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HIV, ARVs and Life Insurance

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Editor's Note: The author is grateful to Dr. Pat Naidoo of the Rockefeller Foundation for his input, especially on the medical aspects of HIV/AIDS. The author includes his apologies for the length of the article, but feels it is necessary to provide a broader treatment of the subject.

The question of providing life insurance coverage to individuals who test positive for the Human Immunodeficiency Virus (HIV) has been a controversial one. On the one hand is the question of risk—can cover be provided without exposing the underwriter to significant risk and hence potential losses in the long-term fund? On the other, there is a real need for some coverage to alleviate the financial hardship caused by death. It could be argued that the latter is really a social role and hence the responsibility of the government. However, in Kenya, the government is looking at the industry with anticipation as the expert in "insurance risk" to take leadership in this area. This, though, is not an easy problem to solve and probably cannot be done by the industry single-handedly.

So what do we know about HIV and especially insurance coverage for HIV in Kenya?

A. BRIEF EPIDEMIOLOGY OF HIV

HIV debilitates an individual's immune system resulting in increased susceptibility to opportunistic infections, ultimately resulting in death. The virus is transmitted mainly through exchange of blood and other body fluids, particularly as a result of unsafe sexual practices (e.g., multiple partners without barrier protection), unsafe blood transfusions, needle-sharing among injection drug users and transmission from mother to child (in-utero, during passage through the birth canal) and breast-feeding from an infected mother.

In Kenya, transmission through heterosexual intercourse accounts for 90 percent of HIV infections, while mother-to-child transmission and contacts with infected blood account for the other 10 percent.

The prevalence of the virus in the population is thought to be between 7 percent and 15 percent, with the highest prevalence being in western Kenya. More females than males are becoming infected at younger ages. Young women in the age group 15-24 are more than twice as likely to contract HIV as males in the same age group. The peak ages for AIDS cases are 25-29 for females and 30-34 for males. Most AIDS deaths occur between ages 20-30 for women and 25-35 years for men. Currently in Kenya, with a population of about 31 million, it is estimated that 1.4 million women in the age group 15-49, compared to 0.9 million men in the same age category, are infected with HIV.

The mother-to-child transmission occurs primarily during the third trimester and during passage of the baby through the birth canal. Approximately 30 percent of babies born to HIV positive mothers will themselves be HIV positive. After birth, there is a 15 percent chance that a baby who is breast fed by an HIV positive mother will become infected through ingestion of breast milk.

There is quite a lot of individual variation in responses to the infection (related to viral

factors and human host factors as well as the presence of co-infection with other diseases). There is also a difference between how men and women initially respond physiologically to the virus. Generally in the absence of treatment, women progress much more rapidly from infection to full-blown AIDS than do men.

Following initial infection, an individual generally would not notice any overt change in his/her health or bodily function. Depending on his/her physical fitness and nutrition, an HIV positive person can live in a relatively healthy state for anywhere between 18 to 48 months. The virus meanwhile continues to replicate within the individual, initially stimulating the host's immune system to respond and then progressively overcoming the immune system because viral replication occurs faster than the body's ability to defend itself against the increasing viral load. At this point, the individual becomes susceptible to opportunistic infections (skin rashes, diarrheal diseases, pneumonia, fungal infections, TB) that normally will not be a problem if the person was immunocompetent. Childbirth, inter-current infections (e.g., malaria) and stress can all contribute to over-burdening the individual's defenses and hastening the decline of immunity.

Symptoms first start to appear when the CD4 cell count drops to around 200-250 (CD4 cell counts measure the ability of the immune system to fight infections; an ideal "healthy" count level is around 1000) although some indications such as fatigue and weight loss might start earlier. This might be the time the individual becomes aware of or suspects that (s)he might be HIV positive. Without significant medical intervention, the virus continues to weaken the immune system until disease resistance virtually disappears (full-blown AIDS) and death ensues shortly thereafter. Survival (in the absence of treatment) can vary from 27 months (for CD4 less than 200) to 55 months (for CD4 levels in the range of 200-350).

B. CURRENT AVAILABILITY OF LIFE INSURANCE

In Kenya today, *for the employed population*, especially with mid-sized to large employers, insurance is available that covers death from all causes including HIV/AIDS (AIDS is the acronym for the advanced stage of infection when disease fighting ability in the body's immune system is very weak) for amounts below the "free cover limit (FCL)." FCL amounts typically vary by size of the employee group and can, in some cases, cover as much as three times salary.

A second type of insurance coverage available (both as group and as ordinary policies) caters to funeral expenses. While company practices may vary on HIV/AIDS deaths, more and more—at least for these two categories of coverage—deaths from advanced AIDS would be covered.

Medical coverage for HIV/AIDS is more restricted and generally not available within either employee group or individual/personal covers. However there are exceptions here also, especially for employee groups where some medical care delivery/financing organizations—HMOs—will cover the condition, either completely or in a limited manner.

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Outside Kenya, a similar situation prevails. Additionally, there is probably some experimentation of enhanced coverage at higher premiums depending on the extent of the virus (viral loads) or CD4 cell counts or on the "target market." Widespread availability of life or medical coverage to the population at large is virtually nonexistent. Nor are there specific coverages catering only to the HIV positive population.

C. ARVs AND THEIR IMPACT ON THE AIDS VIRUS

ARV (Anti-Retro Viral) medication has over the years proved quite effective in resisting the proliferation of the virus and keeping the immune system relatively healthy. It does so by reducing viral replication and destroying the virus; however, the virus is not totally eradicated from the system. A few viral particles may continue to persist in the liver and spleen. If medication levels are decreased below optimal levels (through poor adherence to treatment or partial or inadequate treatment), these viral particles rapidly proliferate and again invade the system. Under these circumstances the "undestroyed" virus usually also mutates developing resistance to one or more of the medications used to treat the infection.

Currently there are three main types of drugs used: nucleoside reverse transcriptase

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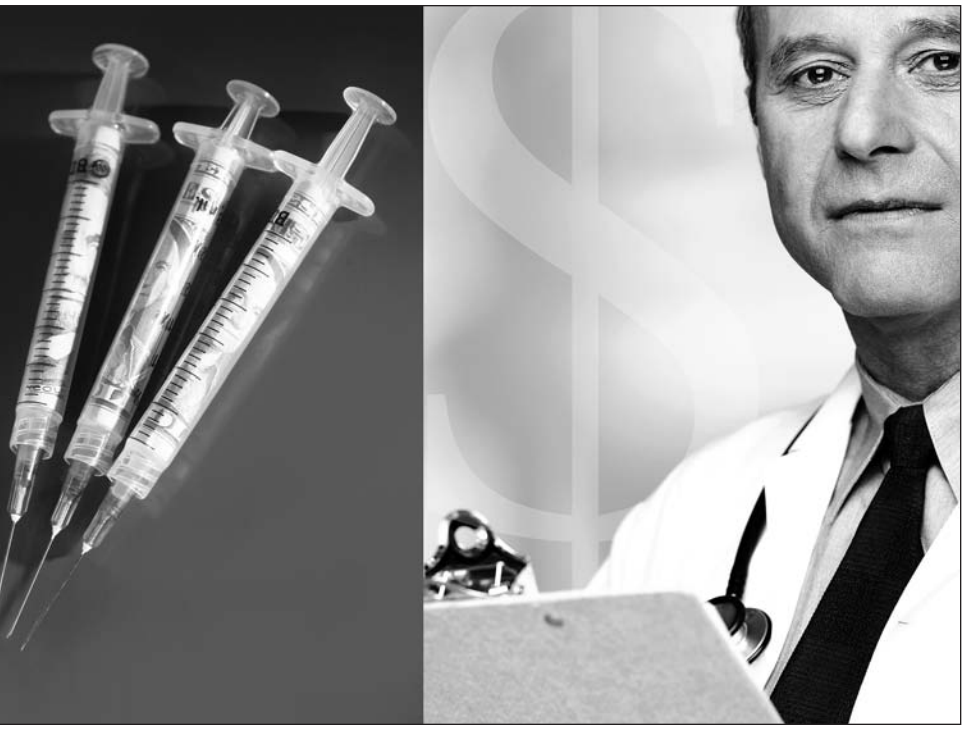

inhibitors (NRTIs), non-nucleoside reverse transcriptase inhibitors (NNRTIs), and protease inhibitors (PIs). These are used in different combinations (drug cocktails) as first line treatment. Combination therapy (triple-therapy or HAART) is recommended over single or dual therapy as a way to stave off drug resistance. Depending on symptoms, progression of the disease, levels of drug resistance and the risk of drug toxicity, second and third line drugs may be introduced into the treatment regimen.

First-line drugs are available either as generic or as brand name preparations. Generic preparations are considerably cheaper (reportedly between KSh 500 and KSh 2000—$7 to $28—for a month's supply). Brand-name drugs on the other hand, are considerably more expensive than generics ($50–$80 per month). There are currently no significant differences in the efficacy of generics versus brand-name drugs. Second and third line treatment regimens are only available as brand-name drugs and are much more costly ($80 to $180 per month).

First-line treatment (both generic and brand-name) has a dramatic effect by fairly rapidly improving the quality of life of a patient and also increasing patient survival. In Africa, because ARVs have only recently been introduced and there has been a relatively short period of consistent use, the impact of ARVs on the actual period of survival is still anecdotal.

Evidence from western countries (where patients are relatively better nourished and have access to better general health care) points to a potential extension of the life of a patient by anywhere from 10 to over 20 years for someone who would otherwise have been within six to 18 months of death. Survival is dependent on good compliance and adherence to treatment, a healthy lifestyle and a conducive environment.

Data from African countries is scanty; outside Africa, Brazil has the most advanced national treatment program in the developing world and has, since 1996 by presidential decree, made ARVs universally available at no cost in public hospitals. Here within the first six years of program implementation, HIV-related mortality had fallen by 50 percent and median survival time had increased dramatically from 18 to 58 months among "advanced" patients and 84 months among ARV-naïve patients. The goal in Kenya is to make ARVs available at no cost and the health ministry has been asked to present proposals on this.

Increasingly across Africa, patient outcomes with ARVs are so compelling that individuals within one to two months of death—emaciated, drained of hope and energy, very sick individuals—bounce back to vitality (gain weight, increase their appetite) and are ready to return to work and take on new challenges with positive outlooks within a period of four to eight weeks of medication.

ARVs have to be administered by trained professionals. The treatment is typically started when the CD4 count is at a certain reduced level (250-300) and/or the viral load is high (>100,000 copies). As a rough guide, at any one time, around 10 percent to 20 percent of all HIV positive individuals would need to be put on medication. Typical dosages can be as many as six tablets three times a day (combining various doses of the three medications) or even more. However "cocktail" preparations are

now available in generic combinations that have lowered the "pill-count" to around two to three capsules twice a day. This is a lot easier for patients who commonly suffer from oral candidiasis (oral and throat fungal disease) to swallow and remain compliant.

Mother-to-child transmission can be almost eradicated by the administration of ARVs to the mother during the second trimester of pregnancy and to the baby within 48 hours of being born. The administration of a single dose of Nevirapine to a newborn at a cost of around KSh 50 ($0.65) can be effective protection against infection.

However, the medication is strong and may in a minority of cases result in significant side effects (allergic reactions and sometimes severe liver damage). This same medication or HAART (Highly Active Anti-Retroviral Therapy—triple therapy) if available can be used for a limited time as post-exposure prophylaxis for rape victims, health workers with needle-stick injuries, etc.

D. PROSPECTS FOR WIDER AVAILABILITY OF LIFE INSURANCE WITHOUT TESTING FOR HIV

If the longevity outcomes and availability/affordability of ARV medication in the West can be replicated in Kenya, clearly the case for availability of specifically designed products would be quite strong. However, all we know today of the situation in parts of sub-Saharan Africa is that an infected individual whose immune system has degenerated and who would likely die in two years could probably increase his/her lifespan a further four to fifteen years with appropriate medication and care, especially with high compliance, ongoing medical supervision and adequate nutrition.

It is understandable that the insurance industry is still nervous about providing coverage to HIV positive individuals in Kenya. Substantial study data is just not available. However, on the positive side, we already cover HIV in the "group" and the "funeral" coverages and hence are familiar with the risk in these populations. There is also encouraging information on the impact of ARVs on life spans, which can be central to the design of appropriate coverages.

However, there are questions about the widespread availability of ARVs and of its affordability as well as numbers of trained professionals to oversee the proper administration of the medication.

So how can the problem of wider insurance coverage be solved? First, there has to be recognition that the insurance industry on its own cannot solve the problem. Additionally, because of the positive impact of ARVs on life span, if coverage is to be provided, there should be proactive efforts, including solid commitment from the government to make the medication widely available with access to palliative care and patient support and to partner the industry in the initiative. Lastly, there should be an industry-wide initiative that, in collaboration with the government and other interested organizations, undertakes a project to design broader product(s) that provide financial relief on deaths, including those from the effects of HIV/AIDS. In other words, not a project focused exclusively on HIV positive individuals, but broader products that also cover, in degrees if necessary, deaths on account of advanced HIV. *Key to this project would be risk pooling,, including the participation of the government to ensure the financial stability of the arrangement.*

In conclusion, ARVs offer significantly improved longevity prospects to HIV positive individuals. To the extent that perhaps for the first time in the history of the epidemic, the industry, the government and interested organizations can, by working in unison each with its natural role, think about building the framework for providing life insurance coverage to include these individuals in Kenya. □

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