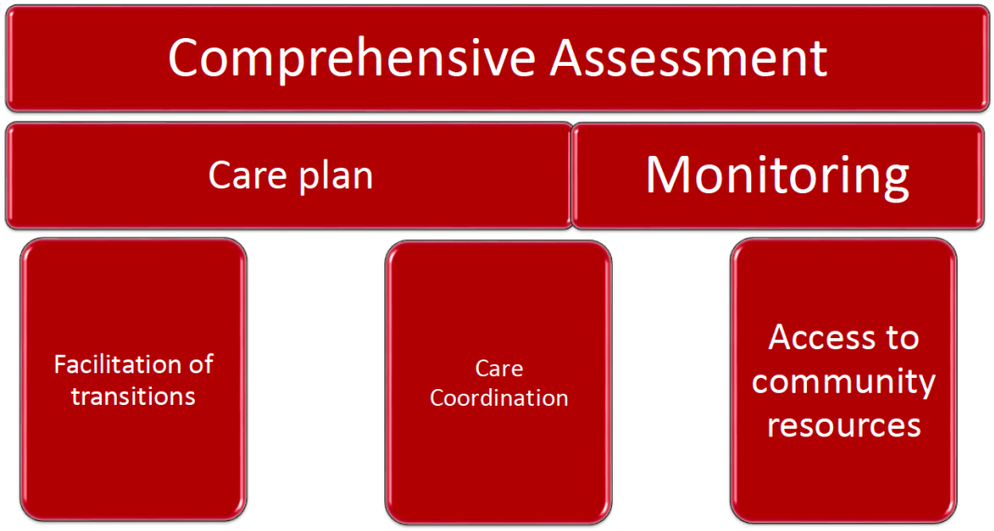
How do we integrate the the components of care?

Leutz defined three levels of care integration



Leutz. *J Integrated Care*, 2005;13(5): pp. 3-12. https://doi.org/10.1108/14769018200500034

Fully integrated models meet needs in all domains



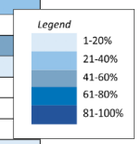
Boult and Wieland 2010: http://dx.doi.org/10.1001/jama. 2010.1623

LMIC have demonstrated how integrated systems can meet people where they are and offer what they need

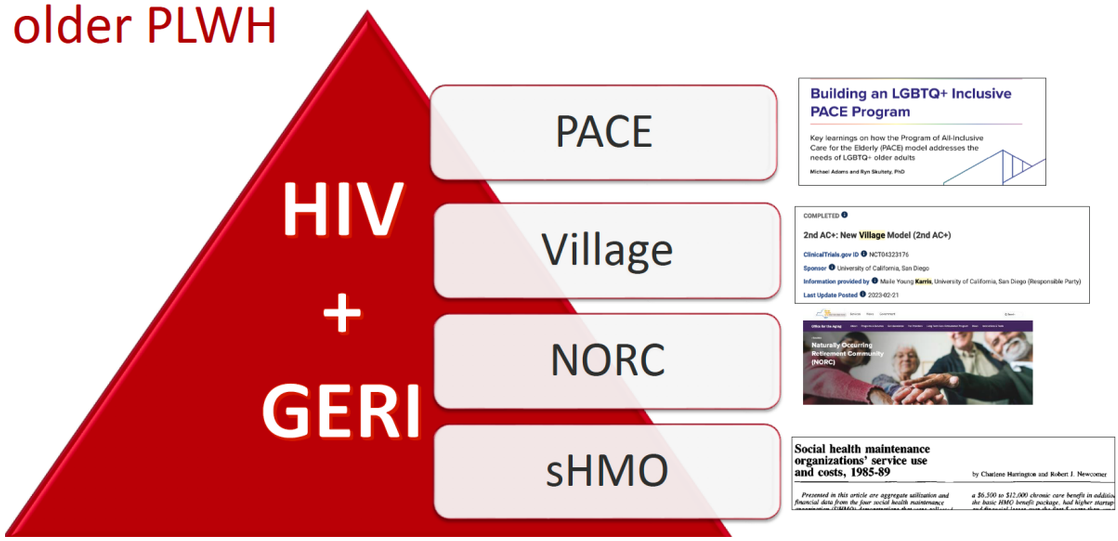
Adler et al. BMC HSR (2023) 23:99
https://doi.org/10.1186/s12913-023-09072-9

Table 5 Number and percentage of service type categories reported in study models stratified by health system level

Service	Community (*N*=55) n (%)	Health center (*N*=93) n (%)	Secondary level (*N*=31) n (%)	Tertiary level (*N*=30) n (%)	Specialty outpatient clinic (*N*=10) n (%)
Health promotion	22 (38)	6 (6)	3 (10)	1 (4)	0
Health education	36 (64)	62 (66)	20 (62)	21 (69)	7 (75)
Screening	34 (62)	42 (44)	10 (31)	14 (50)	3 (25)
Linkage to care	38 (70)	57 (62)	14 (48)	14 (50)	3 (25)
Initial diagnosis	4 (8)	45 (52)	18 (62)	8 (23)	0
Adherence support	21 (41)	20 (23)	4 (14)	8 (23)	4 (50)
Peer group facilitation	6 (9)	4 (3)	1 (3)	2 (4)	1 (13)
Acute care	2 (4)	3 (3)	0	3 (12)	0
Home based care	3 (6)	0	0	0	0
Home visits	18 (34)	10 (10)	1(3)	2 (8)	0
Psychotherapy	4 (8)	12 (13)	3 (7)	5 (19)	2 (13)
Medication dispensing	12 (23)	55 (63)	24 (83)	15 (54)	4 (50)
Patient follow-up	11 (21)	50 (55)	19 (62)	16 (46)	6 (63)
Monitoring	12 (23)	35 (40)	16 (52)	13 (42)	4 (50)
Medication management	1 (2)	11 (13)	13 (41)	11 (31)	4 (50)



We can adapt classic geriatric models of care for older PLWH



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Arc of Aging With HIV 1996-2022: From Promise to Disappointment and Despair

NIH HIV and Aging Research Virtual Meeting, September 5, 2023

Jules Levin, MS, National AIDS Treatment Advocacy Project (NATAP)

(Reported by Mark Mascolini for NATAP)

In his community perspective on aging with HIV, Jules Levin (National AIDS Treatment Advocacy Project, NATAP) hammered three overriding concerns: (1) Aging people with HIV, a quickly growing proportion of all US individuals with HIV, many suffer comorbidities at an earlier age than people without HIV depending apparently on various types of risk factors but in general older PWH infected 25-30 years ago are at greater risk, (2) they need better screening, prevention, and care of these comorbidities, and (3) better research on aging people with HIV is essential. Levin contended that “ageism is systemic in HIV care and research.”

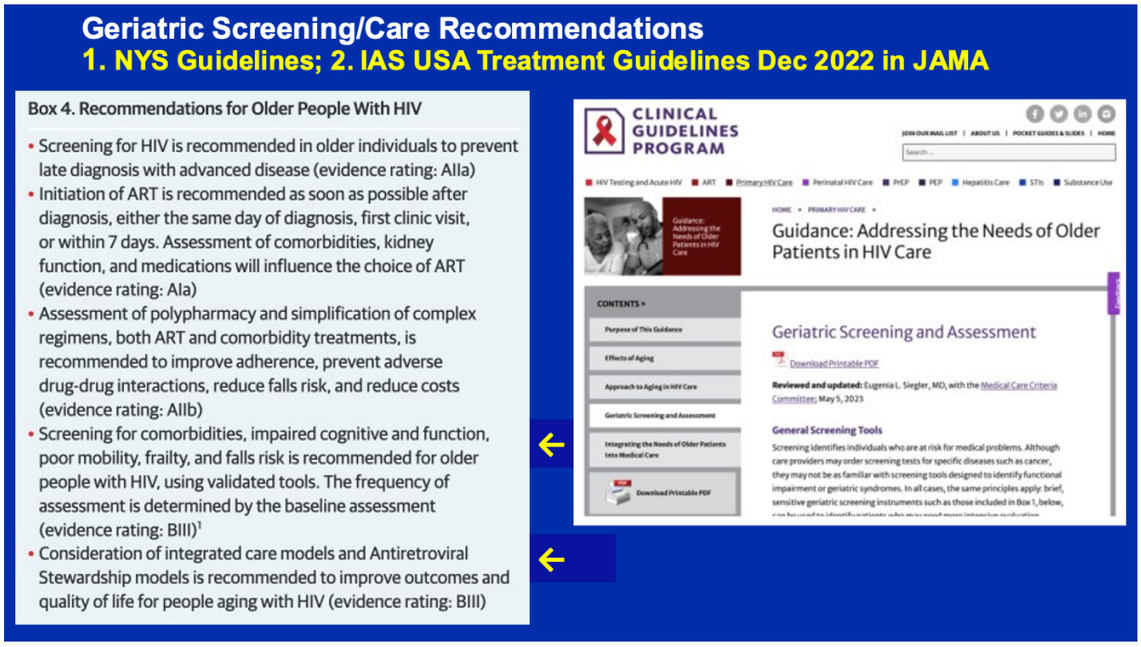
Among the heightened clinical threats seen in people with HIV compared with the general population, Levin listed cognitive impairment, declining physical function, premature heart attacks, falls and fracture, cancers, and kidney disease. Older women with HIV suffer higher diabetes rates than women without HIV.

Levin argued that “HIV aging research is outdated” and does not address pressing issues whose solution will lead to more effective intervention and implementation of care. “Care is horrible” for aging people with HIV, he maintained, listing as evidence of this charge (1) little or no coordination between primary care physicians and specialists, (2) inadequate 15- to 20-minute clinic visits for older

people with HIV, and (3) lack of geriatric-focused screening, prevention, and care. In his own experience, Levin added, a 20-minute video visit with his primary care physician "ignored my mental health, my bone disease, my physical decline." He implored stakeholders to develop a **Model of Care** that permits comprehensive integration of all of each person's clinical needs.

In the United States HIV infection is the only disease with dedicated funding of care—in the Ryan White Care Act. But that model is failing us, Levin charged, as many aging people with HIV are not getting their needs met. He called for restructuring the Ryan White Care Act and for implementation research to provide clinical care support. He reminded colleagues that the National HIV/AIDS Strategy (2022-2025) determined that "the US HIV care and treatment system must adapt to ensure that people aging with HIV can receive whole-person care that addresses their HIV- and aging-related health needs" [1]

Levin cited New York State Department of Health AIDS Institute guidance on caring for older people with HIV, which includes practical advice on geriatric screening for and assessment of HIV and on integrating the needs of older people with HIV into routine medical care [2]. Current IAS USA antiretroviral treatment guidelines concisely summarize specific advice for older people with HIV, including recommendations on HIV screening, starting antiretroviral therapy, assessing polypharmacy, screening for comorbidities, and considering integrated care models (figure below) [3]. The IAS USA recommends screening every HIV-positive person older than 50 for frailty, bone mineral density, cognitive function, and cardiovascular disease.



IAS USA guidance on caring for older people with HIV [3].

To address shortcomings in caring for aging people with HIV, Levin recommended "a joint collaborative funding mechanism that streamlines aging research in the ACTG [AIDS Clinical Trials Group], with community involvement." He observed that recent research budgets allotted $262 million to the National Institute on Drug Abuse, $241 million to the National Cancer Institute, and only $22 million to the National Institute on Aging.

Levin noted that improving HIV care has had an impact on life expectancy in people with HIV, at least those cared for in a health network like Kaiser Permanente, but life expectancy among HIV-positive people at least 21 years old still lags that of HIV-negative matched controls by nearly a decade [4]. In 2014-2016 comorbidity-free life expectancy for a 21-year-old with HIV lagged that of people without HIV by 7.4 years in those free of diabetes, 9 years in people free of cardiovascular disease, 10 years in people free of cancer, 15 years in people free of chronic lung disease, 16 years in people free of chronic kidney disease, and 24 years in people free of chronic liver disease.

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Health Disparities in People With HIV: Focus on Age and Black Women

NIH HIV and Aging Research Workshop, September 5, 2023

Moises Agosto-Rosario, NMAC (formerly National Minority AIDS Council), Washington, DC
Linda H. Scruggs, MHS, LPC, The Ribbon Center of Excellence for Community Health, Largo, Maryland

(Reported by Mark Mascolini for NATAP)

The US National Institutes of Health (NIH) HIV and Aging Working Group convened a virtual workshop on September 5, 2023 to address the topic "HIV and Aging Research: Current Landscape and Opportunities." This workshop aimed to gather researchers, community members, and federal partners with two key goals in mind: (1) to survey the current landscape of HIV and aging research and (2) to identify key future research directions to address the biomedical, behavioral, and social needs of people aging with HIV.

The workshop began with three community perspectives, two of which addressed health disparities in people with HIV. Moises Agosto-Rosario focused on the most vulnerable populations, while Linda H. Scruggs explored the evolving place of Black women in the National HIV/AIDS Strategy and HIV research in general. (A third community perspective on HIV-aging research gaps and priorities, by NATAP's Jules Levin, appears separately at www.natap.org.)

Age- and race-based health disparities among people with HIV
Ageism is systemic in HIV care and research, Agosto-Ramirez maintained, and lifetime survivors of HIV infection have emerged as one of the most vulnerable HIV populations. HIV-positive African Americans and Latinx people using Medicare (US national health insurance for the elderly) have 3- to 4-fold higher comorbidity rates than the general population. Women with HIV have worse adherence to medications and worse outcomes than men. And older Black/Latina women with HIV carry a heavier diabetes burden.

Compared with other races/ethnicities in the same age group, Black Americans 55 and older had the highest number of new HIV diagnoses in 2020 (1241 followed by Whites at 1183 and Hispanics at 585) and the highest number of deaths (4818 followed by Whites at 3642 and Hispanics at 1876) [1], although Blacks make up only 14% of the US population.

While the whole US population had a median income of $64,994 in 2020, the median in people 65 or older lay at $47,484. Food insecurity affected 8.3% of the 65-or-older US population living alone and 7.9% of households with a member 65 or older. Almost 1 in 10 (9.3%) of people 65 or older were living in poverty in 2020.

Agosto-Ramirez posed four questions to federal agencies and to all involved in the field of HIV infection:

1. What kind of systematic and evidence-based strategies do federal agencies/HHS (Health and Human Services) have in place to address health disparities while creating and implementing HIV/geriatric models of care responsive to the needs of Blacks, Latinx, Asians, and Native older adults living with HIV?

2. How do we integrate research on minority health and health disparities into current HIV research on older adults with HIV?

3. How do we ensure social determinants of health are systematically integrated into HIV research and proposed models of care for older adults of color with HIV?

4. What mechanisms are needed to overcome silos across HHS agencies and foster collaboration with concrete objectives and outcomes to address the care and socioeconomic needs of older adults with HIV?

National HIV/AIDS Strategy: Are Black women living with HIV making progress?
Linda Scruggs cited CDC [1] and US Census data indicating that Black American women accounted for 55% of new HIV diagnoses in females in 2020, although they made up only 13% of US women. In comparisons, White women accounted for 24% of new infections, Hispanics 17%, and multiracial people 2.3%.

Scruggs proposed that three overarching social factors put Black women at higher risk of HIV infection: (1) racism, discrimination, and HIV stigma, (2) unawareness of partners' risk factors, and (3) domestic violence or intimate partner violence.

And Black women fare worse once infected with HIV than other groups: In 2019, HIV mortality among Black women was 3 times higher than in White women and 4 times higher than in Hispanic women. In 2021, Black women and men 13 and older made up 42.5% of US people who died from AIDS for a combined mortality 3.4 times higher than the rate for all racial and ethnic groups combined. Compared with White women with HIV, Black women with HIV had 15.9 times higher mortality. Compared with White men with HIV, Black men had 5.8-fold higher mortality.

Scruggs closed with three questions for government and independent HIV researchers:

1. If half of all people living with HIV are women, why are most research participants men?
2. What research do you have now or in the works to address the syndemics that lead to inequitable outcomes for Black women living and aging with HIV?
3. What are your plans to improve the data collection and reporting on HIV among Black women living and aging with HIV?

Reference
1. Centers for Disease Control and Prevention. NCHHSTP AtlasPlus. https://www.cdc.gov/nchhstp/atlas/index.htm