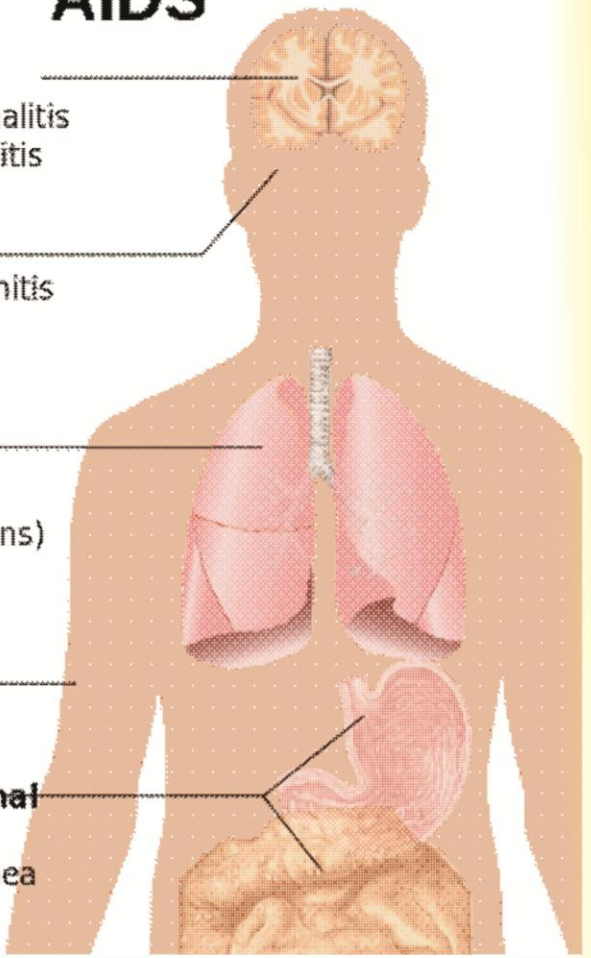
Writers Against Aids and Tobacco Smoking

ABSTINENCE

(A Collection of Drama, Essays and Articles on HIV/AIDS)



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For The Literary And Creative Development Of Nigerian Young Writers

Dedication

Dedicated to all the Contributors.

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QUICK AND DIRTY

CAST

BOB: 50

ANDREW: 25

Bob's apartment. BOB and ANDREW enter hot and heavy, going at it, fall onto the couch. ANDREW goes for Bob's belt buckle.

BOB

Wait.

ANDREW

What? Wait. Why?

BOB sits up, reluctantly pulls himself together.

BOB

I... I kind of have a rule.

ANDREW

Dude, really? Come on. Why'd you bring me back here?

BOB

Because I want to...

(kisses him)

I do, but... I want to be safe.

ANDREW

Condoms? I don't have--

BOB

I want you to take an HIV test.

ANDREW

What? How'm I supposed to do that?

BOB

It's easy. Just a quick swab.

ANDREW

That's really hot, dude.

BOB

I find safe sex hot.

ANDREW

Results take like what? Two weeks. You're gonna come and find

me then?

BOB

Twenty minutes. With rapid testing, they take twenty minutes.

ANDREW

Rapid-- what the fuck? I don't have AIDS.

BOB

But you might have HIV.

ANDREW

I don't.

BOB

How do you know?

ANDREW

I just know, man.

BOB

Lots of people don't. Just know.

ANDREW

You know what? I shoulda known better than to hook up with an
old fag. I shoulda known when you asked about "high risk
events."

BOB

But you're still here.

ANDREW

You’re all the same. Uptight.

BOB

You wouldn’t say that if you’d been there. And if you’d been

there, you’d probably be dead.

ANDREW

You’re not dead. So?

BOB

I was lucky. But a lot of--

ANDREW

I know. I know a lot of guys weren’t lucky. And I’m sorry.

Really, I am sorry. I mean that. And if you lost friends--

BOB

Lots of friends.

ANDREW

I don’t even know what to say about that. I mean it, I’m sorry. It was a really shitty time.

BOB

So you’ll do it?

ANDREW

It was a shitty time, Bob, but it isn't now. AIDS isn't a death sentence.

BOB

Maybe not. But it's a life sentence.

ANDREW

They got it under control.

BOB

There's still no cure. And even if you don't mind the constant doctor visits and medications and worry, there are
no guarantees. And if the test is a buzzkill... "I'm positive" doesn't work so great as a pick-up line either.

ANDREW

What are you, like a one-man crusade? You work at hospital or
something?

BOB

No. I'm just a lucky guy who was there.

ANDREW

You seriously do this to all the guys you bring home?

BOB

Yeah.

ANDREW

You got some kind of reputation I don't know about? I mean,
it feels like you got kind of average package there, but you
do something with it that's extra special?

BOB

I don't spread disease with it. That's pretty special.

ANDREW

There you go again with your sexy talk. C'mon Bob. I'm losing
my mood.

BOB

I'm not.

ANDREW

(approaching, touching)

Then come on.

BOB

(reacting)

Please... oh my god... Andrew, please...

ANDREW

That's more like it.

BOB

Please. Take the test.

ANDREW

For real, dude? You're like stone cold.

BOB

I would love to show you how hot I can be. Take/

ANDREW

Take the test, I know.

BOB

/the test.

ANDREW

And what if it's positive? I'm not gettin' any action then.

BOB

You're not getting any now.

ANDREW

So what if I just walk outta here and go down to Yankin' Hank's and find somebody else?

BOB

I can't stop you.

ANDREW moves toward the door.

ANDREW

That's what I'm gonna do. I was crazy to come up here anyway.

"High risk events." You're whacked.

BOB

So you'll just go back down there and find somebody else, and

this--*I*--won't be on your mind at all? You'll just erase it on your way down the stairs.

ANDREW

I'm gonna put it outta my mind before I even get to the stairs.

BOB

Just like that?

ANDREW puts hand on doorknob.

ANDREW

Just like that.

BOB

I thought you'd be different.

ANDREW

You mean most guys aren't game for your foreplay clinic? I

can't imagine why.

ANDREW opens the door.

BOB

Because they're just like you. Afraid.

ANDREW closes door, turns around.

ANDREW

I ain't afraid a shit.

BOB

You came up here because you wanted to fuck.

ANDREW

Why else?

BOB

So now you don't want to?

ANDREW

Yeah, I want to. But--

BOB

It's just a short delay.

ANDREW

Unless it's positive.

BOB

You said you're not worried about that.

ANDREW

Fuck it. All right. Get your fuckin' test.

BOB

Really?

ANDREW

I'll take your stupid test, you crazy motherfucker.

BOB

Wait here.

BOB leaves, comes back with test kit.

ANDREW

You keep a stockpile of those?

BOB

Just one at a time. They expire.

BOB opens kit, opens bottle, puts it

back, pulls out test stick.

BOB

Do you have any dentures?

ANDREW

Do I look like the old guy in this scenario?

BOB

Open your mouth.

ANDREW

Is this gonna hurt?

BOB

Not at all. Just open your mouth.

ANDREW opens his mouth. Closes it.

ANDREW

Wait.

BOB

What is it?

ANDREW

Nothing. I just wasn't ready. Do it. Do it now.

ANDREW opens his mouth again. BOB gently swabs between his upper teeth
and lip, and again between his lower teeth and lip, maintaining eye contact with Andrew the entire time. BOB removes test stick and puts it into the bottle in kit, and puts kit across the
room on the table, sets alarm on his watch as he returns to where Andrew is sitting.

ANDREW

That's it?

BOB

That's it.

ANDREW

Now what.

BOB

We wait.

Long beat.

ANDREW

Just wait?

BOB

Wait knowing that in twenty minutes, you'll have an answer.

And even if it's the one you don't want to get, you know before it's too late.

ANDREW

You wait with other people?

BOB

I waited with a lot of people, and when they got answers, it

was always too late. And I waited myself. And then... then

one of us was done waiting.

ANDREW

I'm sorry.

BOB

(takes Andrew's hand)

Are you okay? It's okay if you're anxious.

ANDREW

Nah, I'm okay.

(beat)

Those tests really work?

BOB

Yeah. Sometimes there's a false positive.

ANDREW

(pulls hand away)

What?! You didn't tell me that!

BOB

Like 1 in 250.

ANDREW

You're so calm. But hell, it's not your life.

BOB

Not now. Not anymore.

ANDREW

Aw, hey. I'm sorry. I'm sorry. It's easy to forget, you know?

BOB

I know. But I never do.

(beat)

You got family?

ANDREW

Parents. A sister.

BOB

They know?

ANDREW

Sure.

BOB

(reacts to that, another sign

of different times)

Nobody special?

ANDREW

Once. How much longer?

BOB

A few minutes. Listen... I know you think I'm crazy--

ANDREW

Maybe not crazy. Maybe just paranoid.

BOB

I'll never be able to explain to you what it was like.

ANDREW

Maybe in the past ten minutes, I got a little bit better idea.

BOB

(smiles)

Will you promise me something?

ANDREW

Before we even get the results?

BOB

No matter what that result says, no matter what we do after

we see it, I want you to come back tomorrow.

ANDREW

Why would you wanna do that?

BOB

Because I like you.

ANDREW

You like me?

BOB

You make me feel something. And I like feeling it.

ANDREW

You're just throwin' that out there?

BOB

We're both putting ourselves out there.

ANDREW

(beat)

Okay.

BOB

Tomorrow?

ANDREW

Yeah.

BOB

I'll make you dinner.

ANDREW

Fancy!

BOB

We'll get to know each other. No matter what.

ANDREW

I'm still hopin' we get to know each tonight in like what, a

minute?

BOB checks his watch.

BOB

Yep.

BOB takes Andrew's hand, and they sit

in silence for twenty seconds, then BOB

gives Andrew a long, slow kiss until

his watch alarm goes off.

ANDREW

Tomorrow. No matter what?

BOB

Yeah.

LIGHTS OUT. END OF PLAY.

DONNA HOKE (Playwright):

WNY representative for the Dramatists Guild, Donna is a writer and editor, children's author, *New York Times*-published crossword puzzle constructor, and ensemble playwright at Road Less Traveled Productions. Her work has been seen in 24 US states, England, Korea, and Australia. She was voted Buffalo's Best Writer by *Artvoice* in 2012 and 2013.

HIV/AIDS

INTRODUCTION

At the beginning of the 20th Century it was believed by many, including the United States Patent Office, that there was nothing else to invent. Now, 100 years later at the beginning of the new millenium the ancient Egyptian philosopher is more relevant, "there is nothing new under the Sun". While HIV/AIDS may be a new disease, there is nothing new about a novel epidemic, which can potentially or actually decimate a population. In the late middle ages, the Black, now known as the Bubonic Plague, swept through Europe killing virtually half the population. It was introduced by a single or small group of rats that came to Italy abroad a trading ship from what is now Turkey. Small Pox transmitted by trade goods from the Hudson Bay Company wiped out entire Native American tribes. There are other examples of diseases accidentally introduced to a population that had no genetic immunity to them. Not to mention NASA's fear

of an unbeatable super virus from outer space. Now as in previous diseases, one of the dangers of HIV/AIDS is not only in its plague proportions but also in the almost superstitious misunderstanding of the virus itself. In the treatment of all illness, it is necessary to understand the emotional, economic, psychological and sometimes even political impact that is brought about by the disease. This is particularly true with a disease that is as devastating and heretofore misunderstood as HIV/AIDS. AIDS is the punishment of God on sinners. AIDS is a plot by the CIA and the South African Government to wipe out the population of black Africa. AIDS is the result of medical experimentation during the development of the polio vaccine employing the use of rieces monkeys as guinea pigs. AIDS is this, AIDS is that; AIDS is the end of the world. There is nothing new under the Sun. As we enter a new millenium, we are still controlled by prejudice, fear and superstition. AIDS is not the end of the world, it is simply the latest challenge the medical community needs to meet. There are new things to invent including an immunization and cure for HIV/AIDS. But before that we must overcome the age-old superstitious fears of

the unknown and rise above the prejudices that we harbor of, "those people". Let us understand HIV/AIDS. AIDS, the acronym for acquired immunodeficiency syndrome, is the end stage disease of the human immunodeficiency virus (HIV). The result of this disease is the destruction of the patient's immune system. Since the infected person has no ability to fight off any infection because the virus is replicating in and destroying the cells that normally fight infection, he/she then becomes susceptible to all opportunistic disease. Ultimately death occurs as a result of the body's inability to fight infection. In the early 1980"sThe Center for Disease Control and Prevention became aware that a new "virus" was effecting certain segments of society. In 1985 researchers isolated a virus believe to be responsible for AIDS. Since that time the definition of this disease has changed many time. In 1993 the definition was expanded to include conditions more applicable to women and injecting illegal drug users. The new definition includes all HIV infected persons who have a CD4 cell count of 200 cells per microleter of blood. Also added were three clinical conditions. The

current definition states that AIDS is an illness characterized by laboratory evidence of HIV infection coexisting with one or more indicator diseases. Most patients are diagnosed by these criteria. HIV, as its name indicates is a virus and is therefore and obligate parasite. Such parasites can only replicate while inside another living cell, or host. Parenthetically, HIV carries its genetic material in RNA rather than DNA, and while in the host the virus converts RNA to DNA in order to replicate. In seeking hosts, HIV is typically attracted to cells with CD4 + molecules on their surface such as T-helper lymphocytes and similar cells. HIV reproduces at a phenomenal rate, which causes massive destruction to the host cells. Cell destruction grows geometrically as the virus replicates and seeks new host cells. Immune system breakdown primarily results from the dysregulation and destruction of T-helper cells or CD4+lymphocytes. HIV is particularly sinister in its attack on T-helper cells since one of the functions of those cells is to recognize and alert the immune system to alien infections Initially the body's immune system, to a certain degree combats the virus. However, since the

virus virtually targets CD4+lymphatics or T-helper cells, the immune system begins to loose its ability to even recognize let alone defend the invading virus. The immune system remains relatively healthy as long as its count of CD4 cells is greater than 500 per microliter of blood. Since CD4 + cells are designed to attack infection, they are ironically drawn to the virus where they are subsequently infected. Ultimately the infection spreads through the lymph system and lymphoid tissue becomes a reservoir for HIV replication. As the disease progresses viral particles begin to enter the blood, this results in the infection of body tissues where the virus begins to replicate in infected macrophages. Massive reproduction of HIV in these cells causes the macrophage to burst allowing HIV to infect surrounding tissues. The skin, lymph nodes, CNS, lungs and possibly even bone marrow are infected in this manner. The virus at this point is well on its way to infecting every organ and tissue in the body. The symptoms of HIV, while highly identifiable to the patient, are general in nature and are attributable to any number of causes. Early signs are consistent with flu like viruses. They include

abdominal pain, chills and fever, coughing, diarrhea, dyspnea, fatigue and headache. Later symptoms are more severe and could be consistent with other diagnosis including cancer. Some symptoms include disorders of the lymphatic system, malaise, muscle and joint pain, night sweats, oral lesions, shortness of breath, skin rash, sore throat, weight loss and disorientation. Additionally in the majority of HIV cases there are neurological manifestations as well. In addition to symptoms preliminary diagnosis can be made by deduction in ascertaining whether or not the patient engages in high-risk behaviors. If combinations of symptoms are present and are accompanied by high-risk behaviors, then immediate clinical testing is advised. The individual's blood is tested with ELISA or enzyme immunoassay (EIA), antibody tests that detect the presence of HIV antibodies. If this test is positive than the same blood is tested a second time. If a second EIA test is positive a Western blot is performed. This is a more specific confirming test. Blood that tests positive to all three screenings is reported to be positive for HIV. IF the results are inconclusive or indeterminate, the tests are

repeated in 4 to 6 weeks. Again, if repeated and the results remain indeterminate a culture is done to determine the viral load, this is done through testing the DNA of the individual. These tests, whether positive or negative does not confirm nor dismiss the diagnosis of AIDS. That is done according to the 1993 CDC definition of HIV. A negative test is not an assurance that the individual is free of HIV since seroconversion takes up to three months after initial infection. And if the individual continues to engage in risky behaviors, transmission of the disease is likely to occur. At the present time it is believed that the modes of transmission of the HIV virus are clearly identified and understood. Although generally perceived by the public as a sexually transmitted disease, the method of HIV transmission is far broader than simple sexual contact. As previously stated an obligate virus HIV requires a host organism to survive. Once leaving the human body the virus is extremely fragile and cannot survive outside of a host. Thus, HIV is transferred from person to person through infected body fluids including blood, semen, cervicovaginal secretions, breast milk, pericardial,

synovial, cerebrospinal, peritoneal and amniotic fluids. It has been discovered that not all body fluids, which contain HIV, transmit the virus. These fluids include saliva, urine, tears and feces. Further, the ability for HIV to be transmitted via an infected fluid from one human to another is mitigated by a variety of variables such as duration and frequency of exposure, the amount of the virus inoculated and the virulence of the organism. The efficiency of the immune system is also a factor. Once the virus has been passed to another individual, the newly infected individual then is immediately capable of passing the virus to yet another individual. However, there are apparently cycles when the probability of transmission is greater than others. The greatest potential for transmission occurs immediately after infected and during their end stages of the disease. Nonetheless, it must be stressed that it is possible for HIV to be transmitted at anytime during the entire disease spectrum. As a practical matter, the most common method of transmission of HIV is through sexual contact. Vaginal and anal intercourse are two of the three most common modes of HIV transmission. Throughout

the world it is believed that 75% of the total AIDS cases were the result of sexual contact. Anal intercourse is the most frequent method of HIV transmission. This being the result of the frequent tearing of the rectal mucosa which allows for direct infusion of the infected semen into the blood stream. In all cases of intercourse the receptive partner is far more susceptible than the insertive partner. This is not only true of anal and vaginal intercourse, but also for oral intercourse as well. HIV can also be transmitted through oral genital sexual contact but such cases are considered rare. The homosexual community was seriously impacted by HIV in the early days of the epidemic. This was the result of the tendency for unprotected and casual sexual encounters as well as a higher tendency for anal intercourse. The prostitution subculture was and still is seriously impacted by the HIV virus. Causes of this include their numerous and varied sexual encounters, pre-existing sexually transmitted diseases in addition to life style issues such as alcohol, smoking and illegal drug use which weakens the immune system. Undoubtedly, the most powerful form of transmission from one human

to another of the HIV virus is through direct blood transfusions employing infected blood. However, this has resulted in a miniscule number of cases. But the accidental or intentional use of contaminated injecting equipment is the third most common method of HIV transmission. The frequency of transmission being in the deliberate and repeated use of contaminated syringes by infected persons generally occurs in users of illegal drugs. These users typically share syringes and or other improvised injecting paraphernalia. While any illegal drug can be injected, heroine and cocaine are the most widely used injectable illegal drug. Less frequent forms of HIV transmission are vertical transmission and occupational exposure. Vertical transmission occurs when a mother, either during pregnancy, at time of delivery, or after birth (through breast-feeding) infects an infant. Occupational exposure is considered to be rare but does occur. Studies ending in 1996 found 52 documented cases and another 111 cases of possible occupational transmission. These cases, by enlarge, involved health care workers who acquired the disease after percutaneous injury, mucocutaneous exposure and

exposure through open wounds. Most of these cases involve puncture wounds from needle stick type injuries. In addition to health care workers, at risk personal include police officers, fire fighters, military personal and prison employees. Since often the infectious contact is the result of elective human behavior, there are strategies for preventing the continued spread of HIV virus. At the center of these strategies is education which must be world wide, multileveled, intercultural and, of course, non-judgmental. Modifying behavior through education would include teaching safe sex practices, including stressing the proper and consistent use of effective condoms. Similarly for the person who continues to use injected drugs, the use sterile needles must be taught. Deactivation of HIV requires only a 30-second exposure to 100% bleach. Instruction in the cleaning methods used to deactivate HIV should be done. Education without resources can only achieve marginal results. Therefor, although problematic and controversial it is necessary after education to provide easy and in most cases free access to condoms, sterile needles, early HIV testing and follow up medical

treatment. As discussed, while most but not all HIV transmission is the result of risky behavior, there are other causes of transmission as well. Prevention then must entail education, discipline and procedures to minimize infection through transfusion and safety procedures to prevent accidental transmission to people engaged in certain occupations such as health care workers. On this last point herein lies another controversy which is beyond the scope of this paper. That subject deals with what level should a person who is living with the HIV infection have his/her medical and or other records reflect that fact. At what point is the individual's right to privacy negated, if ever, in regards to the individuals who are charged with caring for the infected person. The public at large uses interchangeably the terms HIV and AIDS. This sloppy inaccuracy is one of the basis for the gross misunderstanding of the disease. HIV is divided into two categories; type I, which is found throughout the world and has resulted in most of the reported cases of infection, and type 2, which is localized to Western African coastal nations and areas outside of Africa which have commercial and cultural

relations with that region. HIV infection ultimately leads to the disease of AIDS. But it is not AIDS in and of itself. Within one to three weeks of initial exposure seroconversion occurs. This is the detectable development of HIV antibodies. While the virus is usually detectable, acutely veril and can be passed along, the infected person shows few or no symptoms. From the initial exposure period or roughly from two to six months flu like symptoms will appear in the infected person. The individual will begin to develop antibodies to fight the infection. The individual will frequently appear to be acutely ill. Well before the end of the first year the HIV infection will become asymptomatic. (It should be noted that during this period of time the disease is not dorment but is systematically destroying t-helper cells). During this phase, which will last perhaps into the eighth year of infection, the infected individual will manifest no symptoms of disease. But, nonetheless, will be infectious. Between the eighth and tenth year of infection symptoms of HIV disease will manifest. After ten to fourteen years HIV disease advances into its terminal stage which is known as AIDS. This stage is

epitomized by the body's inability to fight any infection. Thus any infection is potentially fatal to the AIDS patient. In no way to make light of the subject, it is reminiscent of the turn of the century novel by HG Wells, "War of the Worlds". In this first science fiction story that deals with an alien invasion of earth by undefeatable machines, human bacteria proves lethal to these unstoppable forces. Similarly, the most mundane infection is a potential lethal agent to the AIDS patient. However, some opportunistic infections are more frequently associated with AIDS patients than others. Of these opportunistic infections the most frequently encountered are those that are respiratory in nature, particularly pneumoncystic carinii pneumonia and Kaposi's sarcoma. Interestingly, prior to the discovery of HIV/AIDS these two diseases were extremely rare and the dramatic increased occurrence of chronic ailments lead to the discovery of HIV/AIDS. While respiratory system diseases or organisms are most typical other OI can, with fatal consequences strike AIDS patients. The OI can attach any of the body's systems including the integumentary, gastrointestinal and neurologic systems.

For any of these diseases a variety of diagnostic tests are appropriate and similarly with each disease a variety of treatment regimes have been established. However, there is no cure for AIDS. This is not to say that in the early stage of the disease the OI may be successfully resolved. But in the final analysis the OI that strikes the late stage AIDS patient will at some point become fatal. There are several drugs that are available for the treatment and management of opportunistic disease associated with AIDS. Prophylactically used these medications have contributed to the decrease morbidity associated with HIV infection. The individual must take these medications throughout their lives to attempt to control the opportunistic disease as the body's immune system degenerates. These drugs are more effective if used in combination with each other, combination therapy has become the standard of care. These "cocktails" are more effective than single drug therapy. Since patients have become resistant to many drugs over the long periods of time they must take them, studies have shown that combinations of antiviral drugs may reverse the resistance that has taken place. However, the side effects

of these medications are severe, at best. Nucleoside Analogues: zidovudine is the drug of choice to be used initially in combination therapy. Side effects of headache and nausea usually resolve within one month. Other side effects can be more serious such as granulocytopenia, thrombocytopenia, seizures, bone marrow suppression and anemia. Some of these side effects only occur after long term use. This class of drugs inhibits replication of HIV virus by incorporating into cellular DNA thereby terminating the cellular DNA chain. Didanosine, which is in the same classification and acts the same as zidovudine but is used in patients who cannot tolerate zidovudine. Life threatening side effects are pancreatitis, peripheral neuropathy, seizures, CAN depression, leukopenia, granulocytopenia, thrombocytopenia and anemia. Other treatable side effects are nausea and vomiting, diarrhea, abdominal pain, constipation, stomatitis, liver abnormalities, oral thrush and many more usually resolve in a month. These drugs must be taken around the clock to maintain a therapeutic blood level. Non-nucleoside Reverse Transcriptase Inhibitors (NNRTIS) a class of drugs which binds directly to

reverse transcriptase and blocks RNA, DNA conversion causing a disruption of the enzyme site. Nevirapine is used in combination therapy along with other antiviral drugs. Side effects include but are not limited to; rash, thrombocytopenia, fever, headache, nausea, hepatitis, myalgia, etc. The patient must be instructed to report any rash immediately since a rash may progress to Stevens-Johnsons syndrome, which may result in death. Delavirdine is in the same class of drugs as nevirapine. This drug interferes with DNA synthesis that is needed for viral replication. Some side effects of the drug are; fatal metabolic encephalopathy, blood dyscrasias and acute renal failure. Common side effects are nausea and vomiting, headache, vaginitis, rash and elevated LFT's. Again, this drug is used in combination therapy. Protease Inhibitors, another class of drugs inhibits HIV protease, which prevents the maturation of the infectious virus. Saquinavir is generally well tolerated because of low absorption rate. This is used in combination with nucleoside analogues, NNRTIS and other protease inhibitors. Side effects are; pain, rash, diarrhea, buccal mucosa ulceration, abdominal pain, nausea, parathesia,

headache and hyperglycemia. This drug should not be used in children, pregnancy, lactation and with caution in patients with liver disease. The patients must understand that adherence to the drug regimes is extremely important since inadequate adherence can lead to drug resistance and ultimately drug failure. There is little question that early detection is essential to optimum therapeutic management. An obvious benefit of early detection would be corrective treatment of other sexually transmitted diseases, tuberculosis and immunization against the onset of OD and viruses. Lastly, it must be recognized that often life style issues and high-risk behaviors have seriously damaged and weakened the AIDS patient's immune system and health prior to onset of AIDS. Therefore, along with medication life style adjustment is an intricate part of AIDS treatment. Cessation of risky behavior, abstinence from alcohol, tobacco and illegal drugs is essential aspects of the treatment program. Additionally, it is believed that an interdisciplinary approach incorporating acupuncture, massage therapy and other non traditional remedies may be useful if only in raising the mental attitude of the

patient. Interestingly AIDS may be the vehicle for western medicine to entertain more seriously the various treatments of non-traditional therapies, if only to underscores the relationship between health and a positive attitude.

CONCLUSIONS

In 1985 AIDS was viewed as an immediate death sentence, and a horrific one at that, to the infected person. There was apocalyptic terror that this epidemic could wipe out mankind. Now, although there is still no cure for AIDS, education and other aggressive actions are stemming the spread of the disease. On an individual basis, the length and quality of life of people living with the AIDS virus is dramatically increasing. Medicine will ultimately conquer AIDS and with the confidence of having done so, medical practitioners will be better prepared and equipped to meet the next plague when and if it comes.

LIFE-THREATENING INTERACTIONS BETWEEN HIV-1PROTEASE INHIBITORS AND MDMA AND -HYDROXYBUTRATE (GHB)

INTRODUCTION

PURPOSE

The goal of this assignment, is to read the health journal and with an unbiased appraisal, decide whether the information is conclusive enough based on solely the information given to possibly change one's health practices.

Why Topic Selected

In today's college society, with the ever-growing number of sexually active students, HIV is quickly spreading. College students are known for being curious, and it can be extremely common for a person to have several partners in one year. It can also be common for college students to experiment with many illicit "designer"

drugs, such as MDMA (ecstacy). Upon reading the title of this article, I became intrigued. Because both drugs and HIV affect the college student population, it could be very valuable information to the health of those persons who are infected with Hiv-1, who could possibly ingest such drugs as MDMA or GHB as a recreational activity.

Summary

A man with AIDS, age 29, ingested 2 pills of MDMA. Approximately 29 hours later, while still feeling the effects of the amphetamine, the man ingested about ½ teaspoon of GHB, known as a sedative, to help counter the persisting effects of MDMA. About six hours later, the man ingested another ½ teaspoon of GHB. Within twenty minutes after taking the second dose, EMS reported the man “became unresponsive and exhibited a brief episode of clonic contractions of both legs and then the left side of his body." EMS found the subject “responsive only to painful stimuli,” with shallow breathing, and a heart rate of 40/bpm. With the patient’s history of Pneumocystis carinii pneumonia,

cutaneous Kaposi's sarcoma, thrush, and neutropenia, he was beeing treated at the time with protease inhibitors, ritonavir and saquinavir. These protease inhibitors have reports of helping the prognosis of HIV. The journal continues to try and prove, these inhibitors may cause an acceleration or deceleration of the body's metabolism due to their effect on the cytochrome P450 system.

Before being treated by these protease inhibitors, the subject had ingested similar quantities of MDMA and GHB without having the same adverse effects. Also during the time prior to administration (PTA), other persons had consumed similar quantities of the same solution GHB without these life-threatening effects.

Critique

The work was a peer reviewed health journal in which a few medical doctors and pharmacist wrote about a single case and their findings. The study was done at the Dept. of Medicine, School of Medicine, Dept. of Pharmacy, and School of Pharmacy at the University of Washington, Seattle. Because the study was done on-

campus, the funding probably came from grants and off-campus sources. This could lead to a potential bias if limited in funds or time by the source of the promoter. On the other hand, with proper funding the most exact results and conclusions could be drawn. Because the study was only started after the man accidentally had these effects occur, I assume the researchers used what information and equipment already available rather than seeking further funding.

All authors names are accompanied by an MD, or PharmD, therefore, the journal article was created by a fairly knowledgeable source. The study was experimental, as it wasn't planned and all information was gathered after the fact. Only one case was reported and studied, therefore the sample size to be investigated is extremely limited.

I believe that the authors of this article are most likely correct. There could possibly be an interaction between HIV protease inhibitors affecting metabolic rate, and the prolonged or shortened effects of many illicit drugs.

Although the authors could possibly be correct about the relationship between the drugs, with such a limited sample size, it is hard to defend the evidence. Many of the conclusions are simply inconclusive. Many of the same results could have been mimicked by other conditions. For instance, in the journal, the exact milligram count of MDMA ingested is never discussed. It states that prior to taking protease inhibitors the man had ingested similar amounts of the same drugs without feeling the same effects, but the amount of milligrams could be altered from pill to pill. It also does not discuss how much food the subject had eaten, which would also effect the metabolic rate severely. Many combined conditions could have caused this reaction. The conclusions of the study are extremely logical, almost too logical in fact. This leads one to believe that this most simple conclusion was drawn from the inconclusive evidence. The conclusions from the study are limited. The information provided is only useful to those taking protease inhibitors, and illicit drugs (MDMA, GHB). Personally, this information is useless

to me, as I am neither taking protease inhibitors, infected with HIV, nor taking MDMA or GHB.

When I first started this study, it was always a premonition to never take two drugs at once, especially if one of them is considered an illegal, "illicit" one. After reading the study and finding that the subject's episode may have been caused by the reaction between the two drugs, I would certainly never take two drugs together. I would like to continue living a healthy lifestyle, and I do not feel that I will have to change any health behaviors as I am neither infected with HIV or taking illicit drugs.

HIV PREVENTION IN AFRICA

A continuing rise in the number of HIV infected people is not inevitable. There is growing evidence that prevention efforts can be effective, and this includes initiatives in some of the most heavily affected countries.

One new study in Zambia has shown success in prevention efforts. The study reported that urban men and women are less sexually active, that fewer had multiple partners and that condoms were used more consistently. This is in line with findings that HIV prevalence has declined significantly among 15-29 year-old urban women (down to 24.1% in 1999 from 28.3% in 1996). Although these rates are still unacceptably high, this drop has prompted a hope that, if Zambia continues this response, it could become the second African country to reverse a devastating epidemic.

This suggests that awareness campaigns and prevention programs are now starting to work. But a major

challenge is to sustain and build on such uncertain success.

What form should AIDS education take?

Peer education

A social form of education without classrooms or notebooks, where people are educated outside a 'school' environment but still have the opportunity to ask questions.

Most peer education focuses on providing information about HIV transmission, answering questions and handing out condoms to people in a workplace, perhaps in a bar, or where a group of women gather to wash clothes.

Most peer educators make contact with their target audience at least weekly and their sessions will usually be in the context of informal discussions with individual

people or within a group.

Active learning

Active learning can sometimes link into peer education, especially when AIDS education is aimed at young people, as one of the best methods of learning something oneself is to teach it to others.

Blanket education

A general message aimed at the population as a whole. Blanket education usually aims to inform the population about which behaviors are risky and to give them support in changing these behaviors.

Targeted education

This type of strategy is usually used to speak to social groups who are perceived as being at a high risk of HIV infection. It focuses on risky activities particular to the

specific target group.

AFRICA ALIVE!

January of 2000 kicked off the campaign to literally help keep Africa Alive! in the new millennium.

The Mission of the Africa Alive! campaign is to give youth the skills they need to fight against HIV/AIDS. The vision is a new generation of Africans who are HIV/AIDS-free.

The operation principles of Africa Alive! are to create an African network where youth HIV/AIDS prevention programs at all levels can share ideas, have a universal, focused strategy and seek funding for their programs.

With support from the Johns Hopkins University Center for Communication Programs (JHU/CCP), the Africa Alive! network will help organizations that have formerly been working on their own.

The strategy for Africa Alive! encourages young people not only to learn and talk about HIV/AIDS, but also to make the choice to adopt safer sexual behaviors.

With staff in 26 countries, JHU/CCP has developed and managed over 300 country-based projects and contracts in 47 countries, involving more than 200 local organizations and subcontractors. Africa Alive! with support from JHU/CCP reaches African youth by tapping into popular, creative channels of communication that appeal to youth in Africa and all over the world, such as:

- Music contests, where contestants compete to have their songs with HIV/AIDS prevention messages recorded.
- Radio and TV dramas that help educate and promote safe behavior, by depicting and discussing HIV/AIDS prevention and dealing with the decision-making process regarding sexual activity.
- Radio and TV variety/talk shows with phone-ins,

discussion, and mini-dramas addressing HIV/AIDS.

- Comics with HIV/AIDS prevention messages.
- Youth-focused newspaper and magazine articles.
- Public Service Announcements by entertainers popular with youth.
- Peer outreach/counseling in schools and in the communities.
- Telephone hotlines providing information and referral resources.
- Traveling road shows (music, performance, and quiz) that reach both urban and rural areas, getting youth involved in talking about HIV/AIDS.
- Free merchandise with the HIV/AIDS prevention message on it
- Games such as "Snakes and Ladders" with the HIV/AIDS prevention message integrated into the physical materials and strategy of the game.
- Sporting events with prevention messages at breaks, on tickets, and at HIV/AIDS information booths in and around the venue.

Facts

Africa is home to 70% of the adults and 80% of the children living with HIV in the world, and has buried three-quarters of the more than 20 million people worldwide that have died of AIDS since the epidemic began. - UNAIDS Global Summary of the HIV/AIDS Epidemic, December 2000

In the eight African countries where at least 15% of today's adults are infected, conservative analyses show that AIDS will claim the lives of around a third of today's 15-year-olds. - UNAIDS Global Summary of the HIV/AIDS Epidemic, December 2000

HOW HAS IT DEVELOPED?

Only within the last two decades have HIV and AIDS become largely visible in the United States and across the globe. It may appear that there is virtually a void in legislation dealing with HIV and AIDS because of the relatively recent increase in public awareness. Perhaps, though, this lack of legislation should not be surprising considering the fact that almost no other specific illnesses are the target of direct legislation. The rights of patients are often the topic of new laws; however, exact diseases or disorders are not usually expounded upon in these broader forms of legislation.

The situation involving the possible transmission of HIV to Kimberly Bergalis from her dentist provoked many calls for specific legislation requiring medical professionals to be tested for HIV. Additionally, some suggest that if a health care provider tests HIV positive that he or she should be required to disclose this information to all involved patients. Since there is no preexisting legislation on mandated HIV testing for

health care professionals, one must apply broader, more ambiguous interpretations of the Constitution in order to mount cases both for and against the implementation of required HIV testing [Notre Dame J. of Law]. The Amendments of the Constitution that are most applicable to the debate over required HIV testing are the Fifth and Fourteenth Amendments, which contain elements of the right to equal protection, and the fourth amendment, which contains elements of the right to privacy. The Fifth Amendment involves the role of the federal government, as opposed to the Fourteenth Amendment which addresses the role of state governments [Notre Dame J. of Law]. An excerpt from the Fourteenth Amendment of the Constitution is given below:

"…No state shall…deny to any person within its jurisdiction the equal protection of the laws."

(The Constitution of the United States of America can be viewed in its entirety at http://www.publicadministration.net/resources/the-united-states-constitution/)

The Fourteenth Amendment states rather clearly that citizens have the right to equal protection, but the Fifth Amendment does not express this right in such an explicit manner. However, Supreme Court rulings have cited the Fifth Amendment as a source of the right to equal protection through due process in various cases [Notre Dame J. of Law].

An American citizen's fundamental right to privacy is supplied by the Fourth Amendment. This amendment, as stated below, is traditionally known as the Search and Seizure Amendment.

"The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

The federal government and many individual states have mandatory HIV testing of convicted sex offenders and IV drug users. Additionally, many states have extended required HIV testing to include all prisoners of the state. The legal justification upholding laws requiring HIV testing in these situations is that the courts deem these individuals as posing a vested interest to the state as a high risk of further transmission of HIV. Health care workers have not been deemed as a high risk group for transmitting HIV, thus far. For this reason, at this time mandatory HIV testing of health care providers has been held unconstitutional as a form of illegal search and seizure under the Fourth Amendment [Notre Dame J. of Law]. The right to privacy was also the constitutional basis of Griswold v. Connecticut (1965), declaring artificial contraception acceptable for married couples and was the basis of Roe v. Wade (1973), allowing some forms of abortion [American Life League].

Although there is currently no legislation mandating HIV testing for health care providers, this topic has been

and continues to be the source of much contention. Those arguing for mandatory testing claim that a patient's right to full disclosure about his or her treatment includes the risks of treatments. This school of thought holds that health care providers infected with HIV pose a risk to the patient, and therefore, should be required to disclose their HIV diagnosis to their patients. The courts, thus far, have sided with opponents of mandatory HIV testing for health care providers, upholding their right to privacy on the grounds that these individuals do not pose a significant risk of transmitting HIV. Inevitably, the debate over mandatory HIV testing of health care workers will continue as our nation advances the manner in which it aims to control the spread of HIV infection.

HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Human Immunodeficiency Virus (HIV), can be transmitted through unprotected sexual intercourse, sharing contaminated needles and syringes, mother to child (perinatal) and contaminated blood product (National Association of Health Authorities, 1988).

1.2 PURPOSE OF THE RESEARCH

Late HIV diagnosis remains a major problem among black Africans in England. In 2007, about 42 per cent of black Africans diagnosed with HIV were diagnosed late (HPA, 2008a). This compromises their survival chances because evidence indicates that starting treatment with a CD4 cell count below 200 copies/mm3 (a measure of the degree to which an individual's immune system is compromised) increases the risk of disease progression and death (Gazzard, 2008). The reasons for late diagnosis among black Africans are not clear, but include persistent HIV-related stigma and discrimination (WHO, 2006). Fakoya et al. (2008)

identified cultural, social and structural barriers, such as access to testing and care, fear of death and disease, lack of political will, restrictive immigration policies and lack of African representation in decision-making processes.

There is a desperate need to understand the social context of the disease both in terms of the migrants' region of origin as well as in their new United Kingdom (UK) communities. The British government is yet to address the steep rise in rates of the disease among heterosexuals and a new Aids awareness campaign targeted at those most at risk of spreading it is imperative. It is a campaign that the government is reluctant to undertake because of the sensitivities around immigration, race and perceptions of neo-colonialism (Chinouya and Davidson, 2003).

The prevalence of diagnosed HIV in black African and black Caribbean communities in England is estimated to be 3.7% and 0.4% respectively, compared to 0.09% among the white population according to HPA (2008a)

report. In 2007, there were 2,691 new HIV diagnoses among black Africans, representing 40% of all new diagnoses in the UK (HPA 2008c). The majority had acquired their infection heterosexually and in Africa. The number of new diagnoses among black Caribbeans remained low (189 in 2007), representing 3% of new diagnoses in 2007 (HPA 2008c). The percentage of late diagnoses, that is after a point when treatment should have begun, among new diagnoses of HIV in 2007 was highest among black Africans (42%). Twenty-seven percent of HIV diagnoses among black Caribbeans were late.

The worldwide HIV outbreak continues to impact negatively on African communities in the UK. Sub-Saharan Africa is the region most severely affected by the HIV pandemic; as a result, immigrants from sub-Saharan African countries constitute an increasingly large group of those affected by HIV in the UK (Sinka, et al., 2003; UNAIDS, 2006; HPA, 2007). In the UK, African immigrants make up 36% of those living with

HIV (12,558 out of 34,689) despite the fact that they constitute less than 1% of the population (Morris, 2008; HPA, 2009). As part of its continued investigation into the HIV/AIDS epidemic, in 2005 The Guardian newspaper looked at the impact of HIV/AIDS on African communities in the UK and stated the following shocking conclusions:

If you are black, African and living in the UK, you are 50 times more likely to be HIV positive than any other ethnic group…….. In 1999 for the first time the number of black Africans diagnosed with HIV outstripped those among gay and bisexual men. Epidemiologists were shocked to find that one in 18 African women and one in 28 African men attending STI clinics were testing HIV positive…..But, of the Department of Health's annual HIV prevention budget of £53.4 million for 1999, only £75,000 was allocated to African groups (Scott-Clark and Levy, 2005).

As the number of HIV infected African increases in the UK, so too will be the potential for onward transmission among people of the same ethnic and cultural

background given the tendency for social and sexual mixing (Burns, et al. 2005).

HIV/AIDS prevention is necessary now than ever before. Thus, because of advanced therapies that have turned the infection into a chronic disease, many people in developed and developing countries do not take the epidemic to be dangerous or serious as before (Bayene, 2000). In the researcher's view, in spite of advanced therapies, political leaders, institutions, communities and individuals must continue reaffirming their commitment to effective HIV/AIDS prevention in order to curb down the epidemic. Historically, HIV/AIDS interventions have focused on information and education campaigns to promote behavioural change measures such as condom use, having limited sexual partners, being faithful to one partner, abstinence, and delayed sexual debut (Macintyre, et al., 2001).

The desired effect of improving the level of knowledge about HIV/AIDS and its prevention is that individuals will become motivated to alter the behaviours that put

them at risk for contracting the virus. On the other hand, promoting behavioural change indicates that the advent of HIV/AIDS has demanded consideration of the social construction of risk and trust with respect to sexual behaviour and negotiations (Wellings and Field, 1996). Along with HIV/AIDS, the establishment of relationships and sexual coercion are the major themes around which negotiations among people from different ethnic groups and countries occur (Chinouya and Davidson, 2003).

Therefore, in order to grasp the complex social, cultural, political, economic, and demographic factors which together produce response strategies, an interdisciplinary approach is necessary. This is because the existing reality of the HIV/AIDS epidemic in both developed and developing countries indicates that its influence pervades all aspects of the structure of society and that only a holistic approach holds the potential to lead to a fuller understanding of the responses that are adopted in dealing with this crisis (Barnett and

Whiteside, 2002).

There are a number of challenges facing African communities affected by HIV and AIDS in the UK. Despite effective therapies, the infection currently remains incurable and life-long care and treatment will be needed for those diagnosed (Aggleton, et al., 1991). The infection is still frequently regarded as stigmatising, and has a prolonged 'silent' period during which it often remains undiagnosed (HPA, 2007). Late diagnosis is a particular problem with over 40% of new diagnoses occurring at a CD4 count below 200 cells/mm3 (Gazzard, 2008). Late diagnosis greatly increases the risk of mortality, with black Africans and black Caribbean adults 13 times more likely to die within a year of a late diagnosis compared with one at a higher CD4 count (Burns, et al., 2008; HPA, 2008c).

African communities in the UK are at different levels of HIV/AIDS awareness. According to Dodds et al. 2008, the variation of HIV/AIDS awareness among these communities is due to several factors, such as socio-

economic status, religion, culture, gender expectation and level of education, which act as barriers to limit better knowledge and awareness of HIV. Addressing stigma, prejudice and taboo should be an important focus of HIV – related interventions with local African communities.

Although most studies mentioned above have been of much value, there is a great need to provide insights into the underlying socio-cultural rationale of existing responses and the ways in which such responses can be utilised as a source for prevention and care of HIV/AIDS among different ethnic groups. It is also necessary to explore deeper into the changes which responses to the impact of HIV/AIDS have produced within different ethnic groups at the individual and collective levels. It has to be recognised that much of the information about health, disease and illness is often interpreted and modified according to people's cultural explanations and perceptions before they are translated into action (Barrett, 2007). Therefore, it is through understanding the processes and contexts involved in

issues such as risk perceptions from the perspective of the people who are involved that effective HIV/AIDS prevention and intervention programs can be designed.

EPIDEMIOLOGY

Every year, the Health Protection Agency (HPA) publishes reports on HIV in the United Kingdom. The 2010 report relates to statistics for 2009, showing an estimated 86,500 people living with HIV (both diagnosed and undiagnosed) in the UK (HPA, 2010). Approximately a quarter (26%, 22,200) of HIV-infected people were estimated to be unaware of their infection. This compares to the 82,500 people estimated to be living with HIV in 2008, of which 27% were estimated to be unaware of their infection. A total of 6,630 individuals (4,400 men and 2,230 women) were diagnosed with HIV in the UK in 2009. This total for 2009 represents the fourth year-on-year decline from a peak of 7,982 diagnoses in 2005 and is largely due to fewer diagnoses among people infected heterosexually abroad. The HPA (2010) goes on to say that, in 2009, an estimated 63% (2,240/3,560) of new diagnoses acquired

heterosexually were among black Africans and 68% (2,430) acquired their infection abroad, mainly in sub-Saharan Africa.

1.4 **DIAGNOSIS OF HIV/AIDS**

A HIV test is a test that reveals whether HIV is present in the body. Commonly-used HIV tests detect the antibodies produced by the immune system in response to HIV, as it is easier (and cheaper) to detect antibodies than the virus itself (Centre for Health Economics Institute for Health Studies, 1993), and antibodies are produced by the immune system in response to an infection. For most people, it takes three months for these antibodies to develop. In rare cases, it can take up to six months. During this "window period" of early infection a person is at their most infectious (Pratt, 2003). In the early 1980s when the AIDS epidemic began, people living with HIV were not likely to live more than a few years. However, with the development

of safe and effective drugs, HIV positive people now have longer and healthier lives.

Patients attending sexual transmitted infection (STI) clinics are offered an HIV test, with a recommendation to accept, as part of routine care. Overall in 2009, 77% (984,117/1,282,918) of all patients attending an STI clinic had an HIV test (HPA, 2010). This uptake is lower than that seen among patients tested as part of the sentinel unlinked anonymous HIV survey of residual syphilis blood samples which increased from 32% to 95% over the last 10 years. However, despite this increase in HIV testing uptake, 32% of men having sex with men (MSM) and 23% of heterosexual patients attending the 13 sentinel clinics still left the clinic unaware of their infection in 2009 (HPA 2010).

1.5 TREATMENT OF HIV/AIDS

There is no cure for HIV infection. However, the introduction of highly-active antiretroviral therapy (HAART) means that if HIV is detected before

symptoms appear, then in the majority of cases the illness becomes a long-term condition, as opposed to a terminal illness (UK National Guidelines for HIV Testing, 2008). Combination antiretroviral (ARV) therapy prevents the HIV virus from multiplying inside a person. If this growth stops, then the body's immune cells - most notably the CD4 cells - are able to live longer and provide the body protection from infections (Jones, 1992).

It is estimated that 69% of HIV-infected black African and Caribbean people are receiving antiretroviral drugs (HPA 2008a). However, many live with the threat of deportation to countries where they would not be guaranteed such treatment (Pollard and Savulescu, 2004, NAT 2008). According to the African HIV Policy Network (AHPN) some migrants see little point in testing if they cannot access treatment, and fear that accessing services could lead to deportation.Stopping or interrupting treatment can cause HIV to replicate quicker and it may become resistant to therapy (Dodds,

et al., 2008). HIV continues to be one of the most important communicable diseases in the UK. It is an infection associated with serious morbidity, high costs of treatment and care, significant mortality and high number of potential years of life lost (Carter, 2008). Each year, many thousands of individuals are diagnosed with HIV for the first time.

However, the impact of HIV on mortality in the UK has significantly reduced since the introduction of combination therapy in the mid 1990s (Elford, et al., 2007). This applies only to those who are diagnosed and take up treatment in good time to benefit from therapy.

According to Alonzo and Reynolds (1995) admitting to be at risk of HIV means in many people's minds, admitting to place oneself in the category of a stigmatised person and until now in many countries, HIV/AIDS carries enormous stigma, related to the fear of death and the long-held association of HIV/AIDS to prostitution and homosexuality (Dodds, et al., 2004).

Therefore, none of these categories are enticing especially in terms of social identity. That is, to perceive oneself as being at risk, the individual has to either overcome the thought and image of stigma or have had some other overriding shock, perhaps through close personal experience of knowing someone who has died of the disease (Fenton, et al., 2002).

In a comparative study of some men's behaviours in Zambia, Uganda, and Kenya found that a lower level of risky behaviour was associated with the respondent having personally known someone who had died of AIDS (Macintyre, et al., 2001). In two rural areas of Zimbabwe, a survey of 1237 women found that higher levels of knowledge, perception of risk, and having a friend or relative with AIDS were associated with effective behaviour change (Sambisa 2008). The notion behind personal experience or knowing someone who is infected is that for some people HIV/AIDS does not become real, or denial is preferable including denial of risk, until one witnesses someone ill or dying of AIDS.

This means that trying to shift people's perception of risk in order that they choose behaviours that are safe requires a detailed understanding of culture, context of perception, and experience of risk (Kesby, et al., 2003). This is related to the fact that 'culture' in its anthropological sense, is a complex interplay of meanings, action, structure, and change that exist within all social relations and in all social settings (Mayisha II Collaborative Group 2005).

ETIOLOGY OF HIV-ASSOCIATED DEMENTIA

The etiologic agents of the neurologic disease associated with HIV and AIDS are many. Opportunistic infections-cryptococcus, toxoplasmosis, cytomegalovirus, are a few of the organic causes of neurologic disease in AIDS patients, but will not be the main focus of this paper. The human immunodeficiency virus in itself is implicated in much of the neurological manifestations of the disease, and it is the effects of the presence of the virus within the central nervous system which is of interest to me in this paper.

With the advent of more effective highly active antiretroviral therapy (HAART) and thus increased life span of people with AIDS, neurological disorders are becoming a hot topic in AIDS research. In the early days of the epidemic, those infected with the virus could only hope to live for a short time before developing the symptoms of full blown AIDS, and death ensued shortly afterwards. The progress made in treatment in the past two decades has prolonged the lives of people with AIDS, to the point where diagnosis is no longer a sign of

imminent debilitation and death, but rather an acknowledgement of a possible long road ahead with the aid of drug cocktails. There is also a strong possibility that the HIV infected person may develop HIV associated dementia after years of living with the disease (1).

HIV associated dementia (HAD) is comprised of a spectrum of conditions from the mild HIV-1 motor cognitive-motor disorder to severe and debilitating AIDS dementia complex. Symptoms begin with motor slowing (2), and may progress to severe loss of cognitive function, loss of bladder and bowel control, and paraparesis . A classification system has been formulated for HIV associated dementia:

Stage 0: Normal

Stage 0.5: Subclinical or Equivocal

Minimal or equivocal symptoms.

Mild (soft) neurological signs.

No impairment of work or activities of daily living (ADL).

Stage 1: Mild

Unequivocal intellectual or motor impairment.

Able to do all but the most demanding work or ADL.

Stage 2: Moderate

Cannot work or perform demanding ADL.

Capable of self-care.

Ambulatory, but may need a single prop.

Stage 3: Severe

Major intellectual disability, or

Cannot walk unassisted.

Stage 4: End-Stage

Nearly vegetative.

Disease may result from the direct presence of the virus in the central nervous system, toxins released from the virus, the body's immunological responses, or any number of other factors. Studies have found that non physiological levels of cytokines in the brain may have an effect of enhancing replication of HIV 3. Neurodegeneration is implicated in causing the manifestations of dementia, yet the mechanism for neuronal death or malfunction is unknown as of yet.

A mystery of HIV associated dementia was the fact that the human immunodeficiency virus does not seem to infect neurons. However, the virus has been found to infect astrocytes, a type of glial cell within the brain. In

1998, researchers at Flinders University in Australia and Johns Hopkins University found that patients with more rapidly progressing dementia showed more astrocyte death than slower progressors, who in turn showed more cell death than a control group of HIV patients without dementia 4. This supports the idea that the astrocytes, which provide a major mechanism for removing glutamate from the brain, play a role in dementia. Taken into context, the researchers postulated that the next step in this research should be to determine the effect of the apoptosis of the astrocytes on nerve cells.

It has been postulated that the central nervous system provides a "sanctuary" for the persistance and replication of HIV, independent of peripheral viral activity 5. Many drugs used for treatment of HIV are unable to cross the blood brain barrier, and thus virus is protected 6. The majority of research has supported this idea, however a number of studies have found that viral loads within the central nervous system may be affected by antiretroviral therapy. Issues complicating this matter include a shortage of concrete information about the mechanism

for the virus's entry past the blood-brain barrier and into the brain. It has been found that HIV can travel within monocytes (cells which differentiate into macrophages) trafficking into the central nervous system. In the later stages of AIDS, there is may be an influx of monocytes into the brain, triggered by the replication of HIV and the immune activation in the brain. The monocytes not only bring HIV into the brain through the blood brain barrier, but can also act as a reservior for further infection by the virus.

These pieces of research logically present answers to some of the questions about the etiology of HIV associated dementia. However, results generated through other research have presented conflicting information. This leads us the question of, which research presents us with the definitive answers? A lack of evidence of one straightforward causal mechanism implies a more complicated etiology and calls for continued multi-disciplinary research on these conditions.

Two articles presented in Science magazine last year exemplify the controversy over the causes of HIV associated dementia and the large amounts of conflicting evidence associated with this. The first, written by Suzanne Gartner, hypothesizes that HIV associated dementia is the result of the influx of infected blood monocytes into the brain during end stage disease, and proposes that under this hypothesis, HIV associated dementia may be controlled peripherally through HAART. She also states that protease inhibitors have led to a decrease in HIV associated dementia, and suggests that this may be a result of better control on HIV replication peripherally. In summary, a major point of the article is that with appropriate HAART, HIV associated dementia will not occur

In a response to this article, Major and colleagues wrote that although HIV seems to be controlled peripherally by drug therapy, many of the antiretroviral drugs have great difficulty penetrating the blood brain barrier, and cannot get into the brain in significant enough levels to affect

the viral loads there. Although it is difficult to assay the viral load in the brain while a patient is living, post-mortem studies have supported the idea that the virus does appear to be protected while in the brain, and viral load levels differ from those of the periphery 6. They also state that it is a significant finding that HIV is indeed present in the brain very early in infection, and can establish itself there, as a threat to neurological functioning at any time.

Presently, we are left with more questions than answers on this topic. Is this because of the elusive nature of the nervous system? We are constantly left with gaps in our knowledge about the brain after many years of research, and it seems that this case is no different. The nervous system is arguably the most complex system in the human body, and the human immunodeficiency virus is arguably the one of the most puzzling and difficult medical challenges in recent history. They bring together the knowledge and research methods of neuroscientists, immunologists, virologists, and psychologists, among others, to attempt to detect and piece together all of the

elements of this disease 8. The common goal of all of their research is the evolution of a functional working model for the development of therapeutic solutions to put an end to the suffering caused by the HIV virus.

AIDS and HIV

The HIV virus poses one of the biggest viral threats to human society today. It is contracted through bodily fluids such as blood and semen, and sometimes even saliva and tears. AIDS kills 100% of its victims and puts them through agony before they die. It has been a threat for about 15 years, and it is not going to stop now. In fact, AIDS is just getting started: It consumes more people each year. There is no known treatment for it either, only antibiotics to slow the reproduction of the virus. HIV is passed from one person to another by bodily fluids only. It is usually gotten through sexual intercourse or other intimate contact, through the exchanging of unsterilized intravenous needles, or by the contact of HIV-infected bodily fluids and an open wound. It cannot permeate though intact skin, hence it

cannot be spread through informal contact.

AIDS has not been found to travel in insects or tame animals. In pregnant women,the virus only infects the infant near or at the time of birth. The virus dies quickly without a host.

AIDS (Acquired ImmunoDifficiency Syndrome) weakens the body¹s immune system so it is sensitive to infection. The AIDS virus primarily attacks the T lymphocytes, which are a main part of the immune system. The virus is also incubated in cells called macrophages, where it is accidentally sent to other, healthy cells in the body like neurons and lymphatic cells. After HIV is contracted, the person looks and feels healthy for up to 20 years before symptoms start occurring. During this time, the person can give the virus to another even though it cannot be detected by sight or smell. Usually, symptoms start developing

within 1 to 2 years. Typical indications of the virus are fever, weariness, weight loss, skin rashes, a fungal mouth infection called thrush, lack of immunity to infection, and enlarged lymph nodes. When AIDS overtakes the body, the body becomes especially susceptible to tuberculosis,pneumonia, and a rare form of cancer called Kaposi¹s Sarcoma. Once AIDS has fully taken hold, the body may suffer damage to the nerves and brain. The life expectancy of an AIDS victim after the birth of symptoms is 1 to 5 years. AIDS was believed to have begun in Central Africa around 1979. Nearly all of the

first AIDS patients were male homosexuals. However, after 1989 90% of all new cases of AIDS were from heterosexual intercourse. Public awareness rose as famous people began to die, like Rock Hudson, Perry Ellis, Michael Bennett, Robert Mapplethorpe, and Tony Richardson. Basketball star Magic Johnson also reported having AIDS. The approximate number of AIDS cases in the U.S. alone is 65,000 and growing. So

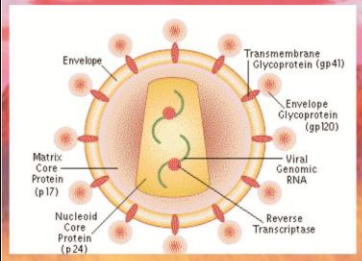
far, there is no treatment or vaccination for AIDS. With most viruses, the body produces antibodies that eventually destroy the virus.

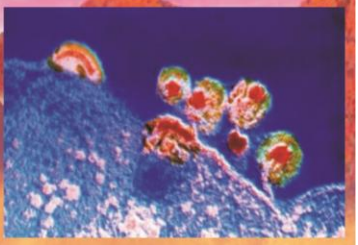
However, with HIV, natural antibodies are completely ineffective. Blood tests will not give accurate results of infection of HIV until between 2 weeks and 3 months after the initial infection. In 1987, the drug AZT (azidothymidine) had proved effective in slowing the growth of the virus, but it was lethal in large doses and some patients could not handle taking it at all. There was a new HIV- fighting chemical scientists found called DDI (dideoxyinosine) that was not as harmful to the patient and could be used in AZT¹s place for more sensitive patients. In 1992 DDC (zalcitbine) was found to be useful for delaying the reproduction of HIV in patients with advanced AIDS, but only in conjunction with AZT. AIDS is one of an epidemic of super-deadly viruses like Ebola, Hanta Virus, and Dingae in Puerto Rico. In my opinion, this is nature¹s way of fighting back from overpopulation. However, AIDS is a

formidable disease and is a force to be reckoned with.

RYAN WHITE STDS/HIV-AIDS CORRESPONDENCE COURSE

By Postal and E-mail





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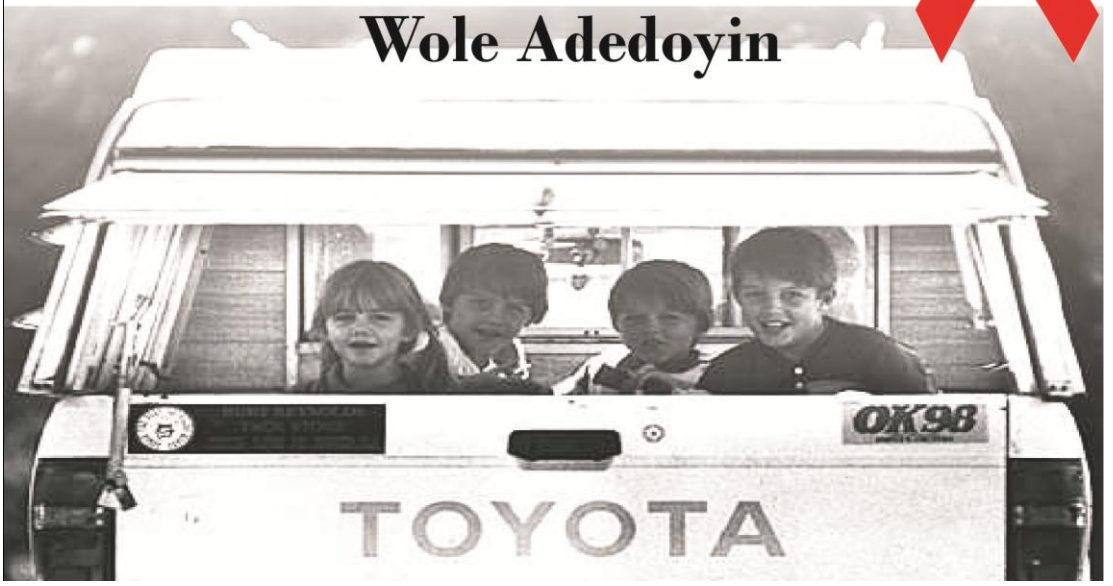
WRITERS AGAINST AIDS AND TOBACCO SMOKING

Prepared by:

Wole Adedoyin



RYAN WHITE STDS/HIV-AIDS CORRESPONDENCE COURSE

The questions are written by recognized and dedicated HIV/AIDS educators. We have nearly ten to fifteen educators working on our questions. They are educators who have had years of practical experience and often they are people who have written recognized HIV/AIDS books for youths.

These HIV/AIDS educators not only prepare your questions of studies they also keep them constantly updated. Every year there are changes, both because of syllabus and text. It is vitally important that your courses are kept up to date. That is why this HIV/AIDS Correspondence Course insists on using the very best expertise available in preparing and updating your course of studies.

Secondly, these expertly prepared questions are available for you to study at your own pace, in your own time, in your own home.

At the end of the day you can relax by your fireside and read through your studies. No turning out at night and traveling to evening classes. No taking notes from lectures, everything is written down for you to study at will and revise as often as you like.

No being held back because of slower students in the class. No being rushed too quickly ahead because a lecturer has to keep up with a time-table.

You don't have to take a chance on how good you are. You can rest assured that your interests are in our interest and we make the best talent available to you to achieve your aim.

How to Enroll

This Letter of Introduction is normally accompanied by an enrolment form. If you require further copies of these documents, please contact the following addresses.

Interested applicants should contact the below listed addresses for registration form or call Wole Adedoyin - +2348072673852 or +2348142693764 or send your e-mail to: olaase10@yahoo.com

RYAN WHITE HIV/AIDS CORRESPONDENCE COURSE BY E-MAIL OR POSTAL MAIL

AIMS AND OBJECTIVES

1. To put a stop to the spread of HIV/AIDS in the country
2. To promote HIV/AIDS Education
3. To encourage HIV/AIDS victims and HIV/Educators
4. To give recognition, reward and award (RRA) to deserving HIV?AIDS educators to serve as role models
5. To highlight the roles of HIV/AIDS education in the education

COURSE ONE

1. Mention and explain 4 different ways by which HIV/AIDS is spread?

b. Mention 7 different ways by which HIV/AIDS is not spread?

c. Gonorrhea is caused by Bacteria – Yes or No

2. Write out 2 causes, 3 symptoms and 2 havocs caused by the following STDs when entered into the body

i. Syphilis

ii. HIV/AIDS

iii. Genital Warts

iv. Vaginitis

v. Chlamydia

b. List 8 signs and symptoms of HIV/AIDS infection

3. In a 3 paragraphs, write down the brief history of HIV/AIDS, how it was

Discovered and when it was discovered.

b. How can you tell if someone has the virus HIV/AIDS?

4. Mention 5 different ways to protect yourself from HIV/AIDS?

b. Differentiate between diseases and infections

5. Mention 5 different ways to cope with an HIV/AIDS victim?

COURSE TWO

1. What is PMTCT?

   b. How does the pregnant woman become HIV infected?

2. What are the benefits of testing pregnant woman for HIV?

   b. How can mother-to-child transmission of HIV can be prevented?

3. How does the baby get HIV from the infected mother?

   b. What conditions increase the chances of a baby getting HIV infection from the mother?

4. What is the consequence of babies acquiring HIV?

   b. How will a pregnant woman know if she has HIV?

5. For women who turn out to be HIV positive, what are the appropriate measures that could

reduce or eliminate the chances of passing HIV to the baby?

COURSE THREE

1. What is the full meaning of STD?

   b. Mention 8 STDs that you know

   c. Which out of the 8 TSDs is the deadliest disease?

2. Mention 8 sense organs of your body

   b. Expatiate fully the functions of each organ

   c. What is Sexual Relationship?

3. What is a Drug?

   b. Differentiate between drug addiction and drug addicts

   c. What type of people could become addicts?

   4. Write out the full meaning of the followings

   i. STI

   ii. HIV

   iii. AIDS

iv. PID

v. NGU

b. Differentiate between HIV/AIDS

c. Write short notes on the followings and how they can be contacted?

i. Virus

ii. Bacteria

iii. Fungus

5. Out of the above mentioned STDs which one has no cure?

b. Write short note on the following terms

i. miscarriage

ii. Burning Sensation

iii. Cervix

iv. Sterility

COURSE FOUR

1. Who is a potential Drug Addict

   b. What is a Hard Drug?

2. What type of people could become addict?

   b. What is Drug Addiction?

3. What is Drug Abuse?

   b. Why do young people turn to drugs?

4. What are the consequences of addiction?

5. Is it possible for an addict to withdraw?

   b. What role can you play to discourage or to terminate Drug addiction in spreading among youth?

COURSE FIVE

1. What is Youth Friendly Clinic?
   b. Why Youth Friendly Clinic?

2. Why should you encourage your brother/sister to use Youth friendly clinic?

   b. What types of services are provided?

3. What type of staff do you find at the Youth Friendly Clinic?

   b. What are the social and reproductive health problems of young people?

4. What is teenage pregnancy?

   b. What is an unwanted pregnancy?

5. What is child trafficking and child labor?