HIV infection in older adults in sub-Saharan Africa: extrapolating prevalence from existing data

Joel Negin[a] & Robert G Cumming[a]

Objective To quantify the number of cases and prevalence of human immunodeficiency virus (HIV) infection among older adults in sub-Saharan Africa.

Methods We reviewed data from Demographic and Health Surveys (DHS). Although in these surveys all female respondents are < 50 years of age, 18 of the surveys contained data on HIV infection among men aged ≥ 50 years. To estimate the percentage of older adults (i.e. people ≥ 50 years of age) who were positive for HIV (HIV+), we extrapolated from data from the Joint United Nations Programme on HIV/AIDS on the estimated number of people living with HIV and on HIV infection prevalence among adults aged 15–49 years.

Findings In 2007, approximately 3 million people aged ≥ 50 years were living with HIV in sub-Saharan Africa. The prevalence of HIV infection in this group was 4.0%, compared with 5.0% among those aged 15–49 years. Of the approximately 21 million people in sub-Saharan Africa aged ≥ 15 years that were HIV+, 14.3% were ≥ 50 years old.

Conclusion To better reflect the longer survival of people living with HIV and the ageing of the HIV+ population, indicators of the prevalence of HIV infection should be expanded to include people > 49 years of age. Little is known about comorbidity and sexual behaviour among HIV+ older adults or about the biological and cultural factors that increase the risk of transmission. HIV services need to be better targeted to respond to the growing needs of older adults living with HIV.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Despite the global attention being paid to the epidemic of infection with the human immunodeficiency virus (HIV), HIV infection rates among older adults in sub-Saharan Africa have been a neglected area of study. The Joint United Nations Programme on HIV/AIDS (UNAIDS) and other prominent sources of data report prevalence rates only for those aged 15–49 years, and the indicators used by the United Nations General Assembly Special Session focus predominantly on the same age group. The burden of disease among those aged ≥ 50 years is almost always ignored and this represents a significant blind spot in the global response to the epidemic of HIV infection and acquired immunodeficiency syndrome (AIDS).

As a result of the situation described above, there is a paucity of data on HIV infection in people aged ≥ 50 years. In 2006, UNAIDS shifted to reporting the number of HIV-positive (HIV+) people aged ≥ 15 years, but it provides limited data specifically on those aged > 49. The 2006 report on the epidemic revealed some of the only existing data for this age group and stated that globally "around 2.8 million adults aged 50 years and older were living with HIV in 2005".[1] Other estimates have been based on limited data.[2] While individuals > 49 years of age account for approximately 10% of the cumulative HIV infection case-load in the United States of America,[3] the corresponding proportion for Africa is not known.

The few existing studies on HIV infection among older adults have focused mainly on developed countries.[4–9] Studies in developing countries emphasize the social and economic impact of HIV infection – mainly its effect on older grandparents in their role as caretakers of children orphaned as a result of parental HIV infection – and have ignored the prevalence of HIV infection in older people and its impact on their lives.[10,11]

As more people in sub-Saharan Africa have begun taking antiretroviral treatment, mortality rates have dropped[12,13] and HIV+ individuals are surviving longer. At the same time, older people remain at risk for infection. In the light of the ageing of the general population, there is a need to better understand the prevalence and characteristics of HIV infection among older adults in sub-Saharan Africa. To begin to address this information gap, we have used existing data and information to estimate the prevalence of HIV infection among people > 49 years of age in sub-Saharan Africa.

Methods

The data in this analysis came from a variety of sources. The main source was data on the prevalence of HIV infection released by UNAIDS in conjunction with its 2008 report on the global AIDS epidemic.[14] The UNAIDS web site provides data, by country and by year, on the estimated number of people living with HIV as well as on the prevalence of HIV infection among adults aged 15–49 years.[14] It does not, however, provide the number of HIV+ people aged ≥ 50 years or the prevalence of HIV infection in this age group. To derive those data, we needed to know the total population of each country in sub-Saharan Africa and its age distribution. We obtained the total population of each country from the *2007 world population data sheet*[15] and extracted the percentage of the total population aged 15–49 years and ≥ 50 years, by country, from *World population prospects: the 2008 revision*, using data from 2005, the most recent year for which data were available.[16] Using population data from 2007 and the percentage of the total population aged 15–49 years, we calculated the number of people aged 15–49 years in each country. The use of UNAIDS data on the prevalence of HIV infection in this age group allowed us to calculate the

[a] University of Sydney, School of Public Health, Edward Ford Building, Sydney, NSW, 2006, Australia.
Correspondence to Joel Negin (e-mail: joel.negin@sydney.edu.au).
(*Submitted: 21 January 2010 – Revised version received: 20 July 2010 – Accepted: 4 August 2010 – Published online: 27 August 2010*)

number of people that had HIV infection. By subtracting this number from the total number of HIV+ people who were aged ≥ 15 years, as calculated by UNAIDS, we estimated the number of HIV+ people aged ≥ 50 years. We then divided this number by the total number of people aged ≥ 50 in a country (as derived from *World population prospects: the 2008 revision*) to estimate the prevalence of HIV infection among people aged ≥ 50 years.

For this analysis we used sub-Saharan African countries as classified by UNAIDS. Data were not available for Cape Verde, the Comoros or Sao Tome and Principe. For the Democratic Republic of the Congo UNAIDS only provides high and low estimates of the number of people living with HIV. We used the midpoint between the two. UNAIDS data for Kenya for 2007 were awaiting finalization of the Kenya AIDS Indicator Survey, so we used those results, released in 2009, for analysis.[17]

Population-based surveys, predominantly the Demographic and Health Surveys (DHS) web site,[18] were a second source of data for this study. We accessed the DHS reports and AIDS Indicator Survey reports on the site. To focus on the most recent data, we reviewed all surveys conducted after 2000 that contained information on HIV testing in countries in sub-Saharan Africa, and we extracted relevant data. Of the 43 DHS reports conducted after 2000 in countries in sub-Saharan Africa, 39 (91%) included interviewees aged ≥ 50, but only if they were men, and the upper age limit for these interviewees ranged from 54 to 64 years. Because the surveys are designed primarily to collect data on maternal and child health, the age ceiling for women interviewees is 49 years.

Of the 39 reports that included interviewees aged ≥ 50, 18 provided data on the prevalence of HIV infection based on population-based HIV testing of interviewees in this age group. The others contained information only on HIV-related awareness and behaviour. Of the four AIDS Indicator Surveys for which data were available, only the Ugandan survey included interviewees aged > 49 years: in that country, both men and women aged < 60 years were interviewed.

In addition, we searched the Internet and the grey literature to identify other sources of data on population-based HIV testing in sub-Saharan Africa. South African data sources and the Kenyan AIDS Indicator Survey were identified through this process.

Results

Based on the analysis of data obtained from UNAIDS and *World population prospects: the 2008 revision*, we estimated that in 2007 approximately 3 million people aged ≥ 50 years were living with HIV in sub-Saharan Africa. This represents 14.3% of the approximately 21 million people aged ≥ 15 years who are infected with HIV (Table 1). The five countries with the highest number of older adults living with HIV in sub-Saharan Africa were Mozambique, Nigeria, South Africa, Zambia and Zimbabwe; together these countries accounted for 54% of the total number of older adults living with HIV. The estimated prevalence of HIV infection among the 74 million people aged ≥ 50 years in sub-Saharan Africa is 4.0%, compared with 5.0% among those aged 15–49 years.

Table 2 presents information on the prevalence of HIV infection among those aged ≥ 50 years in several countries in sub-Saharan Africa from DHS, AIDS Indicator Surveys and other population-based surveys. The highest prevalence of HIV infection among those aged ≥ 50 years was found in Zimbabwe during 2005–2006: 20% of all men aged 50–54 years were living with HIV.[22]

The 39 DHS reports that include male interviewees aged ≥ 50 also contain data on HIV-related awareness, behaviour and attitudes. The questions asked during the course of the decade included in our study differ and this makes direct comparisons difficult, but for each country the responses of those aged ≥ 50 years can be compared with those of people < 50. In general, older men are less aware of and knowledgeable about HIV-prevention measures than men aged 15–49. Interviewees in eight countries (Benin, Cape Verde, Ghana, Lesotho, Mali, Nigeria, Uganda and Zambia) were asked the same question about whether using a condom and having only one sexual partner are effective prevention measures, and in seven of the countries (all but Ghana) men aged ≥ 50 years knew less than men < 50. For example, in Nigeria 68.6% (2612/3808) of men aged 15–49 knew that using condoms and having only one partner are effective prevention measures, as opposed to only 58.3% (978/1678) of men aged 50–59.[23]

In four of the seven countries where interviewees were asked about the number of sexual partners they had had during the past 12 months, namely Benin, the Democratic Republic of the Congo, Ghana and Nigeria, men aged ≥ 50 years were more likely to have had two or more sexual partners than those aged 15–49. In each of these four countries, the percentage of men aged ≥ 50 years who had had two or more sexual partners during the previous 12 months and who had used condoms the last time they had engaged in sexual intercourse was much lower than among men aged 15–49. For example, in Ghana only 7.9% (5/64) of the men aged 50–59 years who had engaged in sex with at least two partners over the previous 12 months had used a condom during their last sexual intercourse, compared with 26.2% (120/459) of men aged 15–49.

Discussion

An analysis of UNAIDS and *World population prospects* data suggests that approximately 3 million adults aged ≥ 50 years are living with HIV in sub-Saharan Africa. People in this age group account for 14.3% of all HIV+ people ≥ 15 years of age. This study confirms that HIV infection does not affect younger people exclusively.

Comparisons between the two types of data sources used in this study reveal an occasional match between the prevalence of HIV infection estimated from UNAIDS data and the prevalence obtained from population-based HIV testing. For example, in Benin calculations made from UNAIDS data suggest that in 2007 the prevalence of HIV infection among those aged ≥ 50 years was 1.0%; similarly, DHS data for 2006 suggest a prevalence of 1.0% among men aged 50–64.[24] However, in other countries there are significant discrepancies. For Lesotho, data derived from UNAIDS statistics suggest a prevalence of 27.8% in 2007 among those aged ≥ 50 years, whereas according to data from the 2004 DHS, prevalence among men aged 50–59 is around 16%.[25] These surveys do not measure the same indicator: most DHS data cover men in a limited age range, as previously indicated, while UNAIDS data are for all adults aged ≥ 50 years.

The main results presented in this paper depend on the quality of the data obtained from UNAIDS. These data are derived from mathematical and demographic projection models based primarily on prevalence data from population-based surveys, time–trend prevalence data from antenatal clinics, estimates of the need for antiretroviral treatment and its coverage, mortality rates and total population;[26–28] they are not designed specifically to quantify the prevalence

Table 1. **Infection with the human immunodeficiency virus (HIV) among adults aged ≥ 50 years (older adults) and people aged 15–49 years in sub-Saharan Africa, by country, 2007**

Country[a]	Older adults who are HIV+		People aged 15–49 who are HIV+		People aged ≥ 15 who are HIV+	HIV+ older adults as a percentage of all HIV+ people aged ≥ 15
	No.[b]	%	No.	%	No.	
Angola	24 600	1.8	155 400	2.1	180 000	13.7
Benin	8 900	1.0	50 100	1.2	59 000	15.1
Botswana	49 700	24.4	230 300	23.9	280 000	17.8
Burkina Faso	9 400	0.8	110 600	1.6	120 000	7.8
Burundi	6 500	0.8	83 500	2.0	90 000	7.2
Cameroon	59 900	3.1	440 100	5.1	500 000	12.0
Central African Republic	12 200	2.5	127 800	6.3	140 000	8.7
Chad	11 700	1.1	168 300	3.5	180 000	6.5
Congo	9 200	2.2	63 800	3.5	73 000	12.6
Côte d'Ivoire	48 500	2.1	371 500	3.9	420 000	11.6
Democratic Republic of the Congo	81 600	1.5	368 400	1.4	450 000	18.1
Djibouti	2 400	2.8	12 600	3.1	15 000	15.9
Equatorial Guinea	1 600	3.3	8 200	3.4	9 800	16.4
Eritrea	3 400	0.8	31 600	1.3	35 000	9.9
Ethiopia	157 700	2.1	732 300	2.1	890 000	17.7
Gabon	8 200	5.2	37 800	5.9	46 000	17.9
Gambia	1 200	0.8	6 300	0.9	7 500	16.2
Ghana	33 900	1.4	216 100	1.9	250 000	13.6
Guinea	6 300	0.6	74 700	1.6	81 000	7.8
Guinea-Bissau	1 100	0.5	13 900	1.8	15 000	7.1
Kenya	169 100	5.6	1 430 900	7.8	1 600 000	10.6
Lesotho	61 900	27.8	198 100	23.2	260 000	23.8
Liberia	1 700	0.5	30 300	1.7	32 000	5.4
Madagascar	4 500	0.3	8 500	0.1	13 000	34.9
Malawi	156 200	12.7	683 800	11.9	840 000	18.6
Mali	6 200	0.6	86 800	1.5	93 000	6.7
Mauritania	1 600	0.6	12 400	0.8	14 000	11.4
Mauritius	800	0.3	12 200	1.7	13 000	5.9
Mozambique	228 500	11.2	1 171 500	12.5	1 400 000	16.3
Namibia	18 100	8.1	161 900	15.3	180 000	10.0
Niger	7 200	0.6	48 800	0.1	56 000	12.9
Nigeria	300 300	2.1	2 099 700	3.1	2 400 000	12.5
Rwanda	1 500	0.2	128 500	2.8	130 000	1.2
Senegal	5 600	0.5	58 400	0.1	64 000	8.7
Sierra Leone	7 400	1.6	43 600	1.7	51 000	14.5
Somalia	3 100	0.4	20 900	0.5	24 000	12.8
South Africa	679 700	10.2	4 720 300	18.1	5 400 000	12.6
Swaziland	31 400	29.2	138 600	26.1	170 000	18.5
Togo	14 800	2.2	105 200	3.3	120 000	12.3
Uganda	150 100	6.8	659 900	5.4	810 000	18.5
United Republic of Tanzania	199 200	5.4	110 0 800	6.2	1 300 000	15.3
Zambia	200 000	18.6	780 000	15.2	980 000	20.4
Zimbabwe	206 600	15.2	993 400	15.3	1 200 000	17.2
Sub-Saharan Africa	**2 993 500**	**4.0**	**17 997 800**	**5.0**	**20 991 300**	**14.3**

HIV+, HIV-positive.

[a] This table reflects sub-Saharan African countries as classified by the Joint United Nations Programme on HIV/AIDS; the data do not include Cape Verde, Comoros and Sao Tome and Principe.

[b] Numbers have been rounded to the nearest hundred.

Sources: data derived from references [15] and [16].

of HIV infection among older adults. Consequently, prevalence and case-load calculations from UNAIDS reports represent the best available, but they do not allow derivation of exact population numbers. Population-based surveys of HIV infection prevalence among older adults would provide more reliable and robust data.

Table 2. **Prevalence of infection with the human immunodeficiency virus (HIV) among older adults (i.e. people aged ≥50 years) in sub-Saharan Africa, by country, from population-based surveys conducted after 2000**

Country	Study				
	Year(s)	Sex of respondents	Age range (years)	Prevalence of HIV infection (%)	Source
Benin	2006	Male	50–64	1.0	DHS[18]
Burkina Faso	2003	Male	50–54	2.8	DHS[18]
	2003	Male	55–59	2.6	DHS[18]
Cameroon	2004	Male	50–54	2.5	DHS[18]
	2004	Male	55–59	1.0	DHS[18]
Cape Verde	2005	Male	50–54	0.3	DHS[18]
	2005	Male	55–59	0.0	DHS[18]
Democratic Republic of the Congo	2007	Male	50–59	0.6	DHS[18]
Ethiopia	2005	Male	50–54	0.9	DHS[18]
	2005	Male	55–59	0.3	DHS[18]
Ghana	2003	Male	50–54	3.6	DHS[18]
	2003	Male	55–59	2.8	DHS[18]
Guinea	2005	Male	50–54	1.6	DHS[18]
	2005	Male	55–59	2.5	DHS[18]
Kenya	2003	Male	50–54	5.7	DHS[18]
	2007	Male	50–54	8.3	KAIS[17]
	2007	Male	55–59	2.3	
	2007	Male	60–64	3.4	
	2007	Female	50–54	7.5	
	2007	Female	55–59	4.7	
	2007	Female	60–64	1.7	
Lesotho	2004	Male	50–54	16.2	DHS[18]
	2004	Male	55–59	16.6	DHS[18]
Mali	2006	Male	50–59	1.7	DHS[18]
	2001	Male	50–59	1.4	DHS[18]
Niger	2006	Male	50–54	0.1	DHS[18]
	2006	Male	55–59	0.5	DHS[18]
Rwanda	2005	Male	50–54	1.7	DHS[18]
	2005	Male	55–59	0.8	DHS[18]
Senegal	2005	Male	50–54	0.3	DHS[18]
	2005	Male	55–59	0.3	DHS[18]
South Africa	2005	Male	50–54	14.2	NHPIBCS[19]
	2005	Male	55–59	6.4	NHPIBCS[19]
	2005	Female	50–54	7.5	NHPIBCS[19]
	2005	Female	55–59	3.0	NHPIBCS[19]
	2005	Male	≥60	4.0	NHPIBCS[19]
	2005	Female	≥60	3.7	NHPIBCS[19]
	2008	Male	50–54	10.4	NHPIBCS[20]
	2008	Female	50–54	10.2	NHPIBCS[20]
	2008	Male	55–59	6.2	NHPIBCS[20]
	2008	Female	55–59	7.7	NHPIBCS[20]
	2008	Male	≥60	3.5	NHPIBCS[20]
	2008	Female	≥60	1.9	NHPIBCS[20]
Uganda	2004–2005	Male	50–54	6.9	UHSS[21]
	2004–2005	Female	50–54	5.4	
	2004–2005	Male	55–59	5.8	
	2004–2005	Female	55–59	4.9	
Zambia	2001–2002	Male	50–54	13.5	DHS[18]
	2001–2002	Male	55–59	11.6	DHS[18]
Zimbabwe	2005–2006	Male	50–54	20.0	DHS[18]

DHS, Demographic and Health Survey; KAIS, Kenya AIDS Indicator Survey; NHPIBCS, South African National HIV Prevalence, Incidence, Behaviour and Communication Survey; UHSS, Uganda HIV/AIDS Sero-behavioural Survey 2004–2005.

A few studies have documented HIV infection among older adults: a study in rural Cameroon showed a prevalence of 2.6% among men and women aged 55–70 years,[29] and a study among people admitted to hospital in Dar es Salaam, United Republic of Tanzania, reported a prevalence of 15% among those aged ≥ 55.[30] A study in the Congo described 175 cases of HIV infection among people aged ≥ 55 years from 1990 to 1996.[31] An 81-year-old male who was HIV+ was identified in an Ethiopian study.[32] In general, however, data on HIV infection in older adults in Africa are limited.

Two facets to the issue of HIV positivity among older adults generate particular challenges. One is the occurrence of new cases of HIV infection among older adults and the other is the ageing of the population infected with HIV.[33]

Previous studies have shown that those who become infected with HIV later in life progress more rapidly towards AIDS and death than those who are infected at a younger age. Justice and Weissman have noted evidence that being older at the time of seroconversion is strongly associated with faster disease progression and shorter survival.[34] A study in the United Kingdom of Great Britain and Northern Ireland revealed that those who became infected between the ages of 15 and 34 years had a 10-year survival rate of 72%, compared with 12% of those who seroconverted after the age of 55.[35] In 2001, the Collaborative Group on AIDS Incubation and HIV Survival predicted a life expectancy of only four years for people who become infected at age ≥ 65 years.[36] A 2001 study in the United States demonstrated that reconstitution of the immune system after initiating antiretroviral treatment was slower in older patients.[37]

As more people survive longer with HIV, the overall case-load will age and new challenges will arise in sub-Saharan Africa. Older adults have greater comorbidity, experience more side-effects from antiretroviral treatment and hence may be less likely to adhere to treatment.[34] The toxicity of antiretroviral therapy, combined with decreased kidney and liver function in older individuals, may lead to treatment difficulties such as drug interactions.[38] Studies are needed to better understand the pharmacokinetics of antiretroviral agents in elderly people.[39]

Common misconceptions about sexual activity among older people remain. A study in Nigeria dismissed older people as no longer being sexually active,[40] confirming what Ory et al. called "ageist assumptions about sexual behaviour".[33] These attitudes limit the development of appropriate responses tailored specifically to older adults.

Several factors put older people at a higher risk of becoming infected with HIV. The thinning of the vaginal wall after menopause increases the risk of HIV transmission during sex.[41] Practices such as wife inheritance and ritual cleansing, in which a widow is expected to either marry or have sex with relatives of the deceased husband, can increase older women's exposure to the virus.[42] Additionally, many older people are poor and may not be able to afford health services.

Older adults' access to HIV-related services and information is limited: the UNAIDS update for 2009 stated that "even though the largest share of new infections in many African countries occurs among older heterosexual couples, relatively few prevention programmes have specifically focused on older adults".[43] DHS data suggest that levels of condom use and knowledge about condoms are low among older adults. In the United States, Ory and Mack noted that people aged ≥ 50 years who had known risk factors for HIV infection were one-sixth as likely to report using condoms as people in their twenties with comparable risk factors.[3] The lack of targeted prevention services becomes even more important considering that many older people care for younger ones, since a lack of knowledge may prevent older people from effectively teaching the next generation about HIV.

The delivery of services to older adults with HIV infection needs to be improved. In the United States, el-Sadr and Gettler have indicated that health-care providers are less likely to attribute signs and symptoms of disease in older people to HIV infection.[44] Data from Brazil suggest that older people are diagnosed later in the course of HIV infection, with more AIDS-defining diseases present at diagnosis.[45] This may be true for Africa as well.

South Africa has added men aged ≥ 50 years to its list of populations considered to be at greatest risk for HIV infection, according to a 2008 survey.[20] The 6.0% prevalence among these men, together with the limited reach of national communication programmes, low levels of knowledge and poor adoption of preventive behaviours, has highlighted the need to focus prevention on this group.

The need to better understand the various HIV-related challenges faced by older adults will increase as the HIV+ population ages. Research should be aimed at understanding the specific vulnerabilities and challenges faced by this group. It should focus on understanding the impact of highly active antiretroviral therapy on older people in Africa and on understanding the sexual behaviour and practices of older people.

Barnett views HIV infection and AIDS as posing a new type of challenge for the global community: a "long-wave event" whose "troubling and large-scale effects emerge gradually over decades".[46] For the past few decades, the global HIV community has focused on people aged 15–49 years, often ignoring the long-wave elements of the epidemic. A significant percentage of the population – those aged ≥ 50 years – has been largely excluded from HIV prevention and testing services. The high prevalence of HIV infection and the high rates of death from AIDS-related causes among older people in developing countries call for greater efforts to integrate the needs of older people into responses to the HIV epidemic and to strengthen targeted prevention, care and support programmes. ■

Competing interests: None declared.

الملخص

العدوى بفيروس الأيدز في المسنين في جنوب الصحراء الكبرى بأفريقيا: استقراء الانتشار المستقى من المعطيات الحالية

الهدف التحديد الكمي لأعداد حالات الإصابة بفيروس الأيدز ومدى انتشارها بين المسنين في جنوب الصحراء الكبرى بأفريقيا

الطريقة قام الباحثون باستعراض معطيات من المسوحات الديموغرافية والصحية. وعلى الرغم من أن المُستجيبات اللائي اشتملت عليهن هذه المسوحات كن من الفئات العمرية دون عمر 50 عاماً، فإن الرجال في 18 من هذه المسوحات التي اشتملت على معطيات خاصة بعدوى فيروس الأيدز، كانوا في عمر أكبر من أو يساوي 50 عاماً. ولتقدير النسبة المئوية للمسنين (ممن هم في عمر أكبر من أو يساوي 50 عاماً) والإيجابيين لفيروس الأيـدز، فقد قام الباحثون باستقراء المعطيات من برنامج الأمم المتحدة المشترك لمكافحة الأيدز وفيروسه، حول العدد التقديري

للمعايشين لفيروس الأيدز، وحول مدى انتشار العدوى به في المجموعة العمرية ما بين 15 و 49 عاماً.

الموجودات في عام 2007، كان هناك حوالي ثلاثة ملايين شخص في عمر أكبر من أو يساوي 50 عاماً مصابين بفيروس الأيدز في جنوب الصحراء الكبرى في أفريقيا. وبلغت نسبة انتشار العدوى بالفيروس في هذه المجموعة 4.0%، مقارنة بنسبة بلغت 5.0% بين المجموعة العمرية التي تراوحت بين 15 و 49 عاماً. ومن بين حوالي 21 مليون نسمة من السكان في عمر أكبر من أو يساوي 15 عاما من سكان جنوب الصحراء الكبرى الإيجابيين للفيروس، كان 14.3% في عمر أكبر من أو يساوي 50 عاماً.

الاستنتاج من أجل إلقاء الضوء بصورة أفضل حول بقيا المعايشين لفيروس الأيدز على قيد الحياة وبلوغ الإيجابيين للفيروس مرحلة الشيخوخة، يجب توسيع نطاق مؤشرات انتشار العدوى بالفيروس لتشمل من هم أكبر من عمر 49 عاماً. فالكثير لا يزال غامضاً حول الاعتلال المشترك والسلوكيات الجنسية بين الإيجابيين لفيروس الأيدز من المسنين أو حول العوامل البيولوجية و الثقافية التي تزيد من خطر انتقال الفيروس. وينبغي أن تستهدف الخدمات المعنية بحالات الإصابة بالفيروس على نحو أفضل للاستجابة للاحتياجات المتنامية للمسنين المعايشين لفيروس الأيدز.

Resumé

Infection à VIH chez les adultes âgés en Afrique subsaharienne: extrapolation de la prévalence à partir de données existantes

Objectif Quantifier le nombre de cas et la prévalence de l'infection par le virus de l'immunodéficience humaine (VIH) chez les adultes âgés en Afrique subsaharienne.

Méthodes Nous avons étudié les données des enquêtes démographiques et sanitaires. Même si, dans ces enquêtes, toutes les femmes interrogées sont âgées de moins de 50 ans, 18 des enquêtes contenaient des données sur l'infection à VIH chez les hommes âgés de 50 ans et plus. Pour évaluer le pourcentage d'adultes âgés (c.-à-d. de personnes âgées de 50 ans et plus) qui étaient séropositives (VIH+), nous avons extrapolé à partir des données du Programme commun des Nations Unies sur le VIH et le Sida (ONUSIDA) sur le nombre estimé de personnes vivant avec le VIH et sur la prévalence de l'infection à VIH chez les adultes âgés de 15 à 49 ans.

Résultats En 2007, approximativement 3 millions de personnes âgées de 50 ans et plus vivaient avec le VIH en Afrique subsaharienne. La prévalence de l'infection par le VIH dans ce groupe était de 4%. Elle était en comparaison de 5% chez les 15–49 ans. Sur les quelques 21 millions d'habitants de l'Afrique subsaharienne âgés de 15 ans et plus qui étaient porteurs du virus HIV, 14,3% d'entre eux étaient âgés de 50 ans et plus.

Conclusion Pour mieux refléter la survie plus longue des personnes vivant avec le VIH et le vieillissement de la population séropositive, les indicateurs de prévalence de l'infection à VIH doivent être étendus afin d'inclure les personnes âgées de plus de 49 ans. On sait peu de choses sur la comorbidité et le comportement sexuel des adultes âgés séropositifs ou sur les facteurs biologiques et culturels qui augmentent le risque de transmission. Les services relatifs au VIH doivent être mieux ciblés pour répondre aux besoins croissants des adultes âgés qui vivent avec le virus.

Resumen

Infección por el VIH entre los adultos de mayor edad en el África subsahariana: extrapolación de la prevalencia a partir de los datos existentes

Objetivo Cuantificar el número de casos y la prevalencia de la infección por el virus de la inmunodeficiencia humana (VIH) entre los adultos de mayor edad en el África subsahariana.

Métodos Se han analizado los datos procedentes de las Encuestas demográficas y de salud (EDS). Aunque en estos estudios todas las mujeres entrevistadas son menores de 50 años, 18 de estas encuestas contenían datos sobre la infección por VIH en hombres con una edad igual o superior a los 50 años. Para calcular el porcentaje de adultos de mayor edad (es decir, personas de 50 o más años de edad) con positividad al VIH (VIH+), se extrapolaron los datos procedentes del Programa Conjunto de las Naciones Unidas sobre el VIH/SIDA sobre la cantidad estimada de personas con el VIH y sobre la prevalencia de la infección por este virus entre los adultos con edades comprendidas entre 15 y 49 años.

Resultados En 2007, en el África subsahariana había unos 3 millones de personas de 50 años o mayores con el VIH. La prevalencia de la infección por el VIH en este grupo fue del 4,0%, en comparación con el 5,0% correspondiente al grupo con edades comprendidas entre 15 y 49 años. De la cantidad aproximada de 21 millones de personas ≥ 15 años con VIH en el África subsahariana, el 14,3% tenía 50 años de edad o más.

Conclusión Para poder reflejar mejor la mayor supervivencia de las personas con VIH y el envejecimiento de la población VIH+, se deben ampliar los indicadores de la prevalencia de la infección por el VIH, de manera que incluyan a las personas mayores de 49 años. Se sabe poco sobre la morbilidad asociada y el comportamiento sexual de los adultos VIH+ de mayor edad o acerca de los factores biológicos y culturales que aumentan el riesgo de transmisión. Los servicios relacionados con el VIH deben orientarse mejor para responder a las necesidades crecientes de los adultos de edad más avanzada que se ven afectados por esta enfermedad.

References

1. *2006 report on the global AIDS epidemic*. Geneva: Joint United Nations Programme on HIV/AIDS; 2006.
2. Knodel J, Watkins S, VanLandingham M. AIDS and older persons: an international perspective. *J Acquir Immune Defic Syndr* 2003;33(Suppl 2):S153–65. PMID:12853864
3. Ory MG, Mack KA. Middle-aged and older people with AIDS. *Res Aging* 1998;20:653–64. doi:10.1177/0164027598206002
4. Orchi N, Balzano R, Scognamiglio P, Navarra A, De Carli G, Elia P et al.; SENDIH group. Ageing with HIV: newly diagnosed older adults in Italy. *AIDS Care* 2008;20:419–25. doi:10.1080/09540120701867073 PMID:18449818
5. Bhavan KP, Kampalath VN, Overton ET. The aging of the HIV epidemic. *Curr HIV/AIDS Rep* 2008;5:150–8. doi:10.1007/s11904-008-0023-3 PMID:18627664

6. Navarro G, Nogueras MM, Segura F, Casabona J, Miro JM, Murillas J et al.; PISCIS Study Group. HIV-1 infected patients older than 50 years. PISCIS cohort study. *J Infect* 2008;57:64–71. doi:10.1016/j.jinf.2008.05.003 PMID:18572247
7. Pitts M, Grierson J, Misson S. Growing older with HIV: a study of health, social and economic circumstances for people Living with HIV in Australia over the age of 50 years. *AIDS Patient Care STDS* 2005;19:460–5. doi:10.1089/apc.2005.19.460 PMID:16053403
8. Schmid GP, Williams BG, Garcia-Calleja JM, Miller C, Segar E, Southworth M et al. The unexplored story of HIV and ageing. *Bull World Health Organ* 2009;87:162–162A. doi:10.2471/BLT.09.064030 PMID:19377704
9. Elford J, Ibrahim F, Bukutu C, Anderson J. Over fifty and living with HIV in London. *Sex Transm Infect* 2008;84:468–72. doi:10.1136/sti.2008.031187 PMID:19028949
10. Kyobutungi C, Ezeh AC, Zulu E, Falkingham J. HIV/AIDS and the health of older people in the slums of Nairobi, Kenya: results from a cross sectional survey. *BMC Public Health* 2009;9:153. doi:10.1186/1471-2458-9-153 PMID:19473488
11. Schatz E, Ogunmefun C. Caring and contributing: the role of older women in rural South African multi-generational households in the HIV/AIDS Era. *World Dev* 2007;35:1390–403. doi:10.1016/j.worlddev.2007.04.004
12. Mermin J, Were W, Ekwaru JP, Moore D, Downing R, Behumbiize P et al. Mortality in HIV-infected Ugandan adults receiving antiretroviral treatment and survival of their HIV-uninfected children: a prospective cohort study. *Lancet* 2008;371:752–9. doi:10.1016/S0140-6736(08)60345-1 PMID:18313504
13. Stover J, Fidzani B, Molomo BC, Moeti T, Musuka G. Estimated HIV trends and program effects in Botswana. *PLoS One* 2008;3:e3729. doi:10.1371/journal.pone.0003729 PMID:19008957
14. *2008 Report on the global AIDS epidemic*. Geneva: Joint United Nations Programme on HIV/AIDS; 2008. Available from: http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp. [accessed 20 August 2010].
15. Population Reference Bureau. *2007 world population data sheet*. Available from: http://www.prb.org/pdf07/07WPDS_Eng.pdf [accessed 20 August 2010].
16. *World population prospects: the 2008 revision* [Internet]. Panel 2: detailed data. Geneva: United Nations Population Division; 2008. Available from: http://esa.un.org/unpp/index.asp?panel=2 [accessed 6 August 2010].
17. National AIDS and STD Control Program. *Kenya AIDS Indicator Survey 2007 final report*. Nairobi: Ministry of Health; 2009.
18. Measure DHS. Demographic and Health Surveys [Internet]. Calverton: ICF Macro; 2010. Available from: http://www.measuredhs.com/pubs/browse_region.cfm [accessed 20 August 2010].
19. Shisana O, Rehle T, Simbayi L, Mbelle N. *South African National HIV Prevalence, Incidence, Behaviour and Communication Survey 2005*. Cape Town: South African Medical Research Council; 2005.
20. Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, et al. *South African National HIV Prevalence, Incidence, Behaviour and Communication Survey 2008: a turning tide among teenagers?* Cape Town: HSRC Press; 2009.
21. *Uganda HIV/AIDS Sero-behavioural Survey 2004–2005.* Calverton: Ministry of Health of Uganda & ORC Macro; 2006.
22. *Zimbabwe Demographic and Health Survey 2005-06.* Calverton: Central Statistical Office of Zimbabwe & Macro International; 2007.
23. *Nigeria Demographic and Health Survey 2008*. Abuja: National Population Commission of Nigeria & ICF Macro; 2009.
24. *Enquête Démographique et de Santé (EDSB-III) – Bénin 2006*. Calverton: Institut National de la Statistique et de l'Analyse Économique [Benin] & Macro International; 2007.
25. *Lesotho Demographic and Health Survey 2004*. Calverton: Ministry of Health and Social Welfare of Lesotho, Bureau of Statistics Lesotho & ORC Macro; 2005.
26. Stover J. *AIM: a computer program for making HIV/AIDS projections and examining the demographic and social impacts of AIDS* [computer manual]. Washington: United States Agency for International Development; 2009. Available from: http://data.unaids.org/pub/Manual/2009/20090414_aim_manual_2009_en.pdf [accessed 20 August 2010].
27. Stover J, Walker N, Grassly NC, Marston M. Projecting the demographic impact of AIDS and the number of people in need of treatment: updates to the Spectrum projection package. *Sex Transm Infect* 2006;82(Suppl 3):iii45–50. doi:10.1136/sti.2006.020172 PMID:16735293
28. Diaz T, Garcia-Calleja JM, Ghys PD, Sabin K. Advances and future directions in HIV surveillance in low- and middle-income countries. *Curr Opin HIV AIDS* 2009;4:253–9. doi:10.1097/COH.0b013e32832c1898 PMID:19532061
29. Nyambi P, Zekeng L, Kenfack H, Tongo M, Nanfack A, Nkombe I et al. HIV infection in rural villages of Cameroon. *J Acquir Immune Defic Syndr* 2002;31:506–13. PMID:12473839
30. Mtei LN, Pallangyo KP. HIV infection in elderly medical patients. *East Afr Med J* 2001;78:144–7. PMID:12002055
31. Ibara JR, Itoua C, Gathse A, Obengui , Gassaye D, Nkoua JL et al. Le syndrome d'immunodéficience acquise (sida) chez les personnes âgées en zone tropicale. À propos de 175 cas congolais [Acquired immunodeficiency syndrome in elderly persons in a tropical zone. Apropros of 175 cases in the Congo]. *Bull Soc Pathol Exot* 2002;95:100–2. French. PMID:12145951
32. Kassu A, Mekonnen A, Bekele A, Abseno N, Melese E, Moges F et al. HIV and syphilis infection among elderly people in northwest Ethiopia. *Jpn J Infect Dis* 2004;57:264–7. PMID:15623952
33. Ory MG, Zablotsky DL, Crystal S. HIV/AIDS and aging: identifying a prevention research and care agenda. *Res Aging* 1998;20:637–52. doi:10.1177/0164027598206001
34. Justice AC, Weissman S. The survival experience of older and younger adults with AIDS: is there a growing gap in survival? *Res Aging* 1998;20:665–85. doi:10.1177/0164027598206003
35. Darby SC, Ewart DW, Giangrande PLF, Spooner RJD, Rizza CR. Importance of age at infection with HIV-1 for survival and development of AIDS in United Kingdom haemophilia population. UK Haemophilia Centre Directors' Organisation. *Lancet* 1996;347:1573–9. PMID:8667864
36. Collaborative Group on AIDS Incubation and HIV Survivaland including the CASCADE EU Concerted Action. Time from HIV-1 seroconversion to AIDS and death before widespread use of highly-active anti-retroviral therapy. A collaborative analysis. *Lancet* 2000;355:1131–7. doi:10.1016/S0140-6736(00)02061-4 PMID:10791375
37. Goetz MB, Boscardin WJ, Wiley D, Alkasspooles S. Decreased recovery of CD4 lymphocytes in older HIV-infected patients beginning highly active antiretroviral therapy. *AIDS* 2001;15:1576–9. doi:10.1097/00002030-200108170-00017 PMID:11504992
38. Gebo KA. Epidemiology of HIV and response to antiretroviral therapy in the middle aged and elderly. *Aging health* 2008;4:615–27. doi:10.2217/1745509X.4.6.615 PMID:19915688
39. Rhee MS, Greenblatt DJ. Pharmacologic consideration for the use of antiretroviral agents in the elderly. *J Clin Pharmacol* 2008;48:1212–25. doi:10.1177/0091270008322177 PMID:18812611
40. Akanji BO, Ogunniyi A, Baiyewu O. Healthcare for older persons, a country profile: Nigeria. *J Am Geriatr Soc* 2002;50:1289–92. doi:10.1046/j.1532-5415.2002.50319.x PMID:12133027
41. Drew O, Sherrard J. Sexually transmitted infections in the older woman. *Menopause Int* 2008;14:134–5. doi:10.1258/mi.2008.008020 PMID:18714080
42. Zaba B, Todd J, Biraro S, Shafer LA, Lutalo T, Ndyanabo A, et al. Diverse age patterns of HIV incidence rates in Africa. Presentation at: *XVII International AIDS Conference, Mexico City, 5 August 2008*.
43. *AIDS epidemic update: December 2009.* Geneva: Joint United Nations Programme on HIV/AIDS; 2009.
44. el-Sadr W, Gettler J. Unrecognized human immunodeficiency virus infection in the elderly. *Arch Intern Med* 1995;155:184–6. doi:10.1001/archinte.155.2.184 PMID:7811128
45. Lacerda HR, Kitner D. Mortality of the elderly is still exceedingly high at diagnosis of AIDS despite favourable outcomes after highly active antiretroviral therapy in Recife, Brazil. *Int J STD AIDS* 2008;19:450–4. doi:10.1258/ijsa.2008.007317 PMID:18574115
46. Barnett T. A long-wave event: HIV/AIDS, politics, governance and 'security': sundering the intergenerational bond? *Int Aff* 2006;82:297–313. doi:10.1111/j.1468-2346.2006.00532.x