

## Special Article - Family Practice

# Training Needs for HIV Risk Assessment with Older Adults: Results from a Family Medicine Resident Survey

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## Abstract

**Introduction:** Older Americans are more likely than young Americans to be diagnosed with HIV infection late in the course of their disease, which can lead to poorer prognoses.

**Objective:** This survey of Family Medicine and transitional year residents at an urban university-affiliated hospital sought to determine the knowledge and practices of the residents in assessing HIV risk with their older patients.

**Methods:** A convenience sample of thirty-two residents participated in a needs assessment survey. Residents were asked about their experience with HIV risk assessment, diagnosis and treatment of HIV infection as well as training needs from their own experience and what they thought would be helpful for practicing primary care physicians.

**Results:** Although older patients may have many of the same sexual and drug use risk factors as younger patients, residents were less likely to ask their older patients, particularly older female patients, about sexual orientation, number of sexual partners and safer sex practices than their younger patients. Similarly, but to a much lesser extent, they were less likely to ask older patients than younger patients about intravenous drug use.

**Discussion:** Our results suggest HIV risk assessment is often overlooked in older adults by resident physicians. There is a critical need to raise the awareness of this bias, and to educate primary care physicians to assess, screen and test their older patients of HIV infection as they would for younger patients to prevent the disease and/or diagnose and treat the disease early to improve their prognosis.

**Keywords:** HIV prevention; Primary care; Family medicine; Continuing medical education

## Introduction

In 2010, Americans aged 55 years and older accounted for 5% of new infections, and in 2011 they were 26% of the estimated 1.2 million people living with HIV/AIDS [1]. From 2009-2013, rates for new HIV infections remained stable for persons aged 50-59 years and increased for persons age 60 and older [2]. US Preventive Services Task Force (USPSTF) Risk Assessment behavioral risk factors for HIV infection include: having unprotected vaginal or anal intercourse, having sexual partners who are HIV-infected, bisexual or injection drug users, or exchanging sex for drugs or money. The USPSTF "recognizes the categories are not mutually exclusive, the degree of sexual risk is on a continuum and individuals may not be aware of their sexual partners' risk factors for HIV infection," and recommends routine HIV screening in persons 15 to 65 years of age, regardless of risk, as well as persons at increased risk for HIV under age 15 and over age 65 [3]. Early diagnosis and treatment is important in the control of the HIV/AIDS prognosis and its spread; however, half of people 50 and over with the disease are diagnosed late compared with one-third of those aged 30-34. Accordingly, the period of survival is shortened and there may be more health, psychological, and social consequences for older people [4,5].

More than half of older Americans are sexually active [6]. Older persons are less likely to see themselves at risk for HIV even if they had a sexual encounter outside a long-term relationship [7]. Gender may also affect HIV incidence and prognosis in older populations. Women are not likely to talk with their physicians about risk, but overwhelmingly prefer that primary care physicians (PCPs) initiate conversations about sexual health [8,9]. With the increasing risk of acquiring HIV among people aged 50 and older, undergraduate and graduate medical education programs need to be aware of the HIV risk of older people and develop curricula to aid in prevention and earlier diagnosis [8,10,11].

Primary care physicians, who regularly see older adults in their offices, have a major role in HIV prevention, screening, diagnosis and treatment. The American Academy of Family Physicians (AAFP) has adopted a clinical policy to improve HIV screening, diagnosis, education, counseling, and referral of people aged 13-64 years [12]. How residents and medical students perceive their HIV prevention role is not well understood, but studies over the past decades show that most primary care residents believe they are inadequately prepared to work with HIV patients [13,14]. The Liaison Committee on Medical Education (LCME) Section II Educational Program for the MD

**Table 1:** HIV/AIDS Needs Assessment Survey Sample Questions.

Category	Number of questions
<b>Patient Care</b>	<b>3</b>
In the past 6 months, please estimate the number of different patients you personally have seen who are: HIV/AIDS positive, older HIV/AIDS positive females, older HIV/AIDS positive males	
On 5 point scale from very uncomfortable to very comfortable, please indicate how comfortable you are in caring for the following patient groups with HIV/AIDS: Males 21-49 with HIV/AIDS, Males 50+ with HIV/AIDS, Females 21-49 with HIV/AIDS, Females 50+ with HIV/AIDS	
<b>Assessment Practices</b>	<b>2</b>
When taking a history on a new patient, how frequently do you assess the following for all patients, older females, and older males non-injection/injection substance use, sexual orientation, number of sex partners, use of condoms, other safer sex practices, history of STDs	
With which of the following patient populations have you conducted an HIV/AIDS assessment? Males/Females aged 13-20 years, aged 21-49 years, aged 50 and older, have never done an HIV/AIDS assessment	
<b>Risk Perception</b>	<b>2</b>
Using the following scale please indicate the HIV/AIDS risk for patients of the following ages: no risk, slight risk, moderate risk, high risk 13-20 years, 21-49 years, 50 and over	
Please rank the following HIV risk factors as to their prevalence in older people and women. "1" would be the most prevalent and "4" the least prevalent risk factor: male to male sex, intravenous drug use, blood transfusion, heterosexual sex	
<b>HIV/AIDS Education</b>	<b>4</b>
In the past three years have you received any training or education in HIV/AIDS related topics for the general population, males over age 50, females over age 50.	
Have you taken a CME or other continuing education program on any topic over the Internet in the past three years?	
Below are topics related to HIV/AIDS prevention, education, and treatment. In the first column, please check the topics for which you have received training. In the second column, please check the topics for which you think primary care physicians should receive training, e.g., risk factors for HIV, taking an appropriate sexual history, HIV prevention, etc...	

Degree notes the curriculum of a medical education must include behavioral and socioeconomic subjects in addition to basic science and clinical disciplines, but states that the coverage of the individual topics depends on the medical education programs' educational goals and objectives. Human sexuality/sexual functioning is noted as a content area which can be included as a subject in required courses [15]. Nonetheless, the Institute of Medicine (IOM) states physicians-in-training should learn the importance of taking a thorough sexual history and performing routine HIV testing during medical school and continuing through residency [16]. As part of the effort to address the HIV training needs of family physicians, a survey was conducted to determine the knowledge and practices regarding assessing HIV risk, sexual history taking and HIV prevention and diagnosis in a Family Medicine residency program.

## Materials and Methods

### Participants

The survey was conducted at a suburban location of an urban university-affiliated community hospital in a metropolitan area. Permission was received from the Chair of Family Medicine & Public Health Sciences, in coordination with the Family Medicine Residency Director, to conduct the survey at a mandatory monthly meeting. The study protocol was approved by the university's institutional review board. A convenience sample of 32 residents in Family Medicine and transitional year was invited to participate in the study during the September meeting of the 2010-2011 academic year. Participants were advised that completion of the survey was voluntary and two participants opted out. The Investigators administered the survey and received it at the end of the meeting.

### Measures

The survey instrument was an HIV/AIDS needs assessment derived from a prior survey of internal medicine residents [17]. Questions for family practice physicians were validated and pre-tested in a presentation with participants at a statewide university

family medicine research conference [18]. All survey items were close-ended and the survey took an average of ten minutes to complete. In addition to several background questions (i.e., gender, age, residency year, and medical specialty area), the residents were asked about their current experiences with HIV/AIDS patients, their risk assessment and HIV testing practices, and their perception of risk (i.e., no risk to high risk) for three patient age groups: 13-20, 21-49, and 50 years and over. They also identified their past training on HIV topics, preferred methods of receiving HIV educational information, and the specific topics for which they thought practicing PCPs should be trained. The list of 13 topics was chosen from the HIV/AIDS clinician training content offered through the AIDS Education and Training Centers [19]. Examples of survey items are presented in Table 1.

### Data analysis

Survey responses were entered into a SPSS database and all analyses were completed using SPSS Statistics Version 18 (IBM SPSS, Somers, NY). Descriptive statistics were used to analyze survey responses.

## Results

Of 32 residents at the meeting, 30 returned useable surveys, yielding a response rate of 93%. Table 2 shows the distribution of the sample characteristics. The participants were predominantly male (n=17) between the ages of 25-34 years (n=25). Ten residents self-reported as White, six as Asian, three as African American and one as Hispanic/Latino. The remaining respondents identified themselves as "Other". The majority of respondents selected Family Practice as their medical specialty. Close to half of the residents were in their first year of residency.

Table 2 also displays the number of residents who had seen at least one HIV+ patient as well as their range of experience in providing medical care for HIV/AIDS. Out of the 30 respondents, only 11 had attended to at least one HIV+ patient of any age; seven of them had seen an older male HIV+ patient, but none of them

**Table 2:** Demographic Characteristics of Residents and Their Experience with HIV Patients.

Resident Characteristic	N (%)
<b>Gender</b>	
Male	17 (61)
Female	11 (39)
<b>Race/Ethnicity</b>	
Hispanic/Latino	1 (4)
African American	3 (12)
Asian	6 (23)
White	10 (39)
Other	6 (23)
<b>Age</b>	
<25 years	2 (7)
25-34	25 (89)
35-44	1 (4)
<b>Medical Specialty</b>	
Family Practice	18 (60%)
Transitional Year	10 (40%)
<b>Residency Year</b>	
Year 1	14 (52)
Year 2	9 (33)
Year 3	4 (15)
<b>HIV Experience</b>	
Seen any HIV+ patient in last 6 months	
None	19 (63)
1 -5	10 (33)
6 or more	1 (3)
Seen older female HIV+ patients	
None	30 (100)
Seen older male HIV+ patients	
None	23 (77)
1-5	7 (23)
<b>Practices regarding HIV+ patients</b>	
Provide care only for non-HIV related conditions	4 (36)
Refer to an infectious disease specialist	7 (64)
Monitor progress in HIV treatment only /communicate with ID specialist	2 (18)
Treat clinical manifestations including opportunistic infections and simple complications	5 (46)
Treat serious complications	0
Use antiretroviral therapy	0
Counsel HIV/AIDS patient about secondary prevention	4 (36)
Educate patients about HIV/AIDS prevention	7 (58)
Educate families about HIV/AIDS prevention	3 (25)

had seen an older female HIV+ patient. For these residents, clinical practice was limited to making referrals to specialists (n=7), treating clinical manifestations of the disease (n=5), and/or providing care only for non-HIV related conditions (n=4). Residents also provided education and counseling about HIV prevention: four had counseled

HIV+ patients about secondary prevention and seven had educated patients about HIV/AIDS prevention. A few also educated family members about HIV/AIDS prevention. Only three of the 11 residents indicated feeling comfortable in caring for an HIV+ patient of any age, the remainder felt somewhat uncomfortable.

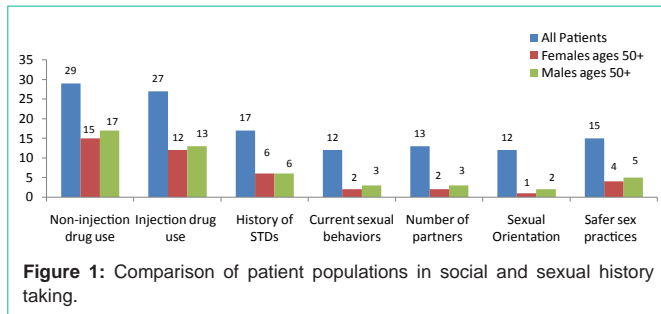


Figure 1 displays the number of residents who indicated that they included each type of HIV/AIDS risk behavior in their assessments most or all of the time. Although nearly all of the residents reported assessing non-injection (n=29) or intravenous drug use (n=27) that when they took a history on a new patient always or most of the time, only about half of them reported that they asked older males (n=17) or older females (n=15). Seventeen residents either always or most of the time included STD history in their assessments with new patient, but only six asked older male or female patients about their history of STDs. Fewer residents reported routinely asking about safer sex practices, sexual orientation, and current sexual behaviors, especially with older adult patients. Although 15 residents assessed safer sex practices most of the time or always with new patients, the number of residents assessing these behaviors decreased to five who asked older male patients and four who asked older female patients most or always. A similar pattern of responses was seen for sexual orientation, the number of sexual partners, and current sexual behavior.

Residents reported the training they received in HIV prevention, treatment, patient education and counseling, diagnosis and treatment along with their perception of the need for training for PCPs in each of these areas. Most residents indicated they had been trained in taking sexual history (n=26), HIV prevention (n=24) and HIV risk factors (n=24). About half or less indicated they had received training in educating at-risk populations (n=16), anti-retroviral therapy (n=12), presenting HIV positive results (n=9), and HIV rapid testing (n=6). Overall the residents considered that practicing PCPs should receive more training, especially in the area of topics they themselves had received little training: anti-retroviral therapy (n=28), HIV Rapid Testing (n=27), presenting HIV positive results (n=25), and educating at-risk populations (n=25).

## Discussion

Our survey findings suggest that there are gaps in medical education training covering HIV/AIDS, especially in older adults. Although residents reported receiving training in HIV prevention and risk assessment including taking sexual histories, only a few residents reported including sexual behaviors when taking a history, especially with older female patients. These findings are consistent with previous studies that concluded that physician assessment of HIV sexual risks are often incomplete [20]. Physicians often overlook the possibility that older adults, particularly women, may have engaged in sexual behaviors that put them at risk [21]. USPSTF screening recommendations should be considered as an important and relevant strategy to combat the HIV infection epidemic [22]. Further, a thorough sex and drug assessment combined with educational intervention strategies that address sexual and drug use behaviors, as

appropriate, should be part of the routine care of older people [23]. Given the increased prevalence of HIV in an older patient population our study suggests there is a need for further targeted education of medical students and residents about assessing HIV risk factors in older patients, particularly older female patients.

Additionally, only a handful of residents were provided with the knowledge and practical experience related to testing, diagnosing, or treating HIV+ patients. Although they themselves did not receive training, most of the participants recognized the need for practicing PCPs to have more information and training in HIV prevention and disease management. Given an increasing aging population in the US, there is a clear need for targeted education of primary care residents about assessing HIV risk factors and providing HIV testing to older patients. Residents and practicing PCPs may increasingly be called upon to screen, counsel and test persons of all ages for HIV/AIDS as a part of the preventive service. Examples of expanding health care system capacity for HIV testing include coverage for Medicare beneficiaries who request the test or who are at risk for HIV infection, as well as the Affordable Care Act coverage for persons fifteen through sixty-five years and for persons of other ages at increased risk [24,25,26].

Limitations of the study include the size of the sample: more rigorous data analysis was not feasible with a sample of 30 residents. Because this was a convenience sample from one residency program, we cannot extend our results to other residency programs in different locales or that may serve populations with a higher prevalence of HIV. A further limitation is that residents reported the training needs of primary care providers, without indicating those needs exclusive to Family Medicine physicians.

## Conclusion

Improvements are needed in training medical students and resident physicians to prevent and diagnosis new HIV infections among older adults, especially older females. Family Medicine physicians in particular, should be trained in several aspects of HIV prevention and treatment. The AAFP identifies a very specific clinical role for its providers since they are likely candidates to educate patients about HIV, influence risk reduction behaviors, and affect patients' perceptions of vulnerability. Clinical faculty involved in teaching Family Medicine residents should advise them to take a full social history including HIV risk factors on every new patient, regardless of age or sex. They also should train residents about raising awareness of HIV risk by initiating discussions and communicating directly with their patients due to the fact that patients expect their physicians to initiate HIV-related discussions. Physicians who are not comfortable discussing sexual practices and sexual orientation with patients, especially older and female patients, may need to avail themselves of education or communication strategies to better achieve this goal.

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