



**STRATEGIES TO IMPROVE
THE HEALTH OF OLDER
ADULTS LIVING WITH HIV**

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EXECUTIVE SUMMARY

Thanks to antiretroviral medications and improvements in care, people with HIV are living into their 50s, 60s, 70s, and beyond. Half of people living with HIV in the U.S. are age 50 or over. While this is a welcome development, growing older with HIV presents unique challenges including:

- the intersection of age-related stigma, HIV stigma, anti-gay stigma, racism, and other forms of prejudice;
- the lack of cultural competency on the part of health care, social service, and elder service providers to serve older adults with HIV;
- sexual health promotion and HIV/STI prevention among older adults;
- social isolation and lack of social support networks;
- comorbidities, including heart disease, diabetes, cancers, depression and cognitive decline;
- substance use, including tobacco use.

Health care providers serving older People Living with HIV (PLWH), and leaders at Ryan White-funded AIDS service organizations (ASOs) and community-based organizations (CBOs) serving this population, can take steps to ensure that older PLWH feel welcome at their institution and receive supportive, affirming services. Five key steps include:

1. Train all staff in the unique needs and experiences of older people living with HIV
2. Screen and treat for comorbidities, depression, and cognitive decline
3. Screen for substance use, including tobacco use, and promote treatment
4. Promote sexual health and HIV/STI prevention with this population
5. Strengthen social support networks and reduce social isolation

Older PLWH exhibit a great deal of resiliency and strength. In fact, many ASOs and government HIV prevention and care programs would not exist were it not for the vision and leadership many older PLWH exhibited in the early years of the AIDS epidemic. Still, older PLWH require core medical care services that address comorbid conditions in addition to HIV, and management of the many medications they may be taking in addition to antiretroviral medications. They may also need services, such as those funded by the Ryan White HIV/AIDS Program (RWHAP), to remain in continuous care and treatment adherent. This issue brief aims to assist HIV care providers in ensuring that their older clients receive high quality care needed to thrive well into older adulthood.



INTRODUCTION

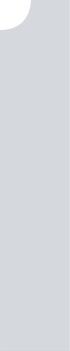
Thanks to the advent of successful antiretroviral therapies, HIV-positive individuals are now living into older adulthood. Many are flourishing in relatively good health. Individuals who begin highly active antiretroviral treatment (ART) at an initial CD4 count above 200 can expect to live well into their 70s and beyond.¹ Half of the 1.2 million people living with HIV in the U.S. today are age 50 or older—about 600,000 individuals.² Half to two thirds of these—300,000 to 400,000—are older gay and bisexual men.³ While longer life expectancy for people living with HIV is a welcome development, the growing population of people age 50 and older living with HIV has unique experiences and needs. It is critical that ASOs, CBOs, and health centers serving older adults living with HIV take steps to ensure that they are providing culturally competent and affirming care to this population and keeping them healthy in the process. This brief provides guidance to leaders at ASOs and CBOs who serve older adults living with HIV as well as health care providers to ensure that older people living with HIV/AIDS (PLWHA) can thrive in older adulthood.

Older adults living with HIV face a series of unique issues such as HIV-related health concerns, health concerns associated with growing older, multiple stigmas (ageism, homophobia, racism, and HIV-related stigma), and the dearth of economic resources available to many older adults. Older PLWHA report higher rates of health risk behaviors—such as smoking, alcohol, and substance use—and experience higher rates of mental health issues such as depression. Of particular concern are comorbidities, substance use, social isolation, barriers to accessing health care, and promoting sexual health education to reduce the transmission of HIV to others.

There are many things health care and AIDS service providers can do to create a more affirming environment for their older HIV-positive clients to improve the health of this population. We encourage you to:

1. Train all staff in the unique needs and experiences of older people living with HIV
2. Screen and treat for comorbidities, depression and cognitive decline
3. Screen for substance use, including tobacco use, and promote treatment
4. Promote sexual health and HIV/STI prevention with this population
5. Strengthen social support networks and reduce social isolation

Resources and model programs that correspond to each of these five recommendations are presented following the overview of these five actions.



TRAIN STAFF IN HOW TO PROVIDE CULTURALLY COMPETENT HEALTH CARE AND SOCIAL SERVICES TO OLDER ADULTS LIVING WITH HIV

Though ASOs, health centers, and other organizations may seem like accepting and inclusive establishments to the people who work within them, many older adults living with HIV are marginalized and may not feel comfortable in these settings. Many “experience the dual threat of HIV stigma and ageism.”⁴ Some people living with HIV report having been denied care or shamed due to their HIV status.⁵ It is critical that staff be trained in the unique issues facing older people living with HIV, and are able to provide affirming, culturally competent care to them. Because older PLWH may have multiple comorbidities and psychosocial needs, they will likely encounter multiple providers who all play a part in managing their care. By training staff to provide client-centered case management, providers will be better equipped to address HIV care in the context of myriad factors affecting a client’s ability to stay healthy and adherent.⁶

Because half to two-thirds of people living with HIV in the U.S. are gay and bisexual men⁷ or transgender women,⁸ it is also important that health care and service providers be trained in how to provide clinically competent and affirming care to these populations, particularly older adults who are gay and bisexual men or transgender women. Providing a welcoming and affirming clinical practice is an essential prerequisite to developing a relationship of trust and open communication with patients and clients.

Polypharmacy—the concurrent use of multiple medications—is common among older adults living with HIV.



2

SCREEN AND TREAT OLDER ADULTS LIVING WITH HIV FOR POTENTIAL COMORBID CONDITIONS

Many older adults who have been living with HIV for decades experience early onset of multiple comorbidities. A study of 180 HIV-positive people 50 and over in New York City found an average (mean) of 3.4 comorbidities. Many had clinical depression. Most had an AIDS diagnosis.⁹

Less than a third of deaths among people with HIV/AIDS in the U.S. are now due to diseases traditionally associated with HIV infection, such as Kaposi's sarcoma.¹⁰ Liver disease, cardiovascular disease, and cancer are now leading causes of morbidity and mortality among older people living with HIV.¹¹ The presence of these comorbidities in the context of suppressed immunity may add to the disease burden of aging PLWH.

Older adults' ability to metabolize antiretroviral medications is diminished and may result in increased toxicity.¹² Long exposure to antiretroviral therapy (ART) may increase the risk of heart attack¹³ and heart disease resulting from specific classes of antiretrovirals.¹⁴ Given the incidence of non-AIDS related comorbidities among older HIV-infected patients, adjusting medication regimens may be necessary to minimize toxicities and drug-drug interactions.¹⁵ In men over 50 years and postmenopausal women, bone density monitoring and replacing tenofovir disoproxil fumarate or boosted protease inhibitors with other antiretroviral medication is recommended in order to minimize the risk of fragility fractures. However, it is not recommended to suspend antiretroviral treatment due to the risk of rebound viremia associated with abrupt discontinuation of treatment.¹⁶ Barring adverse reactions to antiretroviral therapy, older patients should continue their regimens with any necessary adjustments and considerations for the increased prevalence of polypharmacy among HIV-positive older adults.

Many antiretroviral medications, particularly those in wide use a decade or more ago, can cause liver toxicity. For HIV-positive people co-infected with hepatitis, the interaction of some antiretrovirals and cholesterol medications can cause liver toxicity.¹⁷ Other side effects resulting from antiretroviral use include lipodystrophy, osteoporosis, pancreatitis, peripheral neuropathy, and buildup of lactic acid.¹⁸

Older adults with HIV/AIDS are at greater risk of developing cancer. Compared to the general population, people with HIV experience a significantly higher incidence of cancers, including Hodgkin's lymphoma, leukemia, melanoma, and colorectal, renal, anal, vaginal, liver, lung, mouth, and throat cancers.¹⁹ People living with HIV receive cancer diagnoses approximately 20 years earlier than the rest of the United States population.²⁰

Older adults living with HIV experience higher rates of depression.

On a cognitive level, older adults living with HIV may experience increases in impairment, also starting at an earlier age.²¹ Widespread cognitive impairment among people on treatment for a long time could be due to “chronic HIV-driven inflammation in an aging brain.”²² Different antiretroviral medications vary in their ability to penetrate the central nervous system (CNS) and reduce CNS HIV viral load.²³ However, findings suggest increased blood-brain barrier permeability among older adults. Furthermore, HIV-positive individuals over 50 years of age demonstrate considerably better adherence than those under 50. Regardless of the neuroprotection afforded by increased CNS permeability and better adherence, older adults are still at increased risk for HIV-associated cognitive decline and dementia. There appears to be a relationship between cognitive ability and adherence to antiretroviral medication specific to older adults.²⁴ It is likely that decline in cognitive ability affects medication adherence, and vice versa. Potential interventions may include the optimization of medication regimens that effectively reduce CNS HIV viral load and increased adherence support for cognitively impaired elders.

Some research suggests antiretroviral therapy may increase the risk of Alzheimer’s disease,²⁵ depression, and other psychiatric side effects.²⁶ A number of studies have found high rates of depression among older people living with HIV. Heckman et al. found that 29% of a sample (n=113) of HIV-positive adults 45 and older had moderate to severe depression and 31% had mild depression.²⁷ The ACRIA/GMHC study of 180 HIV-positive adults over 50 found that 53% had depression.²⁸ ACRIA’s Research on Older Adults with HIV study of nearly 1,000 New Yorkers found that 52% had depression.²⁹ Depression can correlate with low rates of antiretroviral medication adherence. However, treatment with antidepressant medication can improve antiretroviral adherence.³⁰

Polypharmacy—the concurrent use of multiple medications—is common among older adults living with HIV.³¹ Drug-drug interactions can cause medications to lose efficacy and increase toxicity.³² A thorough medication review on each patient visit is recommended. One low-technology method of doing this is the “brown bag” review, in which a patient brings all of the medications he or she is taking into the health care provider’s office, “including prescription medications, over-the-counter medications, vitamins, and herbal preparations.”³³

3

SCREEN PATIENTS/CLIENTS FOR SUBSTANCE USE, INCLUDING TOBACCO USE, AND CONNECT TO TREATMENT

Another area of concern for an older HIV-positive population is substance use.³⁴ Parsons et al. note that rates of substance use are higher in older individuals living with HIV than among age peers who are not living with HIV.³⁵ For this population, increases in depression (associated with the high levels of stress, stigma, and neurocognitive impairment that may accompany HIV) have been linked with increased use of substances, including alcohol, marijuana, cocaine, opioids, and benzodiazepines.³⁶ Increasingly heroin is being mixed with fentanyl, “its more potent killer cousin,” according to the *New York Times*.³⁷ Emerging research suggests that substance use in older HIV-positive MSM is associated with increased condomless sex, which places them and their partners at risk for STIs.³⁸ Interactions can occur between prescription medications and illicit substances.^{39,40} These interactions may make it difficult for individuals to adhere to their prescribed medications and could greatly reduce quality of life.

Access to mental health care and substance use treatment is particularly important for LGBT people. Studies show higher prevalence of mental health issues among lesbian, gay, and bisexual (LGB) populations compared to heterosexuals, including depression, anxiety, and suicidality.^{41,42,43,44} Gay and bisexual men are more likely than heterosexual men and lesbians to experience eating disorders and weight management issues.⁴⁵ Some studies show the highest mental health burden among bisexuals compared with homosexuals and heterosexuals, as well as higher rates of smoking.⁴⁶ Gay and bisexual men report higher rates of substance use than other men.⁴⁷ Crystal methamphetamine use is so dangerous an epidemic among gay and bisexual men that *The Fenway Guide to Lesbian, Gay, Bisexual and Transgender Health* “suggest[s that] primary care providers should screen for this substance use in all gay and bisexual men.”⁴⁸ Many gay men living with HIV struggle with crystal meth use. Crystal meth use can lead to depression, mania, and psychosis, as well as cardiovascular disease, overdose, and death.⁴⁹

People with HIV of all ages smoke at more than twice the rate of the general U.S. adult population. Some 42% of people with HIV smoke,⁵⁰ while about 17% of all U.S. adults do.⁵¹ Given that half to two-thirds of people living with HIV are gay and bisexual men, it’s important to understand that lesbian, gay and bisexual people smoke at a higher rate than the general straight population: 24% versus 17%.⁵² Compared with never smokers, current smokers who are HIV-positive are less likely to report an undetectable viral load and gastrointestinal opportunistic infections (OIs)⁵³. Former smokers are also more likely to report respiratory OIs when compared with never smokers. Therefore, a relationship between smoking and poorer HIV clinical markers seems

possible, and requiring tobacco cessation interventions tailored to the framework of HIV care services may be helpful. Another study of 2,952 HIV-infected patients explored other comorbidities associated with smoking in this population. Compared with never smokers, current smokers were more likely to have moderate/severe depression and more likely to report current substance abuse.⁵⁴ These factors were shown to impact antiretroviral medication adherence and viral load suppression, with current smokers less likely to report an undetectable viral load.

It is important to promote smoking cessation interventions with older adults living with HIV, who are more likely than younger HIV-positive individuals to smoke.⁵⁵ HIV-positive adults who smoke have lower quality of life and twice the mortality rate of people with HIV who don't smoke.⁵⁶ Contextual barriers to smoking cessation for LGBT people include stress related to anti-LGBT discrimination, fewer deterrents to smoking, and lack of access to culturally competent health care.⁵⁷

Despite higher rates of smoking among LGBT people compared with the general population (odds ratio of 1.5 to 2.5),⁵⁸ the 2009–2010 Adult Tobacco Survey found no difference in reported receipt of physician advice to quit smoking or follow-up between LGBT smokers and heterosexual, cisgender smokers.⁵⁹ Given the disproportionate burden of tobacco addiction among older adults living with HIV and older gay and bisexual men and transgender women living with HIV, providers should regularly screen these patients for tobacco use and follow-up more aggressively with assistance, including pharmacotherapy, referrals to cognitive behavioral therapy, referrals to culturally appropriate support groups, and other approaches.

Older adults living with HIV are more likely to smoke.

4

PROMOTE SEXUAL HEALTH AND HIV/STI PREVENTION WITH OLDER ADULTS LIVING WITH HIV

Given an increase in new HIV diagnoses among older adults in the past decade, sexual health education and HIV prevention with older adults is critically important. New HIV diagnoses increased by 5.3% for people age 45-54 in the U.S. from 2002 to 2011, and by 18.5% for those age 55 and older during the same time period.⁶⁰ In 2013 people age 50 or older comprised 21% of those newly diagnosed with HIV in the U.S.⁶¹

As the National Institute on Aging notes, older adults may have misconceptions about HIV and other sexually-transmitted infections (STIs). Many older adults may view HIV and STIs as risks that only affect young people.⁶² There is an assumption that older individuals are not sexually active. This false belief perpetuates the myth that older adults do not need sexual health education,⁶³ and contributes to lower rates of HIV testing among adults 50 and older.⁶⁴

Older adults report markedly lower rates of condom use.⁶⁵ The prevalence of erectile dysfunction, a common issue for older men, may also make effective use of a condom more difficult.⁶⁶ Due to greater longevity, there is an increasing gender imbalance of men to women within older age cohorts. With older women progressively outnumbering older men, there is increased bargaining power for men in heterosexual sex, which may contribute to lower rates of condom use and, in turn, greater HIV risk.⁶⁷

HIV prevention with older gay and bisexual men and transgender women is also important given the disproportionate burden of HIV on these populations. About two thirds of all new HIV infections in the U.S. occur among men who have sex with men (MSM).⁶⁸ While we have little HIV surveillance data on new HIV infections among transgender women, we know from studies that prevalence is high for this population as well, especially among Black transgender women.⁶⁹

While most HIV prevention is aimed at younger people, it is important that images of racially diverse older adults be used in campaigns promoting safer sex and HIV/STI testing. These should include images of racially diverse older heterosexual couples, as well as images of older gay men and transgender women.

Post-menopausal women often experience decreased estrogen, which causes vaginal dryness.

Federal guidelines recommend the use of pre-exposure prophylaxis (PrEP) for HIV prevention to reduce the risk of acquiring HIV infection in adults.⁷⁰ PrEP has been shown effective for MSM,⁷¹ heterosexuals,⁷² people who inject drugs,⁷³ and transgender women.⁷⁴ Of course, bisexuals are included in these populations as well—in different sex couples and in male same-sex couples. Individuals in any of these groups who engage in sexual intercourse without condoms and lubricant should consider PrEP in consultation with their health care provider.

Those providing health care and HIV/STI testing to high-risk individuals should educate about PrEP as a proven, effective tool to help them avoid HIV infection.

Recent studies have demonstrated a dramatic decrease in HIV transmission when HIV-positive individuals initiate suppressive antiretroviral therapy at higher CD4 counts.⁷⁵ The preventive effect of HIV treatment is known as “treatment as prevention.” Recent models of pre-exposure chemoprophylaxis implementation, coupled with scaled up HIV treatment, predict significant reductions in HIV incidence and prevalence.^{76,77,78}

ASO, CBO and health center leaders working with older adults living with HIV should educate their clients and patients about how to reduce the risk of transmitting HIV to others. “Prevention with positives,” or Treatment as Prevention, should be a focus of routine HIV primary care. By emphasizing patients’ own health through improved HIV medication adherence and treatment of comorbid disorders, the health of partners can also be prioritized. This prevention evaluation and intervention should include detailed HIV transmission risk assessment, STI screening, family planning discussions, identification and correction of misconceptions, tailored prevention messages with individualized interventions and referrals, and periodic reevaluation.⁷⁹

Treatment adherence and retention in regular medical care is a core strategy HIV prevention strategy. Post-menopausal women often experience hypoestrogenism, which causes vaginal dryness.⁸⁰ This can increase older women’s susceptibility to HIV and STI infection due to increased risk of vaginal tearing during intercourse. Using a water-based lubricant, both inside and outside the condom, simultaneously addresses receptive dryness and insertive sensation as both women and men age. By emphasizing the mutual benefits of lubricant and condom use for older adults, the acceptability of these prevention strategies may improve, thereby reducing risk of HIV and STI infection in this population.

5

STRENGTHEN SOCIAL SUPPORT NETWORKS AND REDUCE SOCIAL ISOLATION

HIV-positive older adults are more socially isolated than younger people living with HIV.⁸¹ Some studies use living alone as a proxy for social isolation, which may not always accurately reflect older adults engagement in support networks, particularly in large cities such as New York where living alone may be necessary to maintain ownership of a rent-stabilized apartment. Despite this caveat, older HIV-positive individuals perceive many barriers to receiving emotional and instrumental social support from friends and family. Barriers to receiving family support include concealment of HIV status and others' fear of casual transmission of HIV.⁸² HIV stigma, combined with stigma related to sexual behavior and injection drug use, can also limit caregivers' ability to access traditional social support networks and institutions of support, such as the African American church.⁸³ Because HIV is associated with male homosexuality and injection drug use, Black churches, and other churches across the U.S., have not always been welcoming support systems for people living with HIV.⁸⁴ For some people living with HIV/AIDS, HIV-positive peers replace those lost due to HIV-related stigma and rejection.⁸⁵ Strengthening peer relationships may help address social isolation in this population.

Older gay and bisexual men also experience elevated rates of social isolation. On average they are less likely to have children and grandchildren than older heterosexual adults.^{86,87} Some older gay/bi men and transgender women who have children are estranged from them due to lack of understanding or acceptance of their parents' gender identity or sexuality. LGBT elders are more likely to live alone than heterosexuals^{88,89} and to be single.^{90,91} Because most elder caregiving in the United States is provided by children or partners/spouses, LGBT elders may disproportionately rely on senior services, including formal caregiving assistance.⁹²

A number of studies have found widespread fear among older lesbians and gay men of being rejected because of their sexual orientation in senior care settings, by both residents and staff.^{93,94} Many gay and lesbian elders fear rejection or neglect by health care providers. This is often based on actual experiences of discrimination or culturally inappropriate treatment toward themselves or friends. Gay and lesbian seniors are particularly concerned about possible discriminatory treatment by personal care aides.^{95,96} Fear of rejection may cause older gay and bisexual men and transgender women to not seek access to social services upon which other older adults rely.

Social isolation has been linked to a decrease in health and quality of life.⁹⁷ Many older HIV-positive adults may experience barriers to accessing resources and developing or maintaining social support networks. Such barriers may inhibit the effectiveness of the health care older adults living with HIV receive.

One possible solution to social isolation of older people living with HIV is to host social opportunities for HIV-positive older adults. Such group activities, either held within a health care organization or conducted by a partner site, could increase this population's access to social support. Topics—such as dating and being sexually active while living with HIV, medication adherence, dealing with stigma (from family, friends, coworkers, and health care professionals), and navigating insurance issues—can provide clients with more information on pertinent issues and create a space where individuals can connect with those who are facing similar difficulties.

Older PLWHA, and older gay and bisexual men, experience higher rates of social isolation.

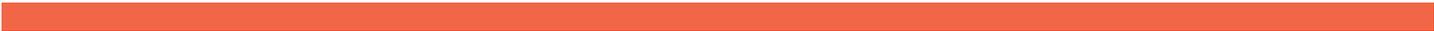
RESOURCES

RESOURCES TO TRAIN ALL STAFF IN THE UNIQUE NEEDS AND EXPERIENCES OF OLDER PEOPLE LIVING WITH HIV

The AIDS Education and Training Center (AETC), the training arm of the Ryan White HIV/AIDS Program, supports HIV education for health care professionals. AETC offers a Cultural Competency provider Self-Assessment Tool (CCPSA). Based on clinician responses to this assessment, the CCPSA tool links providers directly to other AETC HIV cultural competency and training curricula and resources.⁹⁸ The tool asks participants about their position, the training they have received, the type of facility they serve in, and the characteristics of the high risk HIV populations they serve. Furthermore, the tool assesses provider knowledge of the HIV prevalence, social services, support systems, and customs of the primary populations they serve. Based on the responses to the questionnaire, the tool directs the provider to any necessary curricula. For example, it might suggest a training to better address the needs of HIV-infected older adults who are also facing issues of substance abuse.⁹⁹ The tailored design of this assessment tool allows HIV clinicians to gain competency in the areas most relevant to their daily interactions with HIV-infected individuals.

The AIDS Community Research Initiative of America (ACRIA) offers excellent trainings on how to serve older adults living with HIV. Trainings address healthy sexuality, social isolation, substance use, retention in care, comorbidities, resiliency, and health promotion.¹⁰⁰ To address the multiple stigmas faced by LGBT older adults infected with HIV, it is necessary to train staff in both HIV and LGBT competency. Services and Advocacy for GLBT Elders (SAGE) runs the National Resource Center on LGBT Aging, which offers in-person trainings, webinars, online resources, and publications on a wide range of topics, including how to provide culturally competent services to LGBT elders.¹⁰¹

The National LGBT Health Education Center offers educational programs and resources in LGBT cultural competency and technical assistance to health centers, hospitals, health departments, and providers across the United States. Webinars,¹⁰² which are archived and available on-demand, address LGBT aging issues, HIV and aging, sexual health, transgender migrant workers, collecting sexual orientation and gender identity data in clinical settings, and other topics. Issue briefs¹⁰³ address promoting affirming care for transgender patients, sexual transmission of hepatitis C among HIV-positive gay and bisexual men, and other topics.



RESOURCES TO SCREEN AND TREAT FOR COMORBIDITIES, DEPRESSION AND COGNITIVE DECLINE

The International Association of Providers of HIV Care offers online tools to assist providers in addressing 16 comorbidities commonly experienced by older adults living with HIV.¹⁰⁴ Tools related to cardiovascular disease (CVD), for example, include routine assessments, tools for estimating CVD risk, a risk assessment algorithm, lifestyle interventions, and possible antiretroviral therapy modifications.¹⁰⁵

With estimates of HIV-associated neurocognitive disorders exceeding 50%, and with higher rates among older patients, there is a significant burden of cognitive impairment in this population.¹⁰⁶ Due to earlier onset and confounding mood disturbances in HIV-infected populations, reliance on symptoms for diagnosis is insufficient. The University of California at San Francisco Memory Aging Center categorizes HIV-associated cognitive impairment into three groups: Asymptomatic Neurocognitive Impairment (ANI), Mild Neurocognitive Disorder (MND), and HIV-associated Dementia (HAD).¹⁰⁷ Though AIDS-related dementia has become increasingly rare, HIV-associated cognitive disorders may include deficits in attention, information processing, language, executive function, motor skills, memory, or sensory perception.¹⁰⁸ In order to diagnose impairments that affect both cortical and subcortical function, the Montreal Cognitive Assessment is recommended.¹⁰⁹ Exclusive use of symptom-based screening is likely to miss over 50% of cases.¹¹⁰ Though patients are likely to experience fluctuation in their cognitive impairment, deficits are more likely to occur with increased age and with increased disease severity.

RESOURCES TO SCREEN PATIENTS/CLIENTS FOR SUBSTANCE USE, INCLUDING TOBACCO USE, AND CONNECT TO TREATMENT

Given the growing epidemic of opioid abuse that usually starts with use of pain medication for acute or chronic pain management, health care providers should ask patients to self-assess using the Opioid Risk Tool.¹¹¹ This brief, self-administered tool can help screen out individuals with a greater likelihood of becoming addicted to prescription pain relievers. The National Institute on Drug Abuse also offers a general screening tool to assist clinicians in identifying substance use among their adult patients.¹¹²

The U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) has taken a number of steps to enhance LGBT cultural competency among mental health and substance use treatment providers. SAMHSA's Center for Substance Abuse Treatment includes an Addiction Technology Transfer Center, which is currently updating a curriculum on substance use treatment for LGBT people.¹¹³ Titled *A Provider's Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and Transgender Individuals*, the curriculum was first published in 2001 and has been updated several times since.¹¹⁴ SAMHSA also offers an LGBT training curricula for behavioral health and primary care providers, as well as resources to help families support their LGBT children and to help mental health professionals treat lesbian, gay bisexual, transgender and questioning (LGBTQ) youth who are survivors of sexual abuse.¹¹⁵

MODEL PROGRAMS

Smoking Cessation Interventions

The U.S. Public Health Service offers comprehensive clinical practice guidelines to help health care providers work with their patients to achieve smoking cessation.¹¹⁶ It also offers training modules that address a broad range of biobehavioral approaches to helping patients become smoke-free.

LGBT-Specific Smoking Cessation Interventions

LGBT-targeted smoking cessation interventions such as The Last Drag and Bitch to Quit show heterogeneity of results, with quit rates both greater than and less than quit rates for group-level interventions with the general population.¹¹⁷ An LGBT adaptation of the American Lung Association's Freedom From Smoking[®] program was shown effective, with a self-reported quit rate of 32.3 percent, a result in the expected range for community-based smoking cessation interventions.¹¹⁸



RESOURCES TO PROMOTE SEXUAL HEALTH AND HIV/STI PREVENTION WITH OLDER ADULTS LIVING WITH HIV

Many organizations provide guidelines and strategies for engaging in prevention education with HIV-positive clients, including the AIDS Policy Resource Center, The Body,¹¹⁹ the Centers for Disease Control and Prevention,¹²⁰ and AIDS Project Los Angeles.^{121,122} Furthermore, HIV prevention social marketing campaigns targeted toward HIV-infected individuals have been successful in several states, including HIV Stops With Me in New York and Maryland.¹²³ By sharing the personal stories of HIV positive individuals, HIV Stops With Me aims to prevent the spread of HIV while simultaneously reducing stigma by humanizing the epidemic. Many stories feature older adults who have been living with the virus for several decades, with diverse racial/ethnic, sexual, and gender identities.

Gay Men's Health Crisis (GMHC)¹²⁴ and ACRIA¹²⁵ have developed social marketing campaigns to promote HIV prevention with older adults and testing to determine one's serostatus. ACRIA also offers trainings on sexual health education with older adults and older women living with HIV through the New York State AIDS Institute,¹²⁶ and a workshop describing how adhering to antiretroviral treatment reduces one's chance of transmitting HIV to another person.¹²⁷ The National LGBT Health Education Center¹²⁸ and the Fenway Institute¹²⁹ have extensive resources on PrEP for individuals considering PrEP and for health care providers who want to talk with their patients about PrEP.



RESOURCES TO STRENGTHEN SOCIAL SUPPORT NETWORKS AND REDUCE SOCIAL ISOLATION

Screening is necessary to detect and address the prevalence of elder abuse and neglect. Assessment and intervention is especially important among HIV-positive elders due to higher prevalence of social isolation and fear of rejection. According to the U.S. Preventive Services Task Force, evidence is insufficient to demonstrate the harms and benefits of screening all older adults for harm or neglect.¹³⁰ However, The Joint Commission, National Center on Elder Abuse, National Academy of Sciences, and American Academy of Neurology all recommend routine screening, and many consider this to be a professional responsibility of physicians. Few tools have been validated for primary care settings. However, an elder abuse assessment and management flowchart is a helpful starting point. This tool provides guidance for screenings to be used based on whether or not the patient is cognitively intact, and next steps for further assessment, management and reporting of abuse and neglect.¹³¹

Released in April 2016, a San Francisco Chronicle documentary titled *Last Men Standing: Forgotten Survivors of AIDS*, brings attention to the challenges faced by aging survivors of the HIV epidemic, highlighting the social isolation they experience.¹³² Older adults face unique challenges when seeking support due to many having been infected in a time before the advent of antiretroviral therapy, when most of their peers, and support networks, were not surviving. It is necessary to acknowledge this form of social isolation compounded by the isolation experienced by older adults more generally.

MODEL PROGRAMS

“40 and Forward”

In 2008, the Fenway Institute in Boston piloted a group intervention to reduce HIV sexual risk, anxiety-related social avoidance, and depression-related withdrawal among gay and bisexual men 40 and older. The intervention, titled “40 and Forward,” consisted of a series of 2-hour weekly sessions that brought together racially diverse gay men aged 49 to 71 to socialize and discuss topics like safer sex. Intervention participants reported a significant decrease in depressive symptoms as well as a significant increase in condom use self-efficacy. The intervention also helped socially isolated older gay men develop social support networks, a critical resiliency factor against HIV, substance use, and mental health issues.¹³³

Congregate Meal Programs

The LGBT Aging Project coordinates more than a dozen monthly and weekly congregate meal programs for LGBT elders and their friends in locations across Massachusetts.¹³⁴ These meal programs provide nutritional support, and more importantly, help older LGBT adults sustain and strengthen social support networks. LGBT-friendly congregate meal programs are supported by funding from the Older Americans Act, and at least five states offer them.¹³⁵ Many Ryan White-funded AIDS service organizations also offer congregate meal programs, such as the AIDS Service Center of New York City (ASC NYC), and the Boston Living Center. ASC NYC provides a daily onsite meal program which serves a dual purpose of fighting hunger and building community among their clients.¹³⁶

Social Group Activities

Another approach to addressing social isolation is to offer social group activities.

ACRIA holds drop-in support groups for gay men living with HIV every Thursday night at the New York City LGBT Center.¹³⁷ It is important that some support services aimed at older adults living with HIV be available in the evening, as many older adults with HIV work. Many ASO services are targeted toward people who do not work and are available during the day. As more people with HIV live longer, healthier lives and seek to return to or stay in the workforce, it is important that ASOs and CBOs provide services that strengthen social support networks for all people living with HIV.



CONCLUSION

Many older adults living with HIV exhibit a great deal of resiliency. For example, individuals 50 and older are more likely to adhere to their antiretroviral treatment than younger individuals.^{138,139} Many are or were involved in advocacy that led to the creation of the HIV/AIDS treatment infrastructure, including many of the ASOs, CBOs, and health centers that are central to our nation's HIV prevention and care response today. Many encouraged government agencies and pharmaceutical companies to develop more and less toxic treatment options. It's important to keep this resiliency in mind and support it, even as we identify and respond to the social service and health care needs of older people living with HIV.

Despite this resiliency, many older adults living with HIV could benefit from improved cultural competency on the part of those providing health care and support services, sexual health education to reduce the risk of HIV transmission, strengthened social support networks, screening for comorbidities, and referral to substance use treatment and tobacco cessation services. Resources described in this issue brief can help ASOs, CBOs, and health centers to work more effectively with older adults and assist them to thrive.

REFERENCES

- ¹ Schneider, M. F., Grange, S. J., Williams, C. M., Anastos, K., Greenblatt, R. M., Kingsley, L., Muñoz, A. (2005). Patterns of the hazard of death after AIDS through the evolution of antiretroviral therapy: 1984-2004. *AIDS*, 19(17), 2009-2018.
- ² Effros RB, Fletcher CV, Gebo K, et al. *Aging and infectious diseases: Workshop on HIV infection and aging: What is known and future research directions*. *Clin Infect Dis*. 2008;47(4):542-553.
- ³ Centers for Disease Control and Prevention (2015, September 29). *HIV among gay and bisexual men*. Retrieved from: <http://www.cdc.gov/hiv/group/msm/>
- ⁴ Webel, A. R., Longenecker, C. T., Gripshover, B., Hanson, J. E., Schmotzer, B. J., & Salata, R. A. (2014). Age, stress, and isolation in older adults living with HIV. *AIDS Care*, 25(5), 523-531.
- ⁵ Anderson, B. J. (2009). HIV stigma and discrimination persist, even in health care. *AMA Journal of Ethics*, 11(12), 998-1001.
- ⁶ Health Resources and Services Administration. (2008). *HRSA care action: Redefining case management: US Department of Health and Human Services*. Retrieved from: <http://hab.hrsa.gov/newspublications/careactionnewsletter/november2008.pdf>
- ⁷ Centers for Disease Control and Prevention. (2016). HIV surveillance in men who have sex with men (MSM). *HIV/AIDS Statistics and Surveillance*. Retrieved from: <http://www.cdc.gov/hiv/topics/surveillance/resources/slides/msm/index.htm?source=govdelivery>
- ⁸ amfAR: The Foundation for AIDS Research (2014). *Trans population and HIV: Time to end the neglect*. Retrieved from <http://www.amfar.org/issue-brief-trans-populations-and-hiv-time-to-end-the-neglect/>
- ⁹ Cahill, S., Brennan, M., Candelario, N., Seidel, L., Guidry, J., Karpiak, S. (2010, November 12). Emerging client and service issues for older people living with HIV/AIDS. Services and Advocacy for GLBT Elders conference. New York.
- ¹⁰ Smith, C., & Data Collection on Adverse Events of Anti-HIV Drugs (D:A:D) Study. (2009). Association between modifiable and non-modifiable risk factors and specific causes of death in the HAART era: The data collection on adverse events of anti-HIV drugs study. Paper presented at Conference on Retroviruses and Opportunistic Infections Montreal, Canada, February 8-11.
- ¹¹ Capeau, J. (2011). Premature Aging and Premature Age-Related Comorbidities in HIV-Infected Patients: Facts and Hypotheses. *Clinical Infectious Diseases*, 53(11), 1127-1129.
- ¹² Gebo, K. A. (2006). HIV and aging: Implications for patient management. *Drugs & Aging*, 23(11), 897-913.
- ¹³ Bhavan, K., Kampalath, V., Overton, E. T. (2008). The aging of the HIV epidemic. *Current HIV/AIDS Reports*, 5(3), 150-158.
- ¹⁴ Deeks, S. G., Phillips, A. N. (2009). HIV infection, antiretroviral treatment, ageing, and non-AIDS related morbidity. *BMJ*, 338, 288-292. doi:10.1136/bmj.a3172
- ¹⁵ AIDSinfo. (2016, January 28). *Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents: Considerations for antiretroviral use in special patient populations, HIV and the older patient*. Retrieved from: <https://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv-guidelines/277/hiv-and-the-older-patient>
- ¹⁶ Harding, R., Simms, V., Krakauer, E., Delima, L., Downing, J., Garanganga, E.,...Lohman, D. (2011). Quality HIV care to the end of life. *Clinical Infectious Diseases*, 52(4), 553-554.
- ¹⁷ Gebo, K. A. (2006). HIV and aging: Implications for patient management. *Drugs & Aging*, 23(11), 897-913.
- ¹⁸ Ibid.
- ¹⁹ Patel, P., Hanson, D. L., Sullivan, P. S., Novak, R. M., Moorman, A. C., Tong, T. C., et al. (2008). Adult and Adolescent Spectrum of Disease Project and HIV Outpatient Study Investigators. Incidence of types of cancer among HIV-infected persons compared with the general population in the United States, 1992-2003. *Annals of Internal Medicine*, 148(10), 728-736.
- ²⁰ Shiels, M. S., Pfeiffer, R. M., & Engels, E. A. (2010). Age at cancer diagnosis among persons with AIDS in the United States. *Annals of Internal Medicine*, 153, 452-460. doi:10.7326/0003-4819-153-7-201010050-00008
- ²¹ Webel, A. R., Longenecker, C. T., Gripshover, B., Hanson, J. E., Schmotzer, B. J., & Salata, R. A. (2014). Age, stress, and isolation in older adults living with HIV. *AIDS Care*, 25(5), 523-531.
- ²² Portegies, P. (2010). HIV/HAART and the brain—what’s going on? *Journal of the International AIDS Society*, 13(4). doi:10.1186/1758-2652-13-S4-O35
- ²³ Letendre, S., Marquie-Beck, J., Capparelli, E., Best, B., Clifford, D., Collier, A. C. et al. (2008). Validation of the CNS penetration-effectiveness rank for quantifying antiretroviral penetration into the central nervous system. *Archives of Neurology*, 65(1), 65-70.
- ²⁴ Ettenhofer, M. L., Hinkin, C. H., Castellon, S. A., Durvasula, R., Ullman, J., Lam, M., Foley, J. (2009). Aging, neurocognition, and medication adherence in HIV infection. *American Journal of Geriatric Psychiatry*, 17(4), 281-290.
- ²⁵ Myers, J. D. (2009). Growing old with HIV: The AIDS epidemic and an aging population. *Journal of the American Academy of Physician Assistants*, 22(1), 20-24. Cited in Cahill and Valadez, 2013.
- ²⁶ Simone M, Appelbaum J. (2008). HIV in older adults. *Geriatrics*, 63(12), 6-12.
- ²⁷ Heckman TG, Kochman A, Sikkema KJ, Kalichman SC. (1999) Depressive symptomatology, daily stressors, and ways of coping among middle-age and older adults living with HIV disease. *Journal of Aging & Mental Health*, 5, 311-322. Cited in Schrimshaw, E. W., Siegel, K. (2003). Perceived barriers to social support from family and friends among older adults with HIV/AIDS. *Journal of Health Psychology*, 8(6), 738-752.
- ²⁸ Cahill, S., Brennan, M., Candelario, N., Seidel, L., Guidry, J., & Karpiak, S. (2010). Emerging client and service issues for older people living with HIV/AIDS. Services and Advocacy for GLBT Elders (SAGE) conference, New York.

- 29 Karpiak, S. E., Shippey, R. A., & Cantor, M. H. (2006). *Research on Older Adults with HIV*. New York: AIDS Community Research Initiative of America. Retrieved from: https://www.health.ny.gov/diseases/aids/providers/conferences/docs/roah_final_report.pdf
- 30 Moore, D. J., Posada, C. (2013, January). HIV and psychiatric comorbidities: What do we know and what can we do? *Psychology and AIDS Exchange Newsletter*. Retrieved from: <http://www.apa.org/pi/aids/resources/exchange/2013/01/comorbidities.aspx>.
- 31 Gleason, L. J., Luque, A. E., & Shah, K. (2013). Polypharmacy in the HIV-infected older adult population. *Clinical Interventions in Aging*, 8, 749-763. doi:10.2147/CIA.S37738
- 32 Ibid.
- 33 Ibid.
- 34 Edelman EJ, Tetrault JM, Fiellin DA. (2014). Substance use in older HIV-infected patients. *Curr Opin HIV AIDS* 9(4): 317-324 doi:10.1097/COH.0000000000000069.
- 35 Parsons, J. T., Starks, T. J., Millar, B. M., Boonrai, K., & Marcotte, D. (2014). Patterns of substance use among HIV-positive adults over 50: Implications for treatment and medication adherence. *Drug and Alcohol Dependence*, 139, 33-40. doi: 10.1016/j.drugalcdep.2014.02.704
- 36 Skalaski, L. M., Sikkema, K. J., & Heckman, T. G. (2013). Coping styles and illicit drug use in older adults with HIV/AIDS. *Psychology of Addictive Behaviors*, 27(4), 1050-1058.
- 37 Seelye, K. Q. (2016, March 25). Heroin yields ground to Fentanyl, its more potent killer cousin. *New York Times*. A1, A14.
- 38 Golub S, Botsko M, Gamarel K, Parsons J, Brennan M, Karpiak S. (2011). Dimensions of psychological well-being predict consistent condom use among older adults living with HIV. *Aging Int*. 36:346-360.
- 39 Gleason, L. J., Luque, A. E., & Shah, K. (2013). Polypharmacy in the HIV-infected older adult population. *Clinical Interventions in Aging*, 8, 749-763. doi:10.2147/CIA.S37738.
- 40 Lovejoy TJ, Heckman TG, Sikkema KJ, et al. (2008). Patterns and correlates of sexual activity and condom use behavior in persons 50-plus years of age living with HIV/AIDS. *AIDS Behav*. 12:943-956.
- 41 King, M., Semlyen, J., See Tai, S., Killaspy, H., Osborn, D., Popelyuk, D.,...Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self-harm in lesbian, gay and bisexual people. *BMC Psychiatry*, 8:70. doi:10.1186/1471-244X-8-70
- 42 Gilman, S. E., Cochran, S. D., Mays, V. M., Hughes, M., Ostrow, D., & Kessler, R. C. (2001). Risk of psychiatric disorders among Individuals reporting same-sex sexual partners in the national comorbidity survey. *American Journal of Public Health*, 91(6), 933-9.
- 43 Blonich, J. R., Bossarte, R. M., & Silenzio, V. M. (2012). Suicidal ideation among sexual minority veterans: Results from the 2005-2010 Massachusetts behavioral risk factor surveillance survey. *American Journal of Public Health*, 102(1), 44-7. doi:10.2105/AJPH.2011.300565
- 44 Goodenow, C. (2011). Prevention Needs of Sexual Minority Youth, MYRBS 1995-2009. PowerPoint presentation. Malden, MA: Massachusetts Department of Elementary and Secondary Education.
- 45 Ruble, M.W., & Forstein, M. (2008). Mental Health: Epidemiology, Assessment, and Treatment. In *The Fenway Guide to Lesbian, Gay, Bisexual and Transgender Health*, J. Makadon, K.H. Mayer, J. Potter (eds.). Philadelphia, PA: American College of Physicians.
- 46 Conron, K. J., Mimiaga, M. J., & Landers, S. J. (2010). A population-based study of sexual orientation identity and gender differences in adult health. *American Journal of Public Health*, 100(10), 1953-60.
- 47 Finlayson, T. J., Le, B., Smith, A., Bowles, K., Cribbin, M., Miles, L.,...DiNenno, E. (2011). HIV Risk, Prevention, and Testing Behaviors among Men Who Have Sex with Men—National HIV Behavioral Surveillance System, 2008, 21 U.S. Cities, United States, 2008. *Morbidity and Mortality Weekly Report*, 60(14), 1-34. Retrieved from: <http://www.cdc.gov/mmwr/pdf/ss/ss6014.pdf>.
- 48 Ruble, M. W. & Forstein, M. (2008). Mental Health: Epidemiology, Assessment and Treatment. In Makadon, H., Mayer, K., Potter, J., Goldhammer, H., (eds). *Fenway Guide to Lesbian, Gay, Bisexual, and Transgender Health*. American College of Physicians.
- 49 Ibid.
- 50 Centers for Disease Control and Prevention. (2015, March 14). Current cigarette smoking in the United States: Fact sheet. Retrieved from: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/
- 51 Ibid.
- 52 Ibid.
- 53 Ompad, D. C., Kingdon, M., Kupprat, S., Halkitis, S. N., Storholm, E. D., Halkitis, P. N. (2014). Smoking and HIV-related health issues among older HIV-positive gay, bisexual, and other men who have sex with men. *Behavioral Medicine*, 40, 99-107. doi: 10.1080/08964289.2014.889067
- 54 Cropsey, K. L., Willing, J. H., Mugavero, M. J., Crane, H. M., McCullumsmith, C., Lawrence, S.,...Saag, M. S. (2016). Cigarette smokers are less likely to have undetectable viral loads: Results from four HIV clinics. *Journal of Addiction Medicine*, 10(1), 13-19.
- 55 Centers for Disease Control and Prevention. (2015, March 14). Current cigarette smoking in the United States: Fact sheet. Retrieved from: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/
- 56 Griz, E. R., Vidrive, D. J., & Fingeret, M. C. (2007). Smoking cessation a critical component of medical management in chronic disease populations. *American Journal of Preventive Medicine*, 33(6 Suppl): S414-422. Retrieved from: <http://www.ncbi.nlm.nih.gov/pubmed/18021917>

- 57 Cochran S. D., & Vickie, M. (2006). Estimating prevalence of mental and substance-using disorders among lesbians and gay men from existing national health data. In *Sexual Orientation and Mental Health: Examining Identity and Development in Lesbian, Gay and Bisexual People*. Omoto, A. M. & Kurtzman, H. (eds.) Washington, DC: American Psychological Association. (Cited in Matthews, A. K., Chien-Ching, L., Kuhns, L. M., Tasker, T. B., & Cesario, J. A. (2013). Results from a community-based smoking cessation treatment program for LGBT smokers. *Journal of Environmental and Public Health*, 1-9. doi:10.1155/2013/984508)
- 58 Lee, J. G. L., Griffin, G. K., & Melvin, C. L. (2009). Tobacco use among sexual minorities in the U.S.A., 1987 to May 2007: A systematic review." *Tobacco Control* 18(4):275-82. doi:10.1136/tc.2008.028241
- 59 Lee, J. G., Matthews, A. K., McCullen, C. A., & Melvin, C. L. (2014). Promotion of tobacco use cessation for lesbian, gay, bisexual, and transgender people: A systematic review. *American Journal of Preventive Medicine* 47(6), 823-831.
- 60 Johnson, A. S., Hall, H. I., Hu, X., Lansky, A., Holtgrace, D. R., & Mermin, J. (2014). Trends in diagnoses of HIV infection in the United States, 2002-2011. *Journal of the American Medical Association*, 312(4), 432-434.
- 61 Centers for Disease Control and Prevention. (2015, October 7). HIV among people aged 50 and over: Fact sheet. Retrieved from: <http://www.cdc.gov/hiv/group/age/olderamericans/index.html>
- 62 National Institute on Aging. (2013, September 30). Aging with HIV: Responding to an emerging challenge. Retrieved from: <https://www.nia.nih.gov/newsroom/features/aging-hiv-responding-emerging-challenge>
- 63 Cahill, S. (2015). Community resources and government services for LGBT older adults and their families. Orel, N. A. & Fruhauf, C. A. (Eds.), *The lives of LGBT older adults: Understanding challenges and resilience* (141-169). Washington, DC: American Psychological Association.
- 64 Stall, R. & Catania, J. (1994). AIDS risk behaviors among late middle-aged and elderly Americans. The National AIDS Behavioral Surveys. *Archives of Internal Medicine*, 154, 57-63.
- 65 Sankar, A., Nevedal, A., Neufeld, S., Berry, R., & Luborsky, M. (2011). What do we know about older adults and HIV? A review of social and behavioral literature. *AIDS Care*, 23(10), 1187-1207.
- 66 Cahill, S., & Valadez, R. (2013). Growing older with HIV/AIDS: New public health challenges. *American Journal of Public Health*. 103(3). doi: 10.2105/AJPH.2012.301161
- 67 Ibid.
- 68 Centers for Disease Control and Prevention. (2016). HIV surveillance in men who have sex with men (MSM). *HIV/AIDS Statistics and Surveillance*. Retrieved from: <http://www.cdc.gov/hiv/topics/surveillance/resources/slides/msm/index.htm?source=govdelivery>
- 69 amfAR: The Foundation for AIDS Research (2014). *Trans populations and HIV: Time to end the neglect*. Retrieved from: <http://www.amfar.org/issue-brief-trans-populations-and-hiv-time-to-end-the-neglect/>
- 70 U.S. Public Health Service. (2014). Preexposure prophylaxis for the prevention of HIV infection in the United States - 2014. A clinical practice guideline. Atlanta: Centers for Disease Control and Prevention. Retrieved from: <http://www.cdc.gov/hiv/pdf/prepguidelines2014.pdf>
- 71 Grant, R. M., Lama, J. R., Anderson, P. L., McMahan, V., Liu, A. Y., Vargas, L.,...Glidden, D. V. (2010). Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *New England Journal of Medicine*, 363(27), 2587-2599.
- 72 Baeten, J. M., Donnell, D., Ndase, P., Mugo, N. R., Campbell, J. D., Wangisi, J.,...Celum, C. (2012). Antiretroviral prophylaxis for HIV-1 prevention among heterosexual men and women. *New England Journal of Medicine*, 367(5), 399-410.
- 73 Centers for Disease Control and Prevention (2013, July). *Bangkok tenofovir study: PrEP for HIV prevention among people who inject drugs*. Retrieved from: <http://www.cdc.gov/nchhstp/newsroom/docs/factsheets/archive/prep-idu-factsheet-508.pdf>
- 74 Deutsch, M. B., Glidden, D. V., Sevelius, J., Keatley, J., McMahan, V., Guanira, J.,...Grant, R. M. (2015). HIV pre-exposure prophylaxis in transgender women: a subgroup analysis of the iPrEx trial. *The Lancet*, 2(12), 512-519.
- 75 Myron, S., Cohen, M. D., Chen, Y. Q., McCauley, M., Gamble, T., Hosseinipour, M. C.,...Fleming, T. R. (2011). Prevention of HIV-1 infection with early antiretroviral therapy. *New England Journal of Medicine*, 365(6), 493-505.
- 76 Supervie, V., Garcia-Lerma, J. G., Heneine, W., & Blower, S. (2010). HIV, transmitted drug resistance, and the paradox of preexposure prophylaxis. *Proceedings of the National Academy of Sciences*, 107(27), 12381-12386.
- 77 Supervie, V., Barrett, M., Kahn, J. S., Musuka, G., Moeti, T. L., Busang, L., & Blower, S. (2011). Modeling dynamic interactions between pre-exposure prophylaxis interventions & treatment programs: predicting HIV transmission & resistance. *Scientific Reports*, 1(185). doi:10.1038/srep00185
- 78 Hallett, T. B., Baeten, J. M., Heffron, R., Barnabas, R., de Bruyn, G., Cremin, L.,...Celum, C. (2011). Optimal uses for antiretrovirals for prevention in HIV-1 serodiscordant heterosexual couples in South Africa; a modeling study. *PLoS Medicine*, 8(11):e1001123. doi:10.1371/journal.pmed.1001123
- 79 U.S. Department of Veterans Affairs. (2011, October 28). *HIV/AIDS: Prevention for positives, primary care of veterans with HIV*. Retrieved from <http://www.hiv.va.gov/provider/manual-primary-care/prevention-for-positives.asp>
- 80 Linsk, N. L. (2000). HIV among older adults: Age-specific issues in prevention and treatment. *The AIDS Reader*, 10(7), 430-440. Cited in Cahill S, Valadez R. Growing Older with HIV/AIDS: New Public Health Challenges. *Am J Public Health*. 2013 Mar;103(3):e7-e15. doi: 10.2105/AJPH.2012.301161.
- 81 Emler, C. A. (2006). An examination of the social networks and social isolation in older and younger adults living with HIV/AIDS. *Health and Social Work*, 31(4), 299-308.
- 82 Schrimshaw, E. W., Siegel, K. (2003). Perceived barriers to social support from family and friends among older adults with HIV/AIDS. *Journal of Health Psychology*, 8(6), 738-752.
- 83 Baker, S. (1999). Social networks and community resources among older, African American caregivers of people living with HIV/AIDS. *Journal of Cultural Diversity*, 6(4), 124-129.

- 84 Cohen, C. (1999). *The boundaries of Blackness: AIDS and the breakdown of Black politics*. Chicago, IL: University of Chicago Press.
- 85 Poindexter, C., Shippey, R. A. (2008). Networks of older New Yorkers with HIV: Fragility, resilience, and transformation. *AIDS Patient Care STDS*, 22(9), 723-733.
- 86 Gates, G. J., & Cooke, A. M. (2011). *United States Census Snapshot: 2010*. Los Angeles: UCLA Williams Institute. Retrieved from: <http://williamsinstitute.law.ucla.edu/wp-content/uploads/Census2010Snapshot-US-v2.pdf>.
- 87 deVries, B. (2006). Home at the end of the rainbow: Supportive housing for LGBT elders. *Generations*, 29(4), 64-9.
- 88 Brookdale Center on Aging at Hunter College, Senior Action in a Gay Environment (SAGE). (1999). *Assistive Housing for Elderly Gays and Lesbians in New York City: Extent of Need and the Preferences of Elderly Gays and Lesbians*. New York: Hunter College and SAGE.
- 89 Frazer, S.M. (2009). *LGBT health and human services needs in New York State*. Albany, NY: Empire State Pride Agenda Foundation. Retrieved from: <https://prideagenda.org/sites/default/files/pictures/LGBT%20HHS%20Needs.pdf>.
- 90 deVries, B. (2006). Home at the end of the rainbow: Supportive housing for LGBT elders. *Generations*, 29(4), 64-9.
- 91 MetLife Mature Market Institute and American Society on Aging. (2010). *Still out, still aging: The MetLife study of lesbian, gay, bisexual and transgender baby boomers*. Westport, CT: MetLife. Retrieved from: <http://www.lgbtagingcenter.org/resources/pdfs/StillOutStillAging.pdf>.
- 92 U.S. Department of Health and Human Services (DHHS). (1998). *Informal caregiving: Compassion in action*. Washington, DC: DHHS. Retrieved from: <http://aspe.hhs.gov/daltcp/reports/carebro2.pdf>.
- 93 Stein, G. L., Beckerman, N. L., & Sherman, P. A. (2010). Lesbian and gay elders and long-term care: Identifying the unique psychosocial perspectives and challenges. *Journal of Gerontological Social Work*, 53(5), 421-435. doi:10.1080/01634372.2010.496478.
- 94 Rivera, E., Wilson, S. R., Jennings, L. K. (2011). Long-term care and life planning preferences for older gays and lesbians. *Journal of Ethnographic and Qualitative Research*, 5, 157-170.
- 95 Stein, G. L., Beckerman, N. L., & Sherman, P. A. (2010). Lesbian and gay elders and long-term care: Identifying the unique psychosocial perspectives and challenges. *Journal of Gerontological Social Work*, 53(5), 421-435. doi:10.1080/01634372.2010.496478.
- 96 Stein, G. L., & Bonuck, K. A. (2001). Physician-patient relationships among the lesbian and gay community. *Journal of the Gay and Lesbian Medical Association*, 5(3), 87-93.
- 97 Webel, A. R., Longenecker, C. T., Gripschover, B., Hanson, J. E., Schmotzer, B. J., & Salata, R. A. (2014). Age, stress, and isolation in older adults living with HIV. *AIDS Care*, 25(5), 523-531.
- 98 AETC National Resource Center. (2012). *Cultural competency provider self-assessment tool (CCPSA)*. Retrieved from: <http://www.aidsetc.org/resource/cultural-competency-provider-self-assessment-tool-ccpsa>
- 99 AETC National Resource Center. (2015). *Substance use, HIV, and older adults: What clinicians need to know*. Retrieved from: <http://www.aidsetc.org/resource/substance-use-hiv-and-older-adults-what-clinicians-need-know>
- 100 ACRIA. (2015). *The training center*. Retrieved from: <http://www.acria.org/trainingcenter>
- 101 National Resource Center on LGBT Aging (n.d.). Retrieved from: <http://lgbtagingcenter.org/>
- 102 Fenway Institute. (n.d). *On-demand webinars*. Boston, MA: Fenway Institute. Retrieved from: <http://www.lgbthealtheducation.org/training/on-demand-webinars/>.
- 103 Fenway Institute. (n.d). *Publications*. Boston, MA: Fenway Institute. Retrieved from: <http://www.lgbthealtheducation.org/publications/top/>
- 104 My HIV Clinic. (2013). *Comorbidities and HIV*. Retrieved from: <http://myhivclinic.org/comorbidities-1>
- 105 My HIV Clinic. (2013). *Coronary Artery Disease*. Retrieved from: <http://myhivclinic.org/coronary-artery-disease>
- 106 Valcour, V., Paul, R., Chiao, S., Wendelken, L. A., & Miller, B. (2011). Screening for cognitive impairment in human immunodeficiency virus. *Clinical Infectious Disease*, 53(8), 836-842.
- 107 University of California Memory and Aging Center. (n.d.). *HIV-related cognitive impairment*. Retrieved from: <http://memory.ucsf.edu/education/diseases/hiv>
- 108 NIH National Institute on Aging. (2013). *Aging with HIV: Responding to an emerging challenge*. Retrieved from: <https://www.nia.nih.gov/newsroom/features/aging-hiv-responding-emerging-challenge>
- 109 MoCA. (2016). *Montreal Cognitive Assessment*. Retrieved from: <http://mocatest.org>
- 110 Valcour V, P. R., Chiao S, Wendelken LA, Miller B. (2011). Screening for cognitive impairment in Human Immunodeficiency Virus. *Clinical Infectious Disease*, 53(8), 836-842.
- 111 Webster, L. R., Webster, R. (2005). Predicting aberrant behaviors in opioid-treated patients: Preliminary validation of the opioid risk tool. *Pain Medicine*, 6(6): 432. Retrieved from: <https://www.drugabuse.gov/sites/default/files/files/OpioidRiskTool.pdf>
- 112 National Institute on Drug Abuse. (n.d.). *Clinician's screening tool for drug use in general medical settings: Resource guide*. Retrieved from: <https://www.drugabuse.gov/nmassist/>
- 113 U.S. Department of Health and Human Services (DHHS). (2015). *Healthy people 2020 progress review: Social determinants of health and lesbian, gay, bisexual, and transgender health*. Webinar. Washington, DC: DHHS. Presentation by SAMHSA Administrator Pamela Hyde.
- 114 Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment (CSAT). (2012). *A provider's introduction to substance abuse treatment for lesbian, gay, bisexual, and transgender individuals*. Rockville, MD: CSAT. Retrieved from: <http://store.samhsa.gov/shin/content/SMA12-4104/SMA12-4104.pdf>

- 115 U.S. Department of Health and Human Services (DHHS). (2015). Healthy people 2020 progress review: Social determinants of health and lesbian, gay, bisexual, and transgender health. Webinar. Washington, DC: DHHS. Presentation by SAMHSA Administrator Pamela Hyde.
- 116 Agency for Healthcare Research and Quality. (2008). Treating tobacco use and dependence: 2008 update. Retrieved from: <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/index.html>
- 117 Lee, J. G. L., Matthews, A. K., McCullen, C. A., & Melvin, C. L. (2014). Promotion of tobacco use for lesbian, gay, bisexual, and transgender people. *American Journal of Preventive Medicine*, 47(6), 823-831.
- 118 Matthews, A. K., Chien-Ching, L., Kuhns, L. M., Tasker, T. B., & Cesario, J. A. (2013). Results from a community-based smoking cessation treatment program for LGBT smokers. *Journal of Environmental and Public Health*, 1-9. doi:10.1155/2013/984508
- 119 The Body, The Complete HIV/AIDS Resource. (2015). *Safer sex for the HIV positive*. Retrieved from: <http://www.thebody.com/index/treat/prevpos.html>
- 120 Centers for Disease Control and Prevention (2014, December 11). Recommendations for HIV prevention with adults and adolescents with HIV in the United States, 2014. Retrieved from: <http://stacks.cdc.gov/view/cdc/26062>
- 121 AIDS Project Los Angeles (n.d.). Retrieved from: <http://www.apla.org/>
- 122 University of California, San Francisco. (n.d.). *HIV InSite, Comprehensive, up-to-date information on HIV/AIDS treatment, prevention, and policy from the University of California San Francisco: Prevention with Positives*. Retrieved from: <http://hivinsite.ucsf.edu/InSite?page=li-07-16>
- 123 HIV Stops With Me (n.d.) Retrieved from: <http://www.hivstopswithme.org/>
- 124 Gay Men's Health Crisis. (2010). *Growing older with the epidemic: HIV and aging*. Retrieved from: http://www.gmhc.org/files/editor/file/a_pa_aging10_emb2.pdf
- 125 ACRIA. (n.d.) *Health communication*. Retrieved from: <http://www.acria.org/healthcom>
- 126 NYS Department of Health AIDS Institute, HIV Education & Training Programs. (n.d.). *Upcoming courses*. Retrieved from: <http://www.hivtrainingny.org/Home/CourseListings?SiteID=9>
- 127 ACRIA (n.d.). *Community workshops/services*. Retrieved from: <http://www.acria.org/community>
- 128 National LGBT Health Education Center. (n.d.) *HIV/STI treatment and prevention*. Retrieved from: <http://www.lgbthealtheducation.org/topic/hiv-stis/>
- 129 The Fenway Institute. (n.d.) *What is PrEP?* Retrieved from: <http://thefenwayinstitute.org/prepinfo/>
- 130 Hoover, R. M., Polson, M. (2014). Detecting elder abuse and neglect: Assessment and intervention. *American Family Physician*, 89(6), 453-460.
- 131 Bomba, P. (2006). Use of a single page elder abuse assessment and management tool: a practical clinician's approach to identifying elder mistreatment. *Journal of Gerontological Social Work*, 46(3-4), 103-122.
- 132 San Francisco Chronicle. (2016). Last men standing. Retrieved from: <http://projects.sfchronicle.com/2016/living-with-aids/>
- 133 Reisner, S. L., O'Cleirigh, C., Hendricksen, E. S., McLain, J., Ebin, J., Lew, K.,...Mimiaga, M. J. (2010) 40 & forward: *A pilot group intervention to reduce HIV sexual risk behavior and improve mental health outcomes among older age men who have sex with men*. Poster presented at the Society of Behavioral Medicine; April, Seattle, WA. Cited in Cahill, S., Valadez, R., & Ibarrola, S. (2013). Community-based HIV prevention interventions that combat antigay stigma for men who have sex with men (MSM) and transgender women. *Journal of Public Health Policy*, 34(1):69-81. doi: 10.1057/jphp.2012.59.
- 134 The Fenway Institute. (n.d.) *LGBT Aging Project*. Retrieved from: <http://fenwayhealth.org/the-fenway-institute/lgbt-aging-project/>
- 135 Porter, K. E. & Cahill, S. (2014). A state-level review of diversity initiatives in congregate meal programs established under the Older Americans Act. *Research on Aging*, 1-22. doi:10.1177/0164027514552330
- 136 AIDS Service Center NYC. (n.d.) *Basic Needs Program*. Retrieved from: <http://www.asnyc.org/eng/basic-needs-program/>
- 137 ACRIA. (n.d.) *Community*. Retrieved from: <http://www.acria.org/community>
- 138 Mujugira, A., Celum, C., Tappero, J., Ronald, A., Mugo, N., Baeten, J. (2015). Younger age predicts failure to achieve viral suppression and virologic rebound among HIV-1 infected persons in serodiscordant relationships. *AIDS Research and Human Retroviruses*, 32(2), 148-154.
- 139 Ompad, D. C., Kingdon, M., Kupprat, S., Halkitis, S. N., Storholm, E. D., & Halkitis, P. N. (2014). Smoking and HIV-related health issues among older HIV-positive gay, bisexual, and other men who have sex with men. *Behavioral Medicine*, 40(3). doi:10.1080/08964289.2014.889067



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