



St. Joseph Hospital

make a tangible

March 9, 1987

Colostrum Experiment
% MIRACLES-IN-MOTION
Box 8480
Uni-City, CA. 91608
(818) 761-4871

To Whom It May Concern:

Please send me any available information regarding
the Colostrum-Secretion Therapy for A.I.D.S.

Please send to:

St. Joseph Hospital
Attn: Jan Tomakowsky, Health Education
302 Kensington Avenue
Flint, Michigan 48502

Thank you.

Sincerely,

Jan Tomakowsky, MPH
Health Education Coordinator

JT/nh

*** COLOSTRUM-THERAPY FOR AIDS (NO SIDE EFFECTS)**

Step 1 - 1 Teaspoon Colostrum in pint of water ENEMA
(Hold for as close to 15 MINUTES as possible)

Step 2 - 1 Teaspoon ORALLY, 3 times per day for 3-4 Weeks.

Step 3 - 1 Teaspoon ORALLY, 2 times per day to 1 Teaspoon
every 3 days maintenance program.

Comments: Bovine COLOSTRUM Now Available \$8.25/oz with
12-16 Ounces required for stabilization...
Use TOPICALLY as needed for sores, etc..

*Approved Alternative

COLOSTRUM RESEARCH SOCIETY

WHAT HELP CAN YOU GIVE YOUR IMMUNE SYSTEM?

Immunity - Webster defines "immunity" as protection against or lack of susceptibility to a disease, poison, infection or the like.

Until recently, most of us did not give our immune response much thought, much less understand any of it. With much national publicity about Acquired Immuno-deficiency Syndrome (AIDS), Cancer, Leukemia, Herpes, etc., we are beginning to grasp the importance of our body's defense against disease. This security is known as our immune system.

We felt that the body, given a well balanced diet, proper rest and reasonable isolation from people with contagious conditions, would keep us relatively free from illness, and that our bodies would manufacture the antibodies needed to combat the germs that invade our body. Unfortunately, we do not always supply this need from our early childhood.

Animals and humans constantly combat a multitude of disease causing organisms present in the environment. Bacteria, viruses, and other microbes frequently penetrate the skin or mucous membranes which is the signal for the body to initiate an immune response.

The body's security against disease is the immune system. However, when an individual is exposed to the antigens of a microorganism for the first time, production of antibodies may be a relatively slow process, requiring several days or weeks. Many pathogenic bacteria overcome the protective effects of phagocytic white cells, during this interval and reproduce in great numbers.

Disease symptoms that appear in individuals at such times often result from the destruction of human tissue by rapidly growing populations of bacteria. Some bacteria, for example, produce poisons called toxins. Some of these are exotoxins, or poisons, secreted by living bacterial cells into host tissues. In other cases, poisons are retained inside bacteria (endotoxins) and are released only when the cells die and disintegrate. Other pathogenic bacteria do not produce toxins but reproduce so rapidly that their immense population alone is sufficient to disrupt the normal functions of host tissues. Death of infected individuals can result if the normal functions of such tissues are impaired too severely.

Colostrum is mother's way of giving protection to the new born and passing immunity from one generation to the next.

The first and greatest health food was colostrum, the first milk, loaded with antibodies, that gave protection and immunity to the newborn. It started the immune system which allowed individuals to grow. Researchers are now beginning to realize the value and potential use of colostrum in animal and human medicine.

Some immunologists believe that immune factors other than immunoglobulins may be essential in maintaining a strong immune system in adults. Colostrum is so broad a spectrum it seems to have immune factors for all ages.

Bovine milk contains about 4% protein of which 80% is casein and only 10% is immunoglobulins. Colostrum contains about 20% protein, of which 55% is immunoglobulins. Besides immunoglobulins there are antibody stimulating factors, hormones, vitamins, nucleotides, enzymes, and various non-immunoglobulin components that destroy disease-causing microorganisms.

The most common vitamins in colostrum are vitamins A, B and E. For example, Bouda (1) found that the vitamin A concentration in colostrum was 10 times higher than in blood plasma. Samson reported that the mean vitamin B12 concentration in colostrum was 2,432 pg/mL; whereas, milk and serum contained only 116 pg/mL.

In another study, Bouda (2) stated that the vitamin E concentration in milk was 2.5 times lower than in colostrum. The vitamin E protects the vitamin A from oxidation, and it contributes to the formation of antibodies.

Colostrum is a good source of nucleotides. Gil (4) found that colostrum nucleotide content was substantially higher than the levels of milk. Specific nucleotides present were orotic acid, AMP, CMP, GMP, UMP, UDP, and GDP.

Colostrum whey has several inhibitors (9) which may protect ingested antibodies from digestion. Trypsin inhibitors (3,7) and alpha Anti-trypsin (6) have been found in relatively high concentrations in colostrum.

Michael Klagsburn, associate Professor of biological chemistry at Harvard Medical School discovered that cells grew especially well in colostrum, which contains an even higher level of growth factor than is found in blood serum. (10)

Interferon is a class of soluble small proteins that inhibit virus multiplication. Lawton (5) found that leucocytes in colostrum are capable of producing this anti-viral factor. However, the average concentration of interferon in colostrum was not reported.

Dr. Richard Barmakian, N.D., has found that only a small amount of this special extract can provide immune factors to stimulate the body's own immune system. Perhaps this original food may be the protective answer from our beginning to our end.

Many studies have been completed showing relationship between nutrition, infection and immunity, conditions of the body which affect the relationship of nutrition and immunity, including the heterogeneity of the food we eat, our differing abilities to handle various nutrients, and the influence of environment on specific nutritional needs. (11)

Macromolecules present in food capable of eliciting an immune response can be absorbed through the gastrointestinal tract in adults and children. In infants, the relative immune intestine can absorb even larger quantities of such antigenic substances. Antibodies present in mother's milk (colostrum) help limit the uptake of these macromolecules. (12)

Colostrum has been advocated as a "major breakthrough" in fight against hundreds of diseases, (13) including MS patients.

Immunoglobulin therapy is being investigated in the treatment of AIDS in children. It is a unique feature of pediatric AIDS that the patients immune systems are destroyed before they have had a chance to develop fully. (14)

The human skin, which is only a few millimeters thick, is the body's largest organ. One of the skins most remarkable roles has been recognized only recently: It is an integral part and active element of the immune system. Specialized cells in the skin have interacting roles in the response to foreign invaders. (15)

Colostrum also protects intestine walls from E.coli building up, and from gastrointestinal virus, major causes of diarrhea, says Dr. Robert DeGregorio, research scientist at Fort Dodge, Iowa.

REFERENCES

1. Bouda, J. et al. Vitamin A and Carotene Metabolism in Cows and Their Calves Fed from Buckets. Acta. Vet. Brno. 49(1-2), 45-52.
2. Bouda, J. et al. 1980. Vitamins E and C in the blood plasma of cows and their calves fed from buckets. Acta. Vet. Brno. 49 (1-2), 53-8.
3. Cechova, Dana. Havrona, Marie. 1979. Effect on modification of reactive lysine on antitryptic and antichymotryptic activity of proteinase inhibitor from cow colostrum. Hoppe-Seyler's Z.Physiol. Chem. 360 (12), 1745-51.
4. Gil, Angel. Sanchez-Medina, Fermin. 1981. Acid-soluble nucleotides of cow's, goat's and sheep's milks, at different stages of lactation. J.Dairy Res. 48(1), 35-44.
5. Lawton, J.W.M. et al. 1979. Arch.Dis.Child. 54(2), 127-30.
6. Omeme, J.A. et al. 1981. Alpha-1-Antitrypsin in breast milk of healthy Nigerian mothers. East Afr.Med. J. 58 (1), 56-9.
7. Pineiro, A. et al. 1978. Isolation and properties of bovine colostrum trypsin inhibitor. Ann.Rech.Vet 9 (2), 291-6.
8. Samson, R.R. et al. 1979. Immunology, 38(2), 367-73.
9. Von Fellenberg, R. Horber, H. 1980. Multiple protease inhibitors in colostrum and in bovine udder tissue and their possible functional significance. Schweiz.Arch. Tierheilkd. 122(3), 159-68.
10. M.Klagsburn, Associate Professor of biological chemistry at Harvard Medical School. Forbes, April 8, 1985, Health, White Gold?
11. L.C.Corman, M.D. Assistant Professor, Dept of Medicine, University of Florida School of Medicine, Gainesville, Florida. Medical Clinics of North America - Vol 69, No. 3 May 1985 Symposium on Clinical Immunology 1. The Relationship Between Nutrition, Infection and Immunity.
12. L.C.Corman, M.D. Medical Clinics of North America - Vol 69, No 3 May 1985.
13. Health World News, April 1981, special edition. R.Fitz.
14. Dept of Health & Human Services, October 1985, volume 15 No.3-progress on AIDS.
15. R.L.Edelson and J.M.Fink - The Immunologic Function of Skin - Scientific American June 1985. Page 46.

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ASSOCIATION OF CALIFORNIA LIFE INSURANCE COMPANIES

FILE COPY

LEWIS KELLER
PRESIDENT

1400 K STREET, SUITE 212 SACRAMENTO, CALIFORNIA 95814 (916) 442-3648

September 12, 1985

Honorable Art Agnos
Member, California State Assembly
State Capitol
Sacramento, California 95814

Dear Assemblyman Agnos:

This is in response to your letter of August 23rd concerning the interest of our Association in your Assembly Bill 403 as enacted into law in April of 1985.

I am appreciative of the opportunity afforded me to discuss the subject matter of AB 403, as well as your letter, with you and your assistant, Mr. Larry Bush, in your office Friday afternoon, August 30th. Our discussions of that afternoon appeared to develop a better understanding of our mutual desires to work cooperatively toward the solution of problems arising from AIDS in relationship to life and health insurance.

As I indicated to you in our meeting on Friday, your letter of the 23rd attributed to me and to our industry certain intentions which were based on a misunderstanding of fact. These were as follows:

"As I understand the message you are conveying, the insurance industry is seeking to repeal the portion of my bill, AB 403, prohibiting the use of the AIDS antibody test to determine insurability. It is also my understanding that your association is seeking explicit authority in the state insurance code to permit denial of insurance based on a positive HTLV III antibody test."

Both of these two understandings are incorrect. Attached is a copy of a position paper developed by an industry task force, with a draft bill attached. These were given to Larry Bush at a meeting in my office on August 15th (copies of these materials are enclosed). A reading of these discloses no basis for the "understandings" which you have gathered. Specifically, the bill

draft does not propose to repeal the "insurability" portion of your bill, but merely to move it over to the Insurance Code, which normally contains the statutory law relating to "insurability", and permit the use of the AIDS antibody test under carefully restricted conditions in the underwriting of life and health insurance.

The same draft would not, as you state, permit the denial of insurance based on "a" positive HTLV III antibody test. The use of the article "a" connotes singular which means a single test. The draft rather clearly states the opposite and requires as a minimum for denial of insurance that blood from any applicant which initially was found to have serologic evidence of antibodies to the probable causative agent of AIDS shall have been retested for confirmation.

Your letter then continues:

"It is my further understanding from you that, without this authority, health and life insurers plan to implement what you termed 'lifestyle screening' as a means to eliminate applicants you surmise may be risk for AIDS."

Here again, I am unable to find a factual basis for your understanding. "lifestyle screening" of life insurance applicants, which is perhaps more appropriately termed a "background check", has been a part of the life insurance underwriting process for decades. Examples of this process are investigations to determine an applicant's driving habits and use of tobacco, alcohol or drugs. It far preceded the recognition of AIDS as a significant health risk, and could not, therefore, be developed specifically for underwriting AIDS risks, as your letter implies.

With respect to your contention that use of the AIDS antibody tests by insurers for preliminary screening by insurers would constitute a federal offense, our preliminary research has failed to produce confirmation. However, we will continue our research on this fundamental question and share our findings with you when they have been completed.

In the body of your letter on page 3 you make the point that early warnings of health risks meant to help people who have knowledge of their conditions by giving them constructive warnings of risk should not be used to deny coverage. Your statements to this effect appear to overlook the fundamental basis of private voluntary life and health insurance. If individuals have knowledge of health conditions which make them measurably greater risks than the rest of the insured population, the insurer insuring them does a disservice to both the existing and future normal risk pools. This disservice can take the form of charging every new insured individual unfairly high rates in relationship to their risk. In life insurance, rates cannot constitutionally be increased after policies are issued. In the extreme

case, being legislatively mandated to take high risk applicants could threaten the ability of the insurer to pay claims. This condition is known as insolvency.

The life and health insurance industry has a responsibility to the totality of its present and future policyholders and cannot be reasonably expected to jeopardize their financial security by assuming disproportionately high risks for special groups no matter how deserving their condition may be. Under your interpretation of §199.21(f) of the Health and Safety Code an individual could go to any of the multiple testing sites, determine by two successive ELISA tests that he had a 5% to 20% chance of developing AIDS, and then apply to a life insurer for a life insurance policy and the life insurer could not lawfully acquire the same information before assuming the risk. This does not seem to be fair to other applicants who are not given the right to withhold relevant personal medical information, or to the insurer's existing population of carefully underwritten standard risks.

This matter is discussed fully in the attached position paper. It will be addressed in substantially greater detail in materials which will be submitted at a later date.

On page 3 your letter again refers to an industry "proposal" to use "lifestyle screening". This is discussed above but, again, let me emphasize that there is no such "industry proposal", and that investigation of "lifestyle" has been a routine part of the life insurance underwriting process for decades.

On page 3, your letter states that:

"the Governor's AIDS Advisory Committee was informed of reports that the insurance industry is considering redlining by zip code area, and is using or considering such factors as single men having other single men as roommates or beneficiaries."

These "reports" appear to be very general and vague. If you could elaborate on them, I will attempt to respond in a helpful manner.

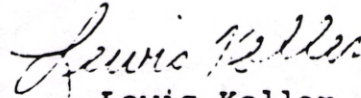
Finally, I must express our pleasure in accepting your invitation to the life and health insurance industry to join with federal and state governments in the fight to control AIDS, and thereby permit our industry to cope in a responsible manner with the potential for financial disaster which AIDS presently poses to the insured public.

Our Association adopted a "support" position on SB 1251 at its meeting on August 29th, as requested by your letter. We will communicate that support to Governor Deukmejian.

You have our pledge of cooperation in finding solutions to the

complex of problems arising from this most pernicious threat to the health and welfare of our nation.

Sincerely,



Lewis Keller
President

LK:gj

cc: Assembly Finance and Insurance Committee Members
Senate Insurance, Claims and Corporations Committee Members
President pro Tempore David Roberti
Speaker Willie Brown
Assembly Minority Floor Leader Pat Nolan
Senate Minority Floor Leader Jim Nielsen
Assemblyman Burt Margolin
Assemblyman Mike Roos

BCC: AHCC

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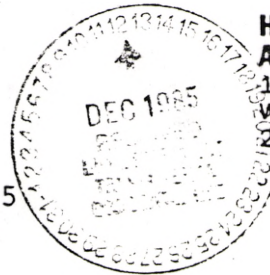
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COMM. BUSINESS

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**American Council
of Life Insurance**
1850 K Street, NW
Washington, DC 20006-2284
202-862-4000

file *Insurance*



**Health Insurance
Association of America**
1025 Connecticut Avenue, NW
Washington, DC 20036-3998
202-223-7780

December 6, 1985

TO THE MEMBERS OF THE
DRAFTING GROUP ON LEGISLATION AND SUPPORTING DOCUMENTS
FOR THE INDUSTRY POSITION ON TESTING FOR EXPOSURE TO THE
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) VIRUS

Re: Position Paper on AIDS Antibody Testing

Dear Members:

As you may know, the position paper on AIDS HTLV-III antibody testing which you developed has been approved by the HIAA Board of Directors and by the Joint ACLI/HIAA CEO Task Force on AIDS. We thank you for your fine work on this project.

Since the last time we wrote you, the paper has gone through further revisions as a result of comments from you and others. Among the changes which you will notice is the deletion of the former introductory paragraph and the incorporation of part of it into the new Section III, "INSURANCE ASPECTS." The purpose of this was to avoid claiming hardship for our industry before we had established a firm base for that argument. Section III also contains assurances about existing coverage. A number of other changes involved the deletion of some of the bibliographical references and the replacement of two of them by new ones. We had to make some changes in the text to be consistent with the new references.

We anticipate that the paper will be updated from time to time. A version very close to the one enclosed will be included in a kit of AIDS materials which will be sent to member companies within the next several weeks.

We wish you all happy holidays.

Sincerely,

Dan Case

Daniel F. Case
Actuary, ACLI

Karen Clifford

Karen A. Clifford
Assistant Counsel,
HIAA

DFC:KAC:cg

Enclosures

WHITE PAPER

THE ACQUIRED IMMUNODEFICIENCY SYNDROME & HTLV-III ANTIBODY TESTING

I. THE AIDS PROBLEM

AIDS is potentially the most serious health threat our nation has ever faced. This is not evident from the fact that 13,611 cases had been reported to the Centers for Disease Control (CDC) by September 30, 1985 (1) or that that number was projected to double by September 30, 1986. (1) The importance of this problem does become evident, however, when one considers that the disease was unknown in the United States until 1981, and that if the number of cases doubles each year or so for very far into the future, a significant portion of the population could contract AIDS.

At present there is no vaccine, nor is one in sight. (2) There is no tested and proven antiviral drug (3) or other form of therapy. At this time, those who develop the full AIDS syndrome are certain to die, usually within 12-24 months. The median age at death is 35. (4)

AIDS has been confirmed to be caused by what is called the HTLV-III virus. The CDC has estimated that from 500,000 to 1,000,000 people in this country have thus far been infected with this virus. (1) Whatever the correct figure may be, it is rising. Because the HTLV-III virus has a long incubation period, the rising curve of actual AIDS cases lags behind the rising curve of viral infections by some three years.

In some risk groups, from 5% to 19% (5) of those who have been infected with the HTLV-III virus have been found to develop AIDS within 2-5 years. A 10% risk of incurring perhaps \$100,000 of health-care expenses within five years, and then dying, represents an exceptionally high risk in a young person for a health or life insurance company.

In addition to the 5% to 19% of infected individuals who developed AIDS within 2-5 years, 25% (5) developed AIDS-related complex (ARC), which progresses to AIDS in some people. While it is not known how many of those 25% will eventually get AIDS, ARC itself is likely to give rise to substantial medical expenses.

Something triggers the HTLV-III virus to attack and severely damage the victim's (cellular) immune system, allowing normally innocuous organisms -- various protozoa, bacteria, viruses and fungi -- to cause pneumonia, meningitis and other life-threatening illnesses. It is these so-called opportunistic infections that characterize AIDS. They serve as the means by which one makes the diagnosis of AIDS. In AIDS victims, these organisms are extremely resistant to therapy and cause death.

E2
M2
GC2
BCL2

The time from infection to development of clinical signs or symptoms of the disease can range from months to as many as ten years.(6) During this incubation period, people remain seemingly quite healthy.

The most common means of transmitting the HTLV-III virus is by intimate sexual contact. Any sexual partner of someone who is infected may become infected by the virus and may subsequently develop AIDS. Sexual encounters with multiple partners greatly increase the risk of becoming infected.(1,6) This applies to both heterosexuals and homosexuals, and for obvious reasons occurs most often with those who are not married.(7) Approximately 73% of all AIDS patients in the United States to date have been homosexual or bisexual men.(1) AIDS tends to be highly prevalent in those metropolitan areas that have large "gay" communities, most notably New York City and San Francisco.(7) About half of all cases thus far have been from those two cities. Other high prevalence areas cited by the CDC include many of the other large cities in the United States.

Illicit intravenous (IV) drug users are another group at high risk for contracting AIDS, constituting about 17% of all who have this disease in the U.S.(1) The HTLV-III virus is transmitted from one person to another by use of nonsterilized (contaminated) needles. Seventy percent of IV drug users who get AIDS are male.(7) Over 94% of all AIDS patients in the U.S. are male.(8)

Hemophiliacs who have required repeated infusion of clotting factor concentrates from 1980 to 1984 to control bleeding episodes are at high risk of having been infected.(9) The clotting products are synthesized from large numbers of donors. Heat treating of these products since 1984 is believed to have greatly reduced the risk of such transmission. HTLV-III antibody testing that is now being done by blood banks should virtually eliminate risk arising from future infusions of blood products. Still, a high percentage of those who have required such products from 1980 to 1984 have already been infected, as demonstrated by the presence of antibodies to HTLV-III.(1) Many may acquire AIDS at some time in the future.

Others at high risk include newborns of infected mothers and those who have had sexual relations with infected people (spouses; (10) prostitutes).

Finally, those who have received multiple blood transfusions in the last five years are at a slight increased risk owing to donated blood contaminated with HTLV-III. Of the millions of people who have received blood transfusions, fewer than 200 cases of transfusion-associated AIDS have occurred. Screening that is now being done by blood banks should virtually eliminate this risk in the future.

II. THE ELISA TEST

In response to being infected with HTLV-III, people develop antibodies to this virus. A relatively easy-to-do and inexpensive

screening test for antibodies to HTLV-III, called "ELISA" or "EIA," has been developed. If a person from one of the aforementioned high-risk groups has repeatedly reactive ELISA tests (i.e., successive tests of a blood sample are positive), he or she has probably at some time in the past been infected with HTLV-III.(5) If the person is still carrying the live virus, he or she may be both capable of transmitting it to others and at a significant risk of eventually developing AIDS.(11)

It is obvious why our blood-banking industry was eager to begin using an antibody screening test. All blood banks and plasma centers initiated use of the ELISA test in March or April of 1985. Such testing is expected to essentially eliminate future contamination problems and guarantee public confidence in our nation's blood supply.

ELISA, like virtually all other blood tests, is not perfect. This fact, unfortunately, creates both misunderstanding and unwarranted mistrust.

The reliability of any positive (abnormal) test result depends to a very great extent on the prevalence of the entity that it seeks to identify (in this case, antibodies to the AIDS virus). When ELISA or another AIDS-related test is used in a setting of high AIDS prevalence (e.g., in those metropolitan areas where relatively many AIDS cases have occurred), it has a very high probability of accurate detection of HTLV-III infection.(12) Such tests will be used more and more by attending physicians (especially those who practice in high-risk areas) to assist in establishing a probable cause for otherwise unexplainable signs and symptoms. Just recently the CDC revised its case definition for AIDS, adding certain diseases that, if also associated with a positive ELISA test, will now be acknowledged as being evidence of AIDS. This means that ELISA is being recognized as a test that can assist in making a reliable diagnosis.

On the other hand, when used in low prevalence settings, such as often happens in the nationwide random testing of blood donors, initially positive test results are more likely to be unreliable ("false" positive). In such circumstances, the Public Health Service has advised, the test should be repeated. If a repeat ELISA is also reactive, reliability is much improved. Still, repeatedly reactive ELISA results in a random screening setting are less reliable than those where the test is used selectively.(13) Use of another kind of test is advocated in the random screening setting to confirm repeatedly reactive ELISA results. The Western blot (WB) test is most often used for this purpose at the present time. It is a time-consuming and relatively expensive test to perform. If, however, someone has two positive ELISAs followed by a positive WB, one may be confident that the result is a true positive.(13)

One last point is worth mentioning in regard to antibody testing. The HTLV-III virus itself was discovered only in early 1984. The ELISA test was put on the market for use by blood banks in remarkably short order by FDA-licensed commercial manufacturers (Abbott; Electro-Nucleonics; Litton). Reasons for false positives are being explored and, in some instances, have already been resolved

by making test modifications and refinements. At present, the ELISA test is already a better screening test than most blood tests that are used in clinical medicine. With the biological research currently being done, it will no doubt become still more reliable. Furthermore, there is already much discussion regarding the development of better, more independent confirmatory tests, about second generation tests, etc. (13) It may even be possible to develop a means of directly testing for HTLV-III itself rather than for its specific antibody.

III. INSURANCE ASPECTS

The life and health insurance business and its customers are affected by the AIDS epidemic in a variety of ways. Because of certain expressed concerns about insurance coverage and AIDS, it seems appropriate to restate a fundamental principle of insurance. Currently, valid contracts of life and health insurance providing coverage for loss of life, loss of income through disability, or medical expense do not exclude AIDS coverage and will remain in full force (subject, of course, to the usual terms of such contracts). Further, currently offered new contracts or additions to existing contracts that do not require as a condition of coverage the submission of individual evidence of insurability acceptable to the insurer will cover AIDS victims.

Therefore, the issue of testing for the presence of the AIDS virus, its antibodies, AIDS-related complex, or the active presence of AIDS is confined to new coverage for which individual evidence of insurability acceptable to an insurer is required. The need for such evidence of insurability, the right of an insurance company to require such evidence and the public interest in requiring such evidence are well documented. The most fundamental principle of insurance -- charging the same premium rate for individuals whose expected risk of loss is the same -- requires that insurers and insureds have equal access to any knowledge that has a significant bearing on the assignment of an individual to the appropriate class of risk.

If people who have tested positive for antibodies to the HTLV-III virus apply for life and health insurance and the insurance companies are unable to identify them as high risks, the insurers' other policyholders will bear the brunt of paying for extra benefits for which inadequate premiums were received. This would unfairly take large amounts of money away from those other policyholders.

IV. THE NEED FOR AIDS-RELATED TESTS IN INSURANCE UNDERWRITING FOR SITUATIONS REQUIRING INDIVIDUAL EVIDENCE OF INSURABILITY

AIDS presents the potential for a very serious situation for the life and health insurance business and its customers. If recent trends continue for just another two years, the insurance industry will probably pay billions of dollars in medical expense, disability and death benefits because of AIDS. Until quite recently, insurers could not have anticipated these losses. As mentioned above, benefits will be paid under existing and future policies in accordance with their terms. The total eventual size of the AIDS-related claims

will depend to a significant extent on how effectively future applicants can be underwritten in the coming months and years. Although the remainder of this paper is devoted to individually underwritten insurance such as individual insurance, small-group coverage and group coverage of late entrants or for supplementary amounts of life insurance, it should be appreciated that AIDS will significantly affect non-individually underwritten group insurance as well.

Progressive Nature of Chronic Diseases

To help the reader understand how the AIDS risk must be evaluated by the insurance underwriter, it may be worthwhile to compare underwriting the AIDS risk with something that is familiar and encountered by the underwriter nearly every day, namely the classification of people with coronary heart disease (CHD). As will be seen, both share common characteristics and call for a generally similar underwriting approach.

As with all chronic diseases, CHD progresses by stages. It typically begins with those at high risk of developing disease. These include the cigarette smokers, the hypertensives, the obese. All these individuals pay a higher premium for their insurance, in accordance with the higher risk they represent.

The next phase in the CHD progression involves signs that suggest the development of underlying atherosclerotic disease. Electrocardiographic changes may occur. The patient may experience anginal chest pains. Heartbeat irregularities may occur. Applicants who are judged to be at this stage of their disease are classified in a far higher risk group -- charged a significantly higher premium or, perhaps, even rejected for coverage.

Late in the course of disease, the patient experiences a heart attack or an episode of life-threatening ventricular fibrillation. Death may be near.

As a group, people tend to progress from one stage of CHD to the next and do so rather predictably. For individuals, the picture is different. Some individuals progress rapidly from one stage to another. For others, progression is slow or may not occur at all. One cannot predict what will happen to any one given individual. Fairly accurate projections can be made, however, for groups of individuals who have similar characteristics.

So it is with AIDS. AIDS is a sexually transmitted disease. Having multiple sex partners puts people at higher risk of contracting the HTLV-III virus, particularly if such activity takes place in those metropolitan areas where the prevalence of AIDS has been documented to be high.

For those who become infected with the AIDS virus, various signs or markers of infection become manifest. First of all, these people develop antibodies to HTLV-III, and an ELISA test result will almost certainly be positive. Further down the line, these people may develop generalized lymphadenopathy. Constitutional symptoms of disease may appear. They may include weight loss, drenching night

sweats, persistent fever, malaise and shortness of breath. Oral thrush may develop, suggesting that one's underlying immune system has been damaged. "T-cell subset studies" may confirm a decrease in the number of T-helper cells or a reversal of the ratio of T-helper to T-suppressor cells -- both indications of the further breakdown of an individual's immune system. At this stage, patients are said to have AIDS-related complex (ARC). Analogous perhaps to angina pectoris in the CHD spectrum, ARC may represent an advanced stage in the progression of AIDS.

Finally, something triggers the development of opportunistic infection. The patient is then diagnosed as having AIDS by the CDC case definition. Death occurs in one or two years.

The underwriting process recognizes that each phase in the natural history of any chronic disease, be it CHD, AIDS, or something else, presents some inherent level of risk and that this risk increases with each advancing stage of disease. For AIDS, those who are confirmed to have been sexually active with multiple partners (for example, those who have been treated on more than one occasion for sexually transmitted disease) are at increased risk because they may become infected with HTLV-III. Such a person would be classified into a still higher risk category if confirmed to be positive for HTLV-III antibodies. Add to this the presence of typical AIDS-related symptoms (e.g., night sweats) and one has a further indication that the progression is far advanced. Development of the full AIDS syndrome represents the end-stage of disease.

As was stated for CHD, there is no certainty that a person will necessarily progress from one stage of disease to the next. The likelihood that this will happen is reflected in an underwriter's estimate of the risk.

The Underwriting Challenge to Insurers

The foregoing remarks illustrate that insurance companies are not simply faced with having to determine whether someone does or does not have the full AIDS syndrome. In fact, few with the full AIDS syndrome may even attempt to purchase insurance. The main underwriting challenge that faces insurers has to do with identifying people in earlier stages of disease. It is at those stages that people are likely to want to buy insurance, while already representing possibly very high risks.

The underwriter's approach is of a searching nature and in that respect is similar to that of a good physician. In an effort to accurately assess the level of risk which an applicant presents, an underwriter may ask the applicant additional questions directed specifically at the AIDS risk, have the applicant physically examined and look for indications of treatment for other sexually transmitted disease. In addition, the underwriter will be alert to unexplained signs and symptoms that may suggest impaired immunity and will want to be sure that the insurance applied for fits the applicant's financial picture. All these steps have been part of good underwriting for many years.

An underwriter must always be objective, not subjective. Here is where tests such as the ELISA and Western blot can be very beneficial. For example, if an applicant admits to nonspecific symptoms that may or may not represent HTLV-III infection, an answer to this question can be easily resolved by doing antibody testing. Another illustration of the value of HTLV-III antibody testing is the hemophiliac who is applying for life insurance. Since the majority of hemophilia A patients who have received clotting factor concentrates have been infected with HTLV-III, the underwriter could simply assume that the applicant has been exposed to HTLV-III and act accordingly. But if instead the underwriter were to get an ELISA test and it turned out to be negative, then he or she could act more favorably on the application.

For all the foregoing reasons, life and health insurers should not be prohibited from administering their own AIDS-related blood tests. Legislative attempts have been made, however, and laws actually enacted, that restrict insurance companies in testing for antibodies to HTLV-III. Proponents of such legislation voice two major reasons: namely, that the tests now available are imperfect (false positives occur) and that even if someone does have antibodies (has been infected with HTLV-III), this does not mean that he or she will necessarily get AIDS. Preceding paragraphs have explained that confirmatory tests are available and that the insurance risk is not limited to people who have AIDS, but also includes people who have a significant chance of getting AIDS.

People are now being tested when they donate blood or plasma. Many states have set up alternative test sites for those who do not choose to go to blood banks. Some of those whose test results turn out to be positive will be told that they are probably carrying the virus and that they are at relatively high risk of developing AIDS. Armed with that knowledge, those people are likely to want to buy life and health insurance. There is evidence that high-risk people are often informed that they had better be certain that they are adequately insured. (14) It is only right and fair that an underwriter be able to acquire the same level of knowledge as the applicant possesses. If insurers do not have adequate means of evaluating their applicants, they will incur substantial claims without receiving corresponding premiums from the high-risk individuals. Their only recourse will be to increase the premiums which their lower-risk policyholders must pay.

The preceding paragraph notwithstanding, the life and health insurance business does not suggest that blood banks, plasma centers or public testing facilities should be asked to divulge to insurers the results of the tests that they administer. If those centers could not treat their test results with appropriate confidentiality, people might be discouraged from donating blood. Clearly, an adequate blood supply is vitally important to all of us. Life and health insurance companies share the concerns of public health professionals and society at large for the health and welfare of the nation.

Confidentiality

A comment regarding the maintenance of confidentiality of results of tests given by insurers to applicants is in order. The insurance industry has a long history of dealing with highly sensitive medical information such as chemical dependency, alcoholism, syphilis or an attending physician's knowledge of cancer that has not been revealed to the patient. Certainly if an insurer received knowledge that an applicant had AIDS, this information would be regarded as highly sensitive and confidential and would be treated in strict accordance with both good common sense and existing statutory safeguards. Confidentiality of results of tests to detect antibodies to HTLV-III would likewise be regarded as sensitive information and protected in an equally secure fashion.

The life and health insurance industry fully supports the model privacy protection act, adopted by the National Association of Insurance Commissioners. That model clearly sets forth many requirements that address the consumers' need for confidentiality.

V. SUMMARY

Insurance companies understand the importance of maintaining public confidence in our nation's blood banks and respect the need to maintain confidentiality of test data generated by those facilities. Certainly the insurance business will not seek to undermine the confidentiality of those test results. On the other hand, insurance companies need to be able to order their own AIDS-related blood tests and to use the results with all due confidentiality. If insurance companies are prevented from learning adverse information that applicants already know, such unprecedented and unfair advantage will unquestionably result in attempts by people to gain from this knowledge and in consequent subsidization of those at high risk by the majority of policyholders who are at virtually no risk of getting AIDS. Given the potential magnitude of the AIDS problem, this inequity will not only be unfair, but may well prove to have serious financial consequences to both companies and policyholders.

Insurance companies must be allowed to fulfill their obligation to policyholders -- an obligation that includes careful selection of applicants and actuarially sound classification practices that assure that policyholders pay a premium that is commensurate with their risk. Companies should be allowed to order their own tests, given that results will be used in a socially and fiscally responsible manner.

11/25/85

BIBLIOGRAPHY

1. "Epidemiology of Acquired Immune Deficiency Syndrome and Infection With Human T-lymphotropic Virus/Lymphadenopathy-associated Virus (HTLV-III/LAV)", James R. Allen, M.D., Centers for Disease Control, October 10, 1985 (presented at Law Journal Seminars-Press October 28-29 Seminar, AIDS: Legal Aspects of a Medical Crisis).
2. "AIDS: The Emerging Ethical Dilemmas--Introduction," Arnold S. Relman, M.D., Hastings Center Report, A Special Supplement, August, 1985, Volume 15, No. 4.
3. 6 drugs have shown some success against HTLV-III, Family Prac. News, 7/85.
4. CDC official calls for AIDS prevention plan, American Medical News, April 12, 1985.
5. Important Aids Information, Department of Health and Human Services, Food and Drug Administration (HFW-40).
6. Annual AIDS cases could reach 30,000. Foresees 30,000 AIDS cases annually within next 10 years. Family Prac. News, 7/85.
7. The Incidence Rate of Acquired Immunodeficiency Syndrome in Selected Populations, Ann M. Hardy DrPH, JAMA, Jan. 11, 1985, Vol. 253, No. 2, pp. 215-220.
8. World Health Organization Workshop: Conclusions and Recommendations on Acquired Immunodeficiency Syndrome, Leads from the MMWR, JAMA, June 21, 1985, Vol. 253, No. 23, pp. 3385-3391.
9. Development and Early Natural History of HTLV-III Antibodies in Persons with Hemophilia, M. Elaine Eyster, M.D., JAMA, April 19, 1985, Vol. 253, No. 15, pp. 2219-2223.
10. Frequent Transmission of HTLV-III Among Spouses of Patients With AIDS-Related Complex and AIDS, JAMA, March 15, 1985.
11. The Acquired Immunodeficiency Syndrome: An Update, Anthony S. Fauci, M.D., Annals of Internal Medicine, 1985, 102:800-813.
12. Comments made at July 31 NIH meeting in Bethesda by Dr. James Curran, head of AIDS research at CDC in Atlanta.
13. Results cited at July 31, 1985 NIH meeting in Bethesda.
14. AIDS Antibody Testing at Alternative Test Sites -- A program of the San Francisco Department of Public Health.

11/25/85

current coverages - fraudulent statements ~~will~~ are being honored -

AIDS must be treated for all insurance purposes as any other life threat illness

- life
- disability - All current coverages remain in force, according to contract terms
- incurs medical expense

1st 2 yrs of a contract is a contestable for death claim
have you ever had AIDS or a $\oplus$ blood test whenever this

CENTERS FOR DISEASE CONTROL

November 15, 1985 / Vol. 34 / No. 45.

life / disab
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David Gooding
Transamerica



MORBIDITY AND MORTALITY WEEKLY REPORT

- 681 Summary: Recommendations for Preventing Transmission of Infection with HTLV-III/LAV in the Workplace
- 682 Recommendations for Preventing Transmission of Infection with HTLV-III/LAV in the Workplace

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Summary:

Recommendations for Preventing Transmission of Infection with Human T-Lymphotropic Virus Type III/ Lymphadenopathy-Associated Virus in the Workplace

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The information and recommendations contained in this document have been developed with particular emphasis on health-care workers and others in related occupations in which exposure might occur to blood from persons infected with HTLV-III/LAV, the "AIDS virus." Because of public concern about the purported risk of transmission of HTLV-III/LAV by persons providing personal services and those preparing and serving food and beverages, this document also addresses personal-service and food-service workers. Finally, it addresses "other workers" - persons in settings, such as offices, schools, factories, and construction sites, where there is no known risk of AIDS virus transmission.

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Because AIDS is a bloodborne, sexually transmitted disease that is not spread by casual contact, this document does not recommend routine HTLV-III/LAV antibody screening for the groups addressed. Because AIDS is not transmitted through preparation or serving of food and beverages, these recommendations state that food-service workers known to be infected with AIDS should not be restricted from work unless they have another infection or illness for which such restriction would be warranted.

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This document contains detailed recommendations for precautions appropriate to prevent transmission of all bloodborne infectious diseases to people exposed - in the course of their duties - to blood from persons who may be infected with HTLV-III/LAV. They emphasize that health-care workers should take all possible precautions to prevent needlestick injury. The recommendations are based on the well-documented modes of HTLV-III/LAV transmission and incorporate a "worst case" scenario, the hepatitis B model of transmission. Because the hepatitis B virus is also bloodborne and is both harder and more infectious than HTLV-III/LAV, recommendations that would prevent transmission of hepatitis B will also prevent transmission of AIDS.

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Formulation of specific recommendations for health-care workers who perform invasive procedures is in progress.

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U.S. DEPARTMENT OF HEALTH AND

MAN SERVICES / PUBLIC HEALTH SERV

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group coverages

- employer - employee relationships
- union
- associations

risk uneven by group and geographic areas
employers
geographic areas - hot

Recommendations for Preventing Transmission of Infection with Human T-Lymphotropic Virus Type III/ Lymphadenopathy-Associated Virus in the Workplace

asked to be
defined employer-
employee relationship
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more evenly -

Persons at increased risk of acquiring infection with human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV), the virus that causes acquired immunodeficiency syndrome (AIDS), include homosexual and bisexual men, intravenous (IV) drug abusers, persons transfused with contaminated blood or blood products, heterosexual contacts of persons with HTLV-III/LAV infection, and children born to infected mothers. HTLV-III/LAV is transmitted through sexual contact, parenteral exposure to infected blood or blood components, and perinatal transmission from mother to neonate. HTLV-III/LAV has been isolated from blood, semen, saliva, tears, breast milk, and urine and is likely to be isolated from some other body fluids, secretions, and excretions, but epidemiologic evidence has implicated only blood and semen in transmission. Studies of nonsexual household contacts of AIDS patients indicate that casual contact with saliva and tears does not result in transmission of infection. Spread of infection to household contacts of infected persons has not been detected when the household contacts have not been sex partners or have not been infants of infected mothers. The kind of nonsexual person-to-person contact that generally occurs among workers and clients or consumers in the workplace does not pose a risk for transmission of HTLV-III/LAV.

As in the development of any such recommendations, the paramount consideration is the protection of the public's health. The following recommendations have been developed for all workers, particularly workers in occupations in which exposure might occur to blood from individuals infected with HTLV-III/LAV. These recommendations reinforce and supplement the specific recommendations that were published earlier for clinical and laboratory staffs (1) and for dental-care personnel and persons performing necropsies and morticians' services (2). Because of public concern about the purported risk of transmission of HTLV-III/LAV by persons providing personal services and by food and beverages, these recommendations contain information and recommendations for personal-service and food-service workers. Finally, these recommendations address workplaces in general where there is no known risk of transmission of HTLV-III/LAV (e.g., offices, schools, factories, construction sites). Formulation of specific recommendations for health-care workers (HCWs) who perform invasive procedures (e.g., surgeons, dentists) is in progress. Separate recommendations are also being developed to prevent HTLV-III/LAV transmission in prisons, other correctional facilities, and institutions housing individuals who may exhibit uncontrollable behavior (e.g., custodial institutions) and in the perinatal setting. In addition, separate recommendations have already been developed for children in schools and day-care centers (3).

HTLV-III/LAV-infected individuals include those with AIDS (4); those diagnosed by their physician(s) as having other illnesses due to infection with HTLV-III/LAV; and those who have virologic or serologic evidence of infection with HTLV-III/LAV but who are not ill.

These recommendations are based on the well-documented modes of HTLV-III/LAV transmission identified in epidemiologic studies and on comparison with the hepatitis B experience. Other recommendations are based on the hepatitis B model of transmission.

COMPARISON WITH THE HEPATITIS B VIRUS EXPERIENCE

The epidemiology of HTLV-III/LAV infection is similar to that of hepatitis B virus (HBV) infection, and much that has been learned over the last 15 years related to the risk of acquiring hepatitis B in the workplace can be applied to understanding the risk of HTLV-III/LAV transmission in the health-care and other occupational settings. Both viruses are transmitted through

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HTLV-III/LAV - Continued

sexual contact, parenteral exposure to contaminated blood or blood products, and perinatal transmission from infected mothers to their offspring. Thus, some of the same major groups at high risk for HBV infection (e.g., homosexual men, IV drug abusers, persons with hemophilia, infants born to infected mothers) are also the groups at highest risk for HTLV-III/LAV infection. Neither HBV nor HTLV-III/LAV has been shown to be transmitted by casual contact in the workplace, contaminated food or water, or airborne or fecal-oral routes (5).

HBV infection is an occupational risk for HCWs, but this risk is related to degree of contact with blood or contaminated needles. HCWs who do not have contact with blood or needles contaminated with blood are not at risk for acquiring HBV infection in the workplace (6-8).

In the health-care setting, HBV transmission has not been documented between hospitalized patients, except in hemodialysis units, where blood contamination of the environment has been extensive or where HBV-positive blood from one patient has been transferred to another patient through contamination of instruments. Evidence of HBV transmission from HCWs to patients has been rare and limited to situations in which the HCWs exhibited high concentrations of virus in their blood (at least 100,000,000 infectious virus particles per ml of serum), and the HCWs sustained a puncture wound while performing traumatic procedures on patients or had exudative or weeping lesions that allowed virus to contaminate instruments or open wounds of patients (9-11).

Current evidence indicates that, despite epidemiologic similarities of HBV and HTLV-III/LAV infection, the risk for HBV transmission in health-care settings far exceeds that for HTLV-III/LAV transmission. The risk of acquiring HBV infection following a needlestick from an HBV carrier ranges from 6% to 30% (12,13), far in excess of the risk of HTLV-III/LAV infection following a needlestick involving a source patient infected with HTLV-III/LAV, which is less than 1%. In addition, all HCWs who have been shown to transmit HBV infection in health-care settings have belonged to the subset of chronic HBV carriers who, when tested, have exhibited evidence of exceptionally high concentrations of virus (at least 100,000,000 infectious virus particles per ml) in their blood. Chronic carriers who have substantially lower concentrations of virus in their blood have not been implicated in transmission in the health-care setting (9-11,14). The HBV model thus represents a "worst case" condition in regard to transmission in health-care and other related settings. Therefore, recommendations for the control of HBV infection should, if followed, also effectively prevent spread of HTLV-III/LAV. Whether additional measures are indicated for those HCWs who perform invasive procedures will be addressed in the recommendations currently being developed.

Routine screening of all patients or HCWs for evidence of HBV infection has never been recommended. Control of HBV transmission in the health-care setting has emphasized the implementation of recommendations for the appropriate handling of blood, other body fluids, and items soiled with blood or other body fluids.

TRANSMISSION FROM PATIENTS TO HEALTH-CARE WORKERS

HCWs include, but are not limited to, nurses, physicians, dentists and other dental workers, optometrists, podiatrists, chiropractors, laboratory and blood bank technologists and technicians, phlebotomists, dialysis personnel, paramedics, emergency medical technicians, medical examiners, morticians, housekeepers, laundry workers, and others whose work involves contact with patients, their blood or other body fluids, or corpses.

Recommendations for HCWs emphasize precautions appropriate for preventing transmission of bloodborne infectious diseases, including HTLV-III/LAV and HBV infections. Thus, these precautions should be enforced routinely, as should other standard infection-control precautions, regardless of whether HCWs or patients are known to be infected with HTLV-III/LAV or HBV. In addition to being informed of these precautions, all HCWs, including students

HTLV-III/LAV — Continued

and housestaff, should be educated regarding the epidemiology, modes of transmission, and prevention of HTLV-III/LAV infection.

Risk of HCWs acquiring HTLV-III/LAV in the workplace. Using the HBV model, the highest risk for transmission of HTLV-III/LAV in the workplace would involve parenteral exposure to a needle or other sharp instrument contaminated with blood of an infected patient. The risk to HCWs of acquiring HTLV-III/LAV infection in the workplace has been evaluated in several studies. In five separate studies, a total of 1,498 HCWs have been tested for antibody to HTLV-III/LAV. In these studies, 666 (44.5%) of the HCWs had direct parenteral (needlestick or cut) or mucous membrane exposure to patients with AIDS or HTLV-III/LAV infection. Most of these exposures were to blood rather than to other body fluids. None of the HCWs whose initial serologic tests were negative developed subsequent evidence of HTLV-III/LAV infection following their exposures. Twenty-six HCWs in these five studies were seropositive when first tested; all but three of these persons belonged to groups recognized to be at increased risk for AIDS (15). Since one was tested anonymously, epidemiologic information was available on only two of these three seropositive HCWs. Although these two HCWs were reported as probable occupationally related HTLV-III/LAV infection (15,16), neither had a preexposure nor an early postexposure serum sample available to help determine the onset of infection. One case reported from England describes a nurse who seroconverted following an accidental parenteral exposure to a needle contaminated with blood from an AIDS patient (17).

In spite of the extremely low risk of transmission of HTLV-III/LAV infection, even when needlestick injuries occur, more emphasis must be given to precautions targeted to prevent needlestick injuries in HCWs caring for any patient, since such injuries continue to occur even during the care of patients who are known to be infected with HTLV-III/LAV.

Precautions to prevent acquisition of HTLV-III/LAV infection by HCWs in the workplace. These precautions represent prudent practices that apply to preventing transmission of HTLV-III/LAV and other bloodborne infections and should be used routinely (18).

1. Sharp items (needles, scalpel blades, and other sharp instruments) should be considered as potentially infective and be handled with extraordinary care to prevent accidental injuries.
2. Disposable syringes and needles, scalpel blades, and other sharp items should be placed into puncture-resistant containers located as close as practical to the area in which they were used. To prevent needlestick injuries, needles should not be recapped, purposefully bent, broken, removed from disposable syringes, or otherwise manipulated by hand.
3. When the possibility of exposure to blood or other body fluids exists, routinely recommended precautions should be followed. The anticipated exposure may require gloves alone, as in handling items soiled with blood or equipment contaminated with blood or other body fluids, or may also require gowns, masks, and eye-coverings when performing procedures involving more extensive contact with blood or potentially infective body fluids, as in some dental or endoscopic procedures or postmortem examinations. Hands should be washed thoroughly and immediately if they accidentally become contaminated with blood.
4. To minimize the need for emergency mouth-to-mouth resuscitation, mouth pieces, resuscitation bags, or other ventilation devices should be strategically located and available for use in areas where the need for resuscitation is predictable.
5. Pregnant HCWs are not known to be at greater risk of contracting HTLV-III/LAV infections than HCWs who are not pregnant; however, if a HCW develops HTLV-III/LAV infection during pregnancy, the infant is at increased risk of infection resulting from

HTLV-III/LAV — Continued

perinatal transmission. Because of this risk, pregnant HCWs should be especially familiar with precautions for the preventing HTLV-III/LAV transmission (19).

Precautions for HCWs during home care of persons infected with HTLV-III/LAV. Persons infected with HTLV-III/LAV can be safely cared for in home environments. Studies of family members of patients infected with HTLV-III/LAV have found no evidence of HTLV-III/LAV transmission to adults who were not sexual contacts of the infected patients or to children who were not at risk for perinatal transmission (3). HCWs providing home care face the same risk of transmission of infection as HCWs in hospitals and other health-care settings, especially if there are needlesticks or other parenteral or mucous membrane exposures to blood or other body fluids.

When providing health-care service in the home to persons infected with HTLV-III/LAV, measures similar to those used in hospitals are appropriate. As in the hospital, needles should not be recapped, purposefully bent, broken, removed from disposable syringes, or otherwise manipulated by hand. Needles and other sharp items should be placed into puncture-resistant containers and disposed of in accordance with local regulations for solid waste. Blood and other body fluids can be flushed down the toilet. Other items for disposal that are contaminated with blood or other body fluids that cannot be flushed down the toilet should be wrapped securely in a plastic bag that is impervious and sturdy (not easily penetrated). It should be placed in a second bag before being discarded in a manner consistent with local regulations for solid waste disposal. Spills of blood or other body fluids should be cleaned with soap and water or a household detergent. As in the hospital, individuals cleaning up such spills should wear disposable gloves. A disinfectant solution or a freshly prepared solution of sodium hypochlorite (household bleach, see below) should be used to wipe the area after cleaning.

Precautions for providers of prehospital emergency health care. Providers of prehospital emergency health care include the following: paramedics, emergency medical technicians, law enforcement personnel, firefighters, lifeguards, and others whose job might require them to provide first-response medical care. The risk of transmission of infection, including HTLV-III/LAV infection, from infected persons to providers of prehospital emergency health care should be no higher than that for HCWs providing emergency care in the hospital if appropriate precautions are taken to prevent exposure to blood or other body fluids.

Providers of prehospital emergency health care should follow the precautions outlined above for other HCWs. No transmission of HBV infection during mouth-to-mouth resuscitation has been documented. However, because of the theoretical risk of salivary transmission of HTLV-III/LAV during mouth-to-mouth resuscitation, special attention should be given to the use of disposable airway equipment or resuscitation bags and the wearing of gloves when in contact with blood or other body fluids. Resuscitation equipment and devices known or suspected to be contaminated with blood or other body fluids should be used once and disposed of or be thoroughly cleaned and disinfected after each use.

Management of parenteral and mucous membrane exposures of HCWs. If a HCW has a parenteral (e.g., needlestick or cut) or mucous membrane (e.g., splash to the eye or mouth) exposure to blood or other body fluids, the source patient should be assessed clinically and epidemiologically to determine the likelihood of HTLV-III/LAV infection. If the assessment suggests that infection may exist, the patient should be informed of the incident and requested to consent to serologic testing for evidence of HTLV-III/LAV infection. If the source patient has AIDS or other evidence of HTLV-III/LAV infection, declines testing, or has a positive test, the HCW should be evaluated clinically and serologically for evidence of HTLV-III/LAV infection as soon as possible after the exposure, and, if seronegative, retested after 6 weeks and on a periodic basis thereafter (e.g., 3, 6, and 12 months following exposure) to determine if

HTLV-III/LAV - Continued

transmission has occurred. During this follow-up period, especially the first 6-12 weeks, when most infected persons are expected to seroconvert, exposed HCWs should receive counseling about the risk of infection and follow U.S. Public Health Service (PHS) recommendations for preventing transmission of AIDS (20,21). If the source patient is seronegative and has no other evidence of HTLV-III/LAV infection, no further follow-up of the HCW is necessary. If the source patient cannot be identified, decisions regarding appropriate follow-up should be individualized based on the type of exposure and the likelihood that the source patient was infected.

Serologic testing of patients. Routine serologic testing of all patients for antibody to HTLV-III/LAV is not recommended to prevent transmission of HTLV-III/LAV infection in the workplace. Results of such testing are unlikely to further reduce the risk of transmission, which, even with documented needlesticks, is already extremely low. Furthermore, the risk of needlestick and other parenteral exposures could be reduced by emphasizing and more consistently implementing routinely recommended infection-control precautions (e.g., not recapping needles). Moreover, results of routine serologic testing would not be available for

(Continued on 691)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	46th Week Ending			Cumulative, 46th Week Ending		
	Nov. 9, 1985	Nov. 10, 1984	Median 1980-1984	Nov. 9, 1985	Nov. 10, 1984	Median 1980-1984
Acquired Immunodeficiency Syndrome (AIDS)	205	67	N	6,897	3,643	N
Aseptic meningitis	252	148	215	8,712	7,078	8,272
Encephalitis: Primary (arthropod-borne & unspecified)	23	25	26	1,059	1,043	1,337
Post-infectious	-	2	1	107	103	81
Gonorrhea: Civilian	11,487	15,584	17,153	726,159	728,211	825,957
Military	369	498	580	15,869	18,630	22,977
Hepatitis: Type A	287	456	484	19,460	18,545	19,734
Type B	381	494	435	22,444	22,407	18,702
Non A, Non B	64	76	N	3,627	3,287	N
Unspecified	70	114	162	4,944	4,422	7,485
Legionellosis	9	13	N	562	602	N
Leprosy	3	-	3	304	195	195
Measles: Total*	17	5	24	2,598	2,439	2,439
Indigenous	17	2	N	2,185	2,150	N
Imported	-	3	N	433	289	N
Meningococcal infections: Total	35	38	53	2,036	2,322	2,355
Civilian	35	38	52	2,034	2,318	2,350
Military	-	-	-	4	4	14
Mumps	37	48	70	2,541	2,565	3,884
Peritussis	70	35	35	2,761	2,069	1,525
Rubella (German measles)	7	8	15	580	670	1,899
Syphilis (Primary & Secondary): Civilian	313	581	581	21,970	24,199	26,765
Military	1	4	4	126	261	334
Toxic Shock syndrome	6	3	N	307	415	N
Tuberculosis	303	383	467	18,350	18,399	21,977
Tularemia	1	3	2	143	266	238
Typhoid fever	4	15	9	315	322	404
Typhus fever, tick-borne (RMSF)	5	12	6	660	801	1,072
Rabies, animal	64	99	99	4,824	4,753	5,514

TABLE II. Notifiable diseases of low frequency, United States

	Cum 1985		Cum 1985
Anthrax	-	Leptospirosis	32
Botulism: Foodborne	43	Plague	15
Infant	50	Poliovirus Total	5
Other	1	Paralytic	5
Brucellosis (Ohio 1, Tex. 2)	119	Parvovirus (Mich. 1, Oreg. 1)	94
Cholera	3	Rabies, human	1
Congenital rubella syndrome	-	Tetanus (La. 1)	61
Congenital syphilis, ages < 1 year	149	Trichinosis (Tex. 1)	56
Diphtheria	1	Typhus fever, flea-borne (endemic, murine) (Md. 1)	21

*There were no cases of internationally imported measles reported for this week.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 9, 1985 and November 10, 1984 (45th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA, NE	Unspecified		
	Cum 1985	1985	Cum 1985	Cum 1985	Cum 1985	Cum 1984	1985	1985	1985	1985	1985	Cum 1985
UNITED STATES	6,897	252	1,069	107	726,159	728,211	287	381	54	70	9	304
NEW ENGLAND	235	19	29	-	19,741	19,781	4	38	2	17	-	6
Maine	11	3	-	-	998	854	-	4	-	-	-	-
N.H.	3	-	7	-	495	639	-	1	-	-	-	-
Vt.	2	-	-	-	288	327	1	3	-	-	-	-
Mass.	136	6	17	-	8,193	8,449	3	24	1	17	-	6
R.I.	12	-	-	-	1,566	1,404	-	1	1	-	-	-
Conn.	69	10	5	-	8,201	8,098	-	5	-	-	-	-
MID ATLANTIC	2,684	59	132	11	110,724	97,224	27	53	10	-	-	33
Upstate N.Y.	296	12	40	4	15,562	15,530	9	10	3	-	-	1
N.Y. City	1,834	-	14	-	53,766	37,672	1	-	-	-	-	28
N.J.	394	13	27	-	16,808	17,273	4	22	1	-	-	-
Pa.	160	34	51	7	24,590	26,749	13	21	6	-	-	4
E.N. CENTRAL	293	55	289	20	101,339	102,222	17	41	8	3	5	21
Ohio	48	35	134	4	27,212	26,561	10	21	3	-	5	3
Ind.	23	-	62	2	11,061	11,217	-	-	-	-	-	-
Ill.	149	3	15	8	24,122	22,642	2	2	-	-	-	16
Mich.	53	17	56	-	29,210	30,330	5	18	5	3	-	2
Wis.	22	-	20	6	9,734	11,472	-	-	-	-	-	-
W.N. CENTRAL	94	10	71	4	36,244	35,903	9	22	5	1	1	2
Minn.	30	3	34	1	5,362	5,366	5	8	2	-	-	1
Iowa	10	1	26	-	3,815	3,887	-	1	-	-	-	-
Mo.	40	3	-	-	17,491	17,227	1	8	2	1	-	1
N. Dak.	1	-	-	1	241	337	-	-	-	-	-	-
S. Dak.	1	1	-	-	691	846	-	-	-	-	1	-
Nebr.	3	-	5	-	3,168	2,662	-	4	-	-	-	-
Kans.	9	2	6	2	5,476	5,578	3	1	1	-	-	-
S. ATLANTIC	1,051	69	124	42	160,787	184,586	31	95	12	9	3	7
Del.	10	1	7	-	3,851	3,442	1	2	1	-	1	-
Md.	119	1	25	1	25,307	20,744	2	15	3	-	1	1
D.C.	151	-	-	-	13,752	13,161	-	1	-	-	-	-
Va.	89	32	26	6	18,649	17,572	6	23	3	1	-	-
W. Va.	5	-	33	-	2,287	2,375	-	1	-	-	-	-
N.C.	56	8	27	1	32,166	29,743	4	10	1	4	-	2
S.C.	24	-	6	-	19,147	18,989	-	6	-	1	-	-
Ge.	164	12	-	-	-	34,185	8	15	-	1	-	1
Fla.	433	15	-	34	47,628	44,394	10	23	4	2	1	3
E.S. CENTRAL	61	14	37	4	66,224	66,065	2	33	2	-	-	-
Ky.	15	5	17	-	7,537	7,867	1	4	-	-	-	-
Tenn.	16	8	6	-	25,479	26,747	-	14	1	-	-	-
Ala.	24	-	11	4	19,762	20,194	-	9	1	-	-	-
Miss.	6	1	3	-	13,446	11,277	1	6	-	-	-	-
W.S. CENTRAL	509	17	133	2	97,374	99,366	83	46	5	28	-	25
Ark.	6	-	6	1	9,282	9,163	2	4	-	-	-	1
La.	81	2	8	-	16,411	21,772	3	1	-	-	-	6
Ola.	15	3	24	1	10,779	10,778	6	4	2	-	-	-
Tex.	407	12	95	-	58,902	57,653	72	37	3	28	-	18
MOUNTAIN	127	8	40	6	24,141	23,952	60	29	8	11	-	9
Mont.	1	-	-	-	693	920	-	2	-	-	-	-
Idaho	1	-	-	-	825	1,148	13	-	-	-	-	-
Wyo.	-	-	1	-	563	642	-	-	-	-	-	-
Colo.	45	1	6	2	7,028	6,871	10	5	2	3	-	2
N. Mex.	12	-	3	-	2,764	2,902	6	9	1	-	-	-
Ariz.	46	5	17	-	7,193	6,619	22	11	3	6	-	1
Utah	13	2	10	4	1,176	1,142	-	1	1	-	-	4
Nev.	9	-	3	-	3,899	3,708	9	1	1	2	-	2
PACIFIC	1,843	1	204	18	109,585	99,092	54	23	2	1	-	201
Wash.	106	1	13	1	8,581	7,783	5	14	-	-	-	34
Oreg.	29	-	1	-	5,640	6,797	48	9	1	-	-	3
Calif.	1,687	U	152	17	91,181	81,359	U	U	U	U	U	143
Alaska	3	-	38	-	2,679	2,467	1	-	1	1	-	-
Hawaii	18	-	-	-	1,504	1,686	-	-	-	-	-	21
Guam	1	U	-	-	128	208	U	U	U	U	U	3
P.R.	86	3	6	2	2,732	2,922	1	14	-	1	-	2
V.I.	2	U	-	-	353	469	U	U	U	U	U	-
Pac. Trust Terr.	-	U	-	-	146	-	U	U	U	U	U	20

N Not notifiable

U Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending
November 9, 1985 and November 10, 1984 (45th Week)

Reporting Area	Malane	Measles (Rubella)					Meningo- coccal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
		Cum 1985	1985	Cum 1985	1985	Cum 1985		Cum 1984	Cum 1985	1985	Cum 1985	1985	Cum 1985	Cum 1984	1985
UNITED STATES	872	17	2 165	-	433	2 438	2 038	37	2 541	70	2 761	2 069	7	580	670
NEW ENGLAND	51	-	38	-	88	106	97	-	58	4	193	68	-	12	18
Maine	4	-	-	-	1	-	4	-	6	-	10	3	-	-	1
N.H.	4	-	-	-	-	36	14	-	10	-	103	17	-	2	1
Vt.	1	-	-	-	-	7	10	-	3	-	3	23	-	-	-
Mass.	25	-	34	-	84	49	16	-	17	-	46	18	-	6	16
R.I.	6	-	-	-	-	-	17	-	15	3	22	3	-	-	-
Conn.	11	-	4	-	3	14	36	-	7	1	9	4	-	4	-
MID ATLANTIC	136	8	193	-	38	159	357	8	298	29	224	178	7	226	222
Upstate N.Y.	47	-	72	-	13	38	136	7	159	5	106	100	1	18	99
N.Y. City	53	8	67	-	12	109	62	-	30	4	27	7	6	185	103
N.J.	14	-	17	-	10	7	58	-	46	-	11	13	-	9	19
Pa.	24	-	37	-	3	5	101	1	63	20	80	58	-	14	1
E.N. CENTRAL	57	-	435	-	90	696	355	13	894	5	574	477	-	33	93
Ohio	9	-	-	-	54	9	115	3	265	5	101	72	-	-	2
Ind.	4	-	55	-	2	3	44	-	37	-	188	229	-	1	5
Ill.	21	-	286	-	10	180	80	8	200	-	46	26	-	16	56
Mich.	17	-	37	-	23	484	88	2	310	-	46	30	-	15	22
Wis.	6	-	57	-	1	40	28	-	82	-	193	120	-	1	8
W.N. CENTRAL	30	-	2	-	10	56	105	1	78	-	212	122	-	19	39
Minn.	14	-	-	-	6	47	26	-	1	-	108	16	-	2	4
Iowa	2	-	-	-	-	-	10	-	16	-	28	12	-	1	1
Mo.	5	-	1	-	2	4	41	1	14	-	28	20	-	7	-
N. Dak.	2	-	-	-	2	-	5	-	4	-	9	-	-	2	3
S. Dak.	1	-	-	-	-	-	3	-	-	-	3	9	-	-	-
Nebr.	1	-	-	-	-	-	9	-	3	-	8	12	-	-	-
Kans.	5	-	1	-	-	5	11	-	40	-	28	53	-	7	31
S. ATLANTIC	102	1	279	-	30	66	389	12	254	5	371	205	-	55	24
Del.	-	-	-	-	-	-	11	-	1	-	2	2	-	1	-
Md.	24	-	104	-	9	22	55	-	33	-	155	61	-	6	1
D.C.	8	-	9	-	1	8	6	-	-	-	1	-	-	-	-
Va.	20	-	21	-	7	5	48	1	46	2	19	19	-	2	-
W. Va.	2	-	31	-	2	-	8	3	68	-	4	11	-	9	-
N.C.	9	-	9	-	-	1	53	2	19	1	31	33	-	1	-
S.C.	-	-	-	-	3	1	34	-	11	-	2	2	-	2	-
Ge.	9	-	8	-	-	2	67	1	29	-	93	17	-	4	2
Fla.	30	1	97	-	8	27	107	5	47	2	64	60	-	29	21
E.S. CENTRAL	11	-	-	-	7	6	91	-	29	3	58	14	-	3	12
Ky.	4	-	-	-	5	1	9	-	8	-	8	2	-	3	6
Tenn.	-	-	-	-	1	2	35	-	17	1	25	7	-	-	-
Ala.	6	-	-	-	-	3	26	-	1	2	21	1	-	-	3
Miss.	1	-	-	-	1	-	21	-	3	-	4	4	-	-	3
W.S. CENTRAL	62	-	421	-	15	565	176	3	282	22	502	321	-	37	54
Ark.	3	-	-	-	-	8	17	-	6	-	14	21	-	1	3
La.	1	-	42	-	-	8	25	-	2	1	16	8	-	-	-
Okla.	5	-	-	-	1	8	32	N	N	-	155	241	-	1	-
Tex.	73	-	379	-	14	541	102	3	274	21	317	51	-	35	51
MOUNTAIN	46	-	497	-	51	145	91	-	230	1	202	118	-	5	21
Mont.	-	-	122	-	17	-	11	-	11	-	9	19	-	-	-
Idaho	2	-	126	-	18	23	4	-	9	-	7	7	-	1	1
Wyo.	1	-	5	-	-	-	6	-	2	-	-	6	-	-	2
Colo.	14	-	6	-	7	6	23	-	24	-	83	45	-	-	2
N. Mex.	14	-	1	-	5	88	10	N	N	1	13	9	-	2	1
Ariz.	10	-	237	-	4	1	22	-	113	-	38	23	-	1	4
Utah	2	-	-	-	-	27	9	-	6	-	52	7	-	-	7
Nev.	3	-	-	-	-	-	6	-	65	-	-	2	-	1	4
PACIFIC	355	8	300	-	104	640	377	-	418	1	425	566	-	190	187
Wash.	23	8	90	-	39	154	65	-	35	-	75	316	-	14	1
Oreg.	13	-	4	-	1	-	35	N	N	1	45	30	-	1	2
Calif.	300	U	188	U	59	323	264	U	356	U	258	144	U	132	178
Alaska	2	-	-	-	-	-	9	-	9	-	30	1	-	1	1
Hawaii	17	-	18	-	5	163	4	-	18	-	17	75	-	42	5
Guam	1	U	10	U	1	90	-	U	5	U	-	-	U	2	4
P.R.	-	4	67	-	-	137	13	1	146	1	12	1	-	27	16
V.I.	-	U	4	U	6	-	-	U	3	U	-	-	U	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-	U	3	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations

N Notifiable U Unavailable 1 International 2 Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending
November 9, 1985 and November 10, 1984 (45th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1985	Cum. 1984		Cum. 1985	Cum. 1984				
UNITED STATES	21,970	24,199	6	18,350	18,399	143	315	660	4,624
NEW ENGLAND	514	461	-	627	560	3	13	8	20
Maine	13	9	-	39	27	-	-	-	-
N.H.	36	14	-	19	25	-	-	1	1
Vt.	5	1	-	8	7	-	-	-	1
Mass.	254	263	-	373	313	3	10	6	11
R.I.	15	19	-	47	45	-	-	1	-
Conn.	191	155	-	141	143	-	3	-	7
MID ATLANTIC	3,101	3,213	1	3,311	3,328	2	48	34	533
Upstate N.Y.	234	289	-	578	521	-	12	9	124
N.Y. City	1,871	1,933	-	1,602	1,345	1	25	5	-
N.J.	602	570	-	453	745	1	10	4	39
Pa.	394	421	1	678	716	-	1	16	370
E.N. CENTRAL	876	1,147	1	2,251	2,392	2	39	39	188
Ohio	134	206	1	391	430	-	10	27	28
Ind.	74	123	-	271	290	-	3	4	23
Ill.	400	421	-	985	987	1	16	6	36
Mich.	210	330	-	479	541	-	8	2	25
Wis.	58	67	-	125	144	1	2	-	54
W.N. CENTRAL	205	323	1	515	562	43	13	42	836
Minn.	40	84	-	110	96	1	6	-	181
Iowa	18	11	-	53	56	-	3	1	136
Mo.	111	162	-	245	282	28	3	8	46
N. Dak.	3	9	-	9	12	-	-	1	121
S. Dak.	6	1	-	27	22	8	-	2	294
Nebr.	6	15	1	12	29	2	1	3	34
Kans.	21	41	-	59	65	4	-	27	44
S. ATLANTIC	5,427	7,119	1	3,758	3,810	6	35	313	1,170
Del.	35	18	-	41	48	1	-	3	1
Md.	382	440	-	338	356	-	11	26	583
D.C.	296	286	-	136	155	-	-	-	-
Va.	263	367	-	359	378	1	3	25	161
W. Va.	22	17	-	97	120	-	1	1	27
N.C.	597	743	1	477	580	4	4	131	11
S.C.	724	673	-	467	455	-	1	70	61
Ga.	-	1,227	-	635	587	-	3	48	183
Fla.	3,108	3,348	-	1,218	1,133	-	12	9	143
E.S. CENTRAL	1,921	1,745	-	1,609	1,736	8	5	74	222
Ky.	61	88	-	394	410	-	1	13	33
Tenn.	568	455	-	477	503	6	2	32	66
Ala.	584	585	-	472	508	1	2	15	117
Miss.	708	617	-	266	315	1	-	14	6
W.S. CENTRAL	5,370	5,921	2	2,354	2,179	56	29	133	762
Ark.	290	193	-	281	255	34	-	16	126
La.	944	1,059	-	335	299	-	1	4	19
Okla.	163	187	1	227	207	16	2	90	97
Tex.	3,973	4,482	1	1,511	1,418	6	26	23	520
MOUNTAIN	643	550	-	495	501	15	11	14	403
Mont.	6	3	-	46	17	4	-	6	201
Idaho	5	22	-	22	27	-	-	-	10
Wyo.	10	7	-	5	3	-	-	4	26
Colo.	189	145	-	72	64	2	4	2	24
N. Mex.	112	77	-	79	94	2	4	-	12
Ariz.	278	198	-	224	228	4	3	-	115
Utah	8	18	-	17	35	3	-	-	4
Nev.	37	80	-	30	33	-	-	2	11
PACIFIC	3,913	3,720	-	3,430	3,331	8	122	3	512
Wash.	97	135	-	207	170	-	1	-	4
Oreg.	90	100	-	116	136	1	5	-	4
Calif.	3,663	3,408	U	2,854	2,771	4	110	3	501
Alaska	4	6	-	89	64	3	2	-	3
Hawaii	59	71	-	184	190	-	4	-	-
Guam	2	-	U	30	48	-	-	-	-
P.R.	758	683	-	307	340	-	3	-	34
V.I.	3	10	U	1	4	-	52	-	-
Pac. Trust Terr.	13	-	U	16	-	-	-	-	-

U Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending
November 9, 1985 (45th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total	
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1		
NEW ENGLAND	688	461	141	44	21	21	55	S. ATLANTIC	1,110	693	242	81	36	56	43	
Boston, Mass.	190	105	51	13	9	12	24	Atlanta, Ga.	176	101	38	23	4	10	3	
Bridgeport, Conn.	53	39	11	3	-	-	8	Baltimore, Md.	176	114	37	13	6	6	2	
Cambridge, Mass.	23	18	5	-	-	-	4	Charlotte, N.C.	71	41	15	2	3	5	6	
Fall River, Mass.	34	23	6	3	2	-	1	Jacksonville, Fla.	107	69	24	8	4	2	4	
Hartford, Conn.	62	45	5	7	4	1	5	Miami, Fla.	137	75	35	14	6	7	3	
Lowell, Mass.	33	23	7	3	-	-	2	Norfolk, Va.	50	25	14	8	1	2	4	
Lynn, Mass.	23	15	6	2	-	-	-	Richmond, Va.	63	40	19	1	3	-	4	
New Bedford, Mass.	24	18	5	1	-	-	1	Savannah, Ga.	50	28	9	2	2	9	5	
New Haven, Conn.	34	21	5	4	2	2	-	St. Petersburg, Fla.	82	72	9	-	-	1	2	
Providence, R.I.	45	33	11	-	1	-	1	Tampa, Fla.	67	40	9	5	5	8	3	
Somerville, Mass.	12	9	2	1	-	-	1	Washington, D.C.	102	66	26	5	2	3	3	
Springfield, Mass.	72	51	12	4	-	5	3	Wilmington, Del.	29	22	7	-	-	-	1	
Waterbury, Conn.	28	18	9	-	1	-	2	E.S. CENTRAL	725	457	172	44	18	34	22	
Worcester, Mass.	55	43	6	3	2	1	3	Birmingham, Ala.	117	72	26	8	3	8	3	
MID ATLANTIC	2,728	1,826	574	215	64	48	140	Chattanooga, Tenn.	44	25	5	-	2	4	4	
Albany, N.Y.	53	31	15	2	4	1	1	Knoxville, Tenn.	68	46	18	1	-	3	5	
Allentown, Pa.	12	11	1	-	-	-	1	Louisville, Ky.	117	75	29	4	1	8	2	
Buffalo, N.Y.	119	74	36	5	4	2	8	Memphis, Tenn.	162	97	38	14	6	7	7	
Camden, N.J.	51	33	9	4	1	3	3	Mobile, Ala.	73	42	20	7	2	2	2	
Elizabeth, N.J.	18	12	6	-	-	-	4	Montgomery, Ala.	27	24	2	-	1	-	-	
Encl. Pa.†	49	30	14	1	2	2	1	Nashville, Tenn.	117	72	30	10	3	2	9	
Jersey City, N.J.	40	32	5	3	-	-	-	W.S. CENTRAL	1,379	817	344	114	58	46	56	
N.Y. City, N.Y.	1,429	947	293	135	34	20	56	Austin, Tex.	40	26	7	5	1	1	1	
Newark, N.J.	63	31	16	8	4	3	9	Baton Rouge, La.	48	32	9	4	2	1	3	
Peterborough, N.J.	41	26	9	5	-	1	6	Corpus Christi, Tex.	70	50	15	3	-	2	3	
Philadelphia, Pa.	411	272	91	31	9	8	23	Dallas, Tex.	193	104	47	15	16	11	5	
Pittsburgh, Pa.†	51	39	9	3	-	-	3	El Paso, Tex.	43	36	6	-	-	1	6	
Reading, Pa.	33	22	4	7	-	-	6	Fort Worth, Tex.	85	50	18	9	3	5	10	
Rochester, N.Y.	123	88	23	6	2	4	10	Houston, Tex.	368	195	96	47	21	9	6	
Schenectady, N.Y.	21	15	4	1	-	1	1	Little Rock, Ark.	71	44	18	2	3	4	4	
Scranton, Pa.†	33	27	5	1	-	-	1	New Orleans, La.	140	70	53	11	3	3	1	
Syracuse, N.Y.	100	77	18	1	3	1	4	San Antonio, Tex.	150	94	32	12	7	5	6	
Trenton, N.J.	28	20	3	2	1	2	-	Shreveport, La.	80	49	23	4	1	3	3	
Utica, N.Y.	21	14	7	-	-	-	-	Tulsa, Okla.	91	67	20	2	1	1	8	
Yonkers, N.Y.	32	25	6	1	-	-	2	MOUNTAIN	638	395	128	46	34	34	31	
E.N. CENTRAL	2,185	1,530	362	133	66	93	87	Albuquerque, N.Mex.	78	47	20	6	2	3	3	
Akron, Ohio	56	39	8	2	3	4	-	Colo. Springs, Colo.	40	21	7	4	4	3	6	
Canton, Ohio	28	18	7	2	1	-	3	Denver, Colo.	95	62	17	4	6	3	3	
Chicago, Ill.‡	553	462	11	26	16	37	16	Las Vegas, Nev.	52	56	21	9	4	2	6	
Cincinnati, Ohio	118	82	24	8	1	3	11	Ogden, Utah	23	16	5	-	-	-	2	
Cleveland, Ohio	171	94	45	17	6	6	5	Phoenix, Ariz.	143	82	33	12	7	9	4	
Columbus, Ohio	129	75	29	13	6	6	5	Pueblo, Colo.	17	13	1	2	1	-	2	
Dayton, Ohio	112	74	24	6	5	3	4	Salt Lake City, Utah	49	29	11	4	2	3	1	
Detroit, Mich.	225	146	48	25	9	7	6	Tucson, Ariz.	98	69	13	5	8	3	4	
Evansville, Ind.	32	23	6	1	-	-	1	PACIFIC	1,851	1,224	367	153	55	46	90	
Fort Wayne, Ind.	55	39	7	3	3	3	3	Berkeley, Calif.	20	14	3	3	-	-	-	
Gary, Ind.	17	8	5	1	3	-	-	Fresno, Calif.	90	63	19	3	3	2	6	
Grand Rapids, Mich.	45	34	9	1	1	-	4	Glendale, Calif.	18	15	1	1	1	-	1	
Indianapolis, Ind.	153	95	37	8	3	10	3	Honolulu, Hawaii	60	42	7	5	4	2	3	
Madison, Wis.	36	27	6	3	-	-	2	Long Beach, Calif.	81	58	10	5	1	7	10	
Milwaukee, Wis.	149	106	30	4	1	8	6	Los Angeles, Calif.	495	316	98	51	20	4	12	
Peoria, Ill.	44	37	5	2	-	-	6	Oakland, Calif.	78	47	17	10	2	2	3	
Rockford, Ill.	48	28	12	4	4	-	3	Pasadena, Calif.	41	29	7	3	1	1	3	
South Bend, Ind.	49	37	10	1	1	-	2	Portland, Oreg.	140	90	31	12	3	4	6	
Toledo, Ohio	97	67	21	5	1	3	8	Sacramento, Calif.	141	92	30	11	3	5	14	
Youngstown, Ohio	58	39	16	1	-	2	2	San Diego, Calif.	117	73	27	10	5	2	6	
W.N. CENTRAL	750	497	169	47	13	24	34	San Francisco, Calif.	159	97	37	19	2	4	5	
Des Moines, Iowa	71	50	15	5	1	-	5	San Jose, Calif.	171	123	32	10	2	4	8	
Duluth, Minn.	15	11	4	-	-	-	-	Seattle, Wash.	144	97	30	8	6	3	5	
Kansas City, Kans.	26	17	7	2	-	-	-	Spokane, Wash.	49	34	8	1	1	5	4	
Kansas City, Mo.	117	77	29	7	1	3	9	Tacoma, Wash.	47	34	10	1	1	1	4	
Lincoln, Nebr.	25	22	3	-	-	-	2	TOTAL	12,054	7,900	2,499	877	365	402	568	
Minneapolis, Minn.	83	49	23	8	1	2	1									
Omaha, Nebr.	93	66	16	6	1	4	3									
St. Louis, Mo.	174	107	38	9	7	13	3									
St. Paul, Minn.	58	47	8	3	-	-	1									
Wichita, Kans.	88	51	26	7	2	2	10									

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza.

† Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

‡ Data not available. Figures are estimates based on average of past 4 weeks.

HTLV-III/LAV — Continued

emergency cases and patients with short lengths of stay, and additional tests to determine whether a positive test was a true or false positive would be required in populations with a low prevalence of infection. However, this recommendation is based only on considerations of occupational risks and should not be construed as a recommendation against other uses of the serologic test, such as for diagnosis or to facilitate medical management of patients. Since the experience with infected patients varies substantially among hospitals (75% of all AIDS cases have been reported by only 280 of the more than 6,000 acute-care hospitals in the United States), some hospitals in certain geographic areas may deem it appropriate to initiate serologic testing of patients.

TRANSMISSION FROM HEALTH-CARE WORKERS TO PATIENTS

Risk of transmission of HTLV-III/LAV infection from HCWs to patients. Although there is no evidence that HCWs infected with HTLV-III/LAV have transmitted infection to patients, a risk of transmission of HTLV-III/LAV infection from HCWs to patients would exist in situations where there is both (1) a high degree of trauma to the patient that would provide a portal of entry for the virus (e.g., during invasive procedures) and (2) access of blood or serous fluid from the infected HCW to the open tissue of a patient, as could occur if the HCW sustains a needlestick or scalpel injury during an invasive procedure. HCWs known to be infected with HTLV-III/LAV who do not perform invasive procedures need not be restricted from work unless they have evidence of other infection or illness for which any HCW should be restricted. Whether additional restrictions are indicated for HCWs who perform invasive procedures is currently being considered.

Precautions to prevent transmission of HTLV-III/LAV infection from HCWs to patients. These precautions apply to all HCWs, regardless of whether they perform invasive procedures: (1) All HCWs should wear gloves for direct contact with mucous membranes or nonintact skin of all patients and (2) HCWs who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment until the condition resolves.

Management of parenteral and mucous membrane exposures of patients. If a patient has a parenteral or mucous membrane exposure to blood or other body fluids of a HCW, the patient should be informed of the incident and the same procedure outlined above for exposures of HCWs to patients should be followed for both the source HCW and the potentially exposed patient. Management of this type of exposure will be addressed in more detail in the recommendations for HCWs who perform invasive procedures.

Serologic testing of HCWs. Routine serologic testing of HCWs who do not perform invasive procedures (including providers of home and prehospital emergency care) is not recommended to prevent transmission of HTLV-III/LAV infection. The risk of transmission is extremely low and can be further minimized when routinely recommended infection-control precautions are followed. However, serologic testing should be available to HCWs who may wish to know their HTLV-III/LAV infection status. Whether indications exist for serologic testing of HCWs who perform invasive procedures is currently being considered.

Risk of occupational acquisition of other infectious diseases by HCWs infected with HTLV-III/LAV. HCWs who are known to be infected with HTLV-III/LAV and who have defective immune systems are at increased risk of acquiring or experiencing serious complications of other infectious diseases. Of particular concern is the risk of severe infection following exposure to patients with infectious diseases that are easily transmitted if appropriate precautions are not taken (e.g., tuberculosis). HCWs infected with HTLV-III/LAV should be counseled about the potential risk associated with taking care of patients with transmissible infections and should continue to follow existing recommendations for infection control to minimize

HTLV-III/LAV — Continued

their risk of exposure to other infectious agents (18,19). The HCWs' personal physician(s), in conjunction with their institutions' personnel health services or medical directors, should determine on an individual basis whether the infected HCWs can adequately and safely perform patient-care duties and suggest changes in work assignments, if indicated. In making this determination, recommendations of the Immunization Practices Advisory Committee and institutional policies concerning requirements for vaccinating HCWs with live-virus vaccines should also be considered.

STERILIZATION, DISINFECTION, HOUSEKEEPING, AND WASTE DISPOSAL TO PREVENT TRANSMISSION OF HTLV-III/LAV

Sterilization and disinfection procedures currently recommended for use (22,23) in health-care and dental facilities are adequate to sterilize or disinfect instruments, devices, or other items contaminated with the blood or other body fluids from individuals infected with HTLV-III/LAV. Instruments or other nondisposable items that enter normally sterile tissue or the vascular system or through which blood flows should be sterilized before reuse. Surgical instruments used on all patients should be decontaminated after use rather than just rinsed with water. Decontamination can be accomplished by machine or by hand cleaning by trained personnel wearing appropriate protective attire (24) and using appropriate chemical germicides. Instruments or other nondisposable items that touch intact mucous membranes should receive high-level disinfection.

Several liquid chemical germicides commonly used in laboratories and health-care facilities have been shown to kill HTLV-III/LAV at concentrations much lower than are used in practice (25). When decontaminating instruments or medical devices, chemical germicides that are registered with and approved by the U.S. Environmental Protection Agency (EPA) as "sterilants" can be used either for sterilization or for high-level disinfection depending on contact time; germicides that are approved for use as "hospital disinfectants" and are mycobactericidal when used at appropriate dilutions can also be used for high-level disinfection of devices and instruments. Germicides that are mycobactericidal are preferred because mycobacteria represent one of the most resistant groups of microorganisms; therefore, germicides that are effective against mycobacteria are also effective against other bacterial and viral pathogens. When chemical germicides are used, instruments or devices to be sterilized or disinfected should be thoroughly cleaned before exposure to the germicide, and the manufacturer's instructions for use of the germicide should be followed.

Laundry and dishwashing cycles commonly used in hospitals are adequate to decontaminate linens, dishes, glassware, and utensils. When cleaning environmental surfaces, housekeeping procedures commonly used in hospitals are adequate; surfaces exposed to blood and body fluids should be cleaned with a detergent followed by decontamination using an EPA-approved hospital disinfectant that is mycobactericidal. Individuals cleaning up such spills should wear disposable gloves. Information on specific label claims of commercial germicides can be obtained by writing to the Disinfectants Branch, Office of Pesticides, Environmental Protection Agency, 401 M Street, S.W., Washington, D.C., 20460.

In addition to hospital disinfectants, a freshly prepared solution of sodium hypochlorite (household bleach) is an inexpensive and very effective germicide (25). Concentrations ranging from 5,000 ppm (a 1:10 dilution of household bleach) to 500 ppm (a 1:100 dilution) sodium hypochlorite are effective, depending on the amount of organic material (e.g., blood, mucus, etc.) present on the surface to be cleaned and disinfected.

Sharp items should be considered as potentially infective and should be handled and disposed of with extraordinary care to prevent accidental injuries. Other potentially infectious waste should be contained and transported in clearly identified impervious plastic bags.

HTLV-III/LAV - Continued

outside of the bag is contaminated with blood or other body fluids, a second outer bag should be used. Recommended practices for disposal of infective waste (23) are adequate for disposal of waste contaminated by HTLV-III/LAV. Blood and other body fluids may be carefully poured down a drain connected to a sanitary sewer.

CONSIDERATIONS RELEVANT TO OTHER WORKERS

Personal-service workers (PSWs). PSWs are defined as individuals whose occupations involve close personal contact with clients (e.g., hairdressers, barbers, estheticians, cosmetologists, manicurists, pedicurists, massage therapists). PSWs whose services (tattooing, ear piercing, acupuncture, etc.) require needles or other instruments that penetrate the skin should follow precautions indicated for HCWs. Although there is no evidence of transmission of HTLV-III/LAV from clients to PSWs, from PSWs to clients, or between clients of PSWs, a risk of transmission would exist from PSWs to clients and vice versa in situations where there is both (1) trauma to one of the individuals that would provide a portal of entry for the virus and (2) access of blood or serous fluid from one infected person to the open tissue of the other, as could occur if either sustained a cut. A risk of transmission from client to client exists when instruments contaminated with blood are not sterilized or disinfected between clients. However, HBV transmission has been documented only rarely in acupuncture, ear piercing, and tattoo establishments and never in other personal-service settings, indicating that any risk for HTLV-III/LAV transmission in personal-service settings must be extremely low.

All PSWs should be educated about transmission of bloodborne infections, including HTLV-III/LAV and HBV. Such education should emphasize principles of good hygiene, antisepsis, and disinfection. This education can be accomplished by national or state professional organizations, with assistance from state and local health departments, using lectures at meetings or self-instructional materials. Licensure requirements should include evidence of such education. Instruments that are intended to penetrate the skin (e.g., tattooing and acupuncture needles, ear piercing devices) should be used once and disposed of or be thoroughly cleaned and sterilized after each use using procedures recommended for use in health-care institutions. Instruments not intended to penetrate the skin but which may become contaminated with blood (e.g., razors), should be used for only one client and be disposed of or thoroughly cleaned and disinfected after use using procedures recommended for use in health-care institutions. Any PSW with exudative lesions or weeping dermatitis, regardless of HTLV-III/LAV infection status, should refrain from direct contact with clients until the condition resolves. PSWs known to be infected with HTLV-III/LAV need not be restricted from work unless they have evidence of other infections or illnesses for which any PSW should also be restricted.

Routine serologic testing of PSWs for antibody to HTLV-III/LAV is not recommended to prevent transmission from PSWs to clients.

Food-service workers (FSWs). FSWs are defined as individuals whose occupations involve the preparation or serving of food or beverages (e.g., cooks, caterers, servers, waiters, bartenders, airline attendants). All epidemiologic and laboratory evidence indicates that bloodborne and sexually transmitted infections are not transmitted during the preparation or serving of food or beverages, and no instances of HBV or HTLV-III/LAV transmission have been documented in this setting.

All FSWs should follow recommended standards and practices of good personal hygiene and food sanitation (26). All FSWs should exercise care to avoid injury to hands when preparing food. Should such an injury occur, both aesthetic and sanitary considerations would dictate that food contaminated with blood be discarded. FSWs known to be infected with HTLV-III/LAV need not be restricted from work unless they have evidence of other infection or illness for which any FSW should also be restricted.

HTLV-III/LAV — Continued

Routine serologic testing of FSWs for antibody to HTLV-III/LAV is not recommended to prevent disease transmission from FSWs to consumers.

Other workers sharing the same work environment. No known risk of transmission to co-workers, clients, or consumers exists from HTLV-III/LAV-infected workers in other settings (e.g., offices, schools, factories, construction sites). This infection is spread by sexual contact with infected persons, injection of contaminated blood or blood products, and by perinatal transmission. Workers known to be infected with HTLV-III/LAV should not be restricted from work solely based on this finding. Moreover, they should not be restricted from using telephones, office equipment, toilets, showers, eating facilities, and water fountains. Equipment contaminated with blood or other body fluids of any worker, regardless of HTLV-III/LAV infection status, should be cleaned with soap and water or a detergent. A disinfectant solution or a fresh solution of sodium hypochlorite (household bleach, see above) should be used to wipe the area after cleaning.

OTHER ISSUES IN THE WORKPLACE

The information and recommendations contained in this document do not address all the potential issues that may have to be considered when making specific employment decisions for persons with HTLV-III/LAV infection. The diagnosis of HTLV-III/LAV infection may evoke unwarranted fear and suspicion in some co-workers. Other issues that may be considered include the need for confidentiality, applicable federal, state, or local laws governing occupational safety and health, civil rights of employees, workers' compensation laws, provisions of collective bargaining agreements, confidentiality of medical records, informed consent, employee and patient privacy rights, and employee right-to-know statutes.

DEVELOPMENT OF THESE RECOMMENDATIONS

The information and recommendations contained in these recommendations were developed and compiled by CDC and other PHS agencies in consultation with individuals representing various organizations. The following organizations were represented: Association of State and Territorial Health Officials, Conference of State and Territorial Epidemiologists, Association of State and Territorial Public Health Laboratory Directors, National Association of County Health Officials, American Hospital Association, United States Conference of Local Health Officers, Association for Practitioners in Infection Control, Society of Hospital Epidemiologists of America, American Dental Association, American Medical Association, American Nurses' Association, American Association of Medical Colleges, American Association of Dental Schools, National Institutes of Health, Food and Drug Administration, Food Research Institute, National Restaurant Association, National Hairdressers and Cosmetologists Association, National Gay Task Force, National Funeral Directors and Morticians Association, American Association of Physicians for Human Rights, and National Association of Emergency Medical Technicians. The consultants also included a labor union representative, an attorney, a corporate medical director, and a pathologist. However, these recommendations may not reflect the views of individual consultants or the organizations they represented.

References

1. CDC. Acquired immune deficiency syndrome (AIDS): precautions for clinical and laboratory staffs. *MMWR* 1982;31:577-80.
2. CDC. Acquired immunodeficiency syndrome (AIDS): precautions for health-care workers and allied professionals. *MMWR* 1983;32:450-1.
3. CDC. Education and foster care of children infected with human T-lymphotropic virus type III/lymphadenopathy-associated virus. *MMWR* 1985;34:517-21.
4. CDC. Revision of the case definition of acquired immunodeficiency syndrome for national reporting — United States. *MMWR* 1985;34:373-5.

HTLV-III/LAV — Continued

5. CDC. ACIP recommendations for protection against viral hepatitis. *MMWR* 1985;34:313-24, 329-335.
6. Hadler SC, Doto IL, Maynard JE, et al. Occupational risk of hepatitis B infection in hospital workers. *Infect Control* 1985;6:24-31.
7. Dienstag JL, Ryan DM. Occupational exposure to hepatitis B virus in hospital personnel: infection or immunization? *Am J Epidemiol* 1982;115:26-39.
8. Pattison CP, Maynard JE, Berquist KR, et al. Epidemiology of hepatitis B in hospital personnel. *Am J Epidemiol* 1975;101:59-64.
9. Kane MA, Lettau LA. Transmission of HBV from dental personnel to patients. *JADA* 1985;110:634-6.
10. Hadler SC, Sorley DL, Acree KH, et al. An outbreak of hepatitis B in a dental practice. *Ann Intern Med* 1981;95:133-8.
11. Carl M, Blakey DL, Francis DP, Maynard JE. Interruption of hepatitis B transmission by modification of a gynaecologist's surgical technique. *Lancet* 1982;i:731-3.
12. Seeff LB, Wright EC, Zimmerman HJ, et al. Type B hepatitis after needlestick exposure: prevention with hepatitis B immune globulin. *Ann Intern Med* 1978;88:285-93.
13. Grady GF, Lee VA, Prince AM, et al. Hepatitis B immune globulin for accidental exposures among medical personnel: Final report of a multicenter controlled trial. *J Infect Dis* 1978;138:625-38.
14. Shikata T, Kerasawa T, Abe K, et al. Hepatitis B e antigen and infectivity of hepatitis B virus. *J Infect Dis* 1977;136:571-6.
15. CDC. Update: evaluation of human T-lymphotropic virus type III/lymphadenopathy-associated virus infection in health-care personnel—United States. *MMWR* 1985;34:575-8.
16. Weiss SH, Saxinger WC, Rechtman D, et al. HTLV-III infection among health care workers: association with needle-stick injuries. *JAMA* 1985;254:2089-93.
17. Anonymous. Needlestick transmission of HTLV-III from a patient infected in Africa. *Lancet* 1984;ii:1376-7.
18. Garner JS, Simmons BP. Guideline for isolation precautions in hospitals. *Infect Control* 1983;4:245-325.
19. Williams WW. Guideline for infection control in hospital personnel. *Infect Control* 1983;4:326-49.
20. CDC. Prevention of acquired immune deficiency syndrome (AIDS): report of inter-agency recommendations. *MMWR* 1983;32:101-3.
21. CDC. Provisional Public Health Service inter-agency recommendations for screening donated blood and plasma for antibody to the virus causing acquired immunodeficiency syndrome. *MMWR* 1985;34:1-5.
22. Favero MS. Sterilization, disinfection, and antisepsis in the hospital. In: *Manual of Clinical Microbiology*. 4th ed. Washington, D.C.: American Society for Microbiology, 1985;129-37.
23. Garner JS, Favero MS. Guideline for handwashing and hospital environmental control, 1985. Atlanta Georgia: Centers for Disease Control, 1985. Publication no. 99-1117.
24. Kneedler JA, Dodge GH. Perioperative patient care. Boston: Blackwell Scientific Publications, 1983. 210-1.
25. Martin LS, McDougal JS, Loskoski SL. Disinfection and inactivation of the human T-lymphotropic virus type III/lymphadenopathy-associated virus. *J Infect Dis* 1985;152:400-3.
26. Food Service Sanitation Manual 1976. DHEW publication no. (FDA) 78-2081. First printing June 1978.

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**THE ACQUIRED IMMUNODEFICIENCY SYNDROME
& HTLV-III ANTIBODY TESTING**

AIDS presents a potentially catastrophic situation for the life and health insurance business. If persons who have tested positive for antibodies to the HTLV-III virus apply for large amounts of life and health insurance and the insurance companies are unable to identify them as high risks, the insurers' other policyholders will bear the brunt of paying for extra benefits for which inadequate premiums were received. This could take billions of dollars away from those other policyholders.

I. BASIS FOR INSURANCE INDUSTRY'S CONCERN

Acquired Immunodeficiency Syndrome (AIDS) is potentially as serious a health threat as our nation has ever faced. If the number of new cases continues to double every 10-12 months, then some 300,000 people may develop the full AIDS syndrome within 5 years. At this point in time, those who develop the full AIDS syndrome are certain to die, usually within 12-24 months. The median age at death is 35.

In some risk groups, from 5% to 20% of those who have been exposed to (infected with) HTLV-III virus are expected to develop the full AIDS syndrome within 2-5 years. A 10% risk of dying within five years, after incurring perhaps \$100,000 of health-care expenses, represents an unmanageable risk in a young person from the point of view of a life or health insurance company.

AIDS is a sexually transmissible disease. Sexual encounters with multiple partners greatly increase the risk of becoming infected. This applies to both heterosexuals and homosexuals, and for obvious reasons occurs most often with those who are not married. It so happens, however, that 70-75% of all AIDS patients have to date been sexually active homosexual or bisexual men. AIDS tends to be highly prevalent in those metropolitan areas that have large "gay" communities.

Illicit IV drug users are another group at high risk for contracting AIDS, constituting 15-20% of all who have this disease. The HTLV-III virus is transmitted from one person to another by use of nonsterilized (contaminated) needles. Seventy percent of IV drug users who get AIDS are male. Over 94% of all AIDS patients are male.

Hemophiliacs, those who have required repeated infusion of clotting products from 1980 to 1984 to control bleeding episodes, are at high risk of having been infected. Others at high risk include those who have had sexual relations with infected persons (spouses; prostitutes) and newborns of infected mothers. Finally, those who have received multiple blood transfusions in the last 5 years are at very slight increased risk due to donated blood contaminated with HTLV-III.

II. THE ELISA TEST

In response to being infected with HTLV-III, persons develop antibody to this virus. A relatively easy-to-do and inexpensive screening test for antibody to HTLV-III (called "ELISA" or "EIA") has now been developed. If an unmarried male's ELISA test is repeatedly reactive (i.e., successive tests are both positive), he has probably at some time in the past been infected with HTLV-III and may well still be carrying the virus in his bloodstream. If so, he is infectious and can transmit the virus to others. Also, he is at significant risk of eventually developing AIDS.

ELISA, like virtually all other blood tests, is not perfect. This fact unfortunately creates both misunderstanding and unwarranted mistrust.

The reliability of any positive (abnormal) screening test depends to a very great extent on the prevalence of whatever is being tested for (in our case, antibody to the AIDS-causing virus). When ELISA is used in a high prevalence setting (e.g., in those metropolitan areas where so many AIDS cases have occurred) it is acknowledged as an extraordinarily good test that can reliably distinguish between those who have and have not been exposed to HTLV-III. On the other hand, when used in low prevalence settings such as often happens in the nationwide random testing of blood donors, initially positive tests are very apt to be unreliable ("false") and must therefore be repeated.

If a repeat ELISA is also reactive, reliability is much improved. Still, use of another kind of test is advocated in the random screening setting to confirm repeatedly reactive EIA results. The "Western Blot" (WB) test is most often used for this purpose. It is time-consuming and relatively expensive to do. If an unmarried male has two positive EIA's followed by a positive WB, he can confidently be termed a "true positive".

III. THE NEED FOR ELISA TESTS IN INSURANCE UNDERWRITING

Progressive Nature of Chronic Diseases

It may be helpful to compare the probable underwriting approach for AIDS with something that is very familiar and encountered by the underwriter every day, namely the selection and classification of those with Coronary Heart Disease (CHD). As will be seen, both share common characteristics and call for a generally similar underwriting approach.

As with all chronic diseases, CHD progresses by stages. It begins with those "at high risk" of developing disease. These are the cigarette smokers (who generally pay an extra premium for their insurance), the people with uncontrolled hypertension (who also pay extra for coverage), and others.

The next phase in the CHD progression involves signs that suggest the development of underlying atherosclerotic disease. Electrocardiographic changes may occur. The patient may experience anginal chest pains. Arrhythmias may occur. Etc. Applicants who are judged to be at this stage of their disease are classified in a far higher risk group -- charged a significantly higher premium or perhaps even rejected for coverage.

Late in the course of disease, the patient experiences his heart attack. Or he has an episode of life-threatening ventricular fibrillation. Death is near.

As a group, persons tend to progress from one stage of disease to the next and do so rather predictably. Certain individuals do so rapidly; for others progression is slow or may not even occur. One cannot predict what will happen for any one given individual. But accurate projections can be made for groups of individuals who have similar characteristics.

So it is with AIDS. In the majority of instances AIDS is a sexually transmitted disease. Having multiple sex partners puts persons "at high risk" of contracting the HTLV-III virus, particularly if such activity takes place in those metropolitan areas where the prevalence of AIDS has been documented to be very high.

For those who become infected with the AIDS virus, various signs or markers of infection become manifest. First of all, these people develop antibodies to HTLV-III, and an ELISA test result will be positive. Further down the line these people may develop generalized lymphadenopathy. Constitutional symptoms of disease may appear, including weight loss, drenching night sweats, persistent fever, malaise, shortness of breath, etc. Oral thrush may develop, suggesting that one's underlying immune system has been damaged. At this stage, patients are said to have AIDS Related Complex (ARC). Analogous perhaps to angina pectoris in the CHD spectrum, ARC represents an advanced stage in the progression of AIDS.

Finally, something triggers the development of an opportunistic infection, such as Kaposi's sarcoma. The patient is diagnosed as having the full AIDS syndrome. Death occurs in one or two years.

The underwriting process recognizes that each phase in the natural history of a chronic disease, be it CHD or AIDS or whatever, presents some inherent level of risk and that this risk increases with each advancing stage of disease. For AIDS, those who are unusually active sexually (for example, those who have been treated on more than one occasion for sexually transmitted disease) are at increased risk because they may become exposed to HTLV-III. Such a person would be classified into a still higher risk category if confirmed to be positive for HTLV-III antibodies. Add to this the presence of typical pre-AIDS symptoms (night

sweats, whatever) and one can be reasonably sure that natural history is far advanced. Development of the full AIDS syndrome represents the end-stage of disease.

As was stated for CHD, there is no certainty that a person will necessarily progress from one stage of disease to the next. The likelihood that this will happen is reflected in underwriter's determination of risk.

The Challenge to Insurers

The foregoing remarks illustrate that insurance companies are not simply faced with having to determine whether someone does or does not have the full AIDS syndrome. The main challenge that faces insurers has to do with identifying those in lesser stages of disease. It is at those stages that people are likely to want to buy insurance while already representing possibly very high risks.

Underwriters must always be objective rather than subjective. Here is where tests such as the ELISA and Western Blot can be very beneficial. For example, if an applicant admits to nonspecific symptoms that may or may not represent HTLV-III infection, an answer to this question can be easily resolved by doing antibody testing. Another illustration of the value for HTLV-III antibody testing is the hemophiliac who is applying for life insurance. Since the majority of these people have been infected with HTLV-III, the underwriter could simply assume that his applicant has been exposed to HTLV-III and is therefore uninsurable. But if instead he were to get an ELISA test and it turned out to be negative, then insurance could be granted to this person. (Future supplies of blood products to hemophiliacs will be safe, because of a heat-treating process and HTLV-III testing.)

Confidentiality

A comment regarding the maintenance of confidentiality of test results. The insurance industry has a long and accomplished track record in dealing with highly sensitive medical information such as chemical dependency, alcoholism, syphilis, an attending physician's knowledge of cancer that has not been revealed to the patient, etc. Certainly, if an insurer received knowledge that an applicant had the full AIDS syndrome, this information would be regarded as highly sensitive and confidential and would be treated in strict accordance with both good common sense and with existing privacy statutory safeguards. Confidentiality of results of tests to detect antibody to HTLV-III would likewise be regarded as very sensitive information and protected in an equally secure fashion.

It is important to recognize that tests for antibody to HTLV-III have been made available only in the last few months. Blood banks were the first users. But serological testing has long been recognized as a valuable adjunct to clinical medicine.

As the AIDS epidemic spreads, attending physicians throughout this country will be encountering patients who are potentially infected with HTLV-III. Antibody testing for HTLV-III will become a standard part of medical practice. Such testing will be a vitally important tool for documenting the spread of this infection in our country and in attempts to control what Secretary Margaret Heckler has called the "number one" health priority of the Department of Health and Human Services.

This test is needed by those in clinical medicine. It is needed by public health officials. It follows that insurance companies also need to have access to antibody testing in order to fairly evaluate all insurance applicants.

IV. SUMMARY

Insurance companies understand the importance of maintaining public confidence in our nation's blood banks and respect the need to maintain confidentiality of test data generated by these facilities. Insurance companies will certainly not ask blood banks nor official, state-sponsored alternative test sites to divulge such information. However, if insurance companies are prevented from learning adverse information that applicants already know, such unprecedented and unfair advantage will unquestionably translate into persons seeking to gain from this and consequent subsidization of those at high risk by the majority of policyholders who are at virtually no risk of getting AIDS. Given the potential magnitude of the AIDS problem, this inequity will not only be unfair, but may well prove to have devastating financial consequences. Insurance companies should be allowed to order their own tests given that results will be used judiciously and equitably.

SEC. 1. Section 199.21(f) of the Health and Safety Code is amended to read:

199.21. (f) The results of a blood test to detect antibodies to the probable causative agent of acquired immune deficiency syndrome, which identifies or provides identifying characteristics of the person to whom the test results apply, shall not be used in any instance for the determination of insurability or suitability for employment.

SEC. 2. Section 10145 is added to the Insurance Code, to read:

10145 (a) No insurance company licensed in this state shall refuse to issue or sell any policy of life or disability insurance based upon the results of a blood test to detect antibodies to the probable causative agent of AIDS administered or used by the insurer as part of its underwriting process to determine insurability unless:

(1) blood from any applicant which initially was found to have serologic evidence of antibodies to the probable causative agent of AIDS shall have been retested for confirmation;

(2) any blood test used to detect antibodies to the probable causative agent for AIDS is licensed by the Federal Food and Drug Administration or recognized by the State Department of Health Services; and

(3) the collection, use and disclosure of the results of any blood test to detect antibodies to the probable causative agent of AIDS are treated as confidential and subject to the restrictions set forth in Article 6.6 (commencing with §791).

(b) No insurance company licensed in this state to issue life or disability insurance shall use the results of blood tests to detect antibodies to the probable causative agent of AIDS administered by the State Director of Health Services pursuant to Article 8 (commencing with §1630) of the Health and Safety Code or administered by any blood bank or plasma center in the determination of insurability.

CONTENTS OF SHIPMENT

INVESTIGATOR: Please verify receipt of QUANTITIES SHIPPED. Complete investigator box and return this form in the enclosed self-addressed envelope. Contact Study Monitor if there is any discrepancy in shipment. (919) 541-9090.

Michael Gottlieb, M.D.
c/o Ed Arriola, Pharm. D.
UCLA Center for Health Sciences
Room 17-816
10833 Le Conte
Los Angeles, CA 90024

INVESTIGATOR BOX	
Materials received as listed	☒ Yes ☐ No
If No, study monitor has been contacted	☐ Yes ☐ No
<i>Haley J. Guffitt</i>	6/11/86
Signature	Date

MEDICAL DIV. USE ONLY	Project No. _____
	IND. No. _____ or NDA No. _____
	Res. Comp. No. Or Product Name _____
	Protocol No. _____
	Study No. _____

INVESTIGATIONAL DRUG ORDER (I.D.O.)

MDF NO. 10 (3/80)

DATE: 6-10-86	SECTION: VIR	DEPT.: ID	AUTHORIZED BY: Terri Creagh-Kirk/jl	ARRIVAL DATE: 6-11-86	I.D.O. NUMBER: 1733
Research Compound or Product Name: BWQA509U		Protocol No.: 27,433-002		Study No.: 05	
C.T.M. Number: 2804		Study Monitor: T. Creagh -Kirk			

DESCRIPTION OF STUDY DRUG(S)

Res. Comp # or Product Name(s)	Dosage Form	Unit Conc.	F#	B.I.N.	Immediate Containers	
					Type	Size wt., vol., or # units
Azidothymidine	caps	250mg	BJG01A1	6B2740	bt1	100
Placebo	caps		AID02A1	6B2741	bt1	100

QUANTITIES (TO BE) SHIPPED

complete one according to packaging specs.

IMMEDIATE CONTAINERS		SHIPPING CARTONS				Special Character or Comments
# Units Ordered	Container (s) Code No(s)	Carton	Patient # (s)	Total units per Patient	Total units per Carton	
			506, 507	1	100	Week 8 ✓
			513	1	50	Week 4 ✓
			514, 515	2	50	Week 2, 3 ✓
			516, 517	1	50	Week 2 ✓
			518	3	50	Week 0, 1, 2 ✓

C.T.M. Coordinator (Medical)	Filled By	Checked By	Packed By	Gross Weight	Postage	Date Shipped
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INVESTIGATOR

U.S.