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**Abstract**

**Title of Seminar Paper:** AIDS: Secretions and Implications for Nursing Care-givers.

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The scourge of AIDS has and/or will impact virtually every person alive today. Whether it is a friend, family member, acquaintance or loved one, everyone will soon all someone with AIDS. If progress is not made against this horrific disease, it will rank among history's greatest killers.

For nurses, this knowledge assumes a new and more crucial dimension when it brings the person with AIDS into the nurses' working environment.

These settings have become hotbeds of controversy because of the emotions that this disease evokes in people: horror, pity, sadness, revulsion, confusion, denial, rejection, and condemnation are some of the emotions used to describe someone's reaction to an AIDS "victim."

As a caring profession, nurses must deal with these patients in a safe, empathic, and professional demeanor. Doing so requires the nurse to be both knowledgeable about the physiological, legal, and ethical aspects of the disease, as well as non-judgmental about the psycho-social aspects of the condition.

Since information about HIV infection is in a constant state of revision, it is virtually impossible to be completely comprehensive and up-to-date. Because of the evolving and imprecise nature of AIDS issues and information, it is vital for nurses to keep abreast of new developments and changes in this field.

**AIDS:  
Secretions and Implications  
for Nursing Care-givers**

by

**Jean Marie Bell**

This seminar paper submitted to the faculty of the  
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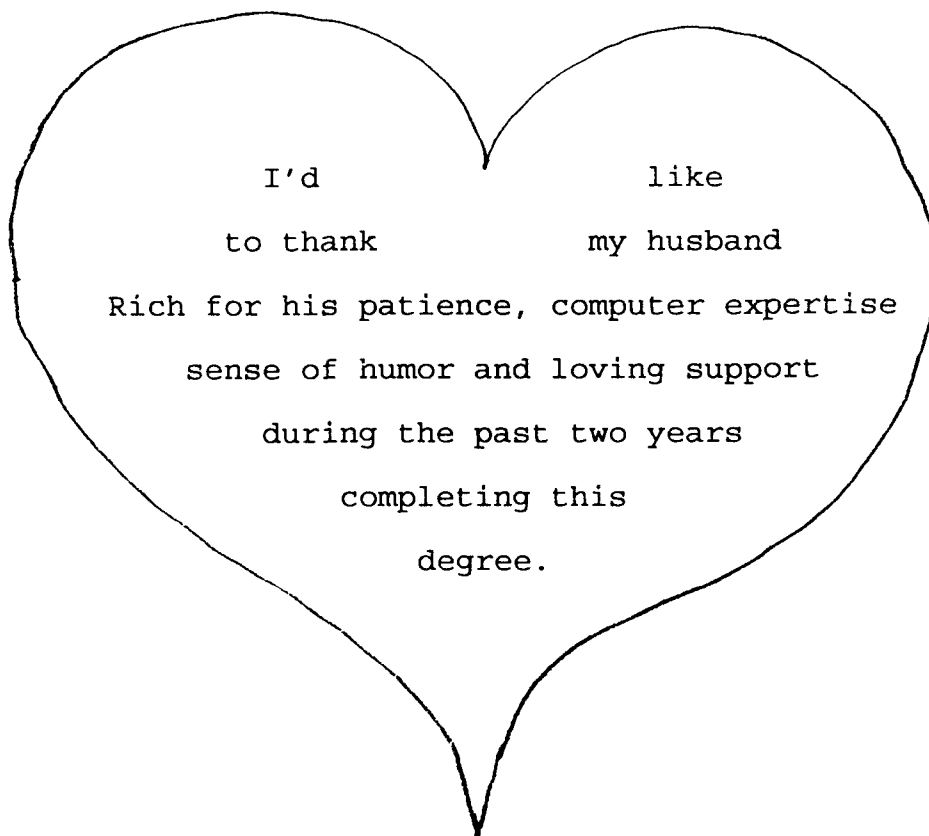




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## I. INTRODUCTION AND SCOPE OF THE PROBLEM

Although the chronology of AIDS is just barely 12 years old, no other health issue commands as much media attention as this one. The Human Immunodeficiency Virus (HIV) was positively identified in 1984, although individuals with the virus were first identified as early as June, 1981. CDC's Morbidity and Mortality Weekly Report (June, 1981) described a P. carinii pneumonia (PCP) in five previously healthy, sexually active, homosexual men from Los Angeles. Subsequently, case reports of an unusual and rare tumor called Kaposi's sarcoma (KS) in the male homosexual population surfaced in the New York City area.

Throughout the remainder of 1981, the CDC continued to receive an increased number of similar reports, with cases actually doubling every six months. The disease at this time was known as the "gay man's disease" with some aspect of the gay life style suspected as being the causative agent for the condition. However, the symptoms also began to be observed in other populations as well, further

contributing to the paranoia and uncertainty associated with it.

The afflicted group grew to include heterosexual intravenous (IV) drug users; Haitian immigrants; persons with hemophilia; spouses, sexual partners, and children of persons with AIDS or at risk for AIDS; and recipients of contaminated blood and blood products. It became obvious by this shift in etiology that AIDS was transmitted through an exchange of body fluids, primarily blood and semen.

HIV infections are associated with several high risk behaviors, including unprotected sex with multiple partners; sharing needles; receiving HIV contaminated blood or blood products; or being the "unsuspecting" spouse or newly conceived child of these people. Transmission occurs via heterosexual and homosexual encounters; the highest infection rate in the United States being homosexual and bisexual men, followed by IV drug users (of both sexes). Collectively, these two groups account for 88% of all AIDS cases nationwide, and 1991 CDC figures report that 89% of this group are male.

Current figures are staggering regarding the incidence and spread of the HIV virus. They seem to be revised upward on an almost-daily basis, and no two sources seem to be in agreement over the exact numbers. In America, AIDS is the number one cause of death for people between the ages of 24 and 44, and it is the number three killer for all ages, behind accidental death and heart disease. The latest 1991 figures show over 165,000 cases of AIDS had been reported in the USA, and an estimated 1.5 million people in North America had been infected with HIV (US CDC, 1989). The Public Health Service anticipates that by the end of this year (1992) the total number of AIDS cases in the US will total 365,000 with 263,000 deaths (Staff, 1989).

Worldwide, the World Health Organization has estimated that as many as 5 to 12 million are infected with the virus, with 500, 000 of those exhibiting symptoms of AIDS (WHO, 1989). This figure was increased by 2 million from the estimates made in April 1991; and included 1 million children. They project that in the next ten years (by the year 2000), as many

as 30-40 million will become infected. In other words, WHO estimates that infections will be at best triple and at worst quadruple in just eight years time.

The Centers for Disease Control estimates between 10,000 and 20,000 American children will be ill with, or die from AIDS in 1991 alone. US officials predict that at least 450,000 Americans will be diagnosed as having AIDS by the end of 1993 (Wilson, 1988). And although people with AIDS in 1992 are living longer and better, the epidemic continues and the news is grim.

Urban areas remain the largest reservoirs of AIDS, with approximately 85% of cases originating there. However, recent reports show a growing trend toward new infection patterns in suburban and rural areas; leveling or falling rates of infection for bisexual and homosexual men; and an increase in heterosexual transmission of the virus, primarily among those who use illegal intravenous drugs and their sex partners (Goldstein, 1992).

The World Health Organization (February, 1992) reported that 90% of all new adult HIV infections reported since April 1991 were the result of

heterosexual intercourse. In the US, this 1991 figure of 6% rose from 3% of all reported AIDS cases in 1985. Subsequently, this increase in HIV-positive women has led to an upsurge in infants who contracted the virus while in utero. Approximately one-third of the 20,000 babies born to infected mothers in the US from 1989 to 1990 had the virus.

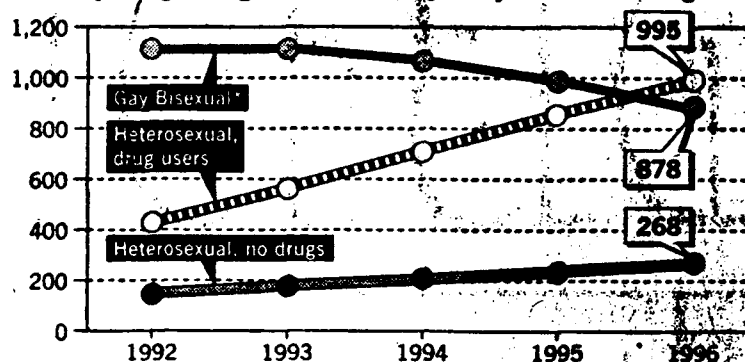
This epidemic is raging right on our very door steps. In Washington, D.C., occurrence rates are consistent with the national trends: the epidemic has crested among homosexual men, and is now spreading rapidly through the IV drug user community. Philip Rosenberg, a National Cancer Institute senior staff fellow has developed a predictive model that forecasts:

"The number of D.C. residents who are infected with HIV or have AIDS itself will double, from about 10,000 at the start of 1991 to 19,989 by the end of 1996. The number of deaths annually is projected to increase by 53%, from 675 this year to more than 1,000. By 1995 the number of new AIDS cases among heterosexuals in the District will exceed that among homosexual and bisexual men. In 1995, there are projected to be 993 new cases among men who have sex with men, compared with 1,094 cases among male and female heterosexuals."

(Goldstein, 1992).

Table 1:

**B**ut as AIDS becomes more prevalent, its demographics are expected to change. AIDS is projected to decline among gay and bisexual men while exploding among heterosexuals, especially intravenous drug users.



\*Figures are for men only and include intravenous drug users. Figures for heterosexuals are total for men and women.

SOURCES: National Cancer Institute, Centers for Disease Control, D.C. Commission of Public Health's Office of AIDS Activities

That increase reflects a significant change in the transmission patterns of the disease. While the number of new AIDS cases between homosexual/bisexual men is leveling off, the disease is claiming increasing numbers of blacks, teenagers, young women, and drug users and their partners, who are generally acquiring the virus through unprotected sex or dirty needles.

Nationally, the cost for treating people with AIDS or AIDS virus infections will reach \$5.8 billion this year, and will almost double to \$10.4 billion in 1994 (Heller, 1991). By comparison, the annual cost of treating cancer was recently estimated at \$35.3 billion. However, Heller believes these figures are



low, because they exclude several expensive medications recently approved, as well as unapproved drugs and services, such as counseling, not covered by insurance or Medicaid.

For treatment of AIDS, Heller calculated a cost of \$4.4 billion this year, based on an annual treatment cost of \$32,000 per patient. This figure assumes an average of 1.6 hospital stays per year at 15 days per stay, and \$1,000 a day for time in the hospital. It also assumes that outpatient costs make up 25% of the total calculated cost of care for an AIDS patient....a conservative figure.

Treatment of HIV infections without AIDS was estimated at \$1.4 billion. The number covers only people actually receiving treatment for HIV infection, rather than the cost of treating every infected person. This amounts to \$5,150 per patient, assuming that 30% are receiving AZT to suppress the virus, and 30% are taking aerosol pentamidine to forestall a potentially lethal pneumonia. Annual AZT costs are estimated at \$2,700 and aerosol pentamidine at \$3,000 a year.

The \$1.4 billion figure also includes annual costs of \$500 a year for other drugs, \$700 for visits to medical offices and clinics, \$800 for laboratory tests, \$200 for other outpatient expenses, and \$1,240 for inpatient hospital care (Hellinger 1991).

For 1994, federal estimates include a national cost of \$7.9 billion for treatment of AIDS and \$2.5 billion for HIV treatment. These costs could go higher, depending on the approval of new treatments and the success of efforts to encourage people to find out if they are infected with HIV.

## **II. HIV DISEASE & AIDS: RISK FACTORS & PATHOLOGY**

HIV-1's (human immunodeficiency virus-1) identity evolved in a rather insidious fashion. Although the human T-cell leukemia/lymphotropic virus (HTLV) was first discovered in 1980, it was not until 1984 that it was suspected to be the cause of AIDS. Researchers at the National Institutes of Health in Bethesda, and scientists at the Institut Pasteur in France working with AIDS patients, isolated and identified a group of cytopathic retroviruses and antibodies, thus making the connection between the two.

### **The spectrum of HIV Infection**

In the early 1980s, clinical AIDS was regarded a two-stage disease: AIDS-related Complex (ARC) and AIDS. ARC included several mild, moderate, and occasionally severe infections/inflammations; mild to moderate symptoms, and a slow decline leading to AIDS. AIDS was a symptomatic condition of acute and chronic opportunistic infections, neoplasms, rapid decline, and death. In 1987, AIDS was expanded to include dementia and wasting syndromes. Currently, the term ARC is obsolete.

Technically, and contrary to popular belief, HIV and AIDS are not synonymous. HIV infection causes a flaw in cell-mediated immunity, which may (and currently does) always result in AIDS. HIV is the starting point of the disease process, one that exists on a continuum of conditions associated with various dysfunctions of the immune system.

HIV is a retrovirus, or slow growing virus that infects many different types of cells including glial (brain) cell, macrophages, Langerhans' cells (skin), T and B lymphocytes (especially T4/helper/inducer cells that aid in the proliferation of antibody secretion and cytotoxic cell maturation in the body) and chromaffin cells (intestines). The cells infected express the CD4 protein, the protein commonly used now to measure HIV activity. In addition, infected cells may be found in many different organs, often at the same time: the brain, lymph nodes, thymus gland, bone marrow, lungs, skin, and intestines.

The CDC currently defines AIDS as follows:

"AIDS is a disabling or life-threatening illness caused by HIV and characterized by HIV encephalopathy, HIV wasting syndrome or certain diseases due to immunodeficiency in a person with laboratory evidence of HIV infection or without certain other causes of immunodeficiency"  
(CDC, 1987).

It was at this point in 1984, after the virus had been identified that the testing for it began. By 1985, blood and blood products were screened for the presence of the HIV antibody through the use of the ELISA (enzyme-linked immunosorbent assay) and confirmed by Western Blot. Recent virology studies seem to indicate that the appearance of the detectable antibodies varies, with a median of 18 months between infection and detection (Allain, 1986).

Clinicians currently recognize four distinctly different stages of the HIV disease based on clinical manifestations. In this system, each group is distinct, so that a person can only be classified in one group at a time. However, an individual may move from one group to another as the physical presentation of symptoms change.

Group I is an early or acute stage of flu-like symptoms and high-level viral replication lasting a few weeks after initial exposure to HIV. Symptoms include fever, malaise, lymphadenopathy, fatigue and myalgias, and less frequently a skin rash or neurological symptoms. These complaints generally resolve within 7-10 days. Seroconversion (presence of HIV antibody in the serum) occurs within 6 weeks to 3 months, although it may be as long as 6 to 12 months.

Group II individuals are HIV positive in this middle or asymptomatic period of minor or no clinical problems, characterized by continuous low-level viral replication and T4-cell loss. This "incubation" or latent stage may last from 6 to 8 years, depending on the age of the patient. Barrick (1990) notes that adults over 60 years progress to AIDS in 5.5 years; individuals 5 to 60 years in 8.0 years; and children under 5 in less than 2.0 years.

Group III is recognized as a transitional period of symptomatic disease with diffuse non-malignant lymph node hypertrophy. Aside from these symptoms of lymphadenopathy, patients are typically healthy.

Group IV is a late or crisis period lasting months or years (CDC, May 1986). This group is further subdivided into categories according to the major disease manifested by the individual. These are opportunistic infections caused by a diverse number of pathogens which rarely cause disease in normal hosts (persons with an intact immune system).

Recent controversy has centered on the different theories to explain the origin of HIV. Over the last thirty-five years, medical literature occasionally mentions the unnerving possibility that HIV, the AIDS virus, may have crossed the species barrier as an unintended byproduct of a live-polio-virus vaccine. Between 1957 and 1970 in equatorial Africa, somewhere between 325,000 and 500,000 people were vaccinated with an oral polio vaccine that subsequently has been found to be "contaminated with an unknown monkey virus" (Curtis, 1992). Other more obscure and less plausible theories involve a kinky-African sex theory, where natives allegedly injected monkey blood into their pubic areas, thighs, and backs to heighten sexual arousal. There is also a cut-hunter theory that

suggests that a hunter may have nicked himself in the process of hunting monkeys and thus become exposed to the virus-laden blood in that manner.

While some feel it is crucial to decipher this mystery, other think it ludicrous. Dr. David Haymann head of the office of research for the World Health Organization's Global Programme on AIDS is openly critical of these suggestions. Robert Gallo in his 1991 book Virus Hunting supports the quest to probe the true origins of AIDS. He believes that answering these questions "may help avoid future zoonotic catastrophes—that is the transmission of disease from lower animals to human."

Genetic sequencing experts can read the molecular history and evolution of a disease by measuring genetic changes. According to Gerald Myers, the federal government's chief expert in genetic sequencing, HIV dates from about 1960, assuming it arose from a single common ancestor. These facts would make it theoretically possible to support the theory that the virus evolved from the infected monkey tissue culture medium that was used to grow polio vaccines.



### Risk Factors for Transmitting HIV

HIV is not a highly contagious and infectious organism contracted by casual contact with an infected person. HIV is a bloodborne retrovirus transmitted via discrete routes and lifestyle patterns. Ejaculate and blood are the only body fluids that have been clearly shown to be infectious, and then only under certain circumstances. HIV is transmitted by sexual contact (vaginal or rectal contact with an infected person), inoculation with contaminated blood or blood products (contaminated blood, blood products, needles, or syringes), or perinatal transmission (from a mother to infant during pregnancy or birth) . Figure 2: Risks and rationale for HIV infections (CDC, May 1989).

Risk factors	Rationale
<b>Sexual activity</b>	
• Receptive anal or vaginal intercourse with infected partner	• Provides route for transmission of virus to blood or for direct infection of rectal mucosal cells
• Multiple anonymous sexual partners	• Increases probability of contact with infected partner
• Douching/enemas, "fisting" use of anal receptive objects before intercourse	• Produces trauma to mucosa and thus increases access of HIV to bloodstream
• Substance abuse including alcohol and recreational drugs (oral, parenteral)	• Dulls inhibitions against frequent sexual contacts and unsafe behaviors
	• Interferes with or "blunts" pain sensation, which may facilitate participation in previously intolerable sexual practices
<b>Injection with infected blood</b>	
• Sharing of needles, syringes, other drug paraphernalia	• Increases probability of direct viral transmission to bloodstream
• Frequent recipient of blood or other blood components (e.g., Factor VIII in those with hemophilia)	• Increases chance for exposure to contaminated blood
<b>Perinatal transmission</b>	
• HIV-positive woman becomes pregnant	• Permits transplacental HIV transmission from mother to fetus in utero and during and immediately after delivery
	• Permits exposure to contaminated blood during labor and delivery

HIV must enter the recipient's bloodstream to produce infection. Because it is a relatively fragile virus, it is unable to survive outside the body. Therefore, casual spread via public toilet seats, drinking fountains, and swimming pools is not likely. Other unlikely modes of transmission including mosquitos and human saliva have also been ruled out (CDC, Feb. 1989).

Transmission is dose-related. Although very low concentrations are sometimes present in saliva, tears, urine, sweat, and other body fluids, non-sexual household transmission does not occur, even when living conditions are crowded, eating utensils and bathing areas are shared, and hugging and kissing occur (Bennett, 1986). Curiously enough, not all individuals exposed to the virus become infected. It is proposed that there are certain "other" variables that determine if a person will contract the virus and become ill. Major cofactors identified include malnutrition, emotional stress, age (especially over 60 or under 2 years), and the presence of other infectious processes. Collectively these cofactors stress the immune system

and result in varying degrees of immunosuppression (Nyamathi, 1989).

Although numerous studies indicate that HIV is sexually transmitted, it appears that only some sexual behavior is considered "high risk." Specifically, vaginal and rectal intercourse without a barrier (condom) (CDC, June 1988). Anal sex is significantly more risky, because the sexual act can tear the walls of the rectum, allowing one partner's semen to come directly into contact with another's blood. Vaginal tissues are stronger than those of the anus and less likely to be damaged in intercourse. Nevertheless, heterosexual transmission has occurred when only vaginal intercourse has been reported (CDC, June 1988).

Some researchers claim that direct contact is not required for the virus to be spread. At the University of California at Davis, scientists were able to infect monkeys simply by placing drops containing the virus on the mucosal tissues inside the females' vaginas and the males' urethras. In each case the virus was placed on undamaged tissues. These findings of mucosal infection support the theory that conventional vaginal

intercourse, even when it causes no bleeding, can result in HIV infection.

Women, overall, seem to be more vulnerable to acquiring HIV infections, although the precise reasons are unclear. One theory is that the vagina can act as a reservoir for HIV-infected semen, allowing the virus to remain inside the woman for some period of time, thus increasing the opportunity for infection. It is also thought that men may carry more virus in semen than women do in vaginal secretions.

All told, estimates say that women are at least twice as likely to catch HIV from men as the other way around--and possibly as much as 10 times more likely. For certain women the risk may be still higher. Older women, for example have several layers of cells covering the tip of the cervix--the tissue most often damaged during sex. But teenagers have just one layer, meaning they are much more likely to bleed during intercourse or to suffer from the genital infections that increase the chance of infection.

Venereal diseases can increase the chance of both catching and passing the virus by two or threefold.

Any inflammation of the genital tract, for example, brings cells of the immune system to the area. If they bear the HIV virus, the person will be more infectious through sexual activity. By the same token, genital lesions caused by syphilis, chancroid or herpes bring to the surface of the skin precisely those cells that the AIDS virus likes to infect the most, providing the virus with an excellent opportunity to enter the bloodstream after it has been deposited by the sex partner.

For men, researchers believe that circumcision significantly decreases susceptibility to the virus. This observation was based on African studies that found uncircumcised men were five times more likely to contract HIV from vaginal intercourse than those who were circumcised. Again, the reasons are varied. But the underside of the foreskin is known to have a thinner layer of skin than other parts of the penis--allowing the virus a greater opportunity to enter. The same tissue is home to many of the dendritic cells favored by the AIDS virus. Men with foreskins also have higher rates of sexually transmitted diseases.

While oral sex transmission may be possible, it has not been clearly proven so far. And the AIDS Committee of Toronto has even gone on record saying that "fellatio without ejaculation into the mouth is 'probably safe' sexual behavior."

Even after exposure, the risk of HIV transmission in the work place is extremely low. The CDC conducted a study between August 1983 and June 1990, and found nurses to be the largest group exposed to HIV (Figure 3; CDC, 1991). Exposures were most common in patient or clinic rooms (Figure 4), with the most common being mucous membrane splashes, contamination of open wounds, cuts with sharp objects, and needle stick injuries (Figure 5).

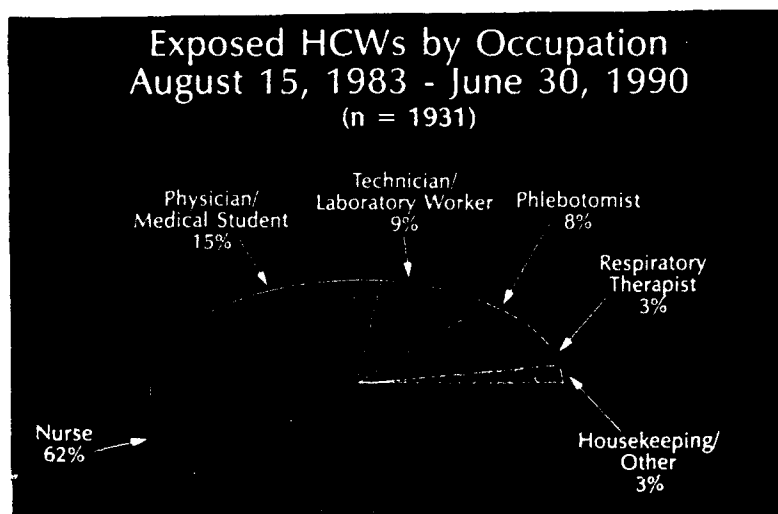


Figure 3

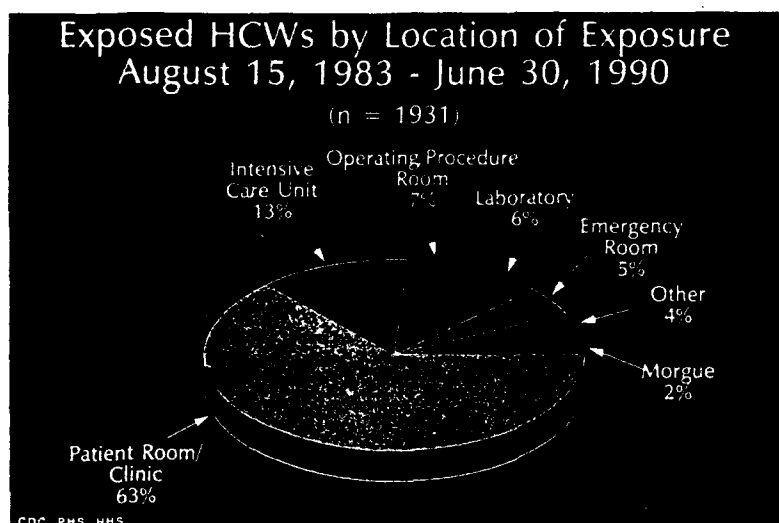


Figure 4

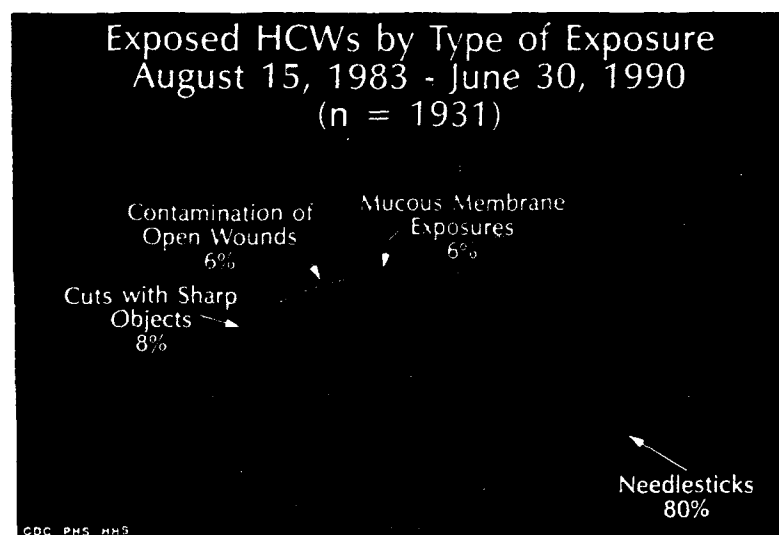


Figure 5

The CDC has ongoing surveillance of those workers exposed to HIV in the work place (via documented percutaneous or mucous-membrane exposures to blood or body fluids) to assess the risk of infection after such exposure. Of 883 exposures, 80% were from percutaneous exposures and 20% from mucous membrane or open wound contamination. 396 of these were tested only once (in the convalescent phase) after exposure, with only one (for whom heterosexual transmission could not be ruled out) seropositive for HIV antibody. The remaining 425 workers were tested twice (in both the acute and convalescent phases); none of the 74 health care workers with non-percutaneous exposures seroconverted, and three (0.9%) of 351 with percutaneous exposures seroconverted. None of these health care workers had any other documented risk factors for infection (CDC, August 1987).



### III. LEGAL, ETHICAL, AND PSYCHOSOCIAL ASPECTS OF AIDS

The multitude of complex moral, ethical, medical, philosophical and legal issues are ones that are complicated by the advances of modern science, medicine, and technology. By virtue of these successes, a perplexing interplay of events has been created that becomes increasingly complex as the issues become tangled. With AIDS, there clearly persists a confusion about the conflicting nature of the issues surrounding this very "political-legal" disease. Health care providers have unwittingly ventured from the safe role of comforter of the sick, to the uneasy position of political advocate and social engineer.

Since there is no absolute standard of "right" or "wrong," developing social standards about what is "ethical" requires society to formulate some specific and agreeable objectives. This author proposes some simple and straightforward objectives might include the following: Minimize the spread of the HIV infection, treat AIDS like any other infectious disease, remove the social/psychological stigma for those with the virus, protect the civil liberties of AIDS sufferers,

while continuing to disseminate information to the public regarding this disease.

Although this is a relatively new medical phenomenon, the ethical issues raised are not fundamentally different from those considered in other such circumstances. Developing ethical principles pertaining to AIDS might logically be formed on the assumptions of some generally accepted statements of ethical integrity. Specifically, these might include the United Nations Covenant on Civil and Political Rights, the Declaration of Helsinki, the International Code of Medical Ethics, the American Medical Associations Principles of Medical Ethics, and the Hippocratic Oath (Gorovitz, 1976).

It might also be appropriate to examine these issues from a liberal versus a utilitarian framework. Crisp (1989) summarizes these principles as follows: The Autonomy principle (or liberal view) stresses the individual rights of autonomy and liberty; the welfare principle (or utilitarian viewpoint) mandates that one maximize welfare.

Within these opposing frameworks, one can examine some pertinent issues surrounding AIDS. For instance, its' transmission and prognosis seem to emphasize the very few forced, harsh moral choices one must make when called upon to treat its sufferers. Oddly enough, both liberal and utilitarian views are attractive simultaneously. To respect the rights of individuals to determine their own lives, yet on the other hand to fulfill the duties of benevolence towards either the individual or others places the two schools of thought at odds with each other. The two principles appear on occasion to advocate inconsistent courses of action.

This conflict of ideologies often pits one health professional against another, when forced to make treatment decisions they feel are in the best interests of the patient. Who makes the final determination when patient welfare is on the line? The patient? The Physician? The nurse? The family?

Nursing has become increasingly involved in offering relevant information and participating in decision-making involving ethical issues. But nursings' position of "servitude" makes for a small

voice from within the complex realm of health care. From this "obedient servant" approach has evolved a very different context within which nurses and doctors view their professional ethics.

However, an emerging professional conscience, within a multidisciplinary team approach, has begun to reflect a realization of the therapeutic potential that nurses bring to a setting. As patient advocates, their mission is to become more responsible and contributory to the health and well-being of those needing their care. With this "caring" responsibility as a priority, nurses guide and comfort patients and their families by helping to understand individual strengths, motivations, and personal resources. Nurses also help them explore the intricate and delicate issues that many other health care professionals avoid.

Yet another issue that comes to mind in this era of cost-effectiveness, budget down-sizing, and health care rationing is the very real problem of scarce resources. Will society continue to willingly fund programs for those with a terminal disease? Who will decide where the treatment dollars will be spent? How

can we ensure that the most good will be purchased for the most people?

It seems that we become obsessed with bioethical issues of this nature when we superimpose the concerns onto an historically stigmatized minority group: homosexuals. Recently this concern has broadened to include all intravenous drug users and sexually promiscuous individuals with "risky" sexual practices.

AIDS is very frightening, and rightfully so by virtue of its absolute mortality. The author (Ross, 1986) ventures that the psychosocial morbidity generated by AIDS probably exceeds the medical morbidity associated with the syndrome. Another (Murphy, 1988) explores the argument that AIDS is a just punishment for the "crime" of a wrongful behavior. Yet another (Crisp, 1988) contrasts the issues from an over-simplified "autonomy" (one ought to respect the rights of autonomy and liberty), versus "welfare" (one ought to maximize welfare) perspective.

Independent of personal judgements, there are several recognized precepts that must be explored.

Gorovitz (1976) summarizes the traditional taxonomy of bioethical dilemmas into the following categories:

(1) Allocation of limited resources (Should everyone be given AZT?) (2) Regulation of health care (Should society/politics dictate how medicine is to practiced?) (3) The use of human subjects and experimentation (Is adequate informed consent given to those undergoing new drug trials?) (4) Scope of medical prerogative (Should medical decisions be made only by those in the medical professions?) (5) Responsibility for dependent persons (What is our duty to inform and protect innocent children?) (6) Death and dying issues (What principles should govern how aggressively we treat a life threatening illness?) (7) The physician-patient relationship (Should that privileged relationship be violated to protect other innocent parties?)

Policy makers at every level of government must devote considerable resources to combatting this disease, both on a physical and psychological basis. Heretofore, society's general regard for homosexuals and IV drug users contributed to the rapid spread of HIV in the States. Shilts (1988) even goes so far as

to charge the Reagan era of ignoring the problem because it was perceived as a disease of gay men, and thus of no great concern to the general population.

This intense "homophobia" is believed by many to have contributed to the delay in funding of research programs, education and public health policies, and potentially to the current epidemic proportions that this disease has assumed.

From a legal standpoint, the issues of duty to treat, confidentiality, and duty to warn, etc., present lawmakers and health care providers with diametrically opposed choices. Whose rights are more precious? The treating physician? The person with a positive HIV test? The partner of an HIV patient? Society as a whole?

As mentioned earlier, these are considered to be dilemmas because of the conflict between autonomy and welfare Principles. Since most are not either pure utilitarians or pure liberals, patients' wishes (only 'she' knows what she really wants) are pitted against the concerns of physicians. Neither side appears to be "wrong", and both have appeal. Although individuals

have the right to determine their own lives, goodwill must be shown to all. This often presents conflicting and inconsistent courses of action to take in any given set of circumstances.

Scientific inquiry and research is a social enterprise supported and conducted at the pleasure of the public whom it ultimately serves. Yet, like medicine, it is practiced by a professions' elite whose judgements are based on considerations that are essentially obscure in many ways to the public at large. When grappling with questions pertaining to public regulation and public accountability in regard to scientific inquiry, investigation and experimentation, traditional questions concerning the democratic processes are raised. The prudence of establishing and supporting social institutions that invest power as well as authority in elite groups charged to act in the interest of a increasingly sophisticated public must be examined. Is this what the public believes will be the most sensitive and prudent approach to meeting their needs? Is there



another way to safeguard the interests of all, and shape public opinion into public policy?

Specifically, new ethical concerns are raised when discussing clinical research involving persons with AIDS. Would the majority of American's think it ethical to perform double-blind studies using placebos? Should every positive HIV patient have access to the latest drug therapies designed for this disease? Who should pay for this medication? Should the pharmaceutical industries have a monopoly on this enterprise?

Another issue raised by the Food and Drug Administration (FDA) is the Orphan Drug Legislation and the new policy to allow drugs to be released for the terminally ill without proper efficacy trials. Is it ethical to expose these patients to potentially unsafe drugs just because they are terminal? Who decides?

The issues surrounding HIV screening are emotionally laden with the anxiety of preserving the public's interest in health and safety, while ensuring an individual's right to privacy. By virtue of its lethal nature, debates over how to balance public

health concerns with the preservation of civil liberties keep public officials, law makers, and legal experts (pre) occupied.

Howard (1988, p. 604) proposes a framework for justifying HIV screening strategies to include three ethical considerations: (1) categorizing all screening outcomes as 'benefits' or 'harms' (2) determining the distribution of benefits and harms between those tested and those not tested and (3) characterizing the impact of a screening strategy on civil liberty interests.

The cost of implementing such a program must also be considered. If it is felt that everyone could benefit from mass screening (or mandatory HIV testing), should the activities be funded with public monies? Or if a more "selective" type of screening would be more appropriate for those high risk groups, who then should be responsible for the costs?

Most ethicists and lawmakers do not feel that the benefit to be derived from universal screening justifies this approach. The potential harm, or maleficence, that could come from a false positive diagnosis, and subsequent emotional stigma is directly

opposed to the principles of autonomy and beneficence. It would therefore be ethically and socially wasteful to direct large amounts of public monies into a program that would recognize few improvements for society at large.

Although the military has historical and legal authority for conducting mandatory HIV screening, other employers find it difficult to justify this practice in their hiring procedures. This compulsory screening is accepted only when test results could be used to potentially reduce the spread of the HIV infection to others. This is illustrated by the public outcry in a recent case involving an HIV infected dentist allowed to continue in his practice, while allegedly infecting several patients along the way.

Other pertinent issues are raised in the discussion of testing for HIV. Should hospitalized patients be automatically tested upon admission? Should testing be required prior to obtaining a marriage license? Should identified IV drug users, especially those enrolled in substance abuse programs

be regularly tested to prevent further spread of the disease to their innocent offspring?

Consider that the patient has consented to being tested for the HIV virus. What type of follow-up counseling and referrals are needed when s/he is found to be HIV positive? Who is responsible for this care? Who else will need to know about this patient's status? Who decides these issues?

Reporting cases of HIV/AIDS has now become an embroiled issue regulated by the Public Health Laws. ALL states require AIDS cases to be reported to local health departments, in direct conflict with an individual's right to privacy. This conflict was addressed by the United States Supreme Court in Whalen v. Roe (as cited by Howard, 1988). This case held that if test results were disclosed only to health authorities with a legitimate right to this information, there will be no imposition on the individuals' privacy. But based on the facts in this case, some have argued this to be the basis for such poor participation in voluntary screening programs. Opponents of this type of "disclosure" legislation

believe the potential exposure of test results could have a negative impact on participants' present or future abilities to seek employment, insurance, housing, and other social services.

In addition, several legal experts advise that this "privileged" information could be illegally obtained and eventually used against employers in a variety of scenarios. Specifically, torts for defamation, invasion of privacy, or emotional distress could arise from the disclosure of these results.

Although the intent of this debate is to identify the person with the HIV using some simple tracking method, the traditional model for infectious diseases does not fit the AIDS epidemic. The virus is not confined to one specific geographical area. The long, non-specific latent period of the virus, and the fact that there is no effective vaccination at present make this argument even more interesting. Quarantine of these patients would restrict their civil liberties, and any control measures to influence behavior have had little if any effect in the past.

At the end of the AIDS time-line is the issue of the patient's right to die and determine the aggressiveness of treatment he/she desires. Although at present there is no cure for this affliction, should AIDS patients undergo all aggressive and life-saving measures in the hope that a cure will be found tomorrow? Or is a hospice-like palliative approach more appropriate and humane? This quandary over the right to choose when and how to die has taken on new meaning within the context of the AIDS crisis. Who has the answers? Who will be allowed to make these choices?

The physician is dictated to follow society's rules and regulations, without consideration of his or her personal opinions. Failure to abide by any of these rules pertaining to AIDS-related diagnosis may form the basis of medical malpractice. These actions may include failure to diagnose, failure to inform a patient of the diagnosis, failure to provide proper counseling and treatment when a patient has a positive HIV test, failure to report the AIDS diagnoses to

health authorities or at-risk sexual partners, and so on and so forth (Hermann, 1987, p. 36).

Both the CDC and the Public Health Service have given top priority to stopping the spread of this disease. In doing so, there is great discord between the scientific and humane imperative to adopt guidelines to stop the spread of this pestilence, while incorporating the input from members of both professional and high-risk groups who want to be consulted in this process (Gostin & Ziegler, 1987).

Informed consent legislation is a state specific issue at present. Among others, Florida now requires health care providers to obtain specific informed consent, in writing, prior to testing for antibodies to the HIV virus. Concurrent with this testing is the American Medical Association (AMA) mandate for pre- and post-test counselling.

Duty to treat issues are interpreted differently from setting to setting. AIDS has brought an interesting argument before ethicists from many settings: Does a physician have a right to deny treatment to a patient based on this disease? In the

past, physicians' duty to treat a patient regardless of disease made this a mute point. This "treat all" practice was backed by the precepts of the Hippocratic Oath which directed a physician to treat all patients without regard for personal risk (Gorovitz, 1976). This oath embodied a moral obligation assumed by the physician to heal all illness regardless of nature, and to use the knowledge gained to benefit society as a whole.

The AIDS dilemmas opened new areas of concern over a physician's responsibility to provide care to these HIV/AIDS patients without fear, discrimination or prejudice. Ascribing to such a practice, what must the physician do differently (or the same) to ensure such non-biased care is delivered to the HIV patient? Patients should be able to receive medical assistance by competent, compassionate, and non-biased providers. To ensure this, the AMA has stated that physicians who can not provide this type of care based on their own personal reservations/short-comings, must make judicious referrals to an appropriate alternative sources of care.



The most recent AMA Guidelines affirm the right of the physician to choose when to treat (Zuger & Miles, 1987), but also point out the conflicting historical and ethical precedents on the physician's right to choose when to treat. Specifically, this provision does not permit categorical discrimination based exclusively on a patient's seropositivity. As stated in the House of Delegates Report YY (1987 Annual Meeting) (as cited in The AIDS Sourcebook, 1988, p. VI/161): "AIDS patients are entitled to competent medical service with compassion and respect for human dignity and to the safeguard of their confidences within the constraints of the law. Those persons who are afflicted with the disease or who are seropositive have the right to be free from discrimination."

In support of this guideline, as illustrated by the case of the private dentist, the Council on Ethics, Bylaws and Judicial Affairs of the American Dental Association has stated "it is unethical for a dentist to refuse to treat an individual solely because the individual had AIDS or is HIV positive" (ADA Principles, 1988)

In a non-emergent hospital situation, at least one federal court has specifically upheld Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. Section 794. This Act prohibits discrimination in the provision of health care services solely on the basis of seropositivity, if the program or activity receives federal financial assistance. An individual excluded from a federally funded program solely because of a positive test for HIV antibodies is "an individual with handicaps" within the meaning of Section 504 (National Health Publishing, 1988).

The complicating issue here is whether the health care provider can continue a productive helping relationship with patients even after gaining knowledge of their HIV status. If the physician can not continue to provide that patient with a therapeutic environment of healing, he/she is neglecting his/her duty to treat. It would be wise at this point, rather than to compromise the care of the patient, to refer him/her to a more capable and appropriate physician.

Confidentiality requires the patient disclose complete, accurate, and sincere information to the

physician. It also requires that the physician treat this information with the utmost respect, and preserve this "privileged" information to be shared with no one.

The problem that arises when this topic undergoes public scrutiny and criticism is one of absolutism. Are there any exceptions allowed when evaluating the need for absolute confidentiality? Ethically speaking, one must determine if more harm is done by occasionally breaching this trust of confidentiality or by always respecting it regardless of the circumstances. This point is graphically illustrated by the Tarasoff case (1974) when the duty to inform an innocent third party offsets the damage that might come from this breach of confidence. This paternalistic breaching of confidentiality is widely condemned, and should be regarded as a last ditch effort to resolve this type of conflict. Ideally, the decision to warn another should be left with the HIV-infected individual. This concept of "situational" or "conditional confidentiality" sheds considerable doubt on the integrity of the medical professional and could seriously undermine the quality of the doctor-patient

relationship. Most believe the patient's right to privacy is absolute. This right is safeguarded until it infringes in a material way on the safety of another person(s).

Closely related to confidentiality is the matter of the HIV positive health care provider. Does the right to privacy supersede the patients' right to informed consent? Specifically, does the patient have a right to know if his/her health care provider (physician, nurse, dentist, etc.) is HIV positive? The Council on Ethical and Judicial Affairs recommends that the "afflicted" provider disclose his/her positive status to his/her colleagues. This group of professional peers would then decide based on the nature of the practice whether it was appropriate for the provider to continue practicing in this capacity. The Hippocratic Oath's directive to "do no harm" mandates the physician to avoid any activity that creates a risk of transmission of the AIDS disease to others.

The issue of confidentiality becomes almost mutually exclusive with the duty to report. This

medical obligation to report cases of HIV and AIDS has been afforded legal backing in all 50 states and many foreign nations. Some states even have specific statutes and registries for persons diagnosed as having AIDS (Lewis, 1987).

Concurrent with these policies are the American Medical Association's recommendations to report seropositive HIV individuals "on an anonymous or confidential basis with enough information to be epidemiologically significant" (AMA, 1987). This anonymous provision would seem to be supportive of the physician's pledge to confidentiality. Only in cases where the partners are to be notified does the American Hospital Association (AHA) require reporting by name. Similar to other arguments of this nature, the potential for breach of confidentiality might undermine the cooperation of high risk populations, and may increase anonymous sexual encounters (Falk, 1988).

This duty to report logically extends to the issue of partner notification. Because of the tremendous potential risk for social alienation that might occur as a result of a breach of this information, some

writers and groups recommend that partner notification be done only with the explicit consent of the HIV-infected person. However, some states have legislated that HIV patients must make full disclosure of their contacts. Several other groups oppose this compulsory disclosure on the grounds that it would violate the patient's right to privacy. There are others that view non-disclosure as a criminal assault with intent to murder. Do we legislate changes that make AIDS transmission a criminal offense?

A duty to warn third parties stipulates a general principle to warn the identified non-patient, placing the physician in a position of divided loyalty between maintaining the patient's need for privacy and the partner's need to know. There is substantial case law regarding disease transmission that establishes a physicians' liabilities. Failure to warn family members (or others in proximity to the patient) that the patient has a communicable disease could result in a tort (Liability of Physician, 1921).

Legal precedence states that "a physician, hospital, or other health care provider owes a duty to

warn specific individuals of foreseeable danger of contracting an infection from the physician's patient (Wojick v. Aluminum Co., 1959), but that a health care provider has no duty to protect a broad class of non-patients from communicable diseases where there is no foreseeable victim (Knier v. Albany Medical Center Hospital, 1986). Does this "non-patient" class include the large number of prostitutes that are known to have high rates of HIV infections (Field, et al, 1987)? How does one notify them if in fact this is required? Although not specifically argued in this case, the application of the "duty to warn" requires further exploration within the context of HIV.

Some courts have already argued against the "duty to warn" dictum, reasoning that gay men and their potential partners should be aware of the inherent risks of their behavior, thus the physician can not be taken to task for the failure to warn theory. How is this rationale applied to the "innocent" third party who accidentally receives a latent virus via a blood transfusion? The recipient is aware of the risks

associated with blood transfusions, but needs it to remain alive.

The AIDS epidemic is creating a social-economic crisis without legal precedent. Because of the sheer number of individuals involved, and because many consider it to be a disease resulting from illicit and immoral behavior, its victims are isolated and discriminated against because of others' irrational fears and morality judgements.

Unfair discrimination has taken on new meaning with the advent of AIDS-related discrimination. There seems to be an inadequate amount of protection afforded to HIV individuals by the Department of Health and Human Services' Rehabilitation Act of 1973. Although this act provides for equality in employment, housing, medical care, education, marriage, travel, and military service, its' appropriateness when applied to persons with HIV has been limited. The lack of uniformity in state statutes and minimal case law interpreting the statute's scope and coverage has contributed to this problem.



Hollowell, et al, (1988, p. 568) asserts that the economic contribution of individuals diagnosed with HIV is clearly needed not only for the nation's economic health and well-being, but also for the underwriting of the epidemic. They believe it is only through comprehensive protection from unfair discrimination will any economic advantage be realized by allowing equal access to all opportunities, including private employment.

AIDS not only attacks a persons' physical integrity, but also affects a person's sense of self, and triggers a number of psychosocial responses. Trained health care workers must use creative approaches to help clients buffer bad news and mobilize constructive coping strategies to deal with the emotional sequelae that follows a diagnosis of HIV.

Initial phases of coping frequently find suicide, increased chemical/substance use/abuse, and behavioral acting out to be common. Fears of losing everything are overwhelming should their new "secret" be discovered. Loss of job, income, scholarship, and insurance removes all hopes for stability. More

importantly, loss of a spouse, significant other, family, friends, church, and dignity is the all-consuming component in this stage.

During this time, it is not unusual to see more mental health admissions or crisis interventions. Confidentiality for time-off requests is vital if the employee is to take care of his/her mental health needs. This includes assurance that paperwork will be handled in a professional manner.

The issue of family is always close at hand. Partners, though, are usually the first to get "the news." This may cause a break-up if the couple is not in a stable relationship, further intensifying the depression. If the relationship lasts through this traumatic time, planning for wills, property, and guardianships may be a priority.

The infected partner may chose to stop working, thus precipitating a host of financial problems. Federal government disability is generally not available to those who are capable of working. Seeking public assistance is an alternative, with General Assistance and food stamp programs being widely

available. Public housing guidelines follow disability criteria, keeping the asymptomatic HIV-positive person out of low rent housing.

Medical assistance guidelines vary from state to state, but are generally unavailable until medical bills are incurred. This usually happens once the immune system begins to be suppressed. Weakness, diarrhea, loss of appetite, and opportunistic infections send patients to doctors' offices with increasing frequency. This preoccupation with illness tends to worsen the sense of isolation that a patient feels. Family members become suspicious and questioning, and a charade of deceit is begun unless the diagnosis is shared with family members.

In the home, each partner fears who will become the caretaker. Both are probably infected and have lost friends already. Each fears abandonment and being the surviving lover. Promises made to keep the partner at home often make placement in a nursing home an emotional and difficult issue (Brandt, 1989).

Support groups are crucial throughout these difficult times to ensure the HIV person has adequate

opportunity to air concerns within a supportive, empathic group environment. But some support networks may be risky. Is the church or synagogue a "safe" haven? Can one trust hometown friends? Should one allow an interview with the press?

Reaching out to help others is one of the highest forms of self-actualization (Carrieri, 1986). Patients mobilize a certain inner strength, and a unique new quality of life emerges. Appreciation of each new day takes on additional significance in the view that the number of good days ahead are most likely numbered. Broadening the patient's outlook on life helps maintain a greater sense of control at a time when most things seem totally out of control.

In addition to helping the HIV person deal with the diagnosis, nurses must help each other deal with the emotional strain of caring for this challenging patient population. Psychiatric consultation-liaison nurses provide consultation, collaboration, and education to nurses in addressing biopsychosocial aspects of the care of patients and families (Kurlowicz, 1991). Liaison nurses have become

knowledgeable about many psychiatric interventions with both AIDS patients and the professionals that care for them. Specifically, they focus on the stresses unique to nurses caring for this population, and base interventions to support them in their work setting. The unique purpose of the liaison nurse is to assist the nursing staff confront the threat of caring for AIDS patients, and to assist them in attaining control or mastery of various clinical and interpersonal situations (Kurlowicz, 1991).

#### IV. NURSING INTERVENTIONS

Although fear and anxiety are common in nurses caring for AIDS patients, these can be tempered with education aimed at removing misunderstandings and myths. Since HIV has become an entity that touches all specialties of nursing, schools of nursing must formulate curricula around the knowledge needs of new nurses. Hospitals and professional organizations must recognize this need for information as well, and make available continuing education offerings that best prepare a nurse to deal with these types of patients. When a nurse does not have accurate information, protecting one's self or one's patients from exposure to this lethal disease becomes impossible.

Of utmost concern are the ways nurses can protect themselves from acquiring HIV in the work place. This can be achieved by judiciously following the "CDC Guidelines for Prevention of Transmission of HIV and HBV (Hepatitis B Virus) to Health Care and Public Safety Workers" (CDC, 1989), contained in Chapter V.

Once the nurse feels adequately protected, then focus can turn to the patient's needs. This begins

with a thorough understanding of the risk factors and behaviors that have precipitated this condition. Results from this risk assessment must be dealt with in a professional and non-judgmental way. Nursing interventions should focus on reducing symptoms, providing information, and discussing ways to optimize health and maintain a high degree of wellness and quality of life.

Specifically, individualized nursing care plans must be based on a thorough assessment of the patient at a specific point on the illness continuum. The tried and true nursing process once again forms the basis for nursing practice and interventions. Assess the client's health status and individual needs, make appropriate nursing diagnoses, set short and long term patient centered goal (incorporating patient's wishes and expectations), initiate interventions and health teachings, make appropriate referrals to other members of the health care team (social services, mental health, nutritional medicine, etc), and evaluate the effectiveness of this care plan, making revisions where necessary.

Based on what might be considered a typical case scenario for the presentation of an HIV patient, Carpenito (1989) uses the following nursing diagnosis as a starting point for a generic physical care plan for HIV patients: impaired cognition, weight loss, dry skin, skin lesions, fatigue, diarrhea, shortness of breath, cough, edema, impaired vision, dry and/or painful mouth, bleeding and bruising, fever, pain, motor impairment, and sexual dysfunction. However, this list by no means should be considered complete. As experience with HIV increases, so too will the list. This is presented as a mere overview of the more obvious conditions that predominate when caring for a patient with HIV.

One must also consider the influence that opportunistic infections play in this patient's overall feeling of malaise. The previous list of nursing diagnosis adequately addresses the symptoms of these infections, but the cumulative effects must also be addressed.

Early intervention for these patients is the key to maintaining maximum amounts of functioning over



time. Early initiation of physical therapy will help to minimize atrophy in already weakened muscles. Maintaining intact skin is essential for preventing potentially lethal opportunistic infections from taking hold. Keeping the patient well nourished and hydrated is of utmost concern, since the metabolic demands of an HIV patient rise considerably. Supplementing the diet may be necessary.

Pain management in these patients is also problematic. HIV patients experience a distal sensory polyneuropathy (DSPN) which begins as a painful burning sensation in the foot, progressively involving weakening of the entire foot, making walking virtually impossible (Scherer, 1990). Round the clock analgesics, soft/loose shoes, and a bed cradle have been recommended for relief of these discomforts.

Peripherally, other assaults on the nervous system are occurring. Progressive polyradiculopathy, mononeuritis multiplex, and polymyositis (Scherer, 1990), disseminated mycobacterium avium intracellulare (Bennett, 1986) are observed as the disease progresses. Use of AZT, other immunosuppressants, and

ant inflammatory agents are commonly employed to mitigate the effects of these conditions.

In addition to the physical ailments besetting the HIV patient, there is a multitude of emotional issues that must be dealt with at this time. Concerns of death and dying are prevalent. Depression, fear of rejection, anxiety, anger, and fear center around non-specific diagnoses and/or treatments, changes in self image, disfigurement, and visions of dying.

Staff members must also remember that the disease process also takes its toll on the persons' nervous system. The nursing diagnosis "Impaired Cognition" is a result of many disease processes occurring concurrently. These attacks on the brain, central and peripheral nervous systems eventually leave a person physically and mentally crippled.

AIDS dementia complex (ADC) or subacute HIV encephalopathy, primary lymphomas, toxoplasmosis, cryptococcal meningitis, herpes, cytomegalovirus, and papovavirus can also be observed. ADC is particularly disturbing, causing a progressive, subcortical dementia (similar to those seen in Huntington's and Parkinson's

diseases), clumsiness and sometimes weakness of the legs and arms, social withdrawal, apathy, and personality changes. Less frequently ADC involves anxiety and hyperactivity (Scherer, 1991).

Early symptoms are difficult to distinguish from depression, which may also be occurring at this time as well. An astute clinician will use results from CT scans to prescribe medications to lessen these effects. Zidovudine (also known as AZT or Retrovir) is currently the drug of choice to lessen these symptoms. But because of the progressive nature of this disease, medication is usually needed on a continual basis once these symptoms manifest themselves.

Nurses must recognize that forgetfulness in the AIDS patient may not be intentional, but merely a disease process in action. They should give the patient information using written instructions that can be reviewed periodically for clarity. When giving instructions, give them in short, simple segments that are easy to follow. Over time, these progressive cognitive and motor deficits will demand a safe,

structured environment, and eventually round-the-clock care (Scherer, 1991).

In later stages of the disease, managing seizures that occur is usually done with the use of anticonvulsants such as dilantin.

A trained and cooperative multidisciplinary team approach is best able to meet the varied needs of this population. Continual close observation of the patient for any progression of the disease is needed to initiate timely interventions. Since the disease course is so variable, the intent of treatment is to maximize quality of life, whatever the patient defines that to be.

Among these quality of life issues is one central to the care of the patient. Will the patient stay at home? Hospice? Hospital? Nursing home? What setting is most compatible with the patient's desires? What type of life saving measures are wanted, if any? Heroic measures? Experimental protocols? What about estate planning? Funeral arrangements?

Families at this time are suffering along with the patient. Much like the family of a cancer patient,

their pain is one of watching the slow degeneration of someone they love. But the additional stress of the social stigma attached to this disease are often too much for families. Nurses need to encourage the family to talk about the pertinent issues among themselves, seek a support group, take time off to get away from the hospital, and replenish their own energies.

The true tragedy of this disease lies in the fact that its victims are usually young, productive, and in the prime of life. Nurses must encourage their patients to do as much for themselves as possible, make realistic expectations, and dwell on positive achievements. Emphasize the right to make choices and voice desires.

Bennett (1988) also reminds nurses that realistic expectation are essential in maintaining patient confidence. False optimism not only undermines trust in you, but also erodes his/her self-esteem when progressive declines occur. He goes on to suggest that confronting this disability may actually trigger a process of self-discovery that serves to strengthen the

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person, and uncover previously unknown strengths and talents.

## V. IMPLICATIONS

The fact that the HIV disease infects cells in virtually every organ system complicates health care provision, in particular, out of hospital care, and home care. Most individuals with HIV disease will have multiple organ involvement causing physical and mental debilitation. Often, their mental status deterioration will be so severe that home care will be difficult, if not impossible to provide unless other care providers are available to stay with the patient 24 hours a day.

The debilitating manifestations of AIDS attacks not only the body but the mind as well. Profound physical wasting accompanies the erosion of personality, intellect, and physical independence, leaving the person totally dependent on others for survival.

The great abundance of guidelines, policies, and procedures drafted by various agencies on HIV/AIDS-related issues, contributes to the care-giver confusion, and subsequent disregard for these life-preserving recommendations.

Guidelines are not legally binding, but do influence professional practice. Regulations are federal "rules" made within the scope of a Congressional statute. Both are taken into account when formulating a standard of care for health care providers and hospitals. The failure to abide by these recognized standards of care forms the basis for negligence, liability for damages and tort claims...and ultimately could result in the contraction of AIDS itself. Thus health care providers from all disciplines have a vested interest in complying with these guidelines.

Religious "witch hunting" should not be ignored when understanding nurses' attitudes toward homosexuals, drug users, and sexually promiscuous persons. Frank group discussions of religious precepts should remind nurses that charity and compassion are necessary when dealing with this group of patients.

Nurses too, must be recognized as becoming stressed through their contacts with these patients. Although few studies in the literature write about specific issues, several obvious concerns surface.



Repetitive death and dying issues, especially in young patients that are often about the same age as the nurse care-giver, create intense identification and feelings of vulnerability. Nurses can easily feel unprepared to deal with the myriad of intense psychosocial needs demanded by the HIV patient (Chisholm, 1991). Additionally, they may experience isolation, discrimination and anxiety from family and friends because of their work with HIV patients.

The American Nurses' Association has endorsed a multifaceted approach of institutional support and educational endeavors. And although education is the key to limiting spread of this deadly disease, ignorance abounds: "I thought only white people caught AIDS," said an 18 year old, black resident of the District (Shen, 1992). Counselors find this information void to be the rule rather than the exception, with short-term problems preoccupying the minds of many high risk people. In their struggle to make it through a single day, many of these folks find it hard to worry about a disease that might kill them in a few years.

Although the need to educate those at risk for HIV infection is acute, underlying moral and social issues make it is hard to identify those "at risk." Therefore, everyone must become knowledgeable so they know what they need to know to protect themselves from infection.

Abstinence from sexual activity would positively eliminate the chance of contracting HIV, but it is not a realistic option for most individuals. This is a very real quality-of-life issue that many feel is both essential and central to the human experience. Likewise, drug use and addiction precludes a "safe lifestyle," but it too is a way of life for some people.

Use of Universal Precautions as recommended by the CDC is intended to prevent exposures to bloodborne pathogens through broken skin and parenteral and mucous membrane entry sites.

Universal precautions DO apply to these body fluids: blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid,

peritoneal fluid, pericardial fluid, and amniotic fluid.

Universal precautions DO NOT apply to the following body fluids, UNLESS they contain visible blood: feces, nasal secretions, sputum, sweat, tears, urine, vomitus, breast milk, and saliva (CDC, Feb. 1989).

"Body Substance Isolation" was recommended as a way to consistently take blood and body fluid precautions for all patients regardless of their bloodborne infection status (CDC, August 1987). This measure served to protect both health care provider from patient, and patient from healthcare provider. Applying precautions to every patient during care activities continues to be a valid and prudent way to reduce the risk of HIV transmission.

Recommendations from Centers of Disease Control in "Guidelines for prevention of transmission of HIV and HBV to health-care and public safety workers" (1989) can be summarized as follows:

**Hands** should be washed immediately before and after patient contact, whether blood exposure has occurred or not. Hands should also be washed after removing gloves.

**Gloves** should be worn when soiling of hands with blood or body fluids is anticipated. This includes:

- \*Contact with mucous membranes or broken skin.
- \*Handling items or surfaces soiled with blood or body fluids.
- \*Performing venipuncture and other vascular access procedures.

Gloves are to be changed after contact with **each** patient.

**Masks and protective eyewear (goggles)** should be worn when splashing or splattering of blood or body fluids is likely or during procedures that may generate droplets of blood or body fluids. Personal eyewear usually offers adequate protection.

**Gowns and/or aprons** should be worn if soiling of the nurses' exposed skin or clothing is likely.

**Prevent injuries** caused by needles or other sharp instruments by taking adequate precautions. Contaminated needles should **never** be bent, clipped, or recapped. Contaminated sharp objects should be discarded in special puncture-resistant containers.

**Spills** of blood and body fluids that may contain blood should be cleaned up according to the following steps:

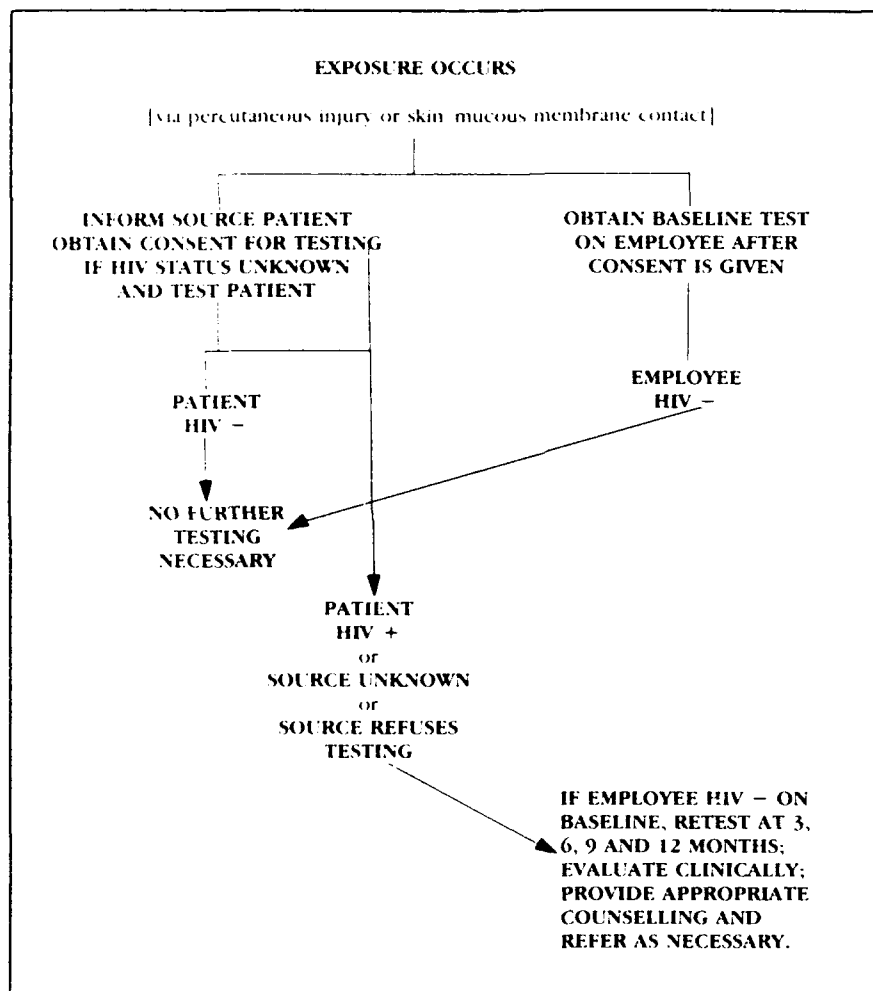
1. Put gloves on. (Use other barriers such as gown or eyewear as necessary.)
2. Wipe up excess material with disposable towels or other absorbent pads.
3. Clean up spill with plain soap and water.
4. Disinfect contaminated surfaces with a 1:10 solution of household bleach (sodium hypochlorite) and water. Dilute bleach solution should be no more than 24 hours old.

Occupational exposure to HIV should be recognized by employers as a legitimate potential source for transmission of the virus. Admittedly this risk is small. The risk of infection following an occupational exposure is about 0.4% (4 in 1,000) following a penetrating injury with a contaminated object (Ross, 1989).

Most commonly experienced are the needle-stick injuries, which account for 80% of all work place exposures. It is obvious that clear policies regarding this type of occurrence must be established and practiced by all health care providers.

The CDC recommends a series of steps to follow after an occupational exposure has occurred (Figure 6) (CDC, 1990). This occurs along with counseling before and after testing (including "safe sex" practices, avoid organ donation for 3 months), and close clinical evaluation.

Figure 6 Algorithm of exposure management steps.



Government estimates of the number of infected individuals remain complex and imprecise, and the techniques for computing a national HIV prevalence rate can not be considered definitive (CDC, 1987). The results however, are consistent with the numbers as they are being reported from sites across the country.

The possibility of a vaccine for this disease exists. Recombinant DNA technology has already incorporated the HIV virus into bacteria, yeasts, and mammalian cells in the hopes of cultivating appropriate antigens. Studies have been underway for several years, and these preparations are now being tested in rhesus monkeys. Although the vaccine availability is years away, debates about who would need it have already begun.



## VI. CONCLUSIONS

The AIDS crisis has not and will not go away, no matter how much one wishes it would. The burgeoning number of cases create a scenario of almost unimaginable consequences. The great stress brought on by this disease has impacted social and economic policies and procedures, and has just begun to challenge the American medico-legal system with legitimate and justifiable concerns.

To the dismay of officials in Washington, society is increasingly looking to law as the preferred way to solve these types of troubling and complex health problems. But legal and public health policy problems have yet to be solved in the AIDS pandemic.

Solutions are not easy to come by; they will not arrive without much public debate, outcry and disagreement on the appropriate course of action society should take against this malady. But the whole thrust of public health law should not be to restrict or punish those who are already suffering. Rather, the law should enhance contributions that promote public health endeavors by setting standards, mandating

education and services, funding research, and safeguarding individual privacy and rights.

The government has bravely tackled the arduous task of studying the complex and conflicting issues embedded in the AIDS crisis. Across the country numerous task forces have been established to study the various issues, and make recommendations which are considered when public health law is formulated. These guidelines, recommendations, and memorandum run the gamut from hand washing to embalming procedures, and everything in between.

The constitutionality of these various disease control measures are just now beginning to make their way into court, as individuals begin to challenge the precepts and assumptions of these new provisions. It is well beyond the scope of this paper to undertake such complex legal discussions.

HIV screening and other public health strategies aimed at restricting the spread of HIV must be examined from scientific, ethical, and legal perspectives to ensure that an appropriate balance is struck between

the public's interest in health and safety and the individual's interest in privacy and liberty.

Historically, contagious diseases have been the subject of statutes, regulations, and judicial decisions imposing limitations on individual freedoms for the sake of the public health. The HIV predicament presents essentially the same argument, but with some additional unique elements to consider.

The recent revelation by basketball superstar "Magic" Johnson has done much to heighten public awareness of this very prevalent disease. It also lent credibility to the argument that this is no longer a disease exclusively of gay men and derelict drug users. The facts point to this being a disease of ever-widening prevalence that continues to gain notoriety and sympathy from the masses in society that are threatened by its presence.

By removing the social stereotypes surrounding this disease, one might hope to get away from the discriminative labeling that occurs, and get down to the true issue in this case: What can be done to

protect and save the most lives? What actions will best meet the needs of all citizens?

The issues are not easy because they involve making choices of one person over another. But each person must come to some personal schemata or framework that can be used to analyze the very personal issues in this case. Considering ourselves to be reasonable and prudent adults, fairly representative of the American public as a whole, it is expected that a wide range of opinions are held on every critical element in this scenario. It is only through the careful examination of all the issues can one hope to arrive at a conclusion that satisfactorily guarantees the protection of rights of all those touched by this devastating disease.

The vast array of opinions produce a nebulous "grey" area where there is no "absolute" answer for every situation. What we as a society are tasked to do is to clarify this "grey" area so that the "promotion of the general welfare" is protected, as is guaranteed in the Constitution's Bill of Rights.

Not since the Bubonic Plague of the Middle Ages has confidence in science and medicine been so shaken. The appearance of such an elusive and deadly disease have made skeptics of many. The idea of finding a cure or a vaccine is something all people wish for, but few believe will happen soon enough to prevent thousands more from dying from this horrible disease.

This author shares the hope that through the cooperative efforts of both the medical and scientific communities, some solution will be found that at least minimizes the suffering from this disease, if not cure and eventually prevent it.

Education and public awareness will halt the spread of this deadly disease. Society must create and enact equitable legislative measures that ensure a balance between an individuals' personal rights and those of the greater society as a whole. But these objectives will not be achieved without considerable effort and sacrifice from all segments of society.

There are numerous talented people in this world that can achieve the desired goal today.....a cure for AIDS. Society must back those efforts that are aimed

at this goal, and commit themselves to active participation in programs designed to achieve this.

When HIV positive individuals are given the freedom to chose their own destiny, health care workers will be rewarded by working with a more whole and peaceful client. The saga and history of AIDS is unfolding day by day in every practice setting. The heroes and unsung heroes will be the nurses and other health care workers that provide the care that sustains and enriches the lives of AIDS patients. This is no longer a disease that affects "them." It is a disease of "us" and "them." "We" have become one of "them," and "they" have become one of "us".....AIDS is a human disease.

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