The number of older adults (described herein as age ≥50 years) with HIV and AIDS is increasing (Mahy, Autenrieth, Stanecki, & Wynd, 2014), and currently constitutes approximately 24% of the population with HIV (Centers for Disease Control and Prevention [CDC], 2015). The increase in individuals living to older ages indicates that the number of individuals with HIV will also grow, resulting in a shift in the age distribution of the disease (Nakagawa, May, & Phillips, 2013). In 2009, older women had the highest rates for HIV and AIDS-related deaths (Beaulaurier, Fortuna, Lind, & Emlet, 2014). Older women with HIV comprise individuals who have been living with the disease for an extended period of time, have been recently diagnosed, and/or remain undiagnosed (Psaros et al., 2012). Cumulative data estimate that older women represent 56% of all women with HIV (The Well Project, 2017). Women who remain undiagnosed despite contracting HIV are important to acknowledge, as they may benefit from prevention programs.
that encourage HIV testing opportunities. Because few HIV prevention programs focus on women’s sexuality in older age, discussions on safer sex practices between health care providers and this population may not occur. In addition, sexual health studies have mainly concentrated on the reproductive health of younger women and not risk factors for HIV among older women (Taylor et al., 2017); therefore, the risk of HIV transmission among older women is not well known and has not been thoroughly described in the literature. Previous studies have underscored HIV risk among older women (Beaulaurier et al., 2014; Jacobs & Kane, 2011; Lindau, Leitsch, Lundberg, & Jerome, 2006; Smith, 2015; Zablotsky & Kennedy, 2003). These studies also provided insight about the risk of HIV transmission among older women. Although women within this age group are postmenopausal, they remain sexually active; however, compared to their younger counterparts, they lacked sufficient knowledge about HIV transmission.

Another factor that emerged from the studies was the lack of communication about sexual risk to older women from their health care provider (Beaulaurier et al., 2014; Jacobs & Kane, 2011; Lindau et al., 2006; Smith, 2015; Zablotsky & Kennedy, 2003). In essence, the confluence of lack of knowledge and absent communication about HIV risk has created a significant health crisis for this segment of the U.S. population. How are older women to acquire the skillset of condom negotiation in the absence of HIV prevention programming targeting this population? The answer to this question is sobering: skill acquisition would be challenging. Furthermore, the myths of older adults not being sexually active may contribute to the stigma older women experience purchasing condoms; however, further study is warranted to determine the prevalence of older women not using or purchasing condoms due to stigma.

In summary, research underscores that older women are less likely to use condoms consistently, and that condoms may be viewed as only for contraceptive use, contributing to high-risk sexual behavior (Minichello, Hawkes, & Pitts, 2011). At age 50 and older, women are no longer in their childbearing years and are less likely to execute the use of a condom to prevent pregnancy or protection from a sexually transmitted disease. In addition, consistent condom use with a primary sexual partner may also prove difficult, as frequent use may indicate a lack of trust on the part of the individual who wants to use condoms regularly (Davey-Rothwell, Tobin, Yang, Sun, & Latkin, 2011).

The current article contributes to the literature by describing categories that put older women at risk for contracting HIV, including: heterosexuality, perceived risk, ageism and HIV transmission, biological factors, transfusions, sexual enhancement aids, and lack of HIV prevention education in primary care. Therefore, the purpose of the article is to discuss the importance of implementing HIV and AIDS education, prevention, and intervention programs that are tailored to women 50 and older and to determine HIV risk factors for this group.

**SEARCH STRATEGY**

The following databases were searched: PubMed, CINAHL, Google Scholar, and MEDLINE. Search terms were: women, HIV, prevention, risk factors, and AIDS. Two hundred articles were retrieved, and 41 were chosen because they specifically focused on the risk of HIV transmission among women 50 and older. The inclusion criteria were empirical and non-empirical articles. Given the limited focus on HIV prevention among women 50 and older, the time frame selected for the review was 2000-2016. Articles were excluded if they did not focus on HIV prevention or HIV risk factors for this population.

**LITERATURE REVIEW**

**Heterosexuality**

Acquisition of HIV/AIDS due to heterosexual exposure has increased dramatically within the past 10 years (Durvasula, 2014; Levy-Dweck, 2008; Nguyen & Holodniy, 2008), and women older than 50 tend to contract HIV through heterosexual transmission. Between 2007 and 2010, 82% of new HIV infections and 66% of HIV prevalence rates among older women were attributed to heterosexual infection (Durvasula, 2014). Women who are 50 or older and single, divorced, or widowed who do not have consistent partners and engage in sexual activity are at risk for HIV transmission (Cardoso et al., 2013). In addition, heterosexual women are less likely to be tested for HIV compared to other populations (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013).

**Perceived HIV Risk**

Middle-aged and older women may avoid seeking HIV testing due to social factors. Among older women, being divorced or widowed creates opportunities for new sexual partners (High et al., 2012). However, older women who are sexually active may not consider themselves at risk for contracting HIV (High et al., 2012). Golub et al. (2010) and Slinkard and Kazer (2011) also identified that although sexual activity continues into late adulthood, older women are less likely to engage in safe sex practices because they no longer use methods of contraception to prevent pregnancy. According to the National AIDS Behavior Survey, among respondents 50 and older who reported at least one risky behavior for HIV, >85% reported never using condoms or using them inconsistently. Furthermore, >90% of respondents 50 and older reported that they had never had an HIV test performed (Nguyen & Holodniy, 2008).
Interestingly, fewer risky sexual behaviors were reported among a study comprising 50- to 74-year-old women who used condoms regularly who believed that safer sexual behaviors were related to fewer risky behaviors (Foster, Clark, Holstad, & Burgess, 2012), indicating that knowledge regarding HIV prevention through safer sexual behaviors and condom use may result in fewer risky behaviors.

Ageism and HIV Transmission
Jacobs and Kane (2011) described how ageism affects the risk of HIV transmission among older women. Older women may have difficulty transitioning into their older years due to ageism. Specifically, many stereotypes surround youth and older age that may be associated with external attractiveness and sickness among older women (Jacobs & Kane, 2011). For example, youthfulness is associated with physical attractiveness and health, whereas older age is unfortunately associated with physical unattractiveness and disease, which conflicts with a youth-oriented society (Jacobs & Kane, 2011). Society then fosters this idea of “ageism,” which overlooks the prevalence and existence of sexual activity among older adults (Emlet, 2006b) due to their purported age. As a result, older women may be less likely to openly discuss sexual activity, substance abuse, or risk of HIV infection with their health care providers (Illa, Echenique, Bustamante-Avellaneda, & Sánchez-Martinez, 2014; Nokes et al., 2009).

Biological Factors
Biological factors have been identified in association with an increased risk of HIV infection among older women. Evidence suggests that physiological changes (e.g., menopause, thinning of the vaginal wall, vaginal dryness) among these women contribute to the efficiency of the transmission of HIV (Durvasula, 2014). These biological changes increase the vulnerability of the vaginal wall, possibly causing it to tear during sexual intercourse, which could lead to increased susceptibility of HIV transmission.

Other age-related biological conditions, such as poor cognitive function or medical comorbidities, could render older women vulnerable to HIV infection, as these conditions are often overlooked or misdiagnosed by health care providers (Grodensky et al., 2015; Martin, Fain, & Klotz, 2008). In addition, the immune system weakens with aging, which increases the odds of contracting sexually transmitted infections (STIs) (Cianelli et al., 2013).

Transfusions
In 1992, 54% of all AIDS cases were attributed to contaminated blood transfusions and occurred among individuals 50 and older (Levy-Dweck, 2008). Therefore, primary prevention should include testing recipients who received blood or blood products prior to 1985. The aging population may have been more susceptible to exposure of donated, contaminated blood due to a greater likelihood of hospitalizations and other health-related conditions. These data underscore the importance of having older women tested for HIV due to the possibility of HIV exposure from blood products prior to 1985 (Levy-Dweck, 2008; Luther & Wilkin, 2007).

Sexual Enhancement Aids
Improved health and increased levels of interest in sexual activity among older women, including pharmaceutical assistance from Viagra®, as well as other similar supplements, have given rise to concerns about the transmission of HIV. According to Beaulaurier et al. (2014), sexual enhancement aids and misconceptions about HIV risk have the potential to contribute to an increase in HIV among older women, particularly if condoms are not used due to no concern for pregnancy. Because of the availability of sexual enhancement aids, older adults are engaging more frequently in sexual activity without regard for associated sexual risks (Psaros et al., 2012). Hence, it is essential that health care providers provide education about these potential risks.

Health Care Providers and Prevention Messages
There is little information about HIV prevention among health care providers for older adults (Davis et al., 2016). The literature concerning health care providers and their education regarding older adults, particularly women, and HIV has often excluded this population without concerns for their knowledge or beliefs about the transmission of the virus that causes AIDS.

Among older adults, the connection from testing to preventive care may be particularly useful, as older women who become infected are at greater risk for poor health outcomes. Many health care providers may not discuss sexual issues with older women who are divorced or widowed due to age (i.e., many physicians believe that HIV risk decreases with age due to lack of sexual activity) and gender biases. However, some older women may be engaging in high-risk behaviors associated with contracting HIV or other STIs (Grant & Ragsdale, 2008).

Some providers believe that it is the role of the health care provider and the patient to bring up discussions related to sexual health, which may not bode entirely well for older women (Grant & Ragsdale, 2008). Multiple studies have also illustrated that older adults have little knowledge of the transmission modes of HIV infection (Emlet, 2014; Foster et al., 2012; Golub et al., 2010).

Orel, Wright, and Wagner (2004) conducted a study on the availability of HIV/AIDS risk reduction materials in the United States and found that only 15 states had publications
specifically targeting an older audience. Older women require age-appropriate interventions to address their unique needs. In addition to providing more age-sensitive HIV and AIDS educational materials for patients and health care providers, Orel et al. (2004) also recommended that other agencies that provide services to older adults share the responsibility to educate their clients on HIV and AIDS risk. Sponsorship of research and educational programs to study older adults’ HIV risk behaviors was also suggested. Many providers also suggested including education about HIV/AIDS during medical training (Orel et al., 2004).

DISCUSSION
HIV prevention programs are needed to educate older women about the risk of HIV transmission. In addition, national strategies are needed to ensure health care providers are well informed about the risk of HIV transmission among this segment of the population (Mahy et al., 2014).

HIV Prevention Programs for Older Women
Many women in the United States view pre-exposure prophylaxis (PrEP) as an important method regarding HIV prevention, although some claim they have not heard much information about these medications (Auerbach, Kinsky, Brown, & Charles, 2015). If novel HIV prevention interventions such as PrEP are not disseminated to older women, efforts to curb HIV risk among this age group will not only fail, but will result in continued risk taking due to lack of knowledge. Educating older women about PrEP may help mitigate the risk of HIV transmission between these women and their sexual partners. Prevention and research programs about PrEP and others specifically tailored to older women are needed to promote and increase communication about HIV risk among aging women who may be unwilling to disclose sexual history. Education and prevention programs about HIV/AIDS could potentially result in increased awareness of well-being and quality of aging among older adults (Coleman, Jemmott, Jemmott, Strumpf, & Ratcliffe, 2009; Durvasula, 2014; Emlet, 2006a,b).

The media has a major role in the advertisement and delivery of prevention and education strategies regarding HIV. Coleman (2003, p. 83) stated this is a “youth-oriented” culture; hence, some older adults may draw the conclusion that they are not at risk of STIs or HIV. Primary prevention strategies and programs are geared and appeal mostly to youth, young adults, and childbearing women.

Lovejoy, Heckman, and the Project SAFER Intervention Team (2014) posit that older adults who would benefit from HIV risk reduction interventions tend to be geographically isolated from such services or face other barriers to care such as the cost of travel, concerns about confidentiality, medical appointment conflicts, and poor physical health that may complicate travel. New methods are needed for developing messages and effectively distributing them to individuals in the middle and later stages of life. Because primary prevention strategies do not target older woman specifically, the focus of prevention messages should include age-appropriate materials.

Comprehensive efforts have been implemented to educate and increase awareness of HIV/AIDS within the health care profession to include physicians, nurses, community health care providers, and others. Despite modernization, many physicians are reluctant to inquire about an older patient’s sexual history or drug use as opposed to their younger counterparts (Dhingra, De Sousa, & Sonavane, 2016).

Health Care Providers Communicating HIV Risk
Physicians were not as likely to diagnose older adults with HIV until 1993, when the CDC recommended that hospitalized patients between ages 15 and 54 had to undergo routine HIV testing (Savasta, 2004). Health care providers should implement primary levels of education during routine office visits. Pertinent information regarding sensitive topics such as sexual history may be obtained with the use of appropriate strategies and questions that do not result in ageism or stereotyping. Because there is tremendous diversity in sexual behavior as well as cultural norms that may vary among women, it is essential that health care providers consider these factors during clinic visits.

Health care providers should not make assumptions based on age and marital status, as they do not predict risk level of contracting HIV.
younger counterparts to be in a non-committed relationship, the dynamics of negotiating safe sexual relationships can contribute to increased HIV risk (Emlet, 2014).

Coleman (2003) reported the need for health care providers to understand that factors associated with HIV transmission among older women differ from those of older men. Health care providers must consider the biological and physiological changes that occur among women due to aging when communicating the risk of HIV infection. In addition, existing HIV/AIDS instructional programs may not be effective tools to educate older women who experience cognitive, visual, and/or auditory deficits due to aging. Thus, health care providers need to ensure that educational materials are designed to accommodate women with existing aging comorbidities.

Health care providers should also consider the venue used to educate older women about sexual risk. Davey-Rothwell et al. (2011) recommend that small, peer-aged groups are more successful in educating women rather than larger groups. This type of setting provides a sense of safety, belonging, and security that encourages disclosure and reinforces confidentiality. Teaching women how to practice their communication skills with sexual partners to engage in safe sex may provide important lessons for sexual health discussions with partners later (Davey-Rothwell et al., 2011).

**REFERENCES**


50. Sexually Transmitted Diseases, 37, 615-620.


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