



HRSA's Ryan White HIV/AIDS Program

Optimizing HIV Care for People Aging with HIV: Incorporating New Elements of Care

Reference Guide for Aging with HIV

PURPOSE

The purpose of this reference guide is to identify commonly occurring health care and social needs of people aging with HIV and to highlight the screenings and assessments for these needs. This reference guide serves as a starting point for the health care team as it builds and expands its knowledge and practice of serving people aging with HIV.

INTRODUCTION

Because of the successes of HIV treatment over the past three decades, people diagnosed with HIV now have a nearly normal life expectancy. Of the estimated 991,447 people with diagnosed HIV infection in the United States as of 2016, 169,424 (17%) were age 60 years or older; this number represents an absolute increase of 5.5 percent since 2012.¹ The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program estimates that of the 533,640 clients served in 2018, 46 percent were age 50 years or older—an increase from 32 percent in 2010.² Given these data, it is incumbent upon the clinical and public health communities to ensure the health care system is equipped to address adequately the unique medical conditions and psychosocial needs of people aging with HIV.

People aging with HIV share many of the same health concerns as the general population age 50 years and older. However, people aging with HIV also may experience unique health needs as a result of chronic HIV-related infections that require medical treatment.^{3,4} The HIV providers caring for people aging with HIV may lack specialized training in health issues specific to aging patients, similar to general primary care providers in the United States who are grappling with an aging population, as well.⁵ In addition, people aging with HIV—many of whom identify as lesbian, gay, bisexual, transgender, or queer—have unique social needs compared with the general aging population. People aging with HIV would benefit from having access to a multidisciplinary health care team that is knowledgeable about community resources available to the aging population and the nuances of health care financing and coverage.

The geriatric multidisciplinary approach to health care, when applied to people aging with HIV, can be highly beneficial.⁶ This approach involves all members of the health care team having an understanding of the geriatric conditions and adequately screening, assessing, treating, and referring patients for geriatric clinical and psychosocial conditions. A multidisciplinary team can build the capacity to conduct screenings and assessments for geriatric conditions and make referrals to aging-related resources, even if there is limited or no access to the geriatrician.

What Is a Geriatric Multidisciplinary Approach to Health Care?

It is a health care approach involving physicians, nurses, medical case managers, occupational therapists, social workers, and others to manage the care of people aging with HIV. Together, the health care team establishes patient-centered goals by addressing the domains of medical problems, cognitive and functional abilities, psychiatric disorders, and social circumstances and maximizes the use of community resources and referrals.

HEALTH CARE CHALLENGES OF PEOPLE AGING WITH HIV

Geriatric syndromes are different from other medical syndromes in that there may be multiple etiologies for a common symptom complex.⁷ People aging with HIV often have additional geriatric challenges. Typical symptoms, syndromes, and risk factors of people aging with HIV may include the following:

- ▶ Hearing decline or loss
- ▶ Impaired oral health⁸
 - ▶ An elevated prevalence of caries and periodontal disease is likely to affect older adults. Periodontitis is a risk factor for several systemic diseases, and impaired oral health is associated with nutritional problems. Those with cognitive deficiencies are especially at risk.
- ▶ Premature aging of the immune system⁹
 - ▶ Chronic viral infections, such as HIV infection, often cause immune activation and inflammation and are linked to premature age-associated conditions, including cardiovascular disease, frailty, and bone loss, even in patients using antiretroviral therapy (ART).
 - ▶ People aging with HIV may have a reduced immunological response to ART, rendering this therapy less effective.
- ▶ Cognitive impairment, which may have multiple etiologies
 - ▶ Cognitive impairment due to HIV-associated neurocognitive disorder (HAND) is a known complication of HIV.¹⁰ It is prevalent among those chronically infected with HIV, affecting 20 to 50 percent of people with HIV.¹¹
 - ▶ Cardiovascular risk factors, the presence of hepatitis C virus, substance use—including alcohol and methamphetamine¹²—female gender, and the presence of depression all have been shown to negatively affect cognitive function and frailty in people aging with HIV.¹³
- ▶ Functional impairment, the inability to carry out tasks that are needed for day-to-day living, is another critical condition that greatly affects daily life and is a core geriatric assessment. Its onset may be gradual, and the unsuspecting HIV provider may screen only after significant impairment is apparent. The health care team needs to assess functional impairment to determine the degree of HAND the person with HIV is experiencing.
- ▶ Falls, which may result from multiple underlying causes (such as functional impairment, frailty, gait instability, cognitive impairment, and adverse reactions to medications), are especially important to monitor and address because of the increased risk of osteoporosis and fractures among people with HIV.
- ▶ Polypharmacy among older adults is common,¹⁴ is associated with a higher risk of falls,¹⁵ and is especially challenging in people aging with HIV because they must take ART, in addition to other medications for comorbidities, as well as over-the-counter medications, vitamins, and supplements. Polypharmacy may contribute to cognitive impairment.¹⁶

HIV-Associated Neurocognitive Disorder (HAND) Classification

ANI: asymptomatic neurocognitive impairment—very mild neurocognitive disorder
MND: mild neurocognitive disorder
HAD: HIV-associated dementia

COMMON GAPS IN MEDICAL MANAGEMENT FOR PEOPLE AGING WITH HIV

Health care for people aging with HIV is an evolving field with new models of care, and recommendations are beginning to emerge. However, some common gaps in medical management that have already been identified include the following:

- ▶ Lack of knowledge about access to affordable hearing aids, glasses, and dental care

- ▶ Failure to assess functional or cognitive status and depression
- ▶ Limited awareness of decreased vaccine responses due to aging
- ▶ Failure to address sexual health, which may be less likely to be discussed because of competing comorbidities or the perception that older people are not sexually active. Providers should continue to ask about sexual activity—including asking about intimate partner violence—and provide appropriate guidance and treatment.

Care of People Aging with HIV Toolkit

The Northeast/Caribbean AIDS Education and Training Center has developed a [Care of People Aging with HIV Toolkit](#). The toolkit provides links to screening and assessment instruments, along with programs and papers that offer clinically useful materials.

SCREENING TOOLS FOR GERIATRIC CONDITIONS AMONG PEOPLE AGING WITH HIV

Functional Assessment

A patient's functional status is his or her ability to carry out tasks needed for day-to-day living. These tasks are grouped mostly into activities of daily living—which includes dressing, transferring, eating, grooming, and bathing—and instrumental activities of daily living, such as taking medications accurately, managing funds, using a telephone, grocery shopping, and preparing meals. Different tools are available for assessing a patient's functional status. The majority of these tools are self-reported questionnaires and may be applicable in a primary care setting. Linkage to resources on home health, nursing homes, day programs, and wellness centers can be initiated from the outcome of these assessments.

Frailty, Gait, and Falls Assessment

Frailty, gait, and falls are interrelated. Frailty is a clinically recognizable state of increased vulnerability resulting from an aging-associated decline in reserve and function across multiple physiologic systems, such that the ability to cope with everyday or acute stressors is compromised.^{17,18} Gait is one component used to determine a person's frailty. Increased frailty and poor gait result in more falls. According to the frailty criteria developed in the Cardiovascular Health Study, the overall prevalence of frailty in community-dwelling adults age 65 years or older in the United States ranged from 7 to 12 percent and increased with age.¹⁷ Gustafson and colleagues found that women with HIV were more likely to have frailty compared with women without HIV.¹⁹ Various screening tools are available for frailty and gait. See the [Care of People Aging with HIV Toolkit](#) for links to some of these tools.

Cognition Assessment: General and HIV-Specific

The U.S. Prevention Task Force has concluded that overall evidence is insufficient to make a single recommendation on screening for mild cognitive impairment; however, Medicare began covering the cost of diagnosing cognitive impairment as part of the annual wellness visit benefit in 2011.²⁰ Although no robust treatment options exist for cognitive impairment and little evidence supports that early detection will improve the patient's outcome,²¹ early detection of cognitive impairment can allow both patients and family members to start planning while the patient is still capable of making informed decisions. The health care team should conduct cognitive assessment screening if individuals complain of memory impairment or other symptoms or if family members identify lapses in memory. Furthermore, the health care team should assess the medications provided to people with HIV to identify and remediate any drug interactions that may cause cognitive impairment.

Although ART is effective at repressing circulating HIV, the central nervous system (CNS) may serve as a reservoir for HIV. Several ART medications are unable to cross the blood-brain barrier to target CNS-specific HIV, allowing the virus to continue to replicate. This replication may lead to neurocognitive disorders in people with HIV as they age. Screening and testing tools specific to HAND detection include the Montreal Cognitive Assessment (MoCA),²² Frascati criteria,²³ and the HIV dementia scale.²⁴ In a recent study, prevalence estimates for HAND diagnoses were 33 percent for asymptomatic neurocognitive impairment (ANI), 12 percent for mild neurocognitive disorder (MND), and

2 percent for HIV-associated dementia (HAD).²⁵ Although the incidence of HAD has been decreasing in recent years, the overall prevalence of all

HAND diagnoses has remained high or has increased over the same period, despite widespread use of ART.^{10,11}

MoCA is a 10-minute cognitive screening tool that is widely used in detecting mild cognitive impairment, especially early HAND. Detection of impairment may warrant further evaluation or referral to a geriatrician, neurologist, or neuropsychologist. It may be beneficial to interview the patient's family or persons who are close enough to identify changes in cognitive function.

Depression Assessment

The National Institute of Mental Health considers depression in older adults to be a significant public health problem.²⁶ Although widespread, depression in older adults often is undiagnosed and untreated, and the system of care for the treatment of depression lacks a unified approach. A thorough clinical evaluation is essential. Insomnia, which is very common in the older adults, is both a symptom of and a risk factor for depression. Left untreated, depression may contribute to physical, social, and cognitive impairment. Depression may delay recovery from medical treatments and may, in some cases, lead to suicide.

National HIV Curriculum

The [National HIV Curriculum](#), funded by the Health Resources and Services Administration AIDS Education and Training Center Program, provides ongoing, up-to-date information needed to meet the core competency knowledge for health care providers in the United States. A special topic section on "HIV in Older Adults" is available that covers many of the issues raised in this short report.

Free Continuing Medical Education contact hours and Continuing Medical Education credits are offered throughout the website. Pharmacology Continuing Education for advanced practice nurses is also available for many activities.

SOCIAL CHALLENGES OF PEOPLE AGING WITH HIV

- ▶ **Social isolation** may become more acute among people aging with HIV, particularly those who have experienced the loss of close friends to HIV throughout the past four decades or those who have limited family support.
- ▶ **Disclosure of medical information** is a relevant issue for people aging with HIV, who may wrestle with decisions about which components of their medical history they want to disclose to family or friends who may be supporting them.
- ▶ **Food and housing insecurity** are often areas of concern for people aging with HIV.
- ▶ **Financial management and management of health care benefits**, such as Medicare and Social Security, become more challenging as Americans age and can be especially complex for people aging with HIV because of the high cost of ART and treatment for comorbidities.
- ▶ **Traumatic life events** may affect the mental health of people aging with HIV, specifically those who have experienced trauma earlier in life, adding importance to intimate partner violence screening.

CONCLUSIONS

Providing optimal care for people aging with HIV requires a specific focus but can be incorporated into existing HIV care systems. A multidisciplinary approach that balances quality of life with medical necessity, as well as addressing the unique needs of people aging with HIV, is likely to result in improved health outcomes for this population.

REFERENCES

1. Centers for Disease Control and Prevention. 2018. *HIV Surveillance Report: Diagnoses of HIV Infection in the United States and Dependent Areas, 2017*. Available at www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2017-vol-29.pdf.
2. Health Resources and Services Administration. 2019. *Ryan White HIV/AIDS Program Annual Client-Level Data Report: Ryan White HIV/AIDS Program Services Report 2018*. Available at hab.hrsa.gov/sites/default/files/hab/data/datareports/RWHAP-annual-client-level-data-report-2018.pdf.
3. Blaylock, J. M., G. W. Wortmann. 2015. "Care of the Aging HIV Patient." *Cleve Clin J Med* 82 (7): 445–55.
4. Wing, E. J. 2016. "HIV and Aging." *Int J Infect Dis* 53: 61–8.
5. Boulton, C., S. R. Counsell, R. M. Leipzig, R. A. Berenson. 2010. "The Urgency of Preparing Primary Care Physicians to Care for Older People with Chronic Illnesses." *Health Aff (Millwood)* 29 (5): 811–8.
6. Greene, M., A. C. Justice, H. W. Lampiris, V. Valcour. 2013. "Management of Human Immunodeficiency Virus Infection in Advanced Age." *JAMA* 309 (13): 1397–1405.
7. Greene, M., K. E. Covinsky, V. Valcour, et al. 2015. "Geriatric Syndromes in Older HIV-Infected Adults." *J Acquir Immune Defic Syndr* 69 (2): 161–7.
8. Gil-Montoya, J. A., A. L. F. de Mello, R. Barrios, et al. 2015. "Oral Health in the Elderly Patient and Its Impact on General Well-Being: A Nonsystematic Review." *Clin Interv Aging* 10: 461–7.
9. Gross, A. M., P. A. Jaeger, J. F. Kreisberg, et al. 2016. "Methylome-wide Analysis of Chronic HIV Infection Reveals Five-Year Increase in Biological Age and Epigenetic Targeting of HLA." *Mol Cell* 62: 157–68.
10. Heaton, R. K., D. B. Clifford, D. R. Franklin, et al. 2010. "HIV-Associated Neurocognitive Disorders Persist in the Era of Potent Antiretroviral Therapy: Charter Study." *Neurology* 75 (23): 2087–96.
11. Eggers, C., G. Arendt, K. Hahn, et al. 2017. "HIV-1-Associated Neurocognitive Disorder: Epidemiology, Pathogenesis, Diagnosis, and Treatment." *J Neurol* 264 (8): 1715–27.
12. Weber, E., E. E. Morgan, J. E. Ludicello, et al. 2013. "Substance Use Is a Risk Factor for Neurocognitive Deficits and Neuropsychiatric Distress in Acute and Early HIV Infection." *J Neurovirol* 17: 50–7.
13. Paul, R. H., S. A. Cooley, P. M. Garcia-Egan, B. M. Ances. 2018. "Cognitive Performance and Frailty in Older HIV-Positive Adults." *J Acquir Immune Defic Syndr* 79 (3): 375–80.
14. Kaufman, D. W., J. P. Kelly, L. Rosenberg, T. E. Anderson, A. A. Mitchell. 2002. "Recent Patterns of Medication Use in the Ambulatory Adult Population of the United States: The Slone Survey." *JAMA* 287 (3): 337–44.
15. Freeland, K. N., A. N. Thompson, Y. Zhao, J. E. Leal, P. D. Mauldin, W. P. Moran. 2012. "Medication Use and Associated Risk of Falling in a Geriatric Outpatient Population." *Ann Pharmacother* 46 (9): 1188–92.
16. Park, H.-Y., J.-W. Park, H. J. Song, et al. 2017. "The Association Between Polypharmacy and Dementia: A Nested Case-Control Study Based on a 12-Year Longitudinal Cohort Database in South Korea." *PLoS One* 12 (1): e0169463. doi.org/10.1371/journal.pone.0169463.
17. Fried, L. P., C. M. Tangen, J. Walston, et al. 2001. "Frailty in Older Adults: Evidence for a Phenotype." *J Gerontol A Biol Sci Med Sci* 56 (3): M146–56.
18. Xue, Q. L. "The Frailty Syndrome: Definition and Natural History." 2011. *Clin Geriatr Med* 27 (1): 1–15.
19. Gustafson, D. R., Q. Shi, M. Thurn, et al. 2016. "Frailty and Constellations of Factors in Aging HIV-Infected and Uninfected Women—The Women's Interagency HIV Study." *J Frailty Aging* 5 (1): 43–8.
20. Moyer, V. A. 2014. "Screening for Cognitive Impairment in Older Adults: U.S. Preventive Services Task Force Recommendation Statement." *Ann Intern Med* 160 (11): 791–7.
21. Cullen, B., B. O'Neill, J. J. Evans, R. F. Coen, B. A. Lawlor. 2007. "A Review of Screening Tests for Cognitive Impairment." *J Neurol Neurosurg Psychiatry* 78 (8): 790–99.
22. Milanini, B., L. A. Wendelken, P. Esmaeili-Firidouni, et al. 2014. "The Montreal Cognitive Assessment (MoCA) to Screen for Cognitive Impairment in HIV Over Age 60." *J Acquir Immune Defic Syndr* 67 (1): 67–70.
23. Antinori, A., G. Arendt, J. T. Becker, et al. 2007. "Updated Research Nosology for HIV-Associated Neurocognitive Disorders." *Neurology* 69 (18): 1789–99.
24. Power, C., O. A. Seines, J. A. Grim, J. C. McArthur. 1995. "HIV Dementia Scale: A Rapid Screening Test." *J Acquir Immune Defic Syndr Hum Retrovirol* 8 (3): 273–8.
25. Sacktor, N., R. L. Skolasky, E. Seaberg, et al. 2016. "Prevalence of HIV-Associated Neurocognitive Disorders in the Multicenter AIDS Cohort Study." *Neurology* 86 (4): 334–40.
26. Centers for Disease Control and Prevention and National Association of Chronic Disease Directors. 2008. *The State of Mental Health and Aging in America*. Available at www.cdc.gov/aging/pdf/mental_health.pdf.