

AIDS: An Infection Control and General Information Packet for Health Care Providers

**Association for Practitioners in Infection
Control, San Francisco Bay Area Chapter**

and

**AIDS/KS Research and Education
Foundation, San Francisco
Bay Area Chapter**

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AIDS/KS FOUNDATION

ACQUIRED IMMUNE DEFICIENCY SYNDROME - KAPOSI'S SARCOMA RESEARCH & EDUCATION FOUNDATION, INC.
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Greetings:

Compiled through the combined efforts of the AIDS Resource Group, Association for Practitioners in Infection Control, and the San Francisco AIDS/KS Foundation (a contract agency of the San Francisco Department of Public Health), "AIDS: An Infection Control and General Information Packet For Health Care Providers", is designed to achieve the following goals:

- o To be an informational resource for health care providers on AIDS.
- o To provide specific examples of the ways various hospitals have interpreted and extended the Centers for Disease Control's AIDS guidelines.
- o To make available AIDS Risk Reduction Literature for the purpose of health wellness education for high risk patients.
- o To address issues of quality care delivery in an "isolation setting".

Quarterly supplements will be made available beginning March, 1984. Packet holders will be notified of availability and ordering procedures at that time.

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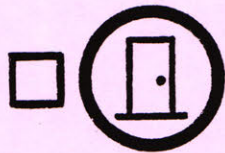
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AIDS: AN INFECTION CONTROL AND GENERAL
INFORMATION PACKET FOR HEALTH CARE PROVIDERS

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INFECTION PRECAUTIONS



Private Room



MASK

On susceptibles in room
On patient outside room



GOWN

For direct contact with

☐ urine/stool
☐ wounds

☐ oral
☐ blood

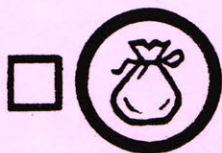


GLOVES

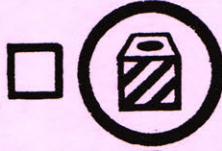
For direct contact with

☐ urine/stool
☐ wounds

☐ oral
☐ blood
☐ CSF



Hot water soluble laundry bags



Puncture proof needle box
in room



No pregnant women



Wash hands



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Current Trends

**Acquired Immune Deficiency Syndrome (AIDS):
Precautions for Clinical and Laboratory Staffs**

The etiology of the underlying immune deficiencies seen in AIDS cases is unknown. One hypothesis consistent with current observations is that a transmissible agent may be involved. If so, transmission of the agent would appear most commonly to require intimate, direct contact involving mucosal surfaces, such as sexual contact among homosexual males, or through parenteral spread, such as occurs among intravenous drug abusers and possibly hemophilia patients using Factor VIII products. Airborne spread and interpersonal spread through casual contact do not seem likely. These patterns resemble the distribution of disease and modes of spread of hepatitis B virus, and hepatitis B virus infections occur very frequently among AIDS cases.

There is presently no evidence of AIDS transmission to hospital personnel from contact with affected patients or clinical specimens. Because of concern about a possible transmissible agent, however, interim suggestions are appropriate to guide patient-care and laboratory personnel, including those whose work involves experimental animals. At present, it appears prudent for hospital personnel to use the same precautions when caring for patients with AIDS as those used for patients with hepatitis B virus infection, in which blood and body fluids likely to have been contaminated with blood are considered infective. Specifically, patient-care and laboratory personnel should take precautions to avoid direct contact of skin and mucous membranes with blood, blood products, excretions, secretions, and tissues of persons judged likely to have AIDS. The following precautions do not specifically address outpatient care, dental care, surgery, necropsy, or hemodialysis of AIDS patients. In general, procedures appropriate for patients known to be infected with hepatitis B virus are advised, and blood and organs of AIDS patients should not be donated.

The precautions that follow are advised for persons and specimens from persons with: opportunistic infections that are not associated with underlying immunosuppressive disease or therapy; Kaposi's sarcoma (patients under 60 years of age); chronic generalized lymphadenopathy, unexplained weight loss and/or prolonged unexplained fever in persons who belong to groups with apparently increased risks of AIDS (homosexual males, intravenous drug abusers, Haitian entrants, hemophiliacs); and possible AIDS (hospitalized for evaluation). Hospitals and laboratories should adapt the following suggested precautions to their individual circumstances; these recommendations are not meant to restrict hospitals from implementing additional precautions.

A. The following precautions are advised in providing care to AIDS patients:

1. Extraordinary care must be taken to avoid accidental wounds from sharp instruments contaminated with potentially infectious material and to avoid contact of open skin lesions with material from AIDS patients.

Acquired Immune Deficiency Syndrome — Continued

2. Gloves should be worn when handling blood specimens, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.
3. Gowns should be worn when clothing may be soiled with body fluids, blood, secretions, or excretions.
4. Hands should be washed after removing gowns and gloves and before leaving the rooms of known or suspected AIDS patients. Hands should also be washed thoroughly and immediately if they become contaminated with blood.
5. Blood and other specimens should be labeled prominently with a special warning, such as "Blood Precautions" or "AIDS Precautions." If the outside of the specimen container is visibly contaminated with blood, it should be cleaned with a disinfectant (such as a 1:10 dilution of 5.25% sodium hypochlorite [household bleach] with water). All blood specimens should be placed in a second container, such as an impervious bag, for transport. The container or bag should be examined carefully for leaks or cracks.
6. Blood spills should be cleaned up promptly with a disinfectant solution, such as sodium hypochlorite (see above).
7. Articles soiled with blood should be placed in an impervious bag prominently labeled "AIDS Precautions" or "Blood Precautions" before being sent for reprocessing or disposal. Alternatively, such contaminated items may be placed in plastic bags of a particular color designated solely for disposal of infectious wastes by the hospital. Disposable items should be incinerated or disposed of in accord with the hospital's policies for disposal of infectious wastes. Reusable items should be reprocessed in accord with hospital policies for hepatitis B virus-contaminated items. Lensed instruments should be sterilized after use on AIDS patients.
8. Needles should not be bent after use, but should be promptly placed in a puncture-resistant container used solely for such disposal. Needles should not be reinserted into their original sheaths before being discarded into the container, since this is a common cause of needle injury.
9. Disposable syringes and needles are preferred. Only needle-locking syringes or one-piece needle-syringe units should be used to aspirate fluids from patients, so that collected fluid can be safely discharged through the needle, if desired. If reusable syringes are employed, they should be decontaminated before reprocessing.
10. A private room is indicated for patients who are too ill to use good hygiene, such as those with profuse diarrhea, fecal incontinence, or altered behavior secondary to central nervous system infections.

Precautions appropriate for particular infections that concurrently occur in AIDS patients should be added to the above, if needed.

B. The following precautions are advised for persons performing laboratory tests or studies on clinical specimens or other potentially infectious materials (such as inoculated tissue cultures, embryonated eggs, animal tissues, etc.) from known or suspected AIDS cases:

1. Mechanical pipetting devices should be used for the manipulation of all liquids in the laboratory. Mouth pipetting should not be allowed.
2. Needles and syringes should be handled as stipulated in Section A (above).
3. Laboratory coats, gowns, or uniforms should be worn while working with potentially infectious materials and should be discarded appropriately before leaving the laboratory.
4. Gloves should be worn to avoid skin contact with blood, specimens containing blood, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.

Acquired Immune Deficiency Syndrome — Continued

5. All procedures and manipulations of potentially infectious material should be performed carefully to minimize the creation of droplets and aerosols.
 6. Biological safety cabinets (Class I or II) and other primary containment devices (e.g., centrifuge safety cups) are advised whenever procedures are conducted that have a high potential for creating aerosols or infectious droplets. These include centrifuging, blending, sonicating, vigorous mixing, and harvesting infected tissues from animals or embryonated eggs. Fluorescent activated cell sorters generate droplets that could potentially result in infectious aerosols. Translucent plastic shielding between the droplet-collecting area and the equipment operator should be used to reduce the presently uncertain magnitude of this risk. Primary containment devices are also used in handling materials that might contain concentrated infectious agents or organisms in greater quantities than expected in clinical specimens.
 7. Laboratory work surfaces should be decontaminated with a disinfectant, such as sodium hypochlorite solution (see A5 above), following any spill of potentially infectious material and at the completion of work activities.
 8. All potentially contaminated materials used in laboratory tests should be decontaminated, preferably by autoclaving, before disposal or reprocessing.
 9. All personnel should wash their hands following completion of laboratory activities, removal of protective clothing, and before leaving the laboratory.
- C. The following additional precautions are advised for studies involving experimental animals inoculated with tissues or other potentially infectious materials from individuals with known or suspected AIDS.
1. Laboratory coats, gowns, or uniforms should be worn by personnel entering rooms housing inoculated animals. Certain nonhuman primates, such as chimpanzees, are prone to throw excreta and to spit at attendants; personnel attending inoculated animals should wear molded surgical masks and goggles or other equipment sufficient to prevent potentially infective droplets from reaching the mucosal surfaces of their mouths, nares, and eyes. In addition, when handled, other animals may disturb excreta in their bedding. Therefore, the above precautions should be taken when handling them.
 2. Personnel should wear gloves for all activities involving direct contact with experimental animals and their bedding and cages. Such manipulations should be performed carefully to minimize the creation of aerosols and droplets.
 3. Necropsy of experimental animals should be conducted by personnel wearing gowns and gloves. If procedures generating aerosols are performed, masks and goggles should be worn.
 4. Extraordinary care must be taken to avoid accidental sticks or cuts with sharp instruments contaminated with body fluids or tissues of experimental animals inoculated with material from AIDS patients.
 5. Animal cages should be decontaminated, preferably by autoclaving, before they are cleaned and washed.
 6. Only needle-locking syringes or one-piece needle-syringe units should be used to inject potentially infectious fluids into experimental animals.

The above precautions are intended to apply to both clinical and research laboratories. Biological safety cabinets and other safety equipment may not be generally available in clinical laboratories. Assistance should be sought from a microbiology laboratory, as needed, to assure containment facilities are adequate to permit laboratory tests to be conducted safely.

Reported by Hospital Infections Program, Div of Viral Diseases, Div of Host Factors, Div of Hepatitis and

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Current Trends

Prevention of Acquired Immune Deficiency Syndrome (AIDS): Report of Inter-Agency Recommendations

Since June 1981, over 1,200 cases of acquired immune deficiency syndrome (AIDS) have been reported to CDC from 34 states, the District of Columbia, and 15 countries. Reported cases of AIDS include persons with Kaposi's sarcoma who are under age 60 years and/or persons with life-threatening opportunistic infections with no known underlying cause for immune deficiency. Over 450 persons have died from AIDS, and the case-fatality rate exceeds 60% for cases first diagnosed over 1 year previously (1,2). Reports have gradually increased in number. An average of one case per day was reported during 1981, compared with three to four daily in late 1982 and early 1983. Current epidemiologic evidence identifies several groups in the United States at increased risk for developing AIDS (3-7). Most cases have been reported among homosexual men with multiple sexual partners, abusers of intravenous (IV) drugs, and Haitians, especially those who have entered the country within the past few years. However, each group contains many persons who probably have little risk of acquiring AIDS. Recently, 11 cases of unexplained, life-threatening opportunistic infections and cellular immune deficiency have been diagnosed in patients with hemophilia. Available data suggest that the severe disorder of immune regulation underlying AIDS is caused by a transmissible agent.

A national case-control study and an investigation of a cluster of cases among homosexual men in California indicate that AIDS may be sexually transmitted among homosexual or bisexual men (8,9). AIDS cases were recently reported among women who were steady sexual partners of men with AIDS or of men in high-risk groups, suggesting the possibility of heterosexual transmission (10). Recent reports of unexplained cellular immunodeficiencies and opportunistic infections in infants born to mothers from groups at high risk for AIDS have raised concerns about in utero or perinatal transmission of AIDS (11). Very little is known about risk factors for Haitians with AIDS.

The distribution of AIDS cases parallels that of hepatitis B virus infection, which is transmitted sexually and parenterally. Blood products or blood appear responsible for AIDS among hemophilia patients who require clotting factor replacement. The likelihood of blood transmission is supported by the occurrence of AIDS among IV drug abusers. Many drug abusers share contaminated needles, exposing themselves to blood-borne agents, such as hepatitis B virus. Recently, an infant developed severe immune deficiency and an opportunistic infection several months after receiving a transfusion of platelets derived from the blood of a man subsequently found to have AIDS (12). The possibility of acquiring AIDS through blood components or blood is further suggested by several cases in persons with no known risk factors who have received blood products or blood within 3 years of AIDS diagnosis (2). These cases are currently under investigation.

No AIDS cases have been documented among health care or laboratory personnel caring

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for AIDS patients or processing laboratory specimens. To date, no person-to-person transmission has been identified other than through intimate contact or blood transfusion.

Several factors indicate that individuals at risk for transmitting AIDS may be difficult to identify. A New York City study showed that a significant proportion of homosexual men who were asymptomatic or who had nonspecific symptoms or signs (such as generalized lymphadenopathy) had altered immune functions demonstrated by in vitro tests (2,13,14). Similar findings have been reported among patients with hemophilia (2,15,16). Although the significance of these immunologic alterations is not yet clear, their occurrence in at least two groups at high risk for AIDS suggests that the pool of persons potentially capable of transmitting an AIDS agent may be considerably larger than the presently known number of AIDS cases. Furthermore, the California cluster investigation and other epidemiologic findings suggest a "latent period" of several months to 2 years between exposure and recognizable clinical illness and imply that transmissibility may precede recognizable illness. Thus, careful histories and physical examinations alone will not identify all persons capable of transmitting AIDS but should be useful in identifying persons with definite AIDS diagnoses or related symptoms, such as generalized lymphadenopathy, unexplained weight loss, and thrush. Since only a small percentage of members of high-risk groups actually has AIDS, a laboratory test is clearly needed to identify those with AIDS or those at highest risk of acquiring AIDS. For the above reasons, persons who may be considered at increased risk of AIDS include those with symptoms and signs suggestive of AIDS; sexual partners of AIDS patients; sexually active homosexual or bisexual men with multiple partners; Haitian entrants to the United States; present or past abusers of IV drugs; patients with hemophilia; and sexual partners of individuals at increased risk for AIDS.

Statements on prevention and control of AIDS have been issued by the National Gay Task Force, the National Hemophilia Foundation, the American Red Cross, the American Association of Blood Banks, the Council of Community Blood Centers, the American Association of Physicians for Human Rights, and others. These groups agree that steps should be implemented to reduce the potential risk of transmitting AIDS through blood products, but differ in the methods proposed to accomplish this goal. Public health agencies, community organizations, and medical organizations and groups share the responsibility to rapidly disseminate information on AIDS and recommended precautions.

Although the cause of AIDS remains unknown, the Public Health Service recommends the following actions:

1. Sexual contact should be avoided with persons known or suspected to have AIDS. Members of high risk groups should be aware that multiple sexual partners increase the probability of developing AIDS.
2. As a temporary measure, members of groups at increased risk for AIDS should refrain from donating plasma and/or blood. This recommendation includes all individuals belonging to such groups, even though many individuals are at little risk of AIDS. Centers collecting plasma and/or blood should inform potential donors of this recommendation. The Food and Drug Administration (FDA) is preparing new recommendations for manufacturers of plasma derivatives and for establishments collecting plasma or blood. This is an interim measure to protect recipients of blood products and blood until specific laboratory tests are available.
3. Studies should be conducted to evaluate screening procedures for their effectiveness in identifying and excluding plasma and blood with a high probability of transmitting AIDS. These procedures should include specific laboratory tests as well as careful histories and physical examinations.

AIDS — Continued

4. Physicians should adhere strictly to medical indications for transfusions, and autologous blood transfusions are encouraged.
5. Work should continue toward development of safer blood products for use by hemophilia patients.

The National Hemophilia Foundation has made specific recommendations for management of patients with hemophilia (17).

The interim recommendation requesting that high-risk persons refrain from donating plasma and/or blood is especially important for donors whose plasma is recovered from plasmapheresis centers or other sources and pooled to make products that are not inactivated and may transmit infections, such as hepatitis B. The clear intent of this recommendation is to eliminate plasma and blood potentially containing the putative AIDS agent from the supply. Since no specific test is known to detect AIDS at an early stage in a potential donor, the recommendation to discourage donation must encompass all members of groups at increased risk for AIDS, even though it includes many individuals who may be at little risk of transmitting AIDS.

As long as the cause remains unknown, the ability to understand the natural history of AIDS and to undertake preventive measures is somewhat compromised. However, the above recommendations are prudent measures that should reduce the risk of acquiring and transmitting AIDS.

Reported by the Centers for Disease Control, the Food and Drug Administration, and the National Institutes of Health.

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An Evaluation of the Acquired Immunodeficiency Syndrome (AIDS) Reported in Health-Care Personnel — United States

As of July 11, 1983, physicians and health departments in the United States and Puerto Rico had reported a total of 1,831 patients meeting the CDC surveillance definition of the acquired immunodeficiency syndrome (AIDS) (1). Of these, four were reported to be health-care personnel not known to belong to groups at increased risk for AIDS. Onset of illness in these patients occurred between June 1981 and April 1983. The source of AIDS in these four patients is unclear, and none had documented contact with another AIDS patient. Additional cases have been reported in health-care personnel; however, these have either occurred in persons belonging to AIDS risk groups or in persons for whom information is insufficient to determine if they belong to such groups. The case histories for the four patients follow.

Patient 1: A 32-year-old black man living in Baltimore, Maryland, was in good health until January 1983, when he complained of lower abdominal discomfort, relieved by urination, and blood in his stools. Medical evaluation, which included a renal sonogram and an abdominal CAT scan, revealed no cause for his complaints, and his symptoms subsided without treatment. At the same time, he began to lose weight. On May 13, he presented to his private physician with complaints of fever and cough of 2-3 days' duration. His temperature was 37.8 C (100 F). Chest x-ray showed a questionable right upper lobe infiltrate, and he was given oral erythromycin.

On May 21, 1983, the patient went to a Baltimore hospital, where he was found to have bilateral pulmonary infiltrates. He was hospitalized and sulfamethoxazole/trimethoprim was added to his therapy. On May 24, a transbronchial lung biopsy showed *Pneumocystis carinii* pneumonia (PCP); results of immunologic studies were consistent with AIDS. Despite the addition of pentamidine isethionate to his therapy, his condition worsened, and he died on June 2. At autopsy, no evidence of malignancy was found.

The patient had worked for the housekeeping department of a hospital since 1968. Beginning in August 1981, he worked exclusively in the ambulatory surgery area, where his duties included removal of surgical drapes and disposable surgical equipment, which were often contaminated with blood. Reportedly, he usually did not wear gloves.

On February 26, 1982, the patient went to the employee-health nurse for treatment of a needlestick injury. The patient stated that, while disposing of a cardboard box containing used needles, he had been stuck on the hand by a needle protruding from the box. Blood samples were drawn for hepatitis B virus serologic tests, and a single 2-ml dose of immune globulin (IG) was given intramuscularly. (IG therapy has not been reported in other AIDS patients not belonging to known risk groups.) The serologic tests were positive for antibody to hepatitis B surface antigen but negative for the antigen. No other injuries had been recorded on his employee-health record.

When interviewed by his physicians, the patient denied homosexual activity, intravenous (IV) drug use, foreign travel, or transfusion. After the patient's death, interviews by the Baltimore City Health Department of his family and friends confirmed his history. Four of his female sexual partners were interviewed, and all denied IV drug use; none had a history compatible with AIDS. The patient had no history of treatment for venereal diseases, and serologic tests for syphilis (RPR, MHA-TP, FTA-ABS), done during his hospitalization for PCP, were negative.

No patient meeting the CDC surveillance definition of AIDS was reported to have been seen at the hospital where patient 1 worked. In June 1982, 4 months after the needlestick injury and 7 months before patient 1 became ill, a homosexual man with a history of chronic,

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Epidemiologic Notes and Reports

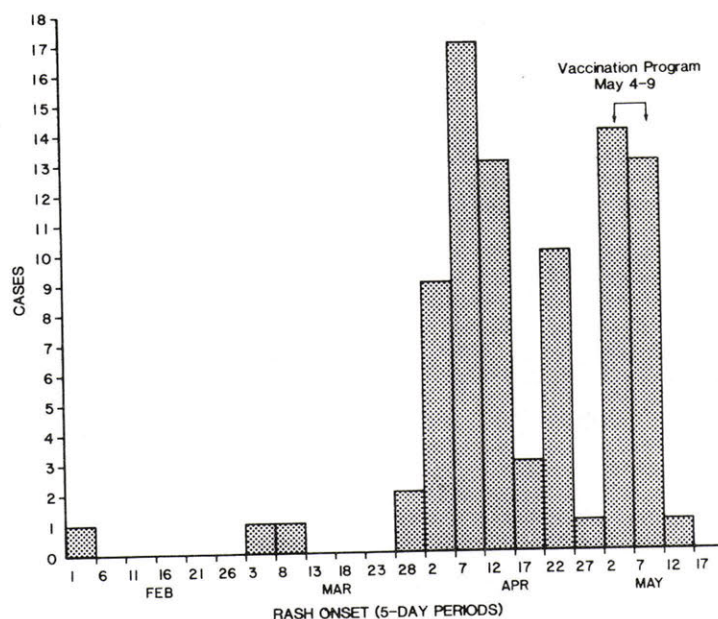
Rubella Outbreak among Office Workers — New York City

From February 2 through May 13, 1983, 86 cases of clinical rubella* were reported among office workers employed at a major bank in lower Manhattan. All but three workers had onset of rash on or after March 28 (Figure 1). Fifteen (17.4%) of the cases were confirmed serologically.† The 86 employees ranged in age from 18 to 54 years. The source of the outbreak was not identified.

*Case definition: Generalized maculopapular rash and at least one of the following: fever, conjunctivitis, coryza, joint pain, lymphadenopathy, or headache.

†Serologically confirmed by: 1) A four-fold or greater rise in titer of rubella hemagglutination-inhibition or complement-fixation antibody titer between acute- and convalescent-phase serum specimens; 2) a significant rise (in this investigation, a ratio 1.65:1 or greater) in ELISA rubella-specific IgG between acute- and convalescent-phase serum specimens; or 3) detectable (positive) ELISA rubella-specific IgM in a single serum specimen.

FIGURE 1. Rubella cases among office workers, by date of rash onset — New York City, February 2-May 13, 1983



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of caring for an AIDS patient, and none had known contact with blood of an AIDS patient; however, the possibility that these patients had forgotten or unknown exposure to the blood of AIDS patients cannot be entirely excluded.

These four cases provide no new information regarding occupational risk related to health-care personnel. Transmission of AIDS within hospitals has not been reported. Recommendations for prevention of AIDS in health-care personnel have been previously published (4), and these personnel are urged to become familiar with and adhere to these recommendations.

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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AIDS — Continued

unexplained lymphadenopathy underwent a lymph node biopsy in the ambulatory surgery area of the hospital. Although patient 1 was working in this area on the day of the biopsy, the extent of his contact, if any, with the lymphadenopathy patient or materials used in the biopsy procedure is unknown.

Patients 2-4: Less epidemiologic information is available for patients 2-4 than for patient 1. They appear either more likely to have belonged to AIDS risk groups or less likely to have had exposure to blood than patient 1. All had immunologic studies consistent with AIDS.

Patient 2, a 32-year-old American Indian woman, was living in New Jersey when she became ill in 1981. She was found to have PCP, recovered following treatment, but died of cerebral toxoplasmosis in 1982. She had worked in a hospital laundry since 1980. During her employment, a patient with possible AIDS had been admitted to the hospital where she worked, but she had no direct contact with this person. Although she used marijuana, cocaine, and mescaline, she denied IV drug use. She also denied foreign travel, receipt of blood, and sexual contact with men who were bisexual or IV drug users. (This patient has been previously reported elsewhere [2].)

Patient 3, a 34-year-old Jamaica-born man, was living in Miami, Florida, when he became ill in 1982. He was found to have PCP and recovered following treatment. He had come to the United States in 1979 and had worked as a private-duty nurse in Miami since then. He denied contact with AIDS patients; a subsequent review of his work assignments showed that he had not cared for any patients reported to have AIDS. He did not recall ever having a needle-stick injury. He also denied homosexual activity, IV drug use, and receipt of blood. One of his female sexual partners was interviewed. She was in good health and denied IV drug use. Another of his female partners could not be located.

Patient 4, a middle-aged man, was living in New York City when he became ill in 1983. He was found to have PCP and recovered following treatment. He worked as a nurse's aide in the outpatient department of a hospital. AIDS patients had been seen at this hospital, but he apparently had not cared for any of them. In the past, he had had needlestick injuries and had received bites from patients, but could recall no such injuries for more than 2 years. Although he admitted to a homosexual encounter as an adolescent, he denied homosexual activity as an adult. He also denied IV drug use and receipt of blood and had no foreign travel since 1976. His serologic tests for syphilis (FTA-ABS) and hepatitis B virus (antibody to hepatitis B core antigen) were positive.

Reported by S Rosen, MD, Baltimore, M Levin, MD, R Berg, MD, D Dutta, MD, S Baker, Sinai Hospital, Baltimore, D Williams, C Campbell, R Dunning, D Glasser, MD, Baltimore City Health Dept, J Horman, DVM, E Israel, MD, State Epidemiologist, Maryland State Dept of Health and Mental Hygiene; U Setia, MD, R Kapila, MD, University of Medicine and Dentistry New Jersey, Newark, W Parkin, DVM, State Epidemiologist, New Jersey State Dept of Health; J Ehrenkrantz, MD, South Florida Hospital Consortium for Infection Control, Miami, R Morgan, MD, Dade County Health Dept, J Sacks, MD, Acting State Epidemiologist, Florida State Dept of Health and Rehabilitative Svcs; S Friedman, MD, New York City Dept of Health, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; Div of Field Svcs, Epidemiology Program Office, Hospital Infections Program, AIDS Activity, Center for Infectious Diseases, CDC.

Editorial Note: Although the etiology of AIDS remains unknown, epidemiologic evidence suggests that AIDS is caused by an infectious agent transmitted sexually or, less commonly, through exposure to blood or blood products. The disease has not been shown to be transmitted through casual contact with affected individuals.

Continuing surveillance of AIDS confirms earlier observations that 94% of patients come from the high risk groups previously described (3). The source of AIDS in the patients reported here is unknown. They denied belonging to known AIDS risk groups; however, the accuracy of data concerning sexual activity and IV drug use cannot be verified. None gave a history

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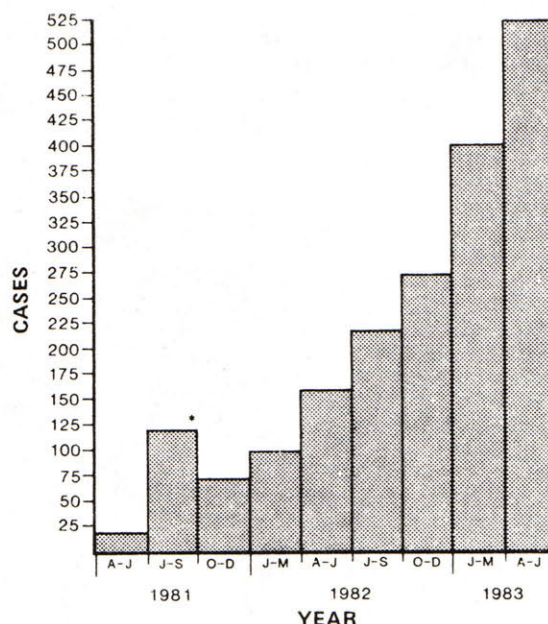
Current Trends

Update: Acquired Immunodeficiency Syndrome (AIDS) — United States

Between June 1981 and August 1, 1983, physicians and health departments in the United States and Puerto Rico reported 1,972 cases of acquired immunodeficiency syndrome (AIDS) meeting the surveillance definition*. These cases were diagnosed in patients who have Kaposi's sarcoma (KS) or an opportunistic infection suggestive of an underlying cellular immunodeficiency. Three hundred thirty-one cases (17% of the total) were reported to CDC over the last 6 weeks; the average of 53 cases reported per week during July 1983 compares

*For the limited purposes of epidemiologic surveillance, CDC defines a case of AIDS as a reliably diagnosed disease that is at least moderately indicative of an underlying cellular immunodeficiency in a person who has had no known cause of underlying cellular immunodeficiency or any other underlying reduced resistance reported to be associated with that disease.

FIGURE 1. Cases of acquired immunodeficiency syndrome (AIDS), by quarter of report — United States, second quarter 1981 — second quarter 1983



*Includes backlog of cases identified at beginning of CDC surveillance

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

AIDS — Continued

with an average of 11 per week in July 1982 and 24 per week in January 1983 (Figure 1). Of all patients, 759 (38%) are known to have died; the mortality rate for patients with opportunistic infections continues to be over twice that of patients with KS alone. *Pneumocystis carinii* pneumonia (PCP) is the most common life-threatening opportunistic infection in AIDS patients; many of the patients may have multiple opportunistic infections, either sequentially or simultaneously. Of the reported cases, 71% have homosexual or bisexual orientation; 95% of the patients with KS are in this group.

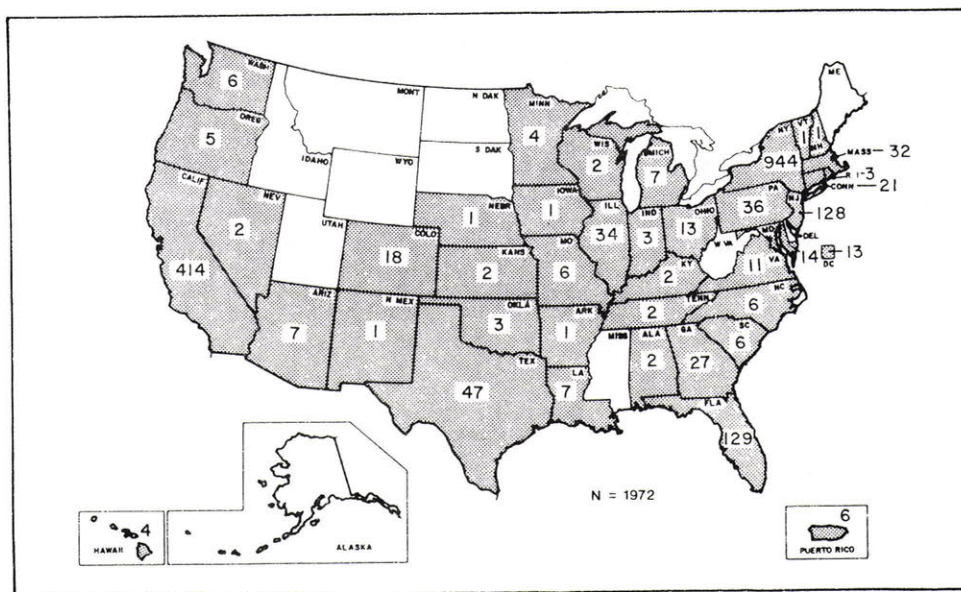
Over 90% of AIDS patients are 20-49 years old; almost 47% are 30-39 years old. Cases have occurred in all primary racial groups in the United States. One hundred twenty-nine (7%) cases have been reported in women; the ratio of male to female patients (14:1) has been almost constant over the last year. Most cases are reported among residents of large cities. New York City has reported 44% of all cases meeting the surveillance definition; San Francisco, 10% of cases; and Los Angeles, 6% of cases. Cases have been reported from 39 states, the District of Columbia, and Puerto Rico (Figure 2).

Reported by city, state, and territorial epidemiologists; AIDS Activity, Center for Infectious Diseases, CDC.

Editorial Note: To date, CDC has been notified that at least 18 states and territories have made AIDS reportable, and approximately 26 have introduced or are considering measures to make it reportable. Some states that have not taken specific action have cancer registries or already require many opportunistic infections to be reported. Physicians aware of patients fitting the case definition for AIDS are requested to report such cases through their local or state health departments. AIDS patients who do not belong to any of the recognized risk groups or who are recipients of blood or blood products (including anti-hemophilic factors) should be reported immediately. CDC will soon make available a reporting format by which patients' names need not be sent to CDC.

Concern has been expressed about potential transmission of AIDS from hospitalized patients to health-care personnel (1). Although no instance of direct transmission has been

FIGURE 2. Acquired immunodeficiency syndrome (AIDS) cases reported to CDC, by state — United States, as of August 1, 1983



AIDS — Continued

reported (2), accidental needlestick injuries or similar types of accidents occasionally occur. To evaluate the possible risk of AIDS transmission after such accidents, the Hospital Infections Program, CDC, in cooperation with several state health departments, has initiated a study at selected hospitals of health-care personnel who have had documented parenteral or mucous membrane exposure to blood of definite or suspected AIDS patients. This study is being expanded to include additional hospitals. Hospital infection control staff who have been notified of these types of personnel exposures in their hospitals and wish to obtain additional information about participation in the study should contact the Hospital Infections Program, (404) 329-3406.

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*Epidemiologic Notes and Reports***Efficacy of Mumps Vaccine — Ohio**

From February 5 through April 23, 1982, 110 cases of mumps were reported among 357 sixth-, seventh-, and eighth-grade students in a middle school in Ashtabula County, Ohio. Because the overall attack rate was 31%, the efficacy of the mumps vaccine was investigated.

Vaccine efficacy (VE) was determined using the standard formula*, and was calculated using a variety of case definitions, case surveillance systems, and vaccination-status ascertainment methods to evaluate their effects on the estimated VE. Three studies were performed. **Study 1:** Using data collected at the school for case ascertainment and vaccination status, clinical VE was initially estimated at 37% (Table 1). Mumps vaccination was not required for school entry, and vaccination-status records were incomplete. Case ascertainment relied on either the school nurse's diagnosis or a parental history of mumps illness and, therefore, lacked a uniform case definition. **Study 2:** Using a uniform case definition (parotitis

* $VE(\%) = \frac{ARU - ARV}{ARU} \times 100$, where ARU and ARV are the attack rates in the unvaccinated and vaccinated, respectively.

TABLE 1. Results of three mumps vaccine efficacy studies — Ashtabula County, Ohio, 1982

Sources of:	Study 1	Study 2	Study 3
Population	School-based	School-based	Family-based
Case-finding	School nurse	Parents	Parents
Case definition	Dx by nurse or parent	Parotitis $\geq$ 2 days	Parotitis $\geq$ 2 days
Vaccine status	School record	Parents	Provider verified
Attack rate (vaccinated)	18% (12/67)	15% (19/128)	7% (2/30)
Attack rate (unvaccinated)	28% (77/272)	49% (70/142)	43% (30/69)
Vaccine efficacy (95% confidence limits)	37% (0-63)	70% (51-81)	85% (39-94)



MORBIDITY AND MORTALITY WEEKLY REPORT

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*Epidemiologic Notes and Reports***Arboviral Encephalitis — United States, 1983**

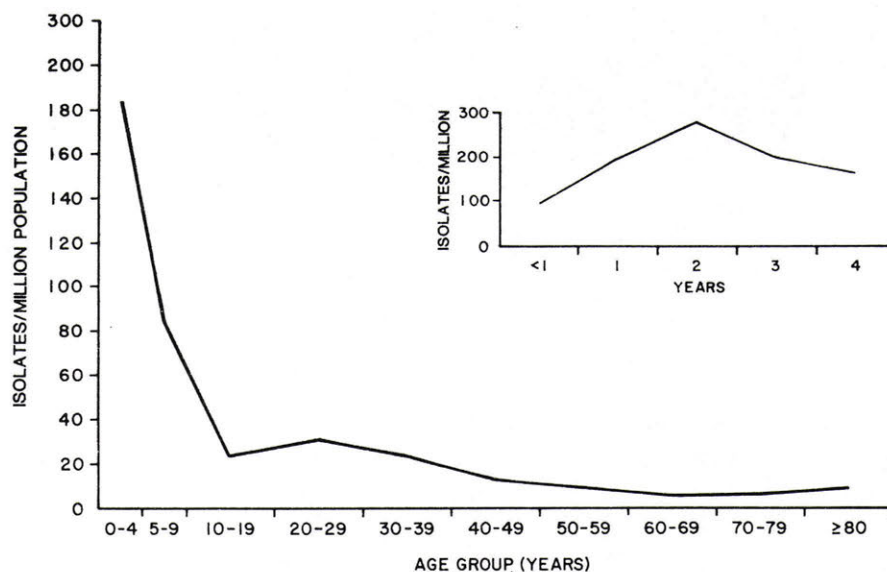
Thus far in 1983, 22 cases of arboviral encephalitis in humans have been reported in the United States; additional cases have been reported in horses, chickens, and wild birds.

Eastern Equine Encephalitis (EEE): Nine human cases of EEE have been diagnosed by virus isolation or serology. Three cases occurred in Florida: a 12-year-old boy from Marion County developed symptoms on July 12 and has recovered with mild residual hemiparesis; a 66-year-old woman from Walton County had onset July 16 and died July 26; a 7-year-old girl from Pensacola had onset of a relatively mild illness July 14 and has recovered. Five confirmed cases have been reported from Massachusetts. Three had presumed exposure in the southeastern part of the state (Plymouth and Bristol Counties): a 64-year-old man with onset August 4 had a fatal case; a 28-year-old woman who developed symptoms about August 11; and an 11-year-old boy with onset August 12 have recovered. A fourth case occurred in a 53-year-old Massachusetts man from Randolph who had onset between August 15 and 17 and remains comatose. A fifth case occurred August 18 in a 58-year-old Norwood woman who recovered. A confirmed case occurred in a 49-year-old woman from Lowndes County, Georgia, who had onset July 14; she recovered but has neurological sequelae.

Cases of EEE in horses have been reported from Florida (55 cases), Louisiana (6), New York (6), New Jersey (5), Massachusetts (4), Rhode Island (4), Michigan (3), Alabama (2), Mississippi (2), Tennessee (2), Georgia (1), and Maryland (1).

Western Equine Encephalitis (WEE): No human cases have been reported. Cases in horses have occurred in South Dakota (6 cases with laboratory evidence), North Dakota (3), California (2), Kansas (2), Minnesota (2), Montana (2), Texas (2), Arizona (1), and New Mexico (1). WEE virus transmission is at a high level, as reflected by isolations from *Culex tarsalis* mosquitoes in parts of Arizona, California, Minnesota, and North Dakota. Vector control efforts have been undertaken in some areas; aerial spraying of malathion has been initiated in a 29-county area of west-central and northwestern Minnesota.

St. Louis Encephalitis (SLE): Two serologically confirmed, non-fatal cases of SLE have been reported (one in a 24-year-old woman from near Yuma, Arizona, with onset June 20, and a second in a 3-year-old boy from Bard, California, with onset July 26). A high rate of SLE virus transmission in flooded areas of southern Arizona has been demonstrated by testing *Cx. tarsalis* collected in early August. In the central and southeastern United States (Alabama, Florida, Illinois, Indiana, Kentucky, Mississippi, Ohio, and Tennessee) SLE virus activity deter-

*Shigellosis — Continued***FIGURE 2. *Shigella*: Rate of reported isolates, by age — United States,* 1982**

* Age data unavailable for California.

Current Trends**Acquired Immunodeficiency Syndrome (AIDS):
Precautions for Health-Care Workers and Allied Professionals**

Acquired immunodeficiency syndrome (AIDS) was first recognized in 1981. The epidemiology of AIDS is consistent with the hypothesis that it is caused by a transmissible infectious agent (1,3). AIDS appears to be transmitted by intimate sexual contact or by percutaneous inoculation of blood or blood products. There has been no evidence of transmission by casual contact or airborne spread, nor have there been cases of AIDS in health-care or laboratory personnel that can be definitely ascribed to specific occupational exposures (4).

CDC has published recommended precautions for clinical and laboratory personnel who work with AIDS patients (5). Precautions for these and allied professionals are designed to minimize the risk of mucosal or parenteral exposure to potentially infective materials. Such exposure can occur during direct patient care or while working with clinical or laboratory specimens and from inadvertent or unknowing exposure to equipment, such as needles, contaminated with potentially infective materials. Caution should be exercised in handling secretions or excretions, particularly blood and body fluids, from the following: (1) patients who meet the existing surveillance definition of AIDS (4); (2) patients with chronic, generalized lymphadenopathy, unexplained weight loss, and/or prolonged unexplained fever when the pa-

AIDS — Continued

tient's history suggests an epidemiologic risk for AIDS (4,2); and (3) all hospitalized patients with possible AIDS.

These principles for preventing AIDS transmission also need to be adopted by allied professionals not specifically addressed in the previous publications but whose work may bring them into contact with potentially infective material from patients with the illnesses described in the above three groups.

The following precautions are recommended for those who provide dental care, perform postmortem examinations, and perform work as morticians when working with persons with histories of illnesses described in the above three groups:

DENTAL-CARE PERSONNEL

1. Personnel should wear gloves, masks, and protective eyewear when performing dental or oral surgical procedures.
2. Instruments used in the mouths of patients should be sterilized after use (5-9).

PERSONS PERFORMING NECROPSIES OR PROVIDING MORTICIANS' SERVICES

1. As part of immediate postmortem care, deceased persons should be identified as belonging to one of the above three groups, and that identification should remain with the body.
2. The procedures followed before, during, and after the postmortem examination are similar to those for hepatitis B. All personnel involved in performing an autopsy should wear double gloves, masks, protective eyewear, gowns, waterproof aprons, and waterproof shoe coverings. Instruments and surfaces contaminated during the postmortem examination should be handled as potentially infective items (5-7).
3. Morticians should evaluate specific procedures used in providing mortuary care and take appropriate precautions to prevent the paraneural or mucous-membrane exposure of personnel to body fluids.

These and earlier recommendations outline good infection control and laboratory practices and are similar to the recommendations for prevention of hepatitis B. As new information becomes available on the cause and transmission of AIDS, these precautions will be revised as necessary.

Reported by AIDS Activity, Div of Host Factors, Div of Viral Diseases, Hospital Infections Program, Center for Infectious Diseases, Office of Biosafety, CDC

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ID/IC BULLETIN

Infectious Diseases and Infection Control, University of California, S.F.

Vol. 3, #2
July, 1983

ACQUIRED IMMUNODEFICIENCY SYNDROME: EPIDEMIOLOGY AND INFECTION CONTROL

In June 1981 the Centers for Disease Control (CDC) first received reports about unusual diseases occurring in gay men in New York City and California. The diseases, Kaposi's Sarcoma (KS) and *Pneumocystis carinii* pneumonia (PCP), as well as other life-threatening opportunistic infections (OI) appeared to be linked by a severe disorder of the immune system. Because of the underlying immune dysfunction, this disease entity has been termed Acquired Immunodeficiency Syndrome (AIDS).

SURVEILLANCE OF AIDS

Retrospectively, AIDS may have occurred in the United States since late 1978. Table 1 indicates the total number of cases recognized nationally to date. The number of cases has been doubling every 5-6 months. Half the patients are in New York City with San Francisco having the second highest incidence, but cases have now been reported from 35 states. Seventy-one percent of the cases have occurred in homosexual or bisexual men, 17% in intravenous drug abusers, 5% in Haitians, 1% in hemophiliacs, and 6% in individuals with no known risk factors. Included in the latter group are sexual partners of drug abusers, possible transfusion related cases, and others from whom insufficient information could be obtained or no risk group could be determined, (personal communication, Centers for Disease Control). There have also been reports of AIDS in infants of Haitian and drug-user mothers (J Oleske et al., JAMA 249:2345, 1983; A Rubinstein et al., JAMA, 249:2350, 1983).

Cases have occurred in the San Francisco Bay Area since 1980 (Table 2). Almost all of the Bay Area cases have occurred in gay men (personal communication, San Francisco Public Health Department).

Initially, no special precautions or isolation measures were used at the University of California, San Francisco (UCSF), because the cause of the underlying immune disorder was not suspected to be communicable. Early reports from the CDC indicated that patients had little or no contact with each other; however, in June

Table 1. Disease and Mortality, United States, 1978-1983, As of June 7, 1983

	Cases	Percent of total	Deaths (percent)
KS without PCP	415	26.7	88 (21.2)
PCP without KS	783	50.5	339 (43.3)
Both KS and PCP	120	7.7	67 (55.8)
OI without KS or PCP	234	15.1	103 (44.0)
Total	1552	100.0	597 (38.5)

1982 clusters of cases began to be reported. In July 1982 the Infection Control Committee at UCSF (Moffitt Hospital) established that Blood and Enteric Precautions would be used for AIDS patients. Specific guidelines were published in the ID/IC Bulletin (Vol 2, No 3, October 1982). The CDC published guidelines in November 1982 emphasizing that AIDS patients should be placed on Hepatitis B virus-like precautions (CDC, MMWR, 31:577, 1982).

Table 2. Disease and Mortality, San Francisco Bay Area 1980-1983, As of June 15, 1983

	Cases	Percent of total	Deaths (percent)
KS without PCP	110	43.5	16 (14.5)
PCP without KS	91	36.0	36 (40.0)
Both KS and PCP	34	13.4	20 (58.8)
OI without KS or PCP	18	7.1	8 (44.4)
Total	253	100.0	80 (32.6)

Infection control concerns have increased concomitant with increasing numbers of patients and escalating press coverage. At Moffitt Hospital an Ad Hoc Subcommittee of the Infection Control Committee was established to review present guidelines and to determine procedures in areas not previously considered. Subsequently, a Task Force comprised of representatives of Moffitt, San Francisco General, and the Veterans Administration Hospitals was formed to develop infection control policies and procedures that were consistent among the three institutions.

ETIOLOGY AND EPIDEMIOLOGY: AIDS

Although the cause of AIDS is unknown, epidemiologic evidence suggests that there is a transmissible agent, possibly a virus, which is responsible for the disease. The incubation period appears to be 6-24 months or longer. It is hypothesized that the agent affects the immune system and particularly the T-lymphocytes in some still undetermined manner. Patients then become susceptible to a variety of infections, malignancies, and possibly other diseases. There may also be asymptomatic carriers or conceivably individuals who have been infected and recovered, although no one with recognized disease has yet been shown to recover normal immune function. In the absence of a known agent and a test to determine who has been infected, the epidemiology remains somewhat obscure. Nevertheless, it is important to recognize that considerable epidemiologic data have accumulated which implicate AIDS infection through sexual transmission, infusion of blood or blood products, and vertical transmission from infected mothers *in utero* or during delivery. Despite misleading information in some of the lay press, there has been no evidence to date which indicates that AIDS can be spread by any other method.

Medical workers may conceivably be at risk of acquiring AIDS through occupational exposure because of frequent handling of blood and other body fluids. Although medical personnel have been treating patients in New York since 1979 and in California since 1980, there have been no documented cases among health care or laboratory personnel caring for AIDS patients or processing laboratory specimens (CDC, MMWR, 31:101, 1983). Infection Control guidelines which are based on current knowledge should be respected and followed because of the theoretical possibility of nosocomial transmission to personnel. There is, however, no evidence to support airborne or casual contact transmission of an AIDS agent or spread through fomites which are not contaminated with blood or excreta. Placement of patients on strict isolation or employing restrictive measures which would prevent a patient from receiving optimal medical care should not be practiced.

EPIDEMIOLOGY: INFECTIONS ASSOCIATED WITH AIDS

Patients with AIDS frequently harbor a number of infectious agents, either through asymptomatic colonization or overt infection. Appropriate infection control

procedures should be followed if patients are known or suspected to be infected with a transmissible agent. The following organisms have been recognized in AIDS patients and the epidemiology in terms of nosocomial transmission is discussed for each.

Cytomegalovirus (CMV): Almost all AIDS patients have been found to be infected with CMV. The organism is usually present in urine, semen and saliva but may also be isolated from blood and tissues. CMV is a common infection worldwide with positive antibody titers found in 30-100% of the populations studied. Most infections in immune competent individuals are asymptomatic or produce a mononucleosis-like syndrome. Infection with CMV has particular significance for pregnant women since *in utero* transmission can cause congenital infection in the neonate. Two recent papers review the current literature on nosocomial spread of CMV (AB Young et al., Lancet, 1:975, 1983; Dept of Health Services, State of California, Calif Morbidity Suppl #7, Feb 25, 1983). Studies of personnel in hospital areas with many potential shedders, such as dialysis units and nurseries, indicate insignificant or minimal occupational risk to employees. Transmission occurs via direct contact with urine, saliva, blood, etc. and can be prevented by thorough handwashing following contact with body fluids. It is prudent, however, to recommend that pregnant women not provide direct patient care to patients with CMV or AIDS.

Pneumocystis carinii: *P. carinii* is a protozoan also found ubiquitously worldwide. By the age of 4, approximately 80% of immunocompetent children have serological evidence for past infection. Disease is believed to occur when an individual's own latent organisms become reactivated in the presence of immunosuppression. Outbreaks have occurred in immunosuppressed children and infection probably occurs through the respiratory route (TK Ruebush II et al., Am J Dis Child, 132:143, 1978). Experts have not recommended isolation or special precautions for patients with pneumocystis pneumonia (CDC: Isolation Techniques for use in Hospitals, 2nd ed., 1978); however, the policy at UCSF is to separate them from immunosuppressed patients.

Mycobacteria: Both *M. tuberculosis* and "atypical" mycobacteria, e.g. *M. avium-intracellulare* have caused pulmonary and disseminated infection in AIDS patients. Tuberculosis (TB) has been less common in the San Francisco experience but is highly communicable in patients who are coughing. Patients with known or suspected TB must be placed in Respiratory Isolation. (UCSF Infection Control Manual — Section 3.5, page 11). The epidemiology of the non-tuberculous mycobacteria is less well understood. The organisms are found widely in nature, especially in water and soil. Colonization and asymptomatic infection are much more common than actual disease. Pulmonary infection is most likely to occur in individuals with predisposing factors, but may occur in otherwise healthy persons. Organisms are probably acquired through exposure to natural sources in the environment but person to person transmission has been reported, albeit very rarely (E

Wolinsky, Am Rev Resp Dis, 119:107, 1979).

Herpes Simplex Virus (HSV): Herpetic lesions are not uncommon in AIDS patients and occasionally develop into severe peri-rectal or peri-oral ulcers. HSV is transmitted by direct contact with virus containing lesions or saliva; gloves should be worn for contact with lesions or for mouth care.

Cryptococcosis: *Cryptococcus neoformans* is a fungus which can cause meningitis or disseminated disease. It is usually an opportunistic infection but can occur in individuals with no apparent risk factors. Infection occurs by inhaling dust containing the organism. Soil contaminated with pigeon droppings contains high concentrations of the yeast. There are no reports of man to man transmission and special infection control procedures are not necessary.

Toxoplasmosis: *Toxoplasma gondii* is a protozoan which can cause a variety of diseases in man including a congenital syndrome, but most infections are asymptomatic. Immunosuppressed patients are more likely to exhibit clinical disease. Many animal species are infected and infection can occur through ingestion of raw meat. Only cats and other felines can excrete infectious oocysts. Person to person transmission does not occur except *in utero*. No special precautions are necessary for patient care.

Cryptosporidiosis and Other Intestinal Parasites: AIDS patients are often infected with intestinal parasites as well as enteric bacterial pathogens. Routine Enteric Precautions which include special handling of fecally contaminated articles and gloves for contact with feces will prevent nosocomial transmission. Most of these organisms are acquired through the fecal-oral route and thorough handwashing is essential.

INFECTION CONTROL POLICIES AND PROCEDURES

The following guidelines for care of AIDS patients have been approved by the Infection Control Committee and Medical Executive Board at UCSF (Moffitt-Long) Hospitals and Clinics. These recommendations are based on current knowledge and may be refined as additional scientific findings become available.

Identification of Patients: The definition of an AIDS patient is as outlined by the CDC in their category A designation; that is, "a disease at least moderately predictive of a defect in cell mediated immunity, occurring in a person with no known cause of diminished resistance to that disease. Such diseases include *Pneumocystis carinii* pneumonia, Kaposi's sarcoma and other serious opportunistic infections." It is recommended that patients with the generalized lymphadenopathy syndrome or those being evaluated for the possibility of AIDS should be included in the definition for infection control purposes. The responsibility for identification of the patient in the above categories should rest with the attending physician. The attending physician must report the diagnosis to the Public Health Department since category A AIDS is now a reportable disease. The attending physician should also have the responsibility,

in consultation with the Infection Control Unit, of determining when appropriate precautions and/or isolation measures can be discontinued.

Isolation Procedures: Patients should be placed on Blood and Excretion Precautions (blue sign). Private rooms are not necessary for the care of patients with AIDS unless they have an additional illness which would normally require a private room. A patient with AIDS should not be placed in a room with another immunocompromised or infected patient. Individuals may want or need private rooms for reasons other than infection control, however, and these may also be considered during patient placement. Gloves should be worn when personnel have contact with blood, secretions, or excretions. Gowns should be worn if clothing may become contaminated with blood or excretions but are otherwise not routinely necessary. Masks are necessary for personnel or visitors if the patient has tuberculosis. They may be worn for direct sustained contact with other patients who are actively coughing although there are no data to support respiratory transmission of PCP or CMV to visitors or staff. Masks should not be worn if an AIDS patient has no respiratory disease. The same guidelines apply for the wearing of masks by AIDS patients when they are outside of their rooms; it is not recommended that patients wear masks when in their own rooms. Handwashing is mandatory for everyone who has patient contact. Disposable dietary trays are not necessary. Linen needs to be double bagged only if it is visibly contaminated with blood or excreta. Rooms do not routinely need to be high cleaned; questions concerning exceptions should be directed to Infection Control.

Equipment: Disposable items which are contaminated with blood or excreta should be red bagged. Contaminated reusable items should be rinsed under running water and sent to Materiel Services in a plastic bag labelled "contaminated". Any instrument which comes in contact with blood, secretions or excretions must be sterilized before reuse. This includes all lensed instruments, laryngoscopes and endotracheal tubes. Respiratory therapy tubing may be pasteurized. Because of the extreme difficulty in cleaning "Clinitron" beds, they should not be used for AIDS patients. Environmental surfaces contaminated with blood or other body fluids should be immediately cleansed with a disinfectant such as bleach diluted 1:10.

Out-Patient Clinics and Emergency Room: AIDS outpatients may use common waiting areas and bathroom facilities unless they have an infection that would otherwise require isolation. Patients who are actively coughing should be asked to cough or sneeze into a tissue and efforts should be made to minimize close contact with other immunocompromised patients. The general guidelines for handling equipment should also be applied in these settings.

Laboratory Specimens: Specimens from patients will be labelled, "H/A Precautions", and placed in an impervious bag or container for transport. It is important to remember, however, that blood, other body fluids and tissues from anyone may be infectious and appropriate

infection control measures should always be followed during specimen processing.

Departmental Procedures: Questions concerning special infection control procedures in each hospital department should be addressed to the Infection Control Department (x 5793).

PSYCHO-SOCIAL ISSUES

Patients with suspected or proven AIDS frequently are very frightened and/or confused by their illness. They have a need for a trusting, non-rejecting relationship with their health care providers. Over-isolation can be traumatic to a person who is already faced with a multitude of concerns about his chances for survival, his relationship with family and friends, and his lifestyle after diagnosis.

The Infection Control guidelines described in this Bulletin are designed to protect personnel from possible infectious diseases and yet provide a humane approach to patient care. Personnel who have concerns about the transmissibility of AIDS or its associated infections may contact the Infection Control Department (x 5793) to discuss these issues or to set up inservice programs for their staff.

Infectious Diseases and Infection Control Unit: John E. Conte, Jr., M.D.; Linda L. Rosendorf, M.S.; Jacqueline Octavio, R.N.

Note: An excellent bibliography of all publications concerning AIDS through May 1983 can be obtained by calling the AIDS/KS Foundation at (415) 864-4376.

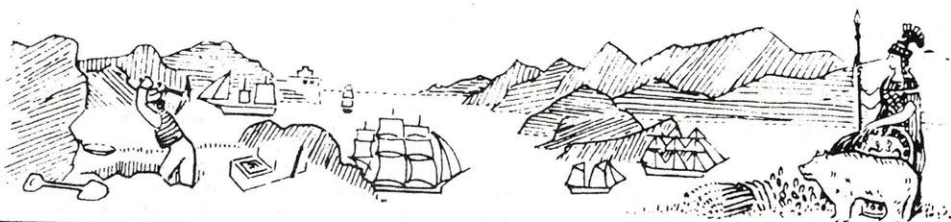
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California Morbidity

Weekly Report from the

Infectious Disease Section
State Department of Health Services



Facts about AIDS

August 1983

The number one priority of the U.S. Public Health Service today is a new disease called Acquired Immune Deficiency Syndrome, or AIDS. Since AIDS was first reported in the United States, in mid 1981, the Public Health Service has received reports of more than 1,900 cases and almost 750 deaths.

AIDS is a serious threat to the health of several specific groups in the American population, a public health problem that merits the highest level of concern. Today, researchers within the Public Health Service and in many major medical institutions are working to identify the cause of AIDS and to develop effective treatments and preventive measures.

Since it was first reported in 1981, medical experts have learned a great deal about AIDS. Here, in question-and-answer form, is the most accurate information available about the nature and extent of AIDS, the populations at risk of contracting AIDS, the actions that individuals can take to reduce the spread of AIDS, and the many research and related activities now underway in the Public Health Service.

What is AIDS?

AIDS is a serious condition characterized by a specific defect in natural immunity against disease. People who suffer from AIDS become susceptible to a variety of rare illnesses. These illnesses are not normally found, or are relatively mild, if they occur, in people whose immune systems are normal. The two diseases most commonly found in AIDS patients are *Pneumocystis carinii* pneumonia, a lung infection caused by a parasite, and Kaposi's sarcoma, a rare form of cancer or tumor of the blood vessel walls.

What are its symptoms?

Many AIDS patients do recall having some symptoms before being diagnosed. Some of these early signs are similar to those of many other illnesses such as cold or flu. These symptoms may include fever, night sweats, swollen glands (enlarged lymph nodes)—in neck, armpits, or groin,—unexplained weight loss, diarrhea, persistent coughs, fatigue and loss of appetite. Anyone with prolonged, persistent symptoms should consult a physician. The incubation period for AIDS appears to range from a few months to about 2 years.

Is AIDS widespread?

There were 1,902 cases reported in the U.S. as of July 18, 1983. In addition, over 130 AIDS cases were reported from 21 other countries during the same period of time. Although at present the number of cases is not large, no one can predict how many people will develop the disease in the coming months and years.

Who gets AIDS?

Nearly 95 percent of the AIDS cases have occurred in people belonging to one of four distinct groups:

- Sexually active homosexual and bisexual men with multiple sex partners. This group accounts for about three fourths of all of the reported cases.
- Haitian entrants into the United States, 5 percent.
- Present or past abusers of intravenous drugs, 17 percent.
- Persons with hemophilia, .8 percent.

The failure to identify cases among the thousands of friends, relatives and co-workers of AIDS patients provides further assurance that routine contact of others no risk.

What causes AIDS?

Scientists have not discovered the cause of AIDS, but they suspect that it is caused by a virus, possibly one present in the blood and/or body fluids, such as semen. AIDS appears to be primarily transmitted through sexual contact. The majority of cases (over 70%) have been in homosexual or bisexual men with multiple sex partners.

AIDS also has been found in intravenous drug abusers, leading investigators to suspect that AIDS can be transmitted by blood on contaminated needles that have been shared.

The best evidence for transmission of AIDS through blood products is the occurrence of AIDS in a small number of hemophilia patients receiving large amounts of Factor VIII, a clotting substance in blood.

As of July, 1983, 98 Haitian entrants had developed AIDS. Public Health Service and other doctors are studying this group and are working with the Haitian government to determine the course of the disease in that country.

Some patients cannot be placed into high-risk groups, but researchers believe that most of these are linked by close physical contact to AIDS victims. Some of the women who have developed AIDS have been steady sex partners of men with AIDS or men who are at high risk for AIDS, or they have a history of drug abuse. Children who have developed a syndrome similar to AIDS may have been exposed to AIDS before or during birth.

What are some theories about viruses linked to AIDS?

Researchers have reported finding evidence of several viral infections in the blood of AIDS patients, including those of cytomegalovirus (CMV), Epstein-Barr virus (EBV) and human T-cell leukemia virus (HTLV).

However, scientists are still uncertain if these viruses play a role in causing AIDS, or if they appear after the patient's immune system has been weakened by AIDS.

How contagious is AIDS?

No cases have been found to date where AIDS has been transmitted by casual or even close daily contact with AIDS.

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patients or persons in the high risk groups. For instance, family members other than sex partners of AIDS victims have not developed AIDS. Ambulance drivers, police, and firemen who have offered emergency assistance to AIDS patients have not fallen ill. Nurses, doctors, and health care personnel have not developed AIDS from exposure to AIDS patients.

Although other diseases may be transmitted through saliva, there is no evidence that AIDS is transmitted by sweat or saliva.

However, health care providers and laboratory workers should follow careful procedures when handling any blood and tissue samples from patients with potentially transmissible diseases, including AIDS.

How do persons with hemophilia get AIDS?

Many persons with hemophilia require extensive use of Factor VIII, a blood product that helps blood to clot. Without effective clotting, even minor cuts can cause prolonged and dangerous bleeding. For persons with hemophilia, the development of Factor VIII has been an important medical advance.

Factor VIII is extracted and concentrated from pooled blood plasma donated by thousands of people, and it appears that in some rare instances the plasma has carried AIDS.

Recently, the FDA approved a new heat treatment similar to pasteurization for treating blood products such as Factor VIII. This procedure will reduce the likelihood that blood products will be contaminated with infectious agents like hepatitis B and, possibly, AIDS.

Can the hepatitis vaccine spread AIDS?

Concern has been expressed about the safety of hepatitis B vaccine (Heptavax-B) because the vaccine is made from the plasma of carriers of hepatitis B, many of whom may be in the same populations at high risk for AIDS. However, the procedures used in the manufacture of hepatitis B vaccine are effective in inactivating viruses from every known group. Therefore, the risk of vaccine-induced infection by any transmissible agent that might cause AIDS is extremely remote, and is far outweighed by the potential benefit from hepatitis B vaccine to individuals at high risk for hepatitis B virus infection.

Is there a danger of contracting AIDS from donating blood?

Absolutely not. Reputable blood banks and other blood collection centers use sterile equipment and disposable nee-

dles. Thus, there is no chance that a needle used for one blood donor would be used for another. The need for blood is always acute, and people who are not in the high-risk groups are urged to continue to donate blood as they have in the past. The chance of contracting AIDS through a blood transfusion has been estimated to be one in a million.

Is there a test for AIDS in blood?

There is as yet no test to detect AIDS in blood. Public Health Service agencies are examining blood products in order to make rapid progress in developing a screening test for AIDS. However, a totally satisfactory test may not be possible until the causative agent of AIDS is identified.

How is AIDS treated?

Some AIDS patients with Kaposi's sarcoma are being treated experimentally with forms of interferon—a virus-fighting protein produced by the body. While it has had some success against Kaposi's sarcoma, interferon treatment does not appear to restore immune function. There are other treatments, such as radiation, drugs, and surgery for many of the illnesses suffered by AIDS patients. Many biomedical investigators continue to work on methods for treating the specific immune defects found in AIDS patients.

Limited trials of a substance called interleukin-2, which scientists believe may help fight the severe deficiencies seen in the immune systems of AIDS patients, will begin soon. Preliminary laboratory results are promising, but much more work remains to be done.

Can AIDS be prevented?

The Public Health Service has recommended that the following steps be taken to prevent spread of this disease:

- Sexual contact should be avoided with persons known or suspected of having AIDS.
- Sexual promiscuity is a risk factor. Avoid having multiple sexual partners and avoid sexual contact with others who do.
- Members of high-risk groups should refrain from donating blood.
- Physicians should order blood transfusions for patients only when medically necessary. Health workers should use extreme care when handling hypodermic needles.

In addition, the FDA has advised blood and plasma collection centers to provide information on AIDS to potential donors, asking those in high-risk groups to refrain from donation. Personnel have been advised to learn the early warning signs of AIDS.

What is the Public Health Service doing about AIDS?

The Public Health Service has declared AIDS a top priority. The Centers for Disease Control in Atlanta has mobilized personnel and laboratories to establish a surveillance system to conduct epidemiologic investigations in an attempt to identify risk factors for AIDS. It also is carrying out extensive testing on blood and tissue from AIDS victims to find the specific cause of the disease.

At the National Institutes of Health in Bethesda, Maryland, 6 of the 11 research components are involved in multidisciplinary studies on AIDS in NIH laboratories and clinics. These studies are aimed at determining the causative agents of AIDS, evaluating the natural history of the disease, characterizing the immune deficiency of the patients, improving treatment for AIDS patients, and establishing the disease in animal models.

Research grants have been awarded by NIH to investigators at medical and research institutions around the country. These studies are aimed at evaluating various treatment regimens, investigating the underlying cause of the disorder, studying the AIDS-associated diseases such as Kaposi's sarcoma and opportunistic infections, developing an animal model for the disease, and developing a "surrogate" test for AIDS that may lead to a method for screening blood prior to transfusion.

In addition to new research activities on AIDS, many on-going basic research studies can yield information about the underlying immunologic defect involved in AIDS and about the diseases that attack AIDS victims.

The Food and Drug Administration is involved in several areas of research with NIH. Other FDA work is aimed at increasing the safety of blood and blood products.

What is the hope for the future?

Scientific research often does not provide quick solutions to diseases as complex as AIDS. But given the scope and sophistication of current investigative efforts, there is every reason to hope—and expect—that they will lead to rapid progress against this devastating illness.

Meanwhile, the preventive measures mentioned earlier can help reduce the risk of contracting or transmitting AIDS.

Is there one place where up-to-date information can be obtained?

The Public Health Service has established a toll-free AIDS hotline. The number is 800-342-AIDS. Collect calls will be accepted from Hawaii and Alaska on (202) 245-6867. Calls in Washington, D.C. should be to 646-8182.

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Instructions for Contributors to the AIDS Memorandum

Articles. Articles published in the AIDS Memorandum must have obvious relevance to AIDS. They can describe clinical or experimental findings. The text should be limited to 500 words.

References. References should be integrated into the text in parentheses. Each citation should include journal title, year of publication, volume and issue numbers and inclusive page numbers. Citations from books should include book title, editor(s), publisher and year of publication.

Tables. Whenever possible, data should be organized into tables rather than figures to facilitate the production of the memorandum on our word processor.

Announcement of meetings. Upcoming AIDS meetings will be listed in the memorandum. Announcements should include title, location, date and organizer of the meeting and an address and telephone number for obtaining additional information.

Further information. For further information about the AIDS Memorandum, please call Mrs. Betty Sylvester or Dr. Ruth Guyer at (301) 496-9537.

Mailing instructions. Please send contributions to the AIDS Memorandum to this address:

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INFECTION CONTROL GUIDELINES FOR
PATIENTS WITH THE ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

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Connie Wofsy, Merle Sande

The following report represents a synthesis of ideas originating from
~~three~~ ^{three primary} committees in the hospitals ^{affiliated with the} ~~which have~~ University of California,
San Francisco ~~services~~: The Infection Control Committee for the University of
California--Moffitt Hospitals and its Ad Hoc AIDS Advisory Committee*; the
Infection Control Committee at San Francisco General Hospital**; and the
University of California, San Francisco Task Force for AIDS.***

Honest and sometimes sharp differences of opinion have arisen within and
among the above Committees charged with developing infection control guidelines
for the care of patients with suspected or proven AIDS. The purpose of this
report is to present the guidelines ^{we have drafted} and, recognizing that a scientific basis
for many of the decisions ^{is currently} ~~was~~ lacking, to point out areas of disagreement. We
hope that airing these issues will encourage ^{serve a useful purpose by} further discussion and
investigation, and ~~thereby serve a useful purpose.~~

Introduction

The first case of AIDS in San Francisco was recognized in 1981. By December of 1981, 35 cases were reported in California, mostly from San Francisco and Los Angeles. (1) As of June 1, 1983, a total of 1508 cases, of which 575 were fatal, had been reported to the Centers for Disease Control from 35 states and 109 cases from 17 other countries. The CDC is receiving reports of 4-5 new cases per day and present estimates are that the number of cases is doubling every six months. (2)

~~The disease occurs in high risk epidemiological groups including~~
AIDS principally affects male members of certain
homosexual men, intravenous drug abusers, hemophiliacs, Haitians, some recipients of blood
transfusions and infants born into families with risk factors for AIDS. (3-5)

AIDS has also been described in women who use intravenous drugs or who are sexual partners of men who use intravenous drugs or have the syndrome. (6-8)

There are no identifiable risk factors present in 5.7% of patients with AIDS. (2)

~~The disease is characterized by~~ *variable but often* severe suppression of the cellular immune

system and a marked reduction in helper T-cell ^{to suppressor ratio.} function, ~~resulting in a~~
~~predominance of T-suppressor cell function.~~ (9) Patients are susceptible to the
development of Kaposi's sarcoma ^{for a malignancy of} and ^{to a variety of} opportunistic infections due to a variety
of organisms including: Candida albicans, Pneumocystis carinii,
cytomegalovirus, Herpes simplex, Cryptococcus neoformans, Histoplasma
capsulatum, Mycobacterium avium-intracellulare, Toxoplasma gondii, Legionella,
Cryptosporidium and Isospora.

The etiology of AIDS is unknown but epidemiological data suggest a
transmissible agent, ^{probably a virus.} Several viruses have been suggested including
cytomegalovirus (9,10), Epstein-Barr virus (5,11), Herpes simplex virus (12)
and human T-cell leukemia virus. (13-18)

Transmission of the disease appears to have an epidemiological pattern
similar to hepatitis B, and for this reason, precautions appropriate for
hepatitis B should be utilized as a guideline in implementing infection control
procedures. (3,19) This implies that the disease may be transmitted by blood,
tissue and secretions/excretions that may contain blood (or the virus) such as

semen, urine, ^{and} stool ~~and saliva~~ and that precautions should be directed at reducing exposure to these body fluids. The incubation period ^{probably} ranges from a few months to 24 months ^{or more} with a mean of 12-14 months. (2) To date, ^{health care} ~~there have~~ ^{workers do not appear to have a high risk of AIDS, with most (but not all) cases occurring in members of high risk groups.} ~~been no documented cases of AIDS in health care workers unless the health care worker was in a high risk group and, there has been no ^{evidence for} person-to-person transmission through casual contact.~~ (3)

The guidelines were developed to address two main concerns: a) the potential transmissability of a putative AIDS agent and b) the transmissability of opportunistic pathogens.

× The Definition of AIDS For Infection Control Purposes

The CDC has defined persons for whom precautions should be taken (19):
i.e., "persons with: opportunistic infections that are not associated with underlying immunosuppressive disease or therapy; Kaposi's sarcoma (patients under 60 years of age); chronic generalized lymphadenopathy, unexplained weight loss and/or prolonged unexplained fever in persons who belong to groups with apparently increased risks of AIDS (homosexual

males, intravenous drug abusers, Haitian entrants, hemophiliacs); and possible AIDS (hospitalized for evaluation)."

Comment: There was no significant dissent regarding this definition of AIDS for the purpose of infection control. It is reasonable to include hospitalized patients for whom the diagnosis is being considered but is not yet established. Although the relationship of the chronic lymphadenopathy syndrome to AIDS is not understood, some patients with AIDS have had opportunistic pathogens, such as Mycobacterium

avium-intracellulare, isolated from lymph nodes. ^{Also} Some patients with adenopathy have developed the full syndrome of AIDS. ^{in number of cases Kaposi's Sarcoma may present with only lymph node involvement} For these reasons, this group of patients is included in the definition.

× Identifying the Patient

The Attending physician has the following responsibilities:

- a) to identify the patient who falls into one of the above categories in order that appropriate procedures can be instituted
- b) to report the diagnosis to the State Health Department, since in

California AIDS is now a reportable disease (20)

- c) to determine, in consultation with the Infection Control Unit, when appropriate precautions or isolation measures can be discontinued

Comment: The purpose of this guideline is to clearly establish the responsibility for identification of patients with AIDS or possible AIDS. False labelling of patients leads to undue anxiety and failure to identify AIDS patients could have serious medical consequences. It was the consensus that these responsibilities rest with the primary care physician.

X Precautions

In general, measures consistent with those suggested for the prevention of hepatitis B should be followed.(3,19) Specimens from patients should have ^{biohazard type} a warning label without mentioning a specific disease and should be placed ^{a water proof} in an ~~impervious~~ bag or container for transport. Gloves should be worn by persons in contact with blood, blood specimens, tissue, all body fluids, excretions and articles or surfaces potentially contaminated by them. After such contact, hands should be washed immediately with soap and

water. Thorough handwashing is mandatory before contact with patients suspected or known to have AIDS and before leaving the patient's room. Gowns are recommended for those likely to have direct contact with the patient's secretions, excretions or blood. Environmental surfaces contaminated with blood or other body fluids should be cleaned immediately with a disinfectant such as 5.25% sodium hypochlorite solution.

Comment: Each of the Committees supported the concept that the epidemiology of AIDS parallels that of hepatitis B and that appropriate infection control measures ^{appropriate to that infection} should be used. There was general agreement that there is no evidence for airborne transmission and that spread of the disease through casual contact is unlikely.

The Task Force recommended that specimens being sent to the laboratory should be labelled "H/A" precautions (a code abbreviation for Hepatitis/AIDS).

X Masks

Masks are not routinely necessary for patients with AIDS. They should be worn by patients who are actively coughing when it is necessary for them to leave the hospital room. Masks should be worn by visitors and health care workers who have direct and sustained contact with an actively coughing or intubated patient who is being suctioned.

Comment: There was considerable disagreement between committees and among committee members. One view was that the routine use of masks was not necessary except for a coughing patient in whom the diagnosis of tuberculosis was not yet ruled out. In this situation health care personnel in the patient's room should wear masks and the patient should wear a mask when leaving the room for any reason. Thus "mask precautions" for patients with AIDS should be followed as for tuberculosis. This policy is currently practiced by some metropolitan hospitals involved with the care of AIDS patients.(21,22)

The final recommendations of the Task Force were more conservative. It

suggested that there is a potential for transmission of opportunistic pathogens to other patients, irrespective of tuberculosis, perhaps because of high inocula in the AIDS patient. It concluded that masks should be worn by any coughing patient who leaves the hospital room and by health care workers and visitors who have "direct and sustained contact" with any ^{actively coughing} AIDS patients. This position is supported by animal studies (2³~~7~~) which suggest that P. carinii pneumonia is transmitted by the airborne route. A similar mask policy is practiced in some hospitals in Los Angeles (24) and New York (25).

X Protective Eyewear

Protective eyewear (goggles) should be worn in situations where splatter with blood or blood secretions is expected.

Comment: This guideline is intended for physicians, dentists, technicians, nurses, and other health care workers directly involved in the performance of procedures such as bronchoscopy, endoscopy, or oral surgical procedures which are likely to produce aerosols. It is based on

the "conjunctival splash" type of exposure which is described for hepatitis B. Other procedures, such as endotracheal intubation, endotracheal tube or tracheotomy manipulations, and other surgical procedures must be judged on an individual basis. We are not requiring ~~the~~ ^{our} nursing staff to wear protective eyewear when they attend intubated patients in the intensive care unit.

X Needles and Syringes

Needles and syringes should be disposed of in rigid wall, puncture resistant containers. Needles should not be resheathed after use and disposable equipment should be used whenever possible.

Employees with needlestick injuries should report to the employee health service and be treated according to the needlestick protocol (26) at their hospital.

Comment: Considerable debate arose over the necessity or wisdom of follow-up studies after AIDS-related needlestick injuries. At the present time the Task Force does not recommend follow-up lymphocyte studies unless

✓ done on a research basis, since a variety of illnesses such as CMV-induced mononucleosis (27), influenza, Epstein-Barr virus infection, hepatitis B infection and biliary cirrhosis (28,29) have been shown to reverse the helper-suppressor ratio. Thus, information so derived has a potential for producing untoward anxiety, while not accurately predicting or identifying the disease.

× Linen and Fomites

All contaminated disposable items (visibly soiled with potentially infectious material) should be considered "infectious waste" and identified as such. Contaminated linen should be double-bagged.

Comment: In our hospital, as in many others, "infectious waste" requires special transport and disposal and is identified by red-bagging. Laundry is double-bagged and washed as usual in the hospital laundry. Because of the difficulty in refurbishing and decontaminating "Clinitron" beds after use by patients with AIDS, these devices are not recommended.

X Private versus Multiple Bed Rooms

A private room is not necessary if the patient is cooperative and not coughing, and can be adequately instructed on personal hygiene. However, it may be prudent to admit patients with AIDS to private rooms, when available. When a double room is used, the additional patient should not be an impaired host who is susceptible to opportunistic infection nor should the roommate be a patient who might harbor potential opportunistic infections that could be transmitted to the patient with AIDS.

Comment: Considerable controversy arose over this guideline. Some members felt that private rooms were not necessary since there is no evidence for casual transmission of AIDS but agreed that the roommate of an AIDS patient should not be immunosuppressed or clinically infected with potentially transmissible pathogens.

The recommendations of the Task Force were more cautious. While stating that strict isolation rooms were not necessary for AIDS patients, the Task Force stated that it may be "prudent" to admit patients to private rooms. This was felt not to be essential for the cooperative patient.

The final wording of the guideline attempts to reflect both these points of view.

X Refusal to Care for Patients with AIDS

Personnel should not be excused on their own request from delivering care to patients with AIDS. Employees who believe they are at high risk for infection because of their own immune status should be encouraged to discuss their work responsibilities with their personal physician. If the physician determines that there are certain assignments the employee should not accept, this should be communicated in writing to the employing department for appropriate action, according to the institution's policies and procedures. Pregnant employees should not engage in the direct care of patients with AIDS, given the potential for birth defects from CMV.

Comment: It is our experience that an increasing number of health care workers, including physicians, are reluctant to care for patients with AIDS. Both committees felt that there are risks associated with caring for sick individuals and, providing that appropriate precautions are

taken, care should not be denied to this group of patients on grounds that lacked scientific merit. In cases where there is outright refusal to perform one's duties, the issue is an ethical, legal and administrative problem that must be handled on an individual basis.

X Direct Patient Care Responsibilities for Employees with AIDS

Because the Task Force was unable to reach a consensus on this issue, two alternatives were offered:

- A. A hospital could decide to make an effort to reassign asymptomatic ^{with AIDS} AIDS employees to nonpatient care positions in order to protect the employee from nosocomial pathogens and protect high risk patients from opportunistic pathogens possibly carried by the employee.
- B. A hospital could consider each asymptomatic ^{with AIDS} AIDS employee on a case by case basis. The employee health service, in conjunction with the employee's private physician would need to determine that 1) the employee is free from transmissible infection, 2) the employee is not at risk for contracting an infectious disease in the line of

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performing his patient care duties. Patient care responsibilities could then be assigned according to an ongoing clinical evaluation of the ~~AIDS~~ ^{health} employee's status.

Comment:

This issue led to the sharpest difference of opinion between the committees and among members of the Task Force. The Ad Hoc Advisory Committee concluded that there were no epidemiologic grounds for recommending the removal of such employees, who were asymptomatic, from direct patient contact except perhaps where the patient was immunosuppressed and would be at risk for acquiring an opportunistic infection. The Task Force was more cautious and concluded that an individual hospital could elect to advise employees with AIDS to ~~seek~~ ^{accept} ~~alternative~~ non-patient care positions.

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The final report of the Task Force deals with this issue in a non-committal way by offering both alternatives.

X Disinfection of Instruments (30)

Lensed instruments should be sterilized using ethylene oxide or glutaraldehyde after each use. Respiratory therapy tubing must be thoroughly washed and at least be pasteurized between patient use. Any instrument which comes into contact with blood, secretions, excretions or tissue must be sterilized before reuse; this includes anesthesia equipment such as laryngoscopes and endotracheal tubes.

X Outpatients

These guidelines should also apply to the outpatient and emergency settings. Separate examining rooms are not necessary and in many situations are not practical or feasible. Efforts should be made, however, to minimize direct contact to other severely immunocompromised patients. Specimen-labeling, equipment sterilization, and disposition of equipment will be handled as for hospitalized patients. AIDS outpatients may use common waiting areas and bathroom facilities.

DRA
7/13/83

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RIGHT SIDE

I. AIDS - INFECTION CONTROL WORKSHOP/TASK FORCE REPORTS

1. Infection Control Workshop - Second National AIDS Forum, Denver, June 1983
2. Report From The Task Force on AIDS - University of California, San Francisco

INFECTION CONTROL WORKSHOP

Co-Chairs:

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SECOND NATIONAL AIDS FORUM

DENVER

June 1983

INTRODUCTION

The Infection Control (IC) Workshop of the Second National AIDS Forum met on June 9, 1983. More than 58 participants representing 20 states, the District of Columbia, and three foreign countries attended. Participants included physicians, nurses, dentists, social workers, persons with AIDS, and representatives from several patient advocacy groups. The scope of the discussion with respect to AIDS included (1) principles of IC; (2) definitions of IC issues of concern to persons with AIDS, health care workers, and the community; (3) general policy recommendations; (4) recommendations for strategies and implementation of IC; and (5) a statement of employment rights for persons with AIDS.

This document is the result of the concentrated effort of this group. It represents the conclusions and recommendations based on the best and most current knowledge available regarding the etiology and epidemiology of AIDS. It is expected that this document will be amended as new information becomes available.

I. PRINCIPLES OF INFECTION CONTROL

The following principles were affirmed:

- (A) IC precautions are designed to promote the healthfulness of patients; health care workers; and family, friends, and co-workers of patients. Inappropriate and "over-protective" precautions are detrimental to this goal.
- (B) IC precautions are established to isolate infectious agents and to interrupt their transmission, not to isolate the patient.
- (C) Every patient has a right to health care provided in a timely and equal manner. This access is not to be abridged in the name of IC. These services include diagnostic, therapeutic, rehabilitative, nutritional, and psycho-social services.
- (D) Many of these principles and policies are derived from general IC concerns such as: (1) the spread of many infections may be associated with body secretions and blood; (2) all patients are at risk of contracting infections as well as spreading them; and (3) dissemination of an agent from infected but asymptomatic patients is of concern to patients, health workers, and the community.

- (E) Within the context of Section D above, these precautions are designed to prevent the spread of presumably transmissible agents to others, and to protect AIDS patients and those patients undergoing evaluation for AIDS from acquisition of potential opportunistic infections.
- (F) Patients have a right to individual human dignity and privacy. Whereas communication within the health system is necessary for optimal patient care and not to be compromised, this does not require the widespread broadcasting of the patient's diagnosis, medical condition, sexual orientation, or personal habits. Lists of persons with AIDS must not be posted publicly or discussed in nonpatient settings. The patient's individual or working diagnosis should not be posted on the outside of his or her chart or room. IC precautions should be indicated with a generic label (such as "blood/secretion precautions" or "biohazard"). Diagnostic information needed on test requisitions and specimen labels should be communicated in a discreet way to preserve confidentiality. The family, friends, co-workers, employers, and non-health care providers of the person with AIDS are not to be informed of the diagnosis unless his or her consent is first obtained.

II. DEFINITIONS

- (A) These guidelines apply to:

1. AIDS patients, defined according to the guidelines of the Centers for Disease Control (Morbidity and Mortality Weekly Report, November 5, 1982, page 577).
2. Those undergoing evaluation for AIDS, such as patients symptomatic from a potential severe opportunistic infection or malignancy as defined in the CDC guidelines.

- (B) These guidelines should not be applied to all members of groups at high risk for developing AIDS, as defined by the CDC, and of new groups that may be identified in the future. These IC precautions should not be instituted simply because of a patient's membership in one of the high-risk groups.

- (C) Individuals identified through research projects involved with AIDS, while having a right to access to all medical information obtained on them individually, are not to be labeled "AIDS" or subjected to the same IC guidelines unless they fall into groups A.1 or A.2 above.

- (D) The diagnosis of A.1 or A.2 above is to be made by the primary physician or health care provider, in consultation with the patient, before IC guidelines are instituted.

- (G) Education requires the careful and thoughtful exploration of the community's fears and concerns. This requires acknowledging the stages of reaction to possible contagion among hospital and community workers, family, and friends. Some of these issues may be unrelated to IC but need to be addressed as a distinct concern. Often listening to these concerns may provide a valuable service to alleviate fears and promote a healthy approach to each individual's situation.
- (H) Each health professional must set an example for others, and make a point of initiating and maintaining supporting contact with persons with AIDS. This may be a hug or an handshake, a warm hello or a moment to listen.
- (I) Dialogue is vital to questions, concerns, and problems that may arise. Individual members of this WORKSHOP may identify themselves as available for contact within their own regions.
- (J) Continued and expanded funding for epidemiologic research is vital to interpret the data emerging on other scientific fronts and to provide perspective of these data for IC.
- (K) Patient Bill of Rights should include a statement regarding the freedom from from discrimination based on sexual orientation. Current bills should be changed to include this feature.
- (L) Since the principles and actual practice of IC are occasionally disparate, the Quality Assurance Committee and other hospital and community agencies must have an ongoing program for periodic review and correction of inappropriate IC actions.
- (M) Quality Assurance Audits in hospitals should include an evaluation of:
 - 1. Appropriateness of the precautions being used based on epidemiologic evidence and known principles:
 - A. On the wards
 - B. In the admitting areas
 - C. In the outpatient areas
 - D. In the diagnostic areas
 - 2. Perceptions of patients as to consistency of application of precautions and understanding of patients as to why these precautions are being used.

V. STATEMENT TO EMPLOYERS

Whereas each person has a right to pursue his or her own livelihood, and

Whereas to date there are no data that implicate transmission of AIDS in casual household or place-of-employment contact, and

III. IC GUIDELINES

- (A) These guidelines are applicable to all settings, including inpatient, outpatient, and community.
- (B) These policies are initiated by the diagnosing care provider as outlined in Section II.D. It is the responsibility of this individual to communicate these policies to other members of the health care team.
- (C) Additional precautions may be instituted at the discretion of the nursing staff or other professional staff only in the presence of additional signs and/or symptoms suggesting organ involvement with an additional infectious agent.
- (D) All IC guidelines on each person with AIDS must be reviewed in a timely manner in light of newly acquired data and discontinued when appropriate by the primary care provider or his/her designate.
- (E) Specific IC guidelines are included in the Addendum.

IV. STRATEGIES FOR IMPLEMENTATION AND ACCEPTANCE

- (A) The principles and policies of this WORKSHOP need to be disseminated in a timely manner to our respective communities and agencies.
- (B) With respect to persons with AIDS, adequate time and careful consideration of their needs and fears, including the fear of loss of intimacy and "contamination," must be provided. There is no substitute for this on an individual and personal basis.
- (C) Hospital IC committees, hospital epidemiologists, and public health departments will need careful and thorough education with input from several sources, including medical professionals already familiar with AIDS and persons with AIDS or their advocates.
- (D) Professional teaching is an ongoing and vital aspect of this program. Each institution and health department should be encouraged to have one or more individuals identified as responsible for professional and lay education regarding AIDS and IC precautions.
- (E) Individuals should be designated at the county level to coordinate public education, residential programs, and to provide assistance to hospitals as needed.
- (F) A curriculum that can be reviewed and updated should be developed for all educational activities.

Whereas these guidelines in Section III are based on the transmission of AIDS through blood products or close, intimate sexual contact, and

Whereas normal practices of cleanliness in persons not symptomatically ill are sufficient to minimize contact with their secretions and blood,

the WORKSHOP concludes that employers do not have a right to deny a person with AIDS employment simply on the basis of AIDS. There is precedent for this in other diseases, such as hepatitis B. On an individual basis and in consultation with their own physicians and employee health services, persons with AIDS who are health care workers may elect not to accept assignments that may unduly expose them to infectious agents.

ADDENDUM TO SECTION III IC POLICIES

(A) Precautions should be taken to prevent potential spread of the suspected agent of AIDS through direct contact with blood and body secretions. Recommended measures include:

1. Handwashing before and after direct patient contact
2. Gloves for direct blood and secretion contact
3. Eye protection in situations where gross splatter of blood is likely
4. Puncture-proof containers for needle and sharps disposal
5. Clean up blood spills with bleach at a 1:10 dilution
6. Disposable equipment and/or sterilization of multi-use instruments as per the recommendations of CDC (MMWR, 11/5/82)

Measures not recommended, based on lack of evidence for casual spread, include:

1. Private room, except in situations where one may be desirable for privacy, optimum patient care, or the presence of other infectious agents such as Mycobacterium tuberculosis
2. Restriction from common patient area
3. Masks for patient or personnel
4. Private toilet or bathing facilities
5. Gowns for personnel, except for gross soiling with blood or feces
6. Special dietary trays or linen precautions

(B) Precautions to prevent transmission of opportunistic infections and other bacteria or viral diseases should be based on existing recommendations for those diseases.

(C) Protection of the immunosuppressed patient is provided by careful handwashing and restricting patient contact with other patients and personnel who are actively infected. These precautions minimize the acquisition of ubiquitous organisms commonly found in all environments.

(D) Implementation of these IC precautions will vary according to the setting, as follows:

1. Caretakers of symptomatic patients in the hospital or home setting should enforce the above precautions to the degree appropriate for the amount of direct personal contact and the diseases confirmed or suspected. Precautions for all settings should be consistent and not contradictory.
2. In the outpatient setting the degree of contact is lower. Therefore, the precautions may be limited to handwashing and gloves for contact with secretions. Other precautions may be instituted for patients as required for the organism suspected.
3. While living at home precautions should include good personal health practices with care not to share toothbrushes, razors, enema equipment, and other personal items that may transfer large numbers of infectious agents. Practices in the kitchen should include good handwashing before preparing food for themselves and others using these guidelines expected for ALL food handlers.

(E) Whereas casual contact has not been implicated as a means of transmission of AIDS, activities that are both healthful and natural and which appear safe include kissing, hugging, sharing hot tubs, massage, and other types of physical contact where body secretions are not exchanged. As always persons with infections should use common sense so as not to spread colds and other infections to all persons, including those with AIDS.

(F) Households with two or more persons with AIDS are acceptable and appropriate if persons with AIDS choose to form or maintain them. Persons with AIDS without active infection do not represent a risk to persons living together. Since the sources of opportunistic infections are ubiquitous, good sanitary conditions and personal hygiene should be maintained at all times. Persons with AIDS who become sick should be evaluated for their need for treatment and the need to institute any of the precautions for transmission of that infection.

REPORT FROM THE TASK FORCE ON AIDS

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

In March 1983 a task force was established by Acting Dean Robert Crede under the chairmanship of Dr. Merle Sande to coordinate and enhance communication between the three UCSF hospitals—Moffitt, VAMC, and San Francisco General—regarding issues dealing with the problems of AIDS. The task force's responsibilities have expanded and include (1) producing a consensus document outlining agreed-upon infection control procedures, (2) coordinating efforts aimed at acquiring additional resources and investigations in the area dealing with AIDS, and (3) coordinating educational activities dealing with AIDS. This report deals specifically with the infection issues and represents our best judgment based on current knowledge, and it is hoped that this will offer general guidelines, from which each individual hospital can formulate its own specific requirements.

DEFINITION OF AIDS AND IDENTIFICATION OF THE PROBLEM

AIDS is an acquired immunodeficiency syndrome first recognized in San Francisco in 1981. It appears that the disease did not exist worldwide prior to 1979 but has been increasing at an alarming rate. At the present time approximately 1,300 to 1,400 cases have been reported in the United States. The disease appears to concentrate in specific high-risk epidemiological groups that include gay males (approximately 90% of cases in San Francisco), intravenous drug users, hemophiliacs, Haitians, and some patients receiving transfusions. An estimated 5-6% of all cases have occurred outside of these high-risk groups. The disease is characterized by a severe suppression of the cellular immune system and a marked reduction in helper T-cell function, resulting in a predominance of suppressor cell function. Patients are particularly susceptible to the development of Kaposi's sarcoma and opportunistic infections, particularly Pneumocystis carinii pneumonia, disseminated Mycobacterium avium-intracellulare infections, cytomegalovirus infections, chronic herpes simplex ulcerations, pulmonary and disseminated Cryptococcus neoformans infections, disseminated histoplasmosis, Candida albicans infections of the mucous membranes, and certain immunological manifestations including immune thrombocytopenic purpura. The etiology of the disease to date is unknown but epidemiological data suggest a transmissible agent. Several agents including cytomegalovirus, Epstein-Barr virus, and herpes simplex virus have been suggested, but no agent has been identified. Transmission of the disease appears to have an epidemiological pattern similar to that of hepatitis B, and for this reason the Centers for Disease Control has suggested that hepatitis B precautions be utilized as a guideline in implementing infection control procedures. This implies that the disease may be transmitted by blood and secretions which might contain blood, such as semen, urine, stool, and possibly saliva, and that precautions should be aimed at reducing exposure to these bodily fluids. The incubation period of the disease appears to be as long as 12 to 24 months. To date, there have been no documented cases of health workers involved in the care of AIDS patients having contracted the disease unless the health care worker was in a high-risk group.

REPORT FROM THE UCSF TASK FORCE ON AIDS
(continued)

RECOMMENDED PROCEDURES — HOSPITALIZED PATIENTS

Purpose: To prevent spread of presumably transmissible agents to others and to protect AIDS patients from acquisition of potential opportunistic infections.

1. Isolation procedures should be consistent with hepatitis B guidelines as proposed by the Centers for Disease Control. This should include the use of gloves and hand-washing when in contact with patient's blood or secretions. Gowns are recommended for those likely to have direct contact with patient secretions and blood.
2. Strict isolation rooms per se are not necessary for AIDS patients. However, it may be prudent to admit AIDS patients to private rooms. This is not essential if the patient is not coughing, is cooperative, and can be adequately instructed on blood, secretion, and enteric precautions. It is, however, recommended, when a double room is used, that the additional patient not be an impaired host who might be susceptible to the potential opportunistic infections harbored by the patient with AIDS, nor should the roommate be a patient who might harbor potential opportunistic infections.
3. Masks are not essential for all AIDS patients, but it is recommended that they be worn by the patient who is actively coughing when out of the hospital room. Masks are advisable for visitors or health care personnel who are in direct, sustained contact with these actively coughing patients. The purpose of this recommendation is to prevent the potential aerosolization of a large inoculum and spread of opportunistic infections (Pneumocystis carinii) to other immunosuppressed patients. This recommendation is based on theoretical considerations supported by animal studies, since this mode of transmission has not been proven in humans. Masks should also be worn by patients in whom Mycobacterium tuberculosis or other agents known to be spread by the droplet or respiratory route have not been ruled out.
4. AIDS patients should be placed on precautions to include blood, needle, secretion and excretion. Specimens from patients should be labeled "H/A precautions" or another similar designation, without mention of a specific disease, and placed in an impervious bag or container for transport.
5. Procedures for equipment use for AIDS patients should be as follows: lensed instruments should be sterilized as recommended by the CDC. Respiratory therapy tubing should at least be pasteurized. Any instrument which comes in contact with blood, secretions, or excretions must be sterilized before reuse; this includes anesthesia instruments such as laryngoscopes and tracheal tubes. All such reusable items should be transported in an appropriately labeled impervious bag or container.
6. All contaminated (visibly soiled with potential infectious material) disposable items are to be considered infectious wastes and must be red-bagged. Needles and syringes should be disposed in rigid-wall, puncture-resistant containers as specified by the hospital. Needles must not be resheathed after use. Contaminated linen is to be double-bagged.

REPORT FROM THE UCSF TASK FORCE ON AIDS
(continued)

RECOMMENDED PROCEDURES — HOSPITAL EMPLOYEES (cont'd)

physician. If the physician determines that there are certain assignments the employee should not accept, this should be communicated in writing to the employing department for appropriate action, according to the institution's policies and procedures. Pregnant employees should not engage in the direct care of patient with AIDS because of the possible risk of acquiring cytomegalovirus.

4. Hospital employees who have AIDS and are directly involved in patient care require special consideration. Their continued contact with patients raises concerns about the potential spread of infectious diseases to them from infected patients and vice versa; we do not consider the direct transmission of AIDS itself to patients to be likely, as there is to date no evidence supporting casual contagion. We are concerned, however, that the employee with AIDS may have an undiagnosed transmissible infection such as CMV or pneumocystis and may thus represent a small but real risk to patients who might themselves be immunosuppressed. An equally important problem is the potential for transmission of unsuspected and undiagnosed infections from patients to the employee with AIDS.

The task force has had particular difficulty developing a consensus position on this issue. All agreed that when an AIDS employee is symptomatic he should not be directly involved in patient care. It was agreed that asymptomatic AIDS employees could be approached in two different ways.

- A. A hospital could decide to make an effort to reassign asymptomatic AIDS employees to non-patient-care positions in order to protect the employee from nosocomial pathogens and protect high-risk patients from pathogens possibly carried by the employee.
- B. A hospital could consider each asymptomatic AIDS employee on a case-by-case basis, through its employee health service in conjunction with recommendations from the employee's private physician, to determine that (1) the employee is free from transmissible infection, and (2) the employee is not unduly susceptible to infections he might come in contact with in the line of performing his patient-care duties. Patient-care responsibilities could then be assigned according to an ongoing clinical evaluation of the AIDS employee's status.

These guidelines should be applied to employees with AIDS as defined by the CDC, including biopsy-proven Kaposi's sarcoma, opportunistic infections, and unexplained wasting febrile illness in members of AIDS risk groups.

This document represents a working statement. In light of the unknown nature of this disease, the task force will review and refine these guidelines as necessary in light of additional scientific findings concerning AIDS.

REPORT FROM THE UCSF TASK FORCE ON AIDS
(continued)

RECOMMENDED PROCEDURES — HOSPITALIZED PATIENTS (cont'd)

7. Environmental surfaces contaminated with blood or other body fluids should be immediately cleansed with a disinfectant such as sodium hypochlorite.

RECOMMENDED PROCEDURES — OUTPATIENTS

The general guidelines for hospitalized patients used for hepatitis B precautions should also be applied to the outpatient and emergency settings. Efforts should be made, however, to minimize direct contact to other severely immunocompromised patients. Specimen labeling, equipment sterilization, and disposition of equipment will be handled as for hospitalized patients. AIDS outpatients may use common waiting areas and bathroom facilities.

RECOMMENDED PROCEDURES — HOSPITAL EMPLOYEES

1. The following protective apparel for hospital workers is recommended:

Gloves when personnel are in direct contact with blood or secretions and excretions of AIDS patients.

Gowns when clothing may become contaminated with blood, excretions or secretions. Water-protective barrier gowns are recommended when there will be exposure to large volumes of secretions.

Masks when in direct sustained contact with actively coughing patients with AIDS as detailed on page 2, item 3.

Eye protection in situations where splatter with blood or bloody secretions is expected.

These protective devices are necessary only when hospital personnel are directly exposed to blood and/or excretions. Such apparel is not necessary if there will be only casual contact while in patient's room.

2. Employees who have needle-stick injuries associated with the care of AIDS patients should be reported to the employee health service in their hospital and ongoing records maintained. The injured employee should then be treated according to the protocol for needle-stick exposure for potential hepatitis at the hospital. At the present time the task force does not recommend follow-up lymphocyte studies since numerous intercurrent illnesses have been shown to reverse the helper-suppressor ratio. Thus, information so derived has a potential for producing untoward anxiety, while not accurately predicting or identifying the disease — AIDS.
3. It is the recommendation of the task force that personnel should not be excused on their own request from delivering care to AIDS patients. Employees who believe they are at high risk for infection because of their own immune status should be encouraged to discuss their work responsibilities with their personal

RIGHT SIDE

II. AIDS - HOSPITAL INFECTION CONTROL GUIDELINES

1. Inpatient Infection Precaution - San Francisco General Hospital
2. Guidelines for Precautions with AIDS patients - Kaiser Permanente Medical Center, San Francisco
3. Precautions with patients with known or suspected AIDS- Presbyterian Hospital of Pacific Medical Center, San Francisco.
4. Infection Control Protocol - Highland General Hospital, Alameda Health Care Services Agency
5. Guidelines for Acquired Immune Deficiency Syndrome - Merritt/Peralta Medical Center, Oakland, California
6. AIDS Precautions/Specifications - Harold D. Chope Community Hospital, San Mateo, California

INPATIENT
INFECTION PRECAUTIONS

SAN FRANCISCO GENERAL HOSPITAL

Purpose: To prevent the possible transmission of an unknown infectious agent to susceptible individuals.

Introduction: Although an infectious etiology for the syndrome has not been proven, the epidemiology of the syndrome suggests a transmissible agent. Cytomegalovirus, hepatitis B, and Epstein-Barr viruses have all been considered as possible causes. Intimate contact with blood or secretions appears to be necessary for transmission.

AIDS is a reportable disease. CDC criteria should be used.

Recommendations: Until the etiology is identified, it seems prudent to institute certain precautions to protect individuals working with these patients. These should include precautions for hepatitis B and CMV viruses and any other precautions that may be needed for the various infections the patient may have. Precautions should be taken to protect employees, patients, and visitors. Excessive precautions should be avoided as this may impair patient care. Accreditation standards caution us that care must not be withheld as a result of the patient being in isolation. Therefore, procedures must be developed to meet patient needs and at the same time provide adequate protection to all.

Diagnosis and Initiation of Infection Precautions: Identification of patients requiring isolation measures will be by the physicians caring for the patients and the Head Nurse or Charge Nurse on each unit. Criteria for diagnoses which warrant AIDS precautions are as follows:

Documented AIDS patients; this includes patients with Kaposi's sarcoma, Pneumocystis carinii pneumonia, and other opportunistic infections not associated with other underlying disease or therapy.

Unexplained fever, unexplained pulmonary symptoms and/or infiltrates, skin lesions highly suggestive of Kaposi's sarcoma, and systemic illnesses that are characterized by fever, weight loss, wasting, sweats, thrush, and diarrhea in persons from a high-risk group (gay males, Haitians, and hemophiliacs; at this time, IV drug abusers have not been identified in San Francisco as being in a high-risk group).

PRECAUTIONS FOR AIDS

Precautions	Rationale
1. Private room	To protect patients from infections to which he/she may be susceptible and to protect other immunocompromised patients.

(continued)

PRECAUTIONS FOR AIDS
(continued)

Precautions	Rationale
2. Gloves for contact with blood and other body secretions.	To protect employee from the transmissible agent of AIDS, herpes, CMV, other infectious agents.
3. Handwashing before and after direct patient care.	To protect the immunocompromised patient and the employee.
4. Blood/secretion precautions:	To protect employees from the transmissible agent of AIDS and hepatitis.
(a) Gloves for contact with gross body secretions and blood, such as starting IV's, drawing blood including both needle aspirations and through stopcocks, dressing changes, emptying urine collection bags, cleaning up spills, etc.	
(b) Needle disposal in puncture-resistant containers without breaking or recapping needle. Needle box should be in room.	To protect nursing staff and housekeeping staff. Needle recapping and disposal are frequent causes of needle sticks.
5. <u>Gowns are not needed unless</u> gross contamination of uniform is expected as in cases where direct contact between uniform and draining wounds is expected, splatter during bronchoscopy, etc.	
6. <u>Masks are not needed</u> for AIDS. After five years experience with AIDS there is no evidence that the transmissible agent of AIDS is spread by the respiratory route. (See "Precautions For Other Diseases Which May Be Seen In AIDS Patients," on next page, for indications for masks.)	
7. <u>Hot-water-soluble laundry bags are not needed</u> unless the patient has draining wounds or is incontinent.	
8. <u>Dietary isolation trays are not needed.</u> Dietary trays may be served, removed, and sanitized as for all other patients.	
9. Patients may use showers and tubs. Shower floors (both for AIDS patients and for others) should be decontaminated daily with 1:10 dilution of (5.25%) sodium hypochlorite by the Housekeeping Department.	
This is to protect against Athlete's Foot (a fungal infection).	
Tubs used by infected patients (AIDS and others) should be cleaned first and then decontaminated with sodium hypochlorite.	

EMPLOYEE HEALTH ISSUES

Needlesticks, mucous membrane or conjunctival exposure to body fluids from AIDS patients - All needlesticks and other exposures to body fluids from AIDS patients must be reported to SFGH employee health. An accident report should be filled out.

The employee will be evaluated as for hepatitis B exposure and treated accordingly. Gamma globulin is given as a part of this protocol.

Additional gamma globulin may be offered. However, the employee will be informed that there is no data to substantiate its use with AIDS.

30cc blood will be drawn in a heparinized tube and taken to the virus lab, Building 100, Third Floor, to be processed for white cells and sent to CDC. Arrangements should be made a half-day ahead of time with the lab, extension 8191.

Employees with immunosuppression - Employees with immunosuppression as a result of disease or therapy should evaluate, with their personal physicians, their own risk of working in a hospital environment. Such employees, if returning to work, should provide a letter from their physician to their supervisor indicating their ability to work and outlining any patient care areas where they should not work.

Employees with AIDS - Employees with AIDS should be handled on a case-by-case basis by Employee Health physicians in consultation with the AIDS Clinic physicians. The decision will be evaluated by the Infection Control Committee on a case-by-case basis, taking into account the safety of all employees and patients. Asymptomatic hospital employees with AIDS who have recovered from an intercurrent illness may generally return to work. They should be instructed on health care precautions such as handwashing and wearing gloves for procedures with patients with trauma or open wounds, and wearing gloves for all patient contact or handling of patient equipment when employee has exudative lesions on hands.

In situations where it is not advisable for employees with AIDS to return to their clinical assignment, reassignment to another area will be coordinated with their supervisors.

These guidelines should be applied only to employees who meet CDC criteria for AIDS.

Cardiopulmonary resuscitation - Resuscitation is the right of all patients who have not asked that extreme measures not be taken. Devices to protect employees from mucous membrane contact with blood and other secretions during resuscitation should be made readily available.

CPR recertification standards should be maintained. Since it is not known if the AIDS agent is in saliva, and since blood may be present in saliva, employees with AIDS should not be required to perform two-man resuscitation. This should apply only to employees with diagnosed AIDS.

10. Specimen Handling:

All specimens must be labeled with "H/A Precautions" labels and placed in ZipLok bags for transport. Lab slip should also be labeled and attached to the outside of bag.

11. Spills of Blood and Other Body Secretions:

Spills should be cleaned up promptly. Large spills should be cleaned up by a gloved employee, using paper towels which should be placed in an infectious waste container. Then 5.25% sodium hypochlorite (household bleach) diluted 1:10 should be used to disinfect the area. Sodium hypochlorite should not be placed directly on large amounts of protein matter (urine, stool, blood, sputum, etc.), to protect employee from noxious fumes.

12. Decontamination of Equipment:

Respiratory Therapy ventilator tubing may be pasteurized. Any instrument that comes in contact with blood or other secretions must be sterilized before reuse. Lensed instruments must be sterilized.

13. Clinitron beds should not be used for AIDS or suspected AIDS patients because of the extreme difficulty in decontaminating them adequately.

PRECAUTIONS FOR OTHER DISEASES
Which May Be Seen In AIDS Patients

Cytomegalovirus (CMV):

1. Pregnant women should not give direct care to AIDS patients. Women trying to get pregnant should use very good personal hygiene (handwashing & gloves) with any body secretions whether from AIDS patients or not.

Many AIDS patients are excreting CMV. Since this virus may cause birth defects it is advisable for pregnant women not to have direct contact with known excretors. Although good hygiene has been shown to prevent acquisition of CMV, the standard practice is for pregnant women to be excused from the care of any known CMV excretor or AIDS patient.

Opportunistic and other infections (Pneumocystis, Mycobacterium avium and tuberculosis, CMV, etc.):

1. Masks (on patient outside of isolation room, on others in room or when patient cannot wear mask) when patient has lung involvement, is coughing, and others have sustained close contact.

Until patient is diagnosed, others need to be protected from disease spread by the respiratory route. Immunocompetent persons need protection from M. tuberculosis. Immunocompromised persons need protection from M. avium and Pneumocystis. Although some AIDS patients have CMV in their lungs, it is not known if CMV can be transmitted by the respiratory route.

2. Other precautions should be as usual for the particular disease. See SFGH Infection Control Manual, pages 15-23 for guidance.

INFECTION PRECAUTIONS FOR PEOPLE WITH A.I.D.S.

LIVING IN THE COMMUNITY

Grace Lusby, MS, RN
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with input from
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and the
San Francisco Bay Area Association for Practitioners of
Infection Control AIDS Resource Group

People with diagnosed AIDS who are able to care for themselves at home can safely live with both healthy individuals who do not have AIDS or with other persons with AIDS. Certain common sense hygienic measures protect both the person with AIDS as well as their living partners.

1. Care should be taken to not share body secretions, particularly blood or semen. In order for body secretions to be shared, there must be a point of entry into another persons body. Preventing this transfer of body secretions while still maintaining ones sexuality requires foresight and common sense. Risk reduction counseling for those who wish to remain sexually active is available through the AIDS/KS Foundation (San Francisco-864-4376) or Shanti Project (San Francisco-558-9644). This is important both to prevent possible transmission of AIDS to others and also to prevent acquiring other infections which may not be well tolerated by the person with AIDS.

There is no reason why persons with AIDS should not continue to have the usual casual social contacts with people that they have had in the past.

2. Maintaining a state of personal cleanliness is helpful to both the person with AIDS and others. This includes bathing regularly, washing hands after the use of bathroom facilities or contact with one's own body fluids such as semen, mucus, or blood, and washing hands before preparing food.
3. Kitchen and bathroom facilities may be shared with others. Surfaces should be cleaned regularly. A good bathroom and kitchen surface disinfectant is household bleach (5.25%) mixed 1:10 (1 part bleach to 10 parts water). This should particularly be used on shower floor to control the fungus that causes Athletes Foot and any other place where molds seem common. It need not be used in refrigerators. Cleaning with soapy water is adequate. Not leaving food sit in the refrigerator until moldy is also a good idea.

4. Dishes may be shared with others provided they are washed in hot soapy water hot enough to require gloves in between people. A disinfectant does not need to be used.
5. People with AIDS can safely cook for others provided they wash their hands before beginning. It's also a good idea to not lick the fingers or taste from the mixing spoon while cooking.
(Advice for everyone)
6. Towels and wash cloths should not be shared without laundering in between people. Toothbrushes, razors, enema equipment and sexual toys should not be shared.
7. Pets - gloves should be used when cleaning bird cages (Psittacosis) and cat litter boxes (Toxoplasmosis). Tropical fish tanks may contain organisms in the Mycobacterium family which are not well tolerated by persons with AIDS. Get someone else to clean your tank.
8. Keep living quarters well ventilated. Airborne diseases are less likely to be a problem when diluted by lots of air.
9. Persons with AIDS who are coughing should cover their mouths with tissues or handkerchiefs.
10. Persons with AIDS living together can do so safely by observing the same common sense hygiene practices discussed above. The opportunistic infections acquired by persons with AIDS are caused by organisms commonly found in the environment. The risk of becoming sick from one of these infections is based on the amount of immune system impairment, not on casual household contact.

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INFECTION PRECAUTIONS FOR PERSONS GIVING DIRECT CARE

TO PERSONS WITH A.I.D.S. IN THE HOME

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with input from
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and
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Infection Control AIDS Resource Group

So far, no one has identified an organism which causes AIDS. Most medical experts believe that AIDS is caused by an infectious agent such as a virus. From looking at the people who develop AIDS (gay men, IV drug abusers, hemophiliacs, babies of mothers who are IV drug abusers, etc), it appears that the infectious agent is transmitted by close, intimate (sexual) contact with blood and perhaps other body secretions. These secretions may include saliva, urine, feces, semen, mucus. However, epidemiologic evidence points to blood as the most "efficient" means of transmission. Casual contact does not appear to lead to transmission as evidenced by the fact that AIDS has not spread to the general public, but rather has remained confined to specific risk groups.

People caring for persons with AIDS in the home should use precautions designed to prevent blood and other body secretions from entering their body through any body opening including cuts or open areas on the skin. Handwashing before giving direct care protects the patient who is susceptible to infection. Handwashing after care protects the Caretaker.

Caretakers should be in good health, free of symptoms of disease such as fever, abscesses, diarrhea, yeast infections so that they will not be a possible source of infection to the patient.

Here are some specific precautions to use when giving direct care to someone with AIDS:

1. WASH YOUR HANDS. Gloves may be useful to protect hands where there will be excessive amounts of body fluid contact or where breaks in the skin occur.
2. Hands do not need to be gloved for handling patient clothing and other articles that are not soiled. Hands do not need to be gloved to touch the patient's intact skin (for example, backrubs).
3. Keep your hands away from mouth and face while working. Wash hands before eating.
4. People who do not have AIDS can use the same bathroom as someone with AIDS. As in any living situation, good sanitary practices (not spilling excrement on toilet seats, etc. and cleaning the bathroom regularly) make it safe for everyone. Washing hands after use of the facilities is protective to others. Physical

cleaning of surfaces actually visibly soiled with blood, fecal material, or other body secretions removes soil and disease causing organisms. A good bathroom and kitchen disinfectant for soiled surfaces is household bleach (5.25%) mixed 1:10 with water (1 part bleach:10 parts water). Bleach is also particularly useful on the shower floor to control the fungus which causes Athletes Foot.

5. Dishes used by people with AIDS can be used by other people once they have been washed in hot soapy water. Allow to drain dry.
6. Wear disposable gloves when handling any secretions or excretions, especially blood. Avoid direct hand contact with blood.
7. When your clothing is likely to be in contact with secretions/excretions, wear a gown, lab coat, or smock.
8. Use plastic bags to dispose of soiled tissues, dressings, band-aids, and soiled gloves. Close and secure the bag tightly when discarding.
9. Wash soiled linens and towels in a washing machine using the hot water cycle and detergent. Dry on high in dryer.
10. Bedpans and urinals in should be handled in a sanitary manner. Excrement need not be treated before being flushed down toilet.
11. Diarrhea and Vomitus: Using gloves, clean up patient and linens immediately, rinsing soiled surfaces with soapy water. Put soiled linens in plastic bag until ready to launder.
12. Pregnant women should avoid direct physical contact with people with AIDS because patients are usually giving off CMV virus in body secretions. CMV may cause birth defects. If someone caring for an AIDS patient becomes pregnant, having used the above precautions will have provided more protection against CMV than we ordinarily have in our daily contact with people (some of whom may be asymptomatic shedders).
13. At the end of physical care, WASH YOUR HANDS. Use lotion on clean hands. (Clean hands will not contaminate lotion bottle.) Lotion is important to replace the natural oils removed by handwashing. Dry, chapped hands leads to open areas through which disease-causing organisms may enter. In addition, those areas may develop mild infections which could then be transmitted to the patient.

There is no evidence that AIDS is transmitted through the air. However, a person with AIDS who has an active and persistent cough may harbor other organisms which could be spread by the airborne route. The main concern to healthy caretakers is the possibility of the cough being caused by TB. The other respiratory diseases that people with AIDS get are usually only of importance to people who are immunosuppressed. Should a cough develop, ask patient to cough or sneeze into a tissue or handkerchief, not directly into the air.

revised 8/24/83

GUIDELINES FOR PRECAUTIONS WITH AIDS PATIENTS

KAISER PERMANENTE MEDICAL CENTER

1. All patients should be placed on "enteric isolation."
2. This means that gloves should be worn when handling blood specimens, blood-soiled items, body fluids, excretions and secretions, as well as surfaces, materials, and objects exposed to them.
3. Gowns should be worn when clothing may be soiled with body fluids, e.g., blood, excretions, or secretions.
4. Hands should be washed after removing gowns and gloves and before leaving the rooms of known or suspected AIDS patients. Hands should also be washed thoroughly and immediately if they become contaminated with blood.
5. All specimens should be handled with caution, as with known Hepatitis B carriers. The laboratory slips should be marked "Blood Precautions." However, it is important to remember that blood and secretions from any patient may be infectious and external surfaces of specimen containers should be free of contamination.
6. A needle box should be placed at the bedside for immediate disposal of used sharps. Do not recap needles before cutting them.
7. A private room is indicated for patients who are too ill to use good hygiene, such as those with profuse diarrhea, fecal incontinence, or altered behavior secondary to central nervous system infections. AIDS patients cannot be in the same room with other immunosuppressed patients or other AIDS patients.
8. Pregnant women should avoid direct patient contact with the patients with rectal ulcers or pneumonia, because many of these patients are excreting cytomegalovirus.
9. Reusable items which are visibly soiled with excretions, secretions, or blood should be rinsed under running water and sent to CSR in a red plastic bag.
10. The above guidelines for hospitalized patients should also be applied to the outpatient clinic areas.
11. AIDS outpatients may use common waiting areas and restroom facilities unless they have an infection that would otherwise require isolation.
12. All cases of AIDS should be reported to the S.F. Department of Health by the attending physician.
13. Enteric isolation procedure may also be referred to in the Hospital Infection Control Manual, pp. 34-40.

PRECAUTIONS WITH PATIENTS WITH KNOWN OR SUSPECTED AIDS

PRESBYTERIAN HOSPITAL OF PACIFIC MEDICAL CENTER

The Infection Control Committee recommended that patients and specimens from patients with known or suspected AIDS be cared for using the same precautions as those for patients with Hepatitis BLOOD, that is, Blood and Secretion precautions. These precautions are aimed at avoiding direct contact of skin and mucous membranes with blood, blood products, excretion, secretions and tissues of persons with AIDS. Since the first memo was distributed on February 19, 1983, questions and concerns have arisen based on additional and often conflicting information available in the media, from outside educational sources and practices at other institutions. In order to clarify the issue a more detailed listing of the precautions is included.

A. GENERAL GUIDELINES

Applicable for all AIDS or suspected AIDS patients

1. Private Room - Required, since patients are immunocompromised.
2. Blood - Blood and Needle precautions required. Careful disposal of sharp instruments and avoidance of accidental punctures with potentially infectious material, i.e., blood.
3. Blood Specimens - Blood specimens must be labeled "Blood Precautions."
4. Gloves - Gloves used in blood handling and drawing when possible.
5. Blood-Soiled Linen or Equipment - Double-bagged for reprocessing or disposal.
6. Dietary - Isolation trays not necessary.
7. Gowns - Not necessary unless there is exposure to large amounts of blood excretions, secretions.
8. Pregnant Women - Avoid exposure to blood or bloody secretions, excretions with blood or any body secretion or excretion.
9. Handwashing - Before and after patient contact; immediately if contaminated.
10. Needle Sticks - Initiate Incident Report and notify nurse manager, supervisor, or Occupational Health.

PRECAUTIONS WITH PATIENTS WITH KNOWN OR SUSPECTED AIDS
(continued)

PRESBYTERIAN HOSPITAL OF PACIFIC MEDICAL CENTER

B. THE AIDS PATIENT ON CRITICAL CARE AREAS
In Addition to General Guidelines

- Masks Masks not necessary even for suctioning the intubated patient. Pneumocystis pneumonia is often the cause of respiratory compromise in AIDS patients. The organism, a protozoan called PNEUMOCYSTIS CARINII, is ubiquitous. Pneumocystis pneumonia has not been documented as being transmitted directly from person to person.
- Gowns & Gloves Recommended for caring for the:
1. Intubated patient as well as
 2. One with large amounts of excretions, secretions or drainage plus
 3. The AIDS patient with multiple invasive lines or procedures occurring

C. THE AIDS PATIENT WITH DIARRHEAL ILLNESS
In Addition to General Guidelines

- Gowns & Gloves Enteric precautions recommended for caring for patient in whom there are large volumes of opportunistic or parasitic infested excretions.

THERE ARE SOME IMPORTANT POINTS TO KEEP IN MIND:

- (1) No AIDS cases have been documented among health care or laboratory personnel caring for AIDS patients or processing laboratory specimens who did not have other risk factors (i.e., sexually active gay males).
- (2) To date, no person-to-person transmission has been identified other than through intimate contact or blood transfusion. (See Note)
- (3) The Infection Control Committee's recommendations are the result of months of discussion and review of available information. These recommendations may differ from those in effect at other institutions. The Infection Control Committee considers these recommendations safe and sufficient to protect the hospital worker in direct contact with patients or secretions/excretions. These recommendations do not preclude individual physicians from ordering additional precautions.

NOTE: Centers for Disease Control, Morbidity and Mortality Weekly Report, March 4, 1983, vol. 32, no. 8, pp. 101-102.

INFECTION CONTROL PROTOCOL

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY HIGHLAND GENERAL HOSPITAL

1. Room: Private room is necessary.
2. Precaution: "Blood" Precautions (white sign with black lettering).
3. Gloves: Gloves are required when employee is in direct contact with the patient, OR when in direct contact with articles contaminated with the patient's secretions, and blood (e.g., linen, equipment, and specimens).
Double-gloving is recommended.
4. Mask: Mask recommended (not required) when in direct contact with the patient's oral secretions (e.g., when suctioning patient).
5. Syringes & Needles: Dispose of needle via needle box (Destructip) located in patient's DO NOT THROW NEEDLES (including those used for IV Therapy) INTO TRASH.
6. Specimens: Label all laboratory requisitions with patient's diagnosis (e.g., R/O AIDS). Place red "Possible hepatitis" stickers on lab requisitions. (New "Possible AIDS" stickers will be made available soon.)
All specimens should be bagged in a clear plastic bag.
Specimens should be handled with caution, as with known hepatitis B carriers.
7. Articles & Equipment: A separate tourniquet (located in the isolation cart) should be used on the patient, and left in the room. Instruments and other items grossly contaminated with blood or excreta should be rinsed to cleanse the instrument of all organic material. (Disinfectant spray located in the isolation cart may be used.)
The item should then be double-red-bagged and sent to Central Supply and Services for sterilization.
Large pieces of equipment should be cleansed of any organic material, and a red bag should be placed over the piece of equipment, indicating that the piece of equipment came from an isolation patient. The equipment will be picked up by Central Supply and Services for appropriate disinfection.
All lensed instruments must be sterilized after use.

(continued)

INFECTION CONTROL PROTOCOL
(continued)

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY HIGHLAND GENERAL HOSPITAL

8. Housekeeping: Category II isolation cleaning. Blood spills should be cleaned up promptly with a disinfectant solution such as sodium hypochlorite (bleach, 1:10 dilution).
9. Dietary: Isolation trays are not necessary.
10. Linen: Double-bag (water soluble bag—red linen bag) linen.
11. Disposable Items: Discard disposable items in red plastic bags: double red bag.
12. Hands: Must be washed after removing gown and gloves and, before leaving the room of a known or suspected AIDS patient, HANDS SHOULD BE WASHED THOROUGHLY AND IMMEDIATELY IF THEY BECOME CONTAMINATED WITH BLOOD OR OTHER SECRETIONS.
13. Pregnant Women: Pregnant women should avoid direct patient contact because many of these patients are excreting cytomegalovirus (CMV).

ADDENDUM: Frequently these patients present with other infectious processes (e.g., hepatitis, herpes, enteric pathogens). The precautions appropriate for these infections should be followed.

GUIDELINES FOR ACQUIRED IMMUNE DEFICIENCY SYNDROME

MERRITT/PERALTA MEDICAL CENTER

1. Private room desirable.
2. All patients with the diagnosis of AIDS should have the following sign(s) placed on the door:
 - a. Blood precautions (all AIDS patients).
 - b. Stool precautions if diarrhea present.
 - c. Sputum precautions if pneumonia present.
 - d. Minor wound if draining skin lesions present.
3. Gloves should be worn when handling blood specimens, blood-soiled items, body fluids, excretions and secretions, as well as materials and objects exposed to them.
4. Gowns should be worn when clothing may be soiled with body fluids, e.g., blood, excretions or secretions.
5. Hands should be washed after removing gowns and gloves and before leaving the room of known or suspected AIDS patient.
6. Blood specimens should be handled with caution, as with known hepatitis B carriers. The laboratory slips should be marked "Blood Precautions." However, it is important to remember all blood should be handled as potentially infectious.
7. A needle box should be placed at the bedside for immediate disposal of used sharps.

AIDS PRECAUTION SPECIFICATIONS

HAROLD D. CHOPE COMMUNITY HOSPITAL

WITHOUT RESPIRATORY INVOLVEMENT

1. Private room Necessary
2. Gowns Must be worn when clothing may be soiled with body fluids, blood secretions, or excretions.
3. Masks Not necessary.
4. Hands Must be washed on entering and leaving the room, after removing gowns and gloves, and thoroughly and immediately if they become contaminated with blood.
5. Gloves Must be worn when handling blood specimens, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials and objects exposed to them.
6. Chart May be taken into the room.
7. Stethoscope and sphygmomanometer Stays in the patient's room and is disinfected with Micro-bac when isolation is terminated. The sleeve of the blood pressure cuff is to be removed and replaced with a clean sleeve. The contaminated sleeve is to be double-bagged and sent to Central Supply.
8. Urine & feces Flush down commode facility.
9. Linen Blood-soiled or excretion-soiled, should be double-bagged. Clear plastic water-soluble bag and double-bagged into a red plastic bag. Secure tightly and deposit in soiled linen room.
10. Dishes Disposable.
11. Dressings Place in brown paper bag and dispose of in trash receptacle in room.
12. Needles and syringes Disposable ones should be rendered inoperable and placed in proper receptacle. If not disposable, rinse off, double-bag, label, and send to Central Supply for sterilization.
13. Drinking water Plastic cup and pitcher should remain in the patient's room. Change liner of pitcher daily.
14. Clothing & personal effects Should be double-bagged to be sent home for washing if soiled with blood or excretion.

(continued)

AIDS PRECAUTION SPECIFICATIONS
(continued)

HAROLD D. CHOPE COMMUNITY HOSPITAL

- | | |
|--------------------------|--|
| 15. Laboratory specimens | Blood and other specimens should be appropriately bagged and labeled as "Blood Precautions" or "AIDS Precautions" to alert laboratory personnel. |
| 16. Blood spills | Should be cleaned up promptly with disinfection solution. |
| 17. Visitors | Please check at nurse's station prior to entering room. Should be limited to no more than two visitors at a time. |

WITH RESPIRATORY INVOLVEMENT

- | | |
|----------|--|
| 1. Masks | Are to be work in room by health care personnel. When the patient leaves the room for treatment or diagnostic procedures, he or she is to wear a mask. |
| 2. Room | Ventilated room (room on 1A or ICU with exhaust fan). |
| 3. | All other protocols remain the same as outlined above for "without respiratory involvement." |

RIGHT SIDE

III. EXAMPLES OF NON-STANDARD HOSPITAL PRECAUTION SIGNS

1. Special Precautions - Veterans Administration Medical Center, San Francisco
2. Special Precautions - Seton Medical Center, Daly City, California
3. Blood Excretion Precaution - University of California, San Francisco Medical Center
4. Precaution - San Francisco General Hospital

Check the appropriate box(es)

SPECIAL PRECAUTIONS

- ☐ **Private Room**
- ☐ **Blood-Secretions**
(Gloves - Gowns)
- ☐ **Enteric**
(Gloves - Gowns)
- ☐ **Respiratory**
(Masks)
- ☐ **No Pregnant Employees**
- ☐ **Separate container**
for needles/syringes
- ☐ **Double Bag Trash/linen**

WASH YOUR HANDS

Veterans Administration Hospital
San Francisco

SPECIAL PRECAUTIONS

Visitors: Report to Nurses' Station
for instructions before entering room

1. Single Room - required.
2. Hands - must be washed on entering and leaving room.
3. Gowns - must be worn when having direct contact with patient's blood (i.e., when obtaining blood specimens and starting infusions), or with articles contaminated with patient's blood (e.g., linen and equipment).
4. Gloves - must be worn by all persons having direct contact with patient's blood, oral secretions, or excretions.
5. Masks - not necessary.
6. Specimens - ALL specimens must be bagged and labeled "Special Precautions" (see "Special Precautions" procedure).
7. Syringes and Needles - Place in container inside patient's room.
8. Articles and Equipment - See "Special Precautions."
9. No pregnant women.

Infection Control Committee 6/83
Seton Medical Center
Daly City

BLOOD, EXCRETION

PRECAUTION

☒ **HANDWASHING IS MANDATORY**

☒ **GOWN** only if likely to contaminate clothes with blood or excreta

☐ **MASK**

☒ **GLOVES** contact with blood, all secretions and excretions

☒ Needle Precautions
No pregnant care-givers

RIGHT SIDE

IV. AIDS INFECTION PRECAUTIONS IN THE HOME AND COMMUNITY

1. Infection Precautions For Persons Giving Direct Care To Persons With AIDS In The Home - Helen Schietinger, MA, RN, Director, Shanti AIDS Residence Program, with input from University of California San Francisco AIDS workers, and San Francisco Bay Area Association of Practitioners of Infection Control AIDS Resource Group.
2. Infection Precautions For People With AIDS Living In The Community - Grace Lusby, MS, RN, Infection Control Coordinator, San Francisco General Hospital; Helen Schietinger, MA, RN, Director, Shanti AIDS Residence Program, with input from San Francisco General Hospital Medical Special Care Unit, and the San Francisco Bay Area Association for Practitioners of Infection Control AIDS Resource Group.

RIGHT SIDE

V. GUIDELINES FOR STERILIZATION/DISINFECTION OF EQUIPMENT

1. Environmental: Disinfection and Sterilization,
Centers For Disease Control, February, 1981 (rev. July, 1982.)

ommendation according to the degree to which it has been substantiated by scientific data or the strength of the working group's opinion on the effectiveness and practical value of the particular practice. The rankings thus provide additional useful information to hospital officials who must decide on which recommendations (e.g., those in Category II and, especially, Category III) best suit their hospital's needs and resources.

Table 1. *Ranking scheme for recommendations**

Category I. Strongly Recommended for Adoption:

Measures in Category I are strongly supported by well-designed and controlled clinical studies that show effectiveness in reducing the risk of nosocomial infections or are viewed as useful by the majority of experts in the field. Measures in this category are judged to be applicable to the majority of hospitals regardless of size, patient population, or endemic nosocomial infection rate and are considered practical to implement.

Category II. Moderately Recommended for Adoption:

Measures in Category II are supported by highly suggestive clinical studies or by definitive studies in institutions that might not be representative of other hospitals. Measures that have not been adequately studied, but have a strong theoretical rationale indicating that they might be very effective are included in this category. Category II measures are judged to be practical to implement. They are not to be considered a standard of practice for every hospital.

Category III. Weakly Recommended for Adoption:

Measures in Category III have been proposed by some investigators, authorities, or organizations, but, to date, they lack both supporting data and a strong theoretical rationale. Thus, they might be considered as important issues that require further evaluation; they might be considered by some hospitals for implementation, especially if such hospitals have specific nosocomial infection problems or sufficient resources.

*Recommendations that advise against the adoption of certain measures can be found in the guidelines that follow. These negative recommendations are also ranked into one of the three categories depending on the strength of the scientific backing or opinions of the members of the working group. A negative recommendation in Category I means that scientific data or prevailing opinion strongly indicate that the measure not be adopted. A negative recommendation in Category III means that, given the available information, the measure under consideration should probably not be adopted; such a measure, however, requires further evaluation.

Finally, the adoption of these recommendations by hospitals does not guarantee that hospital personnel will adhere to them. The reduction of nosocomial-infection risks depends largely on the actual performance of correct patient-care practices. Personnel may be motivated to follow these practices if they are given adequate training, followed by periodic in-service education. Continuous or periodic evaluation of patient-care practices, preferably under the supervision of the infection control staff, might assure continued performance of correct practices.

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Introduction

In the United States nosocomial (hospital-associated) infections occur in approximately 5% of the patients admitted to acute-care hospitals¹, prolong hospital stay by several days on average², and lead to over a billion dollars a year in extra direct hospital charges³. The enormity of the problem has led the Centers for Disease Control (CDC) and other institutions to devote substantial resources over the years to the development of methods and programs to prevent and control such infections. CDC became involved in the 1950s when its medical epidemiologists began to investigate outbreaks of infections in hospitals; in the 1960s more systematic studies of the problem were undertaken^{4,5}. These early experiences indicated the importance of an adequate knowledge of preexisting infection problems to the efficient detection and control of nosocomial outbreaks and led to the formulation of recommendations for the establishment of organized infection control programs^{5,6}. Such programs initially emphasized the importance of surveillance, but as the epidemiology and pathogenesis of infections became better defined, hospitals were encouraged to augment their surveillance activities with prevention and control measures⁷⁻⁹.

In the early 1970s, there was rapid growth in the number of infection surveillance and control programs as hospitals, increasingly concerned about nosocomial infections, began to adopt infection surveillance and control measures recommended by CDC and others¹⁰. Despite the proliferation of scientific literature on nosocomial infections, however, it has become obvious that many of these recommendations, although logical and reasonable, have not been validated by well-designed clinical trials; hospitals, faced with rising costs and limited resources, are forced to choose among many potentially expensive surveillance and control measures often without sufficient scientific guidance.

CDC recommendations for surveillance and control are based on information obtained from many sources: epidemic investigations, epidemiologic and laboratory studies, consultation and guidance from hospital-based infection control personnel, and the scientific literature. Over the years, these recommendations have been disseminated through numerous scientific symposia, journals, and CDC publications. Since many of these recommendations were published over time and in different sources, they were not readily available to professionals involved in infection control. Since this probably diminished

the impact of these recommendations, the need for a central reference—one that would contain CDC recommendations and be easily accessible to the infection control personnel in hospitals—has become obvious.

This manual is being developed to fill that need. It is intended to consolidate updated recommendations for infection surveillance and control into a single, practical document. This edition contains the first of a series of guidelines, each of which addresses an important topic of infection control. Each guideline begins with a preamble that describes the approaches that have been used or advocated to deal with infection control issues and evaluates, where data exist, their efficacy. The preamble is followed by a group of succinct recommendations. The guidelines are being assembled in a loose-leaf notebook to allow the addition of new guidelines as they are developed and revisions as necessary.

Optimally, recommendations should be based on rigorously controlled scientific studies, because recommendations of this type have the highest probability of value. There are some recommendations that have not been adequately evaluated by controlled scientific trials, but are based on such inherent logic and broad experience that experts generally agree that they are useful. At the other extreme are infection control practices that are of uncertain benefit at best and may be quite controversial. To address these last 2 types of practices, realizing that hospitals must make decisions in the absence of definitive data, we have sought the advice of working groups composed of non-CDC experts with broad experience in infection control. CDC has endorsed such recommendations if members of the working group have determined that the recommendations are likely to be effective.

To assist infection control personnel in critically assessing the value of these recommendations, we developed a ranking scheme that takes into account considerations of scientific validity, applicability, and practicality (Table 1). The last 2 considerations are clearly important since scientifically valid infection control practices that are applicable in one setting (e.g., debilitated patients in tertiary referral centers) might not necessarily be applicable or practical in another (e.g., acutely ill patients in community hospitals). Cost effectiveness, another important consideration, is taken into account in the ranking process when possible, although adequate data are generally lacking. We have ranked each rec-

fecting procedure to render them safe to handle. Moreover, objects exposed to patients in strict isolation that need to be processed in central services should be decontaminated in the room if they cannot otherwise be safely transported (1,2).

For many "noncritical" reusable objects in hospitals such as heat lamps, crutches, wheelchairs, bedboards, and bedside utensils, central processing can consist only of 1) high-temperature washing or hand-scrubbing with a detergent or a disinfectant-detergent combination, 2) rinsing, and 3) thorough drying. Many such objects are not easily moved and can be cleaned where they are used. (A discussion of cleaning that is not done in the central services department or other closely monitored areas is included in the Housekeeping Guideline.) Many other objects, including most surgical instruments, can be cleaned by a mechanical washer-sterilizer. However, some delicate instruments might have to be carefully cleaned by hand. Once they are cleaned and inspected, objects requiring sterilization or disinfection are ready for further processing.

Use of pressurized steam in "autoclaves" is the most inexpensive and effective method for sterilization of most objects. Steam sterilization is unsuitable, however, for processing of plastics with low melting points, powders, or anhydrous oils. Residual air pockets can interfere with sterilization in autoclaves; thus, upright containers or steam-impervious wrappers should not be used. After cleaning and before sterilization, objects that will not be used immediately should be wrapped for storage. Sterility can be maintained in storage for various lengths of time depending mainly on the type of wrapping material and the conditions of storage. An item that has been sterilized might not be sterile at the time of use if its safe storage time has been exceeded or if its package has been wet or damaged.

Several methods have been developed to monitor steam sterilization processes, although steam autoclaves are highly reliable if they are used properly. Each sterilizer should be operated according to the manufacturer's instructions. The highest temperature that is reached during sterilization and the length of time that this temperature was maintained should be recorded and checked for adequacy; this check is the most important means of assuring sterility. In addition, heat- and steam-sensitive indicators should be used on the outside of each object. These indicators do not reliably indicate sterility, but they do show that an item has not accidentally bypassed a sterilization process. As an additional precaution, a large pack might have an indicator both on the outside and the inside to verify that steam has penetrated the pack. Checks of steam sterilization should be carried out at least once a week using commercial preparations of spores of *Bacillus stea-*

rothermophilus (an organism whose spores are particularly heat resistant, thus assuring a wide margin of safety). If a sterilizer is working properly and used appropriately, the spores are usually killed. A single positive spore test (spores not killed) does not necessarily indicate that objects processed in the same sterilizer are not sterile. It does suggest that the sterilizer should be rechecked for proper temperature, pressure, and use and that the test be repeated. Spore testing should be considered as just one of several methods of assuring adequate processing of inanimate objects in the hospital environment (Table 1).

Implantable objects, for example, implantable orthopedic devices, require special handling before and during sterilization. To guarantee a wide margin of safety, each load of such objects should be sterilized with a spore test, should not be released for use until the spore test is negative (at 48 hours), and should not be sterilized by "flash" steam sterilization (defined as sterilization of an unwrapped object at 270 °F or 132 °C for 3-5 minutes in a gravity displacement sterilizer). If it is not possible to sterilize an implantable object with a spore test 48 hours before use, then the object should still receive full-cycle steam and not flash sterilization. One acceptable method, steam sterilization at 270 °F for 10 minutes, takes only 5-7 minutes longer than flash sterilization and gives an adequate margin of safety, provided no porous objects (including towels) are included in the load. Packs containing implantable objects need to be clearly labeled so that they can be specially processed.

Because ethylene oxide gas sterilization is a more complex and expensive process than steam sterilization, it is usually restricted to objects that might be damaged by heat or moisture. Before sterilization, objects also need to be cleaned and wrapped. Chemically sensitive indicators should be used with each package to show that it has been exposed to the gas sterilization process. Gas sterilizers should be checked at least once a week with commercial preparations of spores of *Bacillus subtilis* (a resistant spore). All exhaust from gas sterilizers and aerators for gas sterilization should be vented directly to the outdoors because the gas is toxic. All objects processed by gas sterilization need special aeration according to manufacturer's recommendations to remove toxic residues of ethylene oxide.

High-level disinfection can be accomplished by hot-water pasteurization or liquid chemicals. Pasteurization is usually used only for respiratory therapy equipment. Liquid chemical disinfection can be time-consuming and expensive. Several chemical solutions are available (Table 2) for high-level disinfection. Solutions containing activated glutaraldehyde can achieve high-level disinfection in 10 to

Cleaning, Disinfection, and Sterilization of Hospital Equipment

INTRODUCTION

Cleaning is the physical removal of organic material or soil from objects, and it is usually done by using water with or without detergents. Generally, cleaning is not designed to kill microorganisms but to remove them. Sterilization, on the other hand, has as its goal the complete removal or destruction of all forms of microbial life and is carried out in the hospital with steam under pressure, liquid or gas chemicals, or dry heat. Disinfection describes the intermediate measures between physical cleaning and sterilization and is carried out with pasteurization, ultraviolet radiation, or liquid chemicals. The degree of disinfection accomplished depends upon several factors but principally upon the strength of the agent and the nature of the contamination. Some disinfection procedures are capable of producing sterility if they are continued long enough; when these procedures are continued long enough to kill all but resistant bacterial spores, they are called high-level disinfection processes. Other disinfection procedures kill many viruses and most vegetative bacteria but cannot be relied upon to kill resistant organisms such as tubercle bacillus, spores, or certain viruses; these are called low-level disinfection processes. This guideline deals with the cleaning, disinfection, and sterilization of hospital equipment, a task usually performed by the central services department.

EPIDEMIOLOGY

Parts of the hospital environment can be heavily contaminated with potentially pathogenic organisms, but the objects themselves do not usually cause disease unless they are touched or placed onto the body or unless body fluids flow through them. Thus, contaminated *patient-care* supplies or equipment are the most likely objects of the inanimate environment to cause infection. Ironically, contaminated antiseptics (products designed for use on the skin or other tissue) and low-level disinfectants themselves have also been associated with infections.

CONTROL MEASURES

Since it is neither necessary nor possible to sterilize all environmental objects, hospital policies should provide for cleaning, disinfection, or sterilization as necessary to decrease the risk of infection. Which process is indicated for an object depends on the object's intended use and, sometimes, the type of contamination. Any microorganisms, including bacterial spores, which come in contact with normally sterile tissue can cause infection. Thus, it is

"critical" that all objects which will touch normally sterile tissues be sterile. However, intact mucous membranes are generally resistant to infection by common bacterial spores but not by many other organisms such as viruses and tubercle bacilli; it is "less critical" that objects touching mucous membranes be sterile, although these objects require a disinfection process that kills all but resistant bacterial spores. Intact skin acts as an effective barrier to all but the most virulent organisms, and it is "not critical" that objects which will touch only intact skin be sterile.

Objects potentially contaminated with virulent organisms, such as hepatitis viruses, *Shigella*, or multiply-resistant gram-negative bacilli, may require disinfection even if their use would normally dictate only cleaning. Tubercle bacilli and polio-, coxsackie-, echo-, and rhino-viruses are resistant to most germicidal agents and require high-level disinfection if they are to be reliably eliminated from reusable objects. Bacterial spores are the most resistant and require a sterilization procedure to be reliably eliminated.

Hospitals should perform most cleaning, disinfection, and sterilization of reusable patient-care objects in a central services department to maintain high levels of quality control; in addition, central processing can save money and free patient-care personnel from such activities. However, some hospitals are able to maintain high levels of quality control in closely monitored processing areas other than the central services department, such as an area adjacent to the operating rooms and in the respiratory therapy department.

Reusable objects must be thoroughly cleaned before processing because organic material (e.g., blood and proteins) inactivate disinfectants and protect microorganisms from disinfection and sterilization. Generally, these objects should be cleaned in the central services department. They should not be precleaned in patient-care areas because such precleaning is inefficient and because cleaning by hand can lead to injury and increased exposure to hepatitis virus. However, some objects that are heavily soiled, such as used bed pans, can benefit from precleaning. Before being sent to central services, objects contaminated with infectious materials or objects from patients in certain types of isolation (1) should be wrapped in impervious plastic and marked "contaminated" in order to decrease exposure of personnel to highly infectious microorganisms. These should be handled with gloves and "decontaminated" before or during cleaning, that is, they should be exposed to a disinfectant or disin-

Table 1. Methods of Assuring Adequate Processing of Inanimate Objects in the Hospital Environment

Object and Classification	Example	Method	Comment
PATIENT-CARE OBJECTS			
Sterility is critical Sterilized in the hospital: reusable and single use items	Surgical instruments and devices; angiography catheters	Use before maximum safe storage time. Inspect package for integrity and for exposure of sterility indicator before use. Follow manufacturer's instructions for each sterilizer or use recommended protocol. Test sterilizers to find out whether they can kill resistant commercial spores.	Sterilization processes are designed to have a wide margin of safety. If spores are not killed, the sterilizer should be checked for proper use and function; if spore tests remain positive, discontinue use of the sterilizer and have it serviced.
Purchased as sterile	Intravenous fluids; needles; syringes	Use before expiration date if one is given. Inspect package for integrity before use. Culture only if clinical circumstances suggest infection related to use of the item.	Notify the U.S. Food and Drug Administration if factory-related (intrinsic) contamination is suspected.
Sterility is less critical, but should be free of most vegetative bacteria Usually disinfected rather than sterilized in the hospital	Respiratory therapy equipment and instruments for gastrointestinal endoscopy that will touch mucous membranes	Sterilize if possible; if not, follow a protocol for high-level liquid chemical disinfection or wet pasteurization. Culture equipment after any important changes in the disinfection process.	These devices come in contact with mucous membranes. Resistant spores can remain after liquid chemical disinfection, but these are not usually pathogenic. Culturing can verify that a disinfection process (or disinfectant) has not resulted in marked increases in recovery of bacteria from equipment.
Purchased	Water, including water for hemodialysis	Use an adequately treated source of hospital water. Store fluids with proper chlorination to avoid microbial proliferation. Perform routine culturing of hemodialysis water.	The risk of disease appears to be related to the number of organisms present (unless virulent organisms are present). Water for hemodialysis may require further processing, e.g., deionization.
Sterility is not critical and can be expected to be contaminated with some bacteria	Bedpans; crutches; bed rails; water glasses; linens; food utensils; EKG leads; bedside tables; radiology suites; hemodialysis centers	Follow a protocol for cleaning (use a disinfectant or disinfecting process).	These items will not usually come in contact with open skin or mucous membranes.
NON-PATIENT-CARE OBJECTS^a			
Likely to be contaminated with virulent microorganisms	Laboratories handling patient specimens ^b	Follow a protocol for cleaning (use a disinfectant or disinfecting process).	Areas handling blood or microbiologic specimens are most important.
Unlikely to be contaminated with virulent microorganisms	Areas not involved in patient care: offices, storage areas	Perform routine cleaning.	Cleaning is aimed mainly at improving the appearance of and providing a proper atmosphere in which to work

^a Adequate processing of non-patient-care objects is primarily aimed at protecting personnel and others who come in contact with these objects; sterility is *not critical*.

^b For disposal of specimens from patients, see Guideline for Hospital Environmental Control: Housekeeping Services and Waste Disposal or *Isolation Techniques for Use in Hospitals* when applicable.

30 minutes and sterilization in 10 hours if the objects are cleaned until they are relatively free of organic matter. Gloves should be worn when using chemical disinfectants to prevent skin reactions, especially rashes. A new formulation, 6% stabilized hydrogen peroxide, does not appear to cause significant skin rashes and can achieve high-level disinfection in 30 minutes and sterilization in 6 hours. Objects disinfected with liquid chemicals must be rinsed in *sterile* water (or water containing at least 10 mg/liter free residual chlorine, e.g., a fresh 1:5000 dilution of a household bleach that is 5.25% hypochlorite solution) to remove possibly toxic or irritating residues. Afterward, the objects should be handled using sterile gloves and towels and stored in protective wrappers to prevent recontamination.

RECOMMENDATIONS

1. General Operation of the Central Services Department

- No disposable object designed for sterile, single use should be resterilized. *Category I*
- Any object which should be sterile should not be used if its sterility is seriously questioned, e.g., its package is torn or its expiration date is exceeded. *Category I*
- Central services should operate to assure that soiled objects do not contaminate those that are clean. Thus, all contaminated objects should be received and decontaminated in one area and cleaned, disinfected, or sterilized elsewhere. These areas should be separate from those used to receive or store new, clean, or sterile objects. *Category I*

2. Decontamination and Cleaning

All objects to be disinfected or sterilized should be thoroughly cleaned to remove all blood, tissue, food, and other residue. If necessary, they should be decontaminated before or during cleaning. *Category I*

3. Indications for Sterilization or High-level Disinfection

- Patient-care equipment that enters normally sterile tissue or the vascular system, or through which blood flows, should be sterile. *Category I*
- Laparoscopes and other scopes that enter the peritoneal cavity should be subjected to a sterilization procedure before each use; if this is not feasible, they should receive high-level disinfection. *Category I*
- Endoscopes and respiratory therapy equipment that touch mucous membranes should be subjected to a sterilization procedure before each use; if this is not feasible, they should receive high-level disinfection. *Category I*

4. Methods of Sterilization and Disinfection

- Whenever sterilization is required, a steam sterilizer should be used unless the object to be sterilized is damageable by heat, pressure, or moisture or is not otherwise amenable to steam sterilization. *Category I*
- Many reusable patient-care objects can be disinfected or sterilized by the methods found in Table 2. *Category II*

5. Method of Processing, Depending on Contamination

- Patient-care equipment contaminated with blood from a patient known or suspected to be infected with hepatitis B virus should be sterilized; if this is not feasible, it should receive high-level disinfection. *Category I*
- Most environmental surfaces contaminated with blood from a patient known to be infected with hepatitis B virus should be cleaned with a solution of household bleach (e.g., a 1/10 dilution of a household bleach that is 5.25% hypochlorite solution) because such solutions have good activity against this virus. Hypochlorite can corrode metal and should be rinsed off. Other high-level disinfectants may be used if hypochlorite is not acceptable. *Category II*
- Other patient-care and environmental objects that are potentially contaminated with virulent microorganisms should be processed according to the manual *Isolation Techniques for Use in Hospitals (1)*. *Category I*

6. Storage

Sterile packs should be stored no longer than the safe storage time listed in Table 3. The pack must be considered to be contaminated if the wrap is damaged or has been wet. *Category I*

7. Steam Sterilizers

- Steam sterilizers should be monitored at least once a week with commercial preparations of spores of *Bacillus stearothermophilus*. *Category II*
- 1) Every load should be monitored with a spore test if it contains implantable objects. These implantable objects should not be used until the spore test is found to be negative (at 48 hours). *Category II*
- 2) Implantable objects should not be sterilized by "flash" steam sterilization. *Category I*

8. Ethylene Oxide Sterilizers

- Ethylene oxide sterilization should be limited to objects that must be sterilized but can be damaged by heat, pressure, or moisture. *Category I*
- Ethylene oxide sterilizers should be monitored at least once a week with commercial preparations of spores of *Bacillus subtilis*. *Category I*

Table 3. Safe Storage Times For Sterile Packs

Wrapping	Duration of Sterility ^a	
	In Closed Cabinet	On Open Shelves
Single-wrapped muslin (two layers) ^b	1 week	2 days
Double-wrapped muslin (each two layers)	7 weeks	3 weeks
Single-wrapped two-way crepe paper (single layer)	At least 8 weeks	3 weeks
Tightly woven untreated pima cotton (single layer) over single-wrapped muslin (two layers)	—	8 weeks
Two-way crepe paper (single layer) over single-wrapped muslin (two layers)	—	10 weeks
Single-wrapped muslin (two layers) sealed in 3 mil polyethylene	—	At least 9 months
Heat-sealed, paper transparent plastic pouches	—	At least 1 year

^a Sterility was checked daily for the first week of storage and weekly thereafter.

^b Single-wrapped muslin is not recommended because it is easily penetrated by contamination, especially moist contamination.

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- c. Every load should be monitored if it contains implantable objects. These implantable objects should not be used until the spore test is found to be negative (at 48 hours).

Category II

9. Dry-Heat Sterilizers

- a. Dry-heat sterilizers should be monitored at least once a month with commercial preparations of spores of *Bacillus subtilis* that are intended to monitor dry heat. *Category II*
- b. Powders and anhydrous oils that must be sterilized should be sterilized by dry heat.

Category II

10. Positive Spore Tests

- a. If spores are not killed in routine spore tests, the sterilizer should immediately be checked for proper use and function; objects, other than implantable objects, do not need to be recalled for a positive spore test unless the sterilizer or its use is defective. *Category II*
- b. If spore tests remain positive after proper use of the sterilizer is documented, its use should be discontinued and it should be serviced. *Category I*

11. Chemical Indicators

Chemical indicators showing that a package has been through a cycle in a sterilizer should be attached to the outside of each package sterilized. *Category I*

12. Preventive Maintenance

Equipment used for disinfection or sterilization

should be scheduled for preventive maintenance routinely, according to the manufacturers' instructions. *Category I*

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Table 2. Methods of Sterilization and Disinfection

Object	Sterilization		Disinfection	
			High-level	Low-level
	Will enter tissue or vascular system or blood will flow through		Will come in contact with mucous membranes but not enter tissue or vascular system	Will not come in contact with mucous membranes or skin that is not intact
	Procedure	Exposure Time (hr)	Procedure (Exposure Time ≥ 10 to 30 min) ^a	Procedure (Exposure Time ≤ 10 min)
Smooth, hard-surface	A B C D E	mfr. rec. mfr. rec. 10 18 6	D E F G H I J Q	J L M N P
Rubber tubing and catheters ^b	A B E	mfr. rec. mfr. rec. 6	E F H I Q	
Polyethylene tubing and catheters ^{b,c}	A B C D E	mfr. rec. mfr. rec. 10 18 6	D E F H I J Q	
Lensed instruments	B C E	mfr. rec. 10 6	E Q	
Thermometers (oral & rectal) ^d	B C D E	mfr. rec. 10 18 6	K	
Hinged instruments	A B C E	mfr. rec. mfr. rec. 10 6		

Key

- A Heat sterilization including steam or hot air (see manufacturer's recommendations)
- B Ethylene oxide gas (for time, see manufacturer's recommendations)
- C Glutaraldehyde (2%)
- D Formaldehyde (8%)-alcohol (70%) solution (corrosion inhibitor needed if formulated in hospital)
- E 6% stabilized hydrogen peroxide (will corrode copper, zinc, and brass)
- F Wet pasteurization at 75°C for 30 minutes after detergent cleaning
- G Sodium hypochlorite (1000 ppm available chlorine) (will corrode metal instruments)
- H Phenolic solutions (3% aqueous solution of concentrate)
- I Iodophor. Use only a product approved for disinfection by the Environmental Protection Agency (EPA), and follow the product label for use dilution.
- J Ethyl or isopropyl alcohol (70%-90%)
- K Ethyl alcohol (70%-90%)
- L Sodium hypochlorite (100 ppm available chlorine)
- M Phenolic germicidal detergent solution
- N Iodophor germicidal detergent
- P Quaternary ammonium germicidal detergent solution
- Q Glutaraldehyde (a 2% solution has been customary for high-level disinfection and has been shown to be effective for high-level disinfection of respiratory therapy tubing by in-use testing. A glutaraldehyde-phenate formulation also has been shown to be effective for high-level disinfection of respiratory therapy tubing at a glutaraldehyde concentration of 0.13%. [3]. Caution should be exercised with all glutaraldehyde formulations when further in-use dilution is anticipated [4]).

Notes

- ^a The longer the exposure to a disinfectant, the more likely it is that all bacteria will be eliminated. Ten minutes' exposure may not be adequate to disinfect many objects, especially those that are difficult to clean because they have narrow channels or other areas that can harbor organic material and bacteria.
- ^b Tubing must be completely filled for disinfection.
- ^c Thermostability should be investigated when indicated.
- ^d Do not mix rectal and oral thermometers at any stage of handling or processing.

RIGHT SIDE

VI. NURSING CARE PLANS FOR PEOPLE WITH AIDS

1. Acquired Immune Deficiency Syndrome Master Problem List and Nursing Care Plan, Ward 5B, San Francisco General Hospital.

Problem	Expected Outcome	Nursing Strategies
4. CHRONIC PAIN	Pt tolerating pain at acceptable level	Assess level of pain & report sharp increases Give analgesics as ordered & appropriate Consider scheduled analgesics vs. prn use Consider adjunct chemotherapies incl psychotropics & palliatives Explore analgesic alternatives; involve Shanti, Psychiatry as appropriate Provide diversions as possible
5. INCREASED SUSCEPTIBILITY TO DISEASE due to: - Immune suppression - Chemotherapy	Pt is appropriately treated at onset of new infections Pt is protected from new opportunists as possible & practical	Implement appropriate infection control precautions Handwashing before entering & on leaving room Monitor VS, esp temps; report temp > 38.5° to HO Monitor CBCs for leukopenia/neutropenia & increase frequency of VS as ordered or appropriate Monitor status of oral infections Monitor for s/s meningitis incl stiff neck, headache, oculomotor abnormalities Give antibiotics as ordered
6. DRUG TOXICITY	Meds are tolerated with acceptable side-effects Side effects are monitored	Monitor CBCs, electrolytes, LFTs renal functions & urine output for signs of toxicity Monitor VS, N/V, diarrhea, rashes & soft-tissue swelling for signs of toxicity Give dietary supplements as ordered for electrolyte imbalances Observe for s/s impending anaphylaxis Use hot, damp packs at Pentamidine injection sites for 20 minutes after each injection to minimize sterile abscesses Consider use of egg-crate mattress or other appliance for IM Pentamidine patients
7. RESPIRATORY DISTRESS including SOB, DOE, tachypnea, cough, pain cyanosis, diaphoresis due to: - Infiltrates - Effusions - Cavitations - Post bronchoscopy pneumothorax - Anemia	Respiratory status is optimal New pathophysiology is quickly spotted and treated	Implement appropriate infection control precautions Frequent assessment of respiratory status; report any sharp changes Monitor VS, ABGs, chest sounds, color, sclerae & nailbeds Teach cough & deep-breathing exercises Maintain O₂ as ordered & appropriate Encourage use of incentive spirometer as needed Perform chest PT & pulmonary toilet as ordered or appropriate Suction as needed Give analgesics as ordered & appropriate; observe for respiratory depression Give bronchodilators as ordered; give antibiotics as ordered Collect specimens as ordered; consult with RT regarding sputum induction where appropriate Monitor for s/s of secondary, overgrowth or breakthrough infections

ACQUIRED IMMUNE DEFICIENCY SYNDROME
MASTER PROBLEM LIST AND NURSING CARE PLAN

Page 1 of 3

Problem	Expected Outcome	Nursing Strategies
1. ANXIETY, ANGER, DEPRESSION and/or FEAR due to: - Nonspecific diagnosis, prognosis and/or treatment - Stigmata of disease and hostile attitudes concerning it - Self-image changes and/or disfigurement - Lifestyle conflicts & adjustments - Loss of privacy and control in hospital setting - Concepts of death & dying	Expression of relevant feelings Feelings of adequate support Integration of SO, family & friends into care & support Awareness & use of community resources No feeling of censure or judgment from caretaking staff	Provide atmosphere of individual acceptance Assign a primary nurse appropriate to the needs of the pt Respect pt's own limits in his ability to discuss & deal with problems Involve Shanti, Chaplaincy, Psychiatry, etc., where appropriate Encourage SO, family & friends to use staff & Shanti as resources in expression of their anxiety, anger, etc. Encourage honest, consistent communication by all members of caretaking team Use tact, sensitivity & respect in gathering personal data Provide meds for anxiety as ordered & appropriate
2. FATIGUE & MALAISE	Pt feels rested and gets adequate sleep	Provide restful & quiet environment Meds for sleep as ordered & appropriate Assist with ADLs as needed Monitor tolerance for visitors & telephone; suggest limitations as appropriate Avoid awakening pt except as necessary; defer lower-priority activities to times when pt is awake Encourage frequent naps
3. ACUTE PAIN	Pt is free of pain Pt tolerates pain at acceptable level	Assess level of pain & report sharp increases Give meds as ordered & appropriate Consider scheduled analgesics vs. prn use Provide diversions as possible

ACQUIRED IMMUNE DEFICIENCY SYNDROME
MASTER PROBLEM LIST AND NURSING CARE PLAN

Page 3 of 3

Problem	Expected Outcome	Nursing Strategies
8. ANOREXIA, N/V, DIARRHEA, DEHYDRATION, due to: - Oral infections and masses - GI involvement of an opportunist - Chemotherapy	Pt receives nutrition adequate to maintain weight Electrolytes and hydration are optimal	Monitor weight as ordered or appropriate Monitor diaphoresis, vomiting, diarrhea & urine output Collect specimens as ordered Encourage supplements as ordered or appropriate Provide milkshakes, hs snacks, etc., as tolerated Monitor diet trays to see pt receives diet options as requested Encourage SO, family & friends to provide extra foods Involve dietician for consult as appropriate Monitor orthostatic VSs as appropriate to assess hydration Monitor CBCs for appropriateness of neutropenic precautions Provide meds for N/V and diarrhea as ordered & appropriate Maintain parenteral fluids as ordered Maintain fluid restrictions as ordered Implement and maintain I&O's as ordered or appropriate
9. SKIN BREAKDOWN	No pressure sores Present sores are minimized & healing	Monitor skin condition & make incident report of any pressure sores Encourage frequent position changes Encourage mobility & chair as tolerated Perform good skin care and/or massage with use of lotions or oils Use current treatment regimens for existent pressure sores Consider egg-crate mattress or other appliance where appropriate Artificial tears to eye as appropriate
10. _____	_____	_____
_____	_____	_____
_____	_____	_____
11. _____	_____	_____
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12. _____	_____	_____
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RIGHT SIDE

VII. REPRINTS OF AIDS RELATED ARTICLES IN PUBLICATIONS

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UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
HOSPITALS AND CLINICS
INFECTION CONTROL UNIT

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

Q. What is AIDS?

A. AIDS stands for Acquired Immune Deficiency Syndrome:

Acquired: To indicate that it is not an inherited or genetic condition.
Immune: The immune system is the body's natural ability to protect against infection and disease.

Deficiency: Incomplete or lacking.

Syndrome: Characteristic combination of signs and symptoms.

Thus, people who have AIDS have developed a defect in their immune system and which lowers their ability to fight off diseases.

Q. What kinds of diseases do people with AIDS get?

A. Because their immune system is not functioning correctly, individuals with AIDS are susceptible to certain kinds of infections, cancers, and other diseases. The diseases which take advantage of this vulnerability are said to be "opportunistic" — that is, they are taking the opportunity to attack a body while its defenses are down. About 25% of the AIDS patients have Kaposi's Sarcoma, a type of skin cancer which can spread to other parts of the body. Half of the patients have *Pneumocystis carinii* pneumonia, an infection of the lung caused by an organism found worldwide. The rest have other serious infections which may be life-threatening. These diseases are not new, but rarely occur in people with healthy immune systems.

Q. What causes AIDS?

A. Several theories are being investigated, but most researchers believe that an infectious agent, probably a virus, is causing a breakdown of the immune system. Scientists are studying tissues and fluids from patients in order to find an organism, but none has yet been found and shown to cause the disease.

Q. Who is getting AIDS?

A. About 70% of the AIDS patients are homosexual or bisexual men, and the other 30% include users of intravenous street drugs (both male and female), Haitian immigrants, children of the two latter groups, hemophiliac patients and some recipients of blood transfusions.

Q. How is AIDS spread?

A. Medical research to date indicates that the AIDS infection must enter the blood system of a person by *intimate* personal contact with someone who has AIDS. This may occur through sexual contact or through inoculation of blood or blood products, as in people using illegal intravenous drugs and sharing the same unsterile needle.

Q. Can I get AIDS by being in the same room with an AIDS patient or by touching objects used by this person?

A. No, there is no airborne spread of AIDS. AIDS is not spread by sitting in the same chair, using common bathroom facilities, sharing the telephone or by handling objects such as pens, etc.

Q. My impression from reading the paper and listening to television is that it is easy to catch AIDS. Is this true?

A. There has been a great deal of misinformation in the public media and therefore it is easy to understand why people are confused. The San Francisco Department of Public Health has issued the following statement: "Touching objects handled by AIDS patients, spending time in the same house or room with a patient or the same work-place, riding a bus or being near a patient in a public place, eating in a restaurant frequented by possible patients, etc. does not spread the disease." In addition, the Federal Department of Health and Human Services has stated the following: "There is no evidence to date that AIDS is spread by casual contact. On the contrary, our findings indicate that AIDS is spread almost entirely through sexual contact, through the sharing of needles by drug abusers and less commonly, through blood and/or blood products. For these reasons, there is no cause for fear among the general public that individuals may develop AIDS through casual contact with an AIDS patient."

Q. How do I know if a patient has AIDS?

A. This diagnosis is to be made by the attending physician based on clinical signs and symptoms. The hospital's Infection Control Unit may be consulted if there are questions about instituting infection control precautions.

Q. What are the policies and procedures in my department for working with AIDS patients?

A. Each department head has a copy of the UCSF patient care guidelines for Acquired Immune Deficiency Syndrome. You should discuss these with your supervisor.

Q. What else should I understand about AIDS patients and infection control?

A. Our hospital's infection control precautions have been established to isolate infectious agents, not to isolate the patient. These precautions are designed to promote the health of patients, health care workers, family members, and friends of patients. Inappropriate and "over-protective" precautions are detrimental to this goal. Communication within the health system is necessary for optimal patient care and employee safety but patients have a right to individual human dignity and privacy. Therefore, patient information must be confidential.

Q. I still have questions about AIDS and my working with AIDS patients. Who can I talk to?

A. Call the Infection Control Unit at x5793 and ask to speak with one of the Infection Control Practitioners. If your department would like to schedule a class on AIDS, ask your supervisor to call the Infection Control Unit.

Q. I have friends who want to know more about AIDS. Who can they call?

A. The AIDS/Kaposi's Sarcoma Foundation has many informational brochures for the general public and also plans community educational programs. They also have a "hotline" to answer questions. Call 864-4376 for further information.

AIDS: AN INFECTION CONTROL AND GENERAL
INFORMATION PACKET FOR HEALTH CARE PROVIDERS

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- I. BROCHURES FOR HOSPITAL/HEALTH CARE WORKERS - LIGHT GREEN
- II. BROCHURES FOR THE GENERAL POPULATION - ORANGE
- III. BROCHURES FOR POPULATION AT RISK - GOLD
- IV. STATEMENTS ON AIDS FROM PUBLIC HEALTH AUTHORITIES - YELLOW

extension, a partner who has many different sex contacts may expose you in turn to a high and significant risk, even though you have decreased the number of sex contacts in your own life. Ideally, you should know enough about a potential sex partner to be able to make an informed decision.

- Avoid oral ingestion of fecal matter, semen, urine or blood which increases the spread of disease.
- Don't use needles. By injecting drugs into your blood you can also inject viruses and bacteria. Sharing needles exposes you to the blood of the other user, which is extremely dangerous. By extension sexual contact with persons known to use intravenous drugs would represent significant risk.
- Use condoms. Condoms provide a barrier to reduce the likelihood of semen or infectious agents in the feces entering the bloodstream through cuts and injured tissues on either the rectal lining or the penis. Condoms also protect against many of the sexually transmitted infections. It's important to realize that using condoms does not guarantee protection from disease transmission, but properly used reduces your risk.
- Refrain from inserting foreign objects into the rectum that can tear its delicate lining, leading to injury and infection.

Very Important

- Reduce emotional stress. Stress reduces your ability to fight off disease.
- Avoid a shared source of lubrication or shared douching equipment.
- Curtail use of drugs, marijuana, speed, cocaine, nitrites "poppers," downers, tobacco, and alcohol. Drugs can damage the immune system and/or blur your ability to make good decisions about your sexual practices.
- Practice proper hygiene. Showering before and after sexual contact reduces risk of transmitting disease.
- Eat a nutritionally balanced diet.
- Exercise regularly.

We recognize that it may be difficult to follow all of these suggestions, but the more of them you follow the more you will decrease your risk of disease.

WHAT SHOULD YOU DO IF YOUR FRIEND HAS AIDS?

It is important that you continue to offer your friend the social and psychological support you have always shared together to prevent possible isolation and alienation. There are many ways you can help and support without jeopardizing you or your friend's health. Common sense rules—if you have a cold, the flu, feel ill, etc., do not expose your friend to the illness.

REMEMBER

Taking action to reduce risk to our health requires an understanding and sensitivity to our personal needs and health related behaviors. None of the above suggestions for reducing risk preclude a full and satisfying social or sexual life for any gay or bisexual man in San Francisco. It is a scary time for everyone, and the fear of AIDS can and probably will stir a variety of responses in many of us. Denial of the current health crisis and the facts we do know about being at risk is not a healthy reaction. Reducing the risk for AIDS doesn't mean wasting valuable healing energies on negative reactions towards sex or denying the sexual parts of one's life. The current health crisis, if anything, requires developing a more genuinely affirmative support for our sexuality. We are faced with a public health emergency in the form of a new disease that appears to be sexually transmitted—it represents an opportunity to nurture a healthy regard for our being well and the well-being of those we love.

Grateful thanks to the following for their help in developing and verifying the information in this pamphlet:

Barbara Boxer, Congresswoman;
Bay Area Physicians for Human Rights;
Pacific Center for Human Growth;
Aids Project/Los Angeles;
San Francisco Aids/KS Foundation;
Shanti Project.

INFORMATION AND REFERRAL

S.F. Aids/KS Foundation
P.O. Box 14227 • 54 - 10th Street
San Francisco, California
864-4376

For the deaf:

San Francisco Department of Public Health
TTY 929-7384
TTY 821-8246

AIDS SCREENING CLINICS

City Clinic	Health Center I
356 - 7th Street	3850 - 17th Street
864-8100	558-3905

Health Center II
1301 Pierce Street
558-2891

San Francisco
Department of Public Health
Bureau of Health Promotion & Education
November 1983



**AIDS
UPDATE**

AIDS INFORMATION FOR GAY AND BISEXUAL MEN

The goal of this pamphlet is to help you make decisions and take action to stay healthy during the current health crisis. You can maintain your health, and reduce the likelihood of becoming ill while validating your gayness as a positive lifestyle.

Up to now most information provided has focused on illness. To refocus attitudes, beliefs, values and behaviors on what you can do to stay well, it is important not to view yourself as a target for disease, but rather to understand yourself as fully human, with social, psychological, spiritual, emotional and sexual needs. Promoting health during this current health crisis requires your conscious effort to balance these areas, and so enhance your capacity for physical healing.

This pamphlet will give you the most current information on the AIDS crisis. It will hopefully guide you in thinking about and evaluating what we know and don't know about AIDS in light of your own health practices, and then you can set about making sensible, comfortable and attainable goals for maintaining and improving your health.

- **Be Informed!**
- **Evaluate All Information and Personalize it!**
- **Take Action—set goals for your health!**

WHAT IS AIDS?

AIDS is shorthand for Acquired Immune Deficiency Syndrome. AIDS is a life threatening disease that damages the immune system of otherwise healthy persons. Perhaps the best way to understand AIDS is to analyze the term word-by-word.

ACQUIRED—Indicates that it is not an inherited or genetic condition, but rather is contracted later.

IMMUNE—Refers to the body's natural mechanism to protect itself from disease or to fight infection.

DEFICIENCY—Indicates that the immune system is not working properly and therefore deficient in its ability to protect the body.

SYNDROME—Indicates that a pattern or group of signs and symptoms tend to develop due to the acquired immune deficiency.

The diseases which take advantage of this vulnerability are said to be "opportunistic"—that is, they are taking the opportunity to attack the body while its defenses are down. The two **most common** diseases associated with AIDS are Kaposi's Sarcoma (KS—an unusual form of cancer) and Pneumocystis carinii pneumonia (PCP—an uncommon infection of the lungs).

KS is a rare cancer of the blood vessels beneath the skin, in many internal organs and the lymph nodes. It is seen most often in the form of reddish-purple to bluish patches on the arms, legs, face, or at times the roof of the mouth.

PCP's most prominent feature is a pneumonia characterized by a dry persistent cough, sometimes preceded or accompanied by shortness of breath.

WHO IS GETTING AIDS?

In San Francisco 99% of the persons reported with AIDS are gay and bisexual men.

AIDS has been diagnosed in several, not always distinct population groups. Besides gay and bisexual men, the disease has also occurred among intravenous drug users, native and immigrant Haitians, hemophiliacs, women who have regular sexual contact with people with AIDS, and/or IV drug users, and children born to mothers from the above groups.

Because medical data suggests that AIDS has an "incubation period" of 7 to 24 months—**AIDS becomes everybody's problem!** No matter how healthy you feel, you need to take care of yourself and those with whom you care enough about to be sexual. As with other sexually transmitted contagious diseases (gonorrhea, syphilis, herpes, hepatitis B) many people may have contracted AIDS but have no symptoms, and during the incubation period, may be spreading it without their knowledge.

THE SYMPTOMS OF AIDS

Many of the symptoms associated with AIDS are similar to those found with colds, bronchitis and stomach flu. The important difference that characterizes many AIDS symptoms is their duration, disappearance, recurrence and their severity.

According to Bay Area Physicians for Human Rights, the general symptoms of AIDS include:

- Unexplained increasing and persistent fatigue.
- Periodic or regular fevers, shaking chills, drenching night sweats not accompanied by a known illness and lasting longer than several weeks.
- Weight loss that is unexpected and greater than approximately 10 lbs. in less than two months.
- Otherwise unexplained swollen glands (enlarged lymph nodes with or without pain, usually in the neck, armpits or groin) lasting for more than two weeks.
- Pink to purple flat or raised blotches or bumps, usually painless, occurring on or under the skin, inside the mouth, nose, eyelids or rectum. Initially they may look like bruises that do not go away and they usually are harder than the skin around them.
- Persistent white spots or unusual blemishes in the mouth.
- Persistent diarrhea.
- Persistent or frequent dry cough that is not from smoking and has lasted too long to be from a usual respiratory infection.
- Shortness of breath or difficulty in breathing while walking, which is recent and getting worse.

Keep in mind that the early symptoms of all these diseases can be the same as those from less serious

conditions. **The appearance of symptoms is always a matter for concern and attention. If you are not sure about your health—take some action to get the information and reassurance you need.** Find a physician who is knowledgeable about AIDS to talk with and examine you if necessary.

HOW IS ONE EXPOSED TO AIDS?

Although there are several AIDS theories, one common fact that stands out is that transmission involves direct contact and the exchange of body fluids of a person who is infectious. **Body fluids with which to avoid direct contact include urine, stool, blood and semen.** Researchers believe that AIDS is caused by an infectious agent, probably a virus, and the evidence is strong that AIDS is transmissible through intimate sexual contact.

The major concern is whether there are injured tissues or the possibility of injury (even microscopic) to any tissues that would result in exposure to germs which could penetrate into the bloodstream or bowel.

Being sexual with someone could involve cuts or abrasions on the rectal tissues, one's penis, hands, gums, mouth, lip or tongue tissues—all of which would increase the risk of the spread of germs into the bloodstream, semen, stool or urine. Tune in to your partner, communicate with him and take protective action to reduce risk. Be sensitive and listen to your body's messages around pain and possible injury.

Check yourself out around the following sexual practices:

- Fisting (both giving and receiving)—exposes one to bowel germs and blood if there is microscopic or visible injury to rectal tissues, cuts on fingers (even cuticles!) or hands.
- Oral-anal contact (rimming)—exposes one to infectious agents and to parasites in feces, if there are cuts or fissures in anus, gums, mouth, lip or tongue tissues.
- Anal intercourse (receiving)—exposes one's bloodstream to germs in semen, urine, feces and blood if there is injury of rectal tissues.

- Anal intercourse (inserting)—exposes one to infectious agents in feces and blood if there is injury of the penile tissues.
- Oral-genital (receiving)—exposes one to germs in semen and blood if there are cuts on gums, mouth, lip or tongue tissues, and if there are cuts on the inserter's penis.
- Oral-genital (inserting)—exposes one to infectious agents in blood from bleeding gums or damaged mouth, lip or tongue tissues if there are cuts or abrasions on the penis.
- Urine—exposes one to possible infection if it enters the body or bloodstream through cuts or abrasions on skin.

There is no evidence that AIDS can be spread through airborne or casual contact—that is, a person should not fear infection with AIDS organisms from only casual contact with persons with AIDS, persons who may be in an incubation stage or under treatment for AIDS. Living in the same house, riding the same public transportation, eating in the same public places or working in the same office as a person with AIDS does not present a recognized risk of infection.

TAKING ACTION: WHAT YOU CAN DO TO REDUCE RISK

Because we know so little about the causes of immune deficiency, the most important thing is to stay healthy, and minimize your chances of contracting any infections. Consider the following suggested guidelines and how they relate to your personal health-habits:

Most Critical

- Reduce the "numbers" of different sexual partners in your life. This does not mean you need to limit the amount of sex you enjoy—but do consider limiting the number of different partners, particularly the anonymous contacts where you know very little about them. Go for health—if someone has symptoms of illness (especially possible AIDS symptoms) or complains about vague feelings of being unwell without apparent signs, it would be a good idea to modify your ways of relating sexually or not to have sex with that person at that time. By

AIDS

There *is*
something
you can do
about it.

Congress of the United States
House of Representatives
Washington, D.C. 20515
OFFICIAL BUSINESS

Barbara Boxer
M.C.

Who can help?

If you think you have AIDS symptoms:

✓ Initial free screening is available at Public Health Center I (3850 17th Street, 558-3905) and Public Health Center II (1301 Pierce Street, 558-3256).

Call first for an appointment.

✓ Drop-in screening is available at the City Clinic (356 7th Street, 864-8100).

✓ Clinical screening and medical care for sliding-scale fees are available at SF General Hospital's AIDS Screening Clinic (955 Potrero near 22nd Street, 821-8830).

✓ See your personal physician. If you need a referral to an AIDS-sensitive doctor, call the AIDS/KS Foundation (864-4376) or Bay Area Physicians for Human Rights (BAPHR, 673-3189).

If you're healthy but worried about AIDS and want counseling:

✓ Psychotherapy, support groups, and individual counseling for sliding-scale fees are available at Operation Concern (626-7000), the Center for Special Problems (558-4801), and Health Center I (558-3905).

✓ For emergency crisis counseling, call the Mission Crisis Center (558-2071) 8am-midnight, 387-5100 midnight-8am).

✓ For referrals to qualified private therapists, call Operation Concern (626-7000), BAPHR (673-3189), or AIDS/KS Foundation (864-4376).

If you need information or advice, or want to help the community fight AIDS:

✓ Contact the AIDS/KS Foundation (514 Castro Street, 864-4376).

A SPECIAL REPORT ON AIDS

from Congresswoman Barbara Boxer

Dear Friend:

The current epidemic of Acquired Immune Deficiency Syndrome (AIDS) is one which requires the best efforts of us all.

Together with the late Representative Phillip Burton, I have fought for increased funding for research which will ultimately solve this health crisis. On May 25, the House voted an additional \$12 million in research funds, and I am extremely pleased at this very encouraging turn of events.

Until we find the cure or prevention for AIDS, I feel it is critical that you have the latest information on the disease.

I've strived to make this pamphlet as accurate and useful as the current state of knowledge about AIDS allows. It was prepared with the assistance of respected medical professionals.

I want to thank Bill Kraus of Representative Phillip Burton's staff for his many hours of work on this project.

I pledge to continue the efforts to expand AIDS research funding so that the questions will be answered and the day will come when the cure for AIDS is discovered.

Sincerely,



BARBARA BOXER
Member of Congress

What is AIDS?

AIDS stands for Acquired Immune Deficiency Syndrome.

The immune system is made up of parts of the body which fight infection and disease. AIDS impairs or even "turns off" the immune system, leaving the body vulnerable to infections and other illnesses which rarely affect the average person.

The diseases that are most often involved are Kaposi's Sarcoma (an unusual form of cancer), pneumocystis pneumonia (an uncommon infection of the lungs), and other opportunistic infections.

Nationally, about 75% of AIDS cases have been reported among gay men, although about 95% of the San Francisco cases have occurred among gay men. The disease has also occurred among intravenous drug users, native and immigrant Haitians, hemophiliacs, women who have had regular sexual contact with AIDS patients, and children born to mothers from the above groups.

Most leading researchers believe that AIDS is caused by an infectious agent, probably a virus, and that it is transmissible through intimate contact (usually sexual) which involves the direct exchange of bodily fluids (semen, blood, urine, stool and possibly saliva).

There is no evidence to suggest that AIDS can be spread through airborne or casual contact.

How serious is the problem?

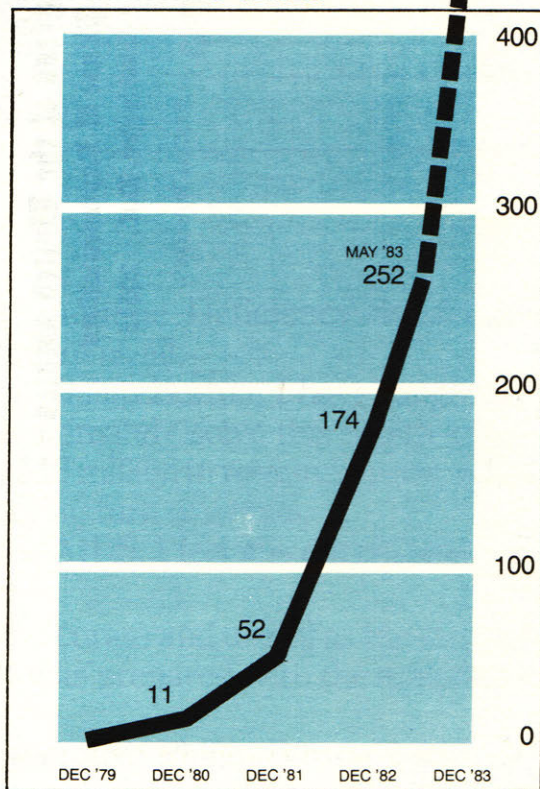
AIDS is a critical health problem.

According to Dr. James Curran of the Centers for Disease Control, AIDS is "a relentless epidemic. (It is) the most important new public health problem in the United States and will inevitably become epidemic throughout the nation."

As of May 1983, 1450 cases of AIDS have been reported, of which 252 are in the San Francisco Bay Area.

San Francisco is second only to New York City in

BAY AREA AIDS CASES



Source: Bureau of Communicable Disease Control, San Francisco Department of Public Health

the number of cases reported. The city's Bureau of Communicable Disease Control expects between 250 and 300 new AIDS cases to be diagnosed here this year, with the rate of new cases approximately doubling every six months.

Among single men in San Francisco, the incidence of AIDS has reached more than 1 in 1000, 1 in 350 in heavily gay neighborhoods, according to a recent University of California study.

The disease is probably more common than these statistics indicate. Medical evidence suggests that AIDS has an "incubation period" of 7 to 24 months. This means that many people may have already contracted AIDS but don't yet show symptoms and, during this incubation period, may be spreading it without their knowledge.

The fatality rate of AIDS is more than 85% two years after diagnosis.

What are the symptoms?

Many symptoms associated with AIDS may appear in illnesses that are not caused by AIDS such as colds, bronchitis and stomach flu. When not easily or otherwise explained, however, persistence of one or more of these symptoms should be discussed with a doctor who is familiar with AIDS.

According to Bay Area Physicians for Human Rights, the general symptoms of AIDS include:

- ✓ Unexplained increasing and persistent fatigue.
- ✓ Periodic or regular fevers, shaking chills, drenching night sweats not accompanied by a known illness and lasting longer than several weeks.
- ✓ Weight loss that is unexpected and greater than approximately 10 lbs. in less than two months.
- ✓ Otherwise unexplained swollen glands (enlarging lymph nodes with or without pain, usually in the neck, armpits or groin) lasting for more than two weeks.
- ✓ Pink to purple flat or raised blotches or bumps, usually painless, occurring on or under the skin, inside the mouth, nose, eyelids, or rectum. Initially they may look like bruises that do not go away and they usually are harder than the skin around them.
- ✓ Persistent white spots or unusual blemishes in the mouth.
- ✓ Persistent or often dry cough that is not from smoking and has lasted too long to be from a usual respiratory infection.
- ✓ Persistent diarrhea.

Thanks to the following members of the medical profession for their help in verifying the information contained in this pamphlet:

Dr. Mervyn Silverman, Director, San Francisco Department of Public Health.

Dr. Richard Andrews, President, Bay Area Physicians for Human Rights.

Dr. Marcus Conant, Executive Director, AIDS/KS Foundation.

Dr. Paul Volberding, Director, AIDS Clinic, San Francisco General Hospital.

Thanks also to *Dick Pabich* and *Michael Housh* for their assistance with this project.

How can the risk be reduced?

Although no specific agent responsible for the transmission of AIDS has been identified as yet, strong evidence indicates that AIDS is transmitted through direct contact with the bodily fluids of a person who is infectious.

There *are* positive steps you can take to protect yourself.

According to the Bay Area Physicians for Human Rights, eliminating, reducing or modifying these practices may reduce your risk for AIDS:

- ✓ Sexual activity in which bodily fluids are exchanged.
- ✓ The more partners, the greater the risk.
- ✓ The injection of drugs with shared use of needles. By extension, sexual contact with those known to use intravenous drugs would represent significant risk.

As with other sexually transmitted diseases (gonorrhea, syphilis, herpes, hepatitis B), it may take only one contact to acquire AIDS. And because of the long incubation period, a person who appears healthy *may* be infectious and capable of spreading the AIDS agent.

Certain sexual practices are known to be associated with increased risk of sexually transmitted diseases such as AIDS. You can help protect yourself by learning more about them in a pamphlet with specific suggestions for gay men produced by BAPHR and the AIDS/KS Foundation. For a copy, write: AIDS/KS Foundation, 514 Castro Street, San Francisco 94114, or call: 864-4376.

Additional suggestions for risk reduction include:

- ✓ Using condoms.
- ✓ Knowing your sex partners and asking about their health.
- ✓ Taking good care of your body and general health: adequate rest, good nutrition, physical exercise and regular medical check-ups.
- ✓ Reducing use of toxic substances.
- ✓ Making sure you have adequate health insurance. AIDS medical costs are extremely high, as are costs of routine medical care, so everyone at risk should have a comprehensive health plan.

What's being done about AIDS?

Although state and local agencies, as well as community organizations, are providing patient support, AIDS screening and other needed services, clearly much more needs to be done.

However, some progress is being made. In San Francisco, Mayor Feinstein's new budget includes several million dollars for AIDS projects, including an increase in funding of \$2 million sponsored by Supervisors Harry Britt and John Molinari.

At the state level, Assembly Speaker Willie Brown, Assemblymember Art Agnos and others are seeking greatly increased AIDS funding. If these efforts are successful, they—together with the San Francisco funds—will provide critically-needed patient care, community education, and research.

Nationally, many of the major medical research institutions are attempting to find the cause and cure of AIDS.

The recent passage by the House of Representatives and the Senate Appropriations Committee of a supplemental appropriation of \$12 million for AIDS research—when passed by the full Senate and signed by the President—will represent a dramatic breakthrough.

Future federal funding for AIDS research is in an extremely fluid situation, with both the House and Senate currently working on budgets for Fiscal Year 1984, which begins in October, 1983.

I have introduced two bills, HR 2762 and HR 2763, which would appropriate \$10 million to the Centers for Disease Control and \$20 million to the National Institutes of Health for research into the cause, transmission, and cure of AIDS. Members of Congress are also working to persuade NIH immediately to reallocate millions of dollars needed to wage a full-scale war on AIDS, and several other pieces of legislation concerning AIDS have been introduced.

Current Administration budget proposals for the Centers for Disease Control (the federal agency primarily responsible for dealing with epidemics) and for the National Institutes of Health (responsible for funding most of the nation's medical research) are clearly inadequate to meet the needs of this grave health crisis.

INFORMATION AND REFERRAL

AIDS/KS FOUNDATION
P.O. Box 14227 - 514 Castro
San Francisco, California
— TTY/V 864-4376 —
(9:00 a.m. to 7:00 p.m.)

Department of Public Health
Bureau Communicable Disease
Control
101 Grove Street, Room 410
558-4046

This pamphlet was prepared
by the San Francisco
Department of Public Health
Bureau of Communicable
Disease Control
May 1983

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Courtsey of
the AIDS/KS Foundation

AIDS

ANY RISK FOR THE GENERAL POPULATION?

New diseases have appeared throughout human history and attacked populations where they were previously unknown, producing epidemics. Most scientists working on the present AIDS epidemic believe it to be just such an infectious invasion.

AIDS has been identified as a new disease in the United States in the past two years, and has now also been reported from 15 cities in other countries. About 70% of the AIDS patients are homosexual or bisexual men, and the other 30% include users of intravenous drugs (both male and female), Haitian immigrants, children of the two latter groups, hemophiliac patients and recipients of blood transfusions.

AIDS causes a breakdown in the body's normal self-defense mechanism against infection and development of malignant tumors. The cause is not yet known; it is possibly a new virus or a new form of some previously known infection. Whatever the agent, the breakdown of this normal immune protection leaves the body vulnerable to attack from organisms which normally cause no disease in healthy persons, or only mild temporary illness.

In the present epidemic, the disease is virulent, and the mortality is high; approximately 75% of cases have died within two years after appearance of symptoms.

Description of the AIDS outbreak in public media has produced considerable anxiety among both homosexual and heterosexual persons. This level of anxiety is not warranted for the general population in the City. Medical research to date indicates that the AIDS infection must enter the blood system of a person by intimate personal contact with a case of AIDS. This contact may be by:

- (1) Direct, probably repeated, sexual contact with an infected person (who may not show symptoms at the time).
- (2) Injection of blood from an infected person, as in sharing illegal intravenous drugs with an unsterile hypodermic needle.
- (3) More rarely, by blood transfusions or injection of clotting agents used by hemophiliac patients.

Only 7% of all cases are reported in persons who either do not have the risk factors listed above, or for whom risk information is not completely known.

Tens of thousands of health workers have been caring for AIDS patients in hospitals for the past four years, and not one has developed the condition as a result of patient care contact during this time. Researchers who have the most advanced information about this disease complex hold firmly that at our present state of knowledge no person should expect to develop AIDS from merely casual contact.

Touching objects handled by AIDS patients, spending time in the same house or room with a patient or the same work-place, riding a bus or being near a patient in a public place, eating in a restaurant frequented by possible patients, etc. does not spread the disease.

These comments are designed to relieve or eliminate unnecessary stress in the general population due to unwarranted anxiety about infection with AIDS from casual contacts with possible AIDS patients.

LEFT SIDE

1. BROCHURES FOR HOSPITAL/HEALTH CARE WORKERS.

1. "AIDS" In A Question And Answer Format - University
Of California, San Francisco Infection Control Unit.

LEFT SIDE

II. BROCHURES FOR THE GENERAL POPULATION.

1. AIDS: Any Risk To The General Population - San Francisco Department of Public Health.
2. AIDS: There Is Something You Can Do About It
Office of Congresswomen Sala Burton And Barbara Boxer.

LEFT SIDE

III. BROCHURES FOR POPULATION AT RISK

1. AIDS Update: AIDS Information For Gay And Bi-sexual Men - San Francisco Department Of Public Health.
2. AIDS Risk Reduction Guidelines - Bay Area Physicians For Human Rights. (Optional)
3. "Can We Talk" - Harvey Milk And Lesbian - Gay Democratic Club San Francisco And AIDS/KS Foundation. (Optional)
4. Shooting Up And Your Health - Haight Ashbury Free Medical Clinic San Francisco. (Optional)

AIDS/KS FOUNDATION

ACQUIRED IMMUNE DEFICIENCY SYNDROME - KAPOSI'S SARCOMA RESEARCH & EDUCATION FOUNDATION, INC.
P. O. Box 14227 (A Nonprofit Corporation) San Francisco, CA 94114

Greetings:

The following risk reduction brochures were not included in the initial distribution of this packet due to the sexually explicit and/or controversial nature of their language. These brochures are written in common vernacular and are, consequently, effective tools in teaching gay men and intravenous drug users to reduce their risk of contracting AIDS.

- o "Guidelines for AIDS Risk Reduction", written by Bay Area Physicians for Human Rights and directed at gay men. This pamphlet discusses transmission systems and risk reduction guidelines.
- o "Can We Talk", a joint venture of the Harvey Milk Democratic Club and the AIDS/KS Foundation. This pamphlet gives an explicit explanation of ways for gays to reduce the risks of contracting AIDS in an easy to read cartoon format.
- o "Shooting Up and Your Health", written by staff at the Haight Ashbury Free Medical Clinic. This pamphlet discusses health risks associated with needle use, AIDS symptoms, and risk reduction guidelines.

Packet holders can receive copies, free of charge, from the San Francisco AIDS/KS Foundation by signing the following statement, completing the form, and returning this entire sheet to: The San Francisco AIDS/KS Foundation, 54 10th Street, San Francisco, California, 94103.

I wish to receive these brochures.

(please sign)

Please print the following information:

Name _____

Address _____

City _____ State _____ Zip _____

Phone () - (home) () - (work) _____

LEFT SIDE

IV. STATEMENTS ON AIDS FROM PUBLIC HEALTH AUTHORITIES

1. Press release on health workers - Mervyn Silverman, M.D.
San Francisco Department of Public Health
2. Risk of AIDS in the work place - Mervyn Silverman, M.D.
San Francisco Department of Public Health

Much needed data is lacking in the histories of the other three patients. They seem less likely to have had exposure to blood, and appear more likely to have belonged to AIDS risk groups. They are 1) a hospital laundress who admitted using oral cocaine and other drugs, but denied IV drug use; 2) a Jamaican male nurse working in Miami; 3) a male nurse's aide with a history of needle sticks and bites from patients, but not in the two years prior to onset of his AIDS.

While these patients denied belonging to any known AIDS risk group, CDC states that "the veracity of this information can never be assured." Therefore, evaluation of the patients must remain inconclusive relative to the risk of AIDS among health care personnel.

Mervyn F. Silverman, M.D., M.P.H., Director of Health of San Francisco, states: "This report does not change the probability that the most frequent mode of transmission is either intimate sexual contact, transfusion of blood or blood products, or use of intravenous drugs with unsterile hypodermic needles. This information, however, should re-emphasize to health workers the importance of following infection control guidelines."

The University of California, San Francisco and the City Health Department have drafted guidelines which have been made available to all physicians.

-----END-----



July 14, 1983

Contact:

Mervyn F. Silverman, M.D., M.P.H.

(415) 558-2466

FOR IMMEDIATE RELEASE

The Center for Disease Control has reported four persons with AIDS who are health care workers. CDC clearly states that the source of infection for those four patients is unknown, although they may have been in the high risk groups (homosexual males, IV drug-abusers, Haitians).

There have been 1737 cases reported, less than 6% have no known risk factors. These four cases, among the millions of health workers in the United States, may fall into that 6% category.

The first case was a male housekeeping hospital worker in Baltimore. He was diagnosed with pneumonia and other laboratory findings consistent with AIDS; he died despite intensive therapy. He had potential exposure to blood-contaminated equipment and it was reported that he usually did not wear gloves. He also reported a needle stick injury three months before the onset of the AIDS symptoms developed.

----- More-----

RISK OF AIDS IN THE WORKPLACE

AIDS (Acquired Immune Deficiency Syndrome) is a condition in which the body's normal self-defense mechanism against infection and development of malignant tumors has been broken down by some as yet unknown agent. The breakdown of this normal immune protection leaves the body vulnerable to fatal attack from organisms which normally cause no disease in healthy individuals, or only mild temporary illness.

Healthy persons should not fear infection with AIDS organisms from only casual contact with AIDS patients, persons who may be in an incubation stage or under treatment for AIDS. Living in the same house, riding the same public transportation, eating in the same public places or working in the same office with persons with AIDS, does not present a recognized risk of infection to healthy individuals in the general population. AIDS patients are at much greater risk of developing infections of various kinds from, than of transmitting infection to, a normally healthy person.

The recognized methods of infection with AIDS are direct, intimate sexual contacts by a variety of techniques, direct contamination with blood or secretions from a patient, or from sharing an unsterile hypodermic needle in injecting street drugs. These obviously are not factors in daily office or other work place situations. Special precautions to avoid contamination from patients are necessary only for persons who must physically care for AIDS patients, such as hospital and clinic personnel. (These precautions are not necessary for casual contact as in usual daily associations, or for that matter in an AIDS patient's hospital room.)

A handwritten signature in dark ink, appearing to read "Mervyn F. Silverman".

MERVYN F. SILVERMAN, M.D., M.P.H.
DIRECTOR OF HEALTH

6/83