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Guidance: Addressing the Needs of Older Patients in HIV Care

Updates, Authorship, and Related Resources

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Lead author	Eugenia L. Siegler, MD
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
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Purpose of This Guidance

Purpose: Because published evidence to support clinical recommendations is not currently available, this guidance on addressing the needs of older patients in HIV care was developed by the New York State Department of Health AIDS Institute (NYSDOH AI) to present good practices to help clinicians recognize and address the needs of older patients with HIV.

The goals of this guidance are to:

- Raise clinicians' awareness of the needs and concerns of patients with HIV who are ≥50 years old.
- Inform clinicians about an aging-related approach to older patients with HIV.
- Highlight good practices to help clinicians provide optimal care for this population.
- Provide resources about aging with HIV for healthcare providers and their patients.
- Suggest steps to guide medical settings in implementing geriatric care into HIV clinical practice.

Demographics: At the end of 2020, according to the Centers for Disease Control and Prevention, more than 52% of people with HIV in the United States were ≥50 years old[CDC 2023]. As of the end of 2020 in New York State, 60% of people with HIV were ≥50 years old, and nearly 30% were ≥60 years old[NYCDHMH 2021]. That same year, almost 19% of new HIV diagnoses in New York State occurred in people ≥50 years old, and one-third of them had progressed to AIDS at the time of diagnosis[NYCDHMH 2021]. In light of these New York State demographics, the NYSDOH AI has developed this guidance to help care providers expand services for older people with HIV.

Ensuring appropriate care delivery: Although the effects of HIV on aging have been studied for years, HIV care has been acknowledged only recently as a domain of geriatrics[Guaraldi and Rockwood 2017]. Geriatric assessment provides a complete view of a patient's function, cognition, and health, and improves prognostication and treatment decisions[Singh, et al. 2017]. As the population with HIV grows older, the application of the principles of geriatrics can enhance the quality of care.

Definition of terms:

- **"Older":** Published studies differ in their definitions of older patients with HIV (e.g., ≥50 years old, ≥55 years old, ≥60 years old), and the needs of individuals within different age groups may differ markedly. This guidance defines older patients as those ≥50 years old, which is the same definition used by the U.S. Department of Health and Human Services Guidelines

for the Use of Antiretroviral Agents in Adults and Adolescents With HIV[DHHS 2023]. Nonetheless, clinical programs may wish to distinguish different strata within this population, as their needs may differ; a local needs assessment is key to determining how best to care for this population as its age distribution continues to change.

- **"Long-term survivor":** The term long-term survivor has different meanings. Some have defined it as having been diagnosed with HIV before the era of effective antiretroviral therapy; others have defined it in terms of the length of time an individual has lived with HIV, e.g., for at least 1 or 2 decades. Long-term survivors can be any age. For example, older teens and adults who were perinatally infected are long-term survivors. It is useful to ask patients if they self-identify as long-term survivors and what that term means to them.

Effects of Aging

Long-term survivors appear to have physiologic changes consistent with advanced or accentuated aging[Akusjarvi and Neogi 2023], even at the level of gene expression and modification[Esteban-Cantos, et al. 2021; De Francesco, et al. 2019]. When compared with age-matched controls who do not have HIV, older patients with HIV have more comorbidities [Verheij, et al. 2023] and polypharmacy[Kong, et al. 2019; Guaraldi, et al. 2018]; poorer bone health[Erlandson, et al. 2016]; and higher rates of cognitive decline[Goodkin, et al. 2017; Vance, et al. 2016], depression[Do, et al. 2014], and aging-related syndromes, such as gait impairment and frailty[Falutz 2020]. Mental health can also be affected in many ways; in 1 study of individuals with HIV ≥50 years old in San Francisco, the majority of participants reported loneliness, poor social support, and/or depression, and nearly half reported anxiety[John, et al. 2016]. Older individuals may also experience negative effects due to the stigma of ageism, which may be compounded by other kinds of stigma, such as racial, gender, or HIV-related stigma[Johnson Shen, et al. 2019]. In addition, long-term survivors, who may have expected to die at a young age like so many of their peers, may feel survivor's guilt[Machado 2012].

These age-related concerns are not limited to long-term survivors. Although individuals who are ≥50 years old with newly diagnosed HIV are not likely to exhibit the same degree of age advancement as those who have lived a long time with HIV, they may have a delayed diagnosis, low CD4 cell counts, and AIDS at the time of diagnosis[Tavoschi, et al. 2017]. Late initiation of antiretroviral therapy increases the long-term risk of complications[Molina, et al. 2018].

Sex differences in the effect of HIV on aging remain an area of controversy. Studies in several countries have found that women with HIV have life expectancies closer to their HIV-negative counterparts than do men with HIV, but this finding has not been supported by studies in North America[Pellegrino, et al. 2023; Wandeler, et al. 2016; Samji, et al. 2013]. A Canadian study showed shorter life expectancy among women with HIV than men with HIV[Hogg, et al. 2017]. Women with HIV in resource-rich countries appear to have a heightened risk of comorbidities[Palella, et al. 2019], including cardiovascular disease[Kovacs, et al. 2022; Stone, et al. 2017], cognitive loss[Maki, et al. 2018], and more rapid declines in bone mineral density[Erlandson, et al. 2018].

Approach to Aging in HIV Care

→ GOOD PRACTICES

Approach to Aging in HIV Care

- Discussing the effects of aging with patients who have HIV and are ≥50 years old can help identify medical priorities and evaluate physical function. Such conversations may also prompt consideration of advance directives and help patients recognize the effects of age-associated stigma.
- Taking a proactive approach to aging to help prevent or slow functional and social decline.
- Becoming familiar with the many available screening tools and local and national services will help meet the needs of older patients with HIV.
- Screening for frailty or functional decline can enable early identification of at-risk patients.
- Including nonpharmacologic measures, such as exercise, nutrition, and socialization is essential to a patient's physical and emotional health.

→ GOOD PRACTICES

- Using a framework such as the geriatric 5Ms—mind, mobility, medications, multimorbidity, and matters most—can help inform the choice of screening tests or communicate geriatric concepts, but it is important that screening and assessment be performed with established tools that assess specific domains.
- Prioritizing treatment plans may help reduce the potential for polypharmacy in older patients with HIV who are being treated for multiple comorbidities.
- Evaluating medication lists at every clinical visit to eliminate unnecessary or toxic medications and to identify and mitigate potentially harmful drug-drug interactions will help minimize the effects of polypharmacy in older patients with HIV.
- Facilitating and simplifying access to care (e.g., arranging for a cardiologist to see a patient in the HIV primary care setting) and services as patients' care needs increase can improve overall adherence to and satisfaction with treatment.
- Having familiarity with the benefits and local sources of palliative care will help clinicians recognize and meet the needs of older patients who have HIV and other serious illnesses.
- Referring to a social worker or care coordinator can help older patients with HIV to transition from commercial insurance or Special Needs Plans (SNPs) to Medicare without experiencing a loss of services or medication coverage.

Discuss aging-related concerns: It is essential to discuss aging-related concerns with patients with HIV who are ≥50 years old. Some HIV healthcare providers and their patients have enduring relationships. Such longstanding ties promote high levels of trust, but they can also inhibit exploration of new concerns and promote too tight a focus on keeping viral load undetectable and treating common comorbidities. As a consequence, older individuals with HIV may not recognize concerns as aging-related or may feel it is unnecessary or inappropriate to discuss aging.

Care of older patients with HIV begins with recognizing that aging-related issues are a fundamental part of primary care. Geriatric concerns do not supplant other medical conditions; they reframe them in light of a multiplicity of problems and a finite lifespan. A geriatric approach, even for people in their 50s, can improve the quality of care. Older people with HIV may range from 50 to 80 years old and beyond and are a heterogeneous group. Providing care for older patients requires balance to avoid ageism and neglect of essential care *while at the same* prevent excessive, dangerous, or unnecessary treatments. Determining what is appropriate for patients begins with an assessment of their health and their priorities.

Asking questions such as, "Have you thought about aging?" or "What would you like to know about aging with HIV?" creates opportunities to learn about patient's concerns about the future and to discuss survivorship, guilt, ageism, financial worries, and other issues[Del Carmen, et al. 2019]. This is an opportunity to discuss healthy aging through lifestyle modifications that include exercise, diet, and socialization.

Sexual health: Older age does not preclude discussions of topics that are essential to health. For example, sexuality should be considered an essential part of health at any age. There is no age limit at which clinicians should stop taking a sexual history or discussing HIV pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) for partners. Initiating discussions of sexual health, including topics such as erectile dysfunction and loss of libido in men, menopause and postmenopausal sex in women, and screening for sexually transmitted infections as needed, may also provide insights into relationships and the strength of a patient's social network. For more information, see the Centers for Disease Control and Prevention Sexually Transmitted Infections Treatment Guidelines, 2021 > Screening Recommendations.

Cancer screening: Overall, patient health and priorities, rather than age, direct the frequency of cancer screening in individuals with HIV. The literature on adherence to cancer screening guidelines among individuals with HIV is mixed, with most [Corrigan, et al. 2019] but not all [Barnes, et al. 2018] studies failing to find that older individuals were screened less frequently. In patients with a good prognosis, clinicians should continue to follow screening guidelines (see the NYSDOH AI guideline Primary Care for Adults With HIV > HIV-Specific Primary Care). Screening can be re-evaluated when it conflicts with a patient's priorities or when a patient's prognosis is poor.

Aging-related syndromes and comorbidities: Some health concerns take on greater relevance as individuals with HIV age. Geriatric or aging-related syndromes, such as frailty, have received special attention. Frailty, which can be measured as a physical construct or as an "accumulation of deficits," is a measure of vulnerability[Kehler, et al. 2022]. Frailty has been associated with increases in falls [Erlandson, et al. 2019] and mortality[Piggott, et al. 2020; Kelly, et al. 2019], and multiple comorbidities [Masters, et al. 2021; Kelly, et al. 2019] have been linked to its development. However, it is possible to reverse frailty. Early identification may enable increased resources for those at highest risk and may also draw attention to associated comorbidities. Cardiovascular risk is increased in people with HIV, as is osteoporosis. Guidelines for bone mineral density

testing, in particular, are often not followed[Birabaharan, et al. 2021], despite the higher rates of osteoporosis and fractures in people with HIV compared with age-matched controls[Starup-Linde, et al. 2020].

Insurance and long-term care needs: Addressing aging-related concerns directly can help older patients with HIV discuss financial worries and prepare for the future when more personal assistance may be needed. Discussing insurance coverage with patients with HIV when they are in their 60s provides an opportunity to help them prepare for the transition from commercial insurance or SNPs to Medicare-based plans. Planning is essential because commercial insurance plans or SNPs often offer more comprehensive care coordination, medication coverage, and health-maintenance services than Medicare-based plans. People with HIV may need long-term care at an earlier age than those without HIV[Justice and Akgun 2019]. Open discussion about support systems can help patients begin to plan for their long-term care needs.

The 5Ms—an effective communication tool: The geriatric approach can be described as attention to the 5Ms: mind, mobility, multimorbidity, medications, and matters most[Tinetti, et al. 2017]. The 5Ms are a useful way to communicate geriatric principles or choose an area for screening. However, some aging-related syndromes (e.g., dizziness, incontinence) or activities of daily living may not easily fit into one of these categories. Nor do the 5Ms offer a structure for a comprehensive geriatric assessment. The following discussion addresses how the 5Ms can be used to understand and explain geriatric priorities and broaden the focus beyond specific comorbidities. The 5Ms are best viewed as an explanatory framework; it is important that screening and assessment be performed with formally recognized instruments (see Table 1: Assessment Domains for Older People With HIV and Selected Tools and Resources).

1. **Mind:** This category includes all domains of behavioral health, including cognition, mood, and other disorders. General assessment questions about instrumental activities of daily living (e.g., using transportation, managing medications, and handling finances) can provide information about practical concerns and offer clues about cognitive or emotional barriers to self-care. Healthcare providers can also use specific tools (i.e., Table 1) to screen patients for disorders such as depression or cognitive impairment, which may be caused by factors both related to and independent of HIV[Winston and Spudich 2020]. Even as the prevalence of HIV-associated neurocognitive disorder has decreased among individuals with HIV, having multiple comorbidities can increase the risk of cognitive impairment[Heaton, et al. 2023]. Identifying factors that can be addressed to prevent or slow cognitive deterioration is a fundamental part of assessment in this category.
2. **Mobility:** Healthcare providers can begin to address mobility with a general assessment of activities of daily living to determine whether patients have difficulty dressing or bathing. Discussion of a patient's fall risk can begin with a question such as, "Have you fallen in the past year?" or healthcare providers can use a comprehensive fall-risk screening tool.
3. **Multimorbidity and multicomplexity:** Care for older patients with HIV usually involves the management of multiple comorbidities, each of which may require treatment with multiple medications. Nonpharmacologic management (e.g., smoking cessation, dietary modification, exercise) can also improve symptoms associated with multiple comorbidities[Fitch 2019].

   A geriatric perspective recognizes that, in patients with multimorbidity, strict adherence to multiple disease-based treatment guidelines may not be possible or may jeopardize a patient's health. Simultaneous management of multiple chronic conditions necessitates establishing treatment priorities[Yarnall, et al. 2017], which requires understanding a patient's priorities[Tinetti, et al. 2019].
4. **Medications:** While older individuals with HIV are taking antiretroviral medications to suppress the virus, they may also be taking other medications to treat comorbidities, which can make medication management especially challenging. Polypharmacy is common, and women appear to be at higher risk than men, likely because of a higher prevalence of comorbidities[Livio, et al. 2021]. Medication evaluation should include a review of all medications, potential drug-drug interactions[Livio and Marzolini 2019], and short- and long-term toxic effects. It may be beneficial to simplify antiretroviral and other medication regimens to ensure that harms from drug-drug interactions and other adverse effects of treatment are avoided[Del Carmen, et al. 2019]. Caution is required when adjusting or simplifying antiretroviral regimens if changes involve either initiating or discontinuing a medication with pharmacologic inhibitive or induction actions; these changes may affect levels of coadministered medications.

   Consultation with a pharmacist can reduce drug-drug interactions and polypharmacy and help clinicians navigate the complexities of medication management in older patients[Ahmed, et al. 2023]. The University of Liverpool HIV Drug Interactions Checker is a useful tool for checking drug-drug interactions; also see NYSDOH AI resource Drug-Drug Interaction Guide: From HIV Prevention to Treatment.
5. **Matters most:** This is the broadest category and includes medical and social priorities, sexual health, and advance directives. This category may also include discussion of palliative care and frank discussion of long-term care needs and end-of-life plans. Advance directives should be addressed and, if an advance directive is in place, revisited. It is preferable for the patient to designate a specific agent or agents who can speak for them when they are incapacitated. Patients who cannot or will not identify a trusted individual to be their agent can complete the NYSDOH Medical Orders for Life-Sustaining Treatment (MOLST) to describe their wishes regarding medical treatment. The MOLST can now also be documented electronically in the eMOLST registry.

Geriatric Screening and Assessment

General Screening Tools

Screening identifies individuals who are at risk for medical problems. Although care providers may order screening tests for specific diseases such as cancer, they may not be as familiar with screening tools designed to identify functional impairment or geriatric syndromes. In all cases, the same principles apply: brief, sensitive geriatric screening instruments such as those included in Box 1, below, can be used to identify patients who may need more intensive evaluation.

For those programs that are just starting to identify the needs of their older patients, a general screening questionnaire is an excellent place to start. General screening questionnaires are usually appropriate for all older patients and long-term survivors and often are performed annually around a patient's birthday. Such screenings can be completed before a clinic visit; some questionnaires are completed by the patient and others are administered by a staff member. The modified World Health Organization integrated care for older people (ICOPE) screening tool has been tested for people with HIV in a New York State-wide pilot and can be administered by staff in person or over the phone; sites can also use other surveys based on workflows.

Why perform general geriatric screening? Not every patient requires a formal geriatric assessment. Tools for general geriatric screening are simple and cover a wide variety of domains; if the results indicate that more extensive assessment is warranted, then a more formal and comprehensive evaluation can be performed. Use of general screening tools can improve case-finding and, when coupled with referral, can enable targeted interventions but has not yet been shown to reduce hospitalizations or improve function[Rubenstein, et al. 2007].

Box 1: General Geriatric Screening Tools for Older Adults With HIV

- World Health Organization (WHO): Integrated care for older people (ICOPE): guidance on person-centered assessment and pathways in primary care
- NYSDOH HIV Quality of Care Program: Modified WHO ICOPE screening tool
- Vulnerable Elders Survey-13 (VES 13) [Saliba, et al. 2001]
- Medicare annual wellness visit:
  - Centers for Disease Control and Prevention: A Framework for Patient-Centered Health Risk Assessments
  - American College of Physicians: A Checklist for Your Medicare Wellness Annual Visit

Comprehensive Geriatric Assessment

When a patient has a positive result on a general geriatric screening test, the clinician may consider a more comprehensive assessment using validated tools. Formal assessment is more effective than clinical judgment at uncovering problems[Elam, et al. 1991; Pinholt, et al. 1987].

The Comprehensive Geriatric Assessment: The gold standard for geriatric evaluation is the Comprehensive Geriatric Assessment (CGA), which assesses multiple domains of health and function[Singh, et al. 2017]. Because it is comprehensive, the CGA is lengthy, and its use may not be feasible in many clinical settings. In the general geriatric outpatient setting, the CGA has not been shown to reduce mortality or nursing home placement, although it may reduce hospital admissions[Briggs, et al. 2022]. The CGA is a complicated process, requiring both expert assessors and clear care plans to manage areas of deficit, and its mixed success in the community likely stems at least in part from the complexity of creating a system that effectively responds to the assessment and includes patient buy-in.

Consulting experts in geriatric care: Some academic centers have tested models of collaboration with geriatricians[Davis, et al. 2022], including referral to geriatric consultants outside the practice, multidisciplinary geriatric care within the practice, and dual training of clinicians in geriatrics and HIV medicine. More models are being studied.

Choosing domains for focused assessment: Given the limitations in both the HIV care and geriatrics workforces[Armstrong 2021; American Geriatrics Society 2017], access to geriatricians may not be feasible. Community-based programs wishing to assess specific domains in the absence of available expert clinicians may choose from among many options.

Recommendations from community advisory boards and patient surveys can advise sites about patient priorities, and results from general screenings can prompt more broad assessments to identify high-prevalence problems. It may be difficult to implement needed aging-related assessments when access to expertise or funding is limited, but every attempt should be made to assess aging-related issues to the degree possible. Table 1, below, lists domains of geriatric assessment and selected resources for older patients with HIV.

Table 1: Assessment Domains for Older People With HIV and Selected Tools and Resources	
Area for Assessment	**Tools and Resources**
Functional Deficits and Geriatric Syndromes	
Basic activities of daily living (general)	Katz Index of Independence in Activities of Daily Living: bathing, dressing, toileting, grooming, transferring, locomotion
Instrumental activities of daily living	The Lawton Instrumental Activities of Daily Living (IADL) Scale: telephone, transportation, housekeeping, medication management, financial management, meal preparation
Continence	• National Association for Continence • Urinary incontinence in women: evaluation and management [Hu and Pierre 2019] (provides links to 3 different brief screening tools)
Exercise prescription	• ACSM Exercise is Medicine® Health Care Providers' Action Guide • Evidence-informed practical recommendations for increasing physical activity among persons living with HIV [Montoya, et al. 2019]
Frailty	CGA Toolkit Plus: Frailty
Mental Health	
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
Social isolation, loneliness	Multiple screening tools and interventions are available through: • Campaign to End Loneliness • UCSF Stress Measurement Network
Other areas (e.g., depression, anxiety, stigma)	• Patient Health Questionnaire-4 (PHQ-4): Ultra-Brief Screening for Anxiety and Depression • SAMHSA Growing Older: Providing Integrated Care for an Aging Population • CDC HIV Stigma and Discrimination
Comorbidities and Medications	
Managing multiple chronic conditions	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 [Boyd, et al. 2019]
Primary care of specific comorbidities	NYSDOH AI guideline Primary Care for Adults With HIV
ART choices and drug-drug interactions	• University of Liverpool HIV Drug Interactions Checker • NYSDOH AI resource Drug-Drug Interaction Guide: From HIV Prevention to Treatment • NYSDOH AI guideline Selecting an Initial ART Regimen > ARV Dose Adjustments for Hepatic or Renal Impairment
Medication choices and polypharmacy	• STOPP/START criteria for potentially inappropriate prescribing in older people: version 2 [O'Mahony, et al. 2015] • American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults [American Geriatrics Society 2019]

Table 1: Assessment Domains for Older People With HIV and Selected Tools and Resources	
Area for Assessment	**Tools and Resources**
Bone health	Management algorithms: • Recommendations for evaluation and management of bone disease in HIV [Brown, et al. 2015] • Diagnosis, prevention, and treatment of bone fragility in people living with HIV: a position statement from the Swiss Association against Osteoporosis [Biver, et al. 2019] • Management of osteoporosis in patients living with HIV: a systematic review and meta-analysis [Starup-Linde, et al. 2020]
Nutrition (food insecurity, obesity, undernutrition)	• USDA Food Security in the U.S. > Survey Tools • HIV and antiretroviral therapy-related fat alterations [Koethe, et al. 2020]
Quality of Life	
Advance directives	NYSDOH: • Health Care Proxy: Appointing Your Health Care Agent in New York State (includes fillable form) • Medical Orders for Life-Sustaining Treatment (MOLST) and eMOLST
Caregiving (requiring and providing)	Next Step in Care Toolkits, Guides, and More for Health Care Providers
Elder mistreatment	• New York State Coalition on Elder Abuse • National Center on Elder Abuse > Elder Abuse Screening Tools for Healthcare Professionals
Overall health, pain management	• CDC HRQOL-14 "Healthy Days Measure" • 2017 HIVMA of IDSA Clinical practice guideline for the management of chronic pain in patients living with HIV [Bruce, et al. 2017]
Palliative care, prognosis, and end-of-life plans	• Palliative care as an essential component of the HIV care continuum [Harding 2018] • Prognostic tools: – VACS Index Calculator – UCSF ePrognosis Calculators – Prognostic indices for older adults: a systematic review [Yourman, et al. 2012]
Sexual health and menopause	• NYSDOH AI GOALS Framework for Sexual History Taking • NYSDOH AI Guidance: Adopting a Patient-Centered Approach to Sexual Health • Clinical considerations for menopause and associated symptoms in women with HIV [Looby 2023] • Sexual health history: techniques and tips [Savoy, et al. 2020]
Abbreviations: ACSM, American College of Sports Medicine; AGS, American Geriatrics Society; ART, antiretroviral therapy; ARV, antiretroviral medication; CDC, Centers for Disease Control and Prevention; CGA, Comprehensive Geriatric Assessment; GOALS, Give Offer Ask Listen Suggest; HIVMA, HIV Medicine Association; HRQOL, Health-Related Quality of Life; IDSA, Infectious Diseases Society of America; MoCA, Montreal Cognitive Assessment; NIH, National Institutes of Health; NYSDOH AI, New York State Department of Health AIDS Institute; SAMHSA, Substance Abuse and Mental Health Services Administration; UCSF, University of California San Francisco; VACS, Veterans Aging Cohort Study.	

Integrating the Needs of Older Patients Into Medical Care

This guidance is designed to foster a shift in the practitioner's perspective when caring for older patients with HIV. However, the clinician cannot provide optimal care in the absence of support. Clinical practices can also begin to address HIV-related aging issues by taking the steps outlined in Box 2, below.

Box 2: Six Steps to Integrating Needs of Older Patients Into HIV Medical Care

1. Assess the clinic's ability to meet the needs of older patients with HIV:

- Review the demographics of the patient population to identify the number of patients in need of aging-related services at present and in the near- and long-term.
- Track patient requests for aging-related services and identify options for responding to those requests.
- Identify resources needed to address any aging-related priorities identified by a community or clinic advisory board.
- Identify clinic care providers who are experienced in geriatrics or the care of older patients.
- If the clinic is not able to provide multidisciplinary, comprehensive services, identify how the clinic can assist patients in accessing needed services.
- Anticipate problems with finances and insurance coverage for those approaching age 65 (earlier for those on disability) who are transitioning to Medicare.

2. Engage older patients with HIV in program planning:

- Provide ample opportunities for patients and clinical care providers and staff to identify needs to be addressed. This is an essential step for programs of any size. The University of California San Francisco used extensive patient input to develop its Golden Compass program for older individuals with HIV[Greene, et al. 2015].
- Provide opportunities for discussion of ageism and stigma, so patients and clinical care providers and staff can understand and identify its effects and how to address them.
- Develop a wish list of services and be realistic about what is possible. Set goals and a timeline for program development.

3. Consider options and develop protocols for identifying patients in need of aging-related care and services. For example, patients may be identified based on:

- Age: At base, a clinic can implement a policy that all patients with HIV who are ≥50 years old should undergo general screening; the clinic might also create a protocol that would add more focused and detailed screening (e.g., for memory or gait) to be initiated at an older age.
- Prognosis, such that a prognostic threshold for referral is established based on measures such as the Veterans Aging Cohort Study (VACS) Index Calculator
- Clinical criteria, such as a recent history of falls, deteriorating memory, polypharmacy, or frailty
- Patient request

4. Develop an assessment strategy:

- Identify who will perform assessments and how results will be communicated to patients and other care providers involved with the patient.
- Determine the scope of assessment: Will it focus on one particular problem (e.g., gait disorders, cognition), or will assessment address a broad array of problems? Examples of assessment types include the following:
  - **Global simple geriatric screening tools:** Global geriatric screening tools are available for administration by clinical staff or patient self-administration, at home or in the clinic. Dedicated time for assessment may be scheduled as part of primary care, following a model such as the Medicare Annual Wellness Visit[CMS 2022].
  - **Comprehensive assessment:** Some clinics may collaborate with aging specialists, such as geriatricians or nurse practitioners who specialize in gerontology and can perform a more detailed geriatric assessment as a consultation.
  - **Specific screening tools:** If a clinic has decided to focus on specific assessments, these can be built into the workflow. For example, a clinic may determine that all patients ≥55 years old will be screened for fall risk and cognitive impairment. In this case, patients could be asked to complete a fall-risk evaluation, such as the Centers for Disease Control and Prevention STEADI Algorithm for Fall Risk Screening, Assessment, and Intervention, before the visit, or a nurse could administer a timed walk test while the patient is walking from the waiting room to the exam room.
  - Any of the domains listed in Table 1: Assessment Domains for Older People With HIV and Selected Tools and Resources would be appropriate for inclusion in a program to enhance the care of older individuals with HIV.

5. Develop protocols for referral:

- Identify aging-related care and services that can be provided on-site and care and services that require referral to an external source. Referral protocols can be problem-specific. For example, if a patient is assessed as being at high risk for falls, the clinic should take a standard approach to address that risk, which could include referral to physical therapy, podiatry, or neurology; medication review; home safety assessment; and/or an exercise program.
- Identify local specialty care providers to whom patients can be referred.

Box 2: Six Steps to Integrating Needs of Older Patients Into HIV Medical Care

6. Link to the Aging Network for services:

- Connect individuals with HIV who are ≥60 years old to the Aging Network, an interconnected group of agencies that assists older adults in living independently. The Aging Network was initiated through the Older Americans Act of 1965 [National Health Policy Forum 2012].
- Become familiar with locally offered services and assist clients in preparing for the transition to Medicare when medication benefits and care coordination change.

◊ RESOURCES

Clinical Resources:

- Care of People Aging with HIV: Northeast/Caribbean AETC Toolkit
- American Geriatrics Society Publications and Tools
- American Geriatrics Society Geriatrics Workforce Enhancement Program (GWEP):
  - GWEP Coordinating Center
  - Finger Lakes Geriatric Education Center (Rochester, Ithaca)
  - Johns Hopkins Medicine GWEP
- Hartford Institute for Geriatric Nursing

Services and Entitlements:

- New York State Office for Aging (provides links to local agencies on aging and other resources like the state *Aging and Disability Resource Center*)
- USAging (from the Association of Area Agencies on Aging)
- Eldercare Locator
- EngAGED: The National Resource Center for Engaging Older Adults
- National Council on Aging *BenefitsCheckUp*
- National Aging and Disability Transportation Center
- Administration for Community Living > Aging and Disability Resource Centers
- Medicare Rights Center
- SAGE > Advocacy for LGBTQ+ Elders

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Supplement: Guideline Development and Recommendation Ratings

Table S1: Guideline Development: New York State Department of Health AIDS Institute Clinical Guidelines Program	
Developer	New York State Department of Health AIDS Institute (NYSDOH AI) Clinical Guidelines Program
Funding source	NYSDOH AI
Program manager	Clinical Guidelines Program, Johns Hopkins University School of Medicine, Division of Infectious Diseases. See Program Leadership and Staff.
Mission	To produce and disseminate evidence-based, state-of-the-art clinical practice guidelines that establish uniform standards of care for practitioners who provide prevention or treatment of HIV, viral hepatitis, other sexually transmitted infections, and substance use disorders for adults throughout New York State in the wide array of settings in which those services are delivered.
Expert committees	The NYSDOH AI Medical Director invites and appoints committees of clinical and public health experts from throughout New York State to ensure that the guidelines are practical, immediately applicable, and meet the needs of care providers and stakeholders in all major regions of New York State, all relevant clinical practice settings, key New York State agencies, and community service organizations.
Committee structure	• Leadership: AI-appointed chair, vice chair(s), chair emeritus, clinical specialist(s), JHU Guidelines Program Director, AI Medical Director, AI Clinical Consultant, AVAC community advisor • Contributing members • Guideline writing groups: Lead author, coauthors if applicable, and all committee leaders
Disclosure and management of conflicts of interest	• Annual disclosure of financial relationships with commercial entities for the 12 months prior and upcoming is required of all individuals who work with the guidelines program, and includes disclosure for partners or spouses and primary professional affiliation. • The NYSDOH AI assesses all reported financial relationships to determine the potential for undue influence on guideline recommendations and, when indicated, denies participation in the program or formulates a plan to manage potential conflicts. Disclosures are listed for each committee member.
Evidence collection and review	• Literature search and review strategy is defined by the guideline lead author based on the defined scope of a new guideline or update. • A comprehensive literature search and review is conducted for a new guideline or an extensive update using PubMed, other pertinent databases of peer-reviewed literature, and relevant conference abstracts to establish the evidence base for guideline recommendations. • A targeted search and review to identify recently published evidence is conducted for guidelines published within the previous 3 years. • Title, abstract, and article reviews are performed by the lead author. The JHU editorial team collates evidence and creates and maintains an evidence table for each guideline.
Recommendation development	• The lead author drafts recommendations to address the defined scope of the guideline based on available published data. • Writing group members review the draft recommendations and evidence and deliberate to revise, refine, and reach consensus on all recommendations. • When published data are not available, support for a recommendation may be based on the committee's expert opinion. • The writing group assigns a 2-part rating to each recommendation to indicate the strength of the recommendation and quality of the supporting evidence. The group reviews the evidence, deliberates, and may revise recommendations when required to reach consensus.

Table S1: Guideline Development: New York State Department of Health AIDS Institute Clinical Guidelines Program	
Review and approval process	• Following writing group approval, draft guidelines are reviewed by all contributors, program liaisons, and a volunteer reviewer from the AI Community Advisory Committee. • Recommendations must be approved by two-thirds of the full committee. If necessary to achieve consensus, the full committee is invited to deliberate, review the evidence, and revise recommendations. • Final approval by the committee chair and the NYSDOH AI Medical Director is required for publication.
External reviews	• External review of each guideline is invited at the developer's discretion. • External reviewers recognized for their experience and expertise review guidelines for accuracy, balance, clarity, and practicality and provide feedback.
Update process	• JHU editorial staff ensure that each guideline is reviewed and determined to be current upon the 3-year anniversary of publication; guidelines that provide clinical recommendations in rapidly changing areas of practice may be reviewed annually. Published literature is surveilled to identify new evidence that may prompt changes to existing recommendations or development of new recommendations. • If changes in the standard of care, newly published studies, new drug approval, new drug-related warning, or a public health emergency indicate the need for immediate change to published guidelines, committee leadership will make recommendations and immediate updates and will invite full committee review as indicated.

Table S2: Recommendation Ratings and Definitions		
Strength	**Quality of Evidence**	
A: Strong B: Moderate C: Optional	1	Based on published results of at least 1 randomized clinical trial with clinical outcomes or validated laboratory endpoints.
	*	Based on either a self-evident conclusion; conclusive, published, in vitro data; or well-established practice that cannot be tested because ethics would preclude a clinical trial.
	2	Based on published results of at least 1 well-designed, nonrandomized clinical trial or observational cohort study with long-term clinical outcomes.
	2†	Extrapolated from published results of well-designed studies (including nonrandomized clinical trials) conducted in populations other than those specifically addressed by a recommendation. The source(s) of the extrapolated evidence and the rationale for the extrapolation are provided in the guideline text. One example would be results of studies conducted predominantly in a subpopulation (e.g., one gender) that the committee determines to be generalizable to the population under consideration in the guideline.
	3	Based on committee expert opinion, with rationale provided in the guideline text.