

## AIDS, SECURITY AND THE MILITARY IN AFRICA: A SOBER APPRAISAL

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### ABSTRACT

This article examines four accepted wisdoms about HIV/AIDS and African armies and in each case concludes that substantial revision is necessary in the light of emerging evidence. First, it appears that military populations do not necessarily have a higher prevalence of HIV than civilian populations. HIV levels in armies depend on many factors including the demographics of the army, its pattern of deployment, the nature and stage of the epidemic in the country concerned, and the measures taken to control the disease by the military authorities. Second, although the epidemic has the potential to undermine the functioning of national militaries, and may have done so in isolated instances, armies in general are well placed to withstand the threat. Third, evidence that war contributes to the spread of the virus is meagre and suggests that we should be concerned primarily with specific risks that conflict may entail including population mobility and changing sexual networks. Lastly, the hypothesis that AIDS has the potential to disrupt national, regional, and international security remains speculative.

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THERE ARE MANY ACCEPTED WISDOMS ABOUT AIDS, its impact on security and on militaries and other uniformed forces. These include the following:

1. Military populations have a higher prevalence of HIV than civilian populations, and this is assumed to be due to the culture and behaviour of soldiers.
2. The HIV/AIDS epidemic is endangering the functioning of national militaries.
3. War and conflict contribute to the spread of the virus, in part because of sexual violence during war.
4. AIDS has the potential to disrupt national, regional and international security.

This article takes a hard look at these four shibboleths. We base our discussion on some new evidence contained in many recent papers, our own

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experience in the field, as well as our growing disquiet over the lack of critical analysis. We conclude that AIDS is indeed an issue for the military, but there needs to be a more nuanced view. We note opportunities for addressing the issue and the problems it does indeed cause. Similarly, AIDS is one security issue among many facing poor countries hard hit by the epidemic. This also needs a careful approach, and we note that there may be important AIDS-security feedback loops that have not been properly or fully understood. We conclude by pointing to many ways in which this agenda can be taken forward.

### *Do soldiers have higher HIV prevalence?*

Data on HIV prevalence in the military are notable for their scarcity. There are very few published studies available, and where there are data, there is a great reluctance to release them as they are perceived as confidential or sensitive. Much of the literature relies on an international survey conducted by the Civil–Military Alliance (CMA) to combat HIV/AIDS in the early 1990s, which recorded some alarming prevalence figures in African militaries (mostly reliable, some — like Angola — subsequently shown to have been incorrect).<sup>1</sup> In Cameroon, HIV prevalence in the military in 1993 was 6.2 percent compared to 2 percent in the general population. In Côte d'Ivoire in 1994, 12 percent of recruits were infected, while in the Central African Republic, prevalence was 22 percent among those entering military service.<sup>2</sup> This study contributed to the claim, still made by UNAIDS, that 'in peacetime, STI [sexually transmitted infection] rates among armed forces are generally two to five times higher than in comparable civilian populations. The difference can be even greater in times of conflict.'<sup>3</sup> While there was some evidence for this (with respect to HIV) in the early 1990s, we will argue that it was uncritically accepted and repeated and is in fact demonstrably incorrect today.

We will examine three issues: prevalence among new recruits, prevalence across the military by age group, and lastly ask how the military fares under different stages and kinds of epidemic.

### *HIV prevalence among recruits*

It is our contention that HIV prevalence among new recruits is low and probably even lower than in civilians of the same age. This is based on

1. Roger Yeager, Craig Hendrix, and Stuart Kingma, 'International military Human Immunodeficiency Virus/Acquired Immunodeficiency syndrome policies and programs: strengths and limitations in current practice', *Military Medicine* 165, 2 (2000), pp. 87–92.
2. S. Kingma, 'AIDS prevention in military populations: learning the lessons of history', *International AIDS Society Newsletter*, 4, March 1996, pp. 9–11.
3. UNAIDS, 'AIDS and the military: UNAIDS point of view', *UNAIDS Best Practice Collection*, May 1998 ([http://www.unaids.org/html/pub/publications/irc-pub05/militarypv\\_en\\_pdf.pdf](http://www.unaids.org/html/pub/publications/irc-pub05/militarypv_en_pdf.pdf), 9 January, 2005).

some limited data from the military, extrapolations from other data, and epidemiological logic. There are two reasons for this. First, the great majority of army recruits are young men in the age range 17–22. This demographic category has lower HIV prevalence than young women of the same age. This is demonstrated by data from population-based surveys. An example is South Africa's 2004 Reproductive Health Research Unit (RHUR) survey of 15- to 24-year-olds.<sup>4</sup> Among males aged 15–19, HIV prevalence was 2.5 percent; for women of the same age, it was 7.3 percent. In the 20- to 24-year-old age group, it was 7.3 percent for males and 24.5 percent for females. Second, many militaries screen recruits, and those who are found to be HIV positive will not be recruited. Informal consultation tells us that every armed force in Africa that is able to screen does so and aims to exclude those who are found to be infected. Most do not publicly admit to doing so; indeed in some countries, this screening is illegal or unconstitutional. In South Africa and Namibia, there have been court cases on this very issue.<sup>5</sup> If recruits are screened and those who are HIV positive are excluded, then prevalence in the military on entry will be close to zero.

These points are illustrated by data from the Ethiopian army. During the mobilization for the war with Eritrea in 1998–2000, mass mandatory screening of recruits for HIV was undertaken. A total of 71,626 recruits, all volunteer young men aged between 18 and 29, were tested. The rate of HIV was 7.2 percent among the nearly 10,000 urban recruits and 3.8 percent among the 62,000 rural recruits.<sup>6</sup> This gave an overall prevalence of 4.3 percent. Only those who tested negative were admitted to the army. Consequent on a shortage of testing kits, this screening programme was abandoned, and the additional recruits, numbering about 160,000, were not tested. However, their demographic and geographical profile was similar to the previous batch, so we will assume they had the same HIV prevalence. As all healthy recruits were admitted, the prevalence during this mobilization would have been 2.8 percent.<sup>7</sup>

The conclusion that new recruits entering the army have low prevalence is an important one for prevention activities. Here are young people in a

4. A.E. Pettifor, H.V. Rees, A. Steffenson, L. Hlongwa-Madikizela, C. MacPhail, K. Vermaak, and I. Kleinschmidt, *HIV and Sexual Behaviour Among Young South Africans: A national survey of 15–24 year olds* (Reproductive Health Research Unit, University of Witwatersrand, Johannesburg, 2004).

5. According to a South African AIDS Law Project press release of 23 October 2003, 'the SANDF has however excluded and continues to exclude job applicants with HIV from employment in the SANDF' (<http://www.alp.org.za/modules.php?op=modload&name=News&file=article&sid=229>, 16 April, 2005).

6. Yigeremu Abebe, Ab Schaap, Girmatchew Mamo, Asheber Negussie, Birke Darimo, Dawit Wolday, and Eduard J. Sanders, 'HIV prevalence in 72,000 urban and rural army recruits, Ethiopia', *AIDS* 17, 12 (2003), pp. 1835–40.

7. Tadesse Berhe, Hagos Gemechu, and Alex de Waal, 'War and HIV prevalence: evidence from Tigray, Ethiopia', *African Security Review* 14, 3 (2005), pp. 107–14.

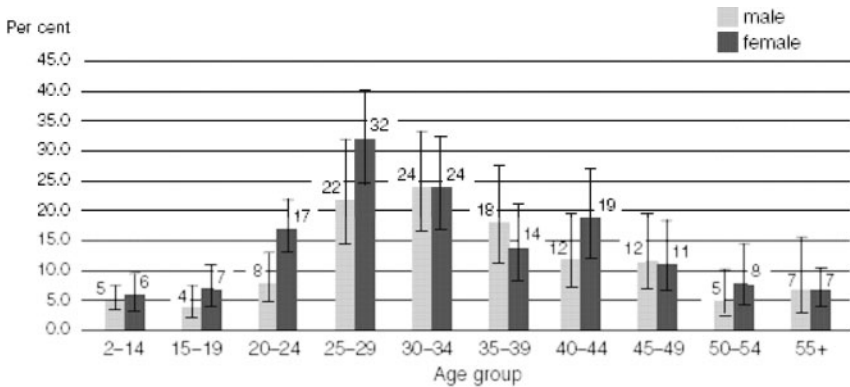


Figure 1. Prevalence of HIV by sex and age, South Africa 2002

disciplined environment, expected to obey orders and live with rules and a code of conduct. This is an opportunity to ensure that they remain HIV negative.

#### *Serving soldiers*

What of older soldiers? The evidence is that in the absence of successful interventions, HIV prevalence rises as men get older. Among women, the peak HIV prevalence is in the 25–29 age cohort; among men, it is five years older. This is illustrated in Figure 1 which is taken from the Nelson Mandela Human Sciences Research Council Study of AIDS in South Africa.<sup>8</sup>

It therefore follows that there will be a ‘natural’ increase in HIV prevalence among older soldiers. But there is good reason to suppose that some military populations will be more susceptible to HIV infection because they:<sup>9</sup>

1. may be posted away from their regular partners;
2. are not as subject to behavioural constraints of family and community and are influenced by peer pressure;
3. have a value set that encourages risky behaviour;
4. are paid and so may be ‘wealthy’ in poor surroundings and have the cash to purchase sex; and

8. Olive Shisana, Leickness Simbayi, and E. Dorkenoo, ‘South Africa’s first national population-based HIV/AIDS behavioural risks, sero-status and media impact survey (SABSSM) research project’ (Third Quarterly Progress Report, Household Survey 2002, Human Sciences Research Council, Pretoria, 2002).

9. UNAIDS, ‘AIDS and the military’, *UNAIDS Technical Update, 1998* ([http://www.worldbank.org/wbi/aidsleadership/dls\\_AIDS\\_military\\_may14.pdf](http://www.worldbank.org/wbi/aidsleadership/dls_AIDS_military_may14.pdf), July 21, 2004); ‘Military populations’ *AIDS Briefs* (<http://www.heard.org.za/publications/AidsBriefs/sec/military.pdf>, December 22, 2005).

5. may sustain injuries in combat and thus be exposed to unscreened blood through direct contamination or through transfusion.

There are counter-examples to all of these. Some military units are immobile for long periods of time, some (for example, many guerrilla units) are located in their home communities, some are disciplined into conservative behaviour, and many are poorly and irregularly paid.

There is evidence both for and against the proposition that serving soldiers are at greater risk of infection. Following the war against Eritrea between June 2000 and June 2001, 135,000 Ethiopian soldiers were demobilized. Of these, 26,496 were tested in a voluntary counselling and testing programme. These were both recent conscripts and pre-1998 serving soldiers, approximately in proportion. The rate of HIV prevalence was 6.1 percent, which implies an increase of 76 percent compared to two to three years earlier. Ideally, this should be compared with the expected increase in HIV prevalence among a cohort of young men in civilian life, but there are simply no comparable data. If, however, we assume that age cohorts in the conscript population can be taken as a proxy for time, then the increase in prevalence from 18- to 19-year-olds (urban 2.2 percent, rural 1.5 percent) to 20- to 24-year-olds (9.4 and 4.4 percent) and 25- to 29-year-olds (15.3 and 6.0 percent) is comparable to that among the demobilizing soldiers.

There is little evidence for increased HIV susceptibility as a result of military service in Ethiopia. But there are reasons why this may be peculiar to this situation. First, the Ethiopian army had a remarkably thorough prevention programme.<sup>10</sup> This was based on widespread testing. Once soldiers and officers were aware of their status, the Ethiopian military's civic and political department (a department entrusted with the responsibilities of political affairs in the army) used the results of the screening for sensitization activities to encourage staying negative. There was also an effort to incorporate the results of HIV test results in the manuals and procedures of promotion and training opportunities for soldiers and officers. The principle was that those who remain negative over periodic tests would be regularly promoted and given the opportunity for training, while those who are HIV positive would not have those opportunities.

Second, the war between Ethiopia and Eritrea was a conventional war between two disciplined and mechanized armies. It was not accompanied by significant guerrilla operations, banditry, or violence against civilians that characterize most other African conflicts.

On the other hand, we do have some data from other countries that suggest military populations may be more susceptible. Brigadier General Adefolalu (Commandant and Chief Consultant Surgeon at Nigerian Army

10. Tsadkan Gebre Tensae, 'HIV/AIDS in the Ethiopian military: perceptions, strategies and impacts' (unpublished paper, 2002).

Medical Command School Headquarters in Lagos) estimated that in 1989/90, prevalence of HIV among Nigerian army troops was less than 1 percent; by 1997, it had increased to 5 percent and by 1999 to 10 percent. The years 1998 and 1999 coincided with a return of troops from the Economic Community of West African States Ceasefire Monitoring Group (ECOMOG) operational areas, and among them the HIV prevalence rate was 12 percent.<sup>11</sup>

The CMA investigated peacekeepers returning from Liberia and Sierra Leone and found that infection rates were more than double those of non-peacekeepers. The study also showed that a soldier's risk of infection doubled each year spent on deployment in conflict regions, suggesting a direct link to duty in war zones.<sup>12</sup> Adefalolu's study of Nigerian troops in Sierra Leone found that prevalence increased from 7 percent after one year to 10 percent after two years to more than 15 percent after three years of duty in the operational area. Many thousands of 'ECOMOG babies' were born.

Our working hypothesis is therefore that, in the absence of successful interventions — especially a well thought-out and properly organized prevention programme carried out by both the command and medical structures of the military establishment — HIV prevalence in the military will increase disproportionately as cohorts age. We can further suggest that there will be a greater increase in prevalence if the soldiers are involved in war or peacekeeping operations or are from less disciplined or professional forces. Therefore, we expect prevalence to be higher among longer-serving soldiers than comparable civilian populations.

The demographic structure of an army, its conditions of service and manner of deployment, and its HIV/AIDS programme are therefore critical factors determining the level of HIV in its ranks.

The age distribution of army personnel and their ranks depends on many factors including the structure of ranks (in African armies, based on those of the former colonial powers), recent history, method of recruitment, overall size, and whether the army is growing, stable, or shrinking. A large and expanding army based on national servicemen will have a much younger age distribution, and a smaller, stable, or restructuring army relying on professional soldiers with many specialist personnel will have a much older age distribution. Let us examine the structure of a hypothetical infantry brigade in a national service-based army.

Soldiers and non-commissioned officers (NCOs) are assigned as ordinary foot soldiers or sailors and do very specific technical activity. They are experts in their specific field of activity, but they are not leaders. Usually

11. A. Adefalolu, 'HIV/AIDS as an occupational hazard to soldiers – ECOMOG experience' (Paper presented at the 3rd All Africa Congress of Armed Forces and Police Medical Services, Pretoria, 1999), pp. 4–11.

12. M. Fleshman, 'AIDS prevention in the ranks – UN target peacekeepers, combatants in war against the disease', *African Recovery* 15, 1–2 (2004), pp. 9–10.

they are rarely promoted to the officer ranks. Their retirement age is 45–50 because of the very tough physical requirements, but many will be discharged earlier, not having received promotion. National servicemen will rarely rise beyond the rank of corporal and will serve two to four years. Corporals are generally between the ages 22 and 28, sergeants 28 and 35, and sergeants-major above 35.

The other group are the officers. They usually have a better level of education and are leaders of the institution at various stages. The retirement age of this group on average is higher than that of the NCOs (the higher the rank, the higher the age of retirement). This category is usually divided into three groupings. Lieutenants and captains are called the line officers. Majors and lieutenant-colonels are middle-level officers. Full colonels and generals are the higher officers. Line and middle-level officers implement; higher officers are the actual leaders. The age distribution in this group is as follows: lieutenants, 21–25; captains, 25–30; majors, 30–35; colonels, 35–45; and generals 45–60.

An infantry brigade of 3000 men could be expected to include approximately one colonel, four lieutenant-colonels, a dozen majors, 30 captains, 100 lieutenants, 300 sergeants, and 900 corporals, in addition to specialist and support personnel such as physicians and logisticians. In a conscription-based army, with most personnel serving for a few years, this would imply the following approximate age distribution:

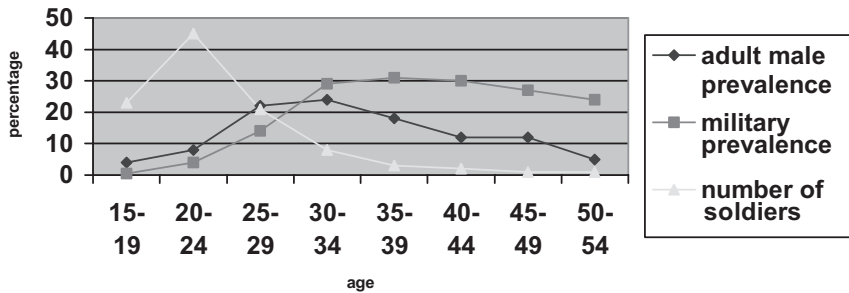
1. Ages 18–22: 360 men in each year cohort.
2. Ages 23–28: average 150 men in each year cohort.
3. Ages 29–34: average 55 men in each year cohort.
4. Ages 35 plus: just a dozen or so men in total.

This extremely young age distribution implies a lower overall level of HIV compared to a comparable male civilian population.

Thus, the HIV prevalence in this hypothetical army is subject to two factors working in opposite directions. The age composition of army members reduces overall prevalence, whereas the increasing age-specific prevalence means that there is increased relative prevalence in the officer corps and among experienced soldiers. This is shown in Figure 2.

A professional army with a high proportion of highly trained and specialized personnel will have a very different age structure, hierarchy, and pattern of deployment. Hence, it would have differing risk factors for exposure to HIV. With a higher proportion of older men, we would expect a higher prevalence of HIV, more in line with a higher-risk group among the general adult male population.

Further variation is introduced by the differing nature of the epidemic: a generalized heterosexual epidemic entails a very different risk profile to an epidemic concentrated among (say) commercial sex workers. This suggests



*Figure 2.* The adult male prevalence is taken from the Human Sciences Research Council study referred to above (note 8). The age profile of the soldiers is calculated from our hypothetical conscript army. The prevalence among the military is our estimate of what happens in the absence of aggressive prevention programmes.

that a single ‘best practice’ may be inappropriate: distinct policies and programmes need to be designed for the very different circumstances of different armies.

#### *Stage and nature of the epidemic*

HIV/AIDS epidemics differ in nature and timing. Let us identify five different kinds of epidemic and examine their implications for the military.

1. Early stage of generalized heterosexual epidemic.
2. Mature generalized heterosexual epidemic.
3. Epidemic focused on sex workers and their clients.
4. Epidemic focused on intravenous drug users.
5. Epidemic focused on men who have sex with men.

The CMA survey in the early 1990s mostly included populations in categories 1 and 3. The way in which such an epidemic unfolds is that high-risk categories, such as sex workers, migrant workers, and truck drivers, quickly reach high prevalence, while the prevalence in the general population remains low. Insofar as soldiers are akin to migrant workers, we would expect them to be at the leading edge of the epidemic. When overall prevalence is (say) 2 percent, the prevalence in these high-risk or leading-edge groups can be 5–10 percent.

Most of eastern and southern Africa is now in a type 2 mature epidemic. As we have demonstrated, when HIV prevalence in the general population is 25 percent (as in South Africa), it is simply untrue as well as epidemiologically improbable that prevalence in the army could be several times higher. On the contrary, for the reasons we have presented, the prevalence



should be lower than the male adult rate for young soldiers and higher for older ones.

Turning to epidemics of types 3–5, in each case it is quite possible that soldiers could be at greater risk and have higher prevalence rates. For example, soldiers are often regular clients of sex workers. In some societies, soldiers may also be more likely to be intravenous drug users or men who have sex with men. We can readily envision cases in support or refutation of these possibilities.

*Does HIV/AIDS undermine military effectiveness?*

Many senior army officers became alarmed at the prospect of HIV/AIDS undermining military effectiveness, often at an early stage of the epidemic. In Ethiopia and South Africa, the armed forces began to acknowledge the extent of the AIDS epidemic and take steps to counter it, in advance of the national government — and on occasion in contradiction to government policies that did not prioritize AIDS at all.<sup>13</sup> In Senegal, the army was in the lead of establishing a national AIDS response in the early days of the epidemic.

Up to 1995, HIV/AIDS in the Ethiopian army received scant attention, with the military focusing its health care on more traditional infectious diseases and STIs. HIV/AIDS was viewed as a peripheral health issue. In 1996, a countrywide survey among apparently healthy army blood donors began to reveal the reality of HIV/AIDS in the Ethiopian army. Almost simultaneously with the survey, the impact of the epidemic was being felt, with AIDS-related deaths increasing among the ranks of mid-level officers. Report findings indicated roughly a 6 percent level of infection.

This prompted the first comprehensive series of discussions on HIV/AIDS by the Council of Commanders, the highest military command structure in the armed forces, chaired by the chief of staff. Through this process of dialogue and review, it was soon accepted that HIV/AIDS posed a severe threat both to individual soldiers and to the army as a whole. Moreover, with higher infection rates among the more experienced and skilled personnel, concerns were raised about the ability of the army to afford replacements and retraining for capacity enhancement in the long term. The epidemic quickly came to be viewed as a strategic issue affecting the central pillars of the entire military institution, not only making them less ready for combat but also undermining the overall mission of the armed forces. Of particular concern were the budgetary implications of the pandemic, from the immediate cost of treating infected personnel and their families to replacing losses in trained manpower. At army headquarters,

13. The same was true in Thailand, where the army responded in advance of the government.

this meant having to conceptualize and then deal with the social, economic, and psychological impacts of AIDS within the armed forces, among soldiers living with HIV/AIDS, and in the society with which they interact.

Once the seriousness of the issue was understood, a series of phased actions were instigated. First, an aggressive awareness-raising campaign was launched, complemented by a system of internal monitoring and follow-up of HIV/AIDS programmes and their impacts. Second, to ensure the integration of AIDS programming in all the activities of the Ethiopian Defence Force, and particularly to foster ownership of the issue at the highest echelons of the army, various aspects of the HIV/AIDS pandemic and direct consequences for the army were regularly tabled for discussion and strategizing at periodic meetings of the Council of Commanders. Finally, as part of a wider agenda of army building, HIV/AIDS was firmly placed as a key agenda item of the National Armed Forces Conference held in 1998. After the conclusion of the army-wide conference, smaller conferences were organized at each successive unit level (from corps down to battalion) and led by the unit representatives from the army conference to disseminate agreements reached on HIV/AIDS actions.

All this was done before any comparable actions were taken by the national government for the civilian population. The military AIDS programme relied on minimal external support, either financial or technical.

In South Africa also, the army has been ahead of the government. At a meeting on HIV/AIDS and uniformed services in Cape Town in December 2004, it was suggested that HIV/AIDS infection will impact on four main areas of combat readiness, namely procurement (recruiting soldiers); preparation (training them); deployment (sending them where they are needed); and sustainment (keeping them there).<sup>14</sup>

The challenge facing the army is less the absolute number of personnel it may lose to HIV and AIDS, but the fact that it is likely to lose more senior, experienced, and skilled personnel, who are difficult to replace. The smooth functioning of the army can depend on the availability and fitness of a handful of individuals in key positions, such as the technicians who service specialist aircraft or the intelligence officers who know the workings of the armed forces of neighbouring states. Epidemiologists tend by the nature of their discipline to focus on the numbers who fall sick and die, no matter what their position in society, but a military planner must focus on key individuals without whom military effectiveness can be severely compromised. There are examples of modern African militaries that have been damaged by the death of a single individual, whether from AIDS, other illness, accident, or assassination. A famous instance of this is the death in a

14. 'HIV/AIDS and Uniformed Services: Analysing the Evidence'. Expert Meeting, Cape Town, December 6-7, 2004 called by UNAIDS and attended by Alan Whiteside.

helicopter accident of the Ugandan chief of staff, General Oyite Ojok, in December 1983, which marked the beginning of the collapse of the army in the face of the insurgents of the National Resistance Army.

A related challenge is budgetary. Because of the length of training required to become an air force pilot, that pilot is worth as much in monetary terms as his plane, and is harder to replace. Armed forces face a serious budgetary crisis if they lose significant numbers of highly trained personnel. Related to this is the budgetary pressure arising from the army's obligation to maintain the health of its servicemen, and often their families too. Most armies maintain their own military hospitals, which are typically better equipped than most civilian ones. HIV/AIDS causes considerable financial burdens. Armed forces face the dilemma of expanding their health budgets to treat their soldiers (and families) or discharging sick soldiers onto an often-inadequate civilian health infrastructure. They also have the dilemma of whether to treat retired personnel. If they refuse to do this, they may find that officers refuse to resign their commissions because of the loss of health care that ensues, leaving the army with an excess of officers for which it has no use. These dilemmas are accentuated by the fact that ministries of finance and international donors are pressing defence ministers to keep their budgets down and by the growing availability of expensive anti-retroviral (ARV) treatment which the military expect to pay for. We have yet to see a donor project offering to fund ARVs for the armed forces.

However, the military has several features that allow it to minimize these impacts. The first is built-in redundancy. An army expects to lose individuals, usually on account of combat. It is therefore designed to duplicate essential tasks. The second is the common practice of early retirement or discharge. An army hierarchy resembles a flattened pyramid: at every layer, there are too many candidates for promotion, and those who are passed over are expected to resign their commissions or are honourably discharged. This means that the army can cope with an increased level of staff attrition. The third is that the army is an institution in which proactive strategic personnel management is a key task. Having recognized the implications of an epidemic of AIDS, the army command should have both the technical capacity and the institutional authority to institute the necessary measures to plan itself out of the epidemic's impacts. As we have noted, some armies have instituted measures such as mandatory testing and the discharge of individuals found to be HIV positive, despite the fact that these fly in the face of some national laws and international standards.

In certain circumstances, an army may find that it faces political constraints that impede its ability to respond. For example, a peace agreement may require the integration of two armies that were formerly enemies, which may have very different HIV rates. Political considerations may make it impossible to award promotion on the basis of merit and HIV status alone.

The South African National Defence Force is a clear example of this, and the integrated units of the post-conflict Sudanese Armed Forces may be another.

Analysts have conjectured that high HIV rates could contribute to indiscipline, corruption, and even mutiny in armies. There are anecdotes of army officers engaging in illegal trade to obtain money to finance ARVs. But there are no known instances of serious challenges to the military hierarchy because of unfulfilled demands for treatment or care despite many clear cases of favouritism and bias in the provision of life-saving treatments. Armies, by their nature, are authoritarian, and those at the top have the authority to make and enforce life-and-death decisions.

In conclusion, an unchecked HIV/AIDS epidemic could imperil the integrity and effectiveness of a national army. In the case of the Ugandan army in the late 1980s and early 1990s, it may well have done so. But there is good evidence and many powerful considerations to suggest that the general peril has been overstated and that armies have the capacity to withstand these threats.

#### *Does war contribute to the spread of HIV?*

A third truism of the literature on AIDS and security is that war and conflict are a major factor in the spread of HIV. If we examine the record, however, we find that while there are some cases that seem to bear this out, there are others that do not, and some of the claimed mechanisms appear to be exceptional and not routine.

First, let us examine the cases in which there is evidence for war, or more specifically, soldiers, spreading HIV. The strongest case can be made for the very first national epidemic, namely Uganda, after 1979. According to the epidemiological reconstructions made by Hooper, it seems clear that HIV spread from an epicentre on the Tanzania–Uganda border (Kagera–Rakai) up through central and western Uganda in 1979, along with the invading Tanzanian army.<sup>15</sup> Subsequently, the spread of HIV in Tanzania may well have correlated closely with the movement of returning soldiers. A second case is the so-called Trojan Horse hypothesis,<sup>16</sup> which argues that the HIV epidemic in South Africa was boosted by the resettlement of the irregular forces stationed on the Caprivi Strip to bases in KwaZulu-Natal and also the return of African National Congress (ANC) fighters from Tanzania.

There is plausible circumstantial evidence in support of both these cases, though it is now almost impossible to reconstruct adequately the

15. Edward Hooper, *Slim* (Bodley Head, London, 1990); Edward Hooper, *The River: A journey to the source of HIV and AIDS* (Penguin, London, 2000), pp. 42–9.

16. Robert Shell, 'The silent revolution: HIV/AIDS and military bases in Sub-Saharan Africa' in *Consolidating Democracy*, Seminar Report Series (Konrad Adenauer Foundation, East London, 2000), pp. 29–41.

epidemiological history of the specific localities and army units involved. It is thus quite possible that military forces played a significant historic role in spreading HIV in Africa. However, that does not automatically mean that armies spread HIV or that conflicts are an engine for the HIV/AIDS epidemic.

Certain conflict areas, for example Mozambique in the period up to the peace agreement of 1992, Angola, Somalia, and Southern Sudan, all appear to have lower HIV prevalence than surrounding areas. The most plausible reason for this is that these areas are cut off from neighbouring countries, and population mobility has been limited, restricting their exposure to the virus. These are all conflicts that preceded the advent of generalized HIV/AIDS epidemics. What of conflicts that have broken out subsequently? Data from conflict-affected areas in Sierra Leone,<sup>17</sup> the Democratic Republic of Congo,<sup>18</sup> and Ethiopia<sup>19</sup> all show modest or indiscernible increases in HIV prevalence. In all cases, caveats are in order. The authors of the Congo study argue that poor data meant that they could not disprove the hypothesis that conflict was increasing HIV, and similar observations have been made for the Ethiopia analysis. In war-affected northern Uganda, HIV prevalence is higher than in the south, but surveillance data indicate that it reflects the national pattern in other respects: it has fallen consistently since the early 1990s and is highest in the major urban centres and lowest in rural areas, implying that the conflict itself has had a limited epidemiological impact.<sup>20</sup> We do not have data for Côte d'Ivoire or the surrounding countries that have received refugee flows.

Comparative analysis of HIV prevalence in refugee camps in Africa also indicates that it is generally lower than in the general population of host countries.<sup>21</sup> If one considers the conditions of life in a rural refugee camp — lack of privacy, often-strict community control, lack of employment, and immobility — they do not indicate conditions for rapid spread of HIV.

Another common assertion is that wartime rape is a significant factor in spreading HIV, either by design or as a by-product of systematic sexual violence. Undoubtedly, there is strong evidence for systematic rape in

17. Reinhard Kaiser, Paul Spiegel, Peter Salama, William Brady, Elizabeth Bell, Kyle Bond, and Marie Downer, 'HIV/AIDS seroprevalence and behavioral risk factor survey in Sierra Leone, April 2002' (Center for Disease Control and Prevention, Atlanta, GA, 2002).

18. C. Mulanga, S. Bazepeo, J. Mwamba, C. Butel, J.-W. Tshimpaka, M. Kashi, F. Lepira, M. Carael, M. Peeters, and E. Delaporte, 'Political and socio-economic instability: how does it affect HIV? A case study in the Democratic Republic of Congo', *AIDS* 18, 5 (2004), pp. 832–4.

19. Tadesse Berhe, Hagos Gemechu, and Alex de Waal, 'War and HIV prevalence: evidence from Tigray, Ethiopia', *African Security Review* 14, 3 (2005), pp. 107–14.

20. Tim Allen, 'AIDS, security and democratic governance', The Hague, 2–4 May 2005. Presentation at expert seminar.

21. Paul Spiegel, 'HIV/AIDS among conflict-affected and displaced populations: dispelling myths and taking action', *Disasters* 28, 4 (2004), pp. 322–39.

many conflicts (Sudan, Rwanda, and Bosnia). However, only in the case of Rwanda is there any evidence that rapists considered infection with HIV to be a deliberate component of their sexual violence.<sup>22</sup> The case of Rwanda was a concerted and systematic attempt to completely eradicate a population and is an exceptional case by any standards. The other instances are disturbing in and of themselves, but we must be careful not to reason from the criminality of acts of rape to the epidemiological significance of rape-induced HIV infection. The recent attention to the hitherto neglected issue of sexual violence in wartime is welcome and overdue, but in the absence of good data, it should not lead us to conclude that it is *ipso facto* an engine in the spread of the AIDS epidemic. Moreover, we should note that while some cases of rape include infection with HIV, the main link between the two is long term: rape survivors tend to be traumatized, stigmatized, and are often unable to find a marriage partner, leading to greater vulnerability to HIV over time.

However, nothing in the above should minimize the fact that the combination of forced displacement, impoverishment, disruption, and the presence of armed forces creates structural conditions that are, in principle, highly conducive to the rapid spread of HIV. The absence of empirical proof that war contributes to an explosive increase in HIV/AIDS is no reason for complacency.

As we turn the analytical lens on conflict and HIV, it becomes evident that we should be concerned less with conflict as such, and more with the specific HIV-vulnerability factors that it entails. These include population mobility and changing sexual networks including resort to transactional sex. It follows that post-conflict transitions can be periods of heightened vulnerability to HIV transmission. This is a concern in Angola Sierra Leone and Southern Sudan, where prolonged conflicts appear to have shielded local populations from the epidemic but where opening up to neighbouring countries after peace runs the risk of igniting epidemics.<sup>23</sup>

### *Does AIDS imperil national security?*

Most analyses of AIDS and national security appear to consist largely of a catalogue of reasons why the epidemic may lead to all kinds of crisis. Such warnings were well justified in the 1990s, when there was little data and much complacency. There is not much more data now and still considerable complacency. But we can begin to dismiss some of the scenarios

22. African Rights, *Rwanda: Broken bodies, torn spirits; living with genocide, rape and HIV/AIDS* (African Rights, Kigali, 2004); V. Randell, 'Sexual violence and genocide against Tutsi women. Propaganda and sexual violence in the Rwandan genocide: an argument for intersectionality in international law', *Columbia Human Rights Law Review* 33, 3 (2002), pp. 733–55.

23. Kaiser et al., 'HIV/AIDS seroprevalence'.

that have been put forward while cautioning that the epidemic's impacts on the functioning of societies are indeed its greatest security threat. Those who write on AIDS and security are advised to avoid, if at all possible, using the word 'may' or at least to note that while the epidemic may do x, it may also not do x.

One well-argued means whereby HIV/AIDS is likely to undermine national stability is through an increase in crime. Regarding this assertion, there is one well-established association and many speculations. The demonstrable link is through a change in the demographic structure of a population affected by AIDS, principally an increase in the proportion of young men in the total population. A society's crime rate is generally correlated with the proportion of its members that are young men, the demographic category most likely to commit crimes.<sup>24</sup> The speculations surround the possibility that children orphaned by AIDS are more likely to become criminals. However plausible the postulated links, there is no empirical evidence for this.<sup>25</sup>

A second correlation is between economic performance and regime stability. Many studies show that weak economic performance is an indicator of political instability and particularly that democracies are imperilled by economic downturns. Insofar as HIV/AIDS increases economic strains, it follows that it contributes to political instability. However, like all correlations in political science, this one is based on data pertaining to a particular historical period. Who is to say that the circumstances of contemporary Africa, which involve important changes in governance structures and norms, and which include both the AIDS epidemic and the international response to that (including massive financial assistance), will not lead to major changes in the patterns of regime change? For example, it is notable that since the Organisation of African Unity (now the African Union) ruled that forcible changes of government are unacceptable, the number of successful *coups d'état* has fallen markedly.

Moreover, even if the correlation were to remain good, what does it tell us? One of the most celebrated statistical correlations is between infant mortality rates and state survival, a link that led farsighted demographers to predict the demise of the Soviet Union many years before it actually occurred. But no one would claim that the increasing infant mortality rate in the USSR actually caused its collapse. Those who argue that no state can retain legitimacy while presiding over the catastrophic mortality

24. P. Fourie and M. Schönteich, 'Africa's new security threat: HIV/AIDS and human security in southern Africa', *African Security Review* 10, 4 (2001), pp. 29–44; M. Schönteich, 'AIDS and age: SA's crime time bomb', *AIDS Analysis Africa* 10, 2 (1999), pp. 1–4.

25. Rachel Bray, 'Predicting the social consequences of orphanhood in South Africa' (Working Paper No. 29, Centre for Social Science Research, University of Cape Town, 2003).

increases that follow an AIDS epidemic need to explain exactly how such state crisis could occur.

Some of the speculative links between AIDS and state crisis can be readily dismissed. For example, it is highly improbable that one nation will see that its neighbour's military has been heavily hit by AIDS and decide this is the opportunity to invade. No serious observer of contemporary Africa would consider such a scenario. Similarly, it is unlikely that a group that believes itself disadvantaged in the distribution of ARVs would stage a coup or take over the ministry of health. There do not appear to be any empirical links between AIDS and terrorism whatsoever — the idea of people living with AIDS flocking to volunteer as suicide bombers collapses at the first scrutiny.

More serious attention needs to be directed to the ways in which the HIV/AIDS epidemic erodes institutional capacity, creates poverty and despair, and intensifies dependence on international aid. These are all serious pressures which jeopardize the development of sound democratic governance and can intensify crisis. The case for AIDS contributing to national insecurity is best stated in its minimal form: there is no element in the HIV/AIDS epidemic that contributes positively to good governance, with the possible exception of the epidemic sparking social mobilization.

### *Implications*

The role of the military in the history of the epidemic probably has historical significance, especially in Uganda and possibly in South Africa. However, the oft-cited claim that soldiers have prevalence rates two to five times higher than the civilian population is unsustainable and should no longer be cited. The demography of military populations means that we should expect them to have relatively low HIV prevalence at young ages and in lower ranks and relatively high prevalence among older and more senior staff. The military's methods for managing the epidemic could mean that low rates are sustained.

Some militaries (again, Uganda is a case) appear to have suffered badly from the HIV/AIDS epidemic. Elite and specialized units and the middle echelons of the officer corps are likely to be most vulnerable to AIDS. But, despite this, there are structural factors in the military's strategic management of personnel that mean that it is relatively straightforward to minimize the impact of the epidemic on military readiness and institutional integrity. This has been demonstrated by some armies. The Ethiopian case, outlined above, is one instance.

There is remarkably little good evidence for conflict accelerating the spread of HIV/AIDS. Researchers need to disaggregate the factors in conflicts that lead on occasion to increased vulnerability to HIV and on other



occasions to lesser vulnerability. Post-conflict transitions emerge as an important nexus in which vulnerability is likely to be increased.

The impact of the HIV/AIDS epidemic on national security is likely to be most pronounced in the same way in which the functioning of an entire society is negatively affected. The epidemic represents an increase in the strain exerted on weak states. However, the context in which these states exist is rapidly changing, not least because of the increase in international assistance partly consequent on the AIDS epidemic itself. More data and analysis are needed in this area than are presently available.

In conclusion, we can decisively dismiss the accepted wisdom that militaries generally have HIV prevalence many times higher than among civilian populations. We can conclude that differences in the structure of armies, their deployment, and the nature of the epidemic to which they are exposed make it extremely difficult to generalize. The notion of a unified 'best practice' in the field of HIV/AIDS and the military should be treated with caution. We can be sceptical about the assertion that conflict contributes to the spread of HIV and that HIV contributes to conflict.

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