Beyond Sick Soldiers: The Impact of HIV/AIDS on Military Forces and Security in Africa

Robert L. Feldman
LTC, USAR
Foreign Military Studies Office

Abstract

The impact of Africa's HIV/AIDS epidemic on the military forces and security of some of its nations extends far beyond the proliferation of sick soldiers. Significant negative effects include loss of tax revenue to support defense, a smaller pool of potential military recruits to draw from, and economic distortions created by well meaning aid donors. Though the HIV/AIDS epidemic has resulted in much suffering, there are also ways it has increased security and lessened the risk of conflict, most notably by decreasing population pressures. Without a complete analysis of the epidemic's impact efforts to improve security and military forces in Africa could prove to be counterproductive.

Introduction

The human immunodeficiency virus, HIV, has spread rapidly through many African militaries, causing numerous soldiers to become ill with acquired immune deficiency syndrome, AIDS. The result has often been army units with a large number of vacancies from soldiers either too sick to perform their duties or who have died. This direct impact of HIV/AIDS on soldiers and the militaries in which they serve has been well studied. However, there are numerous other ways HIV/AIDS can influence African military forces and security. These "indirect means" for the most part have not been as well examined, though as this article will demonstrate they can be quite potent.

In attempting to understand how HIV/AIDS can influence African military forces and security, beyond creating sick soldiers, it is helpful as an overview to create four scenario based categories which examine the interaction between the changes in the prevalence of the disease, which is the percentage of the population with the disease, and the changes in security. These are as follows:

1. **An increase in HIV/AIDS resulting in a less secure environment. As an example, the disease causes decreased worker productivity which in turn leads to decreased tax revenue for defense.**
2. **An increase in HIV/AIDS resulting in a more secure environment. As an example, the disease causes a decrease in population pressures which might decrease the tendency toward conflict.**
3. **A decrease in HIV/AIDS resulting in a less secure environment. As an example, the President's Emergency Plan for AIDS Relief, PEPFAR, results**

in more people surviving the disease and contributing to population pressures.

4. **A decrease in HIV/AIDS deaths resulting in a more secure environment. As an example, with more people surviving there can be greater tax revenues available for defense.**

At first glance it may seem morally reprehensible that a disease as devastating as AIDS could be considered as having any benefit whatsoever. However, the analytical formula is completed by inclusion of potentially forgone or unintended consequences of action, including in this case the opportunity cost of lessened population pressures. In other words, while AIDS causes the deaths of untold millions of innocents, the PEPFAR program, to the extent it is successful, logically adds to population pressures, which can in turn lead to more conflict as a greater number of people are competing for scarce resources. Thus, PEPFAR and similar programs must be evaluated objectively, without emotional blinders, to ensure they are doing more good than harm.

It is not the purpose of this paper to offend anyone. That AIDS is a horrible, devastating disease which orphans children, frequently robs societies of their most productive people, and casts scores of other horrific problems wherever it appears does not bring disagreement from the author. However, to turn a blind eye to the entire range of unintended and potentially negative consequences, including those from well-intentioned actions, would be to ignore reality.

What is HIV/AIDS?

The human immunodeficiency virus, HIV, is a retrovirus, meaning that its genetic material is ribonucleic acid, RNA.[1] The virus is generally transmitted in one of three ways:

- **During unprotected sex**
- **Through blood transfusions or shared needles**
- **From mother to infant during pregnancy or nursing**

HIV attacks the immune system. In time the immune system begins to lose the battle and the person is now said to have developed acquired immune deficiency syndrome, AIDS. As the immune system is ravaged opportunistic infections by other microbes are able to take hold and the individual dies.

There is no cure for HIV/AIDS. However, medications known as antiretrovirals, ARV's, are often helpful in keeping the disease under control. Most African nations are unable to afford the enormous expense of providing these drugs for everyone who is HIV positive.

How many people is that? Estimates are that in Sub-Saharan Africa, a region the disease has struck particularly hard, there are 22.6 million people living with HIV.[2] Each year AIDS kills approximately 1.6 million people in that region.

Why Has HIV/AIDS Spread So Rapidly in Parts of Africa?

African nations have some of the world's highest prevalence rates of HIV/AIDS. There are numerous reasons for this, and not all necessarily pertain to each country. For some countries the high HIV/AIDS rate might be predominantly due to one

factor, for others it might be multifactorial. This variation among the nations as to the rapid spread of the disease makes it all the more difficult to combat for no single strategy appears capable of dealing with all of the causes of the epidemic.

In some countries the rapid spread is fueled by the structure of relationships. Such is the case in Botswana. It is not that people there, on average, have more sexual relationships than people in the United States. However, whereas relationships in the states tend to be serial, in Botswana they tend to occur concurrently.[3] As an example, a man in the states may have a relationship with a woman for several years. After breaking up he starts another relationship, and so forth for maybe seven total relationships, but not all at the same time. While in a relationship with one woman, should he be unfaithful and have sex with someone who has HIV/AIDS, and then he acquires the disease, the spread will probably be rather limited. His immediate partner might catch it, and when they break up and form new relationships their new partners also might acquire the infection. However, this is over a rather long period, and there is a strong possibility during this time the disease will be detected in some of the individuals and its spread halted.

Contrast this with the relationships one often sees in Botswana. There might be a husband, wife and mistress, a situation so common the people have an expression, "big house, little house" meaning the husband and wife in the big house and the mistress regularly visited by the husband in a small house. He might even have more than one mistress, especially if he lives away from home for extended periods. His wife, too, might have a long term relationship with someone besides her husband. Should one of these people acquire HIV from another relationship they are involved

in the disease would quickly spread to everyone in what has been called the "sexual network."[4]

Many of the relationships outside of marriage in Botswana involve an older man and a younger woman. He has some financial security and she has some financial need. However, unlike prostitution with one night stands, these are frequently long term affairs. Because of the financial aspect they have been called "transactional relationships."[5]

It would be a mistake to think that women only go into these relationships when they do not have enough to eat or are trying to better the lives of any children they may have. There are certainly women in such dire straits that they do enter these arrangements to meet minimal needs. However, there are also numerous women who, perhaps responding in part to the pressure of consumerism as seen in Western media, enter these relationships to obtain cars, money for trendy clothes, and/or extra spending money while in college. This is an important point because these relationships to obtain nonessentials are culturally accepted to the point it is almost considered the norm.

Another reason for the high HIV/AIDS prevalence rates in many African countries is the low prevalence of circumcision among the men. Among those people who do circumcise the prevalence of HIV is significantly lower than comparable groups who don't perform this procedure.[6]

Although there are other reasons for the high prevalence of HIV/AIDS in many African nations, this section will conclude with naming only one more, the frequent subjugation of women by men. There is a range to this, from the husband who

demands sex (actually, demand is probably too strong a word in many cultures as a wife would never even begin to refuse), an act defined by many as rape even though they are married, to rape of unmarried women, all of which frequently goes unpunished.

PEPFAR

America's response to AIDS in Africa has been in large measure PEPFAR, as mentioned earlier the President's Emergency Plan for AIDS Relief. Initiated under President George W. Bush it was a five year (2003 to 2008), $15 billion commitment.[7] The funds were largely used for programs involving prevention of the infection, treating those who have it and caring for those infected as well as others such as children orphaned by the disease.

Prevention emphasized three strategies, often called ABC. A was Abstinence until marriage, B was Be faithful, and C was use Condoms. All three strategies have proven controversial with questions as to their effectiveness. Although interesting, discussions related to these are beyond the scope of this article.

Treatment was in large measure aimed at providing antiretrovirals to 2 million Africans by 2008. Although a noble goal it also proved to be an overly ambitious one, falling approximately 800,000 people short, reflecting the many difficulties inherent in trying to implement such a large program in a continent that did not always have adequate infrastructure and human capital to support it.

PEPFAR, despite all of the criticism, has been estimated to have reduced the AIDS mortality rate by 10%.[8] This translates into roughly one million lives that

were saved. Unfortunately prevalence rates remained the same in part because of the difficulties in trying to change sexual behavior. UNAIDS reports new infections in Sub-Saharan Africa increasing faster than antiretrovirals become available, though recently there have been some encouraging signs showing the infection rate finally starting to drop.[9]

In 2008 PEPFAR was reauthorized.[10] Sometimes referred to as PEPFAR Two, it authorizes up to $48 billion over five years, and aims to treat three million people, prevent 12 million new infections, and care for 12 million people by 2013.[11] PEPFAR Two also provides funds to combat malaria and tuberculosis.

It is important to reemphasize PEPFAR's financial costs. Combining the initial program of $15 billion with the reauthorization of $48 billion means the United States will be spending $63 billion from 2003 to 2013 for HIV/AIDS in Africa. Moreover, as will be discussed in future sections, although HIV/AIDS creates security problems, so too can an infusion of such large amounts of foreign money into Africa.

<u>Smaller Pool of Potential Soldiers</u>

In militaries where possible new recruits are screened before entrance, HIV/AIDS has the potential of reducing the number of individuals who would qualify to serve. This could be significant in countries where the HIV/AIDS rate is quite high. To reframe this point using Botswana as an example, approximately 25% of potential military recruits in that country would be ineligible to serve because of their HIV status.

HIV/AIDS also reduces the absolute number of potential military applicants in another way…it kills them. Life expectancy has steadily declined in several African countries, especially those hit hardest by the epidemic. From 1990 to 1995 someone born in Botswana could expect to live to celebrate their 65th birthday.[12] In 2004 life expectancy was approximately 40 years, a 25 year decline. So, not only are the numbers of potential military recruits reduced by individuals being sick, they are also reduced through death.

Two other ways that HIV/AIDS reduces the pool of recruits will be briefly mentioned here for completeness but expanded on in other sections of this article. First, because of the loss of parents an individual of military age may not join the service as he or she is required to provide for remaining family members. The second way is from teachers dying from AIDS, translating into fewer educated individuals who meet the minimal literacy requirements of some African nations' militaries.

Thus, there are at least four ways that HIV/AIDS reduces the potential pool of military recruits. These are:

1. **HIV positive individuals are excluded from the military.**
2. **Death of large numbers of people of military age**
3. **Potential applicants unavailable to serve due to hardships from other family members succumbing to AIDS**
4. **Individuals unable to meet basic literacy requirements of militaries because there were too few teachers**

With fewer qualified individuals available to serve, African militaries may be required to either lower recruiting standards in order to obtain a large enough cohort of soldiers to fill the ranks or leave some positions vacant and thus some units understaffed. In the first scenario a military risks having poorly qualified soldiers in key positions, whereas in the second scenario a military might find itself without adequate human capital to meet its needs. Either way national security could suffer.

Less Taxes, Less Defense Spending

As HIV/AIDS spreads throughout a population there is inevitably a decline in tax revenues as individuals are able to work less and businesses find fewer people able to purchase their goods or services. Since HIV/AIDS often strikes people in their most productive years, this disease can be particularly damaging to an economy.

Decreased worker productivity can be a direct result from HIV/AIDS leading to individuals being too sick to produce at their maximal abilities or from an indirect result.[13] The farmer who has to care for an ailing relative would be an example of the latter. The diversion of family resources, especially time that normally would have been spent tending fields, can greatly reduce crop yields.

The loss of tax revenue is not just from decreased worker productivity. There is also the problem HIV/AIDS presents to tourism. Though difficult to quantify, in discussions with people who are planning vacations HIV/AIDS is occasionally mentioned as a factor in determining which country or countries to visit, with nations that have a high prevalence sometimes considered less desirable destinations.

Less Taxes, Less Money Spent on Infrastructure that Impacts Security

As just noted, a decrease in tax revenue can result in a direct drop in defense expenditures. However, a decrease in tax revenue can also impact on security in less direct ways. Fewer tax dollars means less spent on education, and as discussed elsewhere in this article, this can noticeably impact security.

Fewer tax dollars also means less money spent on infrastructure. Armies often depend on roads and railroads to move troops and equipment. With fewer of these constructed and/or maintained, a military's mobility can be severely limited. The drop off in the installation of telecommunications infrastructure can hinder an army's communication capabilities. Ports not maintained can obstruct the flow of arms, drinking water not cleansed can result in massive numbers of troops falling ill, hydroelectric dams not constructed can result in power shortages to bases, and so on. The impact on security by decreased spending on infrastructure can be enormous.

A Diversion of Resources Away from Security

It is expensive to prevent HIV infections and even more so to treat them once they occur. For many African nations HIV/AIDS creates an added strain to already stretched budgets. To combat the disease means diverting resources from other programs, including defense.

It is not just the national budget which requires a rearrangement of priorities. Defense budgets, too, must take the costs of prevention and treatment of HIV/AIDS

among troops into their spending plans. Thus, security budgets take a double hit. First, there is overall less money available to be spent on defense and second, of the money allocated to defense, an increasingly larger portion must be spent combating HIV/AIDS instead of purchasing bullets, training NCO's, or utilized for other defense related items.

There are also indirect costs involved with HIV/AIDS that essentially result in a diversion of resources away from defense. With fewer people available to work in certain sectors such as transportation, inflation may occur as salaries rise to entice people from other areas of employment. If it costs more to transport weapons from Base A to Base B, less money will be available to actually purchase additional defense related goods.

<u>Impacting Education Means Impacting Security</u>

Besides HIV/AIDS, as previously mentioned, killing teachers, it also hinders education when it claims the lives of parents or makes them too sick to assist their children. Without parents encouraging children to attend school they may find some less productive ways to fill their time. Such children even if they want to attend school might find they lack funds for school admission fees which are a common requirement in many less development countries. Finally, the children may be called upon to work in order to provide for younger siblings, care for sick parents, or deal with other demands that prevents them from attending school.

These hindrances to education impact security in several ways:

- **As previously noted there is a smaller pool of educated people for the military to draw from, leaving the armed services with the unpalatable option of lowering standards to fill vacancies or maintaining standards and having holes in units.**
- **A less educated civilian populace might not always fully understand military missions.**
- **Less educated politicians and bureaucrats who oversee militaries may make mistakes on complicated matters related to security.**

HIV/AIDS Distracts from Security Issues

While many Americans might put "terrorism" at or near the top of their list of major concerns, for many Africans the subject might not even make their top ten list of worries. Certainly there are places in Africa where people are concerned about terrorism, but throughout large portions of the continent little terrorist activity exists.

There is, however, another reason many people in Africa tend not to perceive terrorism as a crisis, and that is because there are so many other problems that directly and immediately affect them. It's hard to think about the terrorist who just blew up a police station 100 miles away when your children are hungry, drought has reduced your crop yield and corrupt government officials demand a significant share of your meager earnings. Oh, and by the way, you have AIDS. To have the time and inclination to be concerned about terrorism in such a situation would be, to put it brutally, almost a luxury.

America worries about weapons of mass destruction. However, as has often been said, AIDS is a weapon of mass destruction. Some people in the United States, where the HIV infection rate is less than 1%, might not think so, but in countries where the rates are 15%, 20%, and higher it is viewed by many with the same dread as war.

In countries with high prevalence rates it's not just the people who are HIV positive who are too preoccupied to worry about terrorism. As they say in Botswana regarding HIV, everyone is infected or affected.

<u>AIDS Orphans</u>

As AIDS claims countless individuals, often between the ages of 20 to 50, the children left behind find themselves with relatives. Thus, the grandparents of Africa are increasingly being asked to raise children…again. Aunts and uncles are being asked to raise nieces and nephews. Older cousins are raising younger cousins.

It's a tradition in many African countries to have extended families, which frequently includes taking in the children of those who have died. However, with AIDS killing so many parents, even extended families have been stretched beyond their capabilities. The result is a large number of AIDS orphans throughout much of Africa growing up without supervision from responsible relatives. From a security standpoint there are several concerns with this situation, not the least of which is the potential for radical organizations to fill the parental void.

Orphaned children can also create security problems by engaging in criminal activities. It is probably no coincidence that South Africa, which is experiencing an

unprecedented increase in crime, has an HIV/AIDS prevalence of 18%.[14] Surely there are numerous other factors that go into this crime wave, but to not notice the immense number of street children involved in crime is to ignore reality. Young criminals frequently grow into older criminals, and their crimes become more daring and dangerous, threatening the very fabric of society.

The Other Side of the Story

The previous sections have detailed how HIV/AIDS can adversely impact security beyond causing soldiers to be sick. However, there is another side to the security issue. Perhaps this infusion of $63 billion into Africa can also hurt security. Additionally, as mentioned before, though difficult to discuss it is necessary to also look at potential ways that stopping HIV/AIDS may actually decrease security.

Moral Hazard

"Moral hazard" basically can be thought of as an individual(s) engaging in risky behavior he or she would normally not engage in except that the consequences of such behavior have to some extent been mitigated.[15] It is a well established concept that has been widely accepted to occur in an untold number of circumstances. An example of moral hazard would be a person with a family to support, who also has life insurance, deciding to smoke even though there is an increased risk he or she may die doing so. Knowing that life insurance will provide for the family's needs should something happen helped convince that individual to smoke, something he or

she might not have done had the potential financial consequences for the family not been mitigated through the presence of life insurance

In the context of HIV/AIDS moral hazard can be thought of as an individual knowing that medication will be provided if he or she becomes infected, even if those drugs are not a cure, deciding it might be worth the chance to hire a prostitute, not wear a condom, or share a needle. Thus antiretrovirals can possibly alter the willingness of an individual to take a risk as the ultimate consequences of such behavior, possible illness and death by AIDS, have been markedly reduced.

With some notable exceptions moral hazard has generally not been discussed to a great extent regarding PEPFAR funds, yet the risk of it occurring is quite real. Perhaps it is difficult to conceive of potential negative effects from a program that is meant to prevent and relieve suffering. However, the plains, cities, and coasts of Africa are strewn with disastrous results from well intentioned programs that went awry.

Because of moral hazard PEPFAR funded HIV/AIDS prevention programs could find themselves in conflict with PEPFAR funded HIV/AIDS treatment programs. As the "cost" of risky behavior is reduced, people willing to engage in it might be increased. This will result in more people acquiring HIV and to the extent that HIV/AIDS weakens security, the goal of increasing security through PEPFAR is not only not met, it is turned upside down. Thus, because of moral hazard, PEPFAR may actually be increasing the number of HIV cases and in turn possibly reducing security.

Population Pressures

Every life saved through the use of antiretrovirals results in additional population pressure on the environment. This is not to say those lives are not worth saving, but there is definitely a cost. As population increases there are problems such as deforestation, soil erosion, hunger and an increase in certain infectious diseases such as meningitis. Is it possible that supplying antiretrovirals actually results in the death of more people than it saves? In Africa, which has limited resources to cope with rising populations, this might be a fair question to ask, albeit one filled with moral minefields.

As African populations swell, in part because millions of individuals are on antiretroviral therapy, the continent will possibly assign untold numbers to death by starvation. With food becoming scarcer, the military might be called on to protect cities from rioters. Security may be threatened.

Undermining Government Legitimacy

If America provides funds to combat HIV/AIDS then the recipient of such money, an African government, doesn't have to. In theory this might sound beneficial as the country is now free to spend its money on other necessities such as teachers. However, American money could undermine the legitimacy of the African government. When people see it is the United States meeting their needs and not their own government, they could reason that their own government doesn't care about them, is incompetent, is too corrupt to act, or all of the above.

Thus, providing large sums of money as PEPFAR does can create a disconnect between the people and the government, potentially leading to security issues. The government, not feeling closely scrutinized by the people, could undetake ill-advised military ventures. The people, essentially removed from their government, could fail to adequately supervise government activities.

<u>Lessons of Capitalism from Communist China</u>

There is an interesting juxtaposition in the city of Gaborone, Botswana. Just a short distance from a building being constructed by the Chinese with local workers is a PEPFAR funded clinic. The Chinese are being paid by Botswana to construct the building. To rephrase this, in Botswana the Chinese are making money from Botswana whereas the Americans are spending.

It is not just construction that the Chinese are involved with in Botswana. Many have also started small businesses employing local people.

Maybe the Chinese inadvertently have a better approach to preventing the spread of AIDS. As discussed earlier, women frequently enter relationships for material gain. If the women are now making some money, perhaps they won't be so quick to enter these transactional relationships, thus slowing the spread of HIV.

This section started with a juxtaposition: the building constructed by a Chinese company near a PEPFAR funded clinic. It will end with irony: some investments by Chinese companies in Africa are probably funded with the interest the US government has had to pay on loans from China in order to fund programs such as PEPFAR.

Conclusions and Suggestions

That HIV/AIDS has been responsible for sickening and killing African soldiers, and in turn weakening military forces, is well known and well studied. However, beyond sick and dying soldiers little appears to be written about how the disease impacts security and military forces in more indirect ways. What comes closest may be described as the impact of HIV/AIDS on human security - issues such as infrastructure, health, and press freedom - but not the more traditional security measures such as the ability of a nation to defend itself against outside attack. This article has attempted to blend the two: looking at how HIV/AIDS impacts such measures as infrastructure construction and health and their relationship to the more traditional definition of security.

HIV/AIDS can clearly adversely affect security. There are fewer educated students in the pool of military applicants, fewer roads for military maneuvers, less tax revenue to spend on defense and so forth. Beyond the items that can be counted such as roads and tax dollars, there are other ways it potentially weakens security, such as people becoming so preoccupied with fighting the disease they fail to prepare to fight an external enemy.

Though perhaps controversial to state, HIV/AIDS may also reduce the chance of conflict. As an example, fewer people means less pressure on already fragile environments, a flashpoint for many conflicts.

The United States through PEPFAR has poured enormous amounts of funds into Africa to combat HIV/AIDS and plans to pour even more in the future. While some

of this may result in improved security, there can also be negative consequences to this massive infusion of funds. Efforts should be made to minimize these, and the following are possible suggestions to accomplish that goal:

- **Encourage increased discussion of possible negative consequences of PEPFAR.**
- **Perform studies to evaluate not just the effectiveness of PEPFAR but also potential negative consequences.**
- **PEPFAR funds should be matched with family planning funds. To not do so is to possibly condemn many people to hunger and poverty who might not have been placed in that position except for the additional population pressures created by people with AIDS having their lives extended.**
- **Reassess the worth of the ABC (abstinence, be faithful, condom use) approach in African nations. It does not appear that abstinence and be faithful have much traction in certain societies. Encouraging condom use does still seem quite valuable for those who visit commercial sex workers, for those with short term relationships, and in certain other situations. However with people who enter long term relationships, condom use does not seem to generally be practiced despite the admonitions from public health officials.**
- **Do a cost-benefit analysis for the amount of money PEPFAR is spending to see if more lives could possibly be saved through interventions for other diseases.**
- **Ask if America can truly afford the expense of PEPFAR. This is a difficult question, laden with moral implications, but it still needs to be asked. Why**

give billions to HIV/AIDS and not the same amount for clean water, tuberculosis control, and other causes. Why spend money for foreign health care when millions of Americans don't have health insurance? Why spend money America doesn't have, but instead must borrow?

- **Consider means to encourage more private investment by American firms in Africa. Maybe the Chinese with their private investments are helping to lower the HIV rate more than PEPFAR.**

The final suggestion this analyst has, based on fieldwork and readings, is to redirect some of the PEPFAR funds into development projects, especially those that benefit women. This would be an experiment with no guarantees regarding the outcome. However, as some women enter relationships mainly for financial benefit, and thus increase the size of sexual networks, development projects that help raise women up financially might result in a reduction of HIV/AIDS. An added benefit of some of these development projects might be indirectly helping security. Assisting in schools, helping to raise orphans, and so forth all have the potential to improve security, and not just human security but also security in the more traditional sense.

Is PEPFAR part of the answer to increasing security in Africa? Studies definitely need to be done to examine if it is helping, hurting, or both. Until they are completed, that remains the $63 billion question.

Disclaimer

The Opinions expressed in this article are those of the author and do not necessarily represent the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

Notes

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